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Preliminary Engineering Report for Sewer System Improvements

City of Carlin

December 2021

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EXECUTIVE SUMMARY

This Preliminary Engineering Report (PER) has been prepared for the City of Carlin (City) to address system deficiencies within the City's sanitary sewer (sewer) utility. This PER describes the existing sewer system and its deficiencies and makes recommendations for improvements. The PER will be used by the City as a Master Plan or Capital Improvement Plan (CIP) for the sewer utility. The projects presented in Section 4 of this report include only improvements associated with the City's existing infrastructure. All improvements necessary to serve future growth will be funded by development funds, and not grant or loan funding.

The areas of concern in the sewer system generally include aged collection mains, leakage from pipes and treatment ponds, and aging lift station equipment. At this time, the City is considering improvements to the collection system and lift stations. The projects proposed in this PER include replacement of the Oak Street Lift Station and replacement of sewer collection lines to be identified during a Sewer System Evaluation Survey.

The PER is required by the United States Department of Agriculture (USDA), Rural Development (RD) as a precursor to obtaining grants or loans from their agency as well as the State of Nevada. This PER follows the general guidelines outlined in the USDA Rural Utility Service (RUS) Bulletin 1780-2, "Preliminary Engineering Reports for the Water and Waste Disposal Program".

1.0 PROJECT PLANNING

1.1 GENERAL INFORMATION

The City of Carlin is located on the western border of Elko County, Nevada. The Humboldt River flows on the south end of town. Two of the Humboldt's tributaries, Maggie and Susie Creek, run through the City of Carlin. Natural boundaries include Pine Mountain to the south, Mary's Mountain to the west, and Grindstone Mountain to the east. A location map is shown in Figure 1. A United States Geological Survey (USGS) map is provided in Figure 2.

With the western expansion of the United States, a small military camp was established in what is now southwestern Elko County when William Passmore Carlin was stationed there in 1858 under the direction of Colonel Albert Sidney Johnston during the Mormon War. The area did not see much additional development until approximately 1868 when Chinese railroad workers had been sent ahead to the area by the Central Pacific Railroad supervisor to prepare the land. In keeping with their agricultural background, some planted vegetables near the Humboldt River; therefore, in the early days the site was called "Chinese Gardens". The Central Pacific reached the Chinese Gardens site in December of 1868 and was selected as the eastern terminus of Humboldt division of the Central Pacific Railroad. A town site was laid out to provide support to the railroad and named "Carlin" after William Passmore Carlin.

The population of Carlin in 1871 was approximately 800. Carlin had a post office and a library furnished by the railroad. By 1884, a roundhouse, machine shop, four stores, one hotel, two saloons, two restaurants, two blacksmith shops, one telegraph office, one express office, and one jail were establishments that comprised the town. By 1918, Carlin's population had dropped to 400 and there was little civic improvement. There were very few trees and few flowers or gardens. The few gardens and flowers that existed had to be watered by a bucket from private wells. By 1923 Carlin began to revitalize when electrical generation and distribution were provided in the town. The present water and sanitary sewer systems were installed in the 1930s under the Federal Works Project Administration with labor mostly by the residents of Carlin. In the early 1950s, steam engines began to be replaced by diesel engines which led to the piecemeal dismantling of the railroad support facilities. The railroad significantly reduced operations in Carlin by 1993.

As railroad operations reduced, mining activity began to increase in the early 1960s with Carlin Gold. Other gold mines were discovered in the area on what is now known as the Carlin Trend with significant mining efforts beginning in the late 1980's all the way through the present day.

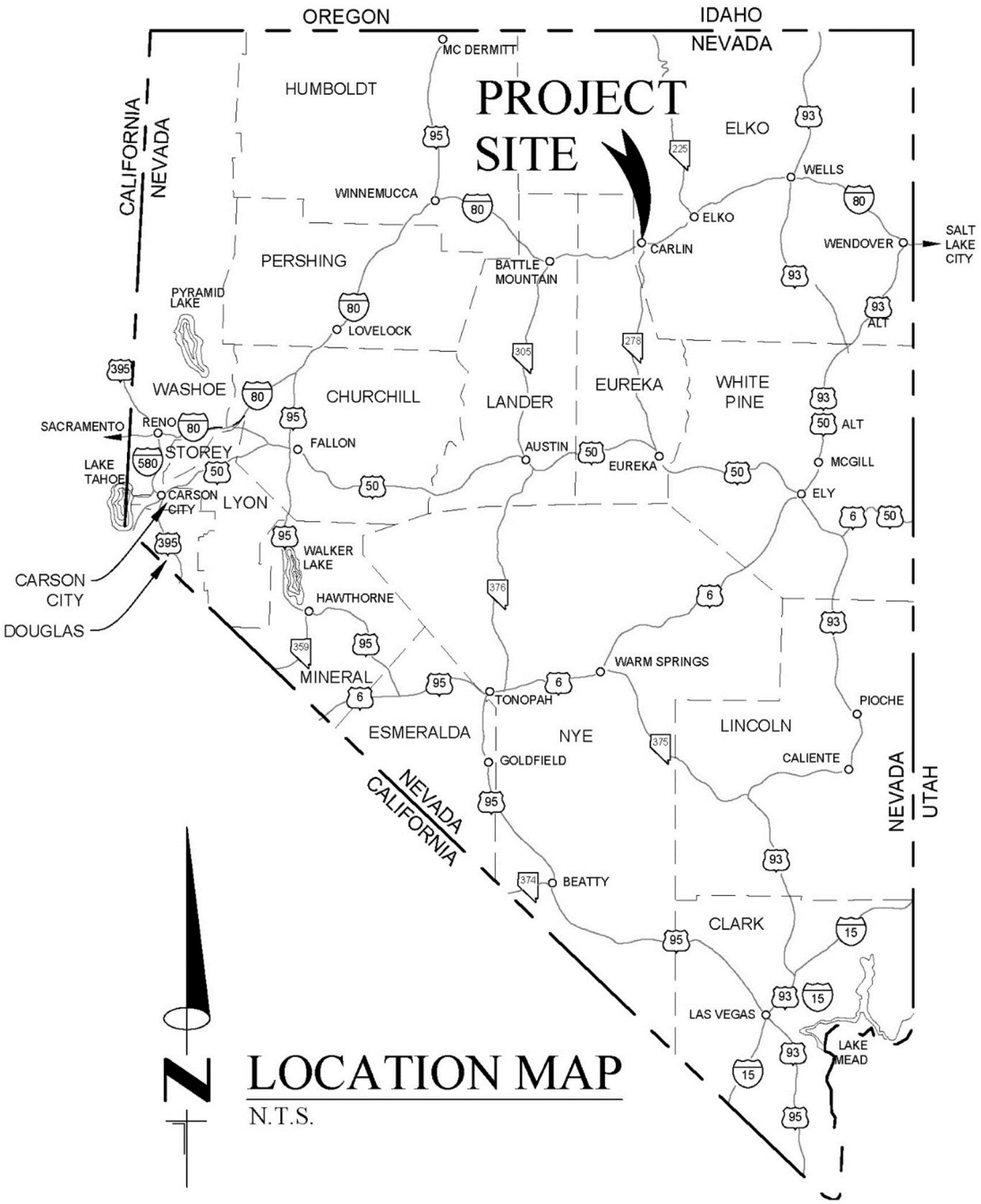

Figure 1: Vicinity Map

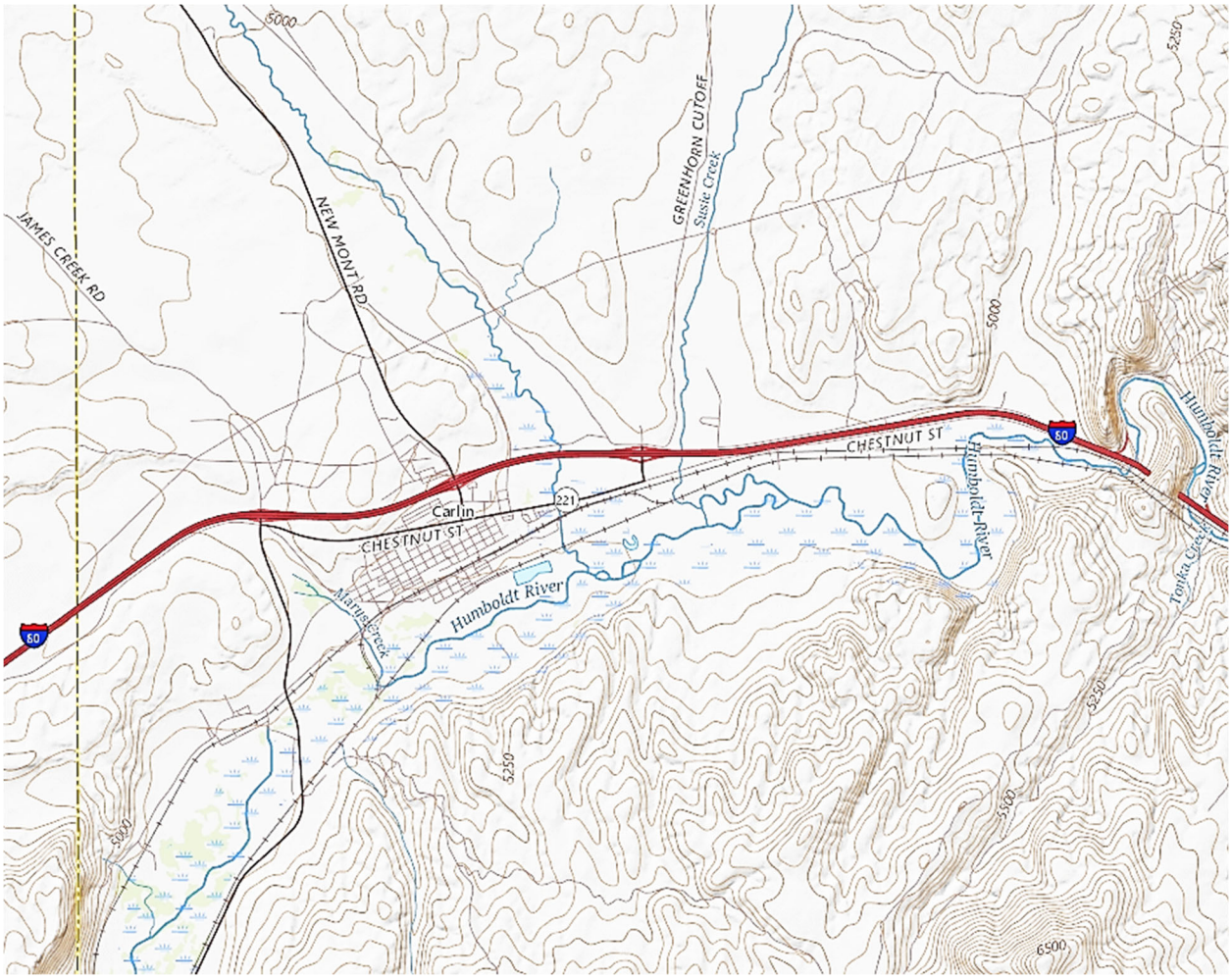

Figure 2: USGS Map

1.2 ENVIRONMENTAL RESOURCES

This section provides a brief overview of environmental resources in the area. Proposed improvements are largely or entirely within existing rights-of-way or on City-owned land, and minimal environmental impacts are anticipated. Attached in Appendix A is the preliminary environmental assessment for the project.

1.2.1 Geologic Setting

Geologic maps indicate the Carlin area mostly lies on alluvial deposits placed by the river and creek flows. The Quaternary period deposits consist of unconsolidated gravels, sand, silt, and clays. The water table in the project area can be found as shallow as 10-feet deep in some areas. The north hills of Carlin consist of tuffaceous sedimentary rocks of the late Eocene to late Miocene period. The City of Carlin lies in a seismic design category C. Known fault lines have been mapped around the Carlin area with the nearest fault at approximately two miles southeast of the City. Refer to Appendix A for Geologic and Fault Maps.

1.2.2 Water Quality

There are no known impacts to water quality in or around the project area as a result of construction activities. Placement of stormwater best management practices (BMPs) during construction will minimize storm water pollution. The Nevada Division of Environmental Protection (NDEP) may require a storm water permit depending on the area of land disturbed.

1.2.3 Climate

The average annual precipitation for the area is 12.09 inches. Temperatures in the area are characterized by large diurnal temperature variations that average 20 to 30 degrees. The average annual high and low temperatures are 57 degrees and 37 degrees Fahrenheit, respectively. Typically, temperature extremes can be in the negatives during the winter and in the just above 100-degrees during the summer. The average growing season is 115 days per year. Table 1 lists the average rainfall and average temperature by month.

Table 1: Average Rainfall and Temperature

Month	Average Rainfall (inches)	Average Temperature (Max/Min) °F
January	1.13	34.4/19.6
February	0.95	38.3/22.6
March	1.23	44.5/26.5
April	1.09	51.6/31.3
May	1.26	62.0/39.9
June	1.10	72.7/49.1
July	0.41	83.1/58.2
August	0.46	82.8/58.2
September	0.96	72.1/48.1
October	0.94	59.2/38.0
November	1.13	43.3/27.1
December	1.43	34.9/19.7
Annual Totals	**12.09**	**56.6/36.5**

Data from Desert Research Institute for Carlin Newmont Mine

1.2.4 General Land Use

Land in the City service boundary includes residential, commercial, light industrial, agricultural and public uses. The rural/agricultural residents on the south end of town are served by City water but are too low to be served by the gravity sanitary sewer system and must use septic systems. The City limits extend out into undeveloped sections of land that are currently not zoned. Most of the undeveloped area within the City limits totals approximately 9 square miles. Approximately 2 square miles is well-developed.

1.2.5 Floodplains

The flood zones for Carlin have been mapped by the Federal Emergency Management Agency (FEMA) and have been designated by the following panel numbers: 32007C5984E, 32007C5985E, 32007C6001E, 32007C6002E, 32007C6003E, and 32007C6004E. Areas immediately adjacent to the Humboldt River and tributary creeks are in Zone A, AE, and X. Most developed portions of the City lie outside the flood zones. Some underground water mains are in flood zones. For reference, the following flood hazard zone designations are provided:

> Zone AE and A1-A30: Zones AE and A1-A30 are the flood insurance rate zones corresponding to the 100-year floodplains, determined by detailed methods in the Flood Insurance Study. In most instances, base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone. Mandatory flood insurance purchase requirements apply.

Zones B, C, and X: Zones B, C, and X are the flood insurance rate zones that correspond to areas outside the 100-year floodplains, areas of 100-year sheet flow flooding where average depths are less than 1 foot, areas of 100-year stream flooding where the contributing drainage area is less than 1 square mile or areas protected from the 100-year flood by levees. No base flood elevations or depths are shown within this zone.

The FEMA FIRM maps for the Carlin area were issued in September 2013. The FEMA designated flood zone impacts the south side of the City as shown in panels 32007C6003E and 32007C6004E. The flood zone associated with Mary's Creek impacts the west side of town including the water spring collection system as designated in panel 32007C5984E.

1.2.6 Flooding History

Historically, the Humboldt River flooding typically occurs during the winter months. Winter flooding is generally caused by heavy rains on top of extensive amounts of snow.

There are two significant storm events recorded in the Carlin area. The first occurred in February of 1910, the largest flood of record for the entire Humboldt River and its associated tributaries. The Humboldt River crested at 15,000 cfs and both Maggie and Susie Creeks flooded. The gauged depth of the Humboldt River is 17 feet southwest of Carlin. Many roads, bridges, and railways in the region were ruined. Another occurred in February of 1962. Maggie Creek was gauged at 2,440 cfs and portions of railyards and lower residential areas flooded. During this event, the Humboldt River gauge southwest of Carlin measured a depth of 9.28 feet. In May 1984 the Humboldt River gauge measured the depth of the flooding event at 10.2 feet. In February of 2017, the depth of the flood event measured at 9.7 feet. Observations of this recent event in 2017 indicated that the river surface reached the base of the southside of the wastewater treatment facility.

1.2.7 Transportation

Water mains that need replacement are generally in existing street rights-of-way. Traffic control devices will be necessary to route traffic around construction zones during main replacements. Minor traffic delays can be expected during construction. State Route 766, which supports several mine sites, is the only significant highway that could be impacted by construction zones for utilities. Other Nevada Department of Transportation (NDOT) roads that contain City water and sanitary sewer mains include Interstate Highway 80 (I-80) and State Route 221 (Chestnut St.). Existing and future utilities that cross I-80 are completed by boring under the freeway so that traffic is not impacted.

1.2.8 Noise

Typical construction noise should be anticipated. Construction will take place only during normal working hours.

1.2.9 Environmental Resources

Table 2 presents a list of environmental resources present in the project area.

Table 2: Environmental Resources

Resource	Type of Information	Comments
General Land Use	Zoning, land use classifications	Refer to subsections listed above.
Important Farmland, Prime Rangeland and Forest Land	Soil surveys	Does not apply. No impact is anticipated.
Formally Classified Lands	Monuments, landmarks, wild and scenic rivers, wilderness areas, state of national parks, reservations, recreation areas	No former classified lands to impact.
Floodplains	Flood insurance maps, soil surveys	Refer to subsections listed above.
Wetlands	Soil surveys, National Wetland Inventory Maps, and Section 404 issues	No wetlands are located within the project area.
Cultural Resources	Historical and archaeological sites, visually sensitive areas.	Refer to subsections listed above.
Biological Resources	Threatened and endangered species, critical habitats, species of special concern	Refer to subsections listed above.
Water Quality	Discharge Permits, Water Appropriation Permits, Sole Source Aquifers	Refer to subsections listed above.
Coastal Resources	Coastal barrier resource maps, coastal zone management planning documents	Does not apply.
Socio-Economic/Environmental Justice	Economic data, location of minority and low-income populations.	No impact is anticipated.
Air Quality	State Implementation Plan	No impact is anticipated.
Transportation	Airports, highway safety, navigation hazards	Refer to subsections listed above.
Noise	Noise levels and restrictions	Refer to subsections listed above.
Hazardous Material and Waste	Bureau of Waste Management	No materials are known to exist.

1.3 POPULATION TRENDS

1.3.1 Base Population

According to the 2019 U.S. Census, there are 2,025 people living in the City. The average household size is 2.66 persons. The 2019 Census lists the total housing units at 994 with 700 of those homes being occupied. The U.S. Census and the Nevada State Demographer do not provide unique population estimates for the City. This report will use the City's population values listed in the Census as the population of the City. More information can be found in Appendix A.

1.3.2 Historical Growth and Future Growth Rate

The Nevada State Demographer has published historical population estimates for the City from 2000 through 2020. According to the Nevada State Demographers Population Estimates of Nevada Counties, Cities, and Towns from 2000 to 2020, the City's population has fluctuated resulting in a net increase of 12 percent. These values are presented in Table 3 and plotted in Figure 3.

Table 3: Population Estimates July 2000 to July 2020

Year	City of Carlin Population	Percent Change
2000	2,395	
2001	2,215	-7.5%
2002	2,074	-6.4%
2003	2,045	-1.4%
2004	2,240	9.6%
2005	2,261	1.0%
2006	2,281	0.9%
2007	2,295	0.6%
2008	2,322	1.2%
2009	2,345	1.0%
2010	2,370	1.1%
2011	2,376	0.3%
2012	2,376	0.0%
2013	2,851	20.0%
2014	2,731	-4.2%
2015	2,727	-0.1%
2016	2,684	-1.6%
2017	2,617	-2.5%
2018	2,613	-0.2%
2019	2,663	1.9%
2020	2,674	0.4%

From Nevada State Demographer, see data in Appendix A

Population estimates are available for Elko County for the 20-year planning period of 2018 through 2038 and have been used to project the future populations. The City population has been estimated to grow at the same rate as Elko County. Population projections are illustrated in Figure 3.

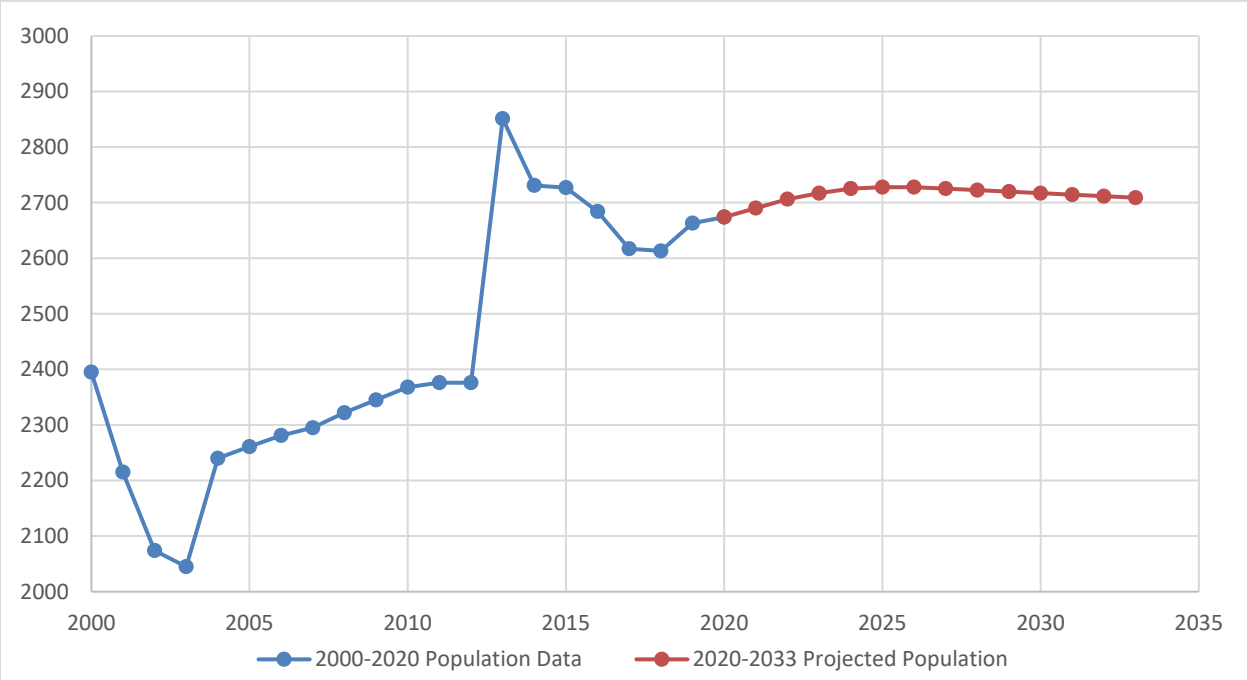

Figure 3: Historical and Future Population Trend

1.3.3 Median Household Income

Per the 2019 American Community Survey 5-Year Estimate, the median household income (MHI) for the City of Carlin is $78,929. Per the same source, the State of Nevada MHI is $60,365. The ratio of the City's current MHI to the State MHI does not classify the community as disadvantaged or low-income which limits some funding opportunities for the City. The City can conduct an independent income survey to evaluate whether or not the $78,929 is accurate and representative of its community.

1.4 COMMUNITY ENGAGEMENT

The Carlin City Council meets on the second and fourth Wednesday of every month. The City engages the public for comment on projects that impact the City. The discussions at the council meetings on projects cover items ranging from benefits to the community, construction impacts, finances, and public input. The city manager and public works director are normally present to receive public and council input on projects and to direct the project engineer.

City of Carlin residents and businesses have had the opportunity to discuss the PER and proposed improvement projects at three separate City Council meetings. The first was on February 22, 2017, when the contract was approved to commence work on the water and sewer system PERs in addition to a road master plan. The second meeting was on February 13th, 2019, when the council acted on a loan with USDA for the wastewater system, although the overall improvement needs of the City were discussed. Most recently, Farr West Engineering presented information to the council and public regarding the two highest priority improvement projects determined by this PER with a specific focus on future rate impacts as a result of these projects. This meeting was held on November 13, 2019 and included attendance from NDEP's Office of Financial Assistance to provide guidance on future funding programs and requirements. The sewer system projects discussed were Sewer System Evaluation Survey, Basement Intrusion and Infiltration Pumping Study, Monitoring Well Installation, Oak Street Lift Station, and Replacement of 1930's Collection System, which are described in detail throughout this document. The City Council and residents understand the need for these projects and made specific action at the meeting to pursue funding

and begin the initial phases of enterprise fund creation for both the water and sewer systems. Approved minutes for each of these meetings can be found on the City's website.

2.0 EXISTING FACILITIES – SEWER SYSTEM

2.1 OVERVIEW OF EXISTING FACILITIES

The public sewer system for the City of Carlin is owned and operated by the City and serves approximately 800 connections. The system has two primary functions: collection, and treatment; which can be further subdivided into the following components: lift stations, collection pipes, manholes, treatment facility, and effluent management. The City's first wastewater piping system was installed in the 1930s, a treatment facility that dates back to the 1960s and lift stations that were originally installed in the 1970s. In this Section, each component will be evaluated in terms of condition, compliance, and capacity with an overall evaluation ranking (good, fair, or deficient) as presented in Table 4.

Table 4: Condition of Existing Facilities

System Component	Condition
Collection Pipes	Deficient (Unknown Materials, Infiltration/Inflow)
Manholes	Deficient (Infiltration/Inflow)
Lift Stations	Deficient (Oak Street Lift Station)
Treatment System	Fair (Maintenance Needed, Future Compliance Issues Possible)
System Operations and Control	Good
Management	Fair (Asset Inventory Needed, Financial Condition Unknown)

The key problems identified in this Section are:

a. Aging collection system pipes with unknown pipe material and condition throughout sewer system;
b. Unknown extent of I/I problems (e.g., location, volume);
c. Oak Street Lift Station approaching end of useful life;
d. Poor monitoring well configuration for treatment monitoring; and
e. Wastewater treatment plant compliance concerns (i.e., treatment pond liner, sludge removal).

Some of these issues can be addressed or minimalized with studies or improvements which have lower costs than the projects presented in Section 4 of this PER. It is recommended that the City pursue funding these items internally prior to or in parallel with the proposed project presented in this PER. These items are listed in more detail below.

Sewer System Evaluation Survey

It is recommended a Sewer System Evaluation Survey (SSES) be conducted. Conducting an SSES will provide information on the existing system including areas of infiltration and inflow (I/I), pipe materials and diameters, and pipeline deficiencies such as structurally damaged pipe sections and faulty joints. These items are accomplished by the Closed-Circuit Television (CCTV) inspection portion of the SSES in which

a robotic camera is used to inspect the whole collection system in addition to a NAASCO pipeline assessment and certification program (PACP) and a manhole assessment and certification program (MACP) for all assets inspected. The SSES can also reveal debris, grease, and other blockages that limit capacity which can be cleaned by water jetting. Other available components of an SSES may include groundwater flow isolation to pinpoint sections of groundwater intrusion conducted during hours of low residential use (12 a.m. – 6 a.m.), smoke testing to identify other inflow sources, and non-toxic dye water flooding used in conjunction with CCTV to identify defects and I/I sources. The SSES is estimated to cost approximately $225,000. The final deliverables will be a detailed report of the system, an inventory of the existing system, and a CCTV video for later review. This study will also be extremely valuable for scoping out Alternatives as presented in Section 4.0.

Inflow and Infiltration Study

I/I is believed to be a significant contributor to system sewer flows, specifically impacting the Oak St. Lift Station and the Wastewater Treatment Plant (WWTP). The I/I study should follow the SSES and should include the following: a 4 to 8-week flow monitoring study during the rainiest month(s) of the year, engineering analysis to determine baseline sewer flows, and rainfall dependent I/I contributions, development of a 25-yr. storm hyetograph to add to the hydraulic model, determination of infiltration flow volumes, and a basement sump pump survey to determine the number of homes that pump stormwater into the sewer system. The entire I/I study is expected to cost between $50,000 and $75,000[1].

Monitoring Wells

The most recent compliance inspection by the Nevada Division of Environmental Protection (NDEP), Bureau of Water Pollution Control (BWPC) stated that the distance of the existing monitoring wells exceeded the current regulation and recommended that new wells be installed with a future permit renewal. Additionally, the inspection report stated that the wells could not be used to determine the performance of the existing clay liner because of their distance from the wastewater ponds. Even though these wells are not currently being required from the BWPC, the addition of these wells does provide a potential data source that could reduce the scope of future improvement projects at the WWTP. For this reason, Farr West recommends that the City pursue their construction as soon as the sewer enterprise fund can afford them. The estimated cost for two 25-foot deep, 4-inch monitoring wells is estimated to be approximately $90,000.

In summary, the deficiencies or issues at the WWTP have been determined to be:

a. maintenance issues (e.g., sludge survey and removal) which the City should pursue separately from the improvements presented in this PER, or
b. significantly impacted from I/I rates (e.g., seepage properties of clay liner) and additional study should be completed before an appropriate project scope can be developed.

This PER has selected the collection system deficiencies as the highest priority for the City and the project Alternatives presented in Section 4 address these deficiencies.

[1] Subcontractor fees for flow monitoring services is typically based on the duration of the study and is the primary reason for the variability in costs.

2.2 SYSTEM CHARACTERISTICS - SEWER FLOWS

Average day and peak hourly sewer flow rates can be difficult to determine without representative flow monitoring devices or methods upstream of the lift station and/or treatment facilities. The City currently has a meter installed downstream of the Oak St. Lift Station which measures wastewater flows into the WWTP and one meter on the effluent pump station which measures flows to the storage reservoir or to the irrigation fields. Flow volumes for influent, effluent to storage, and effluent to RIBs are required to be metered continuously while the effluent to irrigation is required to be metered or calculated during irrigation activities. At times inaccurate data is recorded due to human error, and in part, due to the inaccuracies of the aged Polysonics flow meter at the Oak St. Lift Station that needs replacement.

A review of sewer flow data provided by the City results in an average annual daily flow of 0.382 MGD and an average day of the max month (ADMM) flow of 0.880 MGD. Comparing these annual values to wintertime water use data confirms that the collection system experiences significant inflow and infiltration (I/I). Table 5 provides an annual summary of the data provided to Farr West as part of this report.

Table 5: Sewer Flows and Water Use

Period[i]	Oak St. Lift Station		Potable Water Production	
	Avg. (MGD)	Max. (MGD)	Avg. (MGD)	Max. (MGD)
2011	0.378	0.570	0.347	0.689
Winter 2011[ii]	0.360	0.510	0.212	0.249
2012	0.388	0.770	0.654	1.414
Winter 2012	0.403	0.640	0.289	0.339
2013	0.417	0.870	0.632	1.392
Winter 2013	0.390	0.820	0.342	0.420
2014	0.424	0.880	0.775	1.527
Winter 2014	0.438	0.730	0.552	1.351
2015	n/a	n/a	0.616	1.148
Winter 2015	n/a	n/a	0.415	0.671
2016	0.370	n/a	0.648	1.374
Winter 2016	0.400	n/a	0.353	0.398
2017	0.440	0.660	0.702	1.550
Winter 2017	0.388	0.443	0.477	0.607
2018	0.351	0.443	0.685	1.579
Winter 2018	0.439	0.492	0.349	0.400
2019	0.389	0.492	0.688	1.492
Winter 2019	0.328	0.388	0.394	0.539
2020	0.281	0.350	0.706	1.381
Winter 2020	0.298	0.331	0.462	0.546
Annual	**0.386**	**0.880**	**0.645**	**1.579**
Winter	**0.413**	**0.820**	**0.384**	**1.351**

i – Complete annual data for all years listed in the table was not provided.
ii – Winter period is from Nov. 1st through April 30th.

2.2.1 Peaking Factors and I/I

Peaking factors are typically applied to average-day wastewater flows to account for peak hourly flows generated by the system during maximum water use periods in addition to I/I during storm events or periods of high groundwater. As seen in Table 6, typical peak hour/average day peaking factors for a primarily residential type of community range from 2.5 to 3.5. A peaking factor of 3.0 was used in modeling the sewer collection system for this PER.

Currently, more specific data[2] is required to accurately estimate base sewer flow and I/I rates. However, a comparison of the annual average daily flow rate to the average ADMM for the period of 2011 through 2020 indicates that just over 60 percent of the max daily flow could be generated by I/I. One contribution to I/I which requires more study is that of basement sump pumping contributions in the southern part of the City.

Table 6: Sewer Flow Characteristics

Annual Average Daily Flow	0.386	MGD
Average Day Max Monthly Flow	0.880	MGD
Average # of Services	820	
Flow per Connection[3]	466	gpd/conn.
Average Population	2620	
Flow per Person[4]	146	gpd
Estimated I/I	0.494	MGD
Volume of Max Daily Flow from I/I	64%	
Max Daily Peaking Factor	2.3	

2.2.2 Influent/Effluent Strength Characteristics

The discharge permit requires both influent and effluent sampling and testing. Influent samples are taken at the Oak Street Lift Station and effluent samples prior to reuse or disposal.

[2] Hourly flow meter data was not available for this PER.

[3] For comparison, a community the size of Carlin typically has a rate of 200 to 250 gpd per connection.

[4] For comparison, a community the size of Carlin, typically has a wastewater volume in the range of 80 to 100 gpd per person (gpdpp).

Table 7: Wastewater Strength

Period	Oak St. Lift Station		WWTP Effluent			
	Max. BOD/CBOD (mg/l)	Max. pH (S.U.)	Max. CBOD (mg/l)	Max. pH (S.U.)	Max. TSS (mg/l)	Total Nitrogen as N (mg/l)
2011	151	7.8	18	8.0	39	11
2012	161	7.8	29	8.0	48	14
2013	130	8.9	25	7.9	28	20
2014	111	7.7	27	8.0	42	17
2015	No Data	No Data	No Data	No Data	No Data	No Data
2016	82	7.9	24	8.6	48	15
2017	114	7.7	18	8.3	30	5
2018	126	7.6	9	8.0	10	7
2019	100	7.7	22	8.7	44	6
2020	128	7.6	**33**	8.3	54	16
Average	**123**	**7.9**	**22.8**	**8.2**	**38.2**	**12.3**

2.3 COMPLIANCE

In general, the City of Carlin's sewer system has been compliant with State permit requirements. As further discussed in this Section, the BWPC does have recommendations for improvements to the Carlin WWTP.

2.3.1 Discharge Permit

The City currently operates under Permit Number NEV93001 issued by the BWPC. The permit allows the City a 30-day average influent volume of 0.50 million gallons per day (MGD) and a 0.90 MGD daily maximum. The permit had an expiration date of April 21, 2015; however, the permit is currently being reviewed by the BWPC for renewal and stays in effect until the renewal process is complete. A copy of the permit is included in Appendix C.

Flow volumes for influent, effluent to storage, and effluent to RIBs are required to be metered continuously while the effluent to irrigation is required to be metered or calculated during irrigation. The quarterly average effluent discharge limitations for Biochemical Oxygen Demand (BOD) is 30 milligrams per liter (mg/l) with a daily maximum of 45 mg/l. Total Suspended Solids have an effluent daily maximum of 90 mg/l and pH levels are to be maintained between 6.0 – 9.0 standard units.

The permit authorizes discharge from the secondary treatment pond to the storage reservoir and the east, central, and west irrigation fields during irrigation. Excess effluent which cannot be stored in the reservoir for irrigation use may be discharged to the east and west RIBs, east and west pasture irrigation areas, and/or the emergency irrigation south sand field.

Groundwater quality and level measurements are required for each of the five monitoring wells on a quarterly basis. Total nitrogen as N is required to be monitored and reported for each well and has a maximum concentration limitation of 10 mg/L. Nitrate as N, chlorides, and Total Dissolved Solids (TDS) are also required to be monitored and reported for each well.

2.3.2 Compliance Inspections

The most recent BWPC inspection of the City's wastewater collection and treatment system was conducted on July 29, 2015. A copy of the corresponding Compliance Evaluation Report is included in Appendix C. The report contains various conclusions and recommendations.

The NDEP water balance estimate using Carlin's metered data suggested that the pond seepage losses for the two clay-lined treatment ponds may be significantly higher than published State and National guidelines. This liner was originally installed in the 1960s and has likely been compromised from weathering, erosion, rodents, weed growth, etc. However, inaccuracy in the influent flow meter and failure to account for evaporation from the storage reservoir likely account for a significant volume of the seepage losses calculated by NDEP.

The inspection recommended that leak-detection wells for the two treatment ponds be considered to monitor potential losses from the two treatment ponds. The BWPC also suggested that wells MW-1 and MW-2 be reviewed for removal because the RIBs are rarely if ever, used. However, these two wells still play a role in monitoring for losses from the storage reservoir

2.4 CONDITION OF EXISTING FACILITIES

The following subsections describe the condition of the City's sewer collection system, lift stations, WWTP, and effluent reuse facilities. Refer to Figures 4, 5, and 6 on the following pages for a map and other information on the existing system.

Legend

- Sewer Manhole

Sewer Cleanout

Cleanout Type

- Lateral Cleanout
- Main Line Cleanout
- Sewer Pump Station (PS)
- Sewer Treatment Plant (WTP)

Sewer Storage Type

Storage Type

- Pond
- Septic Tank

Sewer Pipe Type

Pipe Type

- Gravity Main
- Forced Main
- Leach
- Lateral
- Other
- Casing

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City of Carlin
Figure 4 - Existing Sewer System

N

1":1000'

Maxar

Legend

- PS — Sewer Pump Station
- Sewer Manhole
- Lateral Cleanout
- Main Line Cleanout

Pipe Type, Diameter, Length

- Forced Main, 3" - 1,754'
- Forced Main, 4" - 797'
- Forced Main, 8" - 4,369'
- Gravity Main, 6" - 7,177'
- Gravity Main, 8" - 53,618'
- Gravity Main, 10" - 8,631'
- Gravity Main, Unknown - 5,556'
- Lateral, 4" - 718'
- Lateral, Unknown - 2,171'

Pipe Ages

- 1930s
- 1960s
- 1980s
- 1990s
- 2008

8"S35

8"ACP

PS

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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City of Carlin
Figure 5 - Sewer System Pipe Description South

N

1 " = 600 '

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Legend

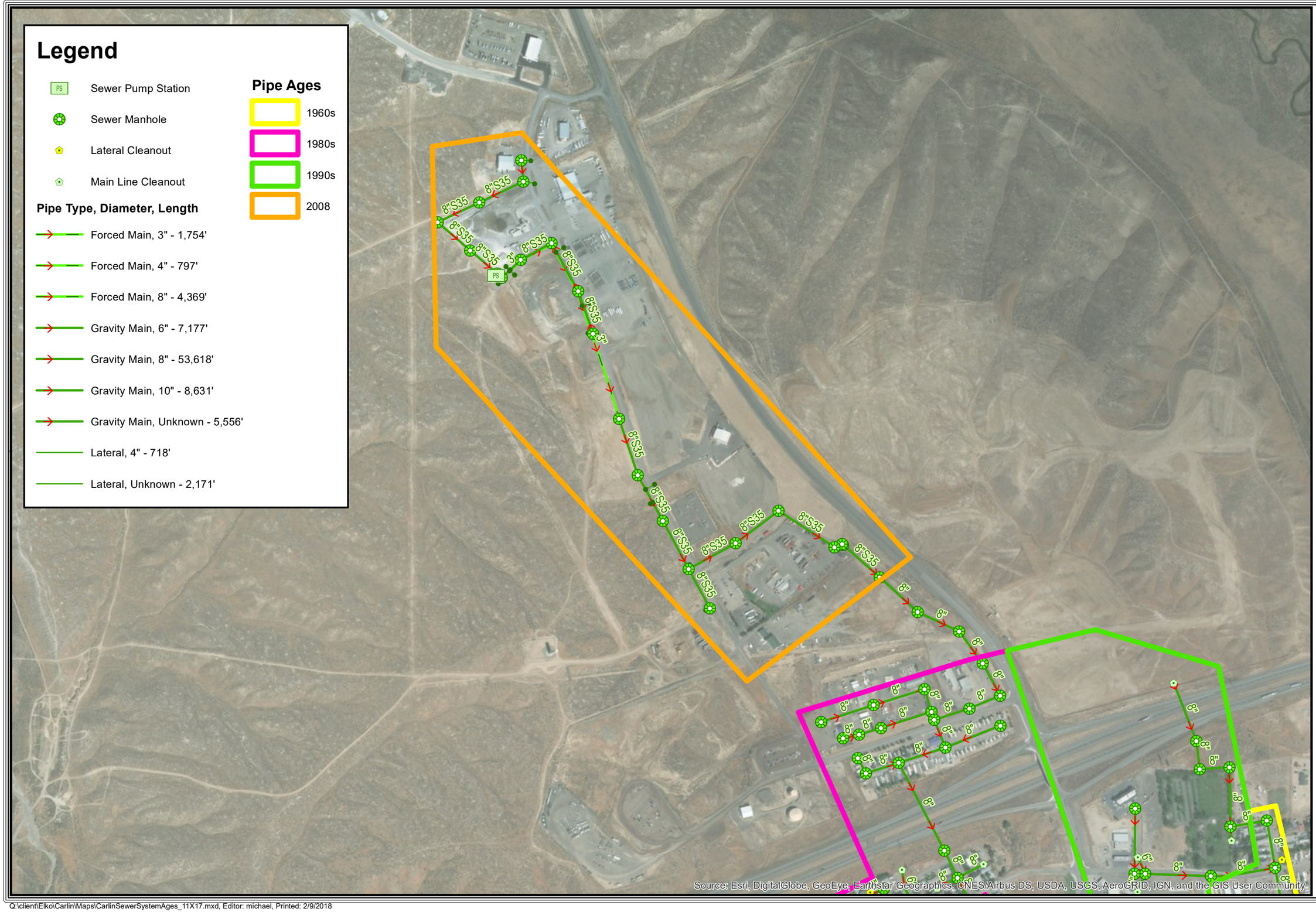
- PS — Sewer Pump Station
- Sewer Manhole
- Lateral Cleanout
- Main Line Cleanout

Pipe Ages

- 1960s
- 1980s
- 1990s
- 2008

Pipe Type, Diameter, Length

- Forced Main, 3" - 1,754'
- Forced Main, 4" - 797'
- Forced Main, 8" - 4,369'
- Gravity Main, 6" - 7,177'
- Gravity Main, 8" - 53,618'
- Gravity Main, 10" - 8,631'
- Gravity Main, Unknown - 5,556'
- Lateral, 4" - 718'
- Lateral, Unknown - 2,171'



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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City of Carlin
Figure 6 - Sewer System Pipe Description North

N

1 " = 600 '

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2.4.1 Collection System

The collection system is made up of gravity collection pipes, manholes, lift stations, and force mains. This section will detail each component of the collection system and identify key shortcomings which may or may not require improvement.

Pipes

The collection pipes and force mains are made up of various diameters, material types, and lengths. The known pipe materials in the system are listed in Table 8 and are described in further detail in Appendix H. While the City has not performed a formal condition assessment[5] of its collection system pipes, there is strong evidence that the majority of collection pipes are in some state of failure.

The City has reported tree root intrusion problems at various locations in the collection system, with the most recent occurring in the PVC pipe in late March 2018. There are two lengths of 8-inch main within the area of the original clay pipe portion of the system that requires regular root clearing. The first length runs in a roughly east-west orientation in the alleyway located between Cedar Street to the north and Hamilton Street to the south from 7th Street westward to 3rd Street. The second length also runs in a roughly east-west orientation located in the alleyway between Bush Street to the north and Cedar Street to the south and runs from 13th Street westward to 8th Street. The City has general concerns that the remainder of the distribution system consisting of clay pipe has increasing maintenance issues. This theory is supported by significant I/I as discussed in Section 2.2.1.

[5] USDA has noted that the City performed a "smoke test" on the sewer system in conjunction with NV Rural Water. This data or report was not provided to Farr West prior to the preparation of this PER.

Table 8: City of Carlin SS Pipe Material Types, Diameters, and Lengths

Year Installed	Pipe Material	Diameter (in)	Type	Length (ft)[6]
1930	Likely Clay	Unknown	Lateral	300
1930	Likely Clay	Unknown	Gravity Main	1,300
1930	Likely Clay	6	Gravity Main	2,900
1930	Likely Clay	8	Gravity Main	13,900
1930	Likely Clay	10	Gravity Main	7,100
1960	Likely ACP	Unknown	Lateral	160
1960	Likely ACP	Unknown	Gravity Main	1,000
1960	Likely ACP	6	Gravity Main	2,100
1960	Likely ACP	8	Force Main	1,100
1960	Likely ACP	8	Gravity Main	9,700
1960	ACP	8	Force Main	3,200
1960	Likely ACP	10	Gravity Main	1,300
1970	Unknown	4	Lateral	290
1970	Unknown	6	Gravity Main	170
1970	Unknown	8	Gravity Main	2,100
1980	Unknown	Unknown	Lateral	1,100
1980	Unknown	6	Gravity Main	300
1980	Unknown	8	Gravity Main	10,000
1980	Unknown	10	Gravity Main	190
1988	Unknown	8	Gravity Main	4,000
1990	Unknown	Unknown	Gravity Main	600
1990	Unknown	6	Gravity Main	700
1990	Unknown	8	Gravity Main	5,400
2008	Unknown	Unknown	Lateral	500
2008	Unknown	3	Force Main	1,800
2008	Unknown	8	Gravity Main	1,200
2008	PVC	8	Gravity Main	5,500
			TOTAL	**77,910**

Further detailed in Section 4.0, improvement projects which replace failing sections of collection pipes were generated based on the following factors:

[6] Pipe lengths under 100-feet in length were omitted from this analysis.

Pipe Condition: The condition of the pipe is the most important category when assessing risk. Pipes in poor structural or operations and maintenance (O&M) condition have an adverse effect on the operation of the system. A video inspection and NAASCO PACP evaluation is required to confirm condition estimates based on pipe material, age, or repair history.

Pipe Material: Standard pipe materials have varied over the decades as industry preferences have changed. The different materials have ranging lifespans, points of failure, and reliabilities. For instance, pipes of different materials are constructed in different standard lengths, as shown below.

- Clay – 4-Foot Lengths
- ACP – 6-Foot Lengths
- PVC – 20-Foot Lengths

The shorter lengths of Clay and ACP pipe result in more joints, which act as potential points of failure, leakage, and intrusion.

Pipe Age: The age of pipes is an important factor as pipe materials deteriorate over time. As the age of a pipe increases, no matter the material, the risk of failure due to the composition or weakening of the pipe increases. The increased age can result in structural and O&M failures. Standard manufacturer-claimed pipe material service lives are shown below. Clay and ACP were the materials of choice for sewer pipe installations until the 1970s. Thus, pipes of these materials are generally nearing the end of their useful lives:

- Clay – 75 Years,
- ACP – 75 Years, and
- PVC – 80-100 Years.

Clay pipe can have a lifespan of 100 years or more if installed properly. However, experience with replacement projects has shown that clay pipes were historically not installed properly and have many points of failure. For these reasons, pipes made of clay and ACP should be prioritized for replacement.

Pipe Size: Consequences of failure are more severe for larger-diameter pipes. Thus, larger diameter pipes should be prioritized over smaller diameter pipes when determining the need for repairs or replacement.

Pipe Slope: The Recommended Standards for Wastewater Facilities (Standards) is the industry-accepted standard for specifying minimum pipe slopes for gravity wastewater collection facilities. For each pipe diameter the Standards identify the minimum acceptable slope to maintain sufficient velocity and prevent solids deposition within a given pipe. Pipes that do not meet the minimum recommended slope should be identified and considered for replacement.

Manholes

Another collection system component which can contribute significant volumes of I/I to system flows are manholes. The City currently has approximately 200 manholes in its collection system which range from 2-feet deep to over 11-feet deep and average 5.3-feet[7]. Manhole diameters are also currently unknown. A NAASCO MACP evaluation is required to evaluate the general condition of system manholes in order to make more accurate determinations on which manholes are contributing the greatest amount of infiltration to system flows.

[7] Manhole depths have not been confirmed against survey data. Field survey collected manhole rim elevations but did not dip system manholes.

2.4.2 Lift Stations

Oak Street Lift Station

The single lift station which conveys all sewer flows to the WWTP is located near the intersection of 4th and Oak Streets. The lift station has dry well housing pumps and controls and a wet well that receives influent from the entire City. The dry well extends more than 15 feet below grade and is accessible via a motorized lift. The two 15 horsepower (HP) lift station pumps are automated by a bubbler level sensor. The lift station pumps influent through eight-inch diameter ACP force main 3,400 feet from the lift station to the treatment ponds. The lift station was originally installed in 1972 with upgrades in 1989 including replacing the original 5 HP pump assemblies with 7.5 HP and 15 HP pump assemblies according to design documents. City operators indicate there are two 15 HP pumps that are approaching 30 years of age. The City also meters the effluent flow with a Polysonics flow meter in the force main downstream of the lift station. Additional information about the lift station is provided in Appendix D.

A PER, titled *Wastewater Pump Station and Screening System Project,* was prepared by Golder Associates for the replacement of this lift station as well as a new headworks system. The draft report was reviewed and provides the following information:

The existing influent screen is a manually cleaned, coarse bar screen installed in a 60-inch diameter manhole. The concrete top on the screen manhole is in poor condition. Operators must clean the bar screen daily, with additional cleaning needed on Monday's following weekend flows. As recent as the April 2018, the bar screens allowed wooden stakes to pass by and enter the pump station. This timed out the pump and required the removal of the debris. These screens are considered a significant shortcoming of the lift station.

From the screen manhole, the flow then enters the wet well from the south side of the screen manhole. There is an enclosed brick structure over the wet well. The wet well does not appear to be vented and the floor or top of the wet well is depressed about 18 inches. Due to the possibility of gas generation from septic sewage, this may be classified as a hazardous location in addition to being a confined space. This condition should be corrected by assuring positive venting of the wet well, removal of the structure and no longer using the room for maintenance storage (Golder). In summary, the current condition of the wet well indicates that the structure is nearing the end of its useful life.

The line from the wet well then enters the bubbler manhole where the pump suction lines connect to the pumps in the dry well. The suction lines enter the drywell about 17 feet below the ground surface. The lift station was originally installed in 1972 (with pump upgrades in 1989) and appears to be in good condition. Entry to the main drywell compartment is by an elevator through a steel access tube. Although it was not likely regulated when constructed, this area likely qualifies as a confined space but may not classify as a hazardous location as there is no exposure to raw sewage. Pumps run at a constant speed and are controlled by a bubbler level sensing system with the bubbler tube located in the bubbler manhole. The recent installation of a new bubbler level sensor has helped improve the daily operation of the pumps reducing pump run time according to operators.

The pump station facilities also include a 100-kilowatt stand-by generator and controls housed in an existing building separated from but adjacent to the wet well structure. A larger generator may be needed depending on the final electrical load for the new pumps and screening equipment (Golder).

The pump station discharges to an 8-inch asbestos cement force main, which is assumed to be a class 150 AC pipe. At this time, it is assumed that the force main is in serviceable condition. Using a practical peak design velocity of about 6.5 feet per second (ft/sec) for the 8-inch line, the capacity of the line is about 1,020 gpm. At the current pumping rate of between 700 and 750 gpm, the line velocity is 4.5 to 4.8 ft/sec or 69% to 74% of flow capacity (Golder).

Industrial Park Lift Station

Located north of the City west of State Route (SR) 277 and Griffen St., south of the 3-D Concrete parcel, this is the newest lift station and was constructed in 2011. The pump station pumps wastewater from the industrial park with two (2), 4 HP Flygt M 3085 pumps at a rate of approximately 50 gpm. Wastewater is pumped through a 3-inch force main for approximately 1,000 feet where enters an 8-inch gravity feed line flowing south toward and into the City collection system. The Industrial Park Lift Station has run at times near capacity with only a few parcels being served. It is believed that nearby truck wash facilities that overflow into the sewer could be the source of the extra flows. However, the extra flows need to be further investigated to verify the source.

East End Trailer Park Lift Station

A lift station located on the east side of the City services about 80 modular home spaces. The lift station is located northwest of Puett Drive and Maggie Court. This private sewer collection system, lift station, and 4-inch force main ties in to the City's collection system at a concrete box in the Chestnut/Huntley Alley near 15th Street. The private system is not a part of the maintenance responsibilities of the City.

2.4.3 Treatment System

Treatment Ponds

The City of Carlin treats wastewater using a municipal lagoon/pond system. This facility receives domestic sewage from the City's collection system through an 8-inch diameter ACP force main connected to the Oak Street Lift Station. Records indicate that the ponds total approximately 18.5 acres in area, have 6-inch-thick clay liners, and are contained by 8-foot-high earthen dikes built on top of existing ground. Although the ponds are near the Humboldt River, they are considered out of the floodplain due to the height of the dikes. The ponds have a volume of approximately 2.2 million gallons. The clay lined ponds allow the rapid growth of cattails and bulrush which is a constant maintenance issue for the City. The clay lining is several decades old and may be compromised, allowing infiltration of partially treated wastewater into the ground. Current metering indicates that the ponds operate at 100,000 GPD below the permitted capacity of 500,000 GPD.

Cell #1 is the primary pond with a surface area of 10 acres. Two earthen baffles installed in 1989 replaced the old panel baffles. The baffles increase the detention time of the wastewater. The facultative cell's aerobic upper zone is enhanced by aerators, two 7.5-HP aerators in the first baffle area, one 5-HP aerator in the second baffle area, and a final 5-HP aerator at the east end of the cell's third baffle area. Operating depth has been slowly decreasing as sludge builds in the bottoms of the pond. The last time sludge was removed was 1988 and the pond is likely due for sludge reduction and/or removal. At a minimum, a sludge survey should be performed to confirm sludge depths in the pond(s). Cell #1 is also classified as a low hazard dam, Permit ID NV10684.

Cell #2 is a polishing pond that receives flow from Cell #1 through a transfer structure located near the north end of the separation dike of the two cells. Cell #2 has a surface area of 8.5 acres and is located on the east side of Cell #1. Effluent from Cell #1 flows into a 10-inch diameter AC pipe approximately 3 feet below water surface. Head pressure forces the water up into a manhole with a standpipe inside. Water fills the manhole and overtops into the standpipe that is about 0.2 feet lower than Cell #1's water surface. The standpipe turns 90 degrees to horizontal below the manhole and discharges into Cell #2 about 2 feet above the pond bottom. No mechanical aeration is used in Cell #2, but with a large surface area, sufficient wind-driven aeration and surface mixing is present. Cell #2 is also a low hazard dam, Permit ID NV10711. Effluent from Cell #2 discharges into structures on the south end of the pond and is either stored in a reservoir, distributed as irrigation water or sometimes is disposed of in rapid infiltration basins (RIB).

On average the WWTP does meet permit limitations. Exceedances of the permitted limits include an average influent flow overage of 0.53 MGD in the month of June 2013; six maximum Carbonaceous

Biochemical Oxygen Demand ($CBOD_5$) overages (MCL= 45 mg/l) of 53 mg/l, 52 mg/l, 56 mg/l, 57 mg/l, 46 mg/l and 74 mg/l in the months of June 2011, October 2012, February 2013, April 2013, April 2014 and May 2014, respectively; and a maximum TSS overage of 102 mg/l in April of 2014.

Two conditions may explain these exceedances. First, significant sludge buildup in the pond cells reduces active volume and adds organic loading from anaerobic decomposition, contributing to the occasional high $CBOD_5$ levels. If this is a significant factor, then sludge should be reduced and/or removed from the ponds as a remedy. Second, high algae concentrations in the effluent caused by high temperatures in spring and summer months also may contribute to occasional high $CBOD_5$ and an abnormally high TSS concentration. A possible mitigation measure for algal bloom events if storage is available is to store the effluent until the algae concentration naturally reduces (Golder).

The discharge permit also requires the City to monitor groundwater at monitoring wells (MW) MW-1 through MW-5. Originally drilled in 1990, the existing monitoring wells around the treatment ponds are located at distances that are greater than current guidance allows (i.e. 250-foot maximum). MW-5 is the closest at 335 feet to the southeast of the polishing pond while MW-3 is approximately 1,840 feet westerly of the primary pond. MW-4 is located 680 feet southwest of the primary treatment pond. Refer to Appendix B for monitoring well details.

The existing monitoring wells are sampled quarterly for the monitoring of total dissolved solids, chlorides, nitrate, total nitrogen, depth to groundwater, and groundwater elevation. The discharge permit attached in Appendix C defines required actions if total nitrogen levels reach 7, 9, and 10 mg/l at any of these monitoring wells though levels have been historically below these limits, as recorded in Table 9.

Table 9: 2020 Monitoring Well Data

Quarter	Well ID	Total Nitrogen (mg/l)	Chlorides (mg/l)	TDS (mg/l)
1st	MW-1	2.3	100	820
2nd	MW-1	2.2	120	870
3rd	MW-1	4.0	100	770
4th	MW-1	1.4	98	780
1st	MW-2	0.8	18	410
2nd	MW-2	0.5	21	410
3rd	MW-2	0.6	18	380
4th	MW-2	1.2	15	370
1st	MW-3	0.9	41	560
2nd	MW-3	0.6	46	550
3rd	MW-3	< 0.2	45	560
4th	MW-3	0.5	42	600
1st	MW-4	3.2	130	800
2nd	MW-4	2.8	150	850
3rd	MW-4	5.1	110	770
4th	MW-4	2.7	100	710
1st	MW-5	8.3	81	830
2nd	MW-5	5.5	140	1000
3rd	MW-5	13	140	1300
4th	MW-5	12	120	1100
Limits	**N/A**	**10**	**M&R**	**M&R**

Data Source: Silver State Labs 2020 and 2021 Analytical Report

Table 10: Monitoring Well Locations

	Described Location	Lat. (D M S)	Long. (D M S)
MW #1	West RIB	40° 42’ 7.4” N	116° 6’ 16.2” W
MW #2	East RIB	40° 42’ 17.3” N	116° 5’ 54.0” W
MW #3	West Irrigation Field	40° 42’ 31.3” N	116° 6’ 16.9” W
MW #4	Central Irrigation Field	40° 42’ 35.6” N	116° 6’ 0.3” W
MW #5	East Irrigation Field	40° 42’ 46.3” N	116° 5’ 35.0” W

Data Source: NDEP BWPC 2015 Inspection Report.

Coordinates: WGS84 datum.

Effluent Pump Station

Effluent from Cell #2 flows through a 10-inch pipe by gravity into a pump house that contains piping, pumps and controls and constitutes the effluent pump station. Two 20-HP pumps are connected to ductile iron pipes along with various fittings, valves, and a flow meter. The pumps can distribute water to nearby irrigation fields or to the water storage reservoir or infiltration. The pumps can also receive water from the storage reservoir and pump water to irrigation by operators manually opening or closing certain valves.

Effluent Irrigation

The treated effluent, or reuse water, from Cell #2 is used to irrigate fields during the growing season. Water is conveyed from the effluent pump station by 6-inch and 8-inch PVC pipe and distributed as needed around the irrigation fields. The effluent is then dispensed through risers at each field. See the "Carlin Sanitary Sewer System Overview" in Figure 4 for the geographical location of each of the elements discussed.

The three regularly used irrigation fields are named "east irrigation field", "central irrigation field", and "west irrigation field". A fourth irrigation field used during emergencies located directly south of the west irrigation field across the river channel is named "south sand field". In 2014 reuse averaged 60,000 GPD from April to August. New data from 2016 to 2017 has errors and cannot be relied upon.

Storage Reservoir and Rapid Infiltration Basins (RIB's)

During the non-irrigation season, the treated effluent is pumped through a 10" PVC pipe to a storage reservoir located south of the Humboldt River. Two RIBs adjacent to the reservoir are available to dispose of the treated effluent and are designated the West RIB and the East RIB. The RIBs are generally inactive but are reserved for disposal when irrigation fields are unavailable, and the storage reservoir is full. See the "Carlin Sanitary Sewer System Overview" in Figure 4 for the geographical presentation of each of the elements discussed. In 2014 flows to storage averaged 190,000 GPD. Recent data has a wide range of inconsistencies from an average 334 GPD to 179,000 GPD and cannot be relied upon. The reservoir and RIBs are considered low-hazard dams.

2.5 EXITING FINANCIAL STATUS

Since July of 2020, the City has maintained a sewer system enterprise fund to track the financial activities of the sewer system. However, the City bills its residents a user rate of $78.75 on a monthly basis which includes funds for the water system, sewer system, landfill, and streetlights. Of this amount, $29.85 is estimated as the amount dedicated to the sewer system. For sewer service, Carlin bills across three different customer classes. During 2020, there were 781 sewer customers: 755 residential, and 26 commercial customers. Sewer system billing rates and 2020 customer counts are summarized in Table 11.

Table 11: 2020 Customers and Sewer Billing Rates

Sewer Customer Type	Total Customers	Rate
Sewer – Residential & Commercial	781	$ 29.85
Sewer Flat Rate RV Parks	1	$ 91.00
Sewer RV	25	$ 17.23

Because the sewer system has only operated as an enterprise fund for one year, comprehensive financial data does not exist. Looking over certified audits from fiscal year (FY) 2009 through 2020 it appears that sewer system revenues have not been sufficient to cover annual expenses over that period. One item to note is that the expense total listed in Table 12 includes depreciation which averaged $104,000 annually over the five-year study period.

Table 12: Estimated Sewer System Revenues and Expenses

Year	Revenues	Expenses
2009	$281,888	$328,171
2010	$290,397	$398,893
2011	$303,877	$396,415
2012	$315,806	$419,899
2013	$339,871	$415,960
2014	$342,026	$421,765
2015	$347,071	$493,633
2016	$340,000	$476,693
2017	$325,472	$585,814
2018	$325,128	$436,286
2019	$323,948	$446,535
2020	$331,517	$419,150
2016-20 Average	**$329,213**	**$472,896**

The City is actively pursuing improvements to how they manage their water and sewer systems from a financial standpoint. A formal rate study for all their utility services is near complete and includes considerations for the recommendations of this PER. The user rates proposed in the rate study will ensure that each system brings in sufficient annual revenues to cover annual expenses in addition to building and maintain adequate reserve balances. It is expected that new user rates will be in place by calendar year 2022. Additional financial information is provided in Appendix G.

3.0 NEED FOR PROJECT

3.1 HEALTH, SANITATION, AND SECURITY

The most significant concern related to public health that the City sewer system presents is related to meeting discharge permit limits as specified by NDEP. Technically, the WWTP has exceeded discharge concentrations for CBOD (i.e., six occurrences) and TSS (i.e., one occurrence) in the past; although, there does not seem to be a chronic history of violating permit terms. As discussed in Section 2.0, there could be multiple factors that caused or influenced the violations, and the City should pursue activities that limit or reduce the variability of WWTP performance.

A second concern related to health is the viability of the clay liner coupled with the distance of the monitoring wells from the treatment ponds and their ability to adequately profile impacts to adjacent groundwater. This issue is complicated by the inability to provide an accurate water balance to support water losses due to percolation. Additionally, the monitoring wells were installed prior to the current requirement for the wells to be within 250-feet of treatment storage facilities (e.g. primary, treated effluent) so they are not reliable representative leak detection wells for the treatment ponds. The City should either install these wells in good faith or wait for them to be required as part of a discharge permit renewal. A new liner system should also be pursued if the ponds are found to be leaking and negatively impacting groundwater in the area.

The final concern is from a sanitary perspective and is related to the screen at the Oak St. Lift Station. These screens are cleaned manually on a daily basis and provide an environment where raw sewage debris could come into human contact. Additionally, the structures around the screen and wet well are in poor condition and make maintenance activities more difficult than they would be with a modern facility.

3.2 AGING INFRASTRUCTURE

Most of the concerns related to the City's sewer system are consistent with a system which has not been significantly improved in almost 30 years. The following is a summarized list of the aging infrastructure issues explained in greater detail in previous sections:

- Aging original section of collection system – reported tree root intrusion. Recent tree root intrusion found in PVC pipe;
- Replacement of the Oak Street Lift Station, Smith and Loveless duplex wet well – dry well sewage pump station including the wet well inlet screen and antiquated flow/totalizing meter;
- Inaccurate flow metering data recordation at the Oak Street Lift Station and treatment effluent pumping;
- I/I, believed to account for a significant percentage of sewage volume, cannot be accurately estimated;
- The approximate 43-year old clay liners of the treatment ponds will only continue to degrade allowing additional seepage; and
- Sludge has not been removed from the treatment ponds since 1988.

3.3 REASONABLE GROWTH

Upsizing infrastructure improvement projects to account for future growth is not a significant factor or component in the scope of the projects as laid out in this PER. The City experienced significant growth (approximately 2.9 percent exponential) from 2010 through 2015 as a result of mining industry expansion over the same period, and populations have remained steady at the 2015 value. Additionally, over the next ten years, the state demographer projects the population to increase slightly, before possibly plateauing in the subsequent 20 years.

However, an argument can be made for evaluating growth potential at the time of project design. Carlin is near the geographic center of one of the world's significant gold mining districts and in the past, the population has often spiked in correlation with the price of gold. Allowances should be made for an additional 125 connections over the next 20 years. The City has also assessed the future development potential of four areas based on the costs to extend City infrastructure into those areas. The four assessed sites are:

- Site 1 – Industrial Park,
- Site 2 – Tomera Ranch Road,
- Site 3 – Carlin Crossing Phase 1, and
- Site 4 – I-80 and State Route 278 Interchange.

A memo assessing the feasibility of each of the four sites is in Appendix F.

4.0 ALTERNATIVES CONSIDERED

Three project alternatives are compared below, including a No Action alternative. The previous sections have identified deficiencies in the sewer collection system that need to be addressed to continue to serve the community. Deficiencies include leaking collection pipes, tree root intrusion, aging infrastructure, and lack of accurate influent metering data. With the exception of the No Action Alternative, the sewer system improvement alternatives presented in this section resolve the deficiencies that have been identified.

4.1 ALTERNATIVE 1 – NO ACTION

4.1.1 Description

One option available to the City is to not pursue any improvements to the sewer collection systems or treatment facilities and respond to failures on an as-needed basis. The No Action alternative would not identify any sewer system improvement project on future capital improvement plans and would not set aside specific funding sources for the improvements.

4.1.2 Design Criteria

The design and construction of any improvements will be subject to the design policies of RUS and 7 CFR 1780.55. All improvements will conform to State of Nevada clean water standards and meet ASTM standards. Since the No Action alternative proposes no improvement to the sewer system, the previously stated design criteria will not apply to this alternative.

4.1.3 Environmental Impacts

More specifically, the alternatives will undergo an environmental impact analysis and will minimize impacts to the environment by being primarily constructed in previously disturbed areas. It is not anticipated that any alternative would have a unique, negative direct impact on the surrounding environment or land resources.

4.1.4 Land Requirements

Since the No Action alternative proposes no improvement to the sewer system, there will not be any land or right of way requirements for this alternative.

4.1.5 Potential Construction Problems

Since the No Action alternative proposes no improvement to the sewer system, there are not any construction problems anticipated for this alternative. However, it is reasonable to expect that emergency repairs of future infrastructure failures will result in more construction conflicts than projects which have undergone the standard engineering design process.

4.1.6 Sustainability Considerations

The City is frequently forced to perform emergency repairs or emergency maintenance activities to the sewer collection system and wastewater treatment facilities and anticipates more frequent and more significant failures in the future. Since these systems are already in a state of "failure" and since the No Action alternative proposes no improvement to the sewer system, this alternative would not improve system sustainability. Additionally, the pumps at the Oak Street Lift Station are near the end of their usable lift and under the No Action Alternative, these inefficient pumps would continue to be operated resulting in excessive energy consumption.

4.1.7 Cost Estimate

A class 5 cost estimate per the Association for the Advancement of Cost Engineering International (AACEI) is typically provided for all alternatives. By definition, class 5 estimates are based on conceptual designs and unit costs and have a level of accuracy of (-50% to +100%). More accurate cost estimates (i.e., class

3) will be prepared for the proposed project (Section 6.0) and will be updated during the design process for each phase of the project. All project cost estimates reflect materials and methods that comply with the American Iron and Steel requirements.

Since the No Action alternative proposes no improvement to the sewer system an opinion of probable costs for the improvements has not been prepared. However, it is estimated that future O&M costs will increase by $40,000 per year to account for "spot" repairs of the collection system (including lift station) and treatment facility.

4.2 ALTERNATIVE 2 – REPLACE COLLECTION SYSTEM + LIFT STATION + WWTP PROJECTS

4.2.1 Description

This alternative includes replacing approximately 8 miles of the sewer collection system and replacing infrastructure at the Oak Street Lift Station. The project would also include more than 200,000 square feet of asphalt paving and replace sewer laterals for 803 current customers. In general, this project proposes to replace just over half of the existing sewer collection over an area of about 0.5 square miles. For this alternative, all sewer pipes would be installed via open-trench construction in previously disturbed areas. It is assumed that the City would pursue these improvements in phases for two primary reasons. First, the total costs of these improvements are expected to significantly exceed any capital reserves or annual user fee revenues so a funding plan will need to be developed over several years. And secondly, to confirm the condition and design capacity of existing infrastructure. For example, if the replacement of Priority 1 pipes reduce total system flows by 20 percent it is reasonable to expect that the design capacity of the Oak Street lift station replacement should also be reduced. This alternative consists of the following phases:

- Phase 1 – Investigate existing pipes that were built in the 1930s with SSES. (e.g., sewer video inspection, inflow + infiltration analysis)
- Phase 2 - Replace pipes that are in the highest priority group based on Phase 1 SSES investigation (10, 8, and 6-inch)
- Phase 3 - Replace the Oak St. lift station and replace the 8" force main that runs to the WWTP.
- Phase 4 - Remove sludge from the wastewater treatment ponds
- Phase 5 - Install new monitoring wells at the wastewater treatment ponds.
- Phase 6 - Investigate existing pipes built in the 1960s with SSES
- Phase 7 - Replace pipes that are considered the highest priority group based on Phase 6 SSES investigation (10, 8, and 6-inch)
- Phase 8 – Replace remaining problematic pipes in the system

4.2.2 Design Criteria

The design and construction of any improvements will be subject to the design policies of RUS and 7 CFR 1780.55. All improvements will conform to State of Nevada clean water standards and meet ASTM standards.

4.2.3 Environmental Impacts

The improvements being proposed by this alternative will undergo an environmental impact analysis and will attempt to minimize impacts to the environment by being primarily constructed in previously disturbed areas. This alternative is not anticipated to have any unique, negative, or direct impact on the surrounding environment or land resources. Also, SHPO consultation[8] has been initiated, although has not been

[8] SHPO consultation is not required for phases of the project which are not funded from federal sources and do not require ROW across federal lands.

completed or resolved at the time of writing of this report. It is anticipated that the lead agency (e.g., USDA) will complete the SHPO consultation once a funding application is in place.

4.2.4 Land Requirements

Significant land acquisition or right of way (ROW) requirements are not anticipated for this alternative since the majority of construction will occur in City secured ROW. However, the replacement of existing service connections can result in the need to repair infrastructure on private property if the condition of the lateral is in a state of complete failure. It is expected that the City will negotiate access with private landowners on a case-by-case basis and ROW or access rights should not result in any additional expense or cost. Finally, jack and bore construction methods will be used to install sewer pipes across NDOT and Union Pacific ROW. Permission to bore under both ROWs will be required, which entails obtaining a permit(s).

4.2.5 Potential Construction Problems

Potential construction problems include poor records of underground infrastructure, existing asphalt paving and sidewalks that are in a failed state, and existing sewer mains and laterals which may be in poor condition at the proposed points of connection. Jack and bore construction methods will also be required at multiple locations to comply with encroachment permit terms and conditions. Another known issue is that construction in alleyways may cause access issues for residents and businesses. Additionally, working in tight quarters through the alleyways will require a vertical walled trench to be excavated. Trench wall shoring will be needed to minimize caving risks if the excavation will exceed OSHA standards.

4.2.6 Sustainability Considerations

This project would greatly improve system sustainability by replacing more than 50 percent of distribution mains with new pipe, reducing I/I, and appropriately sizing the lift station to actual sewer flows instead of conveying significant I/I flows. This reduction in I/I should also directly reduce energy costs associated with the Oak St. lift station.

4.2.7 Opinion of Probable Cost

A class 5 opinion of probable cost per AACEI is provided below in Table 13 for this alternative. By definition, class 5 estimates are based on conceptual designs and unit costs and have a level of accuracy of (-50% to +100%). More accurate cost estimates (i.e., class 3) will be prepared for the proposed project (Section 6.0) and will be updated during the design process for each phase of the project. All project cost estimates reflect materials and methods that comply with the American Iron and Steel requirements.

Table 13: Opinion of Probable Cost – Alternative 2

Item	Description	Quantity	Unit	Unit Price	Total
1	Investigate I/I + Identify Problem Areas	1	LS	$ 200,000	$ 200,000
2	6" PVC SDR-35 Pipe	5,400	LF	$ 120	$ 648,000
3	8" PVC SDR-35 Pipe	29,100	LF	$ 130	$ 3,783,000
4	10" PVC SDR-35 Pipe	8,700	EA	$ 150	$ 1,305,000
5	48" Sewer Manhole	94	EA	$ 5,750	$ 540,500
6	Jack & Bore	700	LF	$ 210	$ 147,000
7	AC Pavement Patch	216,000	SF	$ 5.20	$ 1,123,200
8	Sewer Service Connection w/ Cleanout	500	EA	$ 3,700	$ 1,850,000
9	30 HP Lift Station	1	LS	$ 2,500,000	$ 2,500,000
10	8" Force Main	4,400	LF	$ 110	$ 484,000
11	Wastewater Sludge Removal	1	LS	$ 2,000,000	$ 2,000,000
12	25-ft Deep Monitoring Wells (4-inch casing)	2	EA	$ 47,050	$ 94,100
13	CCTV Video Inspection	1	LS	$ 200,000	$ 200,000
14	Miscellaneous (Mobilization, Traffic Control, Sidewalk)	1	LS	$ 3,481,400	$ 3,481,400
				Sub Total:	$ 18,356,000
				Construction Contingency (25%):	$ 4,589,000
				Engineering & Inspection (25%):	$ 4,169,000
				PROJECT TOTAL:	**$ 27,114,000**

Note: some values have been rounded to the nearest $1,000

4.3 ALTERNATIVE 3 – REPLACE COLLECTION SYSTEM + LIFT STATION + WWTP PROJECTS (TRENCHLESS CONSTRUCTION)

4.3.1 Description

This project alternative proposes to replace system components in the same phases as alternative 2. However, this alternative would replace all failing sewer collection mains with a cured in place pipe (CIPP) inside of existing pipes as opposed to completely replacing all failing pipes with new materials. This method of construction has many benefits, including:

- reduced unit installation costs,
- smaller quantities of asphalt which needs to be replaced,
- pipe segments replaced with jointless, seamless pipes, and
- reduced traffic control costs.

Previously, it was believed that this method required a "host" pipeline that is without significant structural flaws or failures in order to install the flexible liner. However, Farr West has completed multiple, successful CIPP installations in pipelines in various stages of failure. Farr West is confident in recommending CIPP as a preferred method of construction for any pipeline which is not collapsed more than 30 percent, does not have significant "sagging" in the vertical alignment, or has penetrations which could compromise the structural stability of the liner. The first phase of this project includes an investigation which will confirm the condition of the existing pipeline and the quantity of pipe in the existing system which is in this problematic condition.

CIPP is still a viable construction method for existing systems with these conditions, although any problem area would be excavated and replaced with new, rigid pipe in order to eliminate the flaw. Open-trench construction methods would also be implemented if there is a need to re-align any section of the collection system. It should be noted that lined pipe can only be cleaned in the future with a water-jetting based device as opposed to mechanical cables or "snakes" that would damage the liner material.

This alternative does not propose to replace any sewer lateral piping or install any new cleanouts with the improvements.

4.3.2 Design Criteria

The design and construction of any improvements will be subject to the design policies of RUS and 7 CFR 1780.55. All improvements will conform to State of Nevada clean water standards and meet ASTM standards.

4.3.3 Environmental Impacts

The improvements being proposed by this alternative will undergo an environmental impact analysis and will attempt to minimize impacts to the environment by being primarily constructed in previously disturbed areas. This alternative is not anticipated to have any unique, negative, or direct impact on the surrounding environment or land resources. Additionally, it is reasonable to assume that this project alternative will have a reduced environmental impact as compared to alternative 2 since the amount of excavation required to complete the project will be greatly reduced. Finally, SHPO consultation has been initiated, although has not been completed or resolved at the time of writing of this report. It is anticipated that the lead agency (e.g., USDA) will complete the SHPO consultation once a funding application is in place.

4.3.4 Land Requirements

Significant land acquisition or right of way (ROW) requirements are not anticipated for this alternative since the majority of construction will occur in City secured ROW. However, the replacement of existing service connections can result in the need to repair infrastructure on private property if the condition of the lateral is in a state of complete failure. It is expected that the City will negotiate access with private landowners on a case-by-case basis and ROW or access rights should not result in any additional expense or cost. Finally, jack and bore construction methods will be used to install sewer pipes across NDOT and Union Pacific ROW. Permission to bore under both ROWs will be required, which entails obtaining a permit(s).

4.3.5 Potential Construction Problems

In addition to the potential construction problems listed for alternative 2, CIPP construction typically requires more extensive flow bypass pumping than open-trench construction and CIPP materials are typically not as readily available as PVC pipe and PVC fittings. One problem for alternative 2 which should be reduced under this alternative is the need for trench shoring for vertical walled trenches since the excavation of existing sewer lines will not be necessary.

Other potential construction problems include poor records of underground infrastructure, existing asphalt paving and sidewalks that are in a failed state, and existing sewer mains and laterals which may be in poor condition at the proposed points of connection. Jack and bore construction methods will also be required at multiple locations to comply with encroachment permit terms and conditions.

4.3.6 Sustainability Considerations

This project would greatly improve system sustainability by replacing more than 50 percent of distribution mains with essentially a new pipe, reducing I/I, and appropriately sizing the lift station to actual sewer flows instead of conveying significant I/I flows. This reduction in I/I should also directly reduce energy costs associated with the Oak St. lift station.

4.3.7 Opinion of Probable Cost

A class 5 opinion of probable cost AACEI is provided below in Table 14 for this alternative. By definition, class 5 estimates are based on conceptual designs and unit costs and have a level of accuracy of (-50% to +100%). More accurate cost estimates (i.e., class 3) will be prepared for the proposed project (Section 6.0) and will be updated during the design process for each phase of the project. All project cost estimates reflect materials and methods that comply with the American Iron and Steel requirements.

Table 14: Opinion of Probable Cost – Alternative 3

Item	Description	Quantity	Unit	Unit Price	Total
1	Investigate I/I + Identify Problem Areas	1	LS	$ 200,000	$ 200,000
2	6" Cured In Place Pipe	5,400	LF	$ 91	$ 493,000
3	8" Cured In Place Pipe	29,100	LF	$ 99	$ 2,875,000
4	10" Cured In Place Pipe	8,700	EA	$ 114	$ 992,000
5	48" Sewer Manhole	94	EA	$ 5,750	$ 541,000
6	Jack & Bore	700	LF	$ 210	$ 147,000
7	AC Pavement Patch	43,200	SF	$ 5.20	$ 225,000
8	Sewer Service Connection (Top Hat Only)	500	EA	$ 3,000	$ 1,500,000
9	30 HP Lift Station	1	LS	$ 2,500,000	$ 2,500,000
10	8" Force Main (Open Trench)	4,400	LF	$ 110	$ 484,000
11	Wastewater Sludge Removal	1	LS	$ 2,000,000	$ 2,000,000
12	25-ft Deep Monitoring Wells (4-inch casing)	2	EA	$ 47,050	$ 94,000
13	CCTV Video Inspection	1	LS	$ 200,000	$ 200,000
14	Miscellaneous (Mobilization, Traffic Control, Sidewalk)	1	LS	$ 2,438,960	$ 2,439,000
				Subtotal:	$ 14,690,000
				Construction Contingency (25%):	$ 3,670,000
				Engineering & Inspection (25%):	$ 3,250,000
				PROJECT TOTAL:	**$ 21,610,000**

4.4 PROJECT ALTERNATIVES SUMMARY

Table 15 summarizes the construction costs, professional services costs, estimates of annual O&M cost reductions, and recommended annual depreciation figures for each alternative. It should be noted that estimating the impacts to O&M costs for pipeline projects is extremely uncertain as compared to estimating the cost of operation of a pump station or treatment facility. For this PER, Farr West used financial data to estimate the annual cost of services and supplies for the sewer system; and then developed a per foot cost of operation for sewer pipelines. This value was then multiplied by the length of pipe replaced by each project to generate the annual reduction in O&M cost for each alternative. However, it is estimated that the annual depreciation for each alternative will outpace any reduction in O&M costs, therefore eliminating any cost savings (during the useful lifespan of the improvements) to the customer as a result of infrastructure improvements.

Table 15: Sewer System Project Alternative Cost Summary

Alternative	Hard Capital Cost	Soft Cost	Total Capital Cost	Annual Reduction in O&M Cost	Depreciation[1]
1	$ -	$ -	$ -	$ 40,000	$ -
2	$ 22,945,000	$ 4,169,000	$ 27,114,000	$ (41,864)	$ 542,000
3	$ 18,360,000	$ 3,250,000	$ 21,610,000	$ (41,864)	$ 432,000

1 – depreciation period of 50 years.

5.0 SELECTION OF AN ALTERNATIVE

The selection of project alternatives to address the system deficiencies will be based on both life cycle costs and monetary factors. Except for Alternative 1, all project alternatives will improve sewer system operations. These efficiencies are represented by a reduction in future system O&M costs. Figure 7 shows the location of the project phases. As discussed in Section 1.4, the City's sewer customers have been informed of the potential for significant increases to user rates as a result of the proposed improvements. City staff has requested that the proposed improvements be sub-divided into smaller projects so that the City can phase the financial impacts of these improvements over time. The City is also funding some improvement projects (i.e., Investigate I/I + Identify problem areas) with capital reserves to avoid increases in user rates.

5.1 PROJECT ALTERNATIVE SELECTION

Table 16 summarizes the capital costs, the Net Present Value (NPV) of the change to sewer system O&M costs, and the total 3-yr. lifecycle cost for each selected alternative. Annual O&M costs are estimated relative to existing O&M costs and are expected to be reduced as a result of the proposed projects. Most proposed projects will have little direct impact on O&M costs, with most of the anticipated cost reduction coming through the reduction of labor and materials associated with emergency repairs.

Table 16: Alternatives Net Present Value[i]

Alternative	Total Capital Cost	Annual Change in O&M Cost	O&M NPV 30 Yrs @ -0.9%[ii]	Total NPV
1 - No Action	$ -	$ 40,000	$ (1,418,832)	$ (1,418,832)
2 – Open Trench Construction	$27,114,300	$ (41,900)	$ 1,444,327	$ (25,670,000)
3 – Trenchless Construction	$21,610,000	$ (41,900)	$ 1,444,327	$ (20,169,000)

i – All values shown are in 2021 dollars.

ii – Real Discount Rate of -0.9% based on inflation rate of 3.0% and projected interest earned rate of 2.1%.

5.2 NON-MONETARY FACTORS

Non-monetary factors considered for the project alternatives are ease of construction, environmental impacts, ability to be constructed in existing rights of way, disruptions to the public, and the criticality of the infrastructure to system reliability. Table 17 scores each alternative based on these factors. Each alternative is scored with a 4 (best), 3 (good), 2 (satisfactory), or 1 (bad).

Table 17: Non-Monetary Factor Scoring

Alternative	Ease of Construction	Environmental Impacts	Existing ROWs	Public Disruption	Criticality	Total Scoring
1	4	2	4	1	1	**12**
2	2	4	2	2	4	**14**
3	3	4	3	3	4	**17**

Both Alternatives 2 and 3 address the deficiencies identified at the Oak Street Lift Station, WWTP, and pipes throughout the Service Area. The City will rely on information gathered from the pipe evaluation and inspection project(s) to make an informed decision about which pipes are in the most need of replacement. Based on the non-monetary factors covered in Table 17, Alternative 3 is the most preferred alternative.

Legend

- Private System
- Manhole Phase 2
- Cleanout Phase 2
- Sewer Pipe Phase 2
- Lift Station - Phase 3
- Force Main - Phase 3
- Lagoon - Phase 4
- Monitoring Wells - Phase 5
- Manhole Phase 7
- Cleanout Phase 7
- Sewer Pipe Phase 7
- Manhole Phase 8
- Cleanout Phase 8
- Sewer Pipe Phase 8

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City of Carlin
Figure 7 - Proposed Sewer Projects

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6.0 PROPOSED PROJECT

It is recommended that the proposed project be split into eight phases in order to provide a realistic balance between sewer system capital reserves, annual user fee revenues, and external financing sources. The eight phases, their anticipated year of construction, and projected funding sources are listed in Table 18. Upon completion, this project will increase flow capacity in the collection system, improve pump efficiency, reduce pump run time, and increase wastewater storage and treatment capacity. Additionally, all opinions of probable costs presented in this section have been updated to Class 3 (from Class 5) per AACEI and have an accuracy range of -20% to +30%.

Table 18: Proposed Project Phases

Description	Construction Begins	Proposed Funding Source
Phase 1 – Investigate I/I + Identify Problems Areas	FY 2022	Reserves
Phase 2 – Replace Priority 1 Pipes + Manholes	FY 2023	USDA-RD
Phase 3 – WWTP Sludge Removal	FY 2023	USDA-RD
Phase 4 – Lift Station Improvements	FY 2024	USDA-RD
Phase 5 – WWTP Monitoring Wells	FY 2023	City Funds
Phase 6 – Investigate Remaining Collection System	FY 2025	City Funds
Phase 7 – Replace Priority 2 Pipes + Manholes	FY 2026	Unknown
Phase 8 – Replace Priority 3 Pipes + Manholes	FY 2028	Unknown

6.1 PROJECT - PHASE 1

This phase involves conducting a Sewer System Evaluation Survey (SSES) for the pipes constructed in the 1930s. Conducting an SSES will provide information on the existing system including areas of infiltration and inflow (I&I), pipe materials and diameters, and pipeline deficiencies such as structurally damaged pipe sections and faulty joints. The City will then determine which locations are most in need of replacement. Determining the sections of pipe to replace based on the SSES allows the City to make the most informed decisions regarding pipe replacement instead of selecting an area based solely on pipe age. The City intends on using sewer utility capital reserves to fund the construction of these improvements.

Table 19: Opinion of Probable Cost – Phase 1

Item	Description	Quantity	Unit	Unit Price	Total
1	CCTV Video Inspection	1	LS	$ 200,000	$ 200,000
				Subtotal:	$ 200,000
				25% Contingency:	$ 50,000
				15% Construction Management & Inspection:	$ 30,000
				Project Total:	**$ 280,000**

6.2 PROJECT - PHASE 2

The precise size and lengths of pipe to be replaced will be identified through the SSES conducted in Phase 1. This project will likely require directional boring under railroad tracks. Permission to bore under the Union Pacific railroad tracks will be required along with a permit. Construction will cause temporary disruption of service as well. The intent is to select portions of the collection system for replacement which will result in a cost approximately equivalent to that presented in Table 20.

Table 20: Opinion of Probable Cost – Phase 2

Item	Description	Quantity	Unit	Unit Price	Total
1	6" Cured In Place Pipe	2,897	LF	$ 40	$ 115,892
2	8" Cured In Place Pipe	17,401	LF	$ 43	$ 748,230
3	10" Cured In Place Pipe	7,847	LF	$ 47	$ 368,804
4	48" Sewer Manhole	53	EA	$ 6,500	$ 344,500
5	Jack & Bore Railroad Tracks	400	LF	$ 210	$ 84,000
6	AC Pavement Patch	28,145	SF	$ 5.20	$ 146,353
7	Sewer Service Connection (Top Hat Only)	300	EA	$ 2,200	$ 660,000
8	Miscellaneous (Mobilization, Traffic Control, Sidewalk)	28,145	LF	$ 51	$ 1,435,390
				Subtotal:	$ 3,903,170
				25% Contingency:	$ 975,792
				25% Engineering & Inspection:	$ 975,792
				Project Total:	**$ 5,854,755**

6.3 PROJECT - PHASE 3

Sludge has not been removed from the wastewater treatment ponds since 1988. Significant sludge buildup in the pond cells reduces available volume and adds organic loading from anaerobic decomposition, contributing to the occasional high CBOD5 levels. This phase of the project proposes to reduce and/or remove sludge from the ponds in an effort to remedy these issues.

Table 21: Opinion of Probable Cost – Phase 3

Item	Description	Quantity	Unit	Unit Price	Total
1	Wastewater Sludge Removal	1	LS	$ 2,000,000	$ 2,000,000
				Subtotal:	$ 2,000,000
				25% Contingency:	$ 500,000
				5% Construction Management & Inspection:	$ 100,000
				Project Total:	**$ 2,600,000**

6.4 PROJECT - PHASE 4

The rehabilitation of the Oak Street Lift Station system will consist of replacing the two pumps and motors, installing a flow meter, installation of a screen auger, and improve the wet well / dry well configuration to avoid confined space safety issues. This phase also involves replacing the existing force main that connects the pump station to the treatment ponds.

Table 22: Opinion of Probable Cost – Phase 4

Item	Description	Quantity	Unit	Unit Price	Total
1	30 HP Lift Station	1	LS	$ 2,420,000	$ 2,420,000
2	8" Force Main (Open Trench)	4,331	LF	$ 166	$ 718,913
3	Jack & Bore Railroad Tracks	400	LF	$ 210	$ 84,000
4	Miscellaneous (Mobilization, ROW, Sidewalk)	4,331	LF	$ 51	$ 220,871
				Subtotal:	$ 3,380,784
				25% Contingency:	$ 845,196
				25% Engineering & Inspection:	$ 845,196
				Project Total:	**$ 5,071,175**

6.5 PROJECT - PHASE 5

This phase proposes to construct 2 new monitoring wells that are located closer to the wastewater treatment ponds. The addition of these wells would provide additional data sources that may impact the scope of future improvement projects at the WWTP.

Table 23: Opinion of Probable Cost – Phase 5

Item	Description	Quantity	Unit	Unit Price	Total
1	25-ft Deep Monitoring Wells (4-inch casing)	2	EA	$ 47,050	$ 94,100
2	Miscellaneous (Mobilization, BMPs, Traffic Col)	1	LS	$ 6,600	$ 6,600
				Subtotal:	$ 100,700
				25% Contingency:	$ 25,175
				25% Engineering & Inspection:	$ 25,175
				Project Total:	**$ 151,050**

6.6 PROJECT - PHASE 6

This phase involves conducting a SSES for the pipes constructed between the 1960s and the 1980s. Conducting an SSES will provide information on the existing system including areas of infiltration and inflow (I&I), pipe materials and diameters, and pipeline deficiencies such as structurally damaged pipe sections and faulty joints. During the SSES, key locations of deteriorated pipes will be identified. The City will then determine which locations are most in need of replacement.

Table 24: Opinion of Probable Cost – Phase 6

Item	Description	Quantity	Unit	Unit Price	Total
1	CCTV Video Inspection	1	LS	$ 200,000	$ 200,000
				Subtotal:	$ 200,000
				25% Contingency:	$ 50,000
				Construction Management & Inspection:	$ 50,000
				Project Total:	**$ 300,000**

6.7 PROJECT - PHASE 7

The inspection in Phase 6 will determine the exact size and length of pipe to be replaced in Phase 7. The intent is to select portions of the collection system for replacement which will result in a cost approximately equivalent to that presented in Table 25.

Table 25: Opinion of Probable Cost – Phase 7

Item	Description	Quantity	Unit	Unit Price	Total
1	6" Cured In Place Pipe	2,209	LF	$ 40	$ 88,360
2	8" Cured In Place Pipe	11,785	LF	$ 43	$ 506,755
3	10" Cured In Place Pipe	1,084	LF	$ 47	$ 50,948
4	48" Sewer Manhole	46	EA	$ 6,500	$ 299,000
5	Jack & Bore Railroad Tracks	100	LF	$ 210	$ 21,000
6	AC Pavement Patch	15,078	SF	$ 5.20	$ 78,406
7	Sewer Service Connection (Top Hat Only)	125	EA	$ 2,200	$ 275,000
8	Miscellaneous (Mobilization, Traffic Control, Sidewalk)	15,078	LF	$ 51	$ 768,978
				Subtotal:	$ 2,101,447
				25% Contingency:	$ 525,362
				25% Engineering & Inspection:	$ 525,362
				Project Total:	**$ 3,152,170**

6.8 PROJECT - PHASE 8

The inspection in Phase 6 would determine the exact pipe size and length that will be replaced in Phase 8. The intent is to select portions of the collection system for replacement which will result in a cost approximately equivalent to that presented in Table 26.

Table 26: Opinion of Probable Cost – Phase 8

Item	Description	Quantity	Unit	Unit Price	Total
1	6" Cured In Place Pipe	1,105	LF	$ 40	$ 44,200
2	8" Cured In Place Pipe	19,757	LF	$ 43	$ 849,551
3	48" Sewer Manhole	65	EA	$ 6,500	$ 422,500
4	Jack & Bore	100	LF	$ 210	$ 21,000
5	AC Pavement Patch	27,314	SF	$ 5.20	$ 142,033
6	Sewer Service Connection (Top Hat Only)	75	EA	$ 2,200	$ 165,000
7	Miscellaneous (Mobilization, Traffic Control)	6,205	LF	$ 51	$ 316,455
				Subtotal:	$ 2,716,695
				25% Contingency:	$ 679,174
				25% Engineering & Inspection:	$ 679,174
				Project Total:	**$ 4,075,043**

6.9 PROPOSED PROJECT SCHEDULE

The dates below represent a proposed project timeline. The schedule presented in Table 27 assumes that the proposed sewer projects in this PER will be designed and constructed concurrently and provide estimates of ROW acquisition/permitting durations. These dates are preliminary and will be refined as the funding allocations are secured and the project proceeds.

Table 27: Proposed Project Schedule

Item	Duration	Estimated Completion Date
Phase 1		
SSES Investigation	2 Months	April 2022
Phases 2 and 3		
PER acceptance by USDA	1 Month	December 2021
Rate Study[9]	In Progress	December 2021
Funding Acquisition	7 Months	June 2022
Engineering Design	8 Months	March 2023
Permitting + ROW Acquisition	10 Months	May 2023
Solicit for Bids + Award	2 Months	June 2023
Construct Improvements	12 Months	July 2024
Phase 4		
Funding Acquisition	6 Months	June 2023
Engineering Design	4 Months	November 2023
Solicit for Bids + Award	2 Months	January 2024
Construct Improvements	4 Months	June 2024
Phase 5		
Engineering Design	2 Months	September 2022
Solicit for Bids + Award	1 Month	November 2022
Construct Improvements	2 Months	February 2023
Phase 6		
Funding Acquisition	6 Months	FY 23
Engineering Design	12 Months	FY 24
Solicit for Bids + Award	2 Months	FY 24
Construct Improvements	12 Months	FY 25
Phase 7		
Funding Acquisition	6 months	FY 26
Engineering Design	8-12 Months	FY 26
Solicit for Bids + Award	2 Months	FY 26
Construct Improvements	12 Months	FY 27

[9] Work being completed under separate scope of work from proposed project engineering design.

Item	Duration	Estimated Completion Date
Phase 8		
Funding Acquisition	6 months	FY 28
Engineering Design	8-12 Months	FY 28
Solicit for Bids + Award	2 Months	FY 28
Construct Improvements	12 Months	FY 29

6.10 PERMIT REQUIREMENTS

The lift station design must be submitted to NDEP Bureau of Water Pollution Control (BWPC) for approval prior to the start of construction. The design will follow WTS-14 Pumping Station Design and Submittal Criterion published by NDEP.

The NDEP-BWPC also permits water pollution resulting from construction activities, which will be the responsibility of the selected contractor to obtain. The NDOT is responsible for permitting pipes that cross State roadways. Union Pacific Railroad requires permits for projects which cross or encroach its property and tracks. All required permits will be determined and obtained prior to construction.

6.11 SUSTAINABILITY REQUIREMENTS

All proposed alternatives in this PER would improve sustainability within the City's wastewater system. Developing and maintaining a sustainable wastewater system for small utilities is imperative to ensure long-term services for the community.

Aging Systems

The main pump station system proposed to be replaced has components that are as old as 45 years old; pump components are about 30 years old. Spare parts for these older systems will only become more difficult to locate if replacement is delayed. The original collection system consisting of vitrified clay pipe placed in the 1930s has exceeded its design life of 75 years, which will result in the continuing loss of structural integrity, in turn leading to increasing I&I and maintenance problems. The asbestos cement pipe is also aging and is difficult to repair. The clay liner material in the treatment ponds is deteriorating with time and seepage will likely increase. The selected project alternative will replace aging and deteriorating infrastructure which will improve the sustainability of the City's wastewater system by increasing energy efficiency and reducing I&I.

Safety Concerns

The existing main pump station facilities have safety concerns relevant to confined space entry and sewage gases from untreated influent. Modern configurations for this type of facility with modern safety parameters in mind will reduce, if not eliminate, these existing hazards.

Health and Environmental Concerns

As the clay and iron pipes continue to age, they may allow wastewater to infiltrate into the groundwater and adjacent Humboldt River. The proposed project alternative will reduce public health impacts, complaints, regulatory impositions by state or federal government, reduce water monitoring and treatment costs, and other negative consequences.

6.12 TOTAL PROJECT COST ESTIMATE (ENGINEER'S OPINION OF PROBABLE COSTS)

Table 28 summarizes the construction and non-construction costs of the Proposed Project. As stated in previous sections, the exact pipe size and length will be determined based on the video inspections.

Table 28: Total Project Cost Estimate

Item	Description	Quantity	Unit	Unit Price	Total
1	CCTV Video Inspection	2	LS	$ 200,000	$ 400,000
2	6" Cured In Place Pipe	6,211	LF	$ 40	$ 248,452
3	8" Cured In Place Pipe	48,943	LF	$ 43	$ 2,104,536
4	10" Cured In Place Pipe	8,931	LF	$ 47	$ 419,752
5	48" Sewer Manhole	166	EA	$ 6,500	$ 1,079,000
6	Jack & Bore Railroad Tracks	900	LF	$ 210	$ 189,000
7	AC Pavement Patch	64,085	SF	$ 5	$ 333,241
8	Sewer Service Connection (Top Hat Only)	500	EA	$ 2,200	$ 1,100,000
9	30 HP Lift Station	1	LS	$ 2,420,000	$ 2,420,000
10	8" Force Main (Open Trench)	4,331	LF	$ 166	$ 718,913
11	Wastewater Sludge Removal	1	LS	$ 2,000,000	$ 2,000,000
12	25-ft Deep Monitoring Wells (4-inch casing)	2	EA	$ 47,050	$ 94,100
13	Miscellaneous (Mobilization, Traffic Control, Sidewalk)	1	LS	$ 3,495,801	$ 3,495,801
				Subtotal:	$ 14,603,000
				20% Construction Contingency:	$ 2,921,000
				Land and Rights of Way:	$ 25,000
				Legal and Bond Counsel:	$ 40,000
				Interim Interest:	$ 880,000
				Permitting:	$ 25,000
				Engineering:	$ 2,000,000
				Bid Assistance + Construction Management:	$ 1,400,000
				Resident Inspection:	$ 1,400,000
				Construction Total:	$ 17,524,000
				Non-Construction Total:	$ 5,770,000
				Project Total:	**$ 23,294,000**

6.13 FINANCIAL IMPACT ANALYSIS

As discussed in Section 2.5 the City has limited financial data available for the sewer system. This section will attempt to estimate the financial capacity of the sewer system; however, a more detailed analysis will be provided as part of the rate study and funding acquisition processes. In order to qualify for most funding programs, the City started a sewer system enterprise fund in July of 2020. This fund will be funded primarily by user rate revenues and will need to maintain restricted reserves for debt coverage (i.e., bond reserve) and a capital replacement reserve account (i.e., short-lived assets).

6.13.1 SYSTEM EXPENSES

Table 29 provides a five-year (i.e., 2014-2018) summary of sewer system budgets and expenses incurred. This data was interpolated from certified audit data. From this data, it appears that the average annual cost of operation of the sewer system is approximately $480,000.

Table 29: Detailed Operational Budgets

Item	5-Yr. Avg.		2018	
	Budget	Actual	Budget	Actual
Salaries	$ 120,049	$ 121,095	$ 139,247	$ 125,186
Benefits	$ 73,660	$ 60,115	$ 75,000	$ 47,627
Services and Supplies	$ 66,260	$ 211,576	$ 71,400	$ 159,969
Depreciation	$ -	$ 90,052	$ -	$ 103,504
Total Expenses =	$ 259,969	$ 482,838	$ 285,647	$ 436,286
Revenues	$ 310,922	$ 333,029	$ 292,932	$ 325,128
Difference =	**$ 50,952**	**$ (149,809)**	**$ 7,285**	**$ (111,158)**

6.13.2 SYSTEM REVENUES

The City sewer system is funded from a user fee that is combined with water service, landfill operation, and street light operations. It is estimated that the current residential user fee is $29.85 per month. Total sewer system revenues fluctuated between $324,948 (2018) and $326,128 (2016) and were insufficient to cover sewer system expenses over the five-year study period.

6.13.3 FUTURE DEBT SERVICE

At more than $21 million in total project costs, it is anticipated that the City will need assistance financing the proposed improvement projects presented in this PER. With a current MHI of $74,148, the City will not qualify for grant funding, principal forgiveness programs and may not qualify for lower interest rates as a result of this condition. Additionally, §7.010.0 of the City charter sets a debt limit for the City at 20 percent of the total assessed valuation of taxable property within City limits. It is estimated that the current debt limit is approximately $7.6 million for fiscal year 2022[10].

At past City council meetings, it was determined that the City would pursue external financing for phases 2 through 4 of the proposed project. The estimated annual payment on a 40-yr, $13.5 million loan at 2.125 percent interest is $504,000. Basic allocation of this total across a current customer base of 781 results in a per-user impact of $53.78 per month. Additional user rate analysis is provided in Section 6.13.7 below.

6.13.4 FUTURE RESERVES

As part of the process of creating the water system enterprise fund, the City will want or need to create some reserve accounts to either meet funding requirements or to maintain financial best management practices. There are typically two types of reserves used in the operation of a sewer utility, a restricted reserve, and an unrestricted reserve. This section will focus on the minimum requirements for the restricted

[10] In July of 2021, the City completed a funding application with USDA for $4.1M in water system improvements. Final terms and conditions for the water project are not available at the time of publication of this PER, although the amount of loan funding made available for the water project and Phase 2 of the proposed sewer project may require modification to the proposed project scope to remain under the $7.6M debt ceiling.

reserves. Minimum balance goals for unrestricted reserves (e.g., operating reserve, capital reserve) will be recommended as part of the rate study.

6.13.5 BOND RESERVES

A condition of most funding sources which the City is likely to pursue will be the need to maintain a restricted reserve equal to one year of debt repayments for the term of the loan. Typically, these reserves are funded from user rates and most funding agreements allow for these reserves to be built up over ten years. The annual payment for a 40-yr loan of $14 million at a rate of 2.125 percent would be approximately $504,000 which would also be the minimum balance for this reserve account. To accrue this total over 10 years, the City would need to generate approximately $50,000 a year from user rates to fund the reserve which equates to an additional $5.33 per month per customer.

6.13.6 CAPITAL REPLACEMENT RESERVE

An inventory of the City's short-lived assets[11] was performed and can be found in Appendix H. It was found that the City maintains approximately $805,000 in "short-lived" capital assets which equate to an annual replacement cost of $67,433. Depending on the source used to fund the improvements, the City will most likely need to fund a restricted reserve account of at least $67,433 annually. At this time, the City will not need to prepare a fiscal sustainability plan to meet funding requirements.

6.13.7 APPROXIMATE USER RATES

This section attempts to estimate the impact on user rates as a result of the proposed project presented in this PER. Adjusting the annual O&M costs ($436,286 per year) to account for future inflation and a reduction in annual repair costs ($61,000) as a result of the improvements, the approximate per-user cost of operating and maintaining the sewer system will be $40 per month. Adding in the debt service requirement of $53.78 per month (see Section 6.13.3), a reserve contribution of $5.33 per month (see Section 6.13.5), and a short-lived asset replacement contribution of $7.20, the approximate sewer system user fee becomes $106.31 per month[12] for sewer service only. Additionally, the City is pursuing improvements to its water system and its roadways which may place an additional financial burden on its customers.

The City understands that this fee increase is significant and may not be feasible for the community. City leadership is committed to engaging its citizens with each new piece of information that becomes available throughout the funding and rate study process.

[11] Short lived assets are capital assets with a life expectancy of 15 years or less.
[12] The detailed rate study that the City is pursuing should be used in place of this estimate once the data/estimates are published.

7.0 CONCLUSIONS AND RECOMMENDATION

This report provides the City with planning level estimates for multiple sewer system improvement projects. It is recommended the City use a combination of City sewer reserves, user rates, State Revolving Funds, Community Development Block Grants, and USDA-RD funding over the next 10 years to complete the proposed sewer system improvements.

In summary, the following near-term projects are recommended for the sewer system:

- The City utilize sewer system reserve funds to investigate portions of the collection system and conduct a I/I analysis for the system.
- The City pursue the engineering design, permitting and construction of the replacement of Priority 1 pipes and manholes.
- The City pursue external funding sources (e.g., SRF, USDA) to provide near term capital to design and construct these improvements.
- The City complete a comprehensive rate study which provides recommended user rates, connection fees, reserve account minimums and other financial considerations which will ensure a sustainable sewer system from a management perspective.
- Identify a funding source and solicit bids to remove sludge waste from WWTP lagoons.
- The City utilize sewer system reserve funds to install two Monitoring Wells near WWTP lagoons.
- Identify a funding source to fund the engineering design and construction of Oak Street Lift Station improvements.

Longer-term sewer system projects and goals may include:

- Constructing the Oak Street Lift Station improvements.
- Additional sewer system investigations resulting in a comprehensive database of asset condition and need for replacement.
- Replacing pipes and manholes in other portions of the collection system.
- Developing a sustainable source of revenue or qualifying for external funding programs to fund approximately $15M-million in improvement projects.

It is also recommended that the City should regularly assess its sewer utility by preparing and/or updating a rate study every five years and maintaining an updated (i.e., at least every seven years) sewer system facility plan. These studies and plans will help the City to keep the sewer system in reliable operation for future generations.

8.0 REFERENCES

Preliminary Engineering Report City of Carlin – Draft. Golder Associates, August 2014.

APPENDIX A

POPULATION DATA

ENVIRONMENTAL DOCUMENTS

GEOLOGY & FAULT MAPS

DP-1

Profile of General Population and Housing Characteristics: 2010

2010 Demographic Profile Data

NOTE: For more information on confidentiality protection, nonsampling error, and definitions, see http://www.census.gov/prod/cen2010/doc/dpsf.pdf.

Geography: Carlin city, Nevada

Subject	Number	Percent
SEX AND AGE		
Total population	2,368	100.0
Under 5 years	178	7.5
5 to 9 years	129	5.4
10 to 14 years	190	8.0
15 to 19 years	184	7.8
20 to 24 years	169	7.1
25 to 29 years	153	6.5
30 to 34 years	177	7.5
35 to 39 years	157	6.6
40 to 44 years	186	7.9
45 to 49 years	229	9.7
50 to 54 years	178	7.5
55 to 59 years	140	5.9
60 to 64 years	107	4.5
65 to 69 years	91	3.8
70 to 74 years	49	2.1
75 to 79 years	34	1.4
80 to 84 years	9	0.4
85 years and over	8	0.3
Median age (years)	35.1	(X)
16 years and over	1,845	77.9
18 years and over	1,772	74.8
21 years and over	1,645	69.5
62 years and over	242	10.2
65 years and over	191	8.1
Male population	1,310	55.3
Under 5 years	96	4.1
5 to 9 years	67	2.8
10 to 14 years	92	3.9
15 to 19 years	94	4.0
20 to 24 years	111	4.7
25 to 29 years	93	3.9
30 to 34 years	102	4.3
35 to 39 years	80	3.4
40 to 44 years	110	4.6
45 to 49 years	127	5.4
50 to 54 years	109	4.6
55 to 59 years	80	3.4
60 to 64 years	53	2.2
65 to 69 years	50	2.1
70 to 74 years	25	1.1
75 to 79 years	15	0.6
80 to 84 years	5	0.2
85 years and over	1	0.0

Subject	Number	Percent
Median age (years)	35.0	(X)
16 years and over	1,041	44.0
18 years and over	1,003	42.4
21 years and over	936	39.5
62 years and over	119	5.0
65 years and over	96	4.1
Female population	1,058	44.7
Under 5 years	82	3.5
5 to 9 years	62	2.6
10 to 14 years	98	4.1
15 to 19 years	90	3.8
20 to 24 years	58	2.4
25 to 29 years	60	2.5
30 to 34 years	75	3.2
35 to 39 years	77	3.3
40 to 44 years	76	3.2
45 to 49 years	102	4.3
50 to 54 years	69	2.9
55 to 59 years	60	2.5
60 to 64 years	54	2.3
65 to 69 years	41	1.7
70 to 74 years	24	1.0
75 to 79 years	19	0.8
80 to 84 years	4	0.2
85 years and over	7	0.3
Median age (years)	35.2	(X)
16 years and over	804	34.0
18 years and over	769	32.5
21 years and over	709	29.9
62 years and over	123	5.2
65 years and over	95	4.0
RACE		
Total population	2,368	100.0
One Race	2,327	98.3
White	2,174	91.8
Black or African American	43	1.8
American Indian and Alaska Native	35	1.5
Asian	14	0.6
Asian Indian	2	0.1
Chinese	3	0.1
Filipino	5	0.2
Japanese	1	0.0
Korean	1	0.0
Vietnamese	0	0.0
Other Asian [1]	2	0.1
Native Hawaiian and Other Pacific Islander	0	0.0
Native Hawaiian	0	0.0
Guamanian or Chamorro	0	0.0
Samoan	0	0.0
Other Pacific Islander [2]	0	0.0
Some Other Race	61	2.6
Two or More Races	41	1.7
White; American Indian and Alaska Native [3]	19	0.8
White; Asian [3]	5	0.2
White; Black or African American [3]	5	0.2
White; Some Other Race [3]	5	0.2
Race alone or in combination with one or more other races: [4]		
White	2,211	93.4
Black or African American	50	2.1
American Indian and Alaska Native	57	2.4

Subject	Number	Percent
Asian	22	0.9
Native Hawaiian and Other Pacific Islander	2	0.1
Some Other Race	69	2.9
HISPANIC OR LATINO		
Total population	2,368	100.0
Hispanic or Latino (of any race)	240	10.1
Mexican	179	7.6
Puerto Rican	4	0.2
Cuban	1	0.0
Other Hispanic or Latino [5]	56	2.4
Not Hispanic or Latino	2,128	89.9
HISPANIC OR LATINO AND RACE		
Total population	2,368	100.0
Hispanic or Latino	240	10.1
White alone	160	6.8
Black or African American alone	2	0.1
American Indian and Alaska Native alone	5	0.2
Asian alone	0	0.0
Native Hawaiian and Other Pacific Islander alone	0	0.0
Some Other Race alone	61	2.6
Two or More Races	12	0.5
Not Hispanic or Latino	2,128	89.9
White alone	2,014	85.1
Black or African American alone	41	1.7
American Indian and Alaska Native alone	30	1.3
Asian alone	14	0.6
Native Hawaiian and Other Pacific Islander alone	0	0.0
Some Other Race alone	0	0.0
Two or More Races	29	1.2
RELATIONSHIP		
Total population	2,368	100.0
In households	2,256	95.3
Householder	882	37.2
Spouse [6]	453	19.1
Child	630	26.6
Own child under 18 years	500	21.1
Other relatives	133	5.6
Under 18 years	68	2.9
65 years and over	8	0.3
Nonrelatives	158	6.7
Under 18 years	25	1.1
65 years and over	4	0.2
Unmarried partner	79	3.3
In group quarters	112	4.7
Institutionalized population	112	4.7
Male	112	4.7
Female	0	0.0
Noninstitutionalized population	0	0.0
Male	0	0.0
Female	0	0.0
HOUSEHOLDS BY TYPE		
Total households	882	100.0
Family households (families) [7]	576	65.3
With own children under 18 years	270	30.6
Husband-wife family	453	51.4
With own children under 18 years	194	22.0
Male householder, no wife present	67	7.6
With own children under 18 years	39	4.4
Female householder, no husband present	56	6.3
With own children under 18 years	37	4.2

Subject	Number	Percent
Nonfamily households [7]	306	34.7
Householder living alone	237	26.9
Male	165	18.7
65 years and over	23	2.6
Female	72	8.2
65 years and over	40	4.5
Households with individuals under 18 years	302	34.2
Households with individuals 65 years and over	152	17.2
Average household size	2.56	(X)
Average family size [7]	3.11	(X)
HOUSING OCCUPANCY		
Total housing units	1,043	100.0
Occupied housing units	882	84.6
Vacant housing units	161	15.4
For rent	82	7.9
Rented, not occupied	2	0.2
For sale only	6	0.6
Sold, not occupied	7	0.7
For seasonal, recreational, or occasional use	27	2.6
All other vacants	37	3.5
Homeowner vacancy rate (percent) [8]	1.0	(X)
Rental vacancy rate (percent) [9]	21.3	(X)
HOUSING TENURE		
Occupied housing units	882	100.0
Owner-occupied housing units	581	65.9
Population in owner-occupied housing units	1,525	(X)
Average household size of owner-occupied units	2.62	(X)
Renter-occupied housing units	301	34.1
Population in renter-occupied housing units	731	(X)
Average household size of renter-occupied units	2.43	(X)

X Not applicable.

[1] Other Asian alone, or two or more Asian categories.

[2] Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.

[3] One of the four most commonly reported multiple-race combinations nationwide in Census 2000.

[4] In combination with one or more of the other races listed. The six numbers may add to more than the total population, and the six percentages may add to more than 100 percent because individuals may report more than one race.

[5] This category is composed of people whose origins are from the Dominican Republic, Spain, and Spanish-speaking Central or South American countries. It also includes general origin responses such as "Latino" or "Hispanic."

[6] "Spouse" represents spouse of the householder. It does not reflect all spouses in a household. Responses of "same-sex spouse" were edited during processing to "unmarried partner."

[7] "Family households" consist of a householder and one or more other people related to the householder by birth, marriage, or adoption. They do not include same-sex married couples even if the marriage was performed in a state issuing marriage certificates for same-sex couples. Same-sex couple households are included in the family households category if there is at least one additional person related to the householder by birth or adoption. Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households. "Nonfamily households" consist of people living alone and households which do not have any members related to the householder.

[8] The homeowner vacancy rate is the proportion of the homeowner inventory that is vacant "for sale." It is computed by dividing the total number of vacant units "for sale only" by the sum of owner-occupied units, vacant units that are "for sale only," and vacant units that have been sold but not yet occupied; and then multiplying by 100.

[9] The rental vacancy rate is the proportion of the rental inventory that is vacant "for rent." It is computed by dividing the total number of vacant units "for rent" by the sum of the renter-occupied units, vacant units that are "for rent," and vacant units that have been rented but not yet occupied; and then multiplying by 100.

Source: U.S. Census Bureau, 2010 Census.

2017 Population Projections for Nevada's Counties 2017 to 2036
Based On 2016 Estimate: Includes Tesla and Housing Costs as Separate Impact

With Addtional Factors: Tesla and Housing Costs	Elko W/ Additional Factors			Esmeralda W/ Additional Factors		
	Total Population	Change Previous Year	Percentage Change	Total Population	Change Previous Year	Percentage Change
2016	53,997			964		
2017	54,498	500	0.9%	958	-6	-0.6%
2018	54,890	393	0.7%	957	-1	-0.1%
2019	55,061	171	0.3%	954	-2	-0.2%
2020	55,235	174	0.3%	957	2	0.2%
2021	55,407	173	0.3%	962	5	0.5%
2022	55,560	153	0.3%	967	6	0.6%
2023	55,725	164	0.3%	973	6	0.6%
2024	55,926	202	0.4%	978	5	0.5%
2025	56,104	178	0.3%	982	4	0.4%
2026	56,266	161	0.3%	984	2	0.2%
2027	56,457	191	0.3%	990	6	0.6%
2028	56,670	213	0.4%	996	6	0.6%
2029	56,892	222	0.4%	999	4	0.4%
2030	57,106	214	0.4%	1,002	2	0.2%
2031	57,338	232	0.4%	1,004	2	0.2%
2032	57,575	237	0.4%	1,005	1	0.1%
2033	57,835	261	0.5%	1,006	1	0.1%
2034	58,112	277	0.5%	1,008	1	0.1%
2035	58,380	268	0.5%	1,009	1	0.1%
2036	58,648	268	0.5%	1,012	4	0.4%

DRAFT Without Tesla and Current Housing Costs	Elko			Esmeralda		
	Total Population	Change Previous Year	Percentage Change	Total Population	Change Previous Year	Percentage Change
2016	53,997			964		
2017	54,364	367	0.7%	956	-8	-0.9%
2018	54,661	297	0.5%	953	-2	-0.2%
2019	54,880	219	0.4%	952	-1	-0.1%
2020	55,071	191	0.3%	956	4	0.4%
2021	55,256	185	0.3%	960	5	0.5%
2022	55,417	160	0.3%	966	6	0.6%
2023	55,584	168	0.3%	972	6	0.6%
2024	55,791	207	0.4%	977	5	0.5%
2025	55,975	184	0.3%	980	4	0.4%
2026	56,146	171	0.3%	983	2	0.2%
2027	56,350	205	0.4%	989	6	0.6%
2028	56,580	230	0.4%	993	5	0.5%
2029	56,820	240	0.4%	998	5	0.5%
2030	57,053	234	0.4%	1,000	2	0.2%
2031	57,304	250	0.4%	1,003	2	0.2%
2032	57,559	255	0.4%	1,003	0	0.0%
2033	57,837	278	0.5%	1,005	2	0.2%
2034	58,131	294	0.5%	1,006	1	0.1%
2035	58,414	283	0.5%	1,008	1	0.1%
2036	58,695	281	0.5%	1,011	4	0.4%

Governor Certified Population Estimates of Nevada's Counties, Cities and Towns 2000 to 2016

Estimates from NV State Demographer, NV Department of Taxation

	April 1 2000	JULY 1 2000	Percent Change 4/00 - 7/01	Percent Change 7/00 - 7/01	JULY 1 2001	Percent Change 7/01 - 7/02	JULY 1 2002	Percent Change 7/02 - 7/03	JULY 1 2003	Percent Change 7/03 - 7/04
State of Nevada	1,998,257	2,066,831	6.7%	3.2%	2,132,498	3.4%	2,206,022	4.1%	2,296,566	5.0%
Counties										
Cities										
Towns										
Douglas County	41,259	43,101	5.3%	0.8%	43,450	1.8%	44,212	3.1%	45,603	4.8%
Gardnerville	3,377	3,528	14.0%	9.2%	3,851	5.6%	4,065	6.2%	4,316	17.4%
Genoa	235	245	-4.5%	-8.6%	224	1.3%	227	1.0%	229	6.6%
Minden	2,697	2,818	6.1%	1.5%	2,861	-1.1%	2,830	1.4%	2,870	2.6%
Elko County	45,291	50,756	3.0%	-8.1%	46,668	-0.2%	46,577	-1.7%	45,805	1.5%
Carlin	2,161	2,395	2.5%	-7.5%	2,215	-6.4%	2,074	-1.4%	2,045	9.6%
Elko	16,708	18,642	2.3%	-8.3%	17,093	-2.4%	16,690	-2.0%	16,354	4.8%
Wells	1,346	1,563	-11.5%	-23.8%	1,191	16.6%	1,389	-1.1%	1,373	2.4%
West Wendover	4,721	3,867	-2.3%	19.3%	4,614	4.9%	4,839	-2.2%	4,732	2.1%
Jackpot	1,178	1,310	9.3%	-1.7%	1,287	0.1%	1,288	-1.3%	1,271	0.8%
Montello	191	216	-5.1%	-16.3%	181	0.0%	181	0.0%	181	-1.1%
Mountain City	135	150	-2.6%	-12.4%	132	-4.0%	127	-1.6%	125	-1.3%
Esmeralda County	971	1,513	6.9%	-31.4%	1,038	8.4%	1,125	-0.8%	1,116	5.3%
Goldfield	369	574	35.0%	-13.4%	498	-11.9%	438	0.2%	439	3.1%
Silver Peak	148	230	9.8%	-29.6%	162	-20.9%	128	-3.5%	124	2.4%
Eureka County	1,651	1,847	-8.8%	-18.5%	1,506	-8.1%	1,384	2.6%	1,420	4.4%
Crescent Valley	330	369	-9.7%	-19.3%	298	-6.3%	279	7.4%	300	1.4%
Eureka (town)	499	558	-5.8%	-15.8%	470	-7.8%	434	2.9%	446	1.7%
Humboldt County	16,106	18,149	0.4%	-10.9%	16,164	0.9%	16,308	0.9%	16,457	1.4%
Winnemucca	*7,174*	8,884	-2.4%	-21.2%	7,001	3.3%	7,234	0.6%	7,280	-0.4%

Note: This series represents the estimates as certified by NV's Governor each year. It is not a time series reflecting Census 2010.

Governor Certified Population Estimates of Nevada's Counties, Cities and Towns 2000 to 2016

Estimates from NV State Demographer, NV Department of Taxation

	JULY 1 2004	Percent Change 7/04 - 7/05	JULY 1 2005	Percent Change 7/05 - 7/06	JULY 1 2006	Percent Change 7/06 - 7/07	JULY 1 2007	Percent Change 7/07 - 7/08	JULY 1 2008	Percent Change 7/08 - 7/09
State of Nevada	2,410,768	4.5%	2,518,869	4.1%	2,623,050	3.6%	2,718,337	0.8%	2,738,733	-1.0%
Counties										
Cities										
Towns										
Douglas County	47,803	4.8%	50,108	3.3%	51,770	1.2%	52,386	-0.5%	52,131	-1.4%
Gardnerville	5,067	1.9%	5,165	7.4%	5,550	-2.8%	5,394	0.3%	5,412	-3.0%
Genoa	244	1.4%	248	1.6%	252	0.2%	252	1.3%	255	0.2%
Minden	2,945	1.3%	2,983	8.4%	3,234	0.2%	3,239	0.7%	3,261	-1.0%
Elko County	46,499	2.3%	47,586	1.6%	48,339	4.3%	50,434	0.3%	50,561	1.5%
Carlin	2,240	1.0%	2,261	0.9%	2,281	0.6%	2,295	1.2%	2,322	1.0%
Elko	17,140	4.1%	17,850	1.9%	18,183	1.3%	18,427	0.0%	18,424	0.0%
Wells	1,406	1.2%	1,423	1.9%	1,449	4.0%	1,508	1.1%	1,524	-0.6%
West Wendover	4,830	0.4%	4,848	0.5%	4,871	1.8%	4,958	0.6%	4,990	-0.9%
Jackpot	1,281	-0.6%	1,273	1.6%	1,293	-5.9%	1,217	0.4%	1,222	-3.1%
Montello	179	1.2%	181	-3.7%	175	-5.7%	165	0.4%	165	1.3%
Mountain City	123	-1.8%	121	3.1%	125	3.5%	129	0.9%	130	-7.0%
Esmeralda County	1,176	8.5%	1,276	-1.1%	1,262	-2.1%	1,236	0.3%	1,240	-4.3%
Goldfield	453	-3.3%	438	-1.7%	430	4.2%	448	-7.5%	415	6.4%
Silver Peak	127	-0.9%	126	-7.1%	117	6.9%	125	45.9%	182	-22.7%
Eureka County	1,484	0.1%	1,485	-1.7%	1,460	-0.1%	1,458	6.5%	1,553	0.6%
Crescent Valley	304	2.2%	311	-5.9%	292	-1.2%	289	-2.2%	283	0.2%
Eureka (town)	454	-2.9%	440	-1.7%	433	-0.4%	431	9.6%	473	2.1%
Humboldt County	16,692	3.6%	17,293	2.6%	17,751	1.7%	18,052	-0.2%	18,014	-1.8%
Winnemucca	7,249	2.1%	7,401	3.3%	7,643	0.0%	7,646	0.2%	7,659	-0.9%

Note: This series represents the estimates as certified by NV's Governor each year. It is not a time series reflecting Census 2010.

Governor Certified Population Estimates of Nevada's Counties, Cities and Towns 2000 to 2016

Estimates from NV State Demographer, NV Department of Taxation

	JULY 1 2009	Percent Change 7/09 - 7/10	April 1 2010	JULY 1 2010	Percent Change 4/10 - 7/11	Percent Change 7/10 - 7/11	JULY 1 2011	Percent Change 7/11 - 7/12	JULY 1 2012	Percent Change 7/12 - 7/13
State of Nevada	2,711,206	0.5%	2,700,551	2,724,634	0.8%	-0.1%	2,721,794	1.0%	2,750,217	1.8%
Counties										
Cities										
Towns										
Douglas County	51,390	-4.2%	46,997	49,242	1.4%	-3.2%	47,661	0.7%	48,015	1.0%
Gardnerville	5,250	-5.1%	4,756	4,983	15.0%	9.8%	5,469	0.5%	5,495	0.8%
Genoa	256	-4.7%	233	244	-7.2%	-11.5%	216	1.3%	219	0.6%
Minden	3,229	-0.5%	3,067	3,213	-2.7%	-7.1%	2,984	0.9%	3,010	-0.6%
Elko County	51,325	1.5%	48,818	52,097	2.1%	-4.3%	49,861	3.8%	51,771	3.1%
Carlin	2,345	1.1%	2,368	2,370	0.3%	0.3%	2,376	0.0%	2,376	20.0%
Elko	18,428	2.2%	18,297	18,842	5.0%	1.9%	19,209	6.2%	20,406	2.7%
Wells	1,515	1.1%	1,292	1,531	-9.1%	-23.3%	1,174	9.0%	1,280	2.1%
West Wendover	4,945	1.1%	4,410	4,999	1.4%	-10.6%	4,470	-2.3%	4,367	2.0%
Jackpot	1,184	1.1%	1,103	1,197	-12.7%	-19.5%	963	-5.1%	914	1.0%
Montello	167	1.0%	156	169	-49.3%	-53.3%	79	-23.5%	60	-0.3%
Mountain City	121	0.9%	112	122	-9.3%	-16.4%	102	7.4%	110	-0.7%
Esmeralda County	1,187	-3.5%	783	1,145	5.4%	-27.9%	825	4.3%	860	-0.2%
Goldfield	441	-9.4%	274	400	5.3%	-28.0%	288	-9.9%	259	12.8%
Silver Peak	141	-8.3%	88	129	32.6%	-9.3%	117	9.4%	128	3.4%
Eureka County	1,562	3.0%	1,987	1,609	0.4%	23.9%	1,994	0.8%	2,011	0.7%
Crescent Valley	283	4.5%	366	296	8.3%	33.8%	396	-6.5%	370	0.2%
Eureka (town)	483	3.3%	616	499	-0.8%	22.4%	611	17.3%	717	0.4%
Humboldt County	17,690	3.8%	16,528	18,364	3.7%	-6.7%	17,135	1.5%	17,384	0.4%
Winnemucca	7,593	4.8%	7,396	7,961	6.0%	-1.5%	7,839	2.0%	7,997	2.4%

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Governor Certified Population Estimates of Nevada's Counties, Cities and Towns 2000 to 2016

Estimates from NV State Demographer, NV Department of Taxation

	JULY 1 2013	Percent Change 7/13 - 7/14	JULY 1 2014	Percent Change 7/14 - 7/15	JULY 1 2015	Percent Change 7/15 - 7/16	JULY 1 2016
State of Nevada	2,800,967	1.5%	2,843,301	1.9%	2,897,584	1.9%	2,953,375
Counties							
Cities							
Towns							
Douglas County	48,478	0.2%	48,553	-0.7%	48,223	0.0%	48,235
Gardnerville	5,541	4.0%	5,760	-0.2%	5,751	0.5%	5,780
Genoa	220	-1.5%	217	-1.1%	215	-0.5%	213
Minden	2,993	2.7%	3,072	0.0%	3,072	1.2%	3,110
Elko County	53,384	0.0%	53,358	0.4%	53,551	0.8%	53,997
Carlin	2,851	-4.2%	2,731	-0.1%	2,727	-1.6%	2,684
Elko	20,958	-0.4%	20,865	-0.7%	20,714	0.0%	20,704
Wells	1,307	8.0%	1,411	-2.8%	1,371	1.3%	1,388
West Wendover	4,453	-0.7%	4,420	1.3%	4,478	-0.1%	4,474
Jackpot	923	-1.8%	907	-1.0%	898	0.0%	897
Montello	60	-6.3%	56	-0.9%	56	11.6%	62
Mountain City	109	-1.6%	107	-7.0%	100	-4.1%	95
Esmeralda County	858	7.9%	926	-0.4%	923	4.5%	964
Goldfield	293	-7.2%	272	-3.7%	262	-0.6%	260
Silver Peak	132	-3.2%	128	4.0%	133	-7.6%	123
Eureka County	2,024	-6.0%	1,903	-2.2%	1,862	5.2%	1,959
Crescent Valley	371	0.8%	374	0.0%	374	-0.5%	372
Eureka (town)	720	-3.9%	691	0.8%	697	5.1%	732
Humboldt County	17,457	-0.4%	17,388	-1.9%	17,057	-1.2%	16,853
Winnemucca	8,185	-1.8%	8,042	-3.0%	7,802	-0.4%	7,772

Note: This series represents the estimates as certified by NV's Governor each year. It is not a time series reflecting Census 2010.

ENVIRONMENTAL DOCUMENTS

CITY OF CARLIN

Environmental Assessment for

Water and Wastewater System Improvements

December 2021

OWNER:

CITY OF CARLIN
PO BOX 787 - 101 SO. 8th STREET
CARLIN, NEVADA 89822
(775) 754-6354

ENGINEER:

FARR WEST
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5510 LONGLEY LANE
RENO, NEVADA 89511
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TABLE OF CONTENTS

1.0 PURPOSE AND NEED FOR THE PROJECT

1.1 PROPOSED ACTION(S)

The City of Carlin (Carlin) is proposing all or a portion of the following water and sewer system replacement improvements:

Water System Proposed Project: (Alternative 2)

This project would include replacing approximately 13 miles of water main (12, 10, and 8-inch), install 500 water meters, and replace failing infrastructure at Spring 1. The project would also include more than 300,000 square feet of asphalt paving and replace approximately 250 fire hydrants. In general, this project proposes to replace approximately half of the existing water distribution over an area of about 0.5 square miles. New water mains would be installed via open-trench construction in previously disturbed areas.

The first phase of this project would replace the transmission main between Spring 1 and the lower booster pump station in addition to making improvements to the spring facility itself. An engineering design for this project has been completed, although the project has not been subject to competitive bid nor has it been constructed.

The second phase of this project alternative includes replacement of two water transmission mains which cross under I-80 and form the only two connections between the water storage tanks and the majority of the city distribution system. Both of the welded steel mains were constructed in the 1930's and have experienced severe corrosion which has rendered them unsafe, prone to leaks, and are difficult to service. The continuous safe operation of these mains is critical because they supply water to 95% of the City. Additionally, since both mains cross under the I-80 freeway and Chestnut Street, which is a frontage road and the primary east-west artery in Carlin, a large leak in these mains could damage the roadways disrupting interstate traffic patterns and emergency services. Finally, the transmission mains do not have any larger diameter casing providing protection from external loads or excavation activities.

Phase 3 would replace the portion of the distribution system that contains the oldest pipes in the system and is also the area with the greatest water pressures. This phase includes all the locations where main replacement requires directional boring under railroad tracks. The portion of town south of the railroad tracks also contains several mains that dead end. The mains south of the railroad tracks will be extended to 10th Street and 4th Street and looped, eliminating or reducing five dead ends. The horizontal bore under the railroad track at 4th Street will be relocated to the road crossing at B Street and connect to an existing 8-inch PVC main there, eliminating a sixth dead end. Looping the water mains will reduce or eliminate dead end mains, which will increase flow to fire hydrants. Dead end mains can also result in stagnant water and locations for microbiological growth.

Phase 4 improvements include replacing existing deficient water mains north of the railroad tracks and to the east of 6th Street. It is also proposed to include isolated segments of pipe and mains farther to the north, including some isolated segments of main farther north and near I-80. Service lines will be replaced to the edge of City right-of-way and meter pits with meters will be installed. This part of the distribution system contains the second oldest pipes in the distribution system.

The final portion (i.e., Phase 5) of the distribution system which is being proposed for replacement are water mains north of the railroad tracks and to the west of 6th Street. Service lines will also be replaced to the edge of City right-of-way and meter pits with meters will be installed.

The transmission main from Spring 2 to the booster pump is also nearing the end of its useful life and is a candidate for replacement. The proposed improvements include 2,000 lf of 12-inch transmission main which would connect to the Spring 1 transmission main just to the west of Willow St. Additionally, the

spring outlet and flow gauge would be replaced as well. The need for this project is significantly downgraded due to the fact that the City does not need to rely on Spring 2 water to meet average or peak demands.

Pipeline to be replaced in the proposed water system project are listed in the table below.

WATER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
¾	730	6	29,734
1	2,029	8	40,063
1 ¼	405	10	1,332
1 ½	104	12	26,255
2	3,775	14	663
3	1,113	16	1,055
4	3,022	Unknown	15,063

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City of Carlin
Figure 1: Proposed Water Improvements

N

1:53,439

The data contained herein does not represent survey delineation and should not be construed as a replacement for the authoritative source. No liability is assumed by Farr West Engineering as to the sufficiency or accuracy of the data.

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Sewer System Proposed Project: (Alternative 3)

This project alternative proposes to replace the same system components as alternative 1. However, this alternative would replace all failing sewer collection mains with a cured in place pipe (CIPP) inside of existing pipes as opposed to completely replacing all failing pipes with new materials. This method of construction has many benefits, including:

- reduced unit installation costs,
- smaller quantities of asphalt which needs to be replaced,
- pipe segments replaced with jointless, seamless pipes, and
- reduced traffic control costs.

The primary drawbacks to this method of construction is that some open-trench construction will still be required in areas where the "host" pipeline has significant structural flaws or failures and/or the pipeline has a comprimised slope or flowline. Additionally, If there is a need to re-align a section of the collection system that would also require open-trench construction. An additional drawback is that the lined pipe can only be cleaned in the future with a water-jetting based device as mechanical cable or "snakes" would damage the liner material.

This alternative also proposes to line the City owned portion of each sewer connection and not replace any piping or install any new cleanouts with the improvements.

Pipeline to be replaced in the proposed sewer system project are listed in the table below.

SEWER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
3	1,754	8	57,987
4	1,515	10	8,631
6	7,177	Unknown	7,727

Legend

- Sewer Pipe
- Sewer Manhole
- Sewer Cleanout

Phase 1 and Phase 2

- Lift Station - Phase 3
- Monitoring Wells - Phase 5
- Sewer Pipe
- Sewer Manhole
- Sewer Cleanout

Phase 6, Phase 7, Phase 8

- Lagoon - Phase 4 and Phase 9

FARR WEST ENGINEERING
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Reno, NV 89511
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www.farrwestengineering.com

City of Carlin
Figure 2: Proposed Sewer Improvements

N

1:53,439

The data contained herein does not represent survey delineation and should not be construed as a replacement for the authoritative source. No liability is assumed by Farr West Engineering as to the sufficiency or accuracy of the data.

P:\Client Projects\Carlin, City of 325\1169 Water,Sewer, Road PER\6.0 Drawings\6.2 Exhibits\GIS Exhibits\Carlin EA Exhibits\Carlin EA Exhibits.aprx, Editor: kthompson, Printed: 6/16/2021

1.2 PURPOSE AND NEED FOR THE PROJECT

1.2.1 Health and Safety

The primary water system issues related to health and safety include:

- Hazardous materials (lead joints, asbestos cement, potential lead service connections);
- Undersized water mains;
- Significant water losses;
- Insufficient hydraulic capacity to satisfy fire flow requirements, and
- Potential backflow contamination from leaks in system during low pressure events.

The primary sewer system issues related to health and safety include:

- Insufficient pipe slopes and bury depths;
- Structural and O&M defects throughout the system (holes, obstructions, leaching)
- Root obstruction,
- Lift station at end of useful life, and
- Clay lining failing on sewer lagoons.

1.2.2 Aging infrastructure and System O&M

O&M costs are directly related to the condition of the system. Therefore, all the above-mentioned issues are the cause of rising O&M costs. It is anticipated that the construction of any alternative which does not expand the service area or boundary will result in a reduction in O&M costs as they relate to time and resources to repairs of the outdated water and sewer systems.

The following is a summarized list of water issues related to aging infrastructure:

- Transmission Mains - All transmission mains, from both spring sources and those to the storage tanks, have reached the end or their service lives. Failure of these mains creates a potential for a water emergency situation. Additionally, repair activities present a safety hazard to the personnel working on the pipes and increases the likelihood of a more significant failure.
- Old Distribution System - Very old sections (e.g. 1930's) of distribution system piping are likely the cause for high system water losses and the increased potential for future contamination. Also, many aged fire hydrants require adapters for modern fire hoses.
- Source - The Spring 1 intake structure is thoroughly corroded.

Storage – The useful life of the water storage tanks have been extended through numerous repairs and re-coatings. At some point the tanks will need to be replaced

The following is a summarized list of wastewater issues related to aging infrastructure:

- Aging original section of collection system – reported tree root intrusion. Recent tree root intrusion found in PVC pipe;

- Replacement of the Oak Street Lift Station, Smith and Loveless duplex wet well – dry well sewage pump station including the wet well inlet screen and antiquated flow/totalizing meter;
- Inaccurate flow metering data recordation at the Oak Street Lift Station and treatment effluent pumping;
- I/I, believed to account for a significant percentage of sewage volume, cannot be accurately estimated;
- The approximate 43-year old clay liners of the treatment ponds will only continue to degrade allowing additional seepage; and
- Sludge has not been removed from the treatment ponds since 1988

2.0 PROJECT LOCATION

The City of Carlin is located on the western border of Elko County, Nevada. The Humboldt River flows on the south end of town. Two of the Humboldt's tributaries, Maggie and Susie Creek, run through the City of Carlin. Natural boundaries include Pine Mountain to the south, Mary's Mountain to the west, and Grindstone Mountain to the east. A location map is shown in Figure 3.

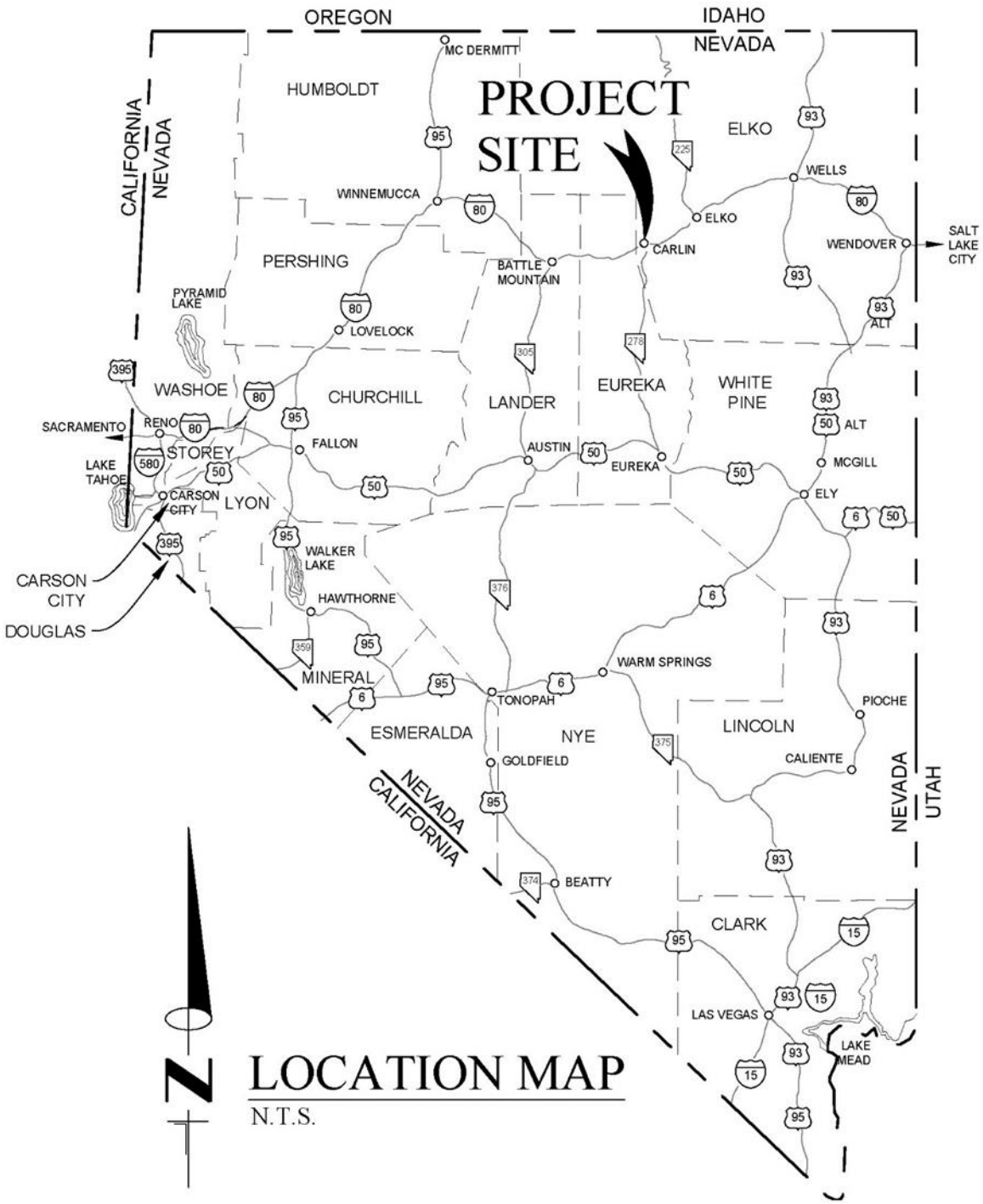


Figure 3 Project Location

3.0 ALTERNATIVES TO PROPOSED ACTION

3.1 DESIGN CRITERIA

It should be noted that the Area of Potential Effect (APE) of this project includes individual elements that will not be implemented simultaneously. All pipe elements will have relatively narrow APE's that will mostly be within or near road shoulders and disturbances will occur within previously developed areas.

3.1.1 Cultural Resources

The only potential impact(s) that could occur because of project elements would be the inadvertent discovery of possible archeological materials. If that occurs, the following protocols would be observed:

- All work will stop immediately in the vicinity of the find,
- the area will be secured and protected,
- the project inspector will be notified,
- SHPO will be notified,
- if human remains are encountered, the City of Carlin Police Department, Commission on Indian Services (CIS), Tribes, and BLM will also be notified,
- no work may resume until SHPO and BLM Archaeology staff are on-site and able to assess the situation and clear the site for continuation of construction activities.

3.1.2 Biological Resources

The Nevada Department of Wildlife and/or the United States Forest Service makes the following recommendations regarding the protection of habitat and wildlife during construction:

- Avoiding vegetation removal activities outside the migratory bird breeding season (passerines: April 15 – July 15; raptors Feb. 1 – Aug). If conducting vegetation disturbance activities during this time, we recommend that a qualified biologist survey for bird breeding behavior within 10 days of the disturbance. If breeding behavior is detected, please apply appropriate non-disturbance buffer or contact NDOW or FWS for further direction,
- avoid impacts to abandoned mines, caves, and roosting and foraging areas,
- work crews take appropriate fire prevention and management measures (e.g. extinguishers, shovels, no smoking, spark arrestors, etc.) to prevent a fire from starting and spreading into adjacent wildlife habitat.
- appropriate weed management plans be developed and implemented to monitor, prevent, and treat weeds from occupying the disturbance area and spreading into adjacent areas. Additionally, we recommend rehabilitating disturbed areas to prevent future weed infestations.
- USFWS recommends: Prevent the spread of invasive species and include measures designed to limit the spread of invasive species facilitated by project activities. Measures may include physical or chemical methods to control or remove invasive species, particularly related to Lahontan Cutthroat Trout.
-

3.1.3 Erosion and Best Management Practices

To prevent erosion during and after construction, best management practices such as the following will be implemented during construction depending upon conditions and need:

- Soils and slopes at the site will be assessed,
- existing vegetation will be preserved wherever possible,
- impervious surfaces will be minimized,
- work to minimize exposed soil areas,
- development of a Storm Water Pollution Prevention Plan,
- salvage, stockpile and reuse topsoil,
- install construction entrances and control dust,
- protect soils with vegetation, mulch, and binders,
- use sediment barriers including fiber rolls and silt fence,
- protecting culvert and ditch inlets and outlets,
- manage trash, materials, and supplies,
- project close-out including removing temporary sediment controls and final site stabilization.

3.1.4 Pressure Requirements

State pressure requirements include the following:

Pressures

According to NAC 445A.6672, Item 2, the public water system shall ensure the residual pressure in the distribution system is:

- At least 20 psi during conditions of fire flow and fire demand experienced during maximum day demand;
- At least 30 psi during peak hour demand; and
- At least 40 psi during maximum day demand.

Furthermore, the zones of pressure in a distribution system must be designed in such a manner that the static pressure at the lowest ground elevation of the zone does not exceed 100 psi.

Velocities

NAC 445A.6672, Item 2 states that high head losses must be avoided by maintaining normal water velocities below 8 feet per second during all conditions of flow other than fire flow.

3.1.5 Projects Involving Collection System Work – WasteWater Collection

As required by NAC 445A.783, item 1, a project that involves collection system work must improve the integrity and performance of the complete waste treatment system. Wastewater systems must also address issues associated with infiltration and blockages as designated in NAC 445A.785.

The antiquated collection system is proposed for replacement to improve the containment of wastewater and reduce the impacts of system leaks. Reducing leaks will reduce infiltration along pipe alignments. Infiltration can also be reduced by improving the lining of the wastewater lagoon treatment facility. The collection system also is impacted by blockages that require regular maintenance.

3.2 WATER SYSTEM ALTERNATIVES CONSIDERED

Alternatives to the proposed project that were considered during the preliminary design phase are described in this section.

3.2.1 Alternative 1: No Action

If no action is taken, the systems will continue to operate as they currently do, including but not limited to the potential for water loss, poor fire flow, low pressures, inefficient use of water resources, wastewater infiltration, and continuing maintenance costs.

3.2.2 Alternative 2: Replace Distribution System with Improvements to Spring 1 and Spring 2

This project would include replacing approximately 13 miles of water main (12, 10, and 8-inch), install 500 water meters, and replace failing infrastructure at Spring 1. The project would also include more than 300,000 square feet of asphalt paving and replace approximately 250 fire hydrants. In general, this project proposes to replace approximately half of the existing water distribution over an area of about 0.5 square miles. New water mains would be installed via open-trench construction in previously disturbed areas.

The first phase of this project would replace the transmission main between Spring 1 and the lower booster pump station in addition to making improvements to the spring facility itself. An engineering design for this project has been completed, although the project has not been subject to competitive bid nor has it been constructed.

The second phase of this project alternative includes replacement of two water transmission mains which cross under I-80 and form the only two connections between the water storage tanks and the majority of the city distribution system. Both of the welded steel mains were constructed in the 1930's and have experienced severe corrosion which has rendered them unsafe, prone to leaks, and are difficult to service. The continuous safe operation of these mains is critical because they supply water to 95% of the City. Additionally, since both mains cross under the I-80 freeway and Chestnut Street, which is a frontage road and the primary east-west artery in Carlin, a large leak in these mains could damage the roadways disrupting interstate traffic patterns and emergency services. Finally, the transmission mains do not have any larger diameter casing providing protection from external loads or excavation activities.

Phase 3 would replace the portion of the distribution system that contains the oldest pipes in the system and is also the area with the greatest water pressures. This phase includes all the locations where main replacement requires directional boring under railroad tracks. The portion of town south of the railroad tracks also contains several mains that dead end. The mains south of the railroad tracks will be extended to 10th Street and 4th Street and looped, eliminating or reducing five dead ends. The horizontal bore under the railroad track at 4th Street will be relocated to the road crossing at B Street and connect to an existing 8-inch PVC main there, eliminating a sixth dead end. Looping the water mains will reduce or eliminate dead end mains, which will increase flow to fire hydrants. Dead end mains can also result in stagnant water and locations for microbiological growth.

Phase 4 improvements include replacing existing deficient water mains north of the railroad tracks and to the east of 6th Street. It is also proposed to include isolated segments of pipe and mains farther to the north, including some isolated segments of main farther north and near I-80. Service lines will be

replaced to the edge of City right-of-way and meter pits with meters will be installed. This part of the distribution system contains the second oldest pipes in the distribution system.

The final portion (i.e., Phase 5) of the distribution system which is being proposed for replacement are water mains north of the railroad tracks and to the west of 6th Street. Service lines will also be replaced to the edge of City right-of-way and meter pits with meters will be installed.

The transmission main from Spring 2 to the booster pump is also nearing the end of its useful life and is a candidate for replacement. The proposed improvements include 2,000 lf of 12-inch transmission main which would connect to the Spring 1 transmission main just to the west of Willow St. Additionally, the spring outlet and flow gauge would be replaced as well. The need for this project is significantly downgraded due to the fact that the City does not need to rely on Spring 2 water to meet average or peak demands.

3.2.3 Alternative 3: Replace Distribution System with New Water Sources

This project proposes nearly identical improvements to that of Alternative 2 except for completely replacing the headworks facility at Spring 1 and constructing a new groundwater well or spring-based headworks facility at an undisclosed location.

3.3 WASTEWATER SYSTEM ALTERNATIVES CONSIDERED

Alternatives to the proposed project that were considered during the preliminary design phase are described in this section.

3.3.1 Alternative 1: No Action

One option available to the City is to not pursue any improvements to the sewer collection systems or treatment facilities and respond to failures on an as-needed basis. The No Action alternative would not identify any sewer system improvement project on future capital improvement plans and would not set aside specific funding sources for the improvements.

3.3.2 Alternative 2: Replace Collection System + Lift Station + WWTP Projects

This project would include sewer system investigations (e.g., sewer video inspection, inflow + infiltration analysis), replacing approximately 8 miles of the sewer collection system (10, 8, and 6-inch), replace the Oak St. lift station, remove sludge and install new monitoring wells at the wastewater treatment ponds. The project would also include more than 200,000 square feet of asphalt paving and replace sewer laterals for 500 current customers. In general, this project proposes to just over half of the existing sewer collection over an area of about 0.5 square miles. For this alternative, all sewer pipe would be installed via open-trench construction in previously disturbed areas

It is assumed that the City would pursue these improvements in phases for two primary reasons. First, the total costs of these improvements are expected to significantly exceed any capital reserves or annual user fee revenues so a funding plan will need to be developed over a number of years. And finally, some additional investigations are needed to confirm the condition of infrastructure as well as to confirm the design capacity of improvements. For example, if the replacement of Priority 1 pipes reduce total system flows by 20 percent it is reasonable to expect that the design capacity of the Oak Street lift station replacement should also be reduced.

3.3.3 Alternative 3: Replace Collection System + Lift Station + WWTP Projects (Trenchless Construction)

This project alternative proposes to replace the same system components as alternative 1. However, this alternative would replace all failing sewer collection mains with a cured in place pipe (CIPP) inside of existing pipes as opposed to completely replacing all failing pipes with new materials. This method of construction has many benefits, including:

- reduced unit installation costs,
- smaller quantities of asphalt which needs to be replaced,
- pipe segments replaced with jointless, seamless pipes, and
- reduced traffic control costs.

The primary drawbacks to this method of construction is that it requires a "host" pipeline which does not have significant structural flaws or failures and it will be installed in the exact same location and at the same slope as the original pipe. If there is a need to re-align a section of the collection system that would require open-trench construction. An additional drawback is that the lined pipe can only be cleaned in the future with a water-jetting based device as mechanical cable or "snakes" would damage the liner material.

This alternative also proposes to line the City owned portion of each sewer connection and not replace any piping or install any new cleanouts with the improvements. It is also assumed that the City would pursue these improvements in phases for the same reasons listed under alternative 2.

3.4 ALTERNATIVE EVALUATION CRITERIA

The following is the criteria used to measure the effectiveness of alternatives. A no-action alternative would not satisfy any of the criteria.

3.4.1 Health and Safety

The condition description in Section 1.2.1 includes items that could cause water and ground water contamination.

3.4.2 System O&M

Both the sewer and water systems are old and have associated increasing O&M costs.

3.4.3 Energy Efficiency

The existing older pipes leak and allow water to infiltrate the pipelines and eventually require pumping into the wastewater treatment facility. Any reduction in the volume of water entering the Oak St. Lift Station will reduce the amount of energy consumed at the lift station facility.

3.5 ALTERNATIVES ELIMINATED FROM DETAILED CONSIDERATION

3.5.1 Water System

Evaluation of Alternative 1 – No Action

If no action is taken, the system would continue to operate as it currently does. This includes all of the problems listed. For this reason, this alternative is unacceptable.

Evaluation of Alternative 3:

Because the location of the second water source is unknown it is assumed that a suitable location will be found within a one-mile radius of the distribution system. A water import project or bulk supply from another utility is being considered as unviable at this time.

3.5.2 Wastewater System

Evaluation of Alternative 1 – No Action

If no action is taken, the system would continue to operate as it currently does. This includes all of the problems listed. For this reason, this alternative is unacceptable.

Evaluation of Alternative 2:

As little information is known on existing utility locations, pursuing Alternative 2 would add the risk of proposed activities conflicting with existing utilities. When compared to other methods of pipe replacement- such as CIPP - the disadvantages of this alternative become more evident. Some of which include more quantities of asphalt required, increased installation costs, and increased traffic control costs. For these reasons, this alternative is eliminated from this study.

4.0 AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES

4.1 LAND USE/IMPORTANT FARMLAND / FORMALLY CLASSIFIED LANDS

4.1.1 Affected Environment

There are some prime farmland soils at the outer edge of the project area. However, proposed project areas that do have prime farmland soils are located adjacent to roads or railroad alignments. Additionally, these areas will not be impacted due to the subsurface nature of the project elements (piping). There are no unique lands, forest lands, national natural landmarks, wilderness areas, national monuments, or national parks or trails located within the proposed project area. There are no wild and scenic rivers in Nevada. See Section 7.0 for maps and NRCS Soils Report.

In summary, the proposed project will not require any change of use for the land involved and the land use required for the project conforms to the existing land use in the area.

4.1.2 Environmental Consequences

No environmental consequences are anticipated.

4.1.3 Mitigation

No mitigation will be required.

4.2 FLOODPLAINS

4.2.1 Affected Environment

The flood zones for Carlin have been mapped by the Federal Emergency Management Agency (FEMA) and have been designated by the following panel numbers: 32007C5984E, 32007C5985E, 32007C6001E, 32007C6002E, 32007C6003E and 32007C6004E. Areas immediately adjacent to the Humboldt River and tributary creeks are in Zone A, AE, and X. Most developed portions of the City lie outside the flood zones. Some underground water and sewer mains are in flood zones. For reference, the following flood hazard zone designations are provided:

Zone AE and A1-A30: Zones AE and A1-A30 are the flood insurance rate zones corresponding to the 100-year floodplains, determined by detailed methods in the Flood Insurance Study. In most instances, base flood elevations derived from the detailed hydraulic analysis are shown at selected intervals within this zone. Mandatory flood insurance purchase requirements apply.

Zones B, C, and X: Zones B, C, and X are the flood insurance rate zones that correspond to areas outside the 100-year floodplains, areas of 100-year sheet flow flooding where average depths are less than 1 foot, areas of 100-year stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 100-year flood by levees. No base flood elevations or depths are shown within this zone.

The FEMA FIRM maps for the Carlin area were issued in September 2013. The FEMA designated flood zone impacts the south side of the City as shown in panel 32007C6003E and 32007C6004E. The flood zone associated with Mary's Creek impacts the west side of town including the water spring collection system as designated in panel 32007C5984E.

See the project area FEMA National Flood Layers in Section 7.0.

4.2.2 Environmental Consequences

No environmental consequences are anticipated. Project elements located in zone AE will be subsurface and will have no effect on the floodplain. Other project element will be in low flood/no flood hazard areas.

4.2.3 Mitigation

No need for mitigation is anticipated.

4.3 WETLANDS

4.3.1 Affected Environment

There are no wetlands within the APE. See the U.S. Fish and Wildlife wetlands maps in Section 7.0.

4.3.2 Environmental Consequences

No environmental consequences are anticipated.

4.3.3 Mitigation

No mitigation will be necessary.

4.4WATER RESOURCES

4.4.1 Affected Environment

The project will have no effect on surface water or groundwater.

The Nevada Bureau of Safe Drinking Water provided the following comments:

"Based on the information provided by Farr West Engineering regarding this project the BSDW does not anticipate any negative environmental impacts to the existing ground water quality from the construction of the project. Please be aware that all vertical and horizontal separation distances between sewer main/laterals and water main/laterals must be maintained in accordance with the Nevada Administrative Code 445A.6715 to 445A.6718 inclusive, "Design, Construction, Operation and Maintenance of Public Water Systems". If compliance with the required separation distances cannot be achieved or is impracticable, the existing water main/lateral shall be protected as described in these sections of NAC 445A. Please be advised that the water improvements must be approved by the BSDW prior to construction."

In addition, permits may be needed from the Bureau of Water Pollution Control to ensure water quality standards are met. A list of potential permits is included in the mitigation section.

The Nevada Department of Environmental Protection (NDEP) requires construction storm water permits under the following conditions:

General Stormwater Permits for Construction Sites are required for projects disturbing at least one acre, or that will disturb less than one (1) acre but are part of a larger common plan for development or sale that will ultimately disturb one (1) or more acres. Although less than an acre will be disturbed at any time, the disturbance will be part of a larger common plan for development and thus will require a storm water permit. NDEP requires that plans and specifications for the replacement utilities will need to be submitted to the Bureau of Safe Drinking Water for review and approval prior to construction.

See Section 6.0 for correspondence with the Nevada Division of Environmental Protection Bureau of Safe Drinking Water.

Sole Source Aquifers According to the U.S. EPA, there are no designated sole source aquifers in Nevada. See EPA Fact Sheet in Section 7.0.

4.4.2 Environmental Consequences

No environmental consequences are anticipated.

4.4.3 Mitigation

Some BMP's may be necessary during construction. These may include but are not limited to dust suppression and straw wattles for the temporary effects due to construction and potential storm runoff. To prevent erosion during and after construction, best management practices such as the following will be implemented during construction depending upon conditions and need:

- Soils and slopes at the site will be assessed,
- existing vegetation will be preserved wherever possible,
- impervious surfaces will be minimized,
- work to minimize exposed soil areas,
- development of a Storm Water Pollution Prevention Plan,
- salvage, stockpile and reuse topsoil,
- install construction entrances and control dust,
- protect soils with vegetation, mulch, and binders,
- use sediment barriers including fiber rolls and silt fence,
- protecting culvert and ditch inlets and outlets,
- manage trash, materials, and supplies,
- project close-out including removing temporary sediment controls and final site stabilization.

The project may be subject to BWPC permitting. Permits are required for discharges to surface waters and groundwaters of the State (Nevada Administrative Code NAC 445A.228). BWPC permits include, but are not limited to, the following:

- Stormwater Industrial General Permit
- De Minimis Discharge General Permit
- Pesticide General Permit
- Drainage Well General Permit
- Temporary Permit for Discharges to Groundwater's of the State
- Working in Waters Permit
- Wastewater Discharge Permits
- Underground Injection Control Permits
- Onsite Sewage Disposal System Permits
- Holding Tank Permits

4.5 BIOLOGICAL RESOURCES

4.5.1 Affected Environment

Consultation was done with the Nevada Department of Conservation and Natural Resources, Nevada Natural Heritage Program (NNHP), Nevada Department of Wildlife (NDOW), and the U.S. Fish and

Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) program. All three programs provided species lists and/or protection/avoidance guidance relating to wildlife that might occur within the project area.

Plants and Animals

The NNHP has developed a list of sensitive animals, plants and lichens. The list gives a brief description of the endangered/threatened status of each species. The program provided the following information for the project area:

"We are pleased to provide the information you requested on endangered, threatened, candidate, and/or At Risk plant and animal taxa recorded within or near the City of Carlin Water and Sewer Improvements Project area in Elko County. We searched our database and maps for the following, a 2 kilometer radius around area provided including:

Township 33N Range 52E Sections 26 and 27

There are no at risk taxa recorded within the given area. However, habitat may be available for: the big-brown bat, Eptesicus fuscus, a Nevada Bureau of Land Management (BLM) Sensitive Species, the Columbia spotted frog (Great Basin Population) Rana luteiventris pop. 3, a Nevada BLM Sensitive Species; and the pygmy rabbit, Brachylagus idahoensis, a Nevada BLM Sensitive Species. The Nevada Department of Wildlife (NDOW) manages, protects, and restores Nevada's wildlife resources and associated habitat. Please contact Bonnie Weller, NDOW GIS biologist (775) 688-1439 to obtain further information regarding wildlife resources within and near your area of interest. Removal or destruction of state protected flora species requires a special permit from Nevada Division of Forestry (NRS 527.270)."

Lahontan Cutthroat Trout

Consultation with USFWS identified Lahontan Cutthroat Trout within the project area. However, no proposed project work is anticipated to take place within water ways or trout habitat. If any project work is planned for the Lower Maggie Creek Watershed, which is known to include Lahontan Cutthroat Trout, USFWS recommends the conservation measures listed in mitigation.

See Section 7.0 for correspondence with NNHP and Bonnie Weller and Lindsey Lesmeister of NDOW and USFWS.

Weeds

The following summarizes the Nevada Department of Agriculture (NDOA) policy statement regarding noxious weed abatement statutes NRS 555.005-201:

A noxious weed is a plant that has been defined as a pest by law or regulation. In Nevada, if a plant is found to probably be "detrimental or destructive and difficult to control or eradicate" (Nevada Revised

Statute 555.005), the NDOA, with approval of the Board of Agriculture, will designate the plant as a noxious weed.

It is the NDOA's policy to use the "Noxious Weed Tier System" to determine what action is to be taken consistent with existing statutes which include authority for: the promulgation of quarantine, abatement for eradication and/or control; holding and inspecting; establishing weed control districts; and for other regulatory activities. At the time, the NDOA lists a species, it will also give a rating of A, B, or C. These ratings reflect the NDOA's view of the statewide importance of the noxious weed, the likelihood that eradication or control efforts would be successful, and the present distribution of noxious weeds within the state. These lists will be in the Nevada Administrative Code (NAC 555.010).

The following defines the NDOA weed ratings:

"A" Weeds normally limited in distribution throughout the state; actively excluded from the state and actively eradicated wherever found; actively eradicated from nursery stock dealer premises; control required by the state

"B" Weeds more widespread throughout the state; actively excluded where possible, actively eradicated from nursery stock dealer premises; control required by the state in areas where populations are not well established or previously unknown to occur

"C" Weeds generally widespread throughout the state; actively eradicated from nursery stock dealer premises; abatement at the discretion of the state quarantine officer.

Table 3.1 is the NDOA weed list with weeds classified per rating.

Table 3.1 – Weeds occurring in Nevada

	COMMON NAME	SCIENTIFIC NAME
Category A Weeds	African Rue	Peganum harmala
	Austrian fieldcress	Rorippa austriaca
	Austrian peaweed	Sphaerophysa salsula / Swainsona salsula
	Camelthorn	Alhagi camelorum
	Common crupina	Crupina vulgaris
	Dalmation Toadflax	Linaria dalmatica
	Dyer's woad	Isatis tinctoria
	Eurasian water-milfoil	Myriophyllum spicatum
	Giant Reed	Arundo donax
	Giant Salvinia	Salvinia molesta
	Goats rue	Galega officinalis
	Houndstongue	Cynoglossum officinale
	Hydrilla	Hydrilla verticillata
	Iberian Star thistle	Centaurea iberica
	Klamath weed	Hypericum perforatum
	Leafy spurge	Euphorbia esula
	Malta Star thistle	Centaurea melitensis
	Mayweed chamomile	Anthemis cotula
	Mediterranean sage	Salvia aethiopis
	Purple loosestrife	Lythrum salicaria, L.virgatum and their cultivars
	Purple Star thistle	Centaurea calcitrapa
	Rush skeletonweed	Chondrilla juncea
	Sow Thistle	Sonchus arvensis
	Spotted Knapweed	Centaurea masculosa
	Squarrose star thistle	Centaurea virgata Lam. Var. squarrose
	Sulfur cinquefoil	Potentilla recta
	Syrian Bean Caper	Zygophyllum fabago
	Yellow Starthistle	Centaurea solstiltialis
	Yellow Toadflax	Linaria vulgaris
Category B Weeds	Carolina Horse-nettle	Solanum carolinense
	Diffuse Knapweed	Centaurea diffusa
	Medusahead	Taeniatherum caput-medusae
	Musk Thistle	Carduus nutans
	Russian Knapweed	Acroptilon repens
	Sahara Mustard	Brassica tournefortii
	Scotch Thistle	Onopordum acanthium

	White Horse-nettle	Solanum elaeagnifolium
Category C Weeds	Black henbane	Hyoscyamus niger
	Canada Thistle	Cirsium arvense
	Green Fountain grass	Pennisetum setaceum
	Hoary cress	Cardaria draba
	Johnson grass	Sorghum halepense
	Perennial pepperweed	Lepidium latifolium
	Poison Hemlock	Conium maculatum
	Puncture vine	Tribulus terrestris
	Salt cedar (tamarisk)	Tamarix spp

4.5.2 Consequences

Although some of the species mentioned in the Natural Heritage Program and/or the NDOW survey may be present within the survey area, the area of potential effect for the project is very narrow, approximately 20 feet wide for the length of the pipeline alignment. Additionally, most of the area has been previously disturbed, including roads, along which a most of the pipelines will be installed.

Regarding weeds, emphasis on development and implementation of best management practices (BMPs) will reduce or eliminate the possibility of environmental consequences.

4.5.3 Mitigation

4.5.3.1 Wildlife

Animals

Lahontan Cutthroat Trout

It is not anticipated that Lahontan Cutthroat Trout will be affected by construction since the construction will take place along existing roadways areas. If any project work occurs in the Lower Maggie Creek Watershed, which is known to include Lahontan Cutthroat Trout, USFWS recommends the following conservation measures:

1. Clean and Maintain Equipment
2. Control Invasive Species

3. Implement Erosion Control Measures
4. Implement Siting Restrictions
5. Implement Wildlife Passage Measures
6. Implement a spill protection plan
7. Institute Refueling Restrictions
8. Institute Seasonal Avoidance Measures
9. Restrictions on In-Water Work
10. Restrictions on Off-Road Travel
11. Use appropriate Survey Protocols
12. Use Known Sources of Fill Material

Birds

It is not anticipated that the raptor nests will be affected by construction since the construction will take place within streets and road shoulders however, NDOW has provided the following recommendations relating to the protection of birds that might occur within the project area:

> *"We recommend avoiding vegetation removal activities outside the migratory bird breeding season (passerines: April 15 – July 15; raptors Feb. 1 – Aug). If conducting vegetation disturbance activities during this time, we recommend that a qualified biologist survey for bird breeding behavior within 10 days of the disturbance. If breeding behavior is detected, please apply appropriate non-disturbance buffer or contact NDOW or FWS for further direction."*

Greater Sage-Grouse

According to NDOW, there is no known greater sage-grouse habitat in the vicinity of the project area.

Big Game

Occupied elk, mule deer, and pronghorn antelope distributions exist within portions of the project area and four-mile buffer area. No known occupied bighorn sheep distribution exists in the vicinity of the project area.

The project will move relatively slow and the equipment used is very slow moving. It is anticipated that the noise associated with the construction should provide sufficient warning to big game in the area. Additionally, most of the project will occur within the City where there is little or no wildlife habitat.

Weeds

Some mitigation may be required to prevent the spread of invasive weeds during and after construction of the proposed project. Mitigation may include the creation of a weed prevention plan to be implemented by the contractor. The plan should include provisions like the following:

- Identify and flag all noxious and invasive weed populations present in the project area,
- Treat or contain any weed populations that may be impacted or disturbed by construction activity,
- Provide training to construction workers and equipment operators on the identification of weeds to be avoided,
- Certify that all construction material sources are weed-free,
- Minimize ground disturbance and vegetation removal as much as possible and practical,
- Re-vegetate or otherwise prevent the establishment of weeds in all areas of the job site.

4.6 HISTORIC AND CULTURAL PROPERTIES

4.6.1 Affected Environment

Consultation with SHPO was initiated under Section 106 of the National Historic Preservation Act of 1966 (NHPA) for the City of Carlin Water and Sewer Improvements Project. The SHPO checked NVCRIS on behalf of NDEP, records show that no portions of the APE have been inventoried, and no archeological sites have been documented within the APE. THE SHPO does not recommend any additional archeological inventory for this undertaking due to low potential for significant archeological sites within the APE.

The SHPO requests that NDEP indicate whether the water system shall be evaluated for National Register of Historical Places (NRHP) eligibility. If the water and sewer systems have a significant alteration that might render them not eligible for NRHP listing, a description of the alterations and statement regarding the integrity of the systems must be submitted.

The SHPO notes that consultation with Native American Tribes that are affected, the general public and other potentially interested groups has not been submitted. Assistance from the lead agency will be required to complete these consultation in accordance with the NHPA.

Table 3.2 shows National and State Register of Historical Places (NRHP and SRHP) resources in Elko County.

TABLE 3.2 – National and State Listed Historical Sites in Elko County

Resource	Location	NRHP	SRHP
Commercial Hotel	345 4th St., Elko		X
Henderson Bank Building	404 Railroad St., Elko		X
Ruby Valley Pony Express Station	1515 Idaho St., Elko	X	X
Skelton Hotel	Jiggs Star Route, Jiggs		X
Midas Schoolhouse	Second St., two blks east of Main St., Midas	X	X
Metropolis Dam	10.5 miles north of Wells, NV, Melandco		X
Elko County Courthouse	571 Idaho St., Elko	X	
US Post Office-Elko Main	275 Third, Elko	X	
Lamoille Organization Camp	Rt. Fork of Lamoille Creek, end of FS Rd. 122	X	
Gold Creek Ranger Station	E of Mountain City, Humboldt NF	X	

4.6.2 Environmental Consequences

Of the historical resources listed in the NRHP and SRHP, none of the historic properties are present in the project area. There are approximately 1,122 properties within the area of potential effect (APE) that are 50 of age or older.

See SHPO correspondence in Section 6.0.

4.6.3 Mitigation

It is anticipated that none of the properties are within the APE. Each of the project APEs are narrow and limited to the existing roadways and rights of way and on previously disturbed lands. No mitigation is expected to be required.

However, should an archaeological inventory of the direct APE indicate additional mitigation to protect cultural resources exit., mitigation options will be assessed, which may include but are not limited to archeologist consultation, notification of all state and Federal Agencies involved in the project, and compliance with NRS Chapter 383 in the case of inadvertent discovery of cultural resources.

Potential impact(s) that could occur because of project elements would be the inadvertent discovery of possible archeological materials. If that occurs, the following protocols would be observed:

- All work will stop immediately in the vicinity of the find,
- the area will be secured and protected,
- the project inspector will be notified,
- SHPO will be notified,
- if human remains are encountered, the City of Carlin Police Department, Commission on Indian Services (CIS), Tribes, and BLM will also be notified,
- no work may resume until SHPO and BLM Archaeology staff are on-site and able to assess the situation and clear the site for continuation of construction activities.

4.7 AESTHETICS

4.7.1 Affected Environment

The project will be subsurface, with the exceptions of hydrants. Regarding the subsurface elements, all the project trenches will be backfilled and graded to the existing grade. Additionally, the disturbed areas will be reseeded where needed. It is not anticipated that the project will lasting aesthetic effect since the project area will be returned to the pre-project condition.

4.7.2 Environmental Consequences

No environmental consequences are anticipated for the project.

4.7.3 Mitigation

No environmental consequences are anticipated for the project.

4.8 AIR QUALITY

4.8.1 Affected Environment

The proposed project will disturb approximately 24.0 total acres. Equipment emissions will have temporary effect on air quality during construction. Table 3.4 shows equipment and vehicles that potentially could be used during the project. Note that generally no more than three of these is in operation at the same time. Dust generated by project activity is also expected to be minimal. This is because the amount of soil being disturbed at any time will be approximately less than 1/10 of an acre and will be accompanied by dust suppression activities. The project conforms to the EPA-approved State Implementation Plan (SIP) per the Nevada Department of Conservation and Natural Resources, Division of Environmental Protection.

See Section 6 for correspondence.

Table 3.4 – Examples of equipment to be used on project

1) Loader
2) Mini Excavator
3) 10 Wheel (haul truck)
4) Double Drum Vibratory Roller
5) Motor Grader
7) Fuel Truck

4.8.2 Environmental Consequences

No environmental consequences are anticipated.

4.8.3 Mitigation

Mitigation will include the watering of fugitive dust. If a disturbance of 5 acres or more is anticipated, a surface area disturbance permit from the Bureau of Water Pollution Control may be necessary. Surface disturbance of 5 acres is not anticipated for the proposed project.

See Section 6 for Correspondence with BSDW.

4.9 SOCIO-ECONOMIC IMPACT ASSESSMENT / ENVIRONMENTAL JUSTICE

4.9.1 Affected Environment

The proposed project includes the replacement of existing deteriorated water distribution lines and appurtenances. The project will benefit the entire community and will have no disproportionately high or adverse human health or environmental effects to minority or low-income populations.

The socio-economic make-up of the area will not be affected. No part of the project will require a land use change. With few exceptions, new proposed pipelines will be installed in the alignments of the existing lines or road shoulders. Some new right-of-way's may need to be obtained from private property owners, and/or Nevada Department of Transportation.

4.9.2 Environmental Consequences

No environmental consequences are anticipated.

4.9.3 Mitigation

No mitigation will be required.

4.10 NOISE

4.10.1 Affected Environment

Except for the construction activities none of the alternatives are expected to cause long term noise problems. The only anticipated noise will be related to construction activities.

4.10.2 Environmental Consequences

No environmental consequences are anticipated.

4.10.3 Mitigation

The following practices will be observed during construction:

1. Construction activities will be done during normal working hours between 7:00 am and 5:00 pm.
2. Quieter methods or equipment will be used when possible
3. All equipment will be required to have efficient mufflers
4. Only equipment of necessary size and power will be used
5. All equipment will be properly lubricated and well maintained.

4.11 TRANSPORTATION

4.11.1 Affected Environment

Most of the pipeline will be installed along road shoulders.

4.11.2 Environmental Consequences

No environmental consequences are anticipated.

4.11.3 Mitigation

If the usable roadway is not sufficient to safely accommodate two-way traffic, one-way traffic will be maintained. Work will be conducted in such a manner as to obstruct and inconvenience traffic as little as possible. Existing travel roads and streets adjacent to or within the limits of the improvement will be kept open and in a good, dust free and safe condition for traffic at all times. Work will be performed in a manner to assure full compliance with all applicable Federal, State and local laws and regulations governing safety, health and sanitation. Adequate safeguards, safety devices, and protective equipment will be provided to conform to the MUTCD. Safe, temporary access to business and residence driveways will be provided by temporary intersections, and temporary connections with roads, streets, bikeways, sidewalks, and footpaths.

4.12 HUMAN HEALTH AND SAFETY

4.12.1 Electromagnetic Fields and Interference

4.12.1.1 Affected Environment

There are no electrical elements included in this project

4.12.1.2 Environmental Consequences

No environmental consequences are anticipated.

4.12.1.3 Mitigation

No mitigation will be required.

4.12.2 Environmental Risk Management

4.12.2.1 Affected Environment

The proposed project may include the replacement of non-friable asbestos cement pipe. The pipe will not be removed from the ground during construction however some of the pipe will be exposed to tie into the existing system.

The only hazardous material that will be present in the construction area will be equipment fuel and lubrication.

4.12.2.2 Environmental Consequences

No environmental consequences are anticipated.

4.12.2.3 Mitigation

Any asbestos pipe that needs to be removed from the ground will be disposed of per EPA and OSHA requirements.

4.13 CORRIDOR ANALYSIS

4.13.1 Affected Environment

It is anticipated that most of the proposed pipeline elements of the project will be constructed within existing road alignments. If necessary, some pipe may need to be installed by pipe bursting or directional boring.

4.13.2 Environmental Consequences

No environmental consequences are anticipated.

4.13.3 Mitigation

No mitigation will be necessary.

5.0 CUMMULATIVE EFFECTS

Table 4.1 – Summary of Cumulative Effects

Resource	Past Actions	Present Actions	Proposed Action	Future Actions	Cumulative Effect
Land Use	No change in land use	No change in land use	No change in land use	Slight increase in system size	None anticipated
Floodplains	No effect	No effect	Little or no effect	Slight increase in system size	None anticipated
Wetlands	Not Applicable	Not Applicable	Not Applicable	Slight increase in system size	Not Applicable
Water Resources	No effect on water resources	No effect on water resources	More efficient use of water resources	Slight increase in system size	None anticipated
Coastal Resources	Not Applicable	Not Applicable	Not Applicable	Slight increase in system size	Not Applicable
Biological Resources	No effect	No effect	No anticipated effect	Slight increase in system size	None anticipated
Historic and Cultural Properties	No effect	No effect	No anticipated effect	Slight increase in system size	None anticipated
Aesthetics	No effect	No effect	No anticipated effect	Slight increase in system size	None anticipated
Air Quality	No effect	No effect	Temporary effects	Slight increase in system size	None anticipated
Socio-Econ/Environmental Justice	No effect	No effect	No effect	Slight increase in system size	None anticipated
Miscellaneous (Noise and Transportation)	No effect	No effect	Temporary effects	Slight increase in system size	None anticipated
Human Health and Safety (Electromagnetic, Environmental Risk	Asbestos pipe used	No Effect	Replace asbestos pipe	Slight increase in system size	None anticipated
Corridor Analysis	Water lines were installed next to roads	No Effect	New pipe installed within existing road alignments	Little or no increase in system size	None anticipated

6.0 SUMMARY OF MITIGATION

Some mitigation may be required for the following:

- Water Resources: BMP's and Permitting
- Wildlife: Weeds/Invasive Species
- Historic and Cultural resources: inadvertent discovery
- Air Quality: Fugitive dust
- Noise
- Transportation

Other than those items listed above, no potentially significant environmental impacts were discovered during the environmental investigation for this project. Therefore, standard construction practices and permitting should be sufficient to protect the affected environment. These practices include halt and notify provisions for the discovery of historic artifacts, limits on hours of operation and noise, air, and traffic abatement procedures.

7.0 COORDINATION, CONSULTATION, AND CORRESPONDENCE

This section includes correspondence from the following State and Federal entities:

- Nevada State Historic Preservation Office
- U.S. Fish and Wildlife Service
- Nevada Division of Environmental Protection, Safe Drinking Water
- Nevada Division of Environmental Protection, Division of Clean Air
- Nevada Division of Environmental Protection, Bureau of Water Pollution Control
- Nevada Natural Heritage Program
- Nevada Dept. of Conservation and Natural Resources, State Engineer
- Nevada Department of Wildlife
- Nevada State Clearing House

Notes:

1. Letters sent to the above agencies included a copy of the project area map and project description.

2. Comments provided by John Nelson of USDA on September 7, 2018 are as follows and incorporated here in as noted below:

Comment 1: p3 (Original document): invasive species prevention is now added to biological resources, see p3 of updated document

Comment 2: p13 (Original document): invasive species conservation measures now included in mitigation See p14 of updated document

Comment 4: p15 (Original document): mitigation for historic properties is now included for unanticipated resources See p17 of updated document

Comment 5: p15 (Original document): Was NVCRIS contacted? See p15-16 of updated document

Comment 6: p65 (Original PER): table for construction mitigation has been added to the PER. See p9-11 for construction related mitigation

NEVADA STATE HISTORIC PRESERVATION OFFICE
Recommended Coversheet for Section 106 Review

If you find this document helpful in preparing a submission document, please include this with your submission. Please type and double clip on the check boxes. Due to limited resources and the requirements of federal regulation, we are unable to accept this application electronically.

I. GENERAL INFORMATION

☒ THIS IS A NEW SUBMITTAL
☐ THIS IS MORE INFORMATION RELATING TO UT# Click or tap here to enter text.

a. Project Name: City of Carlin Sewer and Water System Improvements
b. Project Address and APN (if available): Various Locations within the City of Carlin
c. County: Elko
d. Federal Agency, Contact Name and Mailing Address (*If you do not know the federal agency involved in your project please contact the party requiring you to apply for Section 106 review, not the SHPO, for this information*.). N/A
e. State Agency (if applicable), Contact Name and Mailing Address: Michelle Stamates, 901 So. Stewart Street, Suite 4001, Carson City 89701
f. Consultant or Applicant Contact Information (if applicable) *including mailing address*.
   Farr West Engineering, 5510 Longley Lane, Reno Ph# 775-853-7265, email: danny@farrwestengineering.com
g. Exact project location map should be submitted. Please see our website for further mapping information: nvshpo.org/review-compliance/guidelines.html.
   1. 7.5' USGS Quad Map Name: Carlin East, Nevada
   2. Township: T33N Range: R52E. Section: W ½ Sec 26, Sec 27

II. PROJECT WORK DESCRIPTION AND AREA OF POTENTIAL EFFECTS (APE)
Note: Every project has an APE.

a. Provide a detailed written description of the project (plans, specifications, Environmental Impact Statements (EIS), Environmental Assessments (EA), etc. can be included with the written description): The project includes the replacement of the existing water and sewer piping system within the City of Carlin. All of the piping to be replaced is within existing right-of-ways.
b. Provide a localized map indicating the location of the project; road names must be included and legible. **See attached**
c. On the above-mentioned map, identify the APE. **See attached**
d. Provide a written description of the APE (physical, visual, auditory, and atmospheric), the steps taken to identify the APE, and the justification for the boundaries chosen. Please consider the height of the proposed undertaking when determining this area. The APE was determined by the location of existing piping. The installation of the new pipe will take place within the alignment of the existing pipes.

III. GROUND DISTURBING ACTIVITY (INCLUDING EXCAVATION, GRADING, TREE REMOVALS, UTILITY INSTALLATION, CONSTRUCTION, ETC.)

DOES THIS PROJECT INVOLVE GROUND-DISTURBING ACTIVITY? YES ☒ NO ☐ (If no, proceed to section IV.)

a. Description of width, length and depth of proposed ground disturbing activity (please include all associated disturbances (access roads, laydown areas, etc): Ground disturbance includes trenches approximately 210,134 long x 4 feet wide x 4 feet deep..
b. Previous land use and disturbances: The previous land use is city streets and residential and commercial structures. Previous disturbances included residential and commercial construction as well as utility and road installation. The proposed project will not change the land use.
c. Current land use and conditions: Current land uses include city streets, residential and commercial structures.
d. Does the landowner know of any archaeological resources found on the property?
    1. Please describe: No

IV. IDENTIFICATION OF HISTORIC PROPERTIES

a. List and date all resources (buildings, structures, objects, archaeological sites) 50 years of age or older located in the APE: See attached list.
b. List all resources currently listed in the National Register of Historic Places (NRHP) or currently designated under a local preservation ordinance. (If the resource is located within a NRHP-listed or local historic district it is only necessary to identify the district): None found
c. List all resources previously determined eligible for NRHP listing (see “Instructions for Application for Section 106 Review” on the SHPO website): None that we are aware of
d. Is the APE for the undertaking within the jurisdiction of a Certified Local Government?
    ☒ Yes – please include evidence of consultation with the Historic Resources Review Board or appropriate staff representative.
    ☐ No – no further documentation necessary.
e. Identify whether or not any previously unevaluated resources in the APE are eligible for NRHP listing.
    ☒ The identification process included seeking information, as appropriate, from Indian tribes, local governments, the general public, and any individuals or organizations that may have an interest in, or knowledge of, the historic properties in the area (attach documentation).
    ☐ The identification and evaluation of historic resources was performed by a Secretary of the Interior-qualified professional (attach qualifications).
    a. Describe the steps taken to identify whether or not the APE contains previously unevaluated NRHP-eligible resources:
    b. Consulted with Carlin City Manager
f. Based on the information contained in “b”, please choose one:
    ☐ Historic Properties Present in the APE
    ☒ No Historic Properties Present in the APE
g. Describe the condition, previous disturbance to, and history of any historic properties located in the APE: N/A

V. PHOTOGRAPHS

Note: All photographs should be keyed to a map.

a. Provide photographs of the project area itself.
b. Provide photographs of all resources 50 years of age or older located in the APE. Digital images or clear photocopies are acceptable. **Nearly the entire town is 50 years old. See attached list. It would be impractical for this project to photograph all of the resources that are 50+ years old.**

VI. DETERMINATION OF EFFECT

Based on the above information, please choose one.

☐ No historic properties affected based on [36 CFR § 800.4(d)(1)], please provide the justification for this determination.

☒ No Adverse Effect [36 CFR § 800.5(b)] on historic properties, explain why the criteria of adverse effect, 36 CFR Part 800.5(a)(1), were found not applicable.

No adverse effects are anticipated because the undertaking will not alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. The undertaking will disturb streets but will not involve structures. It should be noted that no properties have been identified as qualifying for the National or State registers.

☐ Adverse Effect [36 CFR § 800.5(d)(2)] on historic properties, explain why the criteria of adverse effect, [36 CFR Part 800.5(a)(1)], were found applicable.

Please print and mail completed form and any additional information to:

Nevada State Historic Preservation Office
901 S. Stewart Street, Suite 5004
Carson City, Nevada 89701-5248

CITY OF CARLIN
151 S. 8th Street
PO Box 787
Carlin, Nevada 89822
775-754-6354
775-754-6912 FAX
www.cityofcarlin.com

To Whom it may Concern,

At this current time the City of Carlin has no concerns about historical structures in the City limits of Carlin.

Sincerely,

David Jones

Carlin, City Manager

CARLIN EAST QUADRANGLE
NEVADA, NORTH
TOPOGRAPHIC SERIES

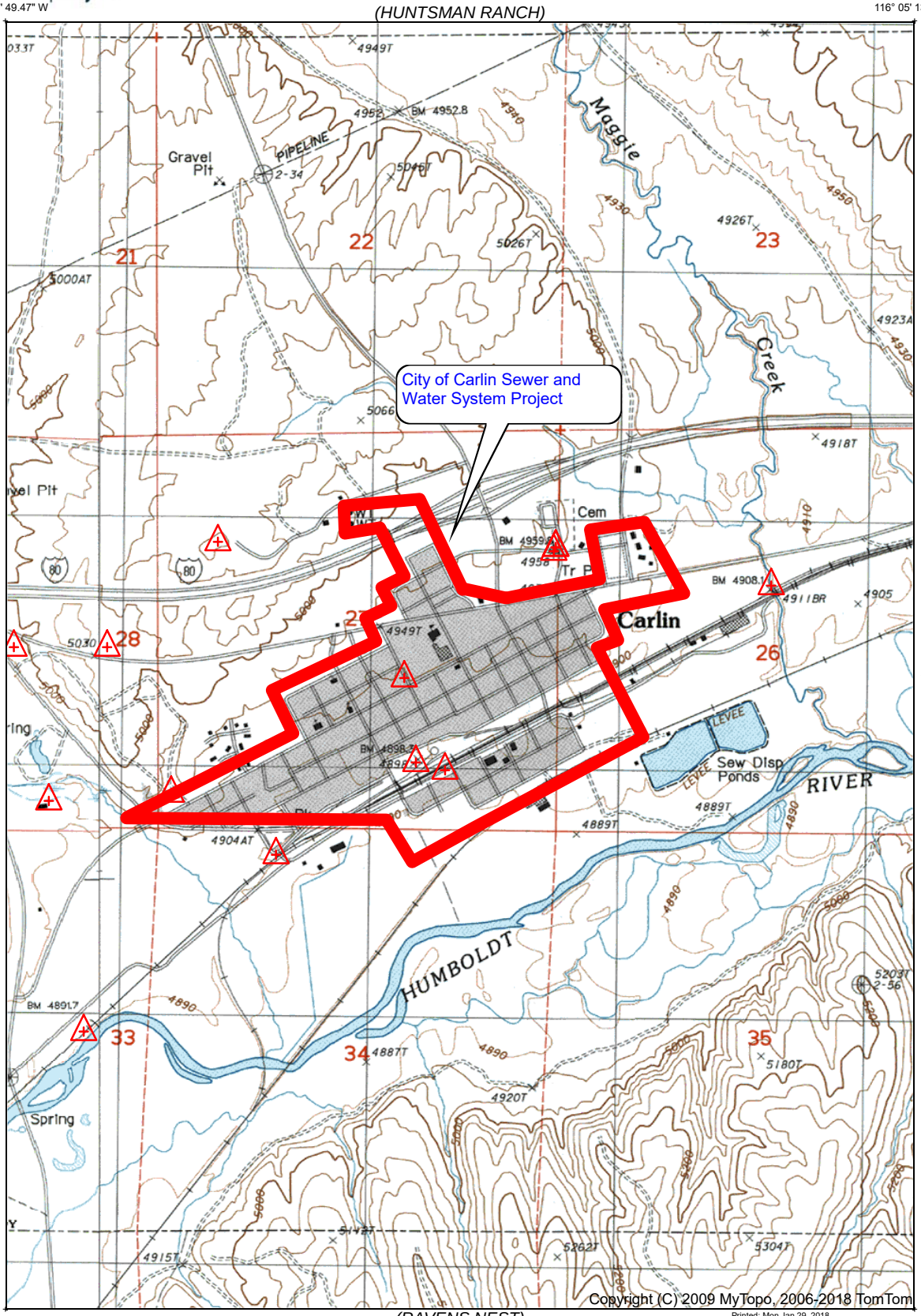
(SCHROEDER MT)

(HUNTSMAN RANCH)

(HUNTER)

116° 07' 49.47" W
040° 44' 21.40" N

116° 05' 13.41" W
040° 44' 21.40" N



(CARLIN WEST)

(GRINDSTONE MT)

040° 41' 33.83" N
116° 07' 49.47" W

(RAVENS NEST)

Copyright (C) 2009 MyTopo, 2006-2018 TomTom
Printed: Mon Jan 29, 2018

040° 41' 33.83" N
116° 05' 13.41" W

(PALISADE)

(BULLION)

SCALE 1:24000

Declination

GN MN

GN 0.58° E
MN 13.05° E

0 1
MILE

0 1000
YARDS

0 1
KILOMETER

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM 1929

Produced by MyTopo Terrain Navigator
Topography based on USGS 1:24,000 Maps

North American 1983 Datum (NAD83)
Transverse Mercator Projection

To place on the predicted North American 1927 move the projection lines 9M S and 77M W

CARLIN EAST, NV
1985

Legend

- PS — Sewer Pump Station
- Sewer Manhole
- Lateral Cleanout
- Main Line Cleanout

Pipe Type, Diameter, Length

- Forced Main, 3" - 1,754'
- Forced Main, 4" - 797'
- Forced Main, 8" - 4,369'
- Gravity Main, 6" - 7,177'
- Gravity Main, 8" - 53,618'
- Gravity Main, 10" - 8,631'
- Gravity Main, Unknown - 5,556'
- Lateral, 4" - 718'
- Lateral, Unknown - 2,171'

Pipe Ages

- 1930s
- 1960s
- 1980s
- 1990s
- 2008

FARR WEST
ENGINEERING
5510 Longley Lane
Reno, NV 89511
(775) 851-4788
www.farrwestengineering.com

City of Carlin Sewer System

N

1 " = 600 '

Q:\client\Elko\Carlin\Maps\CarlinSewerSystemAges_11X17.mxd, Editor: michael, Printed: 2/9/2018

Legend

- PS — Sewer Pump Station
- Sewer Manhole
- Lateral Cleanout
- Main Line Cleanout

Pipe Type, Diameter, Length

- Forced Main, 3" - 1,754'
- Forced Main, 4" - 797'
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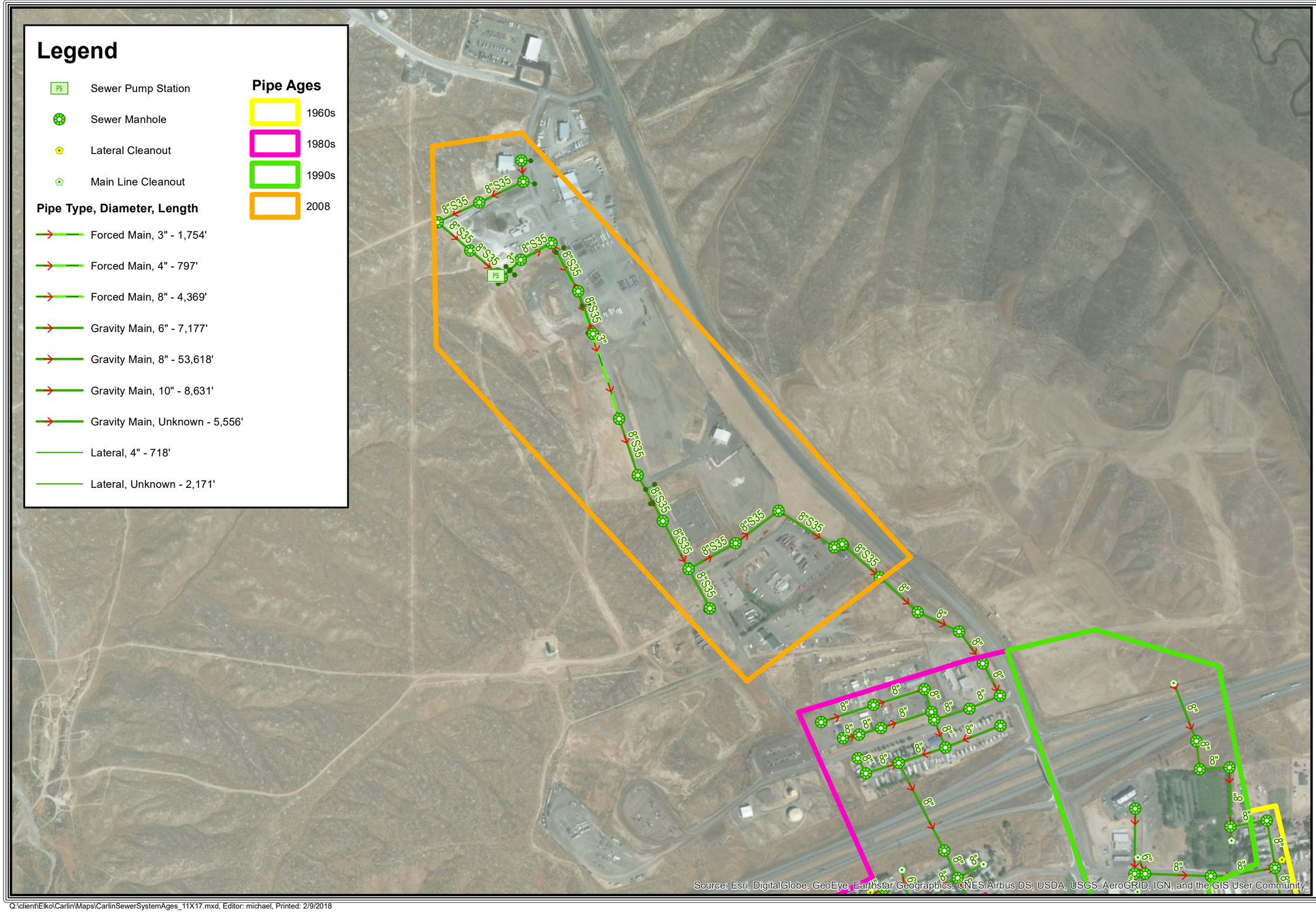
Pipe Ages

- 1960s
- 1980s
- 1990s
- 2008



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Legend

- Water Hydrant
- Water Well
- Resevoir
- Tank

Approx. Pipe Age

- Unknown
- 1930s
- 1960s
- 1970s
- 1970s/1980s
- 1980s
- 1990s
- 2000s

City of Carlin Water System

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NEVADA
STATE HISTORIC PRESERVATION OFFICE

Department of Conservation and Natural Resources

Brian Sandoval, Governor
Kay Scherer, Interim Director
Rebecca L. Palmer, SHPO

May 1, 2018

Michelle Stamates, P.E.
Bureau of Administrative Services
Nevada Division of Environmental Protection
901 S. Stewart Street, Ste 4001
Carson City, NV 89701

Re: Section 106 consultation with the Nevada Division of Environmental Protection for the City of Carlin Sewer and Water System Improvements project, Carlin, Elko County, Nevada (UT 2018-5345)

Dear Ms. Stamates,

The Nevada State Historic Preservation Office (SHPO) has reviewed the subject documents received April 2, 2018 in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The Nevada Division of Environmental Protection (NDEP) is coordinating this review on behalf of the U.S. Environmental Protection Agency.

Project Description
NDEP proposes to replace the sewer and water piping system in the City of Carlin. All work will occur within existing right-of-ways.

Area of Potential Effect (APE)
NDEP has defined the APE as an area approximately 480 acres in size that encompasses all streets where pipe replacement will occur, plus a buffer to include the parcels along those streets. The SHPO concurs with the adequacy of the APE for this undertaking.

Identification of Historic Properties
Archaeology:
The SHPO checked the Nevada Cultural Resources Inventory System (NVCRIS) on behalf of NDEP to identify historic properties, such as previously identified archaeological sites, within the APE. According to these records, portions of the APE have been inventoried for archaeological properties and no archaeological sites have been documented within the APE. However, numerous sites are within a 1-mile buffer of the APE. According to subject documents provided the APE is disturbed by development in the area. Thus, the SHPO would not recommend any additional archaeological inventory for this undertaking as there is a low potential for significant archaeological sites within the APE.

In the future, NVCRIS should be checked prior to any Section 106 submission as part of the identification effort for a federal undertaking. This records check is done via Ms. Annie Hershey the program coordinator for NVCRIS at (775) 684-3441 or via email at ahershey@shpo.nv.gov.

Architecture:
The existing water and sewer systems have not been identified and evaluated for National Register of Historic Places (NRHP) eligibility. What are the construction dates of the water and sewer systems? If they are 50 years of age or older, please indicate if NDEP wishes to evaluate them for NRHP eligibility. If

the water and sewer systems have significant alterations that might render then *not eligible* for NRHP listing, please submit a description of alterations and a statement regarding the systems' overall integrity. The SHPO recommends using color-coded maps to depict the ages of the various system components.

The submitted materials includes a list of properties in Carlin that are 50 years or older. It is not clear which of these properties are located within the APE for this undertaking. Please submit:

- A list of all properties 50 years or older within the APE;
- A total count for how many properties 50 years or older are within the APE; and
- A statement regarding if NDEP intends to leave the (X number of) historic-age properties in the APE unevaluated and treat them as NRHP-eligible for the purposes of this undertaking.

Local Government Consultation
The SHPO acknowledges receipt of documentation that consultation with the affected local government has been completed. This consultation did not result in the identification of properties of historic or cultural significance that could be affected by the proposed undertaking.

Consultation with Tribes and Other Interested Parties
The SHPO has not received documentation that coordination with the affected Native American tribes, the general public, or other potentially-interested groups has occurred. Please submit documentation detailing your efforts in this regard, and indicate whether the consultation resulted in the identification of properties of religious, cultural, or historic significance that could be affected by the undertaking.

Determination of Effect
The SHPO will resume its review of project effect upon receipt of the above-described additional information regarding the consultation and identification efforts and the evaluation of historic-age resources.

Should you have questions concerning this correspondence, please contact SHPO staff archaeologist Ashley Wiley at (775) 684-3450 or by email at awiley@shpo.nv.gov or staff architectural historian Kristen Brown at (775) 684-3439 or by email at knbrown@shpo.nv.gov.

Sincerely,

Robin K. Reed
Deputy State Historic Preservation Officer

23599

FARR WEST
ENGINEERING

May 21, 2018

Robin K. Reed
Deputy State Historic Preservation Officer
State Historic Preservation Office
901 S. Stewart Street, Suite 5004
Carson City, Nevada 89701

RE: SECTION 106 CONSULTATION FOR THE CITY OF CARLIN WATER AND SEWER IMPROVEMENTS PROJECT (UT-2018-5345)

Dear Robin,
This letter is in response to your letter dated May 1, 2018. The following addresses your concerns point-by-point (in bold):

- Construction dates of water and sewer lines.

  Maps showing the age of all water and sewer lines are attached.

- List of all properties 50 years or older within APE.

  All of the properties shown in yellow on the attached list are located within the APE.

- Total count for how many properties 50 years or older are within the APE.

  The total number of properties within the APE is 1,122. They are shown in yellow on the attached list.

- Statement from NDEP regarding evaluation of historic age properties within the APE.

  NDEP will need to submit this item.

- Consultation with Tribes.

  The following Tribes/entities may have an interest in the project and require consultation, however, we are unable to consult directly with the tribes. NDEP and/or USDA will need to provide the results of consultation to SHPO.

Te-Moak Tribe of Western Shoshone **525 Sunset Street** **Elko, Nevada 89801** **Phone: (775) 738-9251** **Fax: (775) 738-2345** **www.temoaktribe.com**	**Battle Mountain Band Council (18)** **37 Mountain View Drive #C** **Battle Mountain, Nevada 89820** **Phone: (775) 635-2004** **Fax: (775) 635-8016**
Elko Band Council (19) **1745 Silver Eagle Dr** **Elko, Nevada 89801** **Phone: (775) 738-8889** **Fax: (775) 753-5439**	**South Fork Band Council (20,21)** **H.C. 30 Box B-13** **Spring Creek, Nevada 89815** **Phone: (775) 744-4273** **Fax: (775) 744-4523**
Bureau of Indian Affairs **Eastern Nevada Agency** **1555 Shoshone Circle** **Elko, NV 89801** **Phone: (775) 738-5165**	**Inter-Tribal Council of Nevada** **680 Greenbrae Drive, Suite 280** **Sparks, Nevada 89431** **Phone: (775) 355-0600** **Fax: (775) 355-0648** **www.itcn.org**

- Consultation with general public or other interested groups.

  Public notification will be completed prior to approval of the environmental assessment. The public will have access to environmental assessment including all maps and descriptions of the proposed project.

Please contact me with any additional questions you may have. I can be reached at (775) 853-7265.

Regards,

Danny Sommers
Project Manager

Encl.:
cc:

Legend

- Water Hydrant
- Water Well
- Resevoir
- Tank

Approx. Pipe Age

- Unknown
- 1930s
- 1960s
- 1970s
- 1970s/1980s
- 1980s
- 1990s
- 2000s

City of Carlin Water System

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Legend

- PS — Sewer Pump Station
- Sewer Manhole
- Lateral Cleanout
- Main Line Cleanout

Pipe Type, Diameter, Length

- Forced Main, 3" - 1,754'
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Q:\client\Elko\Carlin\Maps\CarlinSewerSystemAges_11X17.mxd, Editor: michael, Printed: 2/9/2018

APN	Loc #	Loc Dir	Location or Street	DESCRIPTION	YR BUILT	Assessed Owner
002010050	502		ELM ST	SINGLE FAMILY RES.	1965	MCCARTY, BRETT D
002010050	502		ELM ST	CFW	1965	MCCARTY, BRETT D
002010050	502		ELM ST	WOOD DECK	1965	MCCARTY, BRETT D
002015017			CHESTNUT ST	RETAIL SPACE	1955	GATES, DAVID M ET AL
002015017			CHESTNUT ST	CFW	1955	GATES, DAVID M ET AL
002022001	861		8TH ST	SINGLE FAMILY RES.	1939	DEXTER, MIKE
002022002	821		ELM ST	SINGLE FAMILY RES.	1966	NETHERY, SHIRLEY M
002022002	821		ELM ST	CFW	1966	NETHERY, SHIRLEY M
002022003	862		9TH ST	SINGLE FAMILY RES.	1965	DICKEY, JAMES E
002022003	862		9TH ST	4'C/L FENCE	1965	DICKEY, JAMES E
002022003	862		9TH ST	CFW	1965	DICKEY, JAMES E
002022003	862		9TH ST	PORCH	1965	DICKEY, JAMES E
002022004	842		9TH ST	HOOKUP	1966	GRAVES, GARREY L & LEONA M TR
002022005	822		FIR ST	MOBILE HOME PARK SPACES	1964	BENNETT, JAMES D ET AL
002022006	802		FIR ST	SINGLE FAMILY RES.	1946	ROGERS, NATHAN A
002022006	802		FIR ST	CFW	1946	ROGERS, NATHAN A
002023001	841		9TH ST	MH HOOKUP	1964	CLUFF, DANNY J
002023002	921		ELM ST	SINGLE FAMILY RES.	1950	GRAVES, DAVID L & MICHELLINE M
002025001	761		8TH ST	DETACHED GARAGE	1950	GILLESPIE, JOE E & CHERI A
002025002	821		FIR ST	SINGLE FAMILY RES.	1948	POE, GENE N TR
002025002	821		FIR ST	MH HOOKUPS	1948	POE, GENE N TR
002025002	821		FIR ST	6'C/L FENCE	1948	POE, GENE N TR
002025002	821		FIR ST	CFW	1948	POE, GENE N TR
002025003	852		ASH ST	SINGLE FAMILY RES.	1950	WARREN, JOSHUA
002025003	852		ASH ST	4'C/L FENCE	1950	WARREN, JOSHUA
002025003	852		ASH ST	5'S/B FENCE	1950	WARREN, JOSHUA
002025003	852		ASH ST	3'S/B FENCE	1950	WARREN, JOSHUA
002025003	852		ASH ST	SHED	1950	WARREN, JOSHUA
002025003	852		ASH ST	CFW	1950	WARREN, JOSHUA
002025004	822		ASH ST	SINGLE FAMILY RES.	1938	DEXTER, PATRICK J
002025004	822		ASH ST	4'C/L FENCE	1938	DEXTER, PATRICK J
002025004	822		ASH ST	CFW	1938	DEXTER, PATRICK J
002025004	822		ASH ST	SHED	1938	DEXTER, PATRICK J
002025004	822		ASH ST	PORCH	1938	DEXTER, PATRICK J
002025005	802		ASH ST	SINGLE FAMILY RES.	1949	BRYSON, CATHARINE
002025005	802		ASH ST	WMS FENCE	1949	BRYSON, CATHARINE
002025005	802		ASH ST	PORCH	1949	BRYSON, CATHARINE
002025005	802		ASH ST	CFW	1949	BRYSON, CATHARINE
002028002	842		CHESTNUT ST	SINGLE FAMILY RES.	1942	MONDALE, EVANGELINE S ET AL
002028002	842		CHESTNUT ST	4'S/B FENCE	1942	MONDALE, EVANGELINE S ET AL
002028002	842		CHESTNUT ST	5'S/B FENCE	1942	MONDALE, EVANGELINE S ET AL
002028002	842		CHESTNUT ST	C-BLOCK WALL	1942	MONDALE, EVANGELINE S ET AL
002028002	842		CHESTNUT ST	WMS FENCE	1942	MONDALE, EVANGELINE S ET AL
002028002	842		CHESTNUT ST	CFW	1942	MONDALE, EVANGELINE S ET AL
002028003	822		CHESTNUT ST	HOOKUP	1965	WILKINSON, STEVEN E ET AL
002028003	822		CHESTNUT ST	DETACHED GARAGE	1965	WILKINSON, STEVEN E ET AL
002028003	822		CHESTNUT ST	AWNING	1965	WILKINSON, STEVEN E ET AL
002028004	806		CHESTNUT ST	SINGLE FAMILY RES.	1950	NEILL, JEREMY S & SARAH
002028004	806		CHESTNUT ST	4'C/L FENCE	1950	NEILL, JEREMY S & SARAH
002028004	806		CHESTNUT ST	ROCK WALL	1950	NEILL, JEREMY S & SARAH

APN	Loc #	Loc Dir	Location or Street	DESCRIPTION	YR BUILT	Assessed Owner
002028004	806		CHESTNUT ST	CFW	1950	NEILL, JEREMY S & SARAH
002028005	681		8TH ST	MULTI-FAMILY RES.	1914	CARLIN NEVADA DEVELOPMENT LLC
002028005	681		8TH ST	STORAGE BUILDINGS	1937	CARLIN NEVADA DEVELOPMENT LLC
002028005	681		8TH ST	STORAGE FLOORS	1937	CARLIN NEVADA DEVELOPMENT LLC
002028005	681		8TH ST	CFW	1965	CARLIN NEVADA DEVELOPMENT LLC
002028005	681		8TH ST	CFW	1914	CARLIN NEVADA DEVELOPMENT LLC
002028006	661		8TH ST	SINGLE FAMILY RES.	1937	CARLIN PARTNERS LLC
002028006	661		8TH ST	CFW	1937	CARLIN PARTNERS LLC
002030003	1021		TUSCARORA RD	DETACHED GARAGE	1966	HOUSE, LARRY E
002030003	1021		TUSCARORA RD	WMS FENCE	1966	HOUSE, LARRY E
002030003	1021		TUSCARORA RD	SIDE SHED ON DET GARAGE	1966	HOUSE, LARRY E
002030009	821		TUSCARORA RD	SINGLE FAMILY RES.	1930	ANDERSON, CLAY E & TRACYY
002030009	821		TUSCARORA RD	CFW	1930	ANDERSON, CLAY E & TRACYY
002030035	651		TUSCARORA RD	SHOP/STORAGE/GARAGE	1930	HOLM, K RICK & JANEEN
002030035	651		TUSCARORA RD	WMW FENCE	1948	HOLM, K RICK & JANEEN
002030036	1542		CHESTNUT ST	COTTAGE	1930	WESTERWELLE, MAX
002030036	1542		CHESTNUT ST	FENCE	1942	WESTERWELLE, MAX
002036001	1408		FIR ST	HOOKUP	1943	GALYEAN, SAMUEL F & REBECCA S
002036002	1410		FIR ST	HOOKUP	1943	MONTES DE OCA, FRED
002036003	1412		FIR ST	MH HOOKUP	1943	MONTES DE OCA, FRED
002036004	1414		FIR ST	HOOKUP	1943	MONTES DE OCA, FRED
002036005	1416		FIR ST	HOOKUP	1943	MONTES DE OCA, FRED
002036008	831		14TH ST	HOOKUP	1943	MINCHEW, ARTHUR & EVA
002036009			TUSCARORA RD	HOOKUP	1943	MONTES DE OCA, FRED
002036010	832		TUSCARORA RD	HOOKUP	1943	MUNSTER, TRAVIS
002036011	842		TUSCARORA RD	MH HOOKUP	1943	DANNINGER, APRIL LYNN ET AL
002036012	852		TUSCARORA RD	MH HOOKUP	1943	PAICE, PATSY L
002036013	841		14TH ST	SINGLE FAMILY RES.	1943	URENDA, JOHNNY C & ROSIE C TR
002036013	841		14TH ST	WMS FENCE	1943	URENDA, JOHNNY C & ROSIE C TR
002060001	125	W	BUSH ST	MH PARK	1965	ERP PROPERTIES LLC
002067001	341	W	BUSH ST	SINGLE FAMILY RES.	1932	MCCULLOUGH, THOMAS E
002067001	341	W	BUSH ST	4'C/LL FENCE	1932	MCCULLOUGH, THOMAS E
002067001	341	W	BUSH ST	C/L TOPRAIL	1932	MCCULLOUGH, THOMAS E
002067001	341	W	BUSH ST	SHED	1932	MCCULLOUGH, THOMAS E
002067001	341	W	BUSH ST	DET. GARAGE	1932	MCCULLOUGH, THOMAS E
002067001	341	W	BUSH ST	SHED	1932	MCCULLOUGH, THOMAS E
002068012	251	W	BUSH ST	DETACHED GARAGE	1930	AIAZZI, PETER J & CHERIE J
002077002	107		BUSH ST	SINGLE FAMILY RES.	1935	APLAND, ROBERT L
002077002	107		BUSH ST	CFW	1935	APLAND, ROBERT L
002077002	107		BUSH ST	4'C/L FENCE	1935	APLAND, ROBERT L
002077002	107		BUSH ST	C/L TOPRAIL	1935	APLAND, ROBERT L
002077003	362		2ND ST	HOOKUP	1967	GRISWOLD, TOM C & DIANE M
002077003	362		2ND ST	ADDITION	1967	GRISWOLD, TOM C & DIANE M
002077003	362		2ND ST	COVERED PORCH	1967	GRISWOLD, TOM C & DIANE M
002077008	110		CEDAR ST	HOOKUP	1967	HUGHES, RANDALL
002077008	110		CEDAR ST	CFW	1967	HUGHES, RANDALL
002078002	372		3RD ST	HOOKUP	1966	LOPEZ, TONY
002078002	372		3RD ST	CFW	1966	LOPEZ, TONY
002078003	332		3RD ST	HOOKUP	1967	HUSTEAD, TRENT
002078006	216		CEDAR ST	HOOKUP	1966	CAREY, HUBERT L & MYRTLE E

APN	Loc #	Loc Dir	Location or Street	DESCRIPTION	YR BUILT	Assessed Owner
002078011	220		CEDAR ST	MH HOOKUP	1966	GODWIN, KATHLEEN J ET AL
002078011	220		CEDAR ST	ENCLOSED PORCH	1966	GODWIN, KATHLEEN J ET AL
002078011	220		CEDAR ST	WOOD DECK	1966	GODWIN, KATHLEEN J ET AL
002078011	220		CEDAR ST	CFW	1966	GODWIN, KATHLEEN J ET AL
002079003	317		BUSH ST	SINGLE FAMILY RES.	1945	FERGUSON, DANIEL F & DEMOYA G
002079003	317		BUSH ST	HOOKUP	1945	FERGUSON, DANIEL F & DEMOYA G
002079003	317		BUSH ST	4'C/L FENCE	1945	FERGUSON, DANIEL F & DEMOYA G
002079003	317		BUSH ST	C/L PRIVACY SLATS	1945	FERGUSON, DANIEL F & DEMOYA G
002079003	317		BUSH ST	ASPHALT	1945	FERGUSON, DANIEL F & DEMOYA G
002079003	317		BUSH ST	CFW	1945	FERGUSON, DANIEL F & DEMOYA G
002079004	318		CEDAR ST	HOOKUP	1966	TAYLOR, DONNA
002079005	314		CEDAR ST	HOOKUP	1966	OVERHOLSER, SHECKY
002079007	306		CEDAR ST	SINGLE FAMILY RES.	1926	TRUJILLO, DAVID & HEATHER
002079007	306		CEDAR ST	CFW	1926	TRUJILLO, DAVID & HEATHER
002079007	306		CEDAR ST	3'S/B FENCE	1926	TRUJILLO, DAVID & HEATHER
002079007	306		CEDAR ST	5'S/B FENCE	1926	TRUJILLO, DAVID & HEATHER
002079008	321		3RD ST	SINGLE FAMILY RES.	1950	CULLEY-REYNOLDS, CHERYL L
002079008	321		3RD ST	3'S/B FENCE	1950	CULLEY-REYNOLDS, CHERYL L
002079012	305		BUSH ST	DETACHED GARAGE	1963	MONTES DE OCA, ALFRED ET AL
002079012	305		BUSH ST	CFW	1965	MONTES DE OCA, ALFRED ET AL
002080001	552		8TH ST	COMM'L-ELEMENTARY SCHOOL	1961	ELKO COUNTY SCHOOL DISTRICT
002080001	552		8TH ST	COMM'L-SECONDARY SCHOOL & GY	1926	ELKO COUNTY SCHOOL DISTRICT
002083003	416		BUSH ST	MULTI-FAMILY RES.	1935	HARDISTY, GARY A
002083003	416		BUSH ST	CFW	1935	HARDISTY, GARY A
002083003	416		BUSH ST	5'S/B FENCE	1935	HARDISTY, GARY A
002084008	520		BUSH ST	SINGLE FAMILY RES.	1963	TILLMAN, ABRAHAM N
002084008	520		BUSH ST	6'S/B FENCE	1963	TILLMAN, ABRAHAM N
002084008	520		BUSH ST	SHED	1963	TILLMAN, ABRAHAM N
002085001	401		BUSH ST	SINGLE FAMILY RES.	1937	GAREY, GREGORY D
002085001	401		BUSH ST	3'C/L FENCE	1937	GAREY, GREGORY D
002085001	401		BUSH ST	C/L PRIVACY SLATS	1937	GAREY, GREGORY D
002085001	401		BUSH ST	6'S/B FENCE	1937	GAREY, GREGORY D
002085002	409		BUSH ST	SINGLE FAMILY RES.	1932	HYDE, RICHARD E
002085002	409		BUSH ST	2'S/B FENCE	1932	HYDE, RICHARD E
002085002	409		BUSH ST	4'C/L FENCE	1932	HYDE, RICHARD E
002085002	409		BUSH ST	6'S/B FENCE	1932	HYDE, RICHARD E
002085002	409		BUSH ST	CFW	1932	HYDE, RICHARD E
002085003	411		BUSH ST	SINGLE FAMILY RES.	1952	HOGUE, SHIRLEY M
002085003	411		BUSH ST	3'C/L FENCE	1952	HOGUE, SHIRLEY M
002085003	411		BUSH ST	C/L TOPRAIL	1952	HOGUE, SHIRLEY M
002085003	411		BUSH ST	C/L PRIVACY SLATS	1952	HOGUE, SHIRLEY M
002085003	411		BUSH ST	6'C/L FENCE	1952	HOGUE, SHIRLEY M
002085003	411		BUSH ST	C/L TOPRAIL	1952	HOGUE, SHIRLEY M
002085003	411		BUSH ST	C/L PRIVACY SLATS	1952	HOGUE, SHIRLEY M
002085003	411		BUSH ST	CFW	1952	HOGUE, SHIRLEY M
002085004	342		5TH ST	SINGLE FAMILY RES.	1932	EASTMAN, KEITH P & MARY E
002085004	342		5TH ST	4'C/L FENCE	1932	EASTMAN, KEITH P & MARY E
002085004	342		5TH ST	C/L TOPRAIL	1932	EASTMAN, KEITH P & MARY E
002085004	342		5TH ST	6'C/L FENCE	1932	EASTMAN, KEITH P & MARY E
002085004	342		5TH ST	C/L TOPRAIL	1932	EASTMAN, KEITH P & MARY E

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002085004	342		5TH ST	MH HOOKUP	1932	EASTMAN, KEITH P & MARY E
002085004	342		5TH ST	CFW	1932	EASTMAN, KEITH P & MARY E
002085006	422		CEDAR ST	SINGLE FAMILY RES.	1920	HUSSEY, NANCY
002085006	422		CEDAR ST	SHED	1920	HUSSEY, NANCY
002085006	422		CEDAR ST	PORCH	1920	HUSSEY, NANCY
002085006	422		CEDAR ST	PORCH	1920	HUSSEY, NANCY
002085006	422		CEDAR ST	CFW	1920	HUSSEY, NANCY
002085007	420		CEDAR ST	HOOKUP	1926	LITCHFIELD, LINCOLN & DIANA S
002085007	420		CEDAR ST	RESIDENCE (BUNKHOUSE COST)	1926	LITCHFIELD, LINCOLN & DIANA S
002085007	420		CEDAR ST	UNFINISHED BASEMENT	1926	LITCHFIELD, LINCOLN & DIANA S
002085007	420		CEDAR ST	FIXTURES	1926	LITCHFIELD, LINCOLN & DIANA S
002085007	420		CEDAR ST	COVERED DECK	1926	LITCHFIELD, LINCOLN & DIANA S
002085007	420		CEDAR ST	PORCH WALLS	1926	LITCHFIELD, LINCOLN & DIANA S
002085007	420		CEDAR ST	SHED	1926	LITCHFIELD, LINCOLN & DIANA S
002085007	420		CEDAR ST	CFW	1926	LITCHFIELD, LINCOLN & DIANA S
002085007	420		CEDAR ST	PORCH	1926	LITCHFIELD, LINCOLN & DIANA S
002085008	416		CEDAR ST	SINGLE FAMILY RES.	1926	LITCHFIELD, LINCOLN RJR
002085008	416		CEDAR ST	CFW	1926	LITCHFIELD, LINCOLN RJR
002085009	414		CEDAR ST	DET GARAGE	1932	SIERRA, CATALINA
002086001	501		BUSH ST	SINGLE FAMILY RES.	1943	SIMPSON, VALERIE JO
002086001	501		BUSH ST	4'C/L FENCE	1943	SIMPSON, VALERIE JO
002086001	501		BUSH ST	C/L TOPRAIL	1943	SIMPSON, VALERIE JO
002086001	501		BUSH ST	6'S/B FENCE	1943	SIMPSON, VALERIE JO
002086001	501		BUSH ST	CFW	1943	SIMPSON, VALERIE JO
002086003	523		BUSH ST	SINGLE FAMILY RES.	1947	MICHELI, WILLIAM & JUDY M
002086003	523		BUSH ST	CFW	1947	MICHELI, WILLIAM & JUDY M
002086003	523		BUSH ST	6'S/B FENCE	1947	MICHELI, WILLIAM & JUDY M
002086003	523		BUSH ST	4'C/L FENCE	1947	MICHELI, WILLIAM & JUDY M
002086003	523		BUSH ST	C/L TOPRAIL	1947	MICHELI, WILLIAM & JUDY M
002086003	523		BUSH ST	COVERED PORCH	1947	MICHELI, WILLIAM & JUDY M
002086003	523		BUSH ST	PORCH	1947	MICHELI, WILLIAM & JUDY M
002086003	523		BUSH ST	SHED	1947	MICHELI, WILLIAM & JUDY M
002086004	524		CEDAR ST	SINGLE FAMILY RES.	1942	COSENS, BRUCE & TRACIE
002086004	524		CEDAR ST	5'S/B FENCE	1942	COSENS, BRUCE & TRACIE
002086004	524		CEDAR ST	CFW	1942	COSENS, BRUCE & TRACIE
002086004	524		CEDAR ST	COVERED PORCH	1942	COSENS, BRUCE & TRACIE
002086007	514		CEDAR ST	SINGLE FAMILY RES.	1965	KITTS, BRANDON T & LORIE ANN
002086007	514		CEDAR ST	4'C/L FENCE	1965	KITTS, BRANDON T & LORIE ANN
002086007	514		CEDAR ST	C/L TOPRAIL	1965	KITTS, BRANDON T & LORIE ANN
002086007	514		CEDAR ST	CFW	1965	KITTS, BRANDON T & LORIE ANN
002086007	514		CEDAR ST	8"C-BLOCK WALL	1965	KITTS, BRANDON T & LORIE ANN
002086008	506		CEDAR ST	SINGLE FAMILY RES.	1952	HUTCHISON, DOUGLAS M
002086008	506		CEDAR ST	CFW	1952	HUTCHISON, DOUGLAS M
002086008	506		CEDAR ST	SHED	1952	HUTCHISON, DOUGLAS M
002086008	506		CEDAR ST	PORCH	1952	HUTCHISON, DOUGLAS M
002086009	502		CEDAR ST	SINGLE FAMILY RES.	1951	HENDERSON, JOHN & CHRISTINA
002086009	502		CEDAR ST	CFW	1951	HENDERSON, JOHN & CHRISTINA
002086009	502		CEDAR ST	AWNING	1951	HENDERSON, JOHN & CHRISTINA
002086010	518		CEDAR ST	BUNKHOUSE	1920	CLOUGH, MARK A & CONNIE R
002086010	518		CEDAR ST	FIXTURES	1920	CLOUGH, MARK A & CONNIE R

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002087001	623		BUSH ST	RV PARK	1964	KING, EDWARD O & TERRY L
002087001	623		BUSH ST	4'C/L FENCE	1964	KING, EDWARD O & TERRY L
002087002	618		CEDAR ST	SINGLE FAMILY RES.	1938	ALEXANDER, JEFFERY D TR ET AL
002087002	618		CEDAR ST	4'C/L FENCE	1938	ALEXANDER, JEFFERY D TR ET AL
002087002	618		CEDAR ST	4'S/B FENCE	1938	ALEXANDER, JEFFERY D TR ET AL
002087002	618		CEDAR ST	CFW	1938	ALEXANDER, JEFFERY D TR ET AL
002087003	614		CEDAR ST	SINGLE FAMILY RES.	1932	JNCF HOLDINGS LLC
002087003	614		CEDAR ST	CFW	1932	JNCF HOLDINGS LLC
002087003	614		CEDAR ST	5'C/L FENCE	1932	JNCF HOLDINGS LLC
002087004	610		CEDAR ST	SINGLE FAMILY RES.	1945	ANDERSON, JEFFREY K & NANCY LEE
002087004	610		CEDAR ST	4'C/L FENCE	1945	ANDERSON, JEFFREY K & NANCY LEE
002087004	610		CEDAR ST	C-BLOCK WALL	1945	ANDERSON, JEFFREY K & NANCY LEE
002087004	610		CEDAR ST	CFW	1945	ANDERSON, JEFFREY K & NANCY LEE
002087004	610		CEDAR ST	C-BLOCK WALL	1945	ANDERSON, JEFFREY K & NANCY LEE
002087008	606		CEDAR ST	SINGLE FAMILY RES	1920	CAILOR, ROBERT MICHAEL ET AL
002087008	606		CEDAR ST	WOOD DECK	1920	CAILOR, ROBERT MICHAEL ET AL
002090001	551		8TH ST	SINGLE FAMILY RES.	1945	WHITE, REBECCA
002090001	551		8TH ST	6'S/B FENCE	1945	WHITE, REBECCA
002090001	551		8TH ST	CFW	1945	WHITE, REBECCA
002090005	825		1/2 CHESTNUT ST	COMM'L-STORAGE	1948	MONTES DE OCA, ALFRED RYAN ETAL
002090005	825		1/2 CHESTNUT ST	MH SPACES	1962	MONTES DE OCA, ALFRED RYAN ETAL
002090005	825		1/2 CHESTNUT ST	CFW	1948	MONTES DE OCA, ALFRED RYAN ETAL
002090005	825		1/2 CHESTNUT ST	RETAINING WALL	1948	MONTES DE OCA, ALFRED RYAN ETAL
002090005	825		1/2 CHESTNUT ST	STORAGE	1948	MONTES DE OCA, ALFRED RYAN ETAL
002090006	915		CHESTNUT ST	COMM'L-BAR/TAVERN	1947	ATKINS, SONNY & TERI L
002090006	915		CHESTNUT ST	CFW	1947	ATKINS, SONNY & TERI L
002090006	915		CHESTNUT ST	COVERED PORCH	1947	ATKINS, SONNY & TERI L
002091001	451		8TH ST	SINGLE FAMILY RES.	1966	GILLESPIE, RICHARD D
002091001	451		8TH ST	6'S/B FENCE	1966	GILLESPIE, RICHARD D
002091001	451		8TH ST	CFW	1966	GILLESPIE, RICHARD D
002091003	818		BUSH ST	SINGLE FAMILY RES.	1960	CARPENTER MARIE TR
002091003	818		BUSH ST	6'S/B FENCE	1960	CARPENTER MARIE TR
002091003	818		BUSH ST	3'C/L FENCE	1960	CARPENTER MARIE TR
002091003	818		BUSH ST	CFW	1960	CARPENTER MARIE TR
002091005	808		BUSH ST	MH HOOKUP	1964	CARPENTER, MARIE A TR
002091005	808		BUSH ST	WOOD DECK	1964	CARPENTER, MARIE A TR
002091005	808		BUSH ST	CONCRETE	1964	CARPENTER, MARIE A TR
002091006	802		BUSH ST	SINGLE FAMILY RES.	1962	RAY, KODEE ET AL
002091006	802		BUSH ST	SHED	1962	RAY, KODEE ET AL
002091006	802		BUSH ST	CFW	1962	RAY, KODEE ET AL
002091006	802		BUSH ST	ASPHALT	1962	RAY, KODEE ET AL
002091006	802		BUSH ST	6'S/B FENCE	1962	RAY, KODEE ET AL
002092001	924		BUSH ST	COMM'L-RETAIL STORE	1962	OWENS, BRADLEY NEAL &KATHRYN M
002092001	924		BUSH ST	ASPHALT	1962	OWENS, BRADLEY NEAL &KATHRYN M
002092001	924		BUSH ST	COVERED PORCH	1962	OWENS, BRADLEY NEAL &KATHRYN M
002092001	924		BUSH ST	6'C/L FENCE	1962	OWENS, BRADLEY NEAL &KATHRYN M
002092001	924		BUSH ST	C/L TOPRAIL	1962	OWENS, BRADLEY NEAL &KATHRYN M
002092001	924		BUSH ST	C/L BARBED WIRE	1962	OWENS, BRADLEY NEAL &KATHRYN M
002092001	924		BUSH ST	COLD STORAGE	1962	OWENS, BRADLEY NEAL &KATHRYN M
002092002	902		BUSH ST	SINGLE FAMILY RES.	1964	MARCHAND, CHAD KEITH & CARLENE

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002092002	902		BUSH ST	CFW	1964	MARCHAND, CHAD KEITH & CARLENE
002092002	902		BUSH ST	5'C/L FENCE	1964	MARCHAND, CHAD KEITH & CARLENE
002093004	372		8TH ST	COMM'L-OFFICES	1963	KERR, BRUCE ET AL
002093004	372		8TH ST	ASPHALT	1963	KERR, BRUCE ET AL
002093004	372		8TH ST	CFW	1963	KERR, BRUCE ET AL
002093006	718		CEDAR ST	COMM'L-SENIOR CENTER	1910	CARLIN, CITY OF
002093006	718		CEDAR ST	CFW	1910	CARLIN, CITY OF
002093007	710		CEDAR ST	SINGLE FAMILY RES.	1914	SANTO, CHARLES T
002093007	710		CEDAR ST	SINGLE FAMILY RES.	1914	SANTO, CHARLES T
002093007	710		CEDAR ST	SINGLE FAMILY RES	1932	SANTO, CHARLES T
002093007	710		CEDAR ST	SHED	1932	SANTO, CHARLES T
002093007	710		CEDAR ST	CFW	1932	SANTO, CHARLES T
002093007	710		CEDAR ST	6'S/B FENCE	1932	SANTO, CHARLES T
002093008	702		CEDAR ST	SINGLE FAMILY RES.	1938	RASMUSSEN, ROGER L & PATRICIA J
002093008	702		CEDAR ST	GARAGE	1938	RASMUSSEN, ROGER L & PATRICIA J
002093008	702		CEDAR ST	CFW	1938	RASMUSSEN, ROGER L & PATRICIA J
002093009	705		BUSH ST	SINGLE FAMILY RES.	1959	HOWE, DAVID & ANGELICA
002093009	705		BUSH ST	RETAINING WALL	1959	HOWE, DAVID & ANGELICA
002093009	705		BUSH ST	4'C/L FENCE	1959	HOWE, DAVID & ANGELICA
002093009	705		BUSH ST	CFW	1959	HOWE, DAVID & ANGELICA
002093010	701		BUSH ST	SINGLE FAMILY RES.	1959	CARDONA, ANGEL & VICTORIA
002093010	701		BUSH ST	CFW	1959	CARDONA, ANGEL & VICTORIA
002093011	711		BUSH ST	SINGLE FAMILY RES.	1942	RED, JERRY & ASHLEY
002093011	711		BUSH ST	SINGLE FAMILY RES.	1942	RED, JERRY & ASHLEY
002093011	711		BUSH ST	SINGLE FAMILY RES.	1947	RED, JERRY & ASHLEY
002093011	711		BUSH ST	CFW	1942	RED, JERRY & ASHLEY
002093011	711		BUSH ST	CFW	1947	RED, JERRY & ASHLEY
002094002	811		BUSH ST	SINGLE FAMILY RES.	1964	GATES, ROY
002094002	811		BUSH ST	4'C/L FENCE	1964	GATES, ROY
002094002	811		BUSH ST	RETAINING WALL	1964	GATES, ROY
002094002	811		BUSH ST	CFW	1964	GATES, ROY
002094002	811		BUSH ST	SHED	1964	GATES, ROY
002094003	821		BUSH ST	SINGLE FAMILY RES.	1964	CARPENTER, MARIE A TR
002094003	821		BUSH ST	CFW	1964	CARPENTER, MARIE A TR
002094003	821		BUSH ST	RETAINING WALL	1964	CARPENTER, MARIE A TR
002094003	821		BUSH ST	4'S/B FENCE	1964	CARPENTER, MARIE A TR
002094004	824		CEDAR ST	SINGLE FAMILY RES.	1942	JESS, KENNETH A & TERESA A
002094004	824		CEDAR ST	SINGLE FAMILY RES.	1942	JESS, KENNETH A & TERESA A
002094004	824		CEDAR ST	CFW	1942	JESS, KENNETH A & TERESA A
002094005	818		CEDAR ST	SINGLE FAMILY RES.	1932	WEAVER, PATRICK
002094005	818		CEDAR ST	CFW	1932	WEAVER, PATRICK
002094005	818		CEDAR ST	SHED	1932	WEAVER, PATRICK
002094006	816		CEDAR ST	SINGLE FAMILY RES.	1945	COLTRIN, DEREK M & RUTH E
002094006	816		CEDAR ST	CFW	1945	COLTRIN, DEREK M & RUTH E
002094006	816		CEDAR ST	SHED	1945	COLTRIN, DEREK M & RUTH E
002094006	816		CEDAR ST	PICKET FENCE	1945	COLTRIN, DEREK M & RUTH E
002094007	810		CEDAR ST	SINGLE FAMILY RES.	1945	TERRY, JACK K & SANDRA J
002094007	810		CEDAR ST	CFW	1945	TERRY, JACK K & SANDRA J
002094007	810		CEDAR ST	5'C/L FENCE	1945	TERRY, JACK K & SANDRA J
002094007	810		CEDAR ST	5'SB FENCE	1945	TERRY, JACK K & SANDRA J

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002094008	806		CEDAR ST	SINGLE FAMILY RES.	1947	NUNEZ, HELIODORO & ANNA
002094008	806		CEDAR ST	CFW	1947	NUNEZ, HELIODORO & ANNA
002094009	802		CEDAR ST	SINGLE FAMILY RES.	1952	GRIFFITH, PATRICK S &PATRICIA D
002094009	802		CEDAR ST	4'C/L FENCE	1952	GRIFFITH, PATRICK S &PATRICIA D
002094009	802		CEDAR ST	CFW	1952	GRIFFITH, PATRICK S &PATRICIA D
002095001	371		9TH ST	SINGLE FAMILY RES.	1954	CHASE, DELINDA
002095001	371		9TH ST	4'C/L FENCE	1954	CHASE, DELINDA
002095001	371		9TH ST	CFW	1954	CHASE, DELINDA
002095001	371		9TH ST	5'SB FENCE	1954	CHASE, DELINDA
002095002	909		BUSH ST	MH HOOKUPS	1966	CHIN, KAI YUEN & LI JU
002095002	909		BUSH ST	SHED	1966	CHIN, KAI YUEN & LI JU
002095002	909		BUSH ST	COVERED DECK	1966	CHIN, KAI YUEN & LI JU
002095002	909		BUSH ST	6'S/B FENCE	1966	CHIN, KAI YUEN & LI JU
002095002	909		BUSH ST	4'C/L FENCE	1966	CHIN, KAI YUEN & LI JU
002095002	909		BUSH ST	CFW	1966	CHIN, KAI YUEN & LI JU
002095003	917		BUSH ST	COMM'L-RESTAURANT/LAUNDROMAT	1966	CHIN, KAI YUEN & LI JU
002095003	917		BUSH ST	CFW	1966	CHIN, KAI YUEN & LI JU
002095004	922		CEDAR ST	SINGLE FAMILY RES.	1926	ALEGRIA, JOSE R ET AL
002095004	922		CEDAR ST	5'S/B FENCE	1926	ALEGRIA, JOSE R ET AL
002095004	922		CEDAR ST	4'C/L FENCE	1926	ALEGRIA, JOSE R ET AL
002095004	922		CEDAR ST	CFW	1926	ALEGRIA, JOSE R ET AL
002095005	916		CEDAR ST	SINGLE FAMILY RES.	1949	GUNNELS, MERVA RUTH
002095005	916		CEDAR ST	CFW	1949	GUNNELS, MERVA RUTH
002095006	910		CEDAR ST	SINGLE FAMILY RES.	1946	KULISEK, MICHAEL LOUIS JR
002095006	910		CEDAR ST	WMS FENCE	1946	KULISEK, MICHAEL LOUIS JR
002095006	910		CEDAR ST	CFW	1946	KULISEK, MICHAEL LOUIS JR
002095007	908		CEDAR ST	SINGLE FAMILY RES.	1941	MIERS, MAXINE D & MARSH E
002095007	908		CEDAR ST	4'C/L FENCE	1941	MIERS, MAXINE D & MARSH E
002100001	1003		CHESTNUT ST	COMM'L-MINI-MART	1946	SINGH, AMARJOT
002100001	1003		CHESTNUT ST	SHED	1950	SINGH, AMARJOT
002100001	1003		CHESTNUT ST	SHED	1950	SINGH, AMARJOT
002100005	1105		CHESTNUT ST	COMM'L-STORAGE BLDG.	1926	GUNNELS, BENJAMIN
002100005	1105		CHESTNUT ST	COMM'L-STORAGE BLDG.	1926	GUNNELS, BENJAMIN
002100005	1105		CHESTNUT ST	COVERED PORCH	1950	GUNNELS, BENJAMIN
002100005	1105		CHESTNUT ST	PATIO COVER	1950	GUNNELS, BENJAMIN
002100005	1105		CHESTNUT ST	ENCLOSED PORCH	1950	GUNNELS, BENJAMIN
002100005	1105		CHESTNUT ST	MH HOOKUP	1950	GUNNELS, BENJAMIN
002100005	1105		CHESTNUT ST	ATTACHED GARAGE	1950	GUNNELS, BENJAMIN
002100006	1124		BUSH ST	SHED	1966	GUNNELS, BENJAMIN
002101003	362		11TH ST	MH HOOKUP	1966	OWENS, DENNIS L
002101006	1012		CEDAR ST	SINGLE FAMILY RES.	1945	HOFELDT, DORTHA M TR
002101006	1012		CEDAR ST	CFW	1945	HOFELDT, DORTHA M TR
002101008	1014		CEDAR ST	SINGLE FAMILY RES.	1965	SEXTON, JUSIN L & LILA L
002101008	1014		CEDAR ST	CFW	1965	SEXTON, JUSIN L & LILA L
002101008	1014		CEDAR ST	SHED	1965	SEXTON, JUSIN L & LILA L
002101008	1014		CEDAR ST	SHED FLOOR	1965	SEXTON, JUSIN L & LILA L
002101008	1014		CEDAR ST	4'C/L FENCE	1965	SEXTON, JUSIN L & LILA L
002101008	1014		CEDAR ST	C/L TOPRAIL	1965	SEXTON, JUSIN L & LILA L
002101009	1022		CEDAR ST	SINGLE FAMILY RES.	1948	MICHELI, RUTH ANN
002101009	1022		CEDAR ST	CFW	1948	MICHELI, RUTH ANN

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002101009	1022		CEDAR ST	4'C/L FENCE	1948	MICHELI, RUTH ANN
002102001	371		11TH ST	SINGLE FAMILY RES.	1954	GIBSON, CHARLES TILT
002102001	371		11TH ST	CFW	1954	GIBSON, CHARLES TILT
002102001	371		11TH ST	SHED	1954	GIBSON, CHARLES TILT
002102001	371		11TH ST	3-POLE FENCE	1954	GIBSON, CHARLES TILT
002102001	371		11TH ST	6'S/B FENCE	1954	GIBSON, CHARLES TILT
002102007	311		11TH ST	SINGLE FAMILY RES.	1964	FOSTER, LARRY D
002121007	321	W	CEDAR ST	SINGLE FAMILY RES.	1932	FOBES, DENNIS A
002121007	321	W	CEDAR ST	CFW	1932	FOBES, DENNIS A
002121007	321	W	CEDAR ST	STORAGE SHED	1932	FOBES, DENNIS A
002121008	302	W	HAMILTON ST	SINGLE FAMILY RES.	1920	BROOK FAMILY LIVING TRUST
002121008	302	W	HAMILTON ST	CFW	1920	BROOK FAMILY LIVING TRUST
002121008	302	W	HAMILTON ST	4'C/L FENCE	1920	BROOK FAMILY LIVING TRUST
002121009		W	HAMILTON ST	SHED	1920	BROOK FAMILY LIVING TRUST
002121009		W	HAMILTON ST	CFW	1920	BROOK FAMILY LIVING TRUST
002122001	251	W	CEDAR ST	SINGLE FAMILY RES.	1938	WATSON, CARRIE M
002122001	251	W	CEDAR ST	4'C/L FENCE	1938	WATSON, CARRIE M
002122001	251	W	CEDAR ST	CFW	1938	WATSON, CARRIE M
002122002	241	W	CEDAR ST	SINGLE FAMILY RESIDENCE	1920	EKLUND, ERIC & TERA
002122002	241	W	CEDAR ST	CFW	1920	EKLUND, ERIC & TERA
002122002	241	W	CEDAR ST	6'S/B FENCE	1920	EKLUND, ERIC & TERA
002122002	241	W	CEDAR ST	4'C/L FENCE	1950	EKLUND, ERIC & TERA
002122002	241	W	CEDAR ST	C/L PRIVACY SLATS	1950	EKLUND, ERIC & TERA
002122003	110	W	HAMILTON ST	MH HOOKUPS	1966	KAUFMAN, BEVERLY J
002122005	126	W	HAMILTON ST	HOOKUP	1966	CLOUGH, MARK & CONNIE
002122006	202	W	HAMILTON ST	HOOKUPS	1966	JOHNSON, MICHAEL J & TONIA J
002131001	101		CEDAR ST	HOOKUP	1966	BRIDGES, SHEILA
002131003	113		CEDAR ST	HOOKUP	1967	SCRIPTER, CATHY
002131005	212		2ND ST	HOOKUP	1967	SPENCER, BONNIE L ET AL
002131010	121		CEDAR ST	HOOKUP	1967	HOLMES, VIRGINIA F
002131010	121		CEDAR ST	COVERED PORCH	1967	HOLMES, VIRGINIA F
002132009	214		HAMILTON ST	HOOKUP	1965	MONTES DE OCA, ALFRED
002132012	201		2ND ST	HOOKUP	1966	CAREY, HUBERT L ET AL
002132012	201		2ND ST	ADDITION	1966	CAREY, HUBERT L ET AL
002132013	220		HAMILTON ST	DETACHED GARAGE	1965	WILCOX, ROBERT A
002133005	242		4TH ST	SINGLE FAMILY RES.	1926	HOLBROOK, JORDAN & BRANDY
002133005	242		4TH ST	CFW	1950	HOLBROOK, JORDAN & BRANDY
002133005	242		4TH ST	SHED	1926	HOLBROOK, JORDAN & BRANDY
002133006	324		HAMILTON ST	SINGLE FAMILY RES	1906	STRESS, EDWARD J
002133008	316		HAMILTON ST	SINGLE FAMILY RES	1942	MELENDEZ, MATTHEW & KATIE
002133008	316		HAMILTON ST	CFW	1950	MELENDEZ, MATTHEW & KATIE
002133008	316		HAMILTON ST	SHED	1942	MELENDEZ, MATTHEW & KATIE
002133008	316		HAMILTON ST	DET GARAGE	1942	MELENDEZ, MATTHEW & KATIE
002133008	316		HAMILTON ST	C/L 4 FENCE	1950	MELENDEZ, MATTHEW & KATIE
002133008	316		HAMILTON ST	COVERED PORCH	1950	MELENDEZ, MATTHEW & KATIE
002133008	316		HAMILTON ST	PORCH WALLS	1950	MELENDEZ, MATTHEW & KATIE
002133009	304		HAMILTON ST	SINGLE FAMILY RES	1959	WRIGHT, NANCY A TR
002133009	304		HAMILTON ST	CFW	1959	WRIGHT, NANCY A TR
002133009	304		HAMILTON ST	PATIO COVER	1959	WRIGHT, NANCY A TR
002133009	304		HAMILTON ST	6'S/B FENCE	1959	WRIGHT, NANCY A TR

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002133009	304		HAMILTON ST	STORAGE	1959	WRIGHT, NANCY A TR
002133009	304		HAMILTON ST	4'C/L FENCE W/TR	1959	WRIGHT, NANCY A TR
002133012	315		CEDAR ST	HOOKUP	1966	CUTTS, LINDA
002133015	311		CEDAR ST	HOOKUPS	1966	MONTES DE OCA, ALFRED ET AL
002135001	203		HAMILTON ST	MH HOOKUPS	1966	FORD, JAMES GENE
002135003	221		HAMILTON ST	MH HOOKUP	1965	MONTES DE OCA, RICHARD & KATHY
002135003	221		HAMILTON ST	DETACHED GARAGE	1965	MONTES DE OCA, RICHARD & KATHY
002136001	301		HAMILTON ST	HOOKUP	1965	MONTES DE OCA, ALFRED
002136001	301		HAMILTON ST	DETACHED GARAGE	1965	MONTES DE OCA, ALFRED
002136004	315		HAMILTON ST	SINGLE FAMILY RES.	1954	KILPATRICK, LAWRENCE T ET AL
002136004	315		HAMILTON ST	6'C/L FENCE	1954	KILPATRICK, LAWRENCE T ET AL
002136004	315		HAMILTON ST	C/L PRIVACY SLATS	1954	KILPATRICK, LAWRENCE T ET AL
002136004	315		HAMILTON ST	WMS FENCE	1954	KILPATRICK, LAWRENCE T ET AL
002136004	315		HAMILTON ST	CFW	1954	KILPATRICK, LAWRENCE T ET AL
002141001	401		CEDAR ST	SINGLE FAMILY RES.	1938	SCHULZ, JOHN F
002141001	401		CEDAR ST	CFW	1938	SCHULZ, JOHN F
002141001	401		CEDAR ST	4'C/L FENCE	1938	SCHULZ, JOHN F
002141001	401		CEDAR ST	6'S/B FENCE	1938	SCHULZ, JOHN F
002141002	405		CEDAR ST	SINGLE FAMILY RES.	1931	SUTHERLAND, SHARON F
002141002	405		CEDAR ST	4'C/L FENCE	1931	SUTHERLAND, SHARON F
002141002	405		CEDAR ST	CFW	1931	SUTHERLAND, SHARON F
002141002	405		CEDAR ST	6'S/B FENCE	1938	SUTHERLAND, SHARON F
002141003	407		CEDAR ST	SINGLE FAMILY RES.	1926	SUTHERLAND, SHARON F
002141003	407		CEDAR ST	CFW	1926	SUTHERLAND, SHARON F
002141003	407		CEDAR ST	4'C/L FENCE	1948	SUTHERLAND, SHARON F
002141004	409		CEDAR ST	SINGLE FAMILY RES.	1948	MONTES DE OCA, ALFRED ET AL
002141004	409		CEDAR ST	CFW	1948	MONTES DE OCA, ALFRED ET AL
002141004	409		CEDAR ST	4'C/L FENCE	1948	MONTES DE OCA, ALFRED ET AL
002141005	411		CEDAR ST	SINGLE FAMILY RES.	1961	TAYLOR, GEORGE G JR &JANICE A
002141005	411		CEDAR ST	CFW	1961	TAYLOR, GEORGE G JR &JANICE A
002141005	411		CEDAR ST	4'C/L FENCE	1961	TAYLOR, GEORGE G JR &JANICE A
002141005	411		CEDAR ST	6'S/B FENCE	1961	TAYLOR, GEORGE G JR &JANICE A
002141005	411		CEDAR ST	SHED	1961	TAYLOR, GEORGE G JR &JANICE A
002141005	411		CEDAR ST	SIDE SHED	1961	TAYLOR, GEORGE G JR &JANICE A
002141006	272		5TH ST	SINGLE FAMILY RES.	1932	OTT, MARTHA ET AL
002141006	272		5TH ST	CFW	1932	OTT, MARTHA ET AL
002141006	272		5TH ST	4'S/B FENCE	1932	OTT, MARTHA ET AL
002141006	272		5TH ST	SHED	1932	OTT, MARTHA ET AL
002141009	408		HAMILTON ST	SINGLE FAMILY RES.	1926	DE VOE, VIRGINIA L
002141009	408		HAMILTON ST	SINGLE FAMILY RES.	1931	DE VOE, VIRGINIA L
002141009	408		HAMILTON ST	CFW	1926	DE VOE, VIRGINIA L
002141009	408		HAMILTON ST	2'S/B FENCE	1926	DE VOE, VIRGINIA L
002141010	402		HAMILTON ST	SINGLE FAMILY RES.	1932	MACDONALD FAMILY TRUST
002141010	402		HAMILTON ST	4'C/L FENCE	1932	MACDONALD FAMILY TRUST
002141010	402		HAMILTON ST	CFW	1932	MACDONALD FAMILY TRUST
002141011	420		HAMILTON ST	MH HOOKUPS	1966	EQUITY TRUST COMPANY FBO BRENT
002141011	420		HAMILTON ST	CABIN	1966	EQUITY TRUST COMPANY FBO BRENT
002141011	420		HAMILTON ST	CABIN FIXTURES	1966	EQUITY TRUST COMPANY FBO BRENT
002141013	416		HAMILTON ST	SINGLE FAMILY RES.	1926	JONES, VICTOR J & RENEE D
002141013	416		HAMILTON ST	4'C/L FENCE	1926	JONES, VICTOR J & RENEE D

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002141013	416		HAMILTON ST	CFW	1926	JONES, VICTOR J & RENEE D
002142001	503		CEDAR ST	SINGLE FAMILY RES.	1926	DOYLE, MICHAEL J
002142001	503		CEDAR ST	3'C/L FENCE	1926	DOYLE, MICHAEL J
002142001	503		CEDAR ST	CFW	1926	DOYLE, MICHAEL J
002142002	509		CEDAR ST	DUPLEX	1926	JRT INVESTMENTS LLC
002142002	509		CEDAR ST	CFW	1926	JRT INVESTMENTS LLC
002142005	514		HAMILTON ST	SINGLE FAMILY RES.	1932	BAYSINGER, CLIFFORD B& LISA L J
002142005	514		HAMILTON ST	CFW	1932	BAYSINGER, CLIFFORD B& LISA L J
002142005	514		HAMILTON ST	6'C/L FENCE	1932	BAYSINGER, CLIFFORD B& LISA L J
002142005	514		HAMILTON ST	4'C/L FENCE	1932	BAYSINGER, CLIFFORD B& LISA L J
002142005	514		HAMILTON ST	6'S/B FENCE	1932	BAYSINGER, CLIFFORD B& LISA L J
002142006	508		HAMILTON ST	SHED (CABIN)	1896	JEFFERSON, APRIL
002142007	506		HAMILTON ST	SINGLE FAMILY RES.	1934	JEFFERSON, APRIL
002142007	506		HAMILTON ST	6'S/B FENCE	1934	JEFFERSON, APRIL
002142007	506		HAMILTON ST	SHED	1934	JEFFERSON, APRIL
002142008	502		HAMILTON ST	SINGLE FAMILY RES.	1938	ZOMAR, GAYLE I
002142008	502		HAMILTON ST	BUNKHOUSE	1938	ZOMAR, GAYLE I
002142008	502		HAMILTON ST	BUNKHOUSE FIXTURES	1938	ZOMAR, GAYLE I
002142008	502		HAMILTON ST	6'S/B FENCE	1938	ZOMAR, GAYLE I
002142008	502		HAMILTON ST	CFW	1938	ZOMAR, GAYLE I
002142008	502		HAMILTON ST	CARPORT	1938	ZOMAR, GAYLE I
002142009	512		HAMILTON ST	SINGLE FAMILY RES.	1949	SIMON, DICK W & JANELLE J TR
002142009	512		HAMILTON ST	SINGLE FAMILY RES.	1949	SIMON, DICK W & JANELLE J TR
002142009	512		HAMILTON ST	CFW	1949	SIMON, DICK W & JANELLE J TR
002142009	512		HAMILTON ST	6'S/B FENCE	1949	SIMON, DICK W & JANELLE J TR
002142009	512		HAMILTON ST	4'C/L FENCE	1949	SIMON, DICK W & JANELLE J TR
002142009	512		HAMILTON ST	3'PICKET FENCE	1949	SIMON, DICK W & JANELLE J TR
002142011	515		CEDAR ST	SINGLE FAMILY RES.	1942	MONTES DE OCA, RICHARD & KATHY
002142011	515		CEDAR ST	SINGLE FAMILY RES.	1938	MONTES DE OCA, RICHARD & KATHY
002142011	515		CEDAR ST	6'S/B FENCE	1942	MONTES DE OCA, RICHARD & KATHY
002142011	515		CEDAR ST	CFW	1938	MONTES DE OCA, RICHARD & KATHY
002143001	601		CEDAR ST	SINGLE FAMILY RES.	1952	SIMPKINS, RONDA LEE TR ET AL
002143001	601		CEDAR ST	6'C/L FENCE	1952	SIMPKINS, RONDA LEE TR ET AL
002143001	601		CEDAR ST	6'S/B FENCE	1952	SIMPKINS, RONDA LEE TR ET AL
002143001	601		CEDAR ST	SHED	1952	SIMPKINS, RONDA LEE TR ET AL
002143001	601		CEDAR ST	CFW	1952	SIMPKINS, RONDA LEE TR ET AL
002143002	613		CEDAR ST	SINGLE FAMILY RES.	1945	GROVER, DAVID T
002143002	613		CEDAR ST	CFW	1945	GROVER, DAVID T
002143002	613		CEDAR ST	6'S/B FENCE	1945	GROVER, DAVID T
002143003	615		CEDAR ST	HOOKUP	1965	SALAZ, RAMON & ERNESTINE
002143003	615		CEDAR ST	CFW	1965	SALAZ, RAMON & ERNESTINE
002143004	619		CEDAR ST	BUNKHOUSE	1920	JENSEN, TODD
002143004	619		CEDAR ST	SHED	1920	JENSEN, TODD
002143005	618		HAMILTON ST	SHED	1887	BENDER, WILLIAM F & ISABELLA
002143006	614		HAMILTON ST	SINGLE FAMILY RES.	1947	EVENSON, WAYNE ALLEN
002143006	614		HAMILTON ST	DETACHED GARAGE	1947	EVENSON, WAYNE ALLEN
002143006	614		HAMILTON ST	3'C/L FENCE W/TR	1947	EVENSON, WAYNE ALLEN
002143006	614		HAMILTON ST	CFW	1947	EVENSON, WAYNE ALLEN
002143006	614		HAMILTON ST	AWNING	1947	EVENSON, WAYNE ALLEN
002143006	614		HAMILTON ST	6'S/B FENCE	1947	EVENSON, WAYNE ALLEN

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002143007	602		HAMILTON ST	SINGLE FAMILY RES.	1926	ANTHONY, AHREN
002143007	602		HAMILTON ST	CFW	1926	ANTHONY, AHREN
002143007	602		HAMILTON ST	6'S/B FENCE	1926	ANTHONY, AHREN
002143007	602		HAMILTON ST	WMS FENCE	1926	ANTHONY, AHREN
002151002	711		CEDAR ST	SINGLE FAMILY RES.	1920	DUKE, DARYL
002151002	711		CEDAR ST	6'S/B FENCE	1920	DUKE, DARYL
002151002	711		CEDAR ST	CFW	1920	DUKE, DARYL
002151003	713		CEDAR ST	SINGLE FAMILY RES.	1955	MATHERS, HARRY R & VIVIAN E
002151003	713		CEDAR ST	CFW	1955	MATHERS, HARRY R & VIVIAN E
002151003	713		CEDAR ST	5'S/B FENCE	1955	MATHERS, HARRY R & VIVIAN E
002151003	713		CEDAR ST	4'C/L FENCE	1955	MATHERS, HARRY R & VIVIAN E
002151003	713		CEDAR ST	SHED	1955	MATHERS, HARRY R & VIVIAN E
002151003	713		CEDAR ST	COLOR CFW	1955	MATHERS, HARRY R & VIVIAN E
002151003	713		CEDAR ST	WOOD DECK	1955	MATHERS, HARRY R & VIVIAN E
002151004	719		CEDAR ST	HOOKUP	1965	STENOVICH, BETTY
002151004	719		CEDAR ST	CARPORT	1965	STENOVICH, BETTY
002151004	719		CEDAR ST	PATIO COVER	1965	STENOVICH, BETTY
002151005	242		8TH ST	SINGLE FAMILY RES.	1926	DANN, MARY L
002151005	242		8TH ST	4'C/L FENCE	1926	DANN, MARY L
002151005	242		8TH ST	CFW	1926	DANN, MARY L
002151006	222		8TH ST	DETACHED GARAGE	1920	ZACHTE, ROBERT D & SHARON A TR
002151006	222		8TH ST	AWNING	1920	ZACHTE, ROBERT D & SHARON A TR
002151008	708		HAMILTON ST	SINGLE FAMILY RES.	1926	ANTHONY, ALLEN R & KATHLEEN G
002151008	708		HAMILTON ST	5'C/L FENCE	1926	ANTHONY, ALLEN R & KATHLEEN G
002151008	708		HAMILTON ST	SHED	1926	ANTHONY, ALLEN R & KATHLEEN G
002151009	702		HAMILTON ST	DETACHED GARAGE	1914	ALEXANDER, JEFFERY D TR ET AL
002152002	807		CEDAR ST	SINGLE FAMILY RES.	1926	BRAGG, BOBBY E & ANNA
002152002	807		CEDAR ST	4'C/L FENCE	1926	BRAGG, BOBBY E & ANNA
002152002	807		CEDAR ST	C/L TOPRAIL	1926	BRAGG, BOBBY E & ANNA
002152002	807		CEDAR ST	CFW	1926	BRAGG, BOBBY E & ANNA
002152003	811		CEDAR ST	SINGLE FAMILY RES.	1932	ZEITER, CHRISTINA LINK
002152003	811		CEDAR ST	5'S/B FENCE	1932	ZEITER, CHRISTINA LINK
002152003	811		CEDAR ST	CFW	1932	ZEITER, CHRISTINA LINK
002152004	815		CEDAR ST	SINGLE FAMILY RES.	1932	KAFTON, CLARK W & PHYLLIS
002152004	815		CEDAR ST	CFW	1932	KAFTON, CLARK W & PHYLLIS
002152004	815		CEDAR ST	6'S/B FENCE	1932	KAFTON, CLARK W & PHYLLIS
002152004	815		CEDAR ST	4'C/L FENCE	1932	KAFTON, CLARK W & PHYLLIS
002152005	821		CEDAR ST	SINGLE FAMILY RES.	1941	WILSON, CODY
002152005	821		CEDAR ST	CFW	1941	WILSON, CODY
002152005	821		CEDAR ST	5'S/B FENCE	1941	WILSON, CODY
002152005	821		CEDAR ST	SHED	1941	WILSON, CODY
002152005	821		CEDAR ST	AWNING	1941	WILSON, CODY
002152006	824		HAMILTON ST	SINGLE FAMILY RES.	1938	AQUARIAN MINING EXPLORATION, IN
002152006	824		HAMILTON ST	SHED	1938	AQUARIAN MINING EXPLORATION, IN
002152006	824		HAMILTON ST	CFW	1938	AQUARIAN MINING EXPLORATION, IN
002152006	824		HAMILTON ST	4'S/B FENCE	1938	AQUARIAN MINING EXPLORATION, IN
002152007	818		HAMILTON ST	SINGLE FAMILY RES.	1908	ESPARZA, CARLOS & SABRA
002152007	818		HAMILTON ST	SINGLE FAMILY RES.	1908	ESPARZA, CARLOS & SABRA
002152007	818		HAMILTON ST	CFW	1932	ESPARZA, CARLOS & SABRA
002152007	818		HAMILTON ST	5'S/B FENCE	1932	ESPARZA, CARLOS & SABRA

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002152007	818		HAMILTON ST	3'PICKET FENCE	1932	ESPARZA, CARLOS & SABRA
002152007	818		HAMILTON ST	PICKET FENCE	1908	ESPARZA, CARLOS & SABRA
002152009	808		HAMILTON ST	SINGLE FAMILY RES.	1932	TERRELL, JASON P
002152009	808		HAMILTON ST	CFW	1932	TERRELL, JASON P
002152009	808		HAMILTON ST	LOFT	1932	TERRELL, JASON P
002152009	808		HAMILTON ST	WOOD STAIRS	1932	TERRELL, JASON P
002152009	808		HAMILTON ST	WOOD DECK	1932	TERRELL, JASON P
002152010	806		HAMILTON ST	SINGLE FAMILY RES.	1935	CARLIN UNITED METHODIST CHURCH
002152010	806		HAMILTON ST	COMM'L-CHURCH W/SUNDAY SCHOO	1920	CARLIN UNITED METHODIST CHURCH
002152010	806		HAMILTON ST	CFW	1920	CARLIN UNITED METHODIST CHURCH
002152010	806		HAMILTON ST	PORCH	1920	CARLIN UNITED METHODIST CHURCH
002152010	806		HAMILTON ST	SHED	1920	CARLIN UNITED METHODIST CHURCH
002152010	806		HAMILTON ST	4'C/L FENCE	1935	CARLIN UNITED METHODIST CHURCH
002152010	806		HAMILTON ST	CFW	1935	CARLIN UNITED METHODIST CHURCH
002153001	903		CEDAR ST	SINGLE FAMILY RES.	1914	LESTER, THOMAS M & KAREN
002153001	903		CEDAR ST	SINGLE FAMILY RES.	1950	LESTER, THOMAS M & KAREN
002153001	903		CEDAR ST	4'C/L FENCE W/TR	1914	LESTER, THOMAS M & KAREN
002153001	903		CEDAR ST	4'C/L FENCE W/TR	1950	LESTER, THOMAS M & KAREN
002153001	903		CEDAR ST	CFW	1914	LESTER, THOMAS M & KAREN
002153002	907		CEDAR ST	SINGLE FAMILY RES.	1920	HARRER, WILLIAM
002153002	907		CEDAR ST	4'C/L FENCE	1920	HARRER, WILLIAM
002153002	907		CEDAR ST	CFW	1920	HARRER, WILLIAM
002153003	911		CEDAR ST	SINGLE FAMILY RES.	1920	JOYCE, VERONICA
002153003	911		CEDAR ST	CFW	1920	JOYCE, VERONICA
002153003	911		CEDAR ST	6'C/L FENCE	1920	JOYCE, VERONICA
002153004	913		CEDAR ST	SINGLE FAMILY RES.	1926	HALE, BRENDA A
002153004	913		CEDAR ST	6'C/L FENCE	1926	HALE, BRENDA A
002153004	913		CEDAR ST	CFW	1926	HALE, BRENDA A
002153006	916		CEDAR ST	SINGLE FAMILY RES.	1927	DANN, PEARL L
002153006	916		CEDAR ST	CFW	1914	DANN, PEARL L
002153007	924		HAMILTON ST	SINGLE FAMILY RES.	1926	HAZZARD, MICHAEL K
002153007	924		HAMILTON ST	SINGLE FAMILY RES.	1931	HAZZARD, MICHAEL K
002153008	918		HAMILTON ST	SINGLE FAMILY RES.	1938	GUINN, ANDY & MARJORIE M
002153008	918		HAMILTON ST	4'C/L FENCE	1938	GUINN, ANDY & MARJORIE M
002153008	918		HAMILTON ST	6'S/B FENCE	1938	GUINN, ANDY & MARJORIE M
002153008	918		HAMILTON ST	CFW	1938	GUINN, ANDY & MARJORIE M
002153009	914		HAMILTON ST	SINGLE FAMILY RES.	1953	DTK PROPERTIES LLC
002153009	914		HAMILTON ST	CFW	1953	DTK PROPERTIES LLC
002153010	910		HAMILTON ST	BUNKHOUSE (RES)	1920	OWENS, BRADLEY N & KATHRYN G
002153010	910		HAMILTON ST	HOOKUP	1920	OWENS, BRADLEY N & KATHRYN G
002153011	906		HAMILTON ST	SINGLE FAMILY RES.	1943	MESHEFSKI, SCOTT B & ELLEN
002153011	906		HAMILTON ST	CFW	1943	MESHEFSKI, SCOTT B & ELLEN
002153011	906		HAMILTON ST	4'C/L FENCE	1943	MESHEFSKI, SCOTT B & ELLEN
002153011	906		HAMILTON ST	SHED	1943	MESHEFSKI, SCOTT B & ELLEN
002153012	902		HAMILTON ST	SINGLE FAMILY RES.	1914	GARAMENDI, MITCHELL GUY
002153012	902		HAMILTON ST	4'C/L FENCE	1914	GARAMENDI, MITCHELL GUY
002153012	902		HAMILTON ST	CFW	1914	GARAMENDI, MITCHELL GUY
002154001	709		HAMILTON ST	SINGLE FAMILY RES.	1939	ROWE, BRADLEY
002154001	709		HAMILTON ST	4'C/L FENCE	1939	ROWE, BRADLEY
002154002	182		8TH ST	SINGLE FAMILY RES.	1942	WHITE, DANIEL W

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002154002	182		8TH ST	4'C/L FENCE	1942	WHITE, DANIEL W
002154002	182		8TH ST	WMS FENCE	1942	WHITE, DANIEL W
002154002	182		8TH ST	SHED	1942	WHITE, DANIEL W
002154002	182		8TH ST	CFW	1942	WHITE, DANIEL W
002154003	162		8TH ST	CFW	1932	JOHNSTON, DONALD J & KEELY J TR
002154003	162		8TH ST	4'C/L FENCE	1932	JOHNSTON, DONALD J & KEELY J TR
002154003	162		8TH ST	CFW	1932	JOHNSTON, DONALD J & KEELY J TR
002154004	122		8TH ST	SINGLE FAMILY RES.	1926	JOHNSTON, DONALD J & KEELY J TR
002154004	122		8TH ST	SINGLE FAMILY RES.	1926	JOHNSTON, DONALD J & KEELY J TR
002154004	122		8TH ST	CFW	1926	JOHNSTON, DONALD J & KEELY J TR
002154004	122		8TH ST	WMS FENCE	1926	JOHNSTON, DONALD J & KEELY J TR
002154005	724		RAILROAD ST	DUPLEX	1920	SHEEN, KENDALL L ET AL
002154005	724		RAILROAD ST	CFW	1920	SHEEN, KENDALL L ET AL
002154006	712		RAILROAD ST	SINGLE FAMILY RES.	1926	CARPENTER, JOSEPH C & CATRINA M
002154006	712		RAILROAD ST	4'C/L FENCE	1926	CARPENTER, JOSEPH C & CATRINA M
002154006	712		RAILROAD ST	CFW	1926	CARPENTER, JOSEPH C & CATRINA M
002154006	712		RAILROAD ST	SHED	1926	CARPENTER, JOSEPH C & CATRINA M
002154007	708		RAILROAD ST	SINGLE FAMILY RES.	1926	SHEEN, KENDALL L & MARY L ET AL
002154007	708		RAILROAD ST	WMS FENCE	1926	SHEEN, KENDALL L & MARY L ET AL
002154007	708		RAILROAD ST	CFW	1926	SHEEN, KENDALL L & MARY L ET AL
002154008	131		7TH ST	SINGLE FAMILY RES.	1926	NICHOLS, DIANA M
002154008	131		7TH ST	WMS FENCE	1926	NICHOLS, DIANA M
002154008	131		7TH ST	CFW	1926	NICHOLS, DIANA M
002154011	701		HAMILTON ST	SINGLE FAMILY RES.	1914	JOHNSTON, DONALD J & KEELY J TR
002154011	701		HAMILTON ST	WMW FENCE	1914	JOHNSTON, DONALD J & KEELY J TR
002154011	701		HAMILTON ST	6'C/L FENCE	1914	JOHNSTON, DONALD J & KEELY J TR
002154011	701		HAMILTON ST	3'S/B FENCE	1914	JOHNSTON, DONALD J & KEELY J TR
002154011	701		HAMILTON ST	CFW	1914	JOHNSTON, DONALD J & KEELY J TR
002155001	141		8TH ST	SINGLE FAMILY RES.	1930	HARPER, JON C
002155001	141		8TH ST	CFW	1930	HARPER, JON C
002155001	141		8TH ST	6'S/B FENCE	1930	HARPER, JON C
002155001	141		8TH ST	3-RAIL FENCE	1930	HARPER, JON C
002155001	141		8TH ST	6'S/B FENCE	1930	HARPER, JON C
002155001	141		8TH ST	WMS FENCE	1930	HARPER, JON C
002155001	141		8TH ST	CABIN	1930	HARPER, JON C
002155001	141		8TH ST	CABIN FIXTURES	1930	HARPER, JON C
002155003	807		HAMILTON ST	SINGLE FAMILY RES.	1945	BALLARD, TIMOTHY S
002155003	807		HAMILTON ST	CFW	1945	BALLARD, TIMOTHY S
002155003	807		HAMILTON ST	WMS FENCE	1945	BALLARD, TIMOTHY S
002155003	807		HAMILTON ST	AWNING	1945	BALLARD, TIMOTHY S
002155004	811		HAMILTON ST	SINGLE FAMILY RES.	1926	WRIGHT, NANCY A TR
002155004	811		HAMILTON ST	CFW	1926	WRIGHT, NANCY A TR
002155005	815		HAMILTON ST	SINGLE FAMILY RES.	1950	KAFTON, CLARK SCOTT
002155005	815		HAMILTON ST	CFW	1942	KAFTON, CLARK SCOTT
002155005	815		HAMILTON ST	WMS FENCE	1942	KAFTON, CLARK SCOTT
002155006	819		HAMILTON ST	SINGLE FAMILY RES.	1920	Y & T INVESTMENTS LLC
002155006	819		HAMILTON ST	CFW	1920	Y & T INVESTMENTS LLC
002155006	819		HAMILTON ST	WIRE FENCE	1920	Y & T INVESTMENTS LLC
002155006	819		HAMILTON ST	SHED	1920	Y & T INVESTMENTS LLC
002155007	823		HAMILTON ST	SINGLE FAMILY RES.	1920	GRENFELL, SANDRA MARIE

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002155007	823		HAMILTON ST	WMS FENCE	1920	GRENFELL, SANDRA MARIE
002155007	823		HAMILTON ST	CFW	1920	GRENFELL, SANDRA MARIE
002155008	132		9TH ST	DETACHED GARAGE	1930	WRIGHT, LARRY & KATHY
002155011	816		RAILROAD ST	SINGLE FAMILY RES.	1920	GREEN, DEREK C
002155011	816		RAILROAD ST	4'C/L FENCE	1920	GREEN, DEREK C
002155011	816		RAILROAD ST	AWNING	1920	GREEN, DEREK C
002155011	816		RAILROAD ST	CFW	1920	GREEN, DEREK C
002155012	812		RAILROAD ST	SINGLE FAMILY RES.	1937	MIRELES, LUIS ET AL
002155012	812		RAILROAD ST	4'C/L FENCE	1937	MIRELES, LUIS ET AL
002155012	812		RAILROAD ST	CFW	1937	MIRELES, LUIS ET AL
002155013	808		RAILROAD ST	SINGLE FAMILY RES.	1967	KRANTZ, TERRY E
002155013	808		RAILROAD ST	4'C/L FENCE	1967	KRANTZ, TERRY E
002155013	808		RAILROAD ST	CFW	1967	KRANTZ, TERRY E
002155014	802		RAILROAD ST	SINGLE FAMILY RES.	1897	PEARSON, BETTY F ETAL
002155014	802		RAILROAD ST	4'C/L FENCE	1897	PEARSON, BETTY F ETAL
002155014	802		RAILROAD ST	SHED	1897	PEARSON, BETTY F ETAL
002155014	802		RAILROAD ST	CFW	1897	PEARSON, BETTY F ETAL
002155015	820		RAILROAD ST	SINGLE FAMILY RES.	1926	WILSON, TINA M
002155015	820		RAILROAD ST	STORAGE	1926	WILSON, TINA M
002155015	820		RAILROAD ST	4'C/L FENCE	1926	WILSON, TINA M
002155015	820		RAILROAD ST	CFW	1926	WILSON, TINA M
002156001	901		HAMILTON ST	SINGLE FAMILY RES.	1948	GONZALEZ, MICHAEL C &CECILIA M
002156001	901		HAMILTON ST	4'C/L FENCE	1948	GONZALEZ, MICHAEL C &CECILIA M
002156001	901		HAMILTON ST	C/L PRIVACY SLATS	1948	GONZALEZ, MICHAEL C &CECILIA M
002156001	901		HAMILTON ST	6'C/L FENCE	1948	GONZALEZ, MICHAEL C &CECILIA M
002156001	901		HAMILTON ST	CFW	1948	GONZALEZ, MICHAEL C &CECILIA M
002156002	909		HAMILTON ST	SINGLE FAMILY RES.	1927	JOHNSTON, WILLIAM H ET AL
002156002	909		HAMILTON ST	WMS FENCE	1927	JOHNSTON, WILLIAM H ET AL
002156002	909		HAMILTON ST	4'C/L FENCE	1927	JOHNSTON, WILLIAM H ET AL
002156002	909		HAMILTON ST	6'C/L FENCE	1927	JOHNSTON, WILLIAM H ET AL
002156002	909		HAMILTON ST	CFW	1927	JOHNSTON, WILLIAM H ET AL
002156002	909		HAMILTON ST	SHED	1927	JOHNSTON, WILLIAM H ET AL
002156003	913		HAMILTON ST	SINGLE FAMILY RES.	1920	BECK, MARTY DUANE ET AL
002156003	913		HAMILTON ST	SINGLE FAMILY RES.	1945	BECK, MARTY DUANE ET AL
002156003	913		HAMILTON ST	CFW	1945	BECK, MARTY DUANE ET AL
002156004	917		HAMILTON ST	SINGLE FAMILY RES.	1938	TROUSDALE, EARL
002156004	917		HAMILTON ST	WMS FENCE	1938	TROUSDALE, EARL
002156004	917		HAMILTON ST	CFW	1938	TROUSDALE, EARL
002156005	172		10TH ST	SINGLE FAMILY RES.	1948	LIEBSACK, TASHA L
002156005	172		10TH ST	4'C/L FENCE	1948	LIEBSACK, TASHA L
002156005	172		10TH ST	CFW	1948	LIEBSACK, TASHA L
002156006	122		10TH ST	COMM'L-STORAGE	1920	CAMP CARLIN LLC
002156006	122		10TH ST	PATIO COVER	1920	CAMP CARLIN LLC
002156007	920		RAILROAD ST	SINGLE FAMILY RES.	1920	BUTTARS, MILTON ROGER ET AL
002156008	916		RAILROAD ST	SINGLE FAMILY RES.	1926	SANTO, CHARLES
002156008	916		RAILROAD ST	4'C/L FENCE	1926	SANTO, CHARLES
002156008	916		RAILROAD ST	CFW	1926	SANTO, CHARLES
002156009	912		RAILROAD ST	SINGLE FAMILY RES.	1926	CAMP CARLIN LLC
002156009	912		RAILROAD ST	CFW	1926	CAMP CARLIN LLC
002156010	908		RAILROAD ST	SINGLE FAMILY RES.	1920	BROWN, MORRIS WAYNE

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002156010	908		RAILROAD ST	WMS FENCE	1920	BROWN, MORRIS WAYNE
002156010	908		RAILROAD ST	CFW	1920	BROWN, MORRIS WAYNE
002156010	908		RAILROAD ST	6'C/L FENCE	1920	BROWN, MORRIS WAYNE
002156011	101		9TH ST	SINGLE FAMILY RES.	1926	DTK PROPERTIES LLC
002156011	101		9TH ST	6'S/B FENCE	1926	DTK PROPERTIES LLC
002156011	101		9TH ST	3'C/L FENCE	1926	DTK PROPERTIES LLC
002156011	101		9TH ST	CFW	1926	DTK PROPERTIES LLC
002156013	121		9TH ST	SINGLE FAMILY RES.	1914	LACY, J RAYMOND
002156013	121		9TH ST	4'S/B FENCE	1914	LACY, J RAYMOND
002156013	121		9TH ST	6'S/B FENCE	1914	LACY, J RAYMOND
002156013	121		9TH ST	CFW	1914	LACY, J RAYMOND
002156014	131		9TH ST	SINGLE FAMILY RES.	1914	SUMPTER, SCOTT L
002156014	131		9TH ST	6'S/B FENCE	1914	SUMPTER, SCOTT L
002156014	131		9TH ST	CFW	1914	SUMPTER, SCOTT L
002161002	1011		CEDAR ST	SINGLE FAMILY RES.	1934	MARTIN, KAREN W
002161002	1011		CEDAR ST	CFW	1934	MARTIN, KAREN W
002161003	1017		CEDAR ST	SINGLE FAMILY RES.	1914	OVERMAN, BERTHA ANN
002161003	1017		CEDAR ST	ASPHALT	1914	OVERMAN, BERTHA ANN
002161003	1017		CEDAR ST	4'C/L FENCE	1914	OVERMAN, BERTHA ANN
002161003	1017		CEDAR ST	SHED	1914	OVERMAN, BERTHA ANN
002161003	1017		CEDAR ST	CFW	1914	OVERMAN, BERTHA ANN
002161005	1024		HAMILTON ST	SINGLE FAMILY RES.	1941	GATES, DAVID M ET AL
002161005	1024		HAMILTON ST	4'C/L FENCE	1941	GATES, DAVID M ET AL
002161005	1024		HAMILTON ST	PRIVACY SLATS	1941	GATES, DAVID M ET AL
002161005	1024		HAMILTON ST	CFW	1941	GATES, DAVID M ET AL
002161006	1018		HAMILTON ST	SINGLE FAMILY RES.	1926	GATES, DAVID MORGAN
002161006	1018		HAMILTON ST	SINGLE FAMILY RES.	1938	GATES, DAVID MORGAN
002161006	1018		HAMILTON ST	CFW	1926	GATES, DAVID MORGAN
002161006	1018		HAMILTON ST	4'C/L FENCE	1926	GATES, DAVID MORGAN
002161006	1018		HAMILTON ST	RETAINING WALL	1926	GATES, DAVID MORGAN
002161006	1018		HAMILTON ST	6'S/B FENCE	1938	GATES, DAVID MORGAN
002161008	1002		HAMILTON ST	SINGLE FAMILY RES.	1945	GLENNON, JODY WOODS ET AL
002161008	1002		HAMILTON ST	CFW	1945	GLENNON, JODY WOODS ET AL
002161008	1002		HAMILTON ST	6'S/B FENCE	1945	GLENNON, JODY WOODS ET AL
002161008	1002		HAMILTON ST	RETAINING WALL	1945	GLENNON, JODY WOODS ET AL
002161009	1016		HAMILTON ST	SINGLE FAMILY RES.	1946	FEASEL, TERI L
002161009	1016		HAMILTON ST	CFW	1946	FEASEL, TERI L
002161009	1016		HAMILTON ST	4'C/L FENCE	1946	FEASEL, TERI L
002161009	1016		HAMILTON ST	C/L TOPRAIL	1946	FEASEL, TERI L
002161009	1016		HAMILTON ST	6'S/B FENCE	1946	FEASEL, TERI L
002161010	1014		HAMILTON ST	SINGLE FAMILY RES.	1932	CHAVEZ, RAFAEL
002161010	1014		HAMILTON ST	SHED	1932	CHAVEZ, RAFAEL
002161010	1014		HAMILTON ST	CFW	1932	CHAVEZ, RAFAEL
002162001	251		11TH ST	SINGLE FAMILY RES.	1967	DOXEY, LOREN THOMAS & CATERINA
002162001	251		11TH ST	CFW	1967	DOXEY, LOREN THOMAS & CATERINA
002162001	251		11TH ST	6'S/B FENCE	1967	DOXEY, LOREN THOMAS & CATERINA
002162001	251		11TH ST	4'C/L FENCE	1967	DOXEY, LOREN THOMAS & CATERINA
002162001	251		11TH ST	RETAINING WALL	1967	DOXEY, LOREN THOMAS & CATERINA
002162001	251		11TH ST	SHED	1967	DOXEY, LOREN THOMAS & CATERINA
002162001	251		11TH ST	AWNING	1967	DOXEY, LOREN THOMAS & CATERINA

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002162003	1117		CEDAR ST	HOOKUP	1966	KEARNEY, RAYMOND L & CAROLYN E
002162010	1102		HAMILTON ST	MULTI-FAMILY RES.	1932	HUFFMAN, KEVIN KORY ET AL
002162010	1102		HAMILTON ST	CFW	1932	HUFFMAN, KEVIN KORY ET AL
002162010	1102		HAMILTON ST	ASPHALT	1932	HUFFMAN, KEVIN KORY ET AL
002162010	1102		HAMILTON ST	SHED	1932	HUFFMAN, KEVIN KORY ET AL
002162010	1102		HAMILTON ST	SHED	1932	HUFFMAN, KEVIN KORY ET AL
002164001	151		10TH ST	SINGLE FAMILY RES.	1946	TOGNINI, TODD L
002164001	151		10TH ST	6'C/L FENCE	1946	TOGNINI, TODD L
002164002	171		10TH ST	SINGLE FAMILY RES.	1945	JONES, MICHAEL R
002164002	171		10TH ST	CFW	1945	JONES, MICHAEL R
002164002	171		10TH ST	6'C/L FENCE	1945	JONES, MICHAEL R
002164002	171		10TH ST	4'C/L FENCE	1945	JONES, MICHAEL R
002164003	1009		HAMILTON ST	SINGLE FAMILY RES.	1942	PATERSON, SCOTT C & HOLLY M
002164003	1009		HAMILTON ST	CFW	1942	PATERSON, SCOTT C & HOLLY M
002164003	1009		HAMILTON ST	6'S/B FENCE	1942	PATERSON, SCOTT C & HOLLY M
002164003	1009		HAMILTON ST	SHED	1920	PATERSON, SCOTT C & HOLLY M
002164004	1015		HAMILTON ST	SINGLE FAMILY RES.	1920	VINING, SCOTT & MONICA
002164004	1015		HAMILTON ST	CFW	1920	VINING, SCOTT & MONICA
002164007	1022		RAILROAD ST	SINGLE FAMILY RES.	1931	JRT INVESTMENTS LLC
002164007	1022		RAILROAD ST	SINGLE FAMILY RES.	1908	JRT INVESTMENTS LLC
002164007	1022		RAILROAD ST	SINGLE FAMILY RES.	1908	JRT INVESTMENTS LLC
002164007	1022		RAILROAD ST	6'S/B FENCE	1931	JRT INVESTMENTS LLC
002164007	1022		RAILROAD ST	CFW	1931	JRT INVESTMENTS LLC
002164007	1022		RAILROAD ST	PAVERS	1931	JRT INVESTMENTS LLC
002164008	1016		RAILROAD ST	SINGLE FAMILY RES.	1932	HANSEN, GARY D
002164008	1016		RAILROAD ST	CFW	1932	HANSEN, GARY D
002164008	1016		RAILROAD ST	4'C/L FENCE	1932	HANSEN, GARY D
002164008	1016		RAILROAD ST	4'S/B FENCE	1932	HANSEN, GARY D
002164009	1014		RAILROAD ST	SINGLE FAMILY RES.	1920	ULLMAN, LINDA D
002164009	1014		RAILROAD ST	4'S/B FENCE	1920	ULLMAN, LINDA D
002164009	1014		RAILROAD ST	4'C/L FENCE	1920	ULLMAN, LINDA D
002164009	1014		RAILROAD ST	CFW	1920	ULLMAN, LINDA D
002164010	1010		RAILROAD ST	SINGLE FAMILY RES.	1938	MONGER, ROBERT & SUSAN
002164010	1010		RAILROAD ST	CFW	1938	MONGER, ROBERT & SUSAN
002164010	1010		RAILROAD ST	4'C/L FENCE	1938	MONGER, ROBERT & SUSAN
002164010	1010		RAILROAD ST	4'S/B FENCE	1938	MONGER, ROBERT & SUSAN
002164011	1006		RAILROAD ST	SINGLE FAMILY RES.	1932	ROWE, JOHN F TR
002164011	1006		RAILROAD ST	CFW	1932	ROWE, JOHN F TR
002164011	1006		RAILROAD ST	4'C/L FENCE	1932	ROWE, JOHN F TR
002164012	1002		RAILROAD ST	SINGLE FAMILY RES.	1940	JOHNSON, HENRY C
002164012	1002		RAILROAD ST	CFW	1940	JOHNSON, HENRY C
002164012	1002		RAILROAD ST	WMW FENCE	1940	JOHNSON, HENRY C
002164012	1002		RAILROAD ST	AWNING	1940	JOHNSON, HENRY C
002164013	131		10TH ST	SINGLE FAMILY RES.	1931	JOHNSON, HENRY C
002164013	131		10TH ST	CFW	1931	JOHNSON, HENRY C
002164013	131		10TH ST	4'C/L FENCE	1931	JOHNSON, HENRY C
002164014	1017		HAMILTON ST	SINGLE FAMILY RES.	1914	DTK PROPERTIES LLC
002164014	1017		HAMILTON ST	SINGLE FAMILY RES.	1920	DTK PROPERTIES LLC
002164014	1017		HAMILTON ST	4'C/L FENCE	1920	DTK PROPERTIES LLC
002164014	1017		HAMILTON ST	5'C/L FENCE	1914	DTK PROPERTIES LLC

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002164014	1017		HAMILTON ST	CFW	1914	DTK PROPERTIES LLC
002164015	822		TUSCARORA RD	RESIDENCE (LOW-COST BUNKHOUS	1914	DTK PROPERTIES LLC
002164015	822		TUSCARORA RD	STORAGE	1914	DTK PROPERTIES LLC
002164015	822		TUSCARORA RD	FIXTURES	1914	DTK PROPERTIES LLC
002164015	822		TUSCARORA RD	HOOKUP	1914	DTK PROPERTIES LLC
002170001			4TH ST	BARN	1966	WRIGHT, GARY L & RACHEL
002170001			4TH ST	CORRALS	1966	WRIGHT, GARY L & RACHEL
002170001			4TH ST	WMW FENCE	1966	WRIGHT, GARY L & RACHEL
002170001			4TH ST	BARBED WIRE FENCE	1966	WRIGHT, GARY L & RACHEL
002171001	221		MAIN ST	SINGLE FAMILY RES.	1930	SANDSTEDT, ROBERT M
002171001	221		MAIN ST	CFW	1950	SANDSTEDT, ROBERT M
002171001	221		MAIN ST	SHED	1950	SANDSTEDT, ROBERT M
002171001	221		MAIN ST	4'S/B FENCE	1950	SANDSTEDT, ROBERT M
002171002	231		MAIN ST	SINGLE FAMILY RES.	1926	HOLD, HARVEY
002171002	231		MAIN ST	CFW	1950	HOLD, HARVEY
002171003	245		MAIN ST	SINGLE FAMILY RES.	1902	FERRIN, LAVINIA KIM TR ET AL
002171003	245		MAIN ST	SINGLE FAMILY RES.	1908	FERRIN, LAVINIA KIM TR ET AL
002171003	245		MAIN ST	SINGLE FAMILY RES.	1925	FERRIN, LAVINIA KIM TR ET AL
002171003	245		MAIN ST	CFW	1950	FERRIN, LAVINIA KIM TR ET AL
002171003	245		MAIN ST	4'C/L FENCE	1950	FERRIN, LAVINIA KIM TR ET AL
002171003	245		MAIN ST	6'C/L FENCE	1950	FERRIN, LAVINIA KIM TR ET AL
002171005	271		MAIN ST	SINGLE FAMILY RES.	1935	JOHNSON, MARY F TR
002171005	271		MAIN ST	CFW	1950	JOHNSON, MARY F TR
002171005	271		MAIN ST	PICKET FENCE	1950	JOHNSON, MARY F TR
002171006	301		MAIN ST	SINGLE FAMILY RES.	1920	FERRIN, LAVINIA KIM TR ET AL
002171006	301		MAIN ST	CFW	1920	FERRIN, LAVINIA KIM TR ET AL
002171006	301		MAIN ST	ASPHALT	1920	FERRIN, LAVINIA KIM TR ET AL
002171006	301		MAIN ST	4'C/L FENCE	1920	FERRIN, LAVINIA KIM TR ET AL
002171007	305		MAIN ST	SINGLE FAMILY RES.	1940	MANGUM, BRADY & LARA
002171007	305		MAIN ST	CFW	1940	MANGUM, BRADY & LARA
002171007	305		MAIN ST	4'C/L FENCE	1940	MANGUM, BRADY & LARA
002171008	309		MAIN ST	SINGLE FAMILY RES.	1926	COLTON, DANIEL R & CONNIE L TR
002171008	309		MAIN ST	CFW	1926	COLTON, DANIEL R & CONNIE L TR
002171008	309		MAIN ST	5'S/B FENCE	1926	COLTON, DANIEL R & CONNIE L TR
002171009	311		MAIN ST	SINGLE FAMILY RES.	1956	WALLACE, DONALD S
002171009	311		MAIN ST	CFW	1930	WALLACE, DONALD S
002171010	317		MAIN ST	SINGLE FAMILY RES.	1940	BURNEY, THOMAS J & KATHLEEN L
002171010	317		MAIN ST	CFW	1950	BURNEY, THOMAS J & KATHLEEN L
002171010	317		MAIN ST	4'C/L FENCE	1950	BURNEY, THOMAS J & KATHLEEN L
002171011	321		MAIN ST	SINGLE FAMILY RES.	1915	CAMP CARLIN LLC
002171011	321		MAIN ST	CFW	1950	CAMP CARLIN LLC
002171011	321		MAIN ST	4'C/L FENCE	1950	CAMP CARLIN LLC
002171011	321		MAIN ST	SHED	1950	CAMP CARLIN LLC
002181005	419		MAIN ST	CFW	1950	RIDDLE, JOHN G & JANET L
002181005	419		MAIN ST	6'S/B FENCE	1950	RIDDLE, JOHN G & JANET L
002181005	419		MAIN ST	4'S/B FENCE	1950	RIDDLE, JOHN G & JANET L
002181007	152	S	5TH ST	SINGLE FAMILY RES.	1926	DANN, RUSSELL J & ELIZABETH J
002181007	152	S	5TH ST	CFW	1950	DANN, RUSSELL J & ELIZABETH J
002181007	152	S	5TH ST	3'C-BLOCK WALL	1950	DANN, RUSSELL J & ELIZABETH J
002181007	152	S	5TH ST	MH HOOKUP	1950	DANN, RUSSELL J & ELIZABETH J

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002181008	414		CAMP ST	SINGLE FAMILY RES.	1902	DOYLE, MIKE
002181008	414		CAMP ST	CFW	1950	DOYLE, MIKE
002181008	414		CAMP ST	6'S/B FENCE	1950	DOYLE, MIKE
002181008	414		CAMP ST	4'C/L FENCE	1950	DOYLE, MIKE
002181009	410		CAMP ST	SINGLE FAMILY RES.	1955	KINNEY, CAMERON
002181009	410		CAMP ST	CFW	1956	KINNEY, CAMERON
002181009	410		CAMP ST	4'C/L FENCE	1956	KINNEY, CAMERON
002181011	407		MAIN ST	SINGLE FAMILY RES.	1902	DRESEN, JERRY & LORETTA
002181011	407		MAIN ST	CFW	1902	DRESEN, JERRY & LORETTA
002181013	401		MAIN ST	SINGLE FAMILY RES.	1908	GRIFFIN, GREGORY LOGAN
002181013	401		MAIN ST	CFW	1950	GRIFFIN, GREGORY LOGAN
002181013	401		MAIN ST	5'C/L FENCE	1950	GRIFFIN, GREGORY LOGAN
002181013	401		MAIN ST	2-RAIL FENCE	1950	GRIFFIN, GREGORY LOGAN
002181013	401		MAIN ST	4'C/L FENCE	1950	GRIFFIN, GREGORY LOGAN
002182001	501		MAIN ST	SINGLE FAMILY RES.	1920	CORDOVA, PHILLIP EUGENE
002182001	501		MAIN ST	4'C/L FENCE	1950	CORDOVA, PHILLIP EUGENE
002182001	501		MAIN ST	CFW	1950	CORDOVA, PHILLIP EUGENE
002182002	505		MAIN ST	SINGLE FAMILY RES.	1925	KULISEK, MICHAEL LOUIS JR
002182002	505		MAIN ST	4'C/L FENCE	1950	KULISEK, MICHAEL LOUIS JR
002182003	509		MAIN ST	SINGLE FAMILY RES.	1914	BROWN, DAVID F
002182003	509		MAIN ST	SINGLE FAMILY RES.	1942	BROWN, DAVID F
002182003	509		MAIN ST	4'C/L FENCE	1950	BROWN, DAVID F
002182003	509		MAIN ST	5'S/B FENCE	1950	BROWN, DAVID F
002182003	509		MAIN ST	CFW	1950	BROWN, DAVID F
002182004	517		MAIN ST	SINGLE FAMILY RES.	1914	MONTES DE OCA, ALFRED
002182004	517		MAIN ST	SHED (CABIN)	1914	MONTES DE OCA, ALFRED
002182004	517		MAIN ST	CFW	1950	MONTES DE OCA, ALFRED
002182004	517		MAIN ST	4'C/L FENCE	1950	MONTES DE OCA, ALFRED
002182004	517		MAIN ST	5'S/B FENCE	1950	MONTES DE OCA, ALFRED
002182005	521		MAIN ST	SINGLE FAMILY RES.	1938	BROCK, BRENDA D
002182005	521		MAIN ST	CFW	1938	BROCK, BRENDA D
002182005	521		MAIN ST	SHED	1938	BROCK, BRENDA D
002182007	131	S	6TH ST	SINGLE FAMILY RES.	1950	KIRKHAM, RONALD DAVID& BEVERLY
002182007	131	S	6TH ST	CFW	1950	KIRKHAM, RONALD DAVID& BEVERLY
002182007	131	S	6TH ST	PICKET FENCE	1950	KIRKHAM, RONALD DAVID& BEVERLY
002182008	520		CAMP ST	SINGLE FAMILY RES.	1932	ROMANS, DANIEL F & BECKY
002182008	520		CAMP ST	CFW	1950	ROMANS, DANIEL F & BECKY
002182008	520		CAMP ST	PICKET FENCE	1950	ROMANS, DANIEL F & BECKY
002182008	520		CAMP ST	SHED	1950	ROMANS, DANIEL F & BECKY
002182009	516		CAMP ST	SINGLE FAMILY RES.	1949	JOHN, CRISTINA V
002182009	516		CAMP ST	CFW	1954	JOHN, CRISTINA V
002182009	516		CAMP ST	4'PICKET FENCE	1954	JOHN, CRISTINA V
002182009	516		CAMP ST	SHED 1	1954	JOHN, CRISTINA V
002182009	516		CAMP ST	SHED 2	1954	JOHN, CRISTINA V
002182009	516		CAMP ST	SHED 3	1954	JOHN, CRISTINA V
002182009	516		CAMP ST	SHED 4	1954	JOHN, CRISTINA V
002182010	151	S	5TH ST	DETACHED GARAGE	1946	SIMPSON, KARLA JUNE
002182011	506		CAMP ST	SINGLE FAMILY RES.	1930	CONNER, PATRICK SR & WENDY M
002182011	506		CAMP ST	WMS FENCE	1950	CONNER, PATRICK SR & WENDY M
002183001	601		MAIN ST	STORAGE WAREHOUSE	1920	RUTHERFORD, J BRETT ET AL

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002183003	609		MAIN ST	RES. HOTEL/APTS.	1926	ATKINS, SONNY B & TERI L
002183005	172	S	7TH ST	SINGLE FAMILY RES.	1918	MOEN, JAMES A TR
002183005	172	S	7TH ST	3'C/L FENCE	1950	MOEN, JAMES A TR
002183005	172	S	7TH ST	C/L PRIVACY SLATS	1950	MOEN, JAMES A TR
002183005	172	S	7TH ST	6'C/L FENCE	1950	MOEN, JAMES A TR
002183005	172	S	7TH ST	C/L PRIVACY SLATS	1950	MOEN, JAMES A TR
002183005	172	S	7TH ST	CFW	1950	MOEN, JAMES A TR
002183007	614		CAMP ST	SINGLE FAMILY RES.	1914	CARDENAS, JENNY ELIZABETH
002183007	614		CAMP ST	CFW	1950	CARDENAS, JENNY ELIZABETH
002183007	614		CAMP ST	4'C/L FENCE	1950	CARDENAS, JENNY ELIZABETH
002183008	610		CAMP ST	SINGLE FAMILY RES.	1942	MEALEY, DANIEL P & AMY D
002183008	610		CAMP ST	CFW	1942	MEALEY, DANIEL P & AMY D
002183008	610		CAMP ST	WIRE MESH FENCE	1942	MEALEY, DANIEL P & AMY D
002183008	610		CAMP ST	SHED	1942	MEALEY, DANIEL P & AMY D
002183009	141	S	6TH ST	COMM'L-FRATERNAL BLDG.	1936	AMERICAN LEGION
002183010	132	S	7TH ST	SINGLE FAMILY RES	1938	ABBOT/DAVIS LLC
002183011	617		MAIN ST	CFW	1938	CARLIN, CITY OF
002183011	617		MAIN ST	6'C/L FENCE	1938	CARLIN, CITY OF
002183011	617		MAIN ST	SALVAGE VALUE FOR BLDG.	1938	CARLIN, CITY OF
002184001			5TH ST	BARN	1943	SHRODE, ATHENA LYNNE
002184001			5TH ST	3-RAIL FENCE	1943	SHRODE, ATHENA LYNNE
002184002	212	S	5TH ST	SINGLE FAMILY RES.	1908	SHRODE, ATHENA LYNNE
002184002	212	S	5TH ST	WIRE FENCE	1950	SHRODE, ATHENA LYNNE
002185004	262	S	6TH ST	SINGLE FAMILY RES.	1941	ABRAM, BRIAN L ET AL
002185004	262	S	6TH ST	CFW	1950	ABRAM, BRIAN L ET AL
002185007	519		CAMP ST	DORMITORY	1902	CAMP STREET LLC
002185007	519		CAMP ST	COVERED PORCH	1902	CAMP STREET LLC
002185007	519		CAMP ST	BALCONY (BOTH SIDES)	1902	CAMP STREET LLC
002185007	519		CAMP ST	FLIGHTS OF STAIRS	1902	CAMP STREET LLC
002185009	513		CAMP ST	SINGLE FAMILY RES.	1922	DOXEY, ELIZABETH C TR
002185009	513		CAMP ST	STORAGE BLDG.	1922	DOXEY, ELIZABETH C TR
002185009	513		CAMP ST	CFW	1950	DOXEY, ELIZABETH C TR
002186001	601		CAMP ST	SINGLE FAMILY RES.	1920	BINGHAM, ELAINA
002186001	601		CAMP ST	S/B FENCE	1950	BINGHAM, ELAINA
002186002	603		CAMP ST	SINGLE FAMILY RES.	1939	LUDWIG, JOHN C & LESLIE L
002186002	603		CAMP ST	SB FENCE	1950	LUDWIG, JOHN C & LESLIE L
002186002	603		CAMP ST	CFW	1950	LUDWIG, JOHN C & LESLIE L
002186003	607		CAMP ST	MOBILE HOME HOOKUP	1950	LUDWIG, JOHN C & LESLIE L
002186003	607		CAMP ST	AWNING	1950	LUDWIG, JOHN C & LESLIE L
002186003	607		CAMP ST	WMS FENCE	1950	LUDWIG, JOHN C & LESLIE L
002186003	607		CAMP ST	SHED	1931	LUDWIG, JOHN C & LESLIE L
002186004	609		CAMP ST	SINGLE FAMILY RES.	1922	ARNOLD, STEVEN
002186004	609		CAMP ST	CFW	1950	ARNOLD, STEVEN
002186004	609		CAMP ST	5'S/B FENCE	1950	ARNOLD, STEVEN
002186004	609		CAMP ST	ALUMINUM AWNING	1950	ARNOLD, STEVEN
002186005	613		CAMP ST	SINGLE FAMILY RES.	1914	CARPLUK, CHRIS & CYNDI
002186005	613		CAMP ST	CFW	1950	CARPLUK, CHRIS & CYNDI
002186005	613		CAMP ST	SHED	1950	CARPLUK, CHRIS & CYNDI
002186005	613		CAMP ST	4'C/L FENCE	1950	CARPLUK, CHRIS & CYNDI
002186005	613		CAMP ST	4'S/B FENCE	1950	CARPLUK, CHRIS & CYNDI

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002186006	619		CAMP ST	SINGLE FAMILY RES.	1926	BATTLE, BRADFORD E & DIANA S
002186006	619		CAMP ST	CFW	1950	BATTLE, BRADFORD E & DIANA S
002186007	202	S	7TH ST	SINGLE FAMILY RES.	1914	SUPP, VICTORIA
002186007	202	S	7TH ST	SHED	1950	SUPP, VICTORIA
002186007	202	S	7TH ST	6'C/L FENCE	1950	SUPP, VICTORIA
002186007	202	S	7TH ST	CFW	1950	SUPP, VICTORIA
002186008	262	S	7TH ST	S/B FENCE	1950	LUDWIG, JOHN & LESLIE
002186009	620		OAK ST	SINGLE FAMILY RES.	1932	ANDERSON, JULIE H
002186010	616		OAK ST	SINGLE FAMILY RES.	1922	ROUNDTREE, LISA
002186010	616		OAK ST	SINGLE FAMILY RES.	1908	ROUNDTREE, LISA
002186010	616		OAK ST	CFW	1950	ROUNDTREE, LISA
002186010	616		OAK ST	S/B FENCE	1950	ROUNDTREE, LISA
002186010	616		OAK ST	WIRE FENCE	1950	ROUNDTREE, LISA
002186011	614		OAK ST	SINGLE FAMILY RES.	1922	PEARSON, RONALD ET AL
002186011	614		OAK ST	CFW	1950	PEARSON, RONALD ET AL
002186011	614		OAK ST	WMS FENCE	1950	PEARSON, RONALD ET AL
002186011	614		OAK ST	SHED	1950	PEARSON, RONALD ET AL
002186012	261	S	6TH ST	SINGLE FAMILY RES.	1924	LUDWIG, JOHN C & LESLIE L
002186012	261	S	6TH ST	SHED	1908	LUDWIG, JOHN C & LESLIE L
002186012	261	S	6TH ST	HOOKUP	1908	LUDWIG, JOHN C & LESLIE L
002186012	261	S	6TH ST	CFW	1950	LUDWIG, JOHN C & LESLIE L
002186012	261	S	6TH ST	5'S/B FENCE	1950	LUDWIG, JOHN C & LESLIE L
002186012	261	S	6TH ST	PORCH	1925	LUDWIG, JOHN C & LESLIE L
002186012	261	S	6TH ST	PORCH	1925	LUDWIG, JOHN C & LESLIE L
002186012	261	S	6TH ST	SHED	1925	LUDWIG, JOHN C & LESLIE L
002190003	904		OAK ST	STORAGE	1903	ROUNDTREE, LISA
002190003	904		OAK ST	STORAGE	1903	ROUNDTREE, LISA
002190003	904		OAK ST	BUNKHOUSE	1903	ROUNDTREE, LISA
002190003	904		OAK ST	BUNKHOUSE	1903	ROUNDTREE, LISA
002190003	904		OAK ST	PORCH	1903	ROUNDTREE, LISA
002190003	904		OAK ST	STORAGE FLOORS	1903	ROUNDTREE, LISA
002190004	825		CAMP ST	SINGLE FAMILY RES.	1920	HOUSE, KEITH
002190004	825		CAMP ST	CFW	1960	HOUSE, KEITH
002190007	171	S	10TH ST	SINGLE FAMILY RES.	1966	DEMING, COLLEEN MARIE
002190007	171	S	10TH ST	WIRE FENCE	1966	DEMING, COLLEEN MARIE
002190007	171	S	10TH ST	DET GARAGE	1966	DEMING, COLLEEN MARIE
002190007	171	S	10TH ST	HORSE SHED	1966	DEMING, COLLEEN MARIE
002190007	171	S	10TH ST	S/B FENCE	1966	DEMING, COLLEEN MARIE
002190007	171	S	10TH ST	WIRE FENCE	1966	DEMING, COLLEEN MARIE
002191001	703		MAIN ST	COMM'L-RETAIL STORE	1925	MONTES DE OCA, ALFRED
002191003	707		MAIN ST	COMM'L-RETAIL STORE	1910	DTK PROPERTIES LLC
002191004	711		MAIN ST	COMM'L-RESTAURANT	1927	FONG, JOHN & YOSHIKO
002191006	719		MAIN ST	POTATO STORAGE	1918	SANDSTEDT, ROBERT M & TERRI
002191008	152	S	8TH ST	COMM'L-JAIL	1948	CARLIN, CITY OF
002191008	152	S	8TH ST	PORCH	1948	CARLIN, CITY OF
002191009	720		CAMP ST	SINGLE FAMILY RES.	1938	CAMP CARLIN LLC
002191010	716		CAMP ST	SINGLE FAMILY RES.	1920	CONNER, WENDY M
002191010	716		CAMP ST	4'C/L FENCE	1950	CONNER, WENDY M
002191010	716		CAMP ST	6'C/L FENCE	1950	CONNER, WENDY M
002191011	712		CAMP ST	SINGLE FAMILY RES.	1936	SUTHERLAND, SHARON F

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002191011	712		CAMP ST	5'S/B FENCE	1950	SUTHERLAND, SHARON F
002191011	712		CAMP ST	SHED	1950	SUTHERLAND, SHARON F
002191011	712		CAMP ST	CFW	1950	SUTHERLAND, SHARON F
002191012	171	S	7TH ST	SINGLE FAMILY RES.	1914	FORNESS, JAMES A
002191014	717		MAIN ST	BAR/TAVERN	1910	SANDSTEDT, ROBERT M & TERRI
002191015	713		MAIN ST	BUNKHOUSE	1942	TERRALL, LEWIS D
002191015	713		MAIN ST	BUNKHOUSE FIXTURES	1942	TERRALL, LEWIS D
002192001	101	S	8TH ST	COMM'L-OFFICE BLDG.	1964	CARLIN, CITY OF
002192001	101	S	8TH ST	CFW	1966	CARLIN, CITY OF
002192001	101	S	8TH ST	ASPHALT	1966	CARLIN, CITY OF
002192003	815		MAIN ST	RETAIL STORE	1919	PIERETTI, DOMINEK J TR
002192003	815		MAIN ST	CARPORT	1950	PIERETTI, DOMINEK J TR
002192004	823		MAIN ST	COMM'L-SERVICE GARAGE	1938	GATES, DAVID
002192004	823		MAIN ST	6'C/L FENCE	1950	GATES, DAVID
002192004	823		MAIN ST	C/L TOPRAIL	1950	GATES, DAVID
002192004	823		MAIN ST	C/L PRIVACY SLATS	1950	GATES, DAVID
002192007	810		CAMP ST	SINGLE FAMILY RES.	1932	RIAL, FRANK M
002192007	810		CAMP ST	WMS FENCE	1950	RIAL, FRANK M
002192010	818		CAMP ST	DETACHED GARAGE	1930	SUMPTER, SCOTT ET AL
002193001	903		MAIN ST	SINGLE FAMILY RES.	1926	SMITH, GRANT R
002193001	903		MAIN ST	3'S/B FENCE	1950	SMITH, GRANT R
002193001	903		MAIN ST	CFW	1960	SMITH, GRANT R
002193002	913		MAIN ST	SINGLE FAMILY RES.	1920	FERRIN, LAVINIA KIM TR ET AL
002193002	913		MAIN ST	CFW	1950	FERRIN, LAVINIA KIM TR ET AL
002193002	913		MAIN ST	3'C/L FENCE	1950	FERRIN, LAVINIA KIM TR ET AL
002193002	913		MAIN ST	3'S/B FENCE	1960	FERRIN, LAVINIA KIM TR ET AL
002193003	917		MAIN ST	SINGLE FAMILY RES.	1932	BELSEY, ROBERT & APRIL C
002193003	917		MAIN ST	SHED	1932	BELSEY, ROBERT & APRIL C
002193004	923		MAIN ST	COMM'L-CHURCH	1922	GORS, ROBERT A & BRYAN L
002193004	923		MAIN ST	CFW	1922	GORS, ROBERT A & BRYAN L
002193006	1002		CAMP ST	SINGLE FAMILY RES.	1930	WAGNER, MILO J
002193006	1002		CAMP ST	SINGLE FAMILY RES.	1918	WAGNER, MILO J
002193006	1002		CAMP ST	6'S/B FENCE	1950	WAGNER, MILO J
002193006	1002		CAMP ST	4'C/L FENCE	1950	WAGNER, MILO J
002193006	1002		CAMP ST	CFW	1930	WAGNER, MILO J
002193006	1002		CAMP ST	AWNINGS	1930	WAGNER, MILO J
002193007	930		CAMP ST	SINGLE FAMILY RES.	1914	SMITH, ROGER M
002193007	930		CAMP ST	6'S/B FENCE	1950	SMITH, ROGER M
002193008	924		CAMP ST	SINGLE FAMILY RES.	1935	TONG, APRIL D
002193008	924		CAMP ST	6'S/B FENCE	1950	TONG, APRIL D
002193008	924		CAMP ST	CFW	1950	TONG, APRIL D
002193009	914		CAMP ST	SINGLE FAMILY RES.	1914	THOMPSON, JANET R
002193009	914		CAMP ST	SINGLE FAMILY RES.	1920	THOMPSON, JANET R
002193009	914		CAMP ST	5'S/B FENCE	1950	THOMPSON, JANET R
002193009	914		CAMP ST	SHED	1914	THOMPSON, JANET R
002193009	914		CAMP ST	CFW	1920	THOMPSON, JANET R
002193010	906		CAMP ST	SINGLE FAMILY RES.	1920	WILMINGTON SAVINGS FUND SOCIETY
002193010	906		CAMP ST	4'C/L FENCE	1950	WILMINGTON SAVINGS FUND SOCIETY
002193010	906		CAMP ST	SHED	1920	WILMINGTON SAVINGS FUND SOCIETY
002193010	906		CAMP ST	CFW	1950	WILMINGTON SAVINGS FUND SOCIETY

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002193010	906		CAMP ST	S/B FENCE	1950	WILMINGTON SAVINGS FUND SOCIETY
002193011	902		CAMP ST	SINGLE FAMILY RES.	1920	CAMP CARLIN LLC
002193011	902		CAMP ST	6'C/L FENCE	1950	CAMP CARLIN LLC
002193011	902		CAMP ST	SHED	1950	CAMP CARLIN LLC
002193011	902		CAMP ST	CFW	1950	CAMP CARLIN LLC
002193011	902		CAMP ST	CAR COVER	1950	CAMP CARLIN LLC
002193012	927		MAIN ST	SINGLE FAMILY RES.	1922	BELSEY, APRIL CHANTELLE ET AL
002193012	927		MAIN ST	3'S/B FENCE	1950	BELSEY, APRIL CHANTELLE ET AL
002193012	927		MAIN ST	CFW	1950	BELSEY, APRIL CHANTELLE ET AL
002194001	201	S	7TH ST	SINGLE FAMILY RES.	1926	TAYLOR, KENNETH G III ET AL
002194001	201	S	7TH ST	3'S/B FENCE	1926	TAYLOR, KENNETH G III ET AL
002194003	709		CAMP ST	SINGLE FAMILY RES.	1925	LEDESMA, PEGGY
002194003	709		CAMP ST	CFW	1925	LEDESMA, PEGGY
002194004	713		CAMP ST	SINGLE FAMILY RES.	1938	MACDONALD FAMILY TRUST
002194004	713		CAMP ST	WMS FENCE	1938	MACDONALD FAMILY TRUST
002194004	713		CAMP ST	CFW	1938	MACDONALD FAMILY TRUST
002194005			CAMP ST	HOOKUP	1922	MACDONALD FAMILY TRUST
002194005			CAMP ST	RESIDENCE (SHED VALUE)	1922	MACDONALD FAMILY TRUST
002194005			CAMP ST	SHED FLOOR	1922	MACDONALD FAMILY TRUST
002194006	717		CAMP ST	SINGLE FAMILY RES.	1926	PIERETTI, DOMINEK J
002194006	717		CAMP ST	FENCE	1928	PIERETTI, DOMINEK J
002194006	717		CAMP ST	SHED	1928	PIERETTI, DOMINEK J
002194007	222	S	8TH ST	SINGLE FAMILY RES.	1920	LACY, J RAYMOND
002194007	222	S	8TH ST	SINGLE FAMILY RES.	1920	LACY, J RAYMOND
002194008	272	S	8TH ST	SINGLE FAMILY RES.	1948	JOHNSTON, MARGARET A
002194008	272	S	8TH ST	4'C/L FENCE	1948	JOHNSTON, MARGARET A
002194008	272	S	8TH ST	6'S/B FENCE	1948	JOHNSTON, MARGARET A
002194009	718		OAK ST	SINGLE FAMILY RES.	1926	JOHNSTON, MARGARET A
002194009	718		OAK ST	6'C/L FENCE	1950	JOHNSTON, MARGARET A
002194010	714		OAK ST	SINGLE FAMILY RES.	1926	YARDLEY, DANIEL A ET AL
002194010	714		OAK ST	BUNKHOUSE	1926	YARDLEY, DANIEL A ET AL
002194013	706		OAK ST	HOOKUP	1966	WRIGHT, NANCY A TR
002194013	706		OAK ST	COVERED PORCH	1966	WRIGHT, NANCY A TR
002194013	706		OAK ST	CFW	1966	WRIGHT, NANCY A TR
002195001	803		CAMP ST	SINGLE FAMILY RES.	1947	PACINI, ROY
002195001	803		CAMP ST	CFW	1953	PACINI, ROY
002195001	803		CAMP ST	SHED	1953	PACINI, ROY
002195001	803		CAMP ST	SHED	1953	PACINI, ROY
002195001	803		CAMP ST	FENCE	1942	PACINI, ROY
002195002	809		CAMP ST	SINGLE FAMILY RES.	1942	JONES, DELOS & DOROTHY E
002195002	809		CAMP ST	CFW	1942	JONES, DELOS & DOROTHY E
002195002	809		CAMP ST	SHED	1942	JONES, DELOS & DOROTHY E
002195002	809		CAMP ST	5'S/B FENCE	1942	JONES, DELOS & DOROTHY E
002195002	809		CAMP ST	FENCE	1942	JONES, DELOS & DOROTHY E
002195003	811		CAMP ST	SINGLE FAMILY RES.	1935	PIERETTI, DOMINEK J TR
002195003	811		CAMP ST	CFW	1935	PIERETTI, DOMINEK J TR
002195003	811		CAMP ST	6'S/B FENCE	1950	PIERETTI, DOMINEK J TR
002195004	815		CAMP ST	SINGLE FAMILY RES.	1920	GIURLANI, LORRAINE ET AL
002195004	815		CAMP ST	CFW	1930	GIURLANI, LORRAINE ET AL
002195004	815		CAMP ST	COTTAGE	1930	GIURLANI, LORRAINE ET AL

APN	Loc #	Loc Dir	Location or Street	DESCRIPTION	YR BUILT	Assessed Owner
002195005	821		CAMP ST	SINGLE FAMILY RES.	1951	MILLER, DAVID L & JOANNA
002195005	821		CAMP ST	SINGLE FAMILY RESIDENCE	1938	MILLER, DAVID L & JOANNA
002195005	821		CAMP ST	CFW	1938	MILLER, DAVID L & JOANNA
002195005	821		CAMP ST	3'C/L FENCE	1938	MILLER, DAVID L & JOANNA
002195005	821		CAMP ST	6'C/L FENCE	1938	MILLER, DAVID L & JOANNA
002195005	821		CAMP ST	C/L PRIVACY SLATS	1938	MILLER, DAVID L & JOANNA
002195006	810		OAK ST	QUONSET BLDG.	1930	CARLIN, CITY OF
002195006	810		OAK ST	SHED	1930	CARLIN, CITY OF
002195006	810		OAK ST	SHED	1930	CARLIN, CITY OF
002195006	810		OAK ST	SHED FLOORS	1930	CARLIN, CITY OF
002195006	810		OAK ST	GARAGE	1920	CARLIN, CITY OF
002195006	810		OAK ST	CFW	1930	CARLIN, CITY OF
002195007	271	S	8TH ST	STORAGE WAREHOUSE	1942	CARLIN, CITY OF
002195007	271	S	8TH ST	SHED	1942	CARLIN, CITY OF
002210041	501		POPLAR ST	TANK	1950	CARLIN, CITY OF
002230002	101	W	MAIN ST	SINGLE FAMILY RES.	1927	JONES, RACHEL
002230002	101	W	MAIN ST	GARAGE/SHOP	1920	JONES, RACHEL
002230002	101	W	MAIN ST	BARN	1920	JONES, RACHEL
002230002	101	W	MAIN ST	HORSE SHED	1920	JONES, RACHEL
002230002	101	W	MAIN ST	SLAUGHTER HOUSE	1920	JONES, RACHEL
002230002	101	W	MAIN ST	RR CAR STORAGE	1920	JONES, RACHEL
002230002	101	W	MAIN ST	GARAGE	1955	JONES, RACHEL
002230002	101	W	MAIN ST	BUNKHOUSE STORAGE	1955	JONES, RACHEL
002230002	101	W	MAIN ST	LOAFING SHED	1920	JONES, RACHEL
002230002	101	W	MAIN ST	BARN MISC-2 FLOOR	1920	JONES, RACHEL
002230008			4TH & OAK STS	UTILITY BUILDING	1920	CARLIN, CITY OF

FINAL TOTALS
COUNT 1,126

* * * E N D O F R E P O R T * * *

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
http://www.fws.gov/nevada/

In Reply Refer To:
Consultation Code: 08ENVD00-2018-SLI-0125
Event Code: 08ENVD00-2018-E-00316
Project Name: City of Carlin Sewer and Water Improvements

December 15, 2017

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 et seq.), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit http://www.fws.gov/nevada/es/ipac.html.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be

prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (http://heritage.nv.gov). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of

Nevada (http://www.leg.state.nv.us/NAC/NAC-503.html). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected fish and wildlife species. Please visit http://www.ndow.org or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (e.g., changes in blade cut-in speed, assessments of blade "feathering" success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (http://www.aplic.org/) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20gr .

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 et seq.), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to avoid potential destruction of bird nests or young, or birds that breed in the area. Such

destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

If wetlands, springs, or streams are are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO

Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO
Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO

Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO

Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO
San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta	BDFWO

		smelt	
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO
Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO

Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO
Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO

Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

***Office Leads:**

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife Office

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

Project Summary

Consultation Code: 08ENVD00-2018-SLI-0125

Event Code: 08ENVD00-2018-E-00316

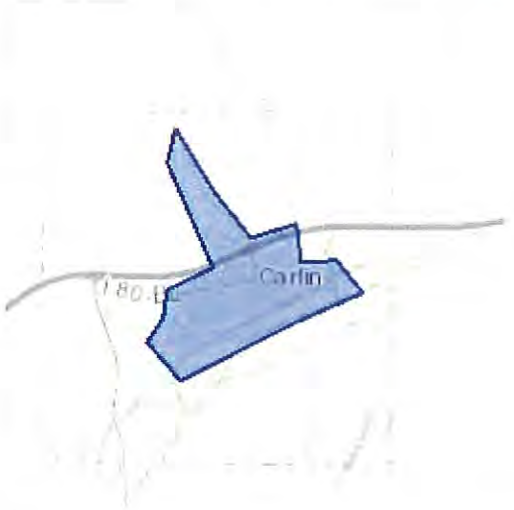
Project Name: City of Carlin Sewer and Water Improvements

Project Type: WATER SUPPLY / DELIVERY

Project Description: The project includes the replacement of all existing sewer collection and water distribution pipe within the City of Carlin service area.

Project Location:

Approximate location of the project can be viewed in Google Maps:
https://www.google.com/maps/place/40.721077409154276N116.10692112379377W



Counties: Elko, NV

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Fishes

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/3964
Species survey guidelines:
https://ecos.fws.gov/ipac/guideline/survey/population/233/office/14320.pdf

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured. Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or are known to have particular vulnerabilities in your project location. To learn more about the levels of concern for birds on your list, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your specific project area. To see maps of where birders and the general public have sighted birds in and around your project area, visit E-bird tools such as the E-bird data mapping tool (search for the scientific name of a bird on your list to see specific locations where that bird has been reported to occur within your project area over a certain time-frame) and the E-bird Explore Data Tool (perform a query to see a list of all birds sighted in your county or region and within a certain time-frame). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list can be found below.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC), but is of concern in this area either because of the Eagle Act, or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Mar 20 to Sep 15
Black Rosy-finch *Leucosticte atrata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9460	Breeds Jun 15 to Aug 31
Brewer's Sparrow *Spizella breweri*	Breeds

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	May 15 to Aug 10
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Golden Eagle *Aquila chrysaetos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/1680	Breeds Apr 1 to Aug 31
Green-tailed Towhee *Pipilo chlorurus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9444	Breeds May 1 to Aug 10
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds Apr 1 to Jul 31
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Sagebrush Sparrow *Artemisiospiza nevadensis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 15 to Jul 31

Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Williamson's Sapsucker *Sphyrapicus thyroideus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8832	Breeds May 1 to Jul 31

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeas

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

FRESHWATER EMERGENT WETLAND

- PEM

NEVADA DIVISION OF
ENVIRONMENTAL
PROTECTION

STATE OF NEVADA
Department of Conservation & Natural Resources
Brian Sandoval, Governor
Bradley Crowell, Director
Greg Lovato, Administrator

March 21, 2018

Dan Sommers
Farr West Engineering
5510 Longley Lane
Reno, Nevada 89511

RE: Environmental Review: City of Carlin Water and Sewer Improvements Project
In reply, please reference plan review number EL-0005887-18.

Dear Mr. Sommers:

The Nevada Division of Environmental Protection (NDEP), Bureau of Safe Drinking Water (BSDW), has reviewed the information provided in the above referenced project document and offers the following comments:

Based on the information provided by Farr West Engineering regarding this project the BSDW does not anticipate any negative environmental impacts to the existing ground water quality from the construction of the project. Please be aware that all vertical and horizontal separation distances between sewer main/laterals and water main/laterals must be maintained in accordance with the Nevada Administrative Code 445A.6715 to 445A.6718 inclusive, "Design, Construction, Operation and Maintenance of Public Water Systems". If compliance with the required separation distances cannot be achieved or is impracticable, the existing water main/lateral shall be protected as described in these sections of NAC 445A. Please be advised that the water improvements must be approved by the BSDW prior to construction.

Please feel free to contact me at (775) 687-9517 or jbalderson@ndep.nv.gov, if you have any questions or comments.

Sincerely,

James R. Balderson, P.E. Engineering Supervisor,
Bureau of Safe Drinking Water
Nevada Division of Environmental Protection

cc: My-Linh Nguyen, Chief, Bureau of Safe Drinking Water

FARR WEST
ENGINEERING

January 23, 2018

Jim Balderson, Safe Drinking Water Engineering Supervisor
Division of Water Resources
Nevada Department of Conservation and Natural Resources
901 So. Stewart Street, Suite 4001
Carson City, Nevada 89701

RE: City of Carlin Water and Sewer Improvements Project

Dear Jim,
The City of Carlin is in the process of performing an environmental review pursuant to the National Environmental Policy Act for USDA Rural Development in order that it may assess the environmental impacts of water and sewer system improvements in Carlin, Nevada. The project includes the items listed below. Enclosed is a map that depicts the proposed project's area of potential effect for all construction activities.

The project includes the installation of the following water and sewer pipes:

WATER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
¾	730	6	29,734
1	2,029	8	40,063
1 ¼	405	10	1,332
1 ½	104	12	26,255
2	3,775	14	663
3	1,113	16	1,055
4	3,022	Unknown	15,063

SEWER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
3	1,754	8	57,987
4	1,515	10	8,631
6	7,177	Unknown	7,727

We are requesting information on the possible effects of the above proposed project in which the Bureau determines if the project will have a negative environmental impact and/or any other potential effects regarding water quality. We would appreciate any of your recommendations to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

5510 LONGLEY LANE • RENO NV 89511 • (775) 851-4788 • FAX (775) 851-0766

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,

Dan Sommers
Farr West Engineering

Enc.
cc: City of Carlin, USDA

Legend

- Sewer Manhole
- Lateral Cleanout
- Main Line Cleanout

Pipe Type, Diameter, Length

- Forced Main, 3" - 1,754'
- Forced Main, 4" - 797'
- Forced Main, 8" - 4,369'
- Gravity Main, 10" - 8,631'
- Gravity Main, 6" - 7,177'
- Gravity Main, 8" - 53,618'
- Gravity Main, Unknown - 5,556'
- Lateral, 4" - 718'
- Lateral, Unknown - 2,171'
- Area Of Potential Effect

Phase

- 1
- 2
- 3
- 4

80

766

221

Union Pacific (Carlin Sidings)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FARR WEST
ENGINEERING
5510 Longley Lane
Reno, NV 89511
(775) 851-4788
www.farrwestengineering.com

City of Carlin Sewer System

N

1 " = 600 '

Q:\client\Elko\Carlin\Maps\CarlinSewerPhases_11X17.mxd, Editor: michael, Printed: 1/5/2018

City of Carlin Water System

Legend

- Water Hydrant
- Hydrant Valve
- Isolation Valve
- Water Well
- Resevoir
- Tank

Pipe Type, Diameter, Length

- Hydrant Lateral, 6" - 244'
- Hydrant Lateral, Unknown - 3,196'
- Pressurized Main, 1 1/4" - 405'
- Pressurized Main, 1" - 1447'
- Pressurized Main, 10" - 1,332'
- Pressurized Main, 12" - 26,255'
- Pressurized Main, 14" - 663'
- Pressurized Main, 16" - 1,055'
- Pressurized Main, 2" - 1,413'
- Pressurized Main, 3" - 1,113'
- Pressurized Main, 4" - 3,022'
- Pressurized Main, 6" - 29,490'
- Pressurized Main, 8" - 40,063'
- Pressurized Main, Unknown - 10,249'
- Service Lateral, 1 1/2" - 104'
- Service Lateral, 1" - 582'
- Service Lateral, 2" - 2,362'
- Service Lateral, 3/4" - 730'
- Service Lateral, Unknown -1,618'

Area Of Potential Effect

Phase

- 1
- 2
- 3
- 4

Union Pacific (Carlin Sidings)

N

1 " = 600 '

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FARR WEST ENGINEERING
5510 Longley Lane
Reno, NV 89511
(775) 851-4788
www.farrwestengineering.com

Q:\client\Elko\Carlin\Maps\CarlinWaterPhases_11X17.mxd, Editor: michael, Printed: 1/5/2018

E2018-111 (City of Carlin Sewer and Water System Improvements)

The Nevada Division of Environmental Protection – Bureau of Air Pollution Control (BAPC) requires that a surface area disturbance permit be submitted to clear, excavate, or level 5 acres or more of land per Nevada Administrative Code (NAC) 445B.22037. Exceptions to this regulation include agricultural activities occurring on agricultural land or surface disturbances authorized by permits issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.

This project does not acknowledge the need for the applicant to obtain a surface area disturbance permit so we want to make sure they are aware of this requirement. The permit application should be submitted to the BAPC. Additional information and the BAPC's Surface Area Disturbances Permit Application can be found at http://ndep.nv.gov/bapc/permitting/permitd.html. For questions, please contact Ryan Clark at (775) 687-9536 or rjclark@ndep.nv.gov.

NAC 445B.22037 Emissions of particulate matter: Fugitive dust. (NRS 445B.210)

1. No person may cause or permit the handling, transporting or storing of any material in a manner which allows or may allow controllable particulate matter to become airborne.

2. Except as otherwise provided in subsection 4, no person may cause or permit the construction, repair, demolition, or use of unpaved or untreated areas without first putting into effect an ongoing program using the best practical methods to prevent particulate matter from becoming airborne. As used in this subsection, "best practical methods" includes, but is not limited to, paving, chemical stabilization, watering, phased construction and revegetation.

3. Except as otherwise provided in subsection 4, no person may disturb or cover 5 acres or more of land or its topsoil until the person has obtained an operating permit for surface area disturbance to clear, excavate, or level the land or to deposit any foreign material to fill or cover the land.

4. The provisions of subsections 2 and 3 do not apply to:

(a) Agricultural activities occurring on agricultural land; or

(b) Surface disturbances authorized by a permit issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.

[Environmental Comm'n, Air Quality Reg. §§ 7.3.1 & 7.3.2, eff. 11-7-75; § 7.3.3, eff. 11-7-75; A 12-15-77] — (NAC A 9-19-90; 12-26-91; 12-13-93; 10-30-95) — (Substituted in revision for NAC 445B.365)

NDEP

Lisa Kremer, P.E.
Chief, Bureau of Air Pollution Control
Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701
p: 775.687.9336
lkremer@ndep.nv.gov
www.ndep.nv.gov

NEVADA DIVISION OF
ENVIRONMENTAL
PROTECTION

STATE OF NEVADA
Department of Conservation & Natural Resources
Brian Sandoval, Governor
Bradley Crowell, Director
Greg Lovato, Administrator

February 2, 2018

Mr. Dan Sommers
Farr West Engineering
5510 Longley Lane
Reno, NV 89511

RE: Environmental Review: City of Carlin Water & Sewer Improvements Project, City of Carlin

Dear Mr. Sommers:

Enclosed you will find the signed environmental review form for the City of Carlin Water & Sewer Improvements Project proposed by the City of Carlin. The Nevada Division of Environmental Protection, Bureau of Air Quality Planning has reviewed this project for conformance with federal air quality standards, and it will conform to Nevada's Applicable State Implementation Plan. Please note the following requirements that must be complied with during the planning and implementation phases of this project:

1. It is our understanding that this project is to improve the water and sewer system in Carlin, Nevada. Pursuant to NAC 445B.22037, if during the course of a project an area in excess of five (5) acres is disturbed, a surface area disturbance permit is required from the Bureau of Air Pollution Control (BAPC).

2. Regardless of the size of the disturbed area, fugitive dust emitted from the project must be controlled at all times through the use of best practical methods. These methods can include, but are not limited to, paving, chemical stabilization, watering, phased construction, and revegetation. For assistance with controlling fugitive dust, you may contact Travis Osterhout at (775) 687-9530.

If you have any questions on this review you may call me at (775) 687-9392, or e-mail at sjaunara@ndep.nv.gov.

Sincerely,

Sig Jaunarajs, Supervisor
Planning and Mobile Sources Branch

ENVIRONMENTAL REVIEW: AIR QUALITY ACT

Grantee: City of Carlin Project Name: City of Carlin Water & Sewer Improvements Project

Pursuant to U.S Department of Housing and Urban Development, U.S. Department of Commerce, Economic Development Administration or other federal department or agency requirements, as applicable, the grant recipient assumes the responsibility for environmental review, decision making and actions required by local, state, and federal environmental laws or authorities. In order to complete the environmental review requirements, we are requesting the Nevada Division of Environmental Protection's (NDEP) review of the project with respect to the threshold for Air Quality. The pertinent standards for Air Quality include the following criteria, standards, policies and/or regulations:

1. The Clean Air Act (42 U.S.C. 7401 et seq.) as amended; particularly Section 176 (c) and (d) (42 U.S.C. 7506 (c) and (d)).

Please check either line A or B below and add any applicable comments in the space provided. Please feel free to attach any additional comments.

X A. The project conforms to the EPA-approved State Implementation Plan (SIP), per contract with the State Air Quality Management District or Board.

____ B. The environmental threshold for Air Quality is exceeded. The project is not in conformance with the Clean Air Act. Negotiate suitable mitigation measures with the Air Quality Management District or Board.

NDEP Comments:

This project is not expected to disturb an area in excess of five (5) acres at one time, therefore, a surface area disturbance permit is not required.

In the event a surface area disturbance permit is required, contact Ryan Clark, Supervisor, BAPC Permitting Branch at (775) 687-9536.

In accordance with NAC 445B.22037, fugitive dust must be controlled at all times during the implementation of this project.

/ Supervisor 2/2/18

Signature/Title Date

Nevada Division of Environmental Protection

Rev. 2/18

FARR WEST
ENGINEERING

January 23, 2018

Adele Malone
Nevada Bureau of Air Quality Planning
901 So. Stewart St., Suite 4001
Carson City, NV 89701

RE: City of Carlin Water and Sewer Improvements Project

Dear Ms. Malone,

The City of Carlin is in the process of performing an environmental review pursuant to the National Environmental Policy Act for USDA Rural Development in order that it may assess the environmental impacts of water and sewer system improvements in Carlin, Nevada. The project includes the items listed below. Enclosed is a map that depicts the proposed project's area of potential effect for all construction activities.

The project includes the installation of the following water and sewer pipes:

WATER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
¾	730	6	29,734
1	2,029	8	40,063
1 ¼	405	10	1,332
1 ½	104	12	26,255
2	3,775	14	663
3	1,113	16	1,055
4	3,022	Unknown	15,063
Total:	**11,178**	**Total:**	**114,165**

SEWER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
3	1,754	8	57,987
4	1,515	10	8,631
6	7,177	Unknown	7,727
Total:	**10,446**	**Total:**	**74,345**

The total estimated length of pipe to be replaced is 210,134 feet. The estimated total ground disturbance to occur during construction is 24 acres. However, since the project will be phased, only part of the 24 acres will be under construction at any time. Likewise, during each phase, only a small segment (about 0.1 acres) of the total acreage will be disturbed at any time.

We are requesting information on the possible effects of the above proposed project in which the Bureau determines if the project will have a negative environmental impact and/or any other potential effects regarding air quality. We would appreciate any of your recommendations to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,

Dan Sommers
Farr West Engineering

Enc.
cc: City of Carlin, USDA

DATE: 1/25/2018

TO: Nevada State Clearinghouse, DCNR

FROM: Nevada Division of Environmental Protection, Bureau of Water Pollution Control

SUBJECT: State Clearinghouse Comments for E2018-111 (City of Carlin Sewer and Water System Improvements)

Disclaimer: The Nevada Division of Environmental Protection (NDEP), Bureau of Water Pollution Control (BWPC) does not have authority for projects occurring on Tribal Lands.

The NDEP, BWPC has received the aforementioned State Clearinghouse item and offers the following comments:

The project may be subject to BWPC permitting. Permits are required for discharges to surface waters and groundwaters of the State (Nevada Administrative Code NAC 445A.228). BWPC permits include, but are not limited to, the following:

- Stormwater Industrial General Permit
- De Minimis Discharge General Permit
- Pesticide General Permit
- Drainage Well General Permit
- Temporary Permit for Discharges to Groundwater's of the State
- Working in Waters Permit
- Wastewater Discharge Permits
- Underground Injection Control Permits
- Onsite Sewage Disposal System Permits
- Holding Tank Permits

Please note that discharge permits must be issued from this Division before construction of any treatment works (Nevada Revised Statute 445A.585).

For more information on BWPC Permitting, please visit our website at: https://ndep.nv.gov/water/water-pollution-control/permitting .

Additionally, the applicant is responsible for all other permits that may be required, which may include, but may not be limited to:

- Dam Safety Permits - Division of Water Resources
- Well Permits - NDEP
- 401 Water Quality Certification - U.S. Army Corps of Engineers
- 404 Permits - Local Health or State Health Division
- Air Permits - Local Government
- Health Permits
- Local Permits

Thank you for the information and the opportunity to comment.

NDEP

Ginger Poulson, AA IV, Supervisor
Bureau of Water Pollution Control
Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701
p: 775-687-9437 f: 775-684-4684
e: gpoulson@ndep.nv.gov

FARR WEST
ENGINEERING

January 23, 2018

Joseph L. Maez, P.E.
Bureau of Water Pollution Control
901 So. Stewart Street, Suite 4001
Carson City, Nevada 89701

RE: City of Carlin Water and Sewer Improvements Project

Dear Mr. Maez,

The City of Carlin is in the process of performing an environmental review pursuant to the National Environmental Policy Act for USDA Rural Development in order that it may assess the environmental impacts of water and sewer system improvements in Carlin, Nevada. The project includes the items listed below. Enclosed is a map that depicts the proposed project's area of potential effect for all construction activities.

The project includes the installation of the following water and sewer pipes:

WATER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
¾	730	6	29,734
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SEWER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
3	1,754	8	57,987
4	1,515	10	8,631
6	7,177	Unknown	7,727

The proposed project does not represent a "major construction activity" as defined in 50 CFR 402.02. We are requesting information on the possible effects of the proposed project which the Bureau determines to have a negative environmental impact with regards to water quality and/or any other potential effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,

Dan Sommers
Farr West Engineering

Enc.
cc: City of Carlin, USDA

Nevada Natural Heritage Program

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
Nevada Natural Heritage Program

Brian Sandoval
Governor

Bradley Crowell
Director

Kristin Szabo
Administrator

24 January 2018

Danny Sommers
Farr West Engineering
5510 Longley Lane
Reno, NV 89511

RE: Data request received 23 January 2018

Dear Mr. Sommers:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or At Risk plant and animal taxa recorded within or near the City of Carlin Water and Sewer Improvements Project area in Elko County. We searched our database and maps for the following, a 2 kilometer radius around area provided including:

Township 33N Range 52E Sections 26 and 27

There are no at risk taxa recorded within the given area. However, habitat may be available for: the big-brown bat, *Eptesicus fuscus*, a Nevada Bureau of Land Management (BLM) Sensitive Species, the Columbia spotted frog (Great Basin Population) *Rana luteiventris* pop. 3, a Nevada BLM Sensitive Species; and the pygmy rabbit, *Brachylagus idahoensis*, a Nevada BLM Sensitive Species. The Nevada Department of Wildlife (NDOW) manages, protects, and restores Nevada's wildlife resources and associated habitat. Please contact Bonnie Weller, NDOW GIS biologist (775) 688-1439 to obtain further information regarding wildlife resources within and near your area of interest. Removal or destruction of state protected flora species requires a special permit from Nevada Division of Forestry (NRS 527.270).

Please note that our data are dependent on the research and observations of many individuals and organizations and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

Eric S. Miskow
Biologist/Data Manager

NEVADA NATURAL HERITAGE PROGRAM DATA REQUEST FORM

rev. 2015-06

Use this form to query the Nevada Natural Heritage Program database for sensitive species location information. Please fill out this form as completely and specifically as possible, attaching additional sheets as needed. For more information on available species and data fields, fees, limitations, and restrictions, please visit our web site http://heritage.nv.gov or contact us for printed information. We cannot guarantee our response time; please allow two weeks for delivery.

Date submitted: 1/23/18

Organization: Farr West Engineering

Mailing Address: 5510 Longley Lane, Reno, NV 89511

Phone: 775-853-7265 **FAX:** 775-851-0766 **email:** danny@farrwestengineering.com

Project or Site Name: City of Carlin Water and Sewer Improvements

How will the information be used? USDA Environmental Assessment

KIND OF SEARCH

(see current fee schedule http://heritage.nv.gov/fees for descriptions, costs, and examples)

X **Standard (one-time),** OR... **Annual Subscription:** _____ first year _____ continuation

LIMIT SEARCH BY THE FOLLOWING CRITERIA

Location (please submit polygon(s) of area(s) as ArcGIS files or specify by township-range-section, map quadrangle, watershed, or other boundaries, and attach map(s) when possible):
W1/2 sec 26, sec 27, T33N R52E

Species: X all plants X all animals X all vertebrates X all invertebrates

other (specify groups/taxa):

Status: X all sensitive X all federal T/E/candidate X all state T/E X all watch list

Additional Limiting Criteria:

FORMAT AND CONTENT OF SEARCH RESULTS

(see http://heritage.nv.gov/gis for sample dataset)

X **Excel spreadsheet** (limited fieldset)

_____ **OR ArcGIS shapefile** (complete fieldset, truncated fields)

OR ArcGIS personal geodatabase (complete fieldset, full length fields)

projection (default = UTM Zone 11N): datum (default=NAD83):

HOW YOU WANT THE RESULTS SENT

Please Send: X search results immediately _____ cost estimate first

Send by any of the following checked methods: _____ U.S. Mail X email _____ FedEx

For FedEx, include PHYSICAL address above, and specify account to charge:

BY SIGNING BELOW, I acknowledge that I have read and agreed to abide by the Nevada Natural Heritage Program's (NNHP's) current fee schedule http://heritage.nv.gov/fees and its data license agreement http://heritage.nv.gov/sites/default/files/other_docs/limitats.pdf. A signed data license agreement must be submitted with an individual's first data request but it is not required for subsequent requests by the same individual.

I also agree that (1) all data supplied, and the analytic tools and processes from which they are derived, are the privileged, confidential property of NNHP, and/or NatureServe, and/or those who supplied the data to NNHP, and will not be provided to any other party without our consent; (2) in any use of the data, NNHP will be cited as a source, along with the year and month it supplied the data; and (3) while NNHP strives for accuracy and completeness, the data it supplies depend on the observations and research of many individuals and organizations, new data are constantly received, and in no case will the data be represented as a complete survey of any species or area.

Danny Sommers — Signature

Danny Sommers — Name (please print)

Project Manager — Title

Internal Use Only

Date Received _____ **Received by:** _____

Please MAIL or FAX completed and signed form to: Nevada Natural Heritage Program, attn: Data Manager, 901 S. Stewart St, ste. 5002, Carson City NV 89701-5245. FAX (775) 684-2909, phone (775) 684-2900.

TRANSACTION REPORT

JAN/23/2018/TUE 03:00 PM

FAX(TX)

#	DATE	START T.	RECEIVER	COM.TIME	PAGE	TYPE/NOTE	FILE
001	JAN/23	02:59PM	6842909	0:00:33	1	MEMORY OK SG3	0867

NEVADA NATURAL HERITAGE PROGRAM DATA REQUEST FORM

rev. 2015-08

Use this form to query the Nevada Natural Heritage Program database for sensitive species location information. Please fill out this form as completely and specifically as possible, attaching additional sheets as needed. For more information on available species and data fields, fees, limitations, and restrictions, please visit our web site http://heritage.nv.gov or contact us for printed information. We cannot guarantee our response time; please allow two weeks for delivery.

Date submitted: 1/23/18

Organization: Farr West Engineering

Mailing Address: 5510 Longley Lane, Reno, NV 89511

Phone: 775-853-7265 **FAX:** 775-851-0766 **email:** danny@farrwestengineering.com

Project or Site Name: City of Carlin Water and Sewer Improvements

How will the information be used? USDA Environmental Assessment

KIND OF SEARCH

(see current fee schedule http://heritage.nv.gov/fees for descriptions, costs, and examples)

X Standard (one-time), OR... Annual Subscription: ____ first year ____ continuation

LIMIT SEARCH BY THE FOLLOWING CRITERIA

Location (please submit polygon(s) of area(s) as ArcGIS files or specify by township-range-section, map quadrangle, watershed, or other boundaries, and attach map(s) when possible):
W1/2 sec 26, sec 27, T33N R52E

Species: X all plants X all animals X all vertebrates X all invertebrates

other (specify groups/taxa):

Status: X all sensitive X all federal T/E/candidate X all state T/E X all watch list

Additional Limiting Criteria:

FORMAT AND CONTENT OF SEARCH RESULTS

(see http://heritage.nv.gov/gis for sample dataset)

X Excel spreadsheet (limited fieldset)

___ OR ArcGIS shapefile (complete fieldset, truncated fields)

OR ArcGIS personal geodatabase (complete fieldset, full length fields)

projection (default = UTM Zone 11N): datum (default=NAD83):

HOW YOU WANT THE RESULTS SENT

Please Send: X search results immediately ____ cost estimate first

Send by any of the following checked methods: ____ U.S. Mail X email ____ FedEx

For FedEx, include PHYSICAL address above, and specify account to charge:

BY SIGNING BELOW, I acknowledge that I have read and agreed to abide by the Nevada Natural Heritage Program's (NNHP's) current fee schedule http://heritage.nv.gov/fees and its data license agreement http://heritage.nv.gov/sites/default/files/other_docs/limitats.pdf. A signed data license agreement must be submitted with an individual's first data request but it is not required for subsequent requests by the same individual.

I also agree that (1) all data supplied, and the analytic tools and processes from which they are derived, are the privileged, confidential property of NNHP, and/or NatureServe, and/or those who supplied the data to NNHP, and will not be provided to any other party without our consent; (2) in any use of the data, NNHP will be cited as a source, along with the year and month it supplied the data; and (3) while NNHP strives for accuracy and completeness, the data it supplies depend on the observations and research of many individuals and organizations, new data are constantly received, and in no case will the data be represented as a complete survey of any species or area.

Danny Sommers Danny Sommers Project Manager

Signature Name (please print) Title

E2018-111 (City of Carlin Sewer and Water System Improvements)

DATE: January 26, 2018
Division of Water Resources – Sue Gilbert
Nevada SAI # E2018-111
Project: City of Carlin Sewer and Water System Improvements

_____No comment on this project _____X____Proposal supported as written

AGENCY COMMENTS:
Water for Construction Projects
Ensure that any water used on this project is provided by an established utility or under permit or waiver issued by the State Engineer's Office with a manner of use acceptable for suggested projects water needs.

FARR WEST
ENGINEERING

January 23, 2018

Kelvin Hickenbottom, Deputy State Engineer
Nevada Division of Water Resources
Nevada Department of Conservation and Natural Resources
901 S. Stewart St., Suite 2002
Carson City, NV 89701

RE: City of Carlin Water and Sewer Improvements Project

Dear Mr. Hickenbottom,

The City of Carlin is in the process of performing an environmental review pursuant to the National Environmental Policy Act for USDA Rural Development in order that it may assess the environmental impacts of water and sewer system improvements in Carlin, Nevada. The project includes the items listed below. Enclosed is a map that depicts the proposed project's area of potential effect for all construction activities.

The project includes the installation of the following water and sewer pipes:

WATER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
¾	730	6	29,734
1	2,029	8	40,063
1 ¼	405	10	1,332
1 ½	104	12	26,255
2	3,775	14	663
3	1,113	16	1,055
4	3,022	Unknown	15,063

SEWER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
3	1,754	8	57,987
4	1,515	10	8,631
6	7,177	Unknown	7,727

We are requesting information on the possible effects of the proposed project relating to water rights, water quality, water availability, and any other potential effects of the proposed project. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,

Dan Sommers
Farr West Engineering

Enc.
cc: City of Carlin, USDA

Danny Sommers

From: Lindsey Lesmeister <llesmeister@ndow.org>
Sent: Thursday, February 15, 2018 3:11 PM
To: Danny Sommers
Cc: Caleb McAdoo
Subject: RE: Carlin Sewer and water project

Danny,

Thank you for providing NDOW the opportunity to evaluate the potential wildlife impacts from the Carlin Sewer and water project. At this time NDOW has no wildlife concern from the project, if the scope of work changes NDOW would ask for an additional opportunity to assess the potential wildlife impacts. If you have any further questions please feel free to contact me.

Thanks,

Lindsey Lesmeister, Habitat Biologist
Nevada Department of Wildlife
60 Youth Center Road
Elko, Nevada 89801
(775) 777-2368
llesmeister@ndow.org

Support Nevada's Wildlife…Buy a Hunting and Fishing License

From: Danny Sommers [mailto:danny@farrwestengineering.com]
Sent: Wednesday, February 14, 2018 1:23 PM
To: Caleb McAdoo
Cc: Lindsey Lesmeister
Subject: Carlin Sewer and water project

Hi Caleb,

I was directed by Bonnie Weller to contact you concerning this project (Please see attached maps). The project description is as follows:

The City of Carlin is in the process of performing an environmental review pursuant to the National Environmental Policy Act for USDA Rural Development in order that it may assess the environmental impacts of water and sewer system improvements in Carlin, Nevada. The project includes the items listed below. Enclosed is a map that depicts the proposed project's area of potential effect for all construction activities.

The project includes the installation of the following water and sewer pipes:

WATER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
¾	730	6	29,734
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1 ¼	405	10	1,332
1 ½	104	12	26,255
2	3,775	14	663
3	1,113	16	1,055
4	3,022	Unknown	15,063
Total:	**11,178**	**Total:**	**114,165**

SEWER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
3	1,754	8	57,987
4	1,515	10	8,631
6	7,177	Unknown	7,727

We are requesting information on the possible effects of the above proposed project in which the NDOW determines if the project will have a negative environmental impact and/or any other potential effects regarding wildlife and/or habitat. We would appreciate any of your recommendations to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

Please let me know if you have questions.

Thanks,

Danny

Danny Sommers
Direct: (775) 853-7265
Cell: (775) 530-3359

From: Caleb McAdoo [mailto:cmcadoo@ndow.org]
Sent: Tuesday, February 13, 2018 4:48 PM
To: Danny Sommers <danny@farrwestengineering.com>
Cc: Lindsey Lesmeister <llesmeister@ndow.org>
Subject: NDOW Contact info

Caleb McAdoo, Eastern Region Habitat Supervisor
Nevada Department of Wildlife
60 Youth Center Road
Elko, Nevada 89801
(775) 777-2306
(775) 388-1914Cell
cmcadoo@ndow.org

Support Nevada's Wildlife…Buy a Hunting and Fishing License

STATE OF NEVADA

DEPARTMENT OF WILDLIFE

6980 Sierra Center Parkway, Suite 120
Reno, Nevada 89511
(775) 688-1500 • Fax (775) 688-1495

BRIAN SANDOVAL
Governor

TONY WASLEY
Director

ELIZABETH O'BRIEN
Deputy Director

JACK ROBB
Deputy Director

Danny Sommers
Project Manager
Farr West Engineering
5510 Longley In
Reno, Nevada 89511

January 25, 2018

Re: Carlin Utility Pipeline Project

Dear Danny Sommers:

I am responding to your request for information from the Nevada Department of Wildlife (NDOW) on the known or potential occurrence of wildlife resources in the vicinity of the Carlin Utility Pipeline Project located in Elko County, Nevada. In order to fulfill your request an analysis was performed using the best available data from the NDOW's wildlife occurrences, raptor nest sites and ranges, greater sage-grouse leks and habitat, and big game distributions databases. No warranty is made by the NDOW as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data. These data should be considered **sensitive** and may contain information regarding the location of sensitive wildlife species or resources. All appropriate measures should be taken to ensure that the use of this data is strictly limited to serve the needs of the project described on your GIS Data Request Form. Abuse of this information has the potential to adversely affect the existing ecological status of Nevada's wildlife resources and could be cause for the denial of future data requests.

To adequately provide wildlife resource information in the vicinity of the proposed project the NDOW delineated an area of interest that included a four-mile buffer around the project area provided by you on Tuesday, January 23, 2018. Wildlife resource data was queried from the NDOW databases based on this area of interest. The results of this analysis are summarized below.

Big Game - Occupied elk, mule deer, and pronghorn antelope distributions exist within portions of the project area and four-mile buffer area. No known occupied bighorn sheep distribution exists in the vicinity of the project area. Please refer to the attached maps for details regarding big game distributions relative to the proposed project area.

Greater Sage-Grouse - Greater sage-grouse habitat in the vicinity of the project area has primarily been classified as Other habitat by the Nevada Sagebrush Ecosystem Program (http://sagebrusheco.nv.gov). Priority and General habitat also exists in the vicinity of the project area. Please refer to the attached map for details regarding greater sage-grouse habitat relative to the proposed project area. There are no known radio-marked greater sage-grouse tracking locations in the vicinity of the project area. There are no known greater sage-grouse lek sites in the vicinity of the project area.

Lahontan Cutthroat Trout - are known to exist in the vicinity of the project area in the Lower Maggie Creek watershed.

Raptors - Various species of raptors, which use diverse habitat types, may reside in the vicinity of the project area. American kestrel, bald eagle, barn owl, burrowing owl, Cooper's hawk, ferruginous hawk, golden eagle, great horned owl, long-eared owl, merlin, northern goshawk, northern harrier, northern saw-whet owl, osprey, peregrine falcon, red-tailed hawk, rough-legged hawk, sharp-shinned hawk, short-eared owl, Swainson's hawk, turkey vulture, and western screech owl have distribution ranges that include the project area and four-mile buffer area. Furthermore, bald eagle, barn owl, golden eagle, merlin, prairie

falcon, and rough-legged hawk have been directly observed in the vicinity of the project area.

Raptor species are protected by State and Federal laws. In addition, bald eagle, burrowing owl, California spotted owl, ferruginous hawk, flammulated owl, golden eagle, northern goshawk, peregrine falcon, prairie falcon, and short-eared owl are NDOW species of special concern and are target species for conservation as outlined by the Nevada Wildlife Action Plan. Per the *Interim Golden Eagle Technical Guidance: Inventory and Monitoring Protocols; and Other Recommendations in Support of Golden Eagle Management and Permit Issuance* (United States Fish and Wildlife Service 2010) we have queried our raptor nest database to include raptor nest sites within ten miles of the proposed project area. There are 77 known raptor nest sites within ten miles of the project area. Please refer to the appendix for details regarding these raptor nest sites.

Other Wildlife Resources

There are no water developments in the vicinity of the project area. The following species have also been observed in the vicinity of the project area:

Common Name	ESA	State	SWAP SoCP
ambersnail (unknown)			
American beaver		Furbearer	
black-billed magpie		Protected	
California floater			Yes
California quail			
California toad			Yes
chukar			
common raven		Protected	
Cortez Hills (Carlin) pebblesnail			
cottontail (unknown)			
fingernail clam (unknown)			
gray partridge			
northern river otter		Furbearer	Yes
physa (unknown)			
pondsnail (unknown)			
pygmy rabbit			Yes
raccoon			
ruffed grouse			
slug (unknown)			
springsnail (unknown)			
striped whipsnake			

ESA: Endangered Species Act Status
State: State of Nevada Special Status
SWAP SoCP: Nevada State Wildlife Action Plan (2012) Species of Conservation Priority

The proposed project area may also be in the vicinity of abandoned mine workings, which often provide habitat for state and federally protected wildlife, especially bat species, many of which are protected under NAC 503.030. To request data regarding known abandoned mine workings in the vicinity of the project area please contact the Nevada Division of Minerals (http://minerals.state.nv.us/).

The above information is based on data stored at our Reno Headquarters Office, and does not necessarily incorporate the most up to date wildlife resource information collected in the field. Please

contact the Habitat Division Supervising Biologist at our Eastern Region Elko Office (775.777.2300) to discuss the current environmental conditions for your project area and the interpretation of our analysis. Furthermore, it should be noted that the information detailed above is preliminary in nature and not necessarily an identification of every wildlife resource concern associated with the proposed project. Consultation with the Supervising Habitat biologist will facilitate the development of appropriate survey protocols and avoidance or mitigation measures that may be required to address potential impacts to wildlife resources.

Caleb McAdoo - Eastern Region Habitat Supervisor (775.777.2306)

Federally listed Threatened and Endangered species are also under the jurisdiction of the United States Fish and Wildlife Service. Please contact them for more information regarding these species.

If you have any questions regarding the results or methodology of this analysis please do not hesitate to contact our GIS office at (775) 688-1439.

Sincerely,

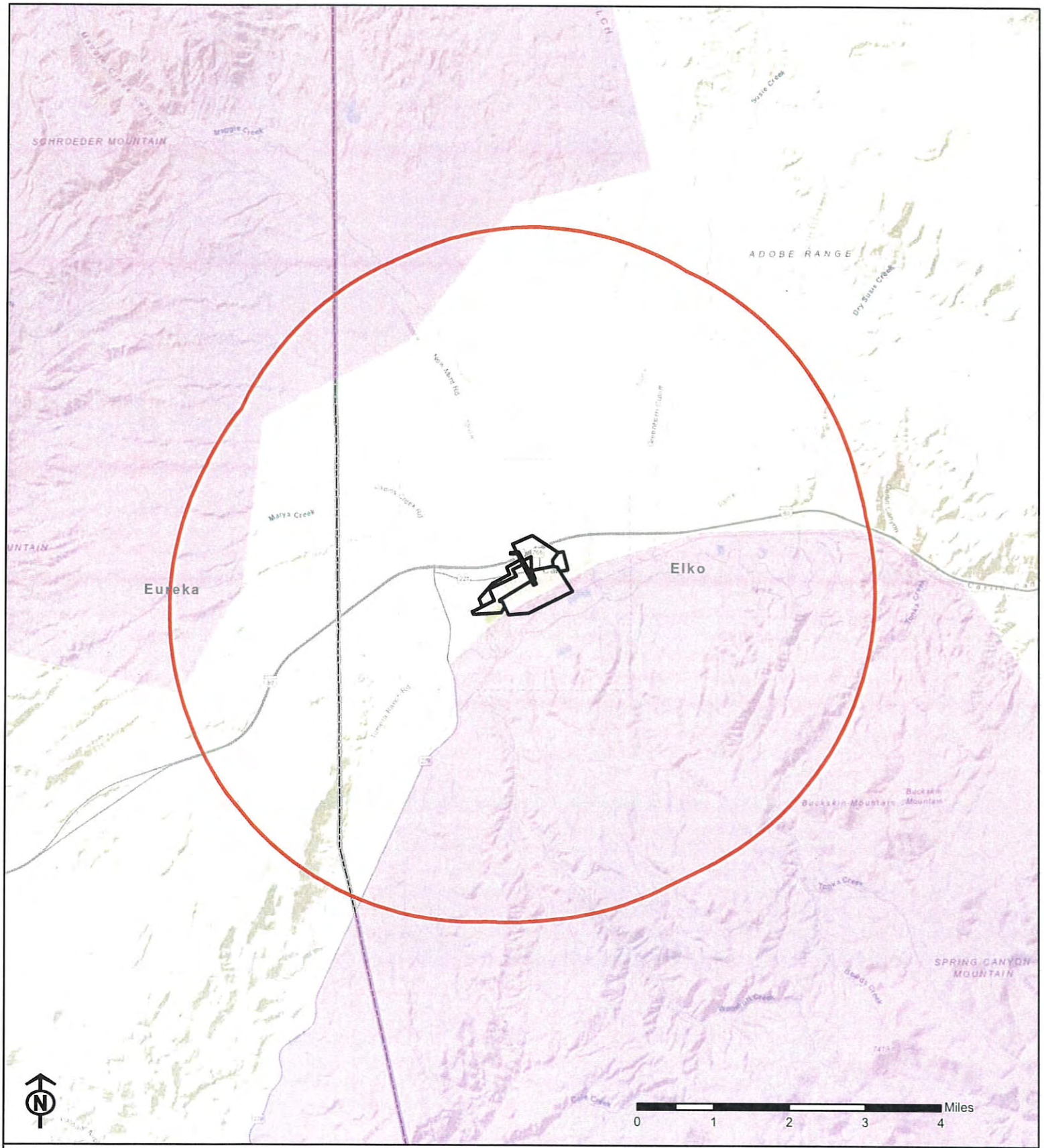
Bonnie Weller

Bonnie Weller, GIS Analyst
Data and Technology Services
Nevada Department of Wildlife
6980 Sierra Center Parkway, Ste. 120
Reno, Nevada 89511
(775) 688-1439
bweller@ndow.org

Appendix: Raptor Nest Sites Table

Probable Use	Last Check	Last Active	Township/Range/Section
Buteo	4/14/1982		21 0310N 0510E 002
Buteo	1/1/1994	1/1/1994	21 0330N 0520E 026
Buteo	5/23/2001		21 0310N 0510E 003
Buteo	5/3/2004	5/3/2004	21 0320N 0510E 035
Buteo	5/8/2014	5/8/2014	
Buteo	5/8/2014	5/8/2014	
Buteo	5/8/2014		
Buteo/Corvid	5/29/2007	5/29/2007	21 0320N 0510E 036
Buteo/Corvid	5/7/2014	5/7/2014	
Buteo/Corvid	5/7/2014		
Buteo/Corvid	5/7/2014		
Buteo/Corvid	5/7/2014		
Buteo/Corvid	5/7/2014		
Buteo/Corvid	5/7/2014		
Buteo/Corvid	5/8/2014		
Corvid	5/7/2014	5/7/2014	
Corvid	5/7/2014		
Corvid	5/8/2014	5/8/2014	
Corvid	5/8/2014	5/8/2014	
Corvid	5/8/2014		
Eagle	3/7/1972	3/7/1972	21 0330N 0530E 014
Eagle	4/29/1972		21 0330N 0540E 032
Eagle	5/26/1972		21 0320N 0530E 007
Eagle	5/26/1972		21 0320N 0530E 007
Eagle	5/4/1973	5/4/1973	21 0340N 0510E 022
Eagle	5/15/1974		21 0330N 0530E 002
Eagle	6/1/1974		21 0340N 0510E 025
Eagle	6/14/1975	6/14/1975	21 0310N 0520E 004
Eagle	5/23/2001		21 0320N 0520E 008
Eagle	5/29/2007	5/29/2007	21 0320N 0510E 025
Eagle	5/29/2007		21 0320N 0510E 025
Eagle	6/2/2011	6/2/2011	21 0310N 0510E 003
Eagle	6/2/2011	6/2/2011	21 0310N 0520E 006
Eagle	6/2/2011	6/2/2011	21 0320N 0520E 030
Eagle	5/7/2014	1/1/1974	21 0330N 0530E 028
Eagle	5/7/2014	5/29/2007	21 0330N 0530E 028
Eagle	5/7/2014	5/7/2014	
Eagle	5/7/2014	5/7/2014	
Eagle	5/7/2014	5/7/2014	
Eagle	5/7/2014	5/7/2014	
Eagle	5/7/2014		210330N0530E026
Eagle	5/7/2014		
Eagle	5/7/2014		
Eagle	5/7/2014		
Eagle	5/7/2014		

Eagle	5/7/2014		
Eagle	5/7/2014		
Eagle	5/7/2014		
Eagle	5/8/2014		
Eagle	5/8/2014		
Eagle/Buteo	6/2/2011	5/29/2007	21 0310N 0510E 010
Eagle/Buteo	6/2/2011		21 0320N 0520E 030
Eagle/Buteo	5/7/2014	5/7/2014	
Eagle/Buteo	5/7/2014		21 0320N 0520E 032
Eagle/Buteo	5/7/2014		21 0330N 0530E 026
Eagle/Buteo	5/7/2014		
Eagle/Buteo	5/8/2014	5/8/2014	
Eagle/Buteo	5/8/2014		
Eagle/Buteo	5/8/2014		
Falcon - Confirmed	6/14/1975	6/14/1975	21 0310N 0510E 010
Falcon - Confirmed	5/29/2007	5/29/2007	21 0320N 0510E 025
Falcon - Confirmed	5/29/2007	5/29/2007	21 0320N 0510E 036
Falcon - Confirmed	5/23/2010	5/23/2010	21 0320N 0530E 035
Falcon - Probable	1/1/1974	1/1/1974	21 0320N 0510E 036
Falcon - Probable	6/10/1975		21 0330N 0540E 019
Falcon - Probable	6/14/1975	6/14/1975	21 0320N 0510E 036
Falcon - Probable	6/22/1976		21 0330N 0540E 019
Falcon - Probable	3/10/1977		21 0320N 0510E 035
Falcon - Probable	3/10/1977		21 0320N 0510E 036
Falcon - Probable	5/23/2001	5/23/2001	21 0310N 0510E 003
Falcon - Probable	5/29/2007	5/29/2007	21 0320N 0510E 036
Falcon - Probable	5/7/2014	5/7/2014	
Falcon - Probable	5/7/2014	5/7/2014	
Falcon - Probable	5/8/2014	5/8/2014	
Ferruginous Hawk	6/1/1993		21 0330N 0510E 034
Ferruginous Hawk	6/1/1993		21 0340N 0510E 024
Unknown	5/8/2014	5/8/2014	



Project Area

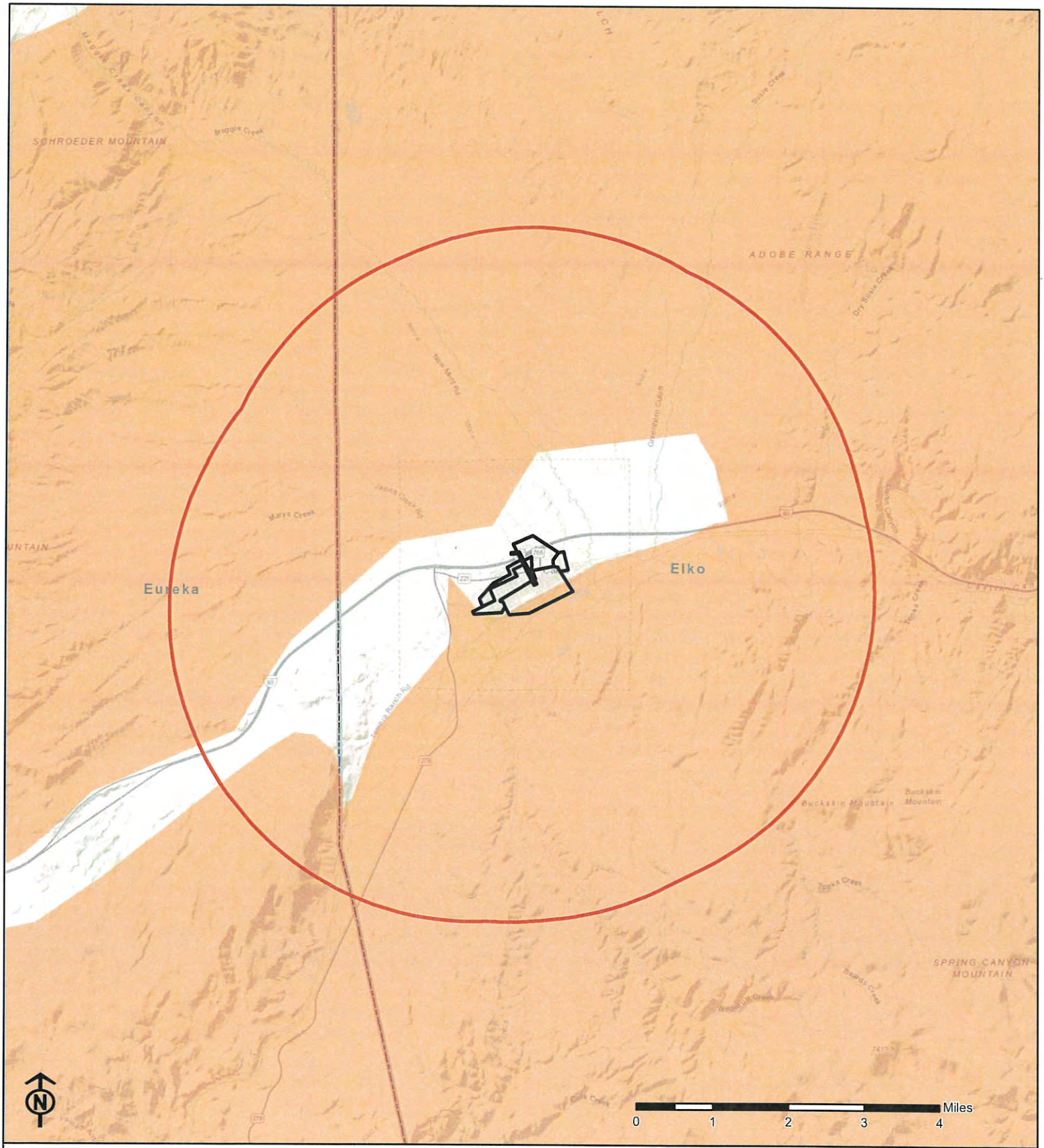
Four Mile Buffer Area Boundary

Elk Distribution

Carlin Utility Pipeline Project
Elk Distribution

January 25, 2018

Projection: UTM Zone 11 North, NAD83



Project Area

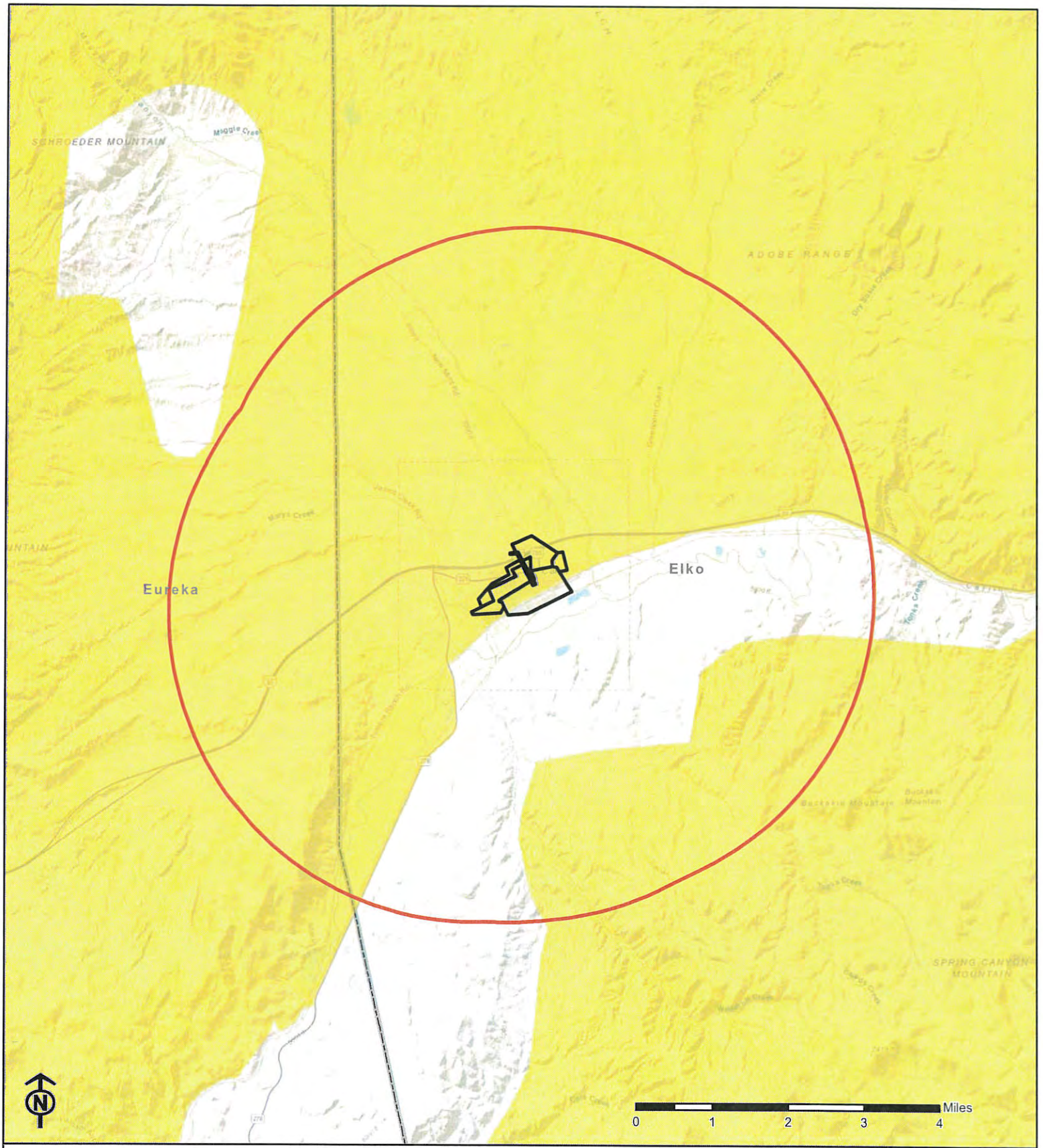
Four Mile Buffer Area Boundary

Mule Deer Distribution

Carlin Utility Pipeline Project
Mule Deer Distribution

January 25, 2018

Projection: UTM Zone 11 North, NAD83



Project Area

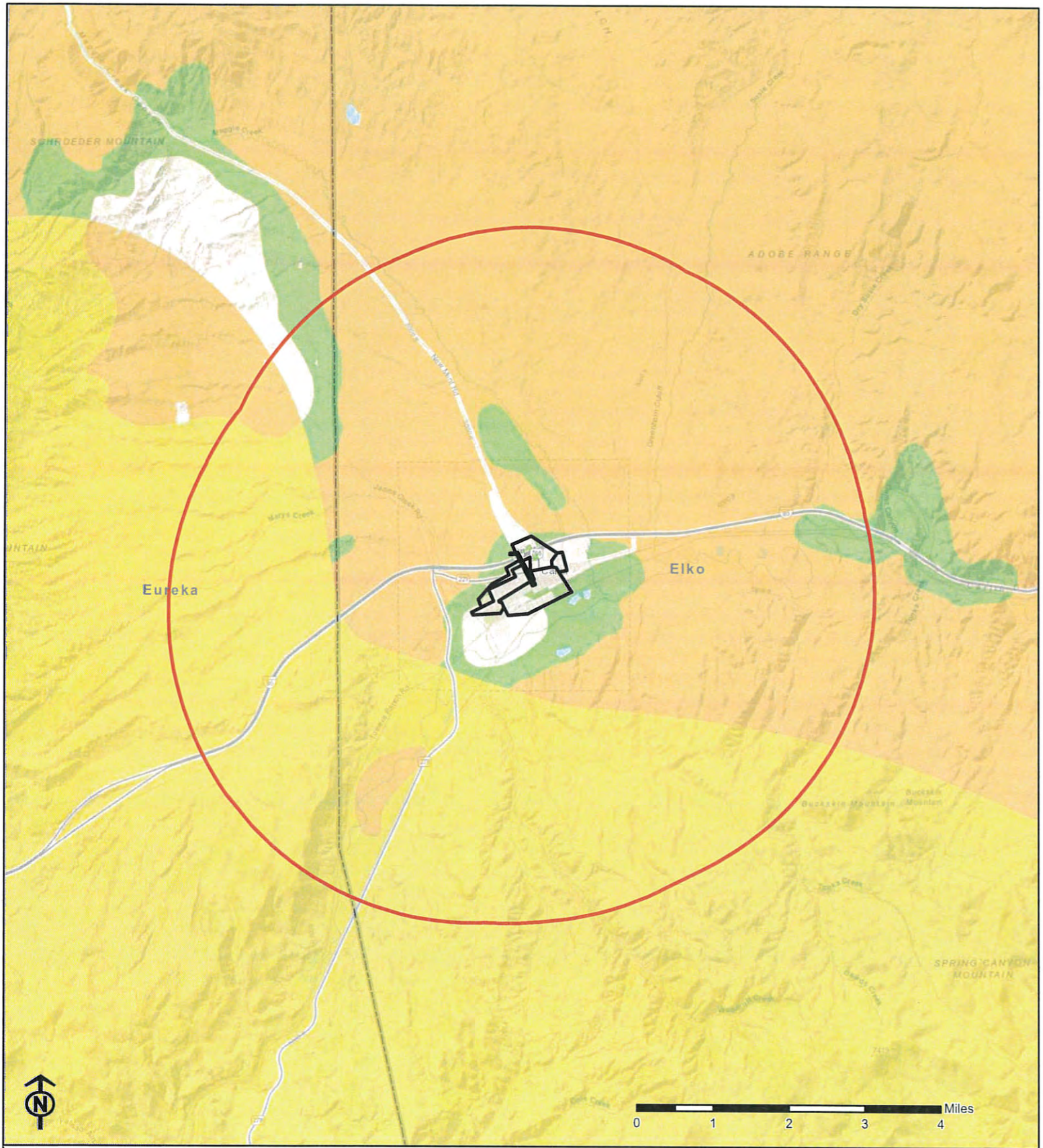
Four Mile Buffer Area Boundary

Pronghorn Antelope Distribution

Carlin Utility Pipeline Project
Pronghorn Antelope Distribution

January 25, 2018

Projection: UTM Zone 11 North, NAD83



Project Area

Four Mile Buffer Area Boundary

Priority Habitat

General Habitat

Other Habitat

Bi-State Habitat

Carlin Utility Pipeline Project
Greater Sage-Grouse Habitat

January 25, 2018

Projection: UTM Zone 11 North, NAD83

BRIAN SANDOVAL
Governor

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
6980 Sierra Center Parkway, Suite 120
Reno, Nevada 89511
(775) 688-1500 • Fax (775) 688-1595

TONY WASLEY
Director
JACK ROBB
Deputy Director
ELIZABETH O'BRIEN
Deputy Director

DATA REQUEST FORM

In order to refine our database queries and provide the most detailed information available, the Nevada Department of Wildlife (NDOW) requires information that details the need for NDOW data and how it would be used. This information will allow the NDOW to better anticipate resource management needs, as well as provide the information necessary for appropriate staff review and approval of this request.

DATA REQUEST CONTACT INFORMATION:

Name:	Danny Sommers		**Title:**	Project manager			
Organization:	Farr West Engineering						
Address:	5510 Longley lane	**City:**	Reno		**State:**	NV	**Zip:** 89511
Phone Number:	775-853-7265	**Email:**	danny@farrwestengineering.com				

REQUEST TYPE (CHECK ONE):

Standard Project Site Analysis ☒
Estimated response time: 2-3 days

Specific Wildlife Data Request ☐
Estimated response time: 2-3 weeks
Signed Data Sharing Agreement may be required

PROJECT DESCRIPTION [ATTACH ADDITIONAL PAGES AS NEEDED]:

Project Name:	Carlin Water/Sewer	**Project Type[1]:**	Water/sewer pipeline
Project Area (acres):	525	**Project Start Date:**	August 2018
Project Duration:	2 years	**Project Status[2]:**	Amend existing project
Permitting Authority:	NV Div. of water resources	**Project Extent[3]:** *Provide GIS files if available*	See attached shape file

Expected Use of Data[4]:

USDA Environmental Assessment

1. E.g. Solar/wind/geothermal (renewable) energy development; Fossil fuel energy development; Mining; Urban development; Energy transmission line; Pipeline; Communication line; Recreation; Restoration; Research or modeling (no surface disturbance); Other.
2. New; Expansion/amendment to existing project; Restoration/reclamation.
3. Attach ESRI shapefile (or similar format such as KML/KMZ files) delineating area of interest or provide location coordinates for areas less than one acre. Minimum required information includes Public Land Survey System (PLSS) location information [Township/Range/Sections] or map documents, but this may delay response.
4. Describe how data will be used. Examples include land use development planning, incorporation into modeling efforts, restoration monitoring, recreational interest, etc.

The completion of this form will ensure that you receive the most accurate response possible. No warranty is made by the NDOW as to the accuracy, reliability, or completeness of the data provided for individual use or aggregate use with other data. Information received may be considered **sensitive** and may contain information regarding the location of sensitive wildlife species. All appropriate measures should be taken to ensure the use of any data received is strictly limited to serve the needs of the project described above. Abuse of NDOW information has the potential to adversely affect the existing ecological status of Nevada's wildlife resources and could be cause for the denial of future data requests.

Please submit form to: Bonnie Weller – GIS Biologist III – bweller@ndow.org – 775.688.1439

Danny Sommers

From: Danny Sommers
Sent: Tuesday, February 20, 2018 2:40 PM
To: 'Skip Canfield'
Subject: RE: State Agency Comments E2018-111 City of Carlin Sewer and Water System Improvements

Thanks Skip!

Danny Sommers
Direct: (775) 853-7265
Cell: (775) 530-3359

From: Skip Canfield [mailto:scanfield@lands.nv.gov]
Sent: Tuesday, February 20, 2018 2:38 PM
To: Danny Sommers <danny@farrwestengineering.com>
Cc: Skip Canfield <scanfield@lands.nv.gov>
Subject: State Agency Comments E2018-111 City of Carlin Sewer and Water System Improvements

Hi Danny:

The Nevada State Clearinghouse received the attached three comment documents regarding the City of Carlin Sewer and Water System Improvements proposal;
http://clearinghouse.nv.gov/public/Notice/2018/E2018-111.pdf

Skip Canfield
Nevada State Clearinghouse
State Land Use Planning Agency

Nevada Division of State Lands
Department of Conservation and Natural Resources
901 South Stewart Street, Suite 5003
Carson City, NV 89701
775-684-2723
http://clearinghouse.nv.gov
www.lands.nv.gov

Danny Sommers

From: Danny Sommers
Sent: Wednesday, January 24, 2018 11:14 AM
To: 'Skip Canfield'
Subject: RE: City of Carlin sewer and water system improvements

Thanks!

Danny Sommers
Direct: (775) 853-7265
Cell: (775) 530-3359

From: Skip Canfield [mailto:scanfield@lands.nv.gov]
Sent: Wednesday, January 24, 2018 11:12 AM
To: Danny Sommers <danny@farrwestengineering.com>
Subject: RE: City of Carlin sewer and water system improvements

OK I'll do that now, I'm in the system, have a good day. -Skip

Skip Canfield
Nevada State Clearinghouse
State Land Use Planning Agency

Nevada Division of State Lands
Department of Conservation and Natural Resources
901 South Stewart Street, Suite 5003
Carson City, NV 89701
775-684-2723
http://clearinghouse.nv.gov
www.lands.nv.gov

From: Danny Sommers [mailto:danny@farrwestengineering.com]
Sent: Wednesday, January 24, 2018 11:06 AM
To: Skip Canfield <scanfield@lands.nv.gov>
Subject: City of Carlin sewer and water system improvements

Hi Skip,

Please see the attached. Thanks for the help.

Danny

FARR WEST
ENGINEERING

Danny Sommers

Senior Project Manager
Farr West Engineering
5510 Longley Lane
Reno, NV 89511

Main: (775) 851-4788
Direct: (775) 853-7265
Cell: (775) 530-3359
Fax: (775) 851-0766
www.farrwestengineering.com

FARR WEST
ENGINEERING

January 23, 2018

Skip Canfield
Nevada Division of State Lands
901 S. Stewart St, Ste 5003
Carson City, NV 89701-5246

RE: City of Carlin Water and Sewer Improvements Project

Dear Mr. Canfield:

The City of Carlin is in the process of performing an environmental review pursuant to the National Environmental Policy Act for USDA Rural Development in order that it may assess the environmental impacts of water and sewer system improvements in Carlin, Nevada. The project includes the items listed below. Enclosed is a map that depicts the proposed project's area of potential effect for all construction activities.

The project includes the installation of the following water and sewer pipes:

WATER

PIPE DIAMETER (in)	PIPE LENGTH (ft)	PIPE DIAMETER (in)	PIPE LENGTH (ft)
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SEWER

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3	1,754	8	57,987
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6	7,177	Unknown	7,727

Please distribute this information to any entity that might have an interest in the project. All responses and/or recommendations will be used to complete the USDA environmental assessment. We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,

Dan Sommers
Farr West Engineering

Enc.
cc: City of Carlin, USDA

7.0 REFERENCES

This section includes the following exhibits:

- Map of the proposed project elements
- FEMA maps
- Wetlands maps
- EPA Sole Source Aquifer Fact Sheet
- Nevada Natural Landmarks
- Nevada Wilderness Areas

Legend

- Sewer Manhole
- Lateral Cleanout
- Main Line Cleanout

Pipe Type, Diameter, Length

- Forced Main, 3" - 1,754'
- Forced Main, 4" - 797'
- Forced Main, 8" - 4,369'
- Gravity Main, 10" - 8,631'
- Gravity Main, 6" - 7,177'
- Gravity Main, 8" - 53,618'
- Gravity Main, Unknown - 5,556'
- Lateral, 4" - 718'
- Lateral, Unknown - 2,171'
- Area Of Potential Effect

Phase

- 1
- 2
- 3
- 4

80

766

221

Union Pacific (Carlin Sidings)

8"ACP

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FARR WEST
ENGINEERING
5510 Longley Lane
Reno, NV 89511
(775) 851-4788
www.farrwestengineering.com

City of Carlin Sewer System

N

1 " = 600 '

Q:\client\Elko\Carlin\Maps\CarlinSewerPhases_11X17.mxd, Editor: michael, Printed: 1/5/2018

Legend

- Water Hydrant
- Hydrant Valve
- Isolation Valve
- Water Well
- Resevoir
- Tank

Pipe Type, Diameter, Length

- Hydrant Lateral, 6" - 244'
- Hydrant Lateral, Unknown - 3,196'
- Pressurized Main, 1 1/4" - 405'
- Pressurized Main, 1" - 1447'
- Pressurized Main, 10" - 1,332'
- Pressurized Main, 12" - 26,255'
- Pressurized Main, 14" - 663'
- Pressurized Main, 16" - 1,055'
- Pressurized Main, 2" - 1,413'
- Pressurized Main, 3" - 1,113'
- Pressurized Main, 4" - 3,022'
- Pressurized Main, 6" - 29,490'
- Pressurized Main, 8" - 40,063'
- Pressurized Main, Unknown - 10,249'
- Service Lateral, 1 1/2" - 104'
- Service Lateral, 1" - 582'
- Service Lateral, 2" - 2,362'
- Service Lateral, 3/4" - 730'
- Service Lateral, Unknown -1,618'

- Area Of Potential Effect

Phase

- 1
- 2
- 3
- 4

Union Pacific (Carlin Sidings)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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City of Carlin Water System

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NOTES TO USERS

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National Geodetic Survey
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Silver Spring, MD 20910-3282

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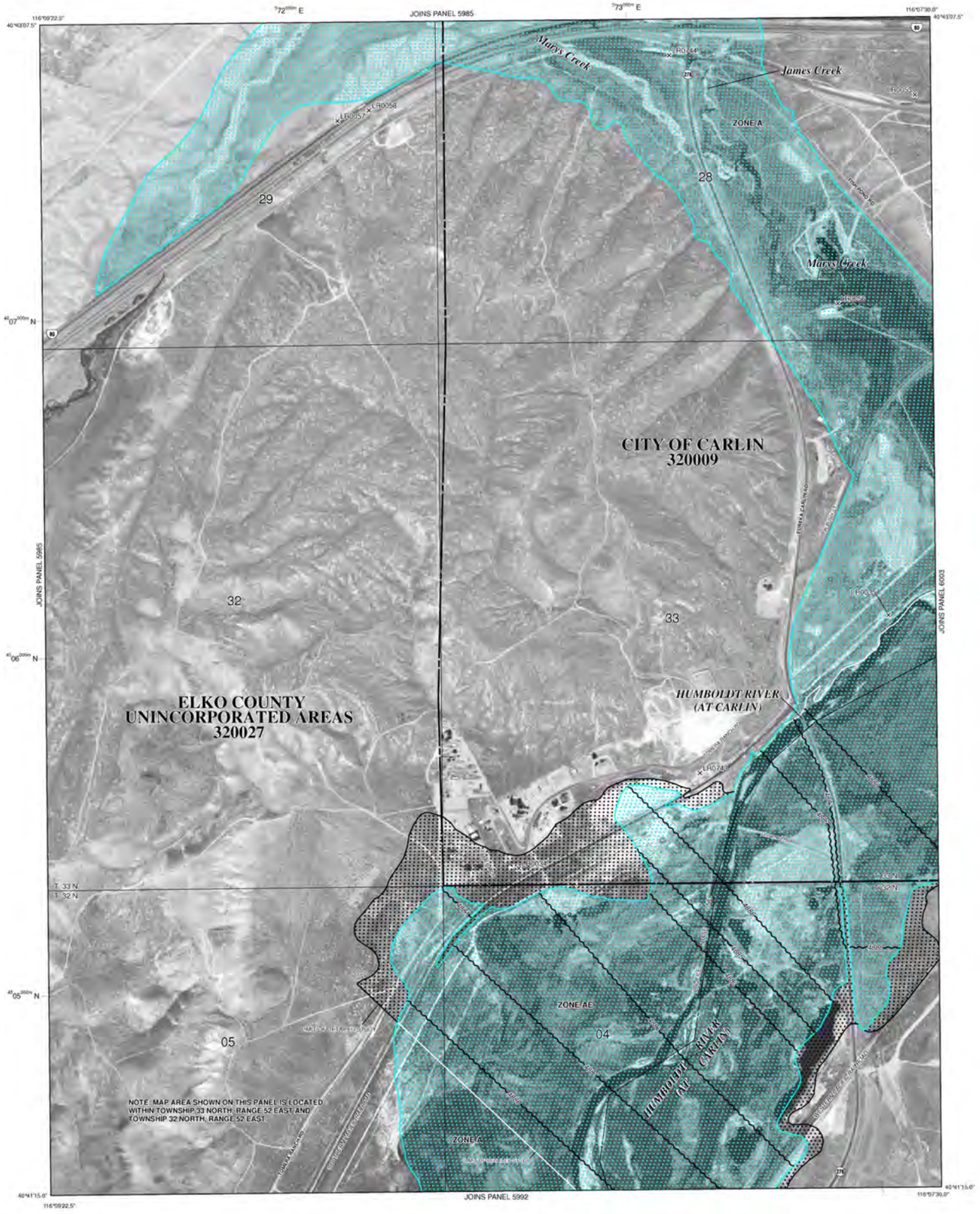

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

A — A	Cross section line
23 — 23	Transect line
97°07'30", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
$^{4}275^{000m}$N	1000-meter Universal Transverse Mercator grid ticks, zone 11
6000000 M	5000-foot grid ticks: Nevada State Plane coordinate system, east zone (FIPSZONE 2701), Transverse Mercator
DX5510	Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5	River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 4, 2013
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

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MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 5984E

FIRM
FLOOD INSURANCE RATE MAP

ELKO COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 5984 OF 8425
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ELKO COUNTY	320027	5984	E
CARLIN, CITY OF	320009	5984	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
32007C5984E
EFFECTIVE DATE
SEPTEMBER 4, 2013

Federal Emergency Management Agency

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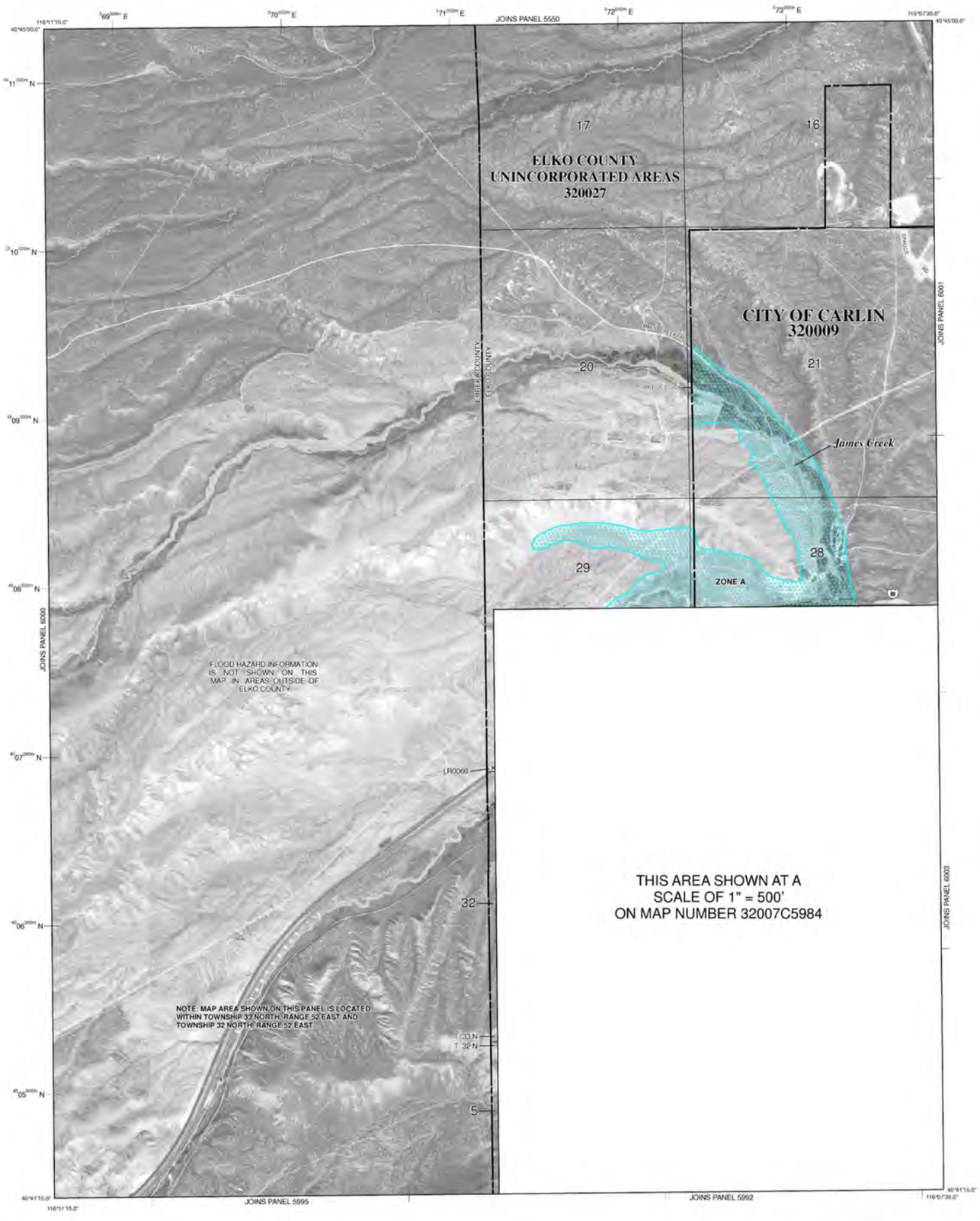

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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FLOODWAY AREAS IN ZONE AE

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OTHER AREAS

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- 1% annual chance floodplain boundary
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- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

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September 4, 2013
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NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 5985E

FIRM
FLOOD INSURANCE RATE MAP
ELKO COUNTY, NEVADA
AND INCORPORATED AREAS

PANEL 5985 OF 8425
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
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Federal Emergency Management Agency

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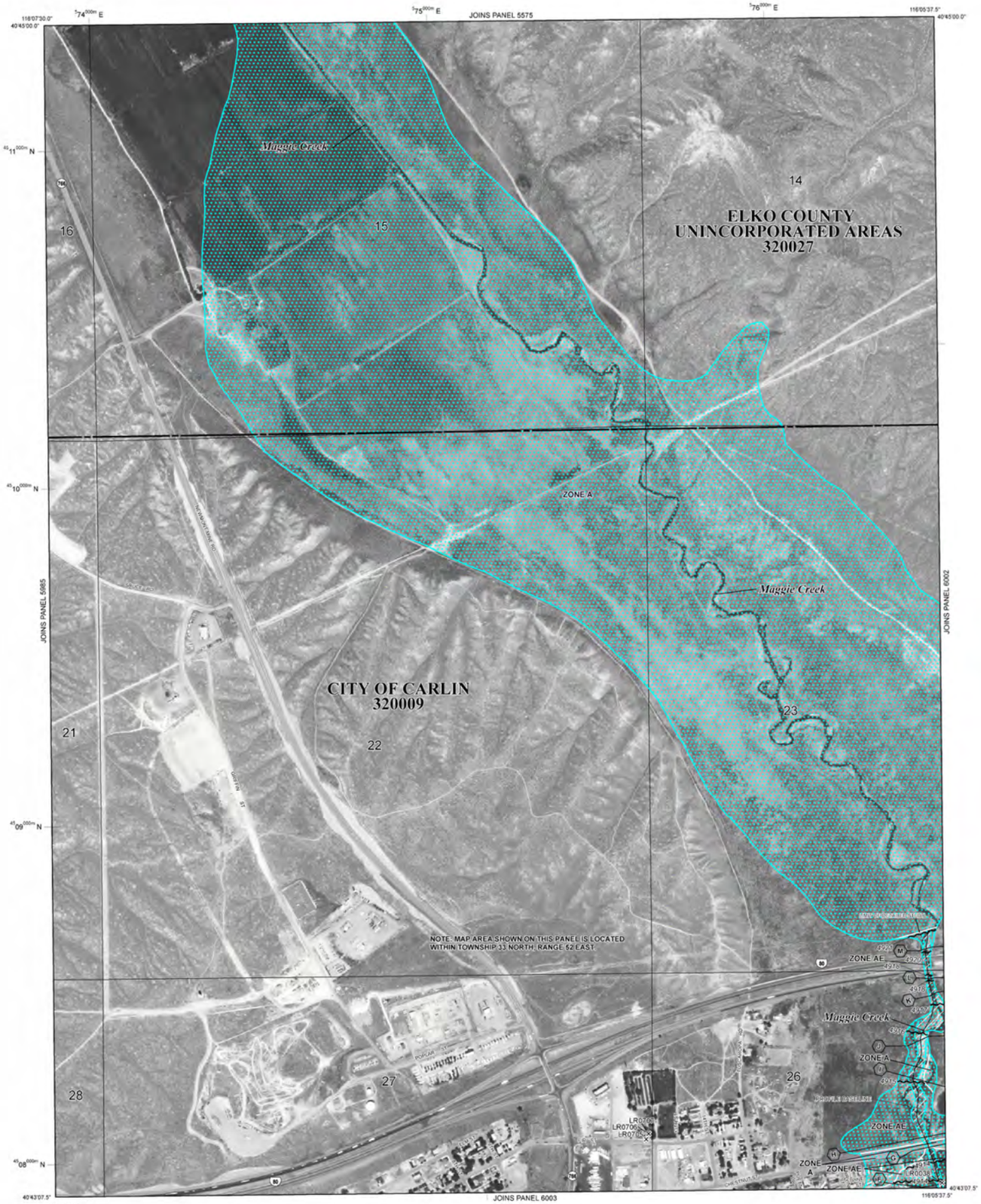

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FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

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M1.5	River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 4, 2013
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 6001E

FIRM
FLOOD INSURANCE RATE MAP

ELKO COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 6001 OF 8425
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ELKO COUNTY	320027	6001	E
CARLIN, CITY OF	320009	6001	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
32007C6001E

EFFECTIVE DATE
SEPTEMBER 4, 2013

Federal Emergency Management Agency

NOTES TO USERS

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC–3, #9202
1315 East–West Highway
Silver Spring, MD 20910–3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713–3242,** or visit its website at http://www.ngs.noaa.gov/.

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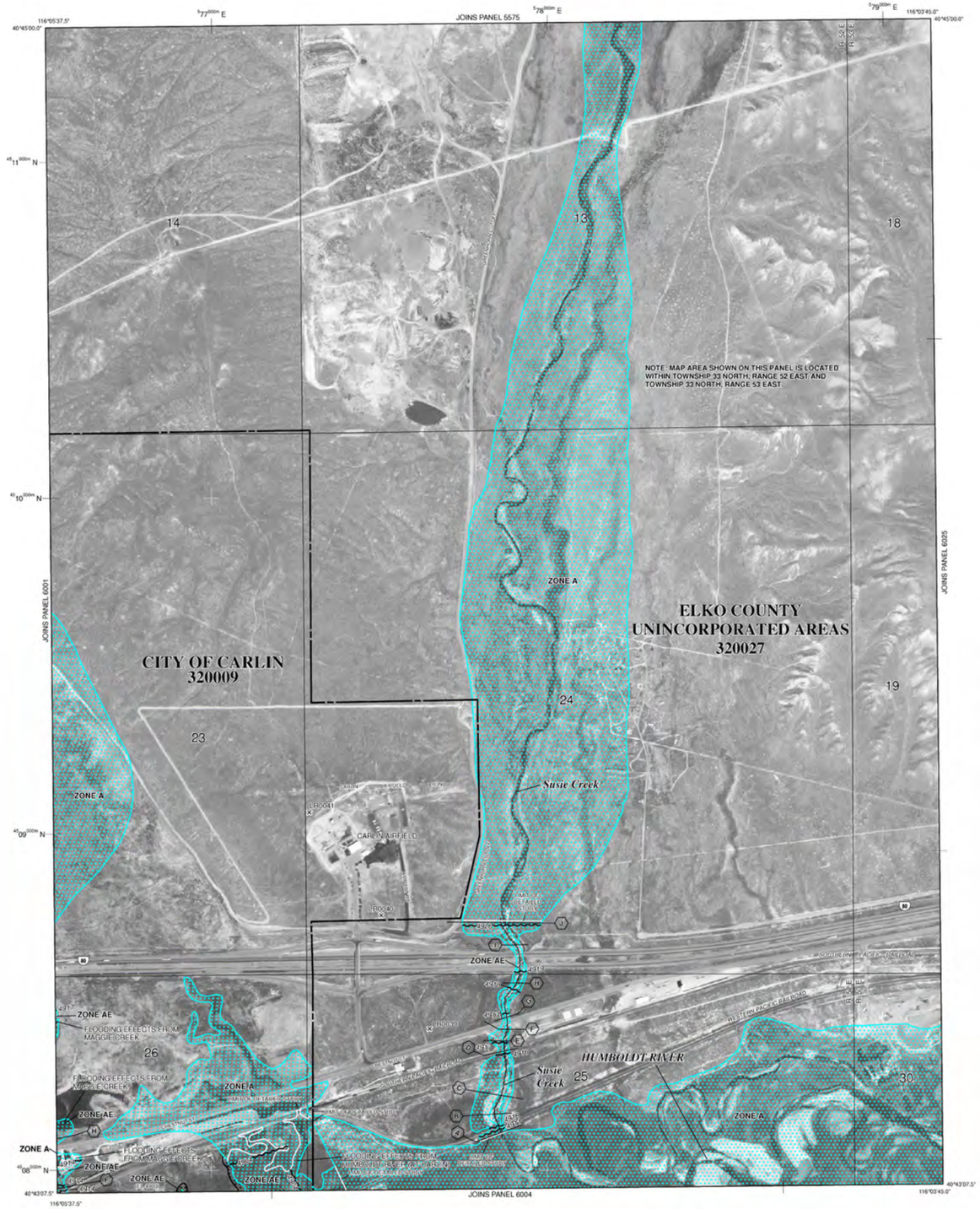

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A — No Base Flood Elevations determined.
- ZONE AE — Base Flood Elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 11
- 6000000 M — 5000-foot grid ticks: Nevada State Plane coordinate system, east zone (FIPSZONE 2701), Transverse Mercator
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 4, 2013
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 500'
250 0 500 1000 FEET
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NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 6002E

FIRM
FLOOD INSURANCE RATE MAP
ELKO COUNTY, NEVADA
AND INCORPORATED AREAS

PANEL 6002 OF 8425
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ELKO COUNTY	320027	6002	E
CARLIN, CITY OF	320009	6002	E

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MAP NUMBER
32007C6002E

EFFECTIVE DATE
SEPTEMBER 4, 2013

Federal Emergency Management Agency

NOTES TO USERS

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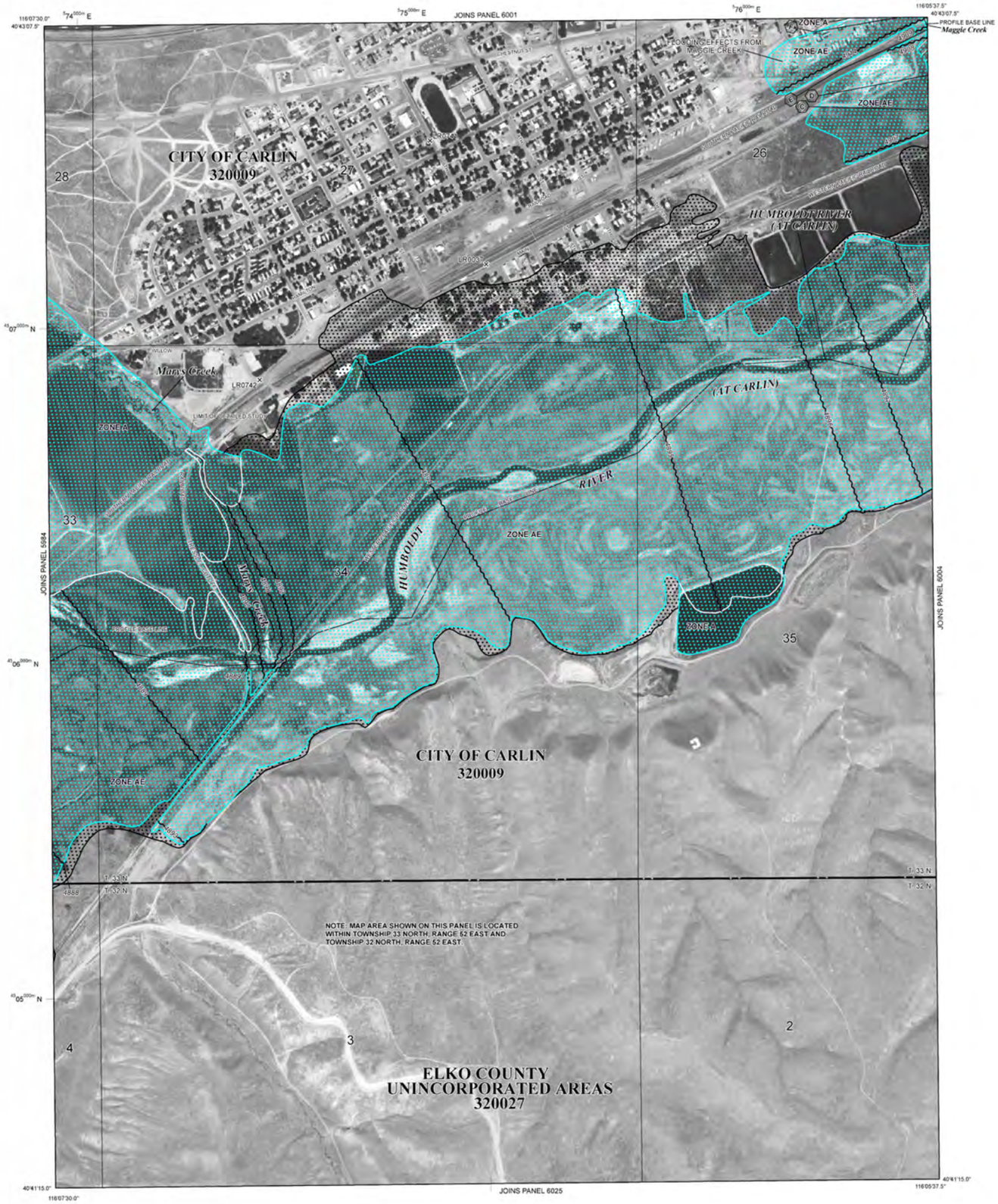

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

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- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
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EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 4, 2013
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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250 0 500 1000 FEET
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NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 6003E

FIRM
FLOOD INSURANCE RATE MAP
ELKO COUNTY, NEVADA
AND INCORPORATED AREAS

PANEL 6003 OF 8425
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ELKO COUNTY	320027	6003	E
CARLIN, CITY OF	320009	6003	E

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MAP NUMBER
32007C6003E
EFFECTIVE DATE
SEPTEMBER 4, 2013

Federal Emergency Management Agency

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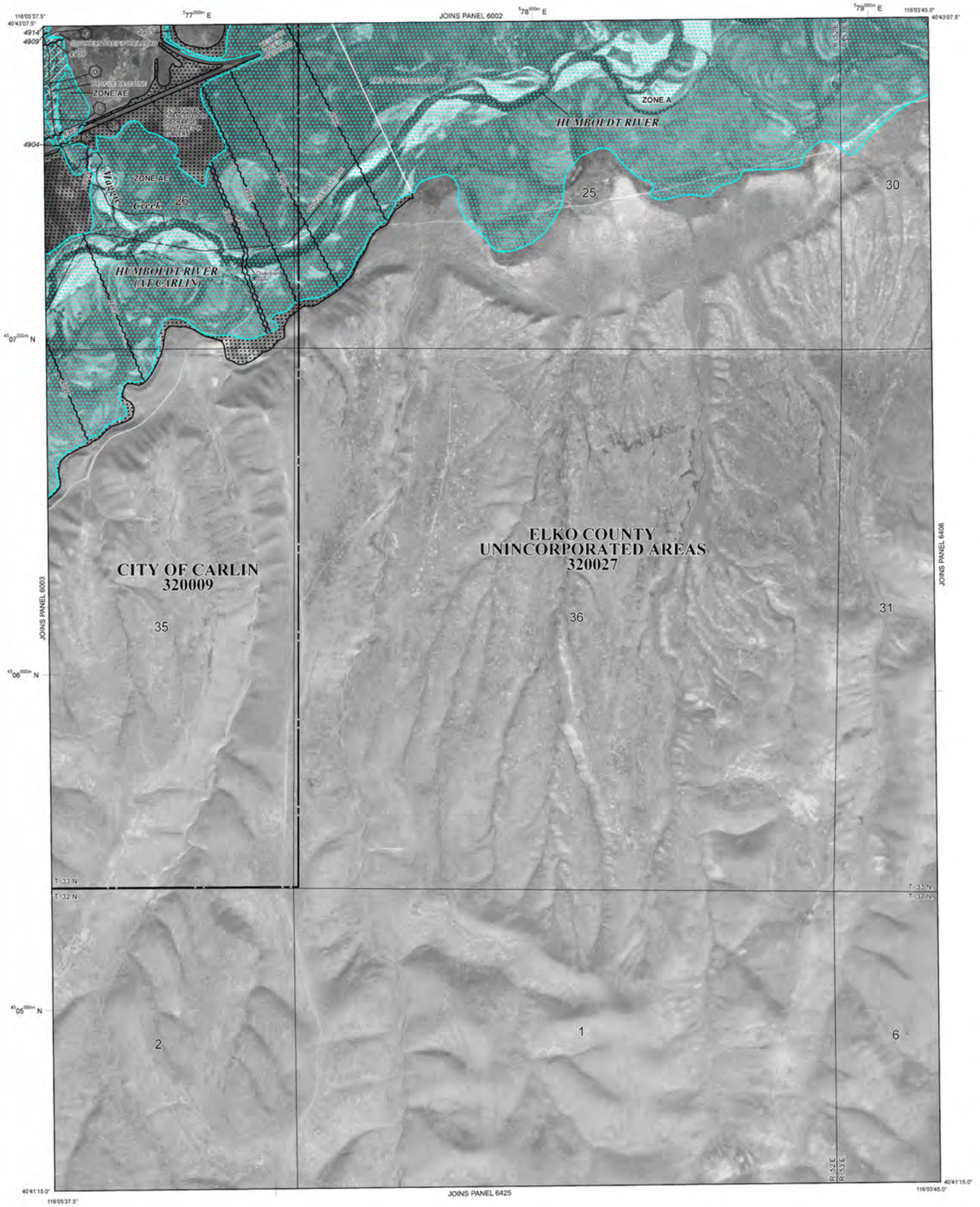

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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ZONE A	No Base Flood Elevations determined.
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FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

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OTHER AREAS

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MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 4, 2013
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 6004E

FIRM
FLOOD INSURANCE RATE MAP

ELKO COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 6004 OF 8425
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
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EFFECTIVE DATE
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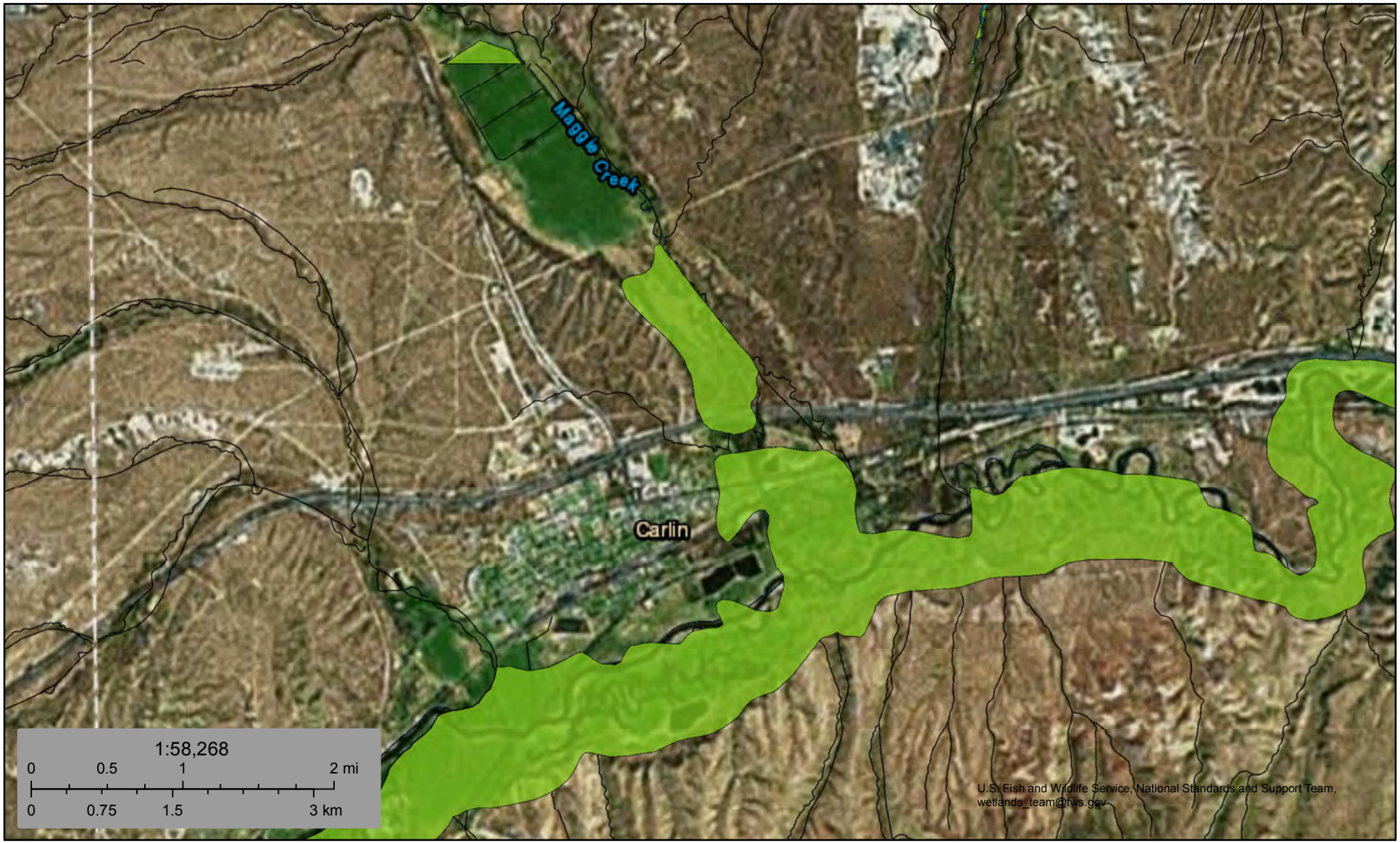
Federal Emergency Management Agency

U.S. Fish and Wildlife Service
National Wetlands Inventory

City of Carlin Sewer and Water Improveme



December 15, 2017

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

United States Environmental Protection Agency

Pacific Southwest, Region 9

Serving: Arizona, California, Hawaii, Nevada, Pacific Islands, Tribal Nations

Ground Water

Ground Water Quick Finder

Ground Water Home
Class V Wells
Cesspools in Hawaii
Onsite Sewage Treatment Permits
Sole Source Aquifer
Source Water Protection
Tribal Water Protection
Underground Injection Wells

Sole Source Aquifer

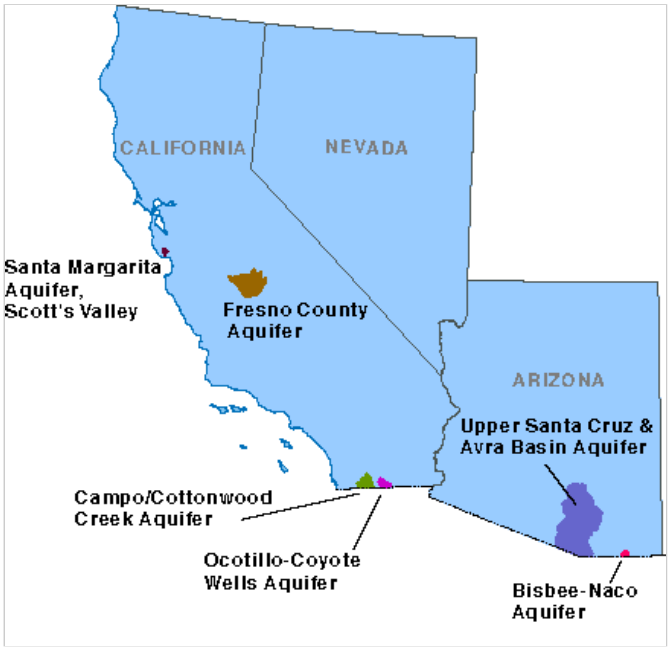
National Links

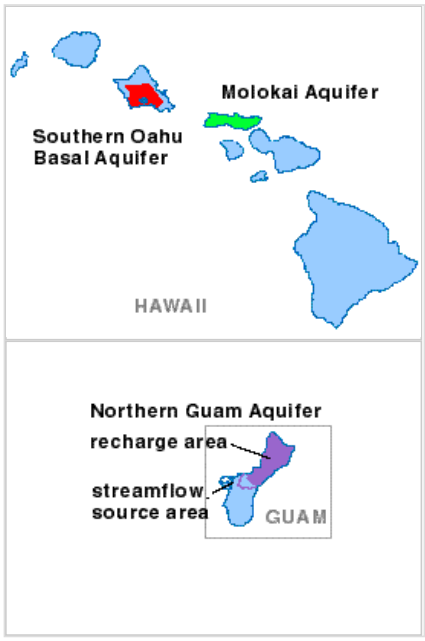
EPA Ground Water & Drinking Water Home

The EPA's Sole Source Aquifer (SSA) Program was established under Section 1424(e) of the Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally-funded projects. It has increased public awareness of the vulnerability of groundwater resources. The SSA program allows for EPA environmental review (PDF) (1pg, 34K) of any project which is financially assisted by federal grants or federal loan guarantees. These projects are evaluated to determine whether they have the potential to contaminate a sole source aquifer.

You will need Adobe Reader to view some of the files on this page. See EPA's PDF page to learn more about PDF, and for a link to the free Adobe Reader.

In Region 9, nine sole source aquifers have been designated:





Maps

Click here for a national layer including all available coverage for Sole Source Aquifers (SSA) that can be used in Geographic Information Systems (GIS)

State	Sole Source Aquifer Name	Federal Reg. Cit	Publ. Date	Map
AZ	Upper Santa Cruz & Avra Basin Aquifer	49 FR 2948	01/24/84	KMZ PDF (1 pg, 1.3M)
AZ	Bisbee-Naco Aquifer	53 FR 38337	09/30/88	KMZ PDF (1 pg, 175K)
CA	Fresno County Aquifer	44 FR 52751	09/10/79	KMZ PDF (1 pg, 1.3M)
CA	Santa Margarita Aquifer, Scotts Valley	50 FR 2023	01/14/85	KMZ PDF (1 pg, 434K)
CA	Campo/Cottonwood Creek	58 FR 31024	05/28/93	KMZ PDF (1 pg, 321K)
CA	Ocotillo-Coyote Wells Aquifer	61 FR 47752	09/10/96	KMZ PDF (1 pg, 337K)
GU	Northern Guam Aquifer System	43 FR 17867	04/26/78	KMZ PDF (1 pg, 400K)
HI	Southern Oahu Basal Aquifer	52 FR 45496	11/30/87	KMZ PDF (1 pg, 716K)

HI	Molokai Aquifer	59 FR 23063	04/20/93	KMZ PDF (1 pg, 146K)

A map of all nationally designated SSAs is also available on the Source Water Protection Publications Database.

For more information, please contact the Ground Water Office at
415-972-3971 or visit the national EPA Sole Source Aquifer Program site.

Outreach Documents

Sole Source Aquifer Fact Sheet (PDF) (1pg, 34K)

For Project Planners: What to submit for EPA review of proposed projects (PDF) (1pg, 34K)

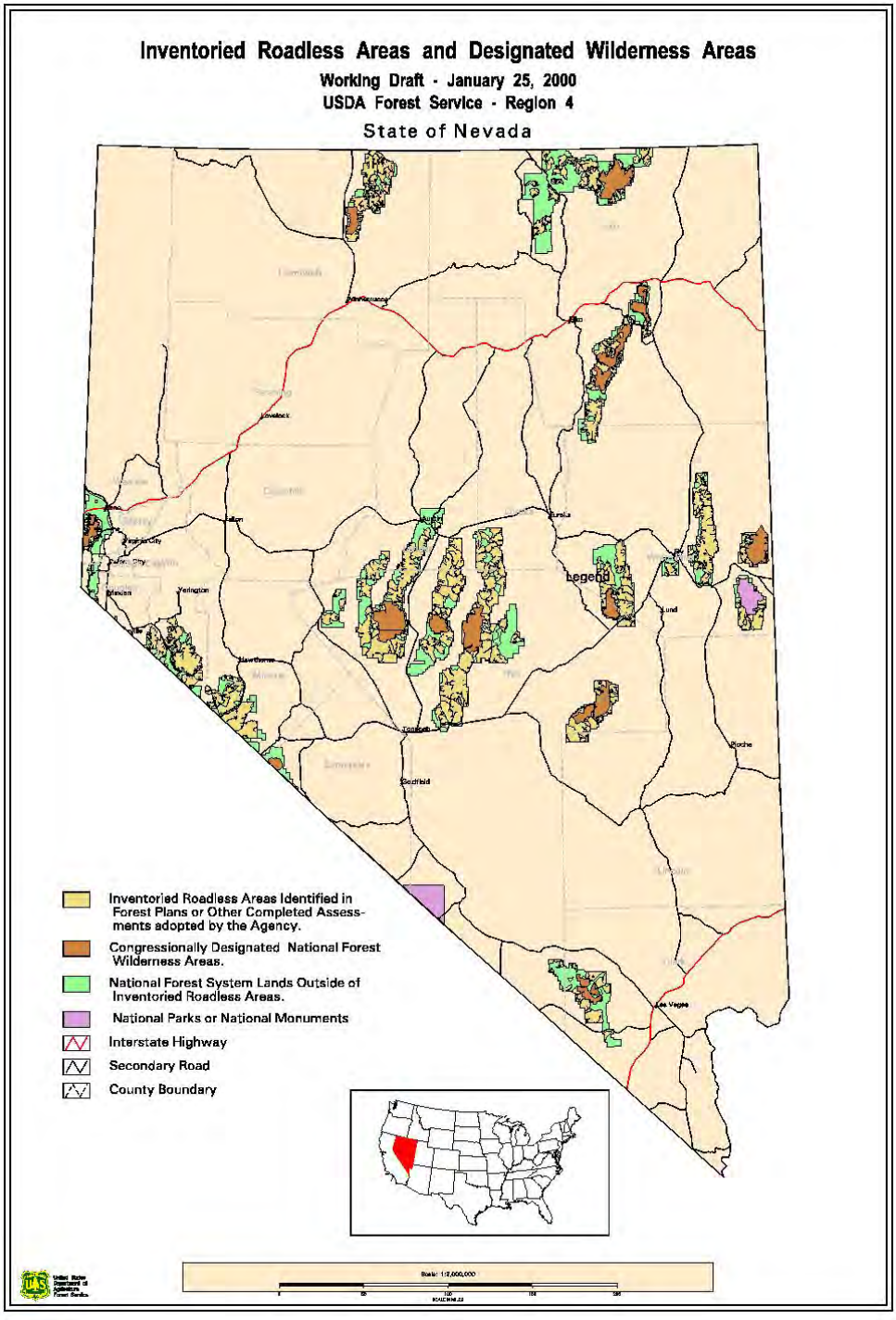
Contact Information

See the Sole Source Aquifer section of the Ground Water contacts page.

Last updated on 10/22/2015

NEVADA NATURAL LANDMARKS

NEVADA WILDERNESS AREAS



8.0 LIST OF PREPARERS

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
http://www.fws.gov/reno/

In Reply Refer To: June 16, 2021
Consultation Code: 08ENVD00-2021-SLI-0419
Event Code: 08ENVD00-2021-E-01251
Project Name: Carlin Water and Sewer Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 *et seq*.), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit http://www.fws.gov/nevada/es/ipac.html.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq*.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or

designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada’s Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (http://heritage.nv.gov). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (http://www.leg.state.nv.us/NAC/NAC-503.html). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to

take, or possess any parts of protected fish and wildlife species. Please visit http://www.ndow.org or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (*e.g.*, changes in blade cut-in speed, assessments of blade "feathering" success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (http://www.aplic.org/) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20grouse%20lek%205%20mile%20public.pdf.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 *et seq*.), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible,

we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (*e.g.*, cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

If wetlands, springs, or streams are are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO

Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO
Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO

Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
	All ownerships but tidal/estuarine	All	SFWO
Napa			
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)

Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO
San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO

Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO
Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)

Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO
Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

***Office Leads:**

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife Office

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

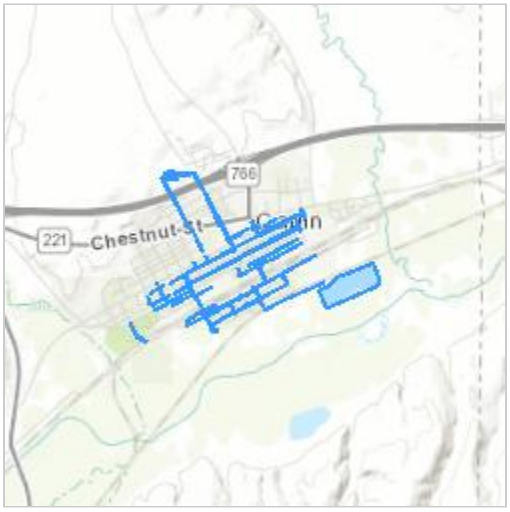
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

Project Summary

Consultation Code: 08ENVD00-2021-SLI-0419
Event Code: 08ENVD00-2021-E-01251
Project Name: Carlin Water and Sewer Improvements
Project Type: WATER SUPPLY / DELIVERY
Project Description: Water and sewer pipeline replacement and waste water pond rehabilitation.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.71309995,-116.09664442948906,14z



Counties: Elko County, Nevada

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Wolf *Canis lupus* Population: Western Distinct Population Segment No critical habitat has been designated for this species.	Proposed Endangered

Fishes

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black Rosy-finch *Leucosticte atrata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9460	Breeds Jun 15 to Aug 31

NAME	BREEDING SEASON
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Golden Eagle *Aquila chrysaetos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee

was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

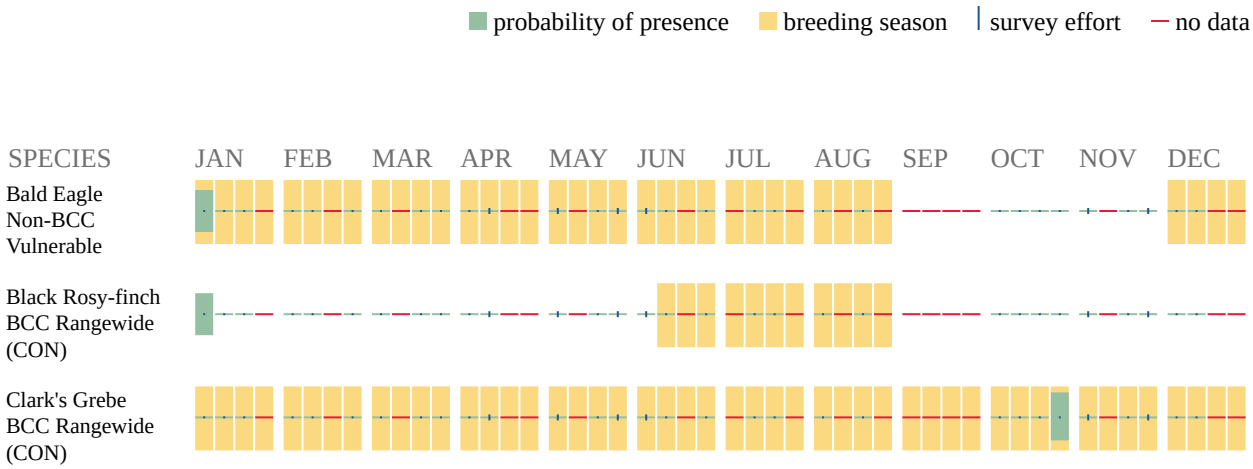
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as

occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can

implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

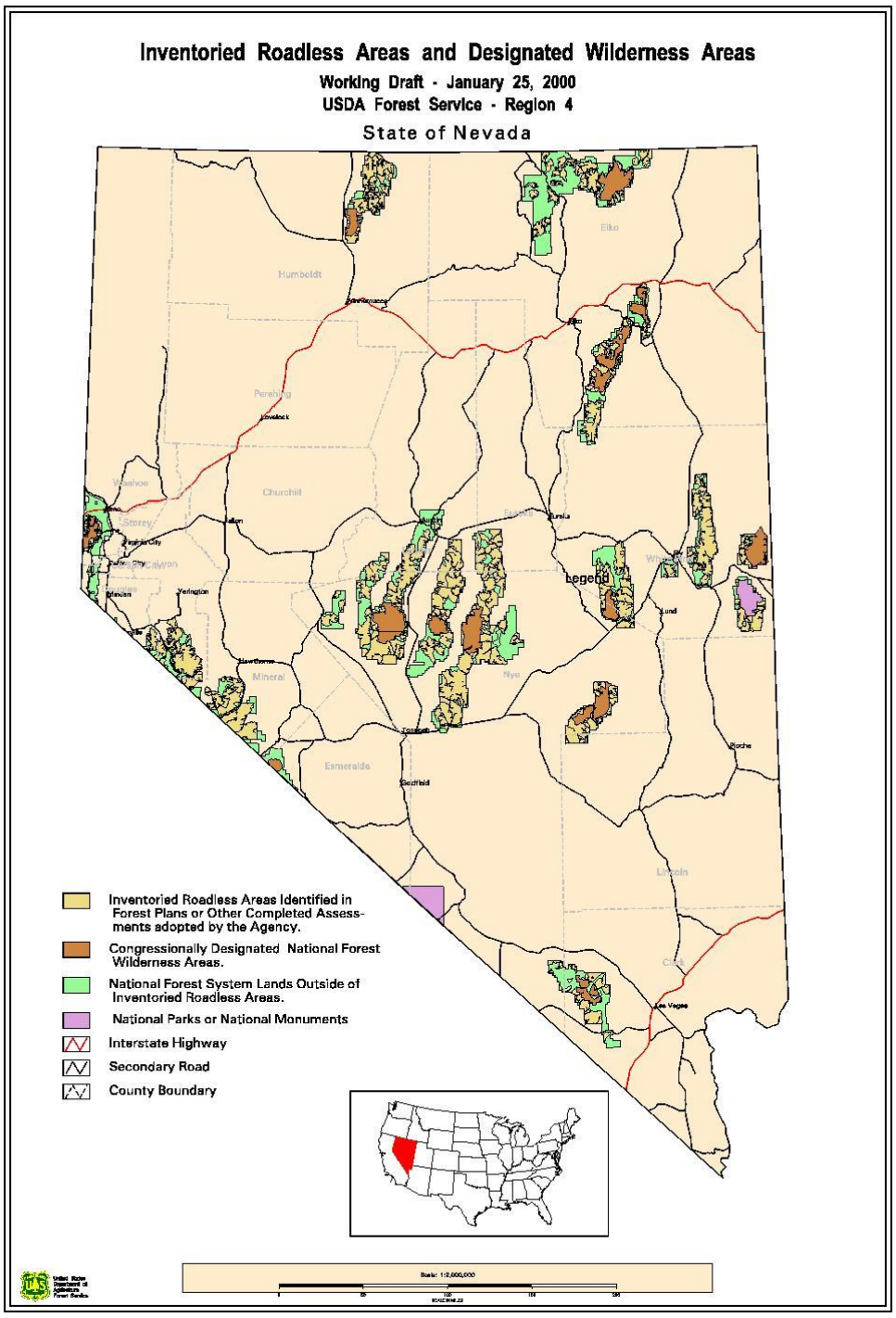
8.0 REFERENCES

This section includes the following exhibits:

- Map of the proposed project elements
- FEMA maps
- Wetlands maps
- EPA Sole Source Aquifer Fact Sheet
- Nevada Natural Landmarks
- Nevada Wilderness Areas

NEVADA NATURAL LANDMARKS

NEVADA WILDERNESS AREAS



9.0 LIST OF PREPARERS

This environmental assessment was prepared by:

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Reno, NV 89511
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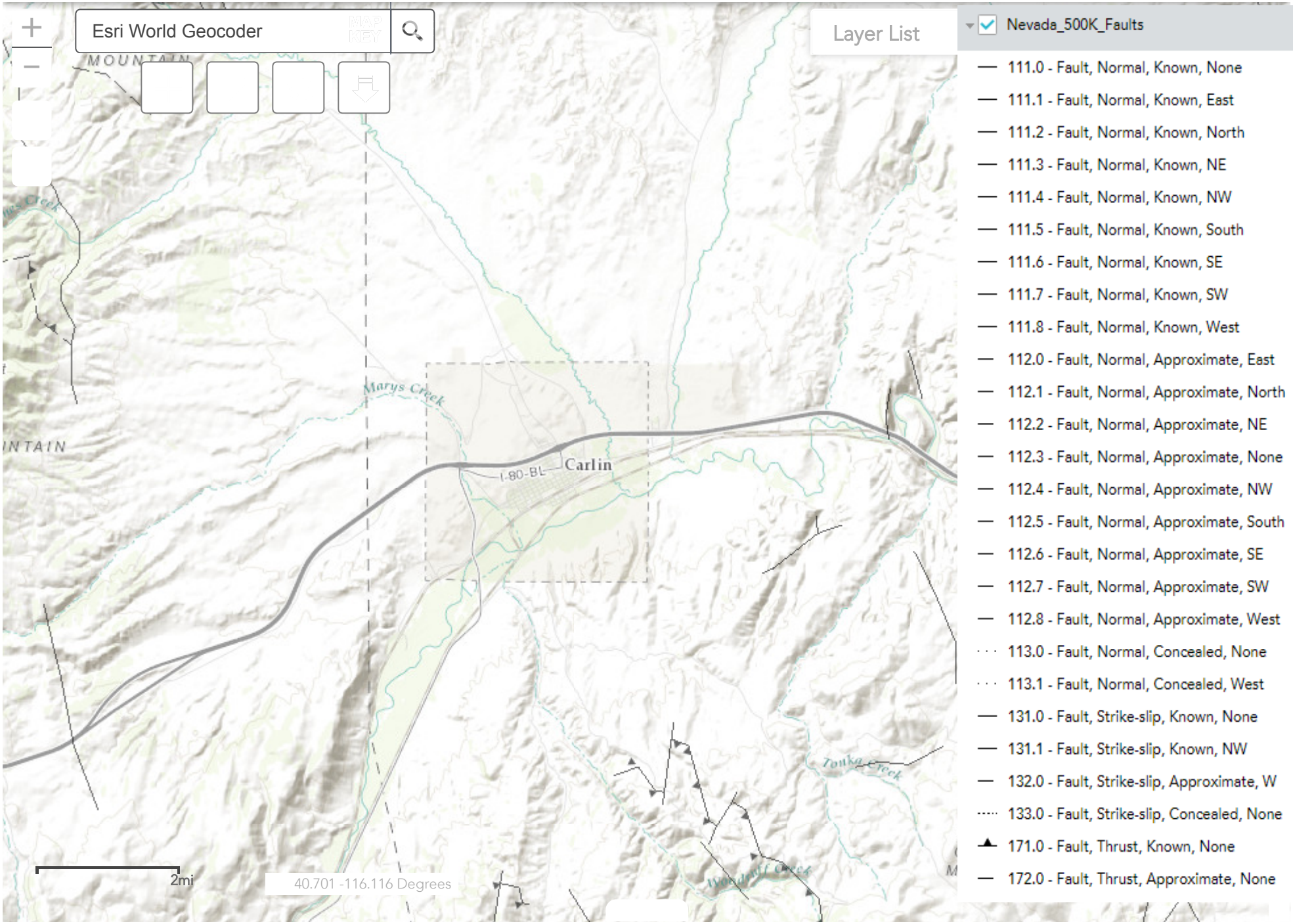
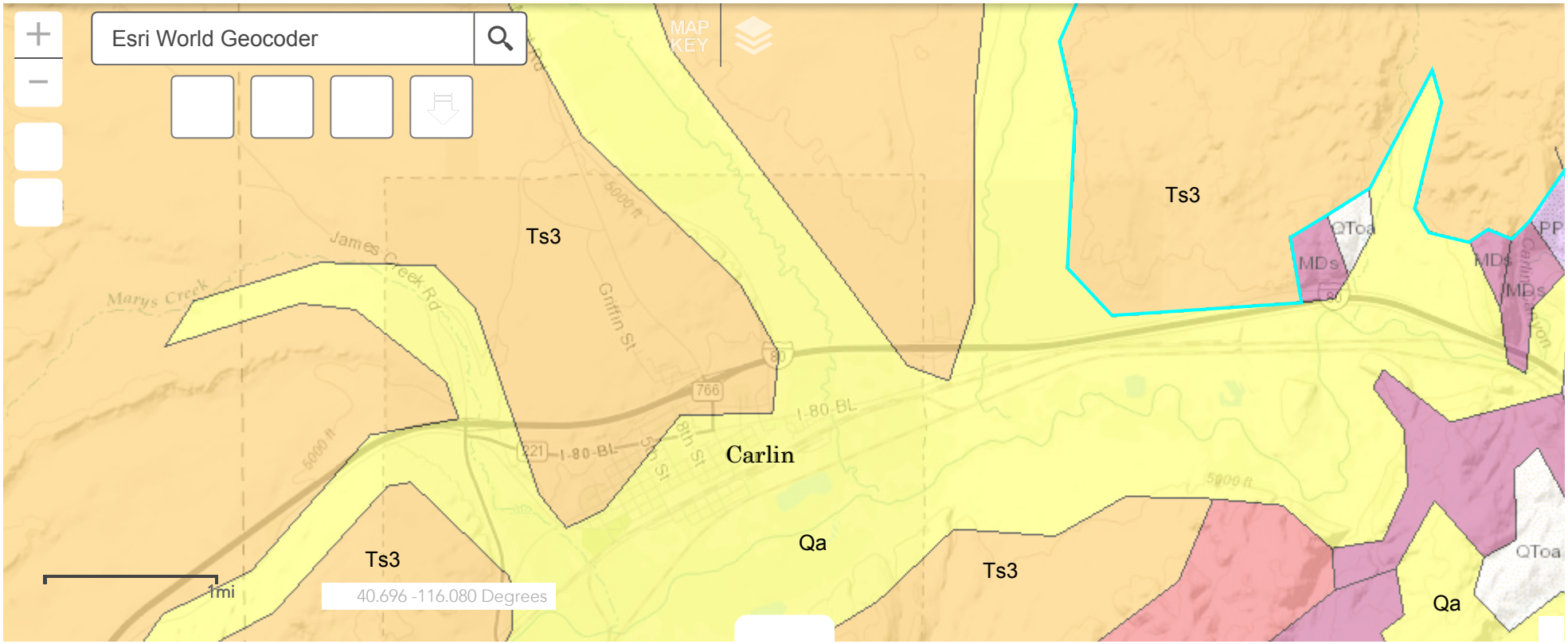
Fax: 775.851.0766

Nevada Geology Stewart and Carlson's Geologic Map of Nevada Nevada Bureau of Mines and Geology



Nevada Geology Stewart and Carlson's Geologic Map of Nevada Nevada Bureau of Mines and Geology



Nevada_500k_Anno | Nevada_500k_Contacts | Nevada_500K_Faults | Nevada_500K_Geologic_Unit

Options | Filter by Map Extent | Zoom to | Clear Selection | Refresh

OBJECTID	Unit Symbol	Name	Description	Unit Type	Lithology	Geologic History	Specification
2729	Ts3	TUFF ACEOUS SEDIMENTARY ROCKS	TUFF ACEOUS SEDIMENTARY ROCKS-Locally includes minor amounts of tuff	Lithostratigraphic Unit	Igneous rock	Late Eocene to Late Miocene	Unknown
2855	Qa	ALL UVIAL DEPOSITS	Locally includes beach and sand dune deposits.	Lithostratigraphic Unit	Unconsolidated	Quaternary	Unknown

1 features 0 selected

APPENDIX B

EFFLUENT WATER RIGHTS

MONITORING WELL LOGS

City of Carlin

February 9, 2018

Basin	App. No.	Status	Cert. No.	Priority Date	Source	Type of Use	POD Designation	Well Log	POD QQ	POD Qtr	POD Sec	POD Twn	POD Rng	Div Rate (CFS)	Annual Duty (AFA)	TCD	County	Due Dates POC	Due Dates PBU	Change App Filed	Remarks
Maggie Creek Area Basin No. 051																					
51	31193	PER		3/18/1977	EFF	STO			SE	SW	26	33N	52E	1.500	1085.955		Elko	Filed	N/A		Effluent discharge right
51	31193-S01	CER	14197	3/18/1977	EFF	IRR			SE	SW	26	33N	52E	1.500	120.76		Elko	Filed	Filed		Effluent 30.19 Acres Total
51	51981	PER		4/4/1988	UG	MUN			SW	SW	23	33N	52E	2.000	735.308		Elko	4/11/2018	4/11/2018		
51	70714	PER		1/5/2004	UG	MUN			SE	SE	16	33N	52E	0.100	4.603		Elko	6/24/2018	6/24/2018		Mining Interpretive Center
Mary's Creek Area Basin No. 052																					
52	50434	CER	15550	12/19/1986	SPR	MUN	Arthur Spring		SW	SE	28	33N	52E	0.144	35.2		Elko	Filed	Filed		
52	50437	PER		7/25/1961	SPR	MUN	Arthur Spring		SW	SE	28	33N	52E	1.000			Elko	Filed	4/11/2018		
52	68232	PER		3/19/1956	SPR	MUN	Arthur Spring		SW	SE	28	33N	52E	3.000			Elko	Filed	6/20/2018		
52	50439	CER	15551	1/1/1870	SPR	MUN	S.P. Spring		SW	SE	28	33N	52E	0.770	557.457		Elko	Filed	Filed		
52	50436	PER		9/7/1934	UG	MUN			SE	SW	27	33N	52E	0.890	644.346		Elko	Filed	4/11/2018		
52	52266	PER		9/9/1933	UG	MUN		30646	NE	NW	27	33N	52E	0.560	405.432		Elko	Filed	4/11/2018		
52	57712	PER		4/4/1988	UG	MUN			SE	SE	27	33N	52E	2.000	735.308		Elko	4/11/2018	4/11/2018		

All water right permits filed in the name of "City of Carlin" and shown as "Carlin - City" on NDWR database

TCD of Permit Nos. 50436, 51981, 52266, 57712 = 342.07 MGA (1049.774 AFA). This TCD spreads over both hydrographic basins.

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

Please complete this form in its entirety

OFFICE USE ONLY
Log No. 32919
Permit No.
Basin 21-49

PRINT OR TYPE ONLY

NOTICE OF INTENT NO. 12758

1. OWNER City of Carlin
MAILING ADDRESS PO Box 785
Carlin, NV

ADDRESS AT WELL LOCATION CW 3
Sewer Treatment Facilities

2. LOCATION NW 1/4 NW 1/4 Sec. 35 T. 33 (N) S R. 52 E. Elko County
PERMIT NO. M/O-206 (Issued by Water Resources) | Parcel No. | Subdivision Name

3. TYPE OF WORK
New Well [X] Recondition [ ]
Deepen [ ] Other [ ]

4. PROPOSED USE
Domestic [ ] Irrigation [ ] Test [ ]
Municipal [X] Industrial [ ] Stock [ ]

5. TYPE WELL
Cable [ ] Rotary [ ]
Other [X] auger

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
Clayey SILT		0	6 5	6 5
Silty Sandy GRAVEL		6 5	14	7 5
Silty SAND		14	19 5	5 5

RECEIVED JAN 29 1991 STATE ENGINEER

Date started December 20, 1990
Date completed " " , 19"

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

BAILER TEST
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours

8. WELL CONSTRUCTION
Diameter 2 inches Total depth 195 feet
..... inches
..... inches
Casing record 2" PVC
Weight per foot ..... Thickness Sch 40

Diameter	From	To
2" Blank inches	0 feet	4 1/2 feet
2" Perf inches	4 1/2 feet	14 1/2 feet
2" Blank inches	14 1/2 feet	19 1/2 feet
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet

Surface seal: Yes [X] No [ ] Type Cement & Bentonite
Depth of seal 3 feet
Gravel packed: Yes [X] No [ ]
Gravel packed from 3 feet to 19 1/2 feet

Perforations:
Type perforation PVC Sch 40 Slot
Size perforation 0.010"
From 4 1/2 feet to 14 1/2 feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet

9. WATER LEVEL
Static water level 5.9 feet below land surface
Flow ..... G.P.M. ..... P.S.I.
Water temperature ..... °F Quality .....

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name [signature] Contractor
Address 1635 Delucchi RD Reno NEV. 89502 Contractor
Nevada contractor's license number issued by the State Contractor's Board .....
Nevada contractor's driller's number issued by the Division of Water Resources .....
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 1028
Signed [signature] By driller performing actual drilling on site or contractor
Date 1/8/91

(Rev. 11-85) USE ADDITIONAL SHEETS IF NECESSARY (O)-627

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

Please complete this form in its entirety

OFFICE USE ONLY
Log No. 32920
Permit No.
Basin 4-5(

PRINT OR TYPE ONLY

NOTICE OF INTENT NO. 29108

1. OWNER City of Carlin
MAILING ADDRESS P.O. Box 785
Carlin, Nevada

ADDRESS AT WELL LOCATION O.W.A. SEWER TREATMENT FACILITIES

2. LOCATION S.W. ¼ S.W. ¼ Sec. 26 T. 33 (N)/S R. 52 E. County

PERMIT NO. M/O-206 (Issued by Water Resources) | Parcel No. | Subdivision Name

3. TYPE OF WORK: New Well ☒ Recondition ☐ Deepen ☐ Other ☐

4. PROPOSED USE: Domestic ☐ Irrigation ☐ Test ☐ Municipal ☒ Industrial ☐ Stock ☐

5. TYPE WELL: Cable ☐ Rotary ☐ Other ☒

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
SILT		0	2.6	2.6
CLAYEY SILT		2.6	6.9	4.3
SILTY SANDY GRAVEL		6.9	12.5	5.6
GRAVELLY SAND		12.5	13.5	1.0
SANDY GRAVEL		13.5	14.7	1.2
SILTY SAND		14.7	19.5	4.8

Date started December 20, 1989
Date completed 11 11, 19 11

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

BAILER TEST
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours

8. WELL CONSTRUCTION
Diameter 2 inches Total depth 19 ½ feet
inches
inches
Casing record 2" PVC
Weight per foot Thickness Sch. 40

Diameter	From	To
2" Blank inches	0 feet	4 ½ feet
2" Perf inches	4 ½ feet	14 ½ feet
2" Blank inches	14 ½ feet	19 ½ feet
inches	feet	feet
inches	feet	feet
inches	feet	feet

Surface seal: Yes ☒ No ☐ Type CEMENT + BENTONITE / CONCRETE CAP
Depth of seal 3 feet
Gravel packed: Yes ☒ No ☐
Gravel packed from 3 feet to 19 ½ feet

Perforations:
Type perforation PVC Sch. 40 SLOT.
Size perforation .010
From 4 ½ feet to 14 ½ feet
From feet to feet
From feet to feet
From feet to feet
From feet to feet

9. WATER LEVEL
Static water level 8.1 feet below land surface
Flow G.P.M. P.S.I.
Water temperature °F Quality

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name [signature] Contractor
Address 1635 Bellevue Rd. Reno Nev. 89502 Contractor
Nevada contractor's license number issued by the State Contractor's Board
Nevada contractor's driller's number issued by the Division of Water Resources
Nevada driller's license number issued by the Division of Water Resources, the on-site driller N28
Signed [signature] By driller performing actual drilling on site or contractor
Date 1/19/90

(Rev. 11-85) USE ADDITIONAL SHEETS IF NECESSARY (O)-627

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

Please complete this form in its entirety

PRINT OR TYPE ONLY

OFFICE USE ONLY
Log No. 32920
Permit No.
Basin 4-49

NOTICE OF INTENT NO. 12759

1. OWNER City of Carlin
MAILING ADDRESS PO Box 795 Carlin NV
ADDRESS AT WELL LOCATION OW2 @ Sewer Treatment Facilities

2. LOCATION NW ¼ NE ¼ Sec. 35 T. 33 (N) S R. 52 E. Elko County
PERMIT NO. M/D-206 (Issued by Water Resources) | Parcel No. | Subdivision Name

3. TYPE OF WORK: New Well ☒ Recondition ☐ Deepen ☐ Other ☐

4. PROPOSED USE: Domestic ☐ Irrigation ☐ Test ☐ Municipal ☒ Industrial ☐ Stock ☐

5. TYPE WELL: Cable ☐ Rotary ☐ Other ☐

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
Sandy Gravel	☒	0	35	35
Clayey SAND		35	75	4
Silty SAND		75	19	115

Date started December 19, 1989
Date completed " " , 19 "

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

BAILER TEST
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours

8. WELL CONSTRUCTION

Diameter 2 inches Total depth 19 feet
..... inches
..... inches
Casing record 2" PVC
Weight per foot ..... Thickness Sch 40

Diameter	From	To
2" Blank inches	0 feet	4 feet
2" Perf. inches	4 feet	14 feet
2" Blank inches	14 feet	19 feet
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet

Surface seal: Yes ☒ No ☐ Type Cement & Bentonite
Depth of seal 3' feet
Gravel packed: Yes ☒ No ☐
Gravel packed from 3 feet to 19 feet

Perforations:
Type perforation PVC Schedule 40 Slot
Size perforation 0.010"
From 4 feet to 14 feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet

9. WATER LEVEL

Static water level ..... feet below land surface
Flow ..... G.P.M. ..... P.S.I.
Water temperature ..... °F Quality .....

10. DRILLER'S CERTIFICATION

This well was drilled under my supervision and the report is true to the best of my knowledge.
Name [illegible] (Contractor)
Address 1635 Bailey Rd, Reno NEV 89509 (Contractor)
Nevada contractor's license number issued by the State Contractor's Board .....
Nevada contractor's driller's number issued by the Division of Water Resources .....
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 1023
Signed [signature] (By driller performing actual drilling on site or contractor)
Date 1/19/90

(Rev. 11-85) USE ADDITIONAL SHEETS IF NECESSARY (O)-627

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

Please complete this form in its entirety

OFFICE USE ONLY
Log No. 32922
Permit No.
Basin 4-49

PRINT OR TYPE ONLY

NOTICE OF INTENT NO. 12159

1. OWNER City of Carlin
MAILING ADDRESS P.O. Box 755
CARLIN, NEVADA

ADDRESS AT WELL LOCATION OW-1 @ Sewer Treatment Facilities

2. LOCATION NW ¼ NE ¼ Sec. 35 T 33 (N/S) R 52 E ELKO County
PERMIT NO. M/O-206 (Issued by Water Resources) | Parcel No. | Subdivision Name

3. TYPE OF WORK: New Well ☒ Recondition ☐ Deepen ☐ Other ☐

4. PROPOSED USE: Domestic ☐ Irrigation ☐ Test ☐ Municipal ☒ Industrial ☐ Stock ☐

5. TYPE WELL: Cable ☐ Rotary ☐ Other ☒ Auger

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
Silty CLAY		0	6	6
Clayey SILT		6	10	4
Sandy Gravel		10	14	14
Sandy CLAY		14	19	5

RECEIVED JAN 29 '90 STATE LAB DIV

Date started December 19, 1989
Date completed " ", 19 "

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

BAILER TEST
G.P.M. ____ Draw down ____ feet ____ hours
G.P.M. ____ Draw down ____ feet ____ hours
G.P.M. ____ Draw down ____ feet ____ hours

8. WELL CONSTRUCTION
Diameter 2 inches Total depth 19 feet
inches
inches
Casing record 2" PVC
Weight per foot ____ Thickness Sch 40

Diameter	From	To
2" Blank inches	0 feet	4 feet
2" Perf inches	4 feet	14 feet
2" Blank inches	14 feet	19 feet
inches	feet	feet
inches	feet	feet
inches	feet	feet

Surface seal: Yes ☒ No ☐ Type Cement & Bentonite
Depth of seal 3 feet
Gravel packed: Yes ☒ No ☐
Gravel packed from 3 feet to 19 feet

Perforations:
Type perforation PVC Schedule 40 Slot
Size perforation 0.010"
From 4 feet to 14 feet
From ____ feet to ____ feet
From ____ feet to ____ feet
From ____ feet to ____ feet
From ____ feet to ____ feet

9. WATER LEVEL
Static water level 7.5 feet below land surface
Flow ____ G.P.M. ____ P.S.I.
Water temperature ____ °F Quality ____

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name [illegible] (Contractor)
Address 1635 Bellevue Rd., Reno Nev. 89509 (Contractor)
Nevada contractor's license number issued by the State Contractor's Board ____
Nevada contractor's driller's number issued by the Division of Water Resources ____
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 1028
Signed [illegible] (By driller performing actual drilling on site or contractor)
Date 1/19/90

(Rev. 11-85) USE ADDITIONAL SHEETS IF NECESSARY (O)-627

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

Please complete this form in its entirety

OFFICE USE ONLY
Log No. 32923
Permit No.
Basin 61-51

PRINT OR TYPE ONLY

NOTICE OF INTENT NO. 22359

1. OWNER City of CARLIN
MAILING ADDRESS P.O. Box 785 CARLIN, NV.
ADDRESS AT WELL LOCATION O.W. 5 C Sewer Treatment Facilities

2. LOCATION SW ¼ of ¼ of Sec. 26 T. 33 N R. 52 E ELKO County
PERMIT NO. M10 Issued by W
Parcel No.
Subdivision Name

3. TYPE O
New Well ☐ Other ☐
Deepen ☐

4. PROPOSED USE
Domestic ☐ Irrigation ☐ Test ☐
Municipal ☐ Industrial ☐ Stock ☐

5. TYPE WELL
Cable ☐ Rotary ☐
Other ☒

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
SILT		0	6.6	6.6
SILTY FINE SAND		6.6	7.8	1.2
SAND and GRAVEL		7.8	15.6	7.8
SILTY SAND		15.6	19.5	3.9

RECEIVED JAN 29 '90 STATE ENGINEER

Date started 12-18, 1989
Date completed 12-19, 1989

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

BAILER TEST
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours

8. WELL CONSTRUCTION
Diameter 2" inches Total depth 19.5 feet
inches
inches
Casing record 2" PVC
Weight per foot Thickness Sch 40

Diameter	From	To
2" BLANK inches	0 feet	4½ feet
2" SLOT inches	4½ feet	14½ feet
2" BLANK inches	14½ feet	19½ feet
inches	feet	feet
inches	feet	feet
inches	feet	feet

Surface seal: Yes ☒ No ☐ Type Cement/Bentonite Concrete Cap
Depth of seal 3' feet
Gravel packed: Yes ☒ No ☐
Gravel packed from 3' feet to 19½ feet

Perforations:
Type perforation PVC Sch. 40 SLOT
Size perforation .010
From 4½ feet to 14½ feet
From feet to feet
From feet to feet
From feet to feet
From feet to feet

9. WATER LEVEL
Static water level 9.2 feet below land surface
Flow G.P.M. P.S.I.
Water temperature °F Quality

10. DRILLER CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name [illegible] Contractor
Address 1635 Bill Ward, Reno NV 89509 Contractor

Nevada contractor's license number issued by the State Contractor's Board
Nevada contractor's driller's number issued by the Division of Water Resources
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 1058
Signed [illegible] By driller performing actual drilling on site or contractor
Date 1/19/90

(Rev. 11-85) USE ADDITIONAL SHEETS IF NECESSARY (O)-627

APPENDIX C

NDEP DOCUMENTS

PERMIT NO. NEV93001

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

AUTHORIZATION TO DISCHARGE

In compliance with the provisions Chapter 445A of the Nevada Revised Statutes (NRS), the Permittee,

City of Carlin
P.O. Box 787
Carlin, Elko County, Nevada 89822

is authorized to discharge from the

City of Carlin Wastewater Treatment Facility
101 South Eighth Street
Carlin, Elko County, Nevada 89822

Latitude: 40° 42' 50" North
Longitude: 116° 05' 40" West
Township 33 North, Range 52 East, Section 26

to receiving waters named

Groundwaters of the State of Nevada by percolation

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Part I, II, and III hereof.

This permit shall become effective on April 21st, **2010**.

This permit and the authorization to discharge shall expire April 21st, **2015**.

Signed this 21st day of April, **2010**.

Kristen M Rose
Environmental Scientist
Bureau of Water Pollution Control

PART I

I.A. EFFLUENT LIMITATIONS, MONITORING, AND CONDITIONS

There shall be no discharge from the facility property except as authorized by this permit; there shall be no discharge or release of pollutants or toxic contaminants from the facility to the ground surface or waters of the State; and there shall be no discharge of substances that would cause a violation of water quality standards of the State of Nevada.

I.A.1 During the period beginning on the effective date of this permit, and lasting until the permit expires, the Permittee is authorized to discharge from the secondary treatment pond to:

Outfall 001: Storage Reservoir; and
Outfall 002: Irrigation fields: East, Central and West (during the growing season).

Excess effluent which cannot be stored in the reservoir for irrigation use may be discharged to:

Outfall 003: Rapid Infiltration Basins: East and West;
Outfall 004: Pasture Irrigation Areas: East and West; and/or
Outfall 005: South Sand Field (emergency irrigation).

Samples taken in compliance with the monitoring requirements specified below shall be taken at the following locations: at the influent pump station; and effluent prior to reuse or disposal. If effluent analysis results from Lagoon Cell #1 exceed any discharge limitations, the Permittee shall promptly resample (within two (2) days of receiving results from the lab) at Lagoon Cell #2 to demonstrate compliance. The discharge shall be limited and monitored by the Permittee as specified below.

Table 1.1

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30 - day Average	**Daily Maximum**	**Sample Locations**	**Measurement Frequency**	**Sample Type**
Flow	0.50 MGD	0.90 MGD	Influent	Continuous	Meter
	M&R 001, 003	M&R 001, 003	Effluent to storage & RIB's	Continuous	Meter
	M&R 002, 004, 005	M&R 002, 004, 005	Effluent to Irrigation	During Irrigation	Meter or Calculate
	Quarterly Average	**Daily Maximum**	**Sample Locations**	**Measurement Frequency**	**Sample Type**
BOD (inhibited)	M&R	M&R	Influent	Monthly	Composite
	30 mg/l	45 mg/l	Effluent	Monthly	Composite
Total Suspended Solids	M&R	90 mg/l	Effluent	Monthly	Composite
PH	M&R		Influent	Monthly	Discrete
	Shall not be less than 6.0 SU nor greater than 9.0 SU		Effluent	Monthly	Discrete
Total Nitrogen as N	M&R	M&R	Effluent	Quarterly	Composite
Annual Nitrogen Applied (pounds/acre/year) [1]	M&R		Irrigation	Annual	Calculation (cumulative)[2]

[1]: The Annual nitrogen load is determined based on the nitrogen budget described in the EMP. The total annual nitrogen applied (lbs/acre/year) shall not be greater than the total annual nitrogen uptake (lbs/acre/year). Calculations and monitoring data shall use the **total nitrogen** in the applied wastewater (monitored by the treatment facility), total nitrogen from fertilizer applications, nitrogen uptake by crops or vegetation, evapotranspiration rate, precipitation rate, and fraction of applied nitrogen removed by denitrification and volatilization.

[2]: The allowable value (pursuant to the approved EMP) must be reported in the 4th quarter DMR along with the actual applied value to directly evaluate for compliance.

MGD:	million gallons per day	BOD	Biochemical oxygen demand (inhibited refers to carbonaceous)
mg/L:	milligrams per liter		
as N:	As nitrogen	SU:	Standard Units
M&R:	Monitor & Report	EMP:	Effluent Management Plan

TABLE I.2

PARAMETER	LIMITATIONS	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE
Depth to Groundwater (feet)	Monitor & Report	Each Well	Quarterly	Field Measurement
Groundwater Elevation (feet above msl)	Monitor & Report	Each Well	Quarterly	Calculate
Total Nitrogen as N (mg/L)	10	Each Well	Quarterly	Discrete
Nitrate as N (mg/L)	Monitory & Report	Each Well	Quarterly	Discrete
Chlorides (mg/L)	Monitor & Report	Each Well	Quarterly	Discrete
Total Dissolved Solids (mg/L)	Monitor & Report	Each Well	Quarterly	Discrete

msl: mean sea level
mg/L: milligram per liter
as N: as Nitrogen

I.A.2 **Schedule of Compliance:** The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance. The Permittee shall implement and/or execute the following scheduled compliance requirements:

a. **Upon issuance of the permit,** the Permittee shall achieve compliance with all discharge limitations; and,

b. **Within 45 days of the permit issue date *(April 21, 2010),*** the Permittee shall submit an updated Operations and Maintenance (O&M) Manual prepared in accordance with guidance document WTS-2: Minimum Information Required for an O&M Manual. An Effluent Management Plan (EMP), which shall also be updated in accordance with WTS-1B – Guidance Criteria for Preparing an Effluent Management Plan.

c. If no updates are needed for either the O&M Manual and/or the EMP, then state that in writing **within 30 days of the permit issue date (April 21, 2010):**

Nevada Division of Environmental Protection
Attn: Compliance Coordinator
Bureau of Water Pollution Control
901 S. Stewart St, Suite 4001
Carson City, Nevada 89701

I.A.3 **Groundwater Monitoring**: Ground Water Monitoring Wells MW-1 through MW-5 shall be sampled and analyzed as detailed in Table I.2. Reporting shall be performed in accordance with permit section I.B.2.

a. Groundwater monitoring and data rendering activities shall be conducted using monitoring protocols approved by the Nevada Division of Environmental Protection – Bureau of Water Pollution Control (Division).

b. Groundwater monitoring wells shall be conspicuously labeled, capped to prevent migration of surface contaminants to the groundwater, and locked to restrict access.

c. The Permittee shall monitor all new and existing groundwater monitoring wells for the following parameters:

I.A.4 If the Total Nitrogen as N levels increase to 7.0 mg/L an alternate method of disposal, shall be selected. If the increase is due to irrigation reuse, the Effluent Management Plan (EMP) shall be revised to provide management practices which increase the nitrogen uptake by vegetation and/or adjust other nitrogen sources such as fertilizer application rates. If the Total Nitrogen as N levels increase to 9.0 mg/L construction of the approved alternate disposal site shall begin. The Permittee shall take all corrective action necessary to ensure that there is no further degradation of groundwater. If the Total Nitrogen as N levels increase to 10.0 mg/L the discharge to groundwater must cease.

I.A.5 There shall be no objectionable odors from the collection system, treatment facility or disposal area.

I.A.6 There shall be no discharge of floating solids or visible foam in other than trace amounts.

I.A.7 Facility operations shall not cause or contribute to the propagation of pests or vector nuisances. Weed and general pond berm maintenance shall be performed on an annual basis, at a minimum, and reported in accordance with section I.B.2.

I.A.8 The Permittee shall provide a copy of a brief, but complete and understandable document describing the possible hazards and proper hygiene of working with and around reclaimed water to potentially exposed personnel or persons using reclaimed water. The document shall be printed in relevant languages.

I.A.9 All storage ponds and RIBs shall have staff gauges, or another Division-approved means of monitoring water levels. Readings shall be performed as necessary to maintain the design freeboard. A log of recorded readings and impoundment inspections shall be retained by the Permittee in accordance with condition I.A.12.

I.A.10 Collection, treatment, and/or disposal facilities shall be constructed in conformance with plans approved by the Division. All plans must be approved by the Division prior to the start of construction and must be stamped by a Professional Engineer registered in the State of Nevada. All changes to any plans approved by the Division must be stamped by a Nevada Professional Engineer and re-approved by the Division prior to implementation.

I.A.11 The total nitrogen applied to crop and pasture fields (pounds per acre per year) shall not exceed the maximum yearly nitrogen application rate calculated in the EMP.

I.A.12 Lagoons and the storage reservoir shall be inspected in accordance with the O&M. A minimum of 2-feet of freeboard shall be maintained in the lagoons and storage reservoir at all times.

I.A.13 The treatment and disposal facility shall be fenced and posted with signs indicating wastewater treatment. Rapid infiltration basins, the reservoir and irrigated fields shall be fenced and posted to restrict public and vehicular traffic.

I.A.14 With the exception of tailwater control areas, irrigation shall be performed in such a manner as to reduce standing water to a minimum. Runoff beyond property boundaries is prohibited.

I.A.15 The treatment facility shall be operated by a Nevada Certified Class I (or higher) Operator. The Discharge Monitoring Reports (DMRs) must be signed by the facilities highest ranking certified operator. The first DMR submitted under this permit must include the written designation of certified operator (required by Part III.A.2) as the authorized representative to sign the DMRs. If the certified operator in responsible charge changes, then a new designation letter must be submitted.

I.A.16 Abandonment of any groundwater monitoring wells shall be conducted under the approval of, and in accordance with the requirements established by, the Division and the State Engineer's office.

I.A.17 All solid waste screening and sewage sludge shall be disposed of in a manner approved by the Division and the County. Facilities that generate and dispose of sewage sludge shall monitor the concentrations of arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium and zinc and report in mg/dry Kg of sludge as outlined below.

Dry Sludge Disposal rate in tons/yr.	**Frequency**
>0 - 319	each year
320 - 1,653	once a quarter
1,654 - 1,6537	once every 2 months
<1,6538	once a month

A monitoring report shall be submitted with the Discharge Monitoring Report (DMR).

I.A.18 Copies of this permit, any subsequent modifications, and the approved O&M Manual shall be maintained at the permitted facility or at the utility office at all times.

I.A.19 This permit may be re-opened, re-evaluated, and modified by the permitting authority to include effluent limits, additional testing, and/or other appropriate actions in response to demonstrated effluent toxicity or conditions confirmed by subsequent monitoring data. This permit may also be re-evaluated and modified by the permitting authority to incorporate alternative permit conditions determined to be appropriate based on subsequent monitoring data and/or effluent toxicity information.

I.A.20 The Permittee shall remit an annual review and services fee in accordance with NAC 445A.232 starting **July 1, 2010** and every year thereafter until the permit is terminated.

I.A.21 There shall be no discharge from the collection, treatment and disposal facilities except as authorized by this permit.

I.B. MONITORING AND REPORTING

I.B.1 Monitoring

a. **Representative Samples:** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

b. **Test Procedures:** Analyses shall be conducted by a "certified laboratory" using an "approved method of testing", as defined in NAC 445A.0564 and NAC 445A.0562, respectively.

c. **Recording the Results:** For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information:

   i. The exact place, date, and time of sampling;

   ii. The dates the analyses were performed;

   iii. The person(s) who performed the analyses;

   iv. The analytical techniques or methods used; and

   v. The results of all required analyses, including reporting limits.

d. **Additional Monitoring by Permittee:** If the Permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in any calculation and/or reported value required by this permit. Such increased frequency shall also be indicated in required reports.

e. **Records Retention:** All records and information resulting from monitoring activities; the permit application; reporting required by this permit, including all records of analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation shall be retained for a minimum of five (5) years or longer if required by the Administrator.

f. **Reporting Limits:** Unless otherwise allowed by the Division, the approved method of testing selected for analyses shall have a reporting limit which is:

i. Half or less of the discharge limit; or, if there is no discharge limit,
ii. Half of less of the applicable water quality criteria; or, if there is no limit or criteria,
iii. The lowest reasonable obtainable limit using an approved test method.

g. **Modification of Monitoring Frequency and Sample Type:** After considering monitoring data, stream flow, discharge flow, discharge frequency, and receiving water conditions, the Division and/or Administrator may, for just cause, modify the monitoring frequency and/or sample type by issuing an order to the Permittee.

h. **Definitions**

i. **Daily maximum:** is the highest measurement obtained during the monitoring period.

ii. **30-day average discharge:** means the total discharge during a month divided by the number of samples in the period that the facility was discharging. Where less than daily sampling is required by this permit, the 30-day average discharge shall be determined by the summation of all the measured discharges divided by the number of samples during the period when the measurements were made.

iii. **30-day average concentration:** means the arithmetic mean of measurements made during a month (other than for fecal coliform bacteria). The "30-day average concentration" for fecal coliform bacteria means the geometric mean of measurements made during a month. The geometric mean is the "n^{th}" root of the product of "n" numbers. Geometric mean calculations where there are non-detect results for fecal coliform shall use a value of ½ the detection limit to represent the non-detect results.

iv. **"Discrete" sample:** means any individual sample collected in less than 15 minutes.

v. **"Composite" sample:** (for flow-rate measurements) means the arithmetic mean of no fewer than six (6) individual measurements taken at equal time intervals for 24 hours or for the duration of discharge, whichever is shorter.

vi. **"Composite" sample:** (for measurements other than flow-rate) means a combination of no fewer than six (6) individual flow-weighted samples obtained at equal time intervals for 24 hours or for the duration of discharge, whichever is shorter. Flow-weighted sample means that the volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling.

I.B.2 Reporting:

a. **Discharge Monitoring Reports:** Analytical data and monitoring results shall be summarized and reported for presentation in standardized Discharge Monitoring Reports (DMRs). Laboratory reports for quantitative analyses conducted by State of Nevada certified laboratories must accompany DMR submittals. If no discharge occurs during the reporting period, report "no discharge" on the submitted DMR. If groundwater wells are dry, report "dry" on the DMR for that period.

b. **Schedule:** DMRs shall be received by the 28th day of the month following the third month of each quarter (reporting period). Quarterly and annual reporting periods are based on the standard annual cycle, January 1 through December 31. The first report is due on **July 28, 2010**.

c. **Submittals:**

i. Quarterly Reporting: Monitoring results for the effluent discharge and groundwater monitoring requirements described in Part I.A.1. shall be summarized and reported for each quarter. The Permittee is considered in compliance if the reported results are less than the established permit limit. Any data submitted that exceeds the limits of Part I.A.1 must be explained by a narrative.

ii Annual Report: The fourth quarter report shall contain a plot of concentration (y-axis) versus date (x-axis) for each effluent limit listed under Part I.A.1 and each groundwater monitoring parameter (constituent) listed under Part I.A.3. The plot shall include data from the preceding five (5) years or the lifetime of the permit, whichever is shorter. A narrative must explain any data point from the current year that exceeds the limits in Part I.A.1.

a. As required by Sections I.A.I and I.A.II of this permit, the annual report shall demonstrate that the facility has maintained compliance with the maximum yearly application rate of nitrogen. The demonstration shall include the total nitrogen in the applied wastewater, nitrogen from fertilizer applications, nitrogen uptake by plant materials, and fraction of applied nitrogen removed by denitrification and volatilization.

b. The 4th Quarter Report shall include information on pond maintenance per I.A.7 and I.A.8.

iii. Planned Changes: The Permittee shall give notice to the Division as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition to a permitted facility:

a. Could significantly change the nature or increase the quantity of pollutants discharged; or

b. Results in a significant change to the Permittee's sludge management practice or disposal sites.

d. **Anticipated Noncompliance:** The Permittee shall give advance notice to the Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

e. **Submittal:** An original signed copy of these, and all other reports required herein, shall be submitted to the Division at the following address:

Division of Environmental Protection
Bureau of Water Pollution Control
Attn: Compliance Coordinator
901 S. Stewart Street, Suite 4001
Carson City, Nevada 89701

I.B.3 Signatory Certification Required on Application and Reporting Forms:

a. All applications, reports, or information submitted to the Administrator shall be signed and certified by making the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

b. All applications, reports, or other information submitted to the Division shall be signed by one of the following:

i. A principal executive officer of the corporation (of at least the level of vice president) or his authorized representative who is responsible for the overall operation of the facility from which the discharge described in the application or reporting form originates;

ii. A general partner of the partnership;

iii. The proprietor of the sole proprietorship; or

iv. A principal executive officer, ranking elected official, or other authorized employee of the municipal, state, or other public facility.

c. **Changes to Authorization:** If an authorization under Part I.B.3. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part I.B.3. must be submitted to the Administrator prior to or together with any reports, information, or applications to be signed by an authorized representative.

PART II

II.A. MANAGEMENT REQUIREMENTS

II.A.1 **Change in Discharge:** All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than, or at a level in excess of, that authorized shall constitute a violation of the permit.

Any anticipated facility expansions or treatment modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Any changes to the permitted treatment facility must comply with NAC 445A.283 to 445A.285. Pursuant to NAC 445A.263, the permit may be modified to specify and limit any pollutants not previously limited.

II.A.2 **Facilities Operation-Proper Operation and Maintenance:** The Permittee shall, at all times, maintain in good working order and operate as efficiently as possible all treatment or control facilities, collection systems, or pump stations installed or used by the Permittee to achieve compliance with the terms and conditions of this permit.

II.A.3 **Adverse Impact-Duty to Mitigate:** The Permittee shall take all reasonable steps to minimize releases to the environment resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. The Permittee shall carry out such measures, as reasonable, to prevent significant adverse impacts on human health or the environment.

II.A.4 **Noncompliance, Unauthorized Discharge, Bypassing, and Upset:**

a. Any diversion, bypass, spill, overflow, or discharge of treated or untreated wastewater from wastewater treatment or conveyance facilities under the control of the Permittee is prohibited except as authorized by this permit. In the event the Permittee has knowledge that a diversion, bypass, spill, overflow, or discharge not authorized by this permit is probable, the Permittee shall immediately notify the Division at 775.687.9425 and/or 888.331.NDEP(6337).

b. The Permittee shall notify the Administrator within twenty-four (24) hours of any diversion, bypass, spill, upset, overflow, or release of treated or untreated discharge other than that which is authorized by the permit. The following shall be included as information which must be reported within 24 hours:

i. Any unanticipated bypass which exceeds any effluent limitation in the permit;

ii. Any upset which exceeds any effluent limitation in the permit; and

iii. Any violation of a limitation for any toxic pollutant or any pollutant identified as the method to control a toxic pollutant.

c. A written report shall be submitted to the Division within five (5) days of diversion, bypass, spill, overflow, upset, or discharge detailing the entire incident including:

   i. Time and date of discharge;

   ii. Exact location and estimated amount of discharge;

   iii. Flow path and any bodies of water which the discharge contacts;

   iv. The specific cause of the discharge; and

   v. The preventive and/or corrective actions taken.

d. The Permittee shall report all instances of noncompliance not reported under Part II.A.4.c. at the time monitoring reports are submitted. The reports shall contain the information listed in Part II.A.4.c.

e. A "bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

   i. Bypass not exceeding limitations: The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II.A.4.a. and II.A.4.b.

   ii. Anticipated bypass: If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten (10) days before the date of bypass.

f. Bypass is prohibited and the Division may take enforcement action against a Permittee for bypass unless:

   i. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

   ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurs during normal periods of equipment downtime or preventative maintenance; and

   iii. The Permittee submitted notices as required under Part II.A.4.e.

g. The Division may approve an anticipated bypass, after considering its adverse effects, if the Division determines that it will meet the three conditions listed in Part II.A.4.f.

h. An "upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

i. A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

i. An upset occurred and the Permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being properly operated;

iii. The Permittee submitted notice of the upset as required under Part II.A.4.e.; and

iv. The Permittee complied with any remedial measures required under II.A.3.

j. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part II.A.4.i. are met.

k. In selecting the appropriate enforcement option, the Administrator shall consider whether or not the noncompliance was the result of an upset. The burden of proof is on the Permittee to establish that an upset occurred.

II.A.5 **Removed Substances:** Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of process wastewaters shall be disposed of in a manner such as to prevent any pollution from such materials from entering any navigable waters.

II.A.6 **Safeguards to Electric Power Failure:** In order to maintain compliance with the effluent limitations and prohibitions of this permit the Permittee shall either:

a. Provide, at the time of discharge, an alternative power source sufficient to operate the wastewater control facilities; or

b. Halt or reduce all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

II.B. RESPONSIBILITIES

II.B.1 **Right of Entry and Inspection:** The Permittee shall allow the Administrator and/or his authorized representatives, upon the presentation of credentials, to:

a. Enter at reasonable times upon the Permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit;

b. Have access to and copy any records required to be kept under the terms and conditions of this permit;

c. Have unrestricted access to employees and others for interviews during any onsite inspection or investigation conducted by the Division relating to the administration or enforcement of the provisions of the permit;

d. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations required in this permit; and

e. Perform any necessary sampling or monitoring to determine compliance with this permit at any location for any parameter.

II.B.2 **Transfer of Ownership or Control:** In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the Permittee shall notify the succeeding owner or controller of the existence of this permit, by letter, a copy of which shall be forwarded to the Administrator. The Administrator may require modification or revocation and re-issuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary. The Division shall approve all transfer of permits.

II.B.3 **Availability of Reports:** Except for data determined to be confidential under NRS 445A.665, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of the Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NRS 445A.710.

II.B.4 **Furnishing False Information and Tampering with Monitoring Devices:** Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained by the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation, or order issued pursuant thereto or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the provisions of NRS 445A.300 to 445A.730, inclusive or by any permit, rule, regulation, or order issued pursuant thereto is guilty of a gross misdemeanor and shall be punished by a fine of not more than $10,000 or by imprisonment. This penalty is in addition to any other penalties, civil or criminal, provided pursuant to NRS 445A.300 to 445A.730, inclusive.

II.B.5 **Penalty for Violation of Permit Conditions:** NRS 445A.675 provides that any person who violates a permit condition is subject to administrative and judicial sanctions as outlined in NRS 445A.690 through 445A.705.

II.B.6 **Permit Modification, Suspension, or Revocation:** After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

II.B.7 **Toxic Pollutants:** Notwithstanding Part II.B.6, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the Permittee so notified.

II.B.8 **Liability:** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Federal, State, or local laws, regulations, or ordinances.

II.B.9 **Property Rights:** The issuance of this permit does not convey any property rights, in either real or personal property, or any exclusive privileges, rights, or rights of access or easement; nor does it authorize any injury to private property, any invasion of personal rights, or any infringement of Federal, State, or local laws or regulations.

II.B.10 **Severability:** The provisions of this permit are severable, and if any provision of this permit or the application of any provisions of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

II.B.11 **Need to Halt or Reduce Activity Not a Defense:** The need to halt or reduce permitted activities in order to maintain compliance with the conditions of this permit shall not be a defense for a Permittee in an enforcement action.

II.B.12 **Duty to Provide Information:** The Permittee shall furnish to the Administrator, within a reasonable time, any relevant information which the Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Administrator, upon request, copies of records required to be kept by this permit.

PART III

III.A. OTHER REQUIREMENTS

III.A.1 **Reapplication:** If the Permittee desires to continue to discharge, he shall reapply not later than 180 days before this permit expires on the application forms then in use. The fee required by NAC 445A.232 shall accompany the renewal application.

III.A.2. **Flow Rate Notification:** The Permittee shall notify the Administrator, by letter, not later than 90 days after the 30-day average daily influent flow rate first equals or exceeds 85% of the design treatment capacity of the permitted facility or limitations specified in Part I.A. The letter shall include:

a. The 30-day average daily influent flow rate:

b. The maximum 24-hour flow rate measured during the pertinent 30-day period and the date the maximum flow occurred;

c. An estimate of when the 30-day average influent flow rate will equal or exceed the design capacity of the permitted facility;

d. A status report for the facility which will outline, but not be limited to, past performance, remaining capacity of the limiting treatment and disposal units or sites, past operational problems and improvement instituted, and modifications to the treatment works which are needed to attain the permitted flow rate due to changing, site-specific conditions or design criteria; and e. A schedule of compliance to provide additional treatment capacity before the 30-day average daily influent flow rate equals the present design treatment capacity of the permitted facility.

III.A.3. **Holding Pond Conditions:** The construction of any new ponds for process wastewater and stormwater runoff control, modifications to existing ponds, and/or closure or replacement of existing ponds must be approved by the Division prior to commencement of construction. Such ponds shall be located and constructed so as to:

a. Contain, without discharge, the once-in-25 year, 24-hour storm event at said location;

b. Withstand, without structural damage, the once-in-100 year flood of said location; and

c. Prevent escape of wastewater by leakage other than as authorized by this permit.

NEV Permit Processing Form

1.	**Applicant name:** City of Carlin - WWTP		
2.	Application:	Check #: 20633	Check Date: 11-12-09
		Receipt #: 37963	Amount: $3,000.00
		Date received: 11-19-09	Permit #: NEV 93001
		Confidentiality requested? NO	Confidentiality Concur? —
3.	Application reviewed and accepted: 2-1-10		
4.	Permit drafted: 2-4-10		
5.	Fact Sheet prepared: 2-4-10		
6.	Public Notice prepared: 2-4-10		
7.	Routed to NDEP staff: 2-4-10		
8.	Comments resolved & modifications made: 3-1-10		
9.	Permit Supervisor signature on Draft permit: [signature] 3/2/10		
10.	Copy of Draft Permit, Fact Sheet & NOPA to Permittee: 3-8-10		
11.	Public Notice to Appropriate Newspaper: 3-8-10		
12.	Copy of Public Notice and Fact Sheet to John Walker: 3-8-10		
13.	Public Notice sent to mailing List: 3-10-10		
14.	Certification of Publication/Copy of Publication: 3-10-10		
15.	Comments received from others: —		
16.	Public hearing required: —		
17.	Public notice of public hearing prepared: —		
18.	Public Notice of Public Hearing to —		
19.	Certification of Publication/Copy of Publication: —		
20.	Public Hearing Date: —		
21.	Permit redrafted (steps 4 - 18): —		
22.	Response to Comments prepared: —		
23.	Decision to Issue Permit/Notice of Decision Prepared: 4-13-10		
24.	"I have reviewed all required actions and determined the file to be complete and the permit ready to be issued." [signature]		
25.	Permits Supervisor signature: [signature] 4/14/10		
26.	Permit issued Date: 4-21-10		
27.	Copy to Compliance: 4-21-10		
28.	Computer database updated: 4-21-10		
29.	Permit File Organized and completed: 4-21-10		

NEVADA DIVISION OF
ENVIRONMENTAL PROTECTION

STATE OF NEVADA
Department of Conservation & Natural Resources
Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
David Emme, Administrator

July 29, 2015

Kirk Peterson, Certified Operator
SPB Utility Services, Inc.
430 Stoker Ave., Suite 207
Reno, NV 89503

RE: **Inspection Report for the City of Carlin WWTF – # NS0093001**

Dear Mr. Peterson:

Enclosed is a copy of the inspection report for this municipal lagoon and effluent reuse system. Groundwater monitoring well recommendations discussed in this report may be considered by the Permits Branch upon the upcoming permit renewal period. The City of Carlin should discuss preparation of a Facility Plan with its engineer, especially if state and federal funding will be pursued. Finally, the weed issue would best be addressed by discussion between the City and rancher.

No written response is required at this time. However, if you or the City of Carlin should have any questions in regards to this report, please feel free to contact me at (775) 687-9424.

Sincerely,

Mark A. Kaminski

Mark A. Kaminski, P.E.
Technical, Compliance & Enforcement Branch
Bureau of Water Pollution Control

Enclosure: Inspection Report

cc (w/enclosure):

Ken Mallory, SPB Utility Services, Inc., 430 Stoker Ave., Suite 207, Reno, NV 89503
Carlos Esparza, Public Works Director, City of Carlin, P.O. Box 340, Carlin, NV 89822
Clay Knight, Public Works Dept., City of Carlin, P.O. Box 340, Carlin, NV 89822
Sylvia Dahl, Asst. Compliance Coordinator

INSPECTION REPORT

Nevada Division of Environmental Protection
Bureau of Water Pollution Control

FACILITY PERMIT:	NS0093001
FACILITY TITLE:	CITY OF CARLIN WASTEWATER TREATMENT PLANT
FACILITY DESCRIPTION:	MUNICIPAL LAGOONS
FACILITY LOCATION:	101 SOUTH EIGHTH STREET, CARLIN, NV 89822
APPROVED OUTFALLS:	001 EXTERNAL OUTFALL 002 LAND APPLICATION SITE 003 EXTERNAL OUTFALL 004 LAND APPLICATION SITE 005 LAND APPLICATION SITE 006 MONITORING WELL 007 MONITORING WELL 008 MONITORING WELL 009 MONITORING WELL 010 MONITORING WELL 011 INTERNAL OUTFALL
DATE OF INSPECTION:	6/10/2015
TYPE OF INSPECTION:	RECONNAISSANCE INSPECTION (RI)
ATTENDEES:	MARK KAMINSKI, P.E., NDEP CARLOS ESPARZA, PUBLIC WORKS DIRECTOR, CITY OF CARLIN CLAY KNIGHT, CITY OF CARLIN KIRK PETERSON, CERTIFIED OPERATOR, SPB UTILITIES NICK BROTHERS, E.I., NDEP ALAN PINEDA, E.I., NDEP
DISCHARGE RATE:	0.43
PERMITTED QUANTITY:	0.5

DATE OF REPORT: 7/29/2015

INTRODUCTIONS/FACILITY OVERVIEW

Carlin's WWTP was previously inspected by BWPC in 2013. The purpose of this day's site visit was to review the facility's groundwater monitoring wells and its reuse program. The Carlin WWTP services 2,400 residents. Discharge permit # NS0093001 has expired and is currently up for renewal.

DISCHARGE MONITORING REPORTS

The City of Carlin does not have a certified Grade I Wastewater Operator. The certified operator requirement is contracted out to SPB Utilities. Mr. Ken Mallory, Grade IV WW Operator signs the DMRs.

Flow: The influent flow rate averaged 0.43 MGD or 180 GPD/capita. Carlin's Public Works Director mentioned that this relatively high per capita flow rate is attributed to the practice of dewatering residential basements (i.e. home sump pumps) located in shallow groundwater zones near the Humboldt River floodplain. If there were no dewatering contribution, NDEP estimated that Carlin's flow rate would be closer to 0.24 MGD or 100 GPD/capita. Therefore, Carlin's sewage flow contribution is estimated about 50% of the present rated treatment capacity of Ponds #1-2.

CBOD: Carlin's influent CBOD level averaged 111 mg/l, which reflects dilution by basement groundwater addition. Without dilution, typical domestic sewage strength would be around 180 to 220 mg/l of CBOD. Effluent CBOD levels from Pond #2 averaged 27 mg/l. One high month of effluent CBOD level had occurred in May 2014 (74 mg/l), which may have been from a spring pond turnover event.

TSS: Effluent TSS levels from Pond #2 averaged 39 mg/l. There was one high effluent TSS sample, which had occurred in April (102 mg/l), suspected to be from a springtime algal bloom.

TN: Effluent Total Nitrogen level averaged 17 mg/l.

Nitrogen Balance: SPB reported an annual nitrogen application rate of 103 lbs. of Nitrogen per acre from 17.7 Million Gallons of effluent water that was applied via flood irrigation method. Based on this application rate and the average effluent nitrogen level of 17 mg/l, NDEP estimated that 24 acres of fields were irrigated last year, which is about two-thirds of the available acreage. Carlin's three reuse fields, West, Central and East, account for some 36 acres of flood-irrigated pasture.

Water Balance: Refer to the 1st page of the attached spreadsheet. Using SPB's data from last year and evaporation rate data from Elko County published by the UNR's Desert Research Institute, NDEP prepared a water balance to estimate the treatment ponds' seepage losses. Inflow into the ponds averaged 0.43 MGD. Effluent discharged to the storage reservoir averaged 0.19 MGD. Irrigation flow averaged 0.06 MGD. Surface evaporation in Ponds #1 (10 acres) and #2 (8.5 acres) was estimated at 3.25 ft. of water per year or 0.05 MGD. Therefore, 0.43 MGD flowed into the ponds, while Seepage Losses plus Outflows totaled 0.3 MGD. Estimated seepage losses are estimated at 0.13 MGD or 7,000

GPD per Acre in Ponds #1-2. Such seepage losses are much higher than the 500 GPD/acre guideline specified in State (WTS-5) and National (Ten State Standards) for clay-lined treatment ponds. Therefore, this inspection report recommends that the BWPC Permit Writer consider representative leak detection wells for Ponds #1-2 during the upcoming permit renewal.

Groundwater Monitoring : NDEP surveyed and plotted the groundwater monitoring map shown in Figure 1. SPB had indicated that since the West and East RIBs were not in use, that NDEP consider waiving MW-1 and MW-2 monitoring requirements on the next permit renewal. In response, NDEP noted that there is no representative leak-detection wells for the two clay-lined treatment ponds. Therefore, the Permit Writer may consider replacing MW-1 and MW-2 with wells for the treatment ponds . Last year's groundwater monitoring data is summarized in the 2nd spreadsheet.

Well Logs: NDEP has provided the GPS coordinates for the monitoring wells in Spreadsheet #3. This analysis indicated that representative leak detection wells for the treatment ponds are needed to better monitor their seepage losses and any impact on groundwater quality.

FACILITY WALKTHROUGH

Monitoring Wells: The five monitoring wells were surveyed by NDEP. On the south side of the river, the RIBs are presently inactive so SPB mentioned they would like to inactivate Wells #1 and #2 on the next permit renewal. The RIBs are reserved for emergency disposal in case the fields were unavailable such as a flood event during full storage in the reservoir. On the north side of the river, Wells #3-5 monitor reuse activity at the three irrigation fields, but NDEP noted there are no representative leak detection wells for the treatment ponds so this issue will be considered by NDEP during the permit renewal.

Reuse: The ranch workers determine the reuse flow amounts and when the fields are in rotation. On this day, flood reuse was in occurrence at the East Irrigation Field, while cattle were noted grazing in the Central Irrigation Field. The drier or less vegetated field was the West Field. NDEP did not note any noticeable tailwater issues such as direct runoff of effluent into the river. The main issue noted by NDEP at the fields was the presence of weeds such as thistle, and to a lesser extent, mustard. Proper weed control would require an end-of-season burning or disking of the fields with reseeding to establish the desired pasture seed mix. This item should be coordinated between the City and the rancher to ensure that the forage crop yield is maximized. Last year's data indicated the City reclaimed only less than 15% of the water it treated. With better liner materials in the ponds and/or reservoir, less water would be lost to seepage and more water available for irrigation and other beneficial reuse purposes.

Treatment Ponds: An afternoon thunderstorm had moved into the area by the time we toured the ponds, but the surface color in both ponds was green indicative of adequate oxygenation and moderate organic loading. Without modern geomembrane liners, the Public Works staff must spray and burn these weeds annually to keep the cattails and bulrush in check. Pond #1 is aerated by a total of 25-HP (i.e., 2 x 7.5-HP + 2 x 5-HP), while Pond #2 is facultative (polishing). The large, open surface area in these two ponds does allow for sufficient wind-driven aeration and mixing on the surface. Also, it should be noted that with basement dewatering, Carlin's influent sewage is already at diluted or weak-strength compared to other treatment systems where Infiltration / Inflow (I / I) is not quite so prevalent.

Lift Stations : Within a year, the Smith and Loveless influent lift station will be decommissioned. The current dry pit will be replaced with an above-grade control panel. For perhaps the last time, NDEP staff toured the existing dry pit enclosure using an outdated but still functional man-lift hoist (i.e., one-man elevator). Attendees also toured the effluent pump house, which tracks the flow delivered to the reservoir and reuse fields.

CONCLUSIONS

The afternoon's site visit proved worthwhile to see the groundwater wells and reuse fields. Based on the observations and DMR review, the following items are noted:

1. Seepage: The NDEP water balance estimate using Carlin's metered data suggests that the pond seepage losses may be high and much higher than published State and National guidelines for clay-lined ponds. Therefore, this inspection finding suggests that leak-detection wells for the two treatment ponds be considered on the upcoming permit renewal.
2. Monitoring Wells : With the RIBs offline, MW-1 and MW-2 may be obsolete, but correspondingly, this facility does not sufficiently monitor seepage losses from the ponds to the groundwater. Therefore, the permit renewal may consider waiving MW-1 and MW-2 but installing leak detection wells for the two treatment ponds.
3. Reuse: The fields appear to have been overgrown with weeds such as thistle. The City of Carlin should review this finding with the rancher to determine a schedule when reseeding would be beneficial to reestablish a better forage crop mix for the cattle grazing. See example photos of other reuse sites where weed growth is not as prevalent.
4. Liners: The clay liners are now 43 years old. Due to issues such as sludge buildup and seepage losses, the City of Carlin needs to consider a Facility Plan to budget for eventual pond and storage reservoir liner upgrade with modern liner materials such as geomembranes (e.g., 60-mil High Density Polyethylene or HDPE).

FINDINGS

None

RECOMMENDATIONS

No.	Recommendation
1	During the permit renewal, this report recommends that the Permit Writer consider representative monitoring wells to assess seepage losses from the two treatment ponds. Also, MW-1 and MW-2 should be reviewed for removal since the RIBs are rarely, if ever used.
2	The City of Carlin should prepare a comprehensive Facility Plan to examine upgrading the liners and removal of accumulated sludge (biosolids).
3	Invasive (noxious) weeds such as thistle appear to be too prolific at this reuse site. The City of Carlin needs to discuss this NDEP finding with its rancher

lessee to grow more forage crop and less weeds.

CITY OF CARLIN
NS0093001

Mon-Yr	Flow-Inf	Flow-Sto	Flow-Reu	CBOD-I	CBOD-E	TSS-E	pH-I	pH-E	TN-E
Jan-14	0.45 / 0.56	0.09 / 0.55	0 / 0	117	35	35	7.9	7.7	20
Feb-14	0.47 / 0.53	0.1 / 0.33	0 / 0	87	11	12	7.6	7.6	-
Mar-14	0.44 / 0.55	0.03 / 0.29	0 / 0	111	22	27	7.8	7.9	-
Apr-14	0.42 / 0.73	0.08 / -	0.339 / -	97	**46**	**102**	7.6	8.3	21
May-14	0.41 / 0.74	0.348 / -	0.09 / -	84	**74**	85	7.6	8.1	-
Jun-14	**No Data**	**No Data**	**No Data**	147	14	14	8.4	7.9	-
Jul-14	0.39 / 0.68	0 / 0	0.158 / 1.6	109	16	36	7.3	8.2	14
Aug-14	0.4 / 0.43	0 / 0	0.12 / 3.26	139	24	56	7.5	8	-
Sep-14	0.39 / 0.49	0.02 / 0.61	0 / 0	70	10	17	7.8	8.2	-
Oct-14	0.4 / 0.54	0.29 / 1.02	0 / 0	98	26	27	7.8	8.1	14
Nov-14	0.47 / 0.6	0.42 / 0.6	0 / 0	141	27	35	7.8	7.9	-
Dec-14	0.44 / 0.51	0.67 / 2.4	0 / 0	130	15	24	7.8	7.9	-
Ave.	*0.43*	*0.19*	*0.06*	*111*	*27*	*39*	*7.7*	*8.0*	*17*
Limits	0.5 / 0.9	M&R	M&R	M&R	45	90	M&R	6 to 9	M&R

Nitrogen Balance: Acreage Applied = (17.7 MG/yr) x (17 mg/l, TN) x (8.34) / (103 lbs. TN/acre) = 24 acres.

Water Balance (Ponds #1-2):

Seepage Loss (ponds) = Inflow (To Ponds) - Outflow (To Storage Reservoir) - Outflow (To Reuse) - Outflow (Evaporation Loss)

Evaporative Loss (Desert Research Institute) = (51.5 in./yr. - Elko Co. evaporative pan data) x 0.75 (adjustment factor) = 39 in/yr. for Ponds #1-2.
Evaporative Loss (Ponds #1-2) = (39 in./yr.)/(12 in./ft.) x (10 ac. - Pond #1 + 8.5 ac. - Pond #2) = 60.1 AF/yr. = 19.6 MG/yr. = 0.05 MGD

Seepage Loss (MGD) = 0.43 MGD - (0.19 MGD + 0.06 MGD + 0.05 MGD) = 0.13 MGD

Seepage Loss (GPD / acre) = (130,000 GPD) / (18.5 acre) = 7,000 GPD /acre.

QTR-YR	ID	DEPTH (ft)	TN (mg/l)	Cl (mg/l)	TDS (mg/l)
1st-2014	MW-1	12	1.4	98	720
2nd-2014	MW-1	9.5	< 2.3	75	600
3rd-2014	MW-1	9.9	2.2	71	600
4th-2014	MW-1	12	2.1	66	500
Ave.	-	*11*	*1.7*	*78*	*605*
Limits	-	M&R	10	M&R	M&R

QTR-YR	ID	DEPTH (ft)	TN (mg/l)	Cl (mg/l)	TDS (mg/l)
1st-2014	MW-2	10	4.9	110	750
2nd-2014	MW-2	8	< 4.9	84	750
3rd-2014	MW-2	8.6	4.0	87	780
4th-2014	MW-2	10	0.9	77	670
Ave.	-	*9*	*3.1*	*90*	*738*
Limits	-	M&R	10	M&R	M&R

QTR-YR	ID	DEPTH (ft)	TN (mg/l)	Cl (mg/l)	TDS (mg/l)
1st-2014	MW-3	9	0.7	110	790
2nd-2014	MW-3	7	< 1.2	60	660
3rd-2014	MW-3	8	0.6	63	650
4th-2014	MW-3	9	0.5	52	590
Ave.	-	*8*	*0.6*	*71*	*673*
Limits	-	M&R	10	M&R	M&R

QTR-YR	ID	DEPTH (ft)	TN (mg/l)	Cl (mg/l)	TDS (mg/l)
1st-2014	MW-4	7	1.9	220	1,000
2nd-2014	MW-4	5	< 3.6	130	820
3rd-2014	MW-4	6.1	2.9	120	810
4th-2014	MW-4	6	2.8	93	640
Ave.	-	*6*	*2.4*	*141*	*818*
Limits	-	M&R	10	M&R	M&R

QTR-YR	ID	DEPTH (ft)	TN (mg/l)	Cl (mg/l)	TDS (mg/l)
1st-2014	MW-5	5.5	0.6	140	940
2nd-2014	MW-5	4	< 1.6	120	890
3rd-2014	MW-5	3.5	0.6	120	880
4th-2014	MW-5	6	0.6	120	800
Ave.	-	*5*	*0.7*	*125*	*878*
Limits	-	M&R	10	M&R	M&R

WELL ID	DESCRIPTION (E.G., LOCATION)	LATITUDE (D, M & S)	LONGITUDE (D, M & S)
MW # 1	West RIB	40° 42' 7.4" N	116° 6' 16.2" N
MW # 2	East RIB	40° 42' 17.3" N	116° 5' 54.0" N
MW # 3	West Irrigation Field	40° 42' 31.3" N	116° 6' 16.9" N
MW # 4	Central Irrigation Field	40° 42' 35.6" N	116° 6' 0.3" N
MW # 5	East Irrigation Field	40° 42' 46.3" N	116° 5' 35.0" N

Fig. 1 – Monitoring Wells #1-5

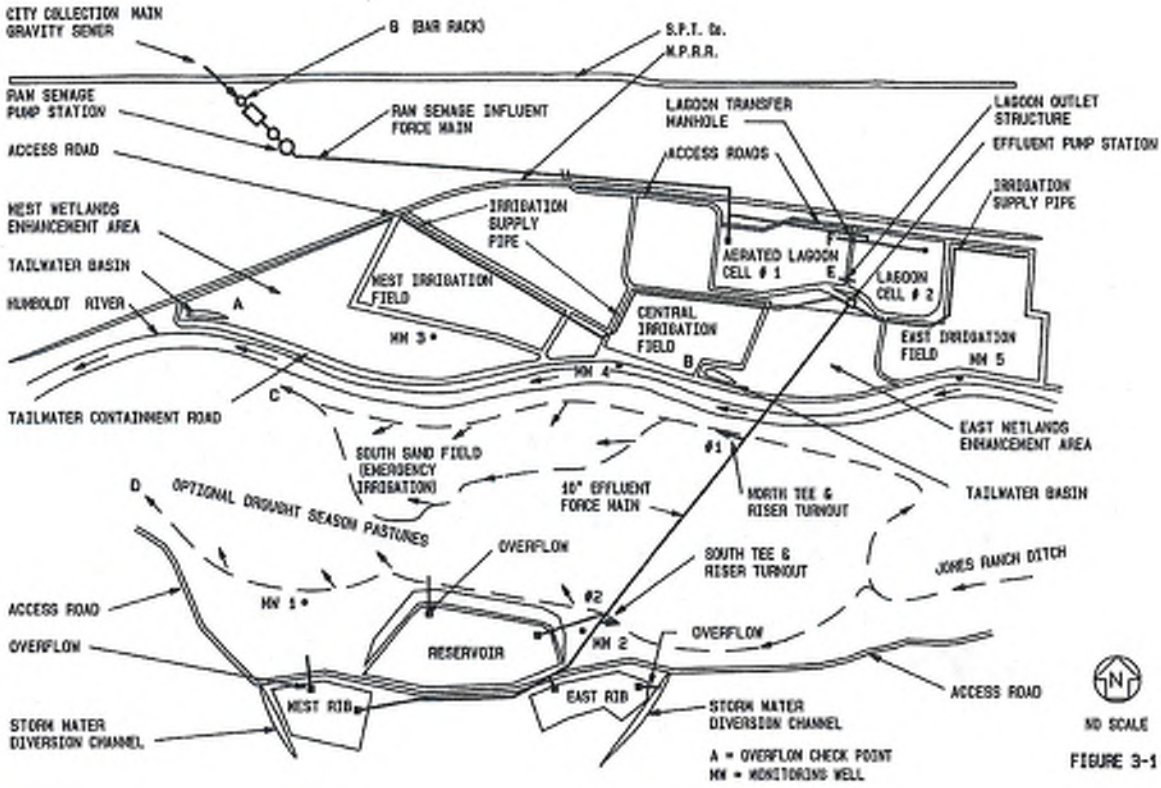


Fig. 2 – Field Map (O&M)

Fig. 3 – Primary Pond (1st Baffle)

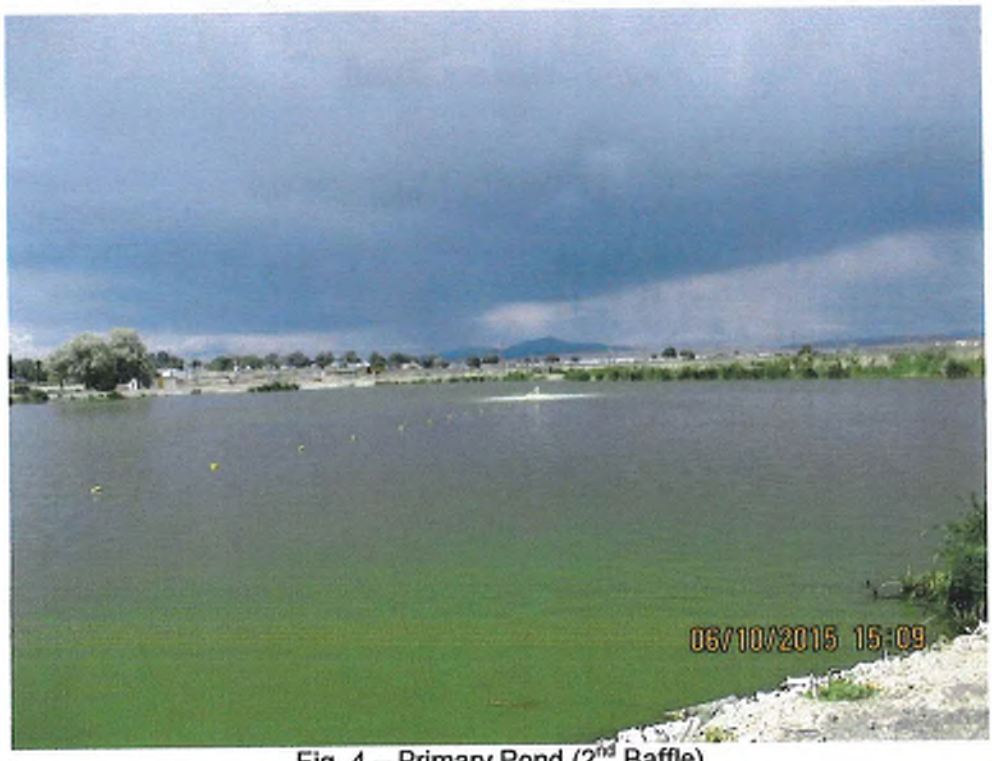


Fig. 4 – Primary Pond (2nd Baffle)

Fig. 5 – Primary Pond (3rd Baffle)

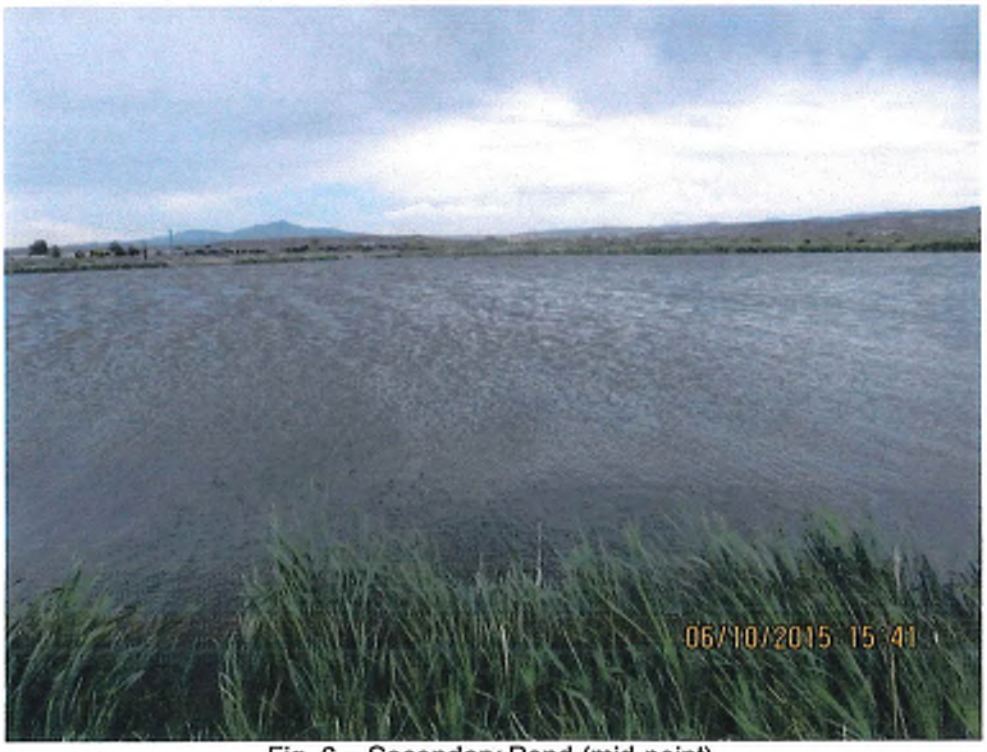


Fig. 6 – Secondary Pond (mid-point)

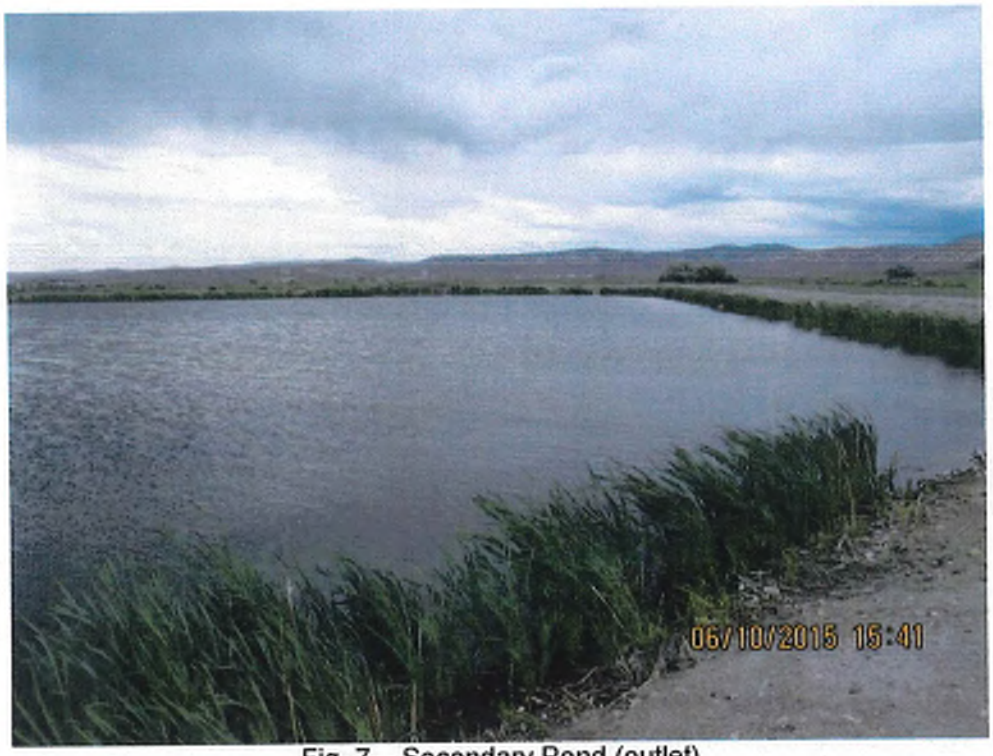


Fig. 7 – Secondary Pond (outlet)

Fig. 8 – East Irrigation Field

Fig. 9 – Central Irrigation Field

Fig. 10 – West Irrigation Field (idle)

Fig. 11 – Forage Crop Detail (note: thistle weeds)

Fig. 12 – Edge of Field (Mustard & Thistle)

Fig. 13 – Recently Plowed Field by Central Irrigation Field

Fig. 14 – South Storage Reservoir

Fig. 15 - MW-4 Proximity to the River

Fig. 16 – MW-4 Pedestal & Casing Cover

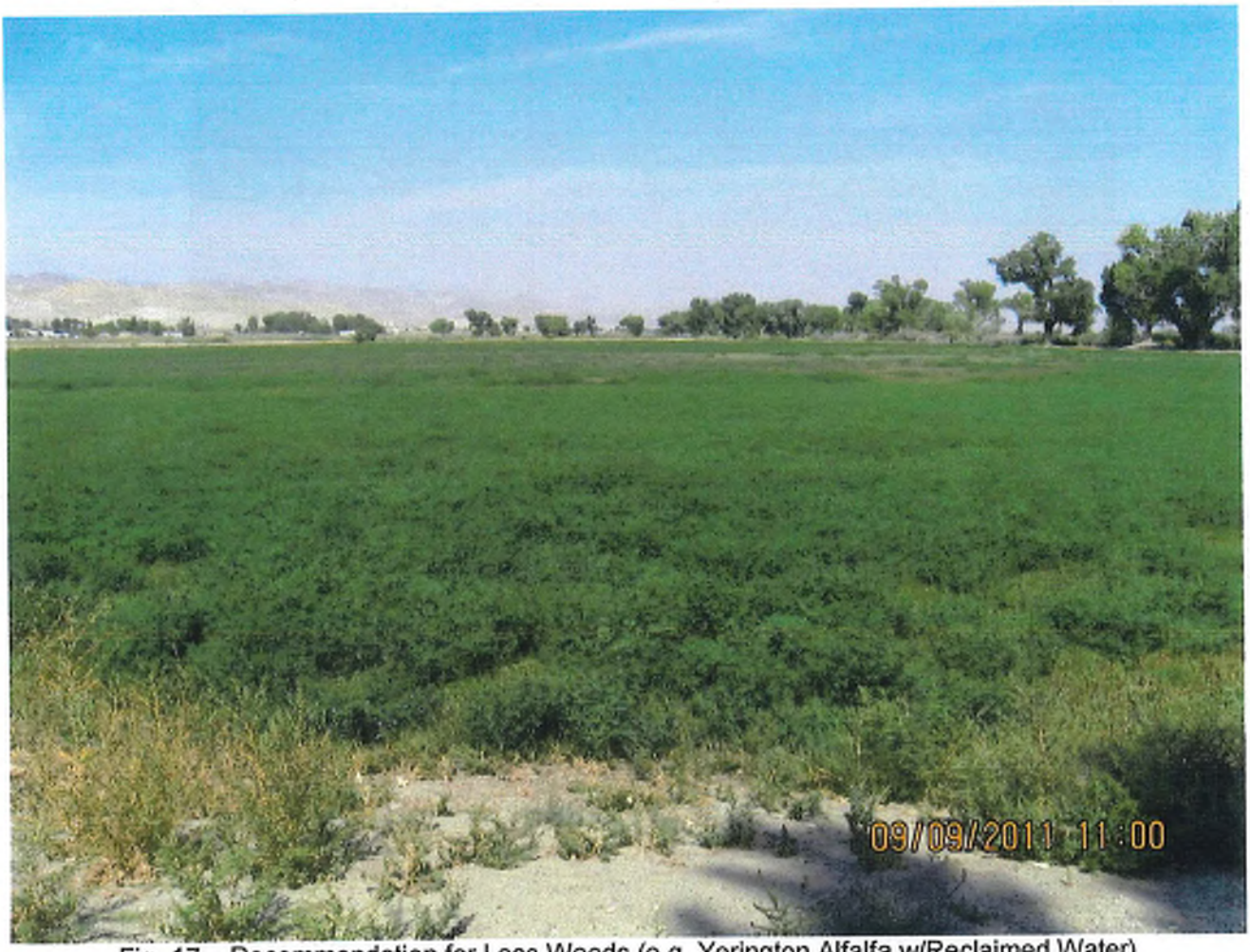


Fig. 17 – Recommendation for Less Weeds (e.g. Yerington Alfalfa w/Reclaimed Water)

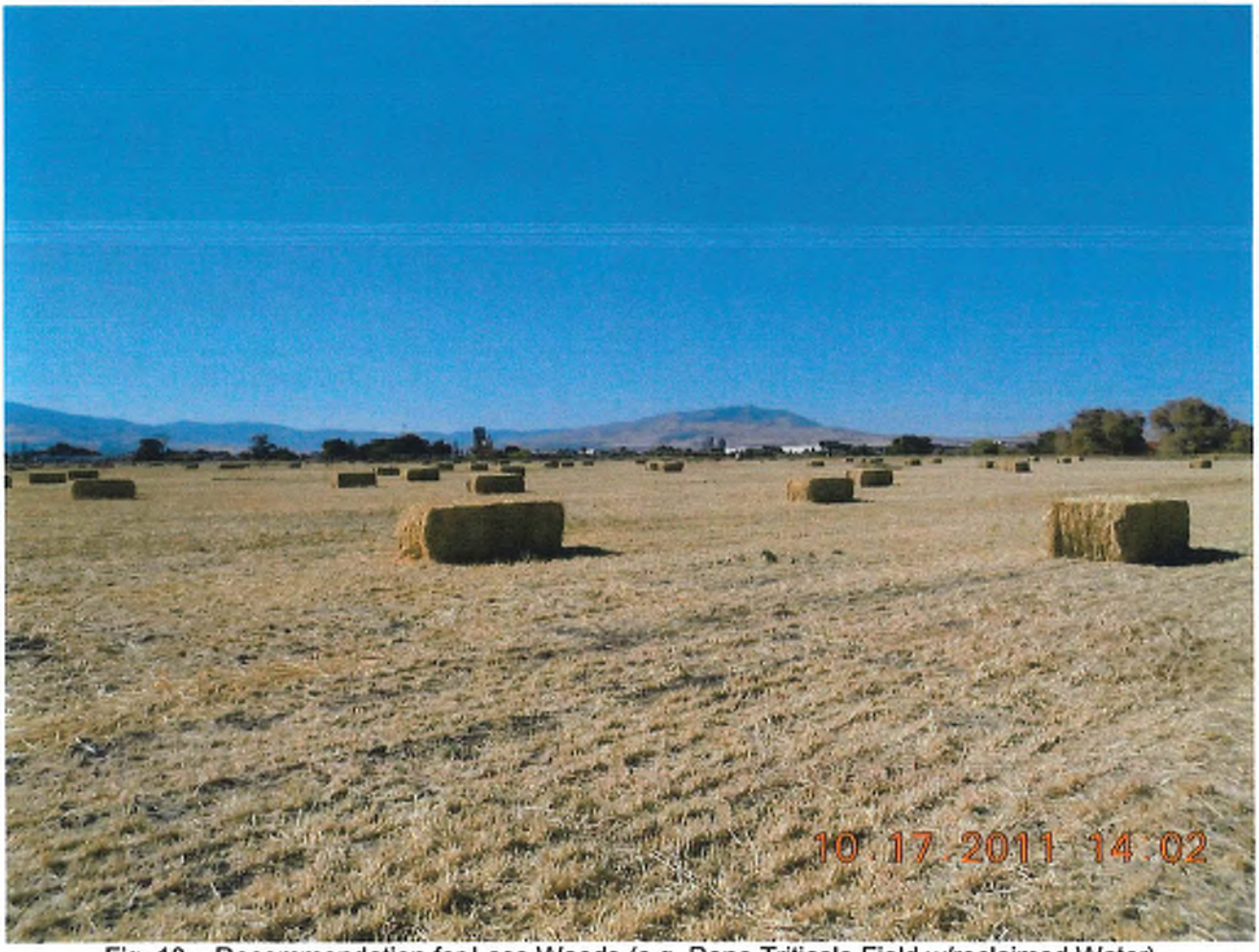


Fig. 18 – Recommendation for Less Weeds (e.g. Reno Triticale Field w/reclaimed Water)

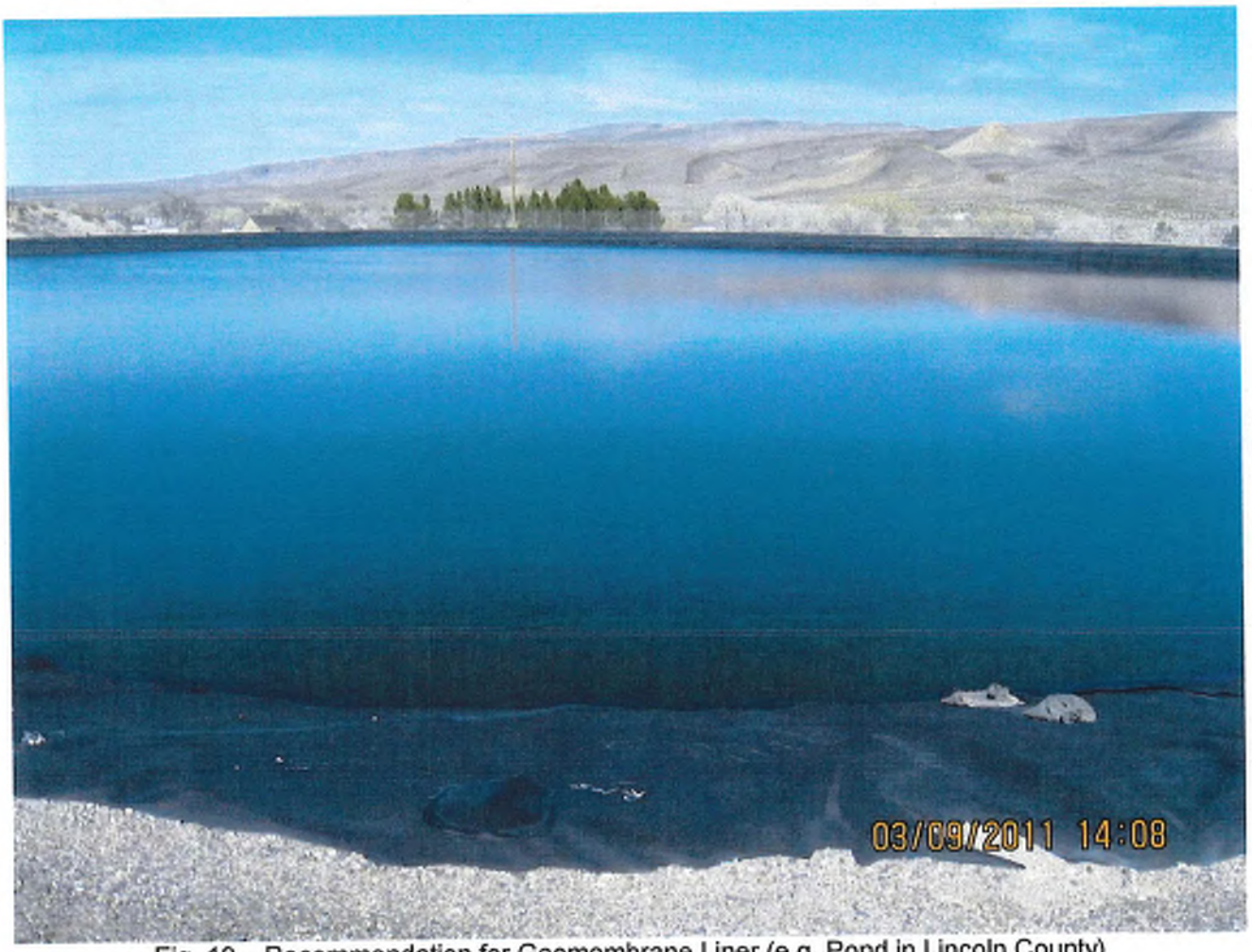


Fig. 19 – Recommendation for Geomembrane Liner (e.g. Pond in Lincoln County)

Fig. 20 – Same pond as above in Fig. 19, but before lining.

ndep
NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
protecting the future for generations

STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

September 30, 2013

Carlos Esparza
Director, City of Carlin Public Works
P.O. Box 340
Carlin, NV 89822

RE: City of Carlin's Wastewater Treatment Plant Compliance Evaluation Inspection Permit No. NEV93001

Dear Mr. Esparza:

Enclosed for your review is the Nevada Division of Environmental Protection's (NDEP) compliance evaluation inspection report for Carlin's wastewater treatment facility that was performed on August 28, 2013. This inspection found the site well maintained.

In the report there are three items of follow-up that NDEP needs to have Carlin complete. These are items 1, 2, and 4 of the conclusion section of the report. Please submit a written response to these items by no later than **December 1, 2013**.

If you have any questions or comments about this report or the compliance item, please call me at (775) 687-9435.

Sincerely,

Joseph Maez, Supervisor, P.E.
Compliance and Technical Services Branch
Bureau of Water Pollution Control

Attachment: Report

CC/ with enclosure Ken Mallory, SPB Utilities, 430 Stoker Ave, Suite 207, Reno, NV 89503

COMPLIANCE INSPECTION REPORT

Nevada Division of Environmental Protection
Bureau of Water Pollution Control

FACILITY PERMIT:	NS0093001
FACILITY TITLE:	City of Carlin WWTF
FACILITY DESCRIPTION:	Two Pond System
FACILITY LOCATION:	SE Limits of the City of Carlin, Elko County, NV Pond #1 Inlet: Latitude: 40° 42' 46"N, Longitude: 116° 6' 0"W Elevation 4,895 ft. above sea level
DATE OF INSPECTION:	August 28, 2013
ATTENDEES:	Joseph Maez, P.E., NDEP Nick Brothers, E.I. NDEP Carlos Esparza, Carlin Public Works Director
DISCHARGE RATE:	0.46 MGD (June 2013)
PERMITTED QTY:	0.5 MGD 30-Day Average 0.9 MGD Daily Maximum
DATE OF REPORT:	September 27, 2013

DMR Review

The tables on the following page summarize the DMR data from July 2012 through June 2013. The data shows that the effluent flow rate had not been reported until the last 3 months. This was due to a lengthy delay in getting the effluent mag meter repaired. Secondly, the influent flow rate exceeded the 85% of the flow limit of the permit the last two months of the second quarter DMR's. Pursuant to Part III.A.2 of the permit, Carlin must undertake steps to discuss the steps what it will take to prevent the discharge from exceeding the permitted limits. These high flows are currently under investigation, but based on the effluent meter readings, there may be an error on the influent flow meter.

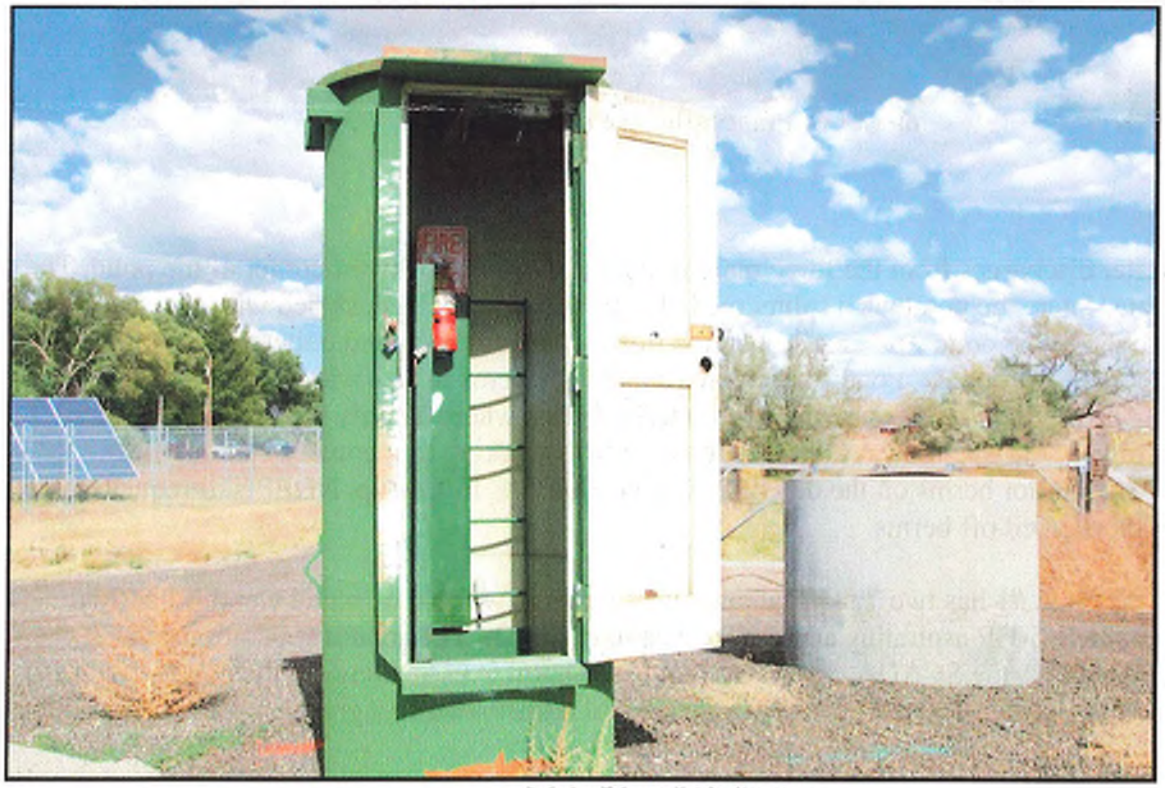
Effluent CBOD was met in 10 of the last 12 months, with slight exceedances noted in February of this year and October of last year. Overall the effluent values reported over the last 12 months reflects a properly operating pond system over all four seasons.

INSPECTION WALKTHROUGH

Carlos Esparza showed NDEP around the treatment system and the evaporation pond. Carlin has two influent lift stations. There is a new lift station in Carlin's industrial park that is approximately three years old and an older lift station is located at 4th Street and Oak Street, as shown in Attachment 2. The older lift station that NDEP visited has a dry well for the pumps and controls and a wet well that receives the influent from the residential area. The wet well is accessible by the operators and includes a coarse bar screen for removal of large objects. The dry pit is more than 15 feet below grade and is accessible via a motorized lift. The two 15-HP influent pumps are automated to a bubbler level sensor. An 8-inch diameter effluent force main goes 3,400 feet from the lift station to the treatment ponds. NDEP's inspection of the lift station showed that it is well-maintained, clean and the doors and access lids were locked.

A diesel generator will automatically supply power during a prolonged power outage. This generator is housed inside of a wood frame building, as are the station power controls and flow meter readout. The influent flow rate is recorded via a mag meter located at the main lift station.

A preliminary engineering report is being prepared by a consultant to evaluate the replacement options for this old Smith and Loveless™ Lift Station. NDEP will receive a copy of the final PER and subsequent design plans on the selected new lift station option that Carlin chooses.



Main Plant Lift Station

Bank vegetation at first Pond

Pond #2 is roughly 8.4 acres in area with a volume of 11 million gallons. The effluent from the final cell had good color attachment 2. This last cell is facultative, without mechanical aeration. Some vegetation was noted on the interior berm of the pond, but it was not excessive. Both treatment ponds were operating at the maximum water level, with about 3 feet of freeboard. Due to concerns about kids playing on the iced-over pond during the winter, Carlin installed a 6-foot high chain link fence around the ponds. This fence is posted with notification signs and is well constructed.

Final Pond Effluent

Effluent Holding Pond at Carlin WWTP

CONCLUSIONS AND FOLLOW-UP

NDEP appreciates the site tour provided by Mr. Esparza on short notice. The fencing around the treatment ponds was completed very adeptly. We are in full support of the City's plans to address upgrading its plant lift station and look forward to reviewing the plan submittal in the near future.

Based upon this year's site inspection, the Division had the following items for follow-up that are required by **December 1, 2013**:

1. Weed Removal:

   Please include photos by December 1, 2013 that demonstrate the vegetation around Pond 1 has been removed.

   The vegetation on the interior berms needs to be removed to prevent root intrusion into the berm and to prevent dead zones in the treatment ponds. Herbicides can be used to help control vegetation once they have been burned down. Please note that any holes that are created from the removal of this vegetation should be resealed with a compacted clayey soil mixture. Some herbicides to consider include Clearcast™, Arsenal™, and Polaris™. Follow the label direction and note the limits on irrigation use of the water for the last two products.

City of Carlin
Public Works Department
310 Oak Street, PO Box 340
Carlin, NV 89822
Phone 775-754-6515
Fax 775-754-6253
publicworks@explorecarlinnv.com
Director Carlos A Esparza
The City of Carlin is an equal opportunity provider and employer.

November 13, 2013

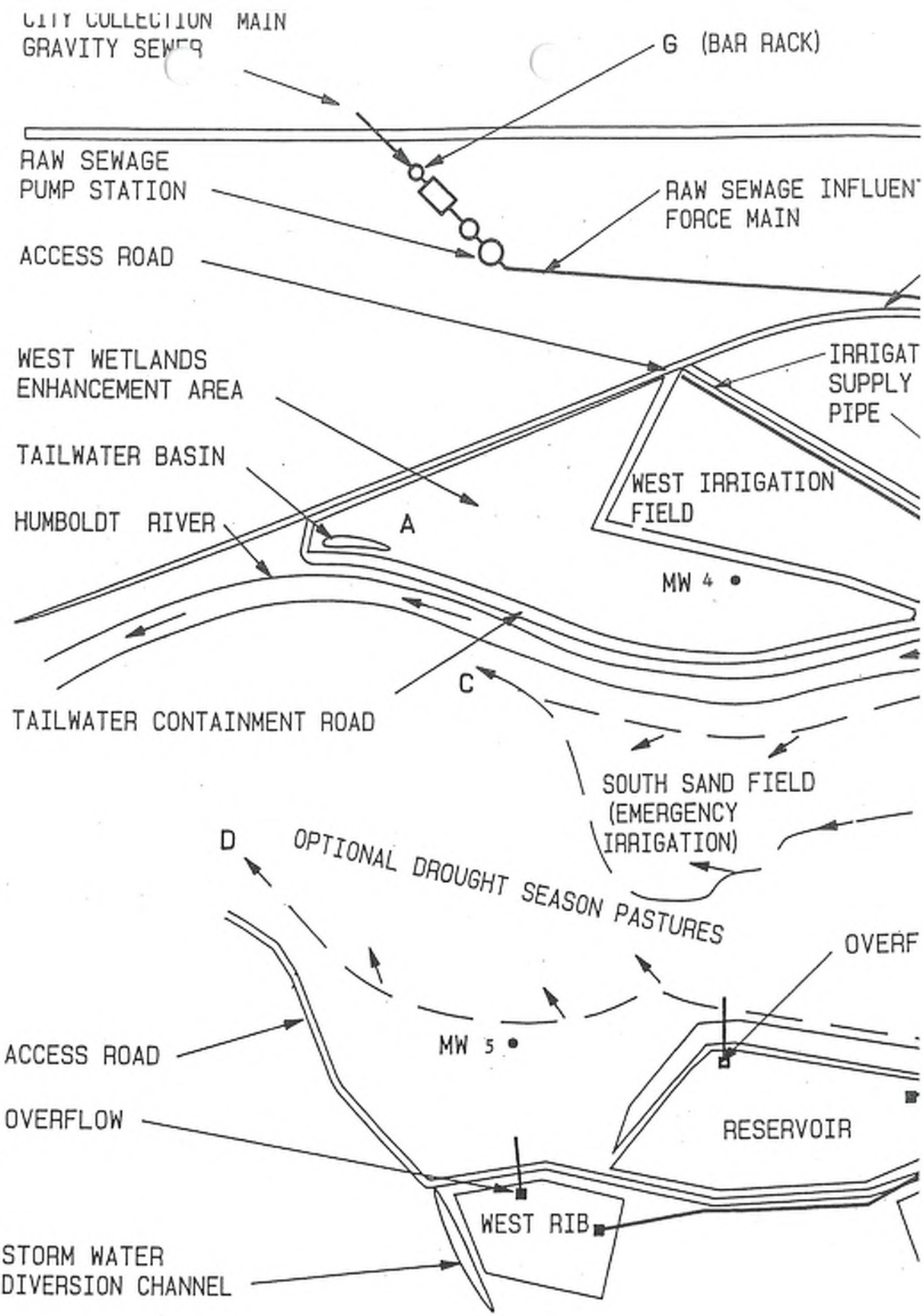
Joseph Maez
Supervisor, P.E.
Compliance and Technical Services Branch
Bureau of Water Pollution Control

RE: Written response to Wastewater Treatment Plant Inspection
Permit No. NEV93001

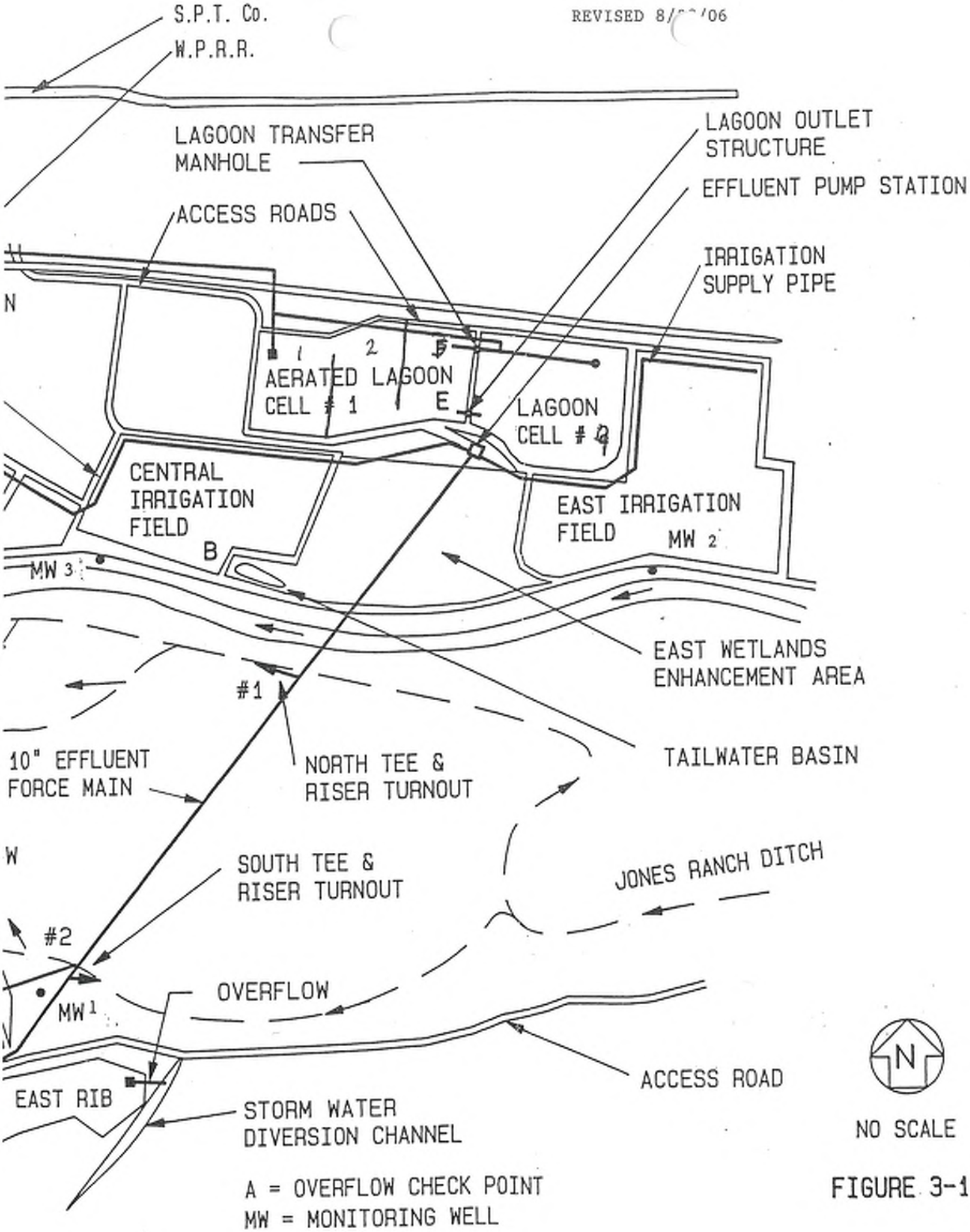
Dear Mr. Maez:

We have addressed the three items that you were concerned about. Item one was the vegetation around the ponds, We have been working diligently to correct this. Enclosed you will find photos of what we have completed thus far. We will continue to work on this. Item two has been researched by our staff and we were unable to explain the overages. We have forwarded all information to the City Engineer for further examination and as of the date of this letter he is still working on it. His contact information if you would like to follow up on this with him is, Tom Ballew (High Desert Engineering) 775-738-4083. Item four we have enclosed a map of locations of monitoring wells. If I can be of further assistance to you please do not hesitate to call.
Thank You for your time

Carlos A Esparza
City of Carlin
Director of Public Works


CITY COLLECTION MAIN
GRAVITY SEWER
G (BAR RACK)
RAW SEWAGE
PUMP STATION
RAW SEWAGE INFLUEN
FORCE MAIN
ACCESS ROAD
WEST WETLANDS
ENHANCEMENT AREA
IRRIGAT
SUPPLY
PIPE
TAILWATER BASIN
WEST IRRIGATION
FIELD
HUMBOLDT RIVER
A
MW 4
C
TAILWATER CONTAINMENT ROAD
SOUTH SAND FIELD
(EMERGENCY
IRRIGATION)
D
OPTIONAL DROUGHT SEASON PASTURES
OVERF
ACCESS ROAD
MW 5
OVERFLOW
RESERVOIR
WEST RIB
STORM WATER
DIVERSION CHANNEL

REVISED 8/[illegible]/06



A = OVERFLOW CHECK POINT
MW = MONITORING WELL

FIGURE 3-1

CARLIN WW WEST RIB

Description

Low Hazard Dams

Details

NATID
NV10712

STATEID
J-291

DAMNAME
CARLIN WW WEST RIB

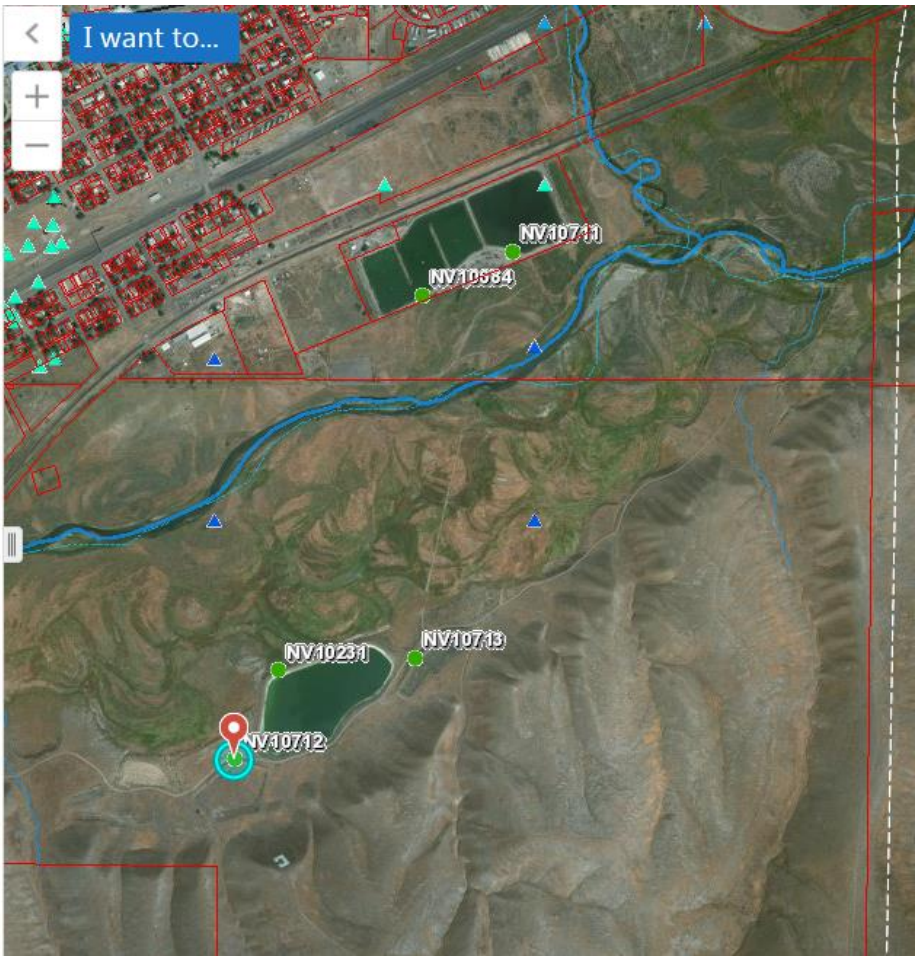
COUNTY
ELKO

FORMERNAME
CARLIN WW POND

LATITUDE
40.70153

LONGITUDE
-116.10366

LEGAL
049 N33 E52 35BD



CARLIN WW STORAGE POND

Description

Low Hazard Dams

Details

NATID
NV10231

STATEID
J-291

DAMNAME
CARLIN WW STORAGE POND

COUNTY
ELKO

FORMERNAME
CARLIN WW POND

LATITUDE
40.70351

LONGITUDE
-116.10235

LEGAL
049 N33 E52 35BD

CARLIN WW EAST RIB

Description

Low Hazard Dams

Details

NATID
NV10713

STATEID
J-291

DAMNAME
CARLIN WW EAST RIB

COUNTY
ELKO

FORMERNAME
CARLIN WW POND

LATITUDE
40.70379

LONGITUDE
-116.09833

LEGAL
049 N33 E52 35BD

CARLIN WWTP TREATMENT L...

Description

Low Hazard Dams

Details

NATID
NV10684

STATEID
J-291

DAMNAME
CARLIN WWTP TREATMENT LAGOON CELL 1

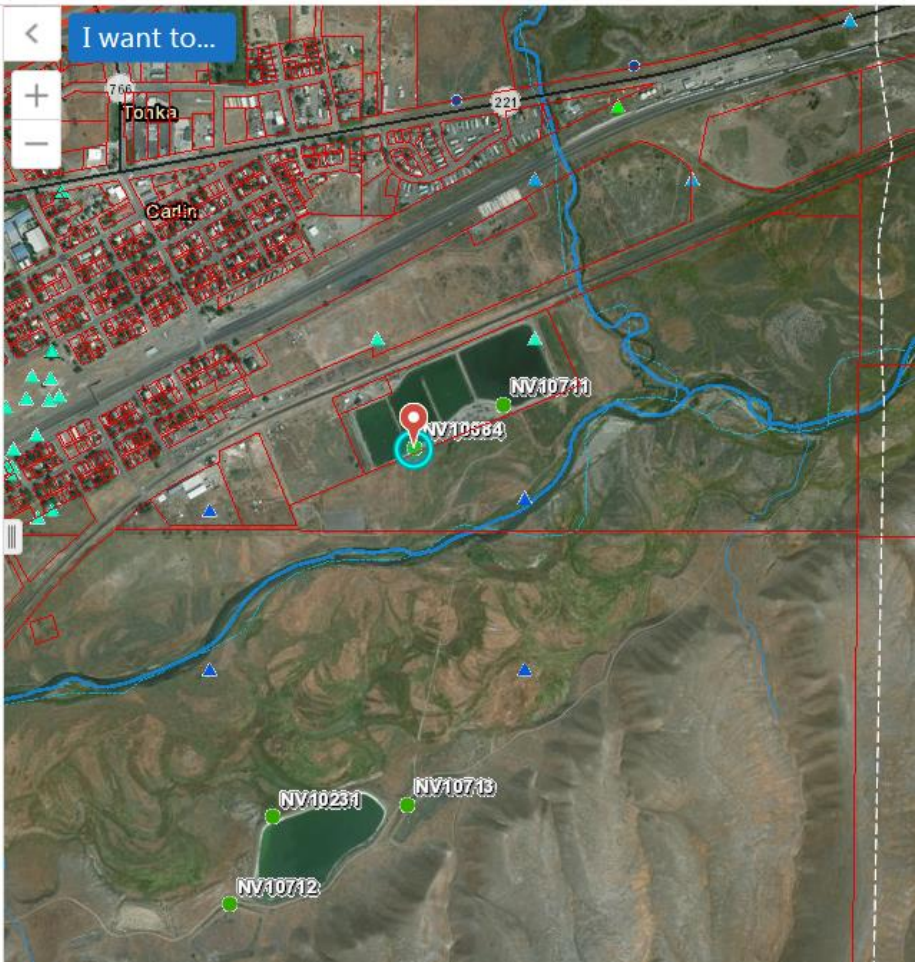
COUNTY
ELKO

FORMERNAME
N/A

LATITUDE
40.71188

LONGITUDE
-116.09812

LEGAL
049 N33 E52 26CD



CARLIN WWTP TREATMENT L...

Description

Low Hazard Dams

Details

NATID
NV10711

STATEID
J-291

DAMNAME
CARLIN WWTP TREATMENT LAGOON CELL2

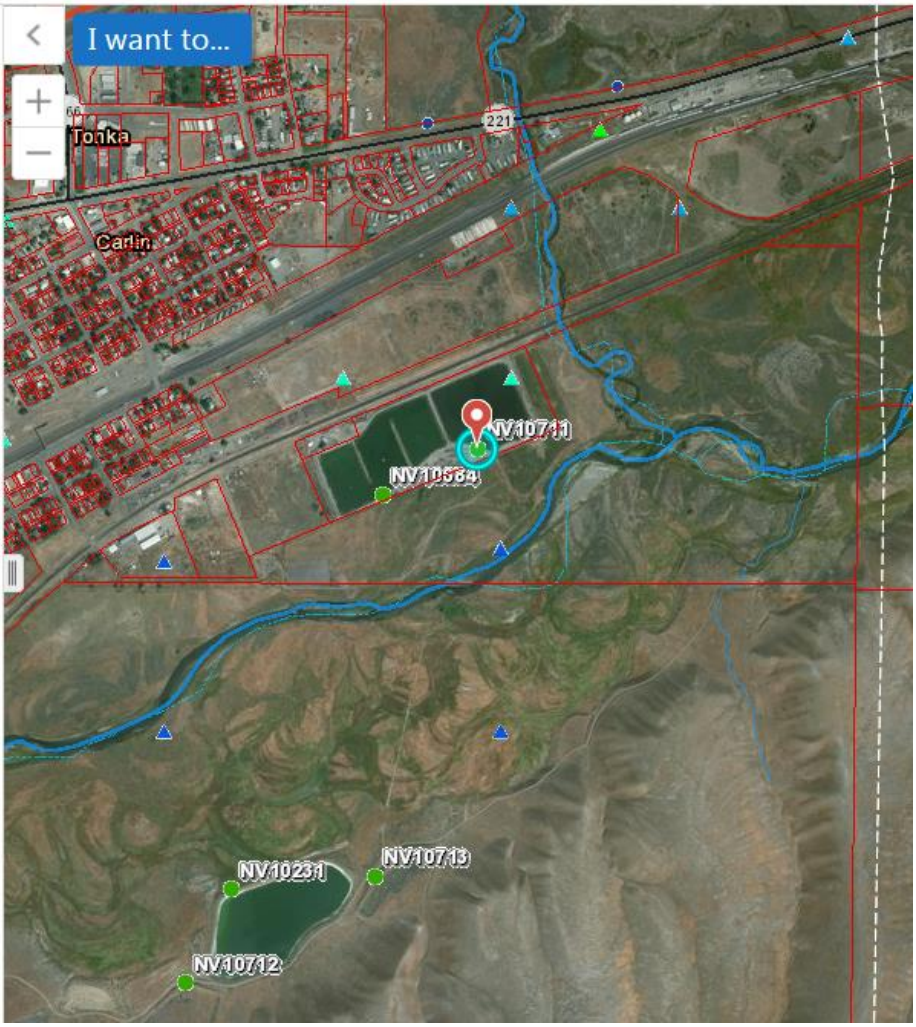
COUNTY
ELKO

FORMERNAME
N/A

LATITUDE
40.71287

LONGITUDE
-116.09547

LEGAL
049 N33 E52 26CD



APPENDIX D

PUMP INFORMATION

City of Carlin
Public Works Department
810 Oak Street, PO Box 340
Carlin, NV 89822
Phone 775-754-6515
Fax 775-754-6253
publicworks@explorecarlinnv.com
Director Carlos A Esparza
The City of Carlin is an equal opportunity provider and employer.

October 12, 2017

Main sewer lift station
Smith & Loveless
Two (2) M# 4B2A pumps with 15 HP- 1800 RPM 208 VOLT 3PH 1 CW and 1 CCW
Impellers trimmed 9-3/8 for 640 GPM @ 66' TDH

Industrial lift station
Flygt
Two (2) M# M 3085 pumps 4HP 3430 RPM 460 Volt 3ph

Effluent pump station
Fairbanks Morse
Two (2) M# 4" B5432CLV Pumps 20 HP 1770 RPM 460 VOLT GPM 900 TDH 62

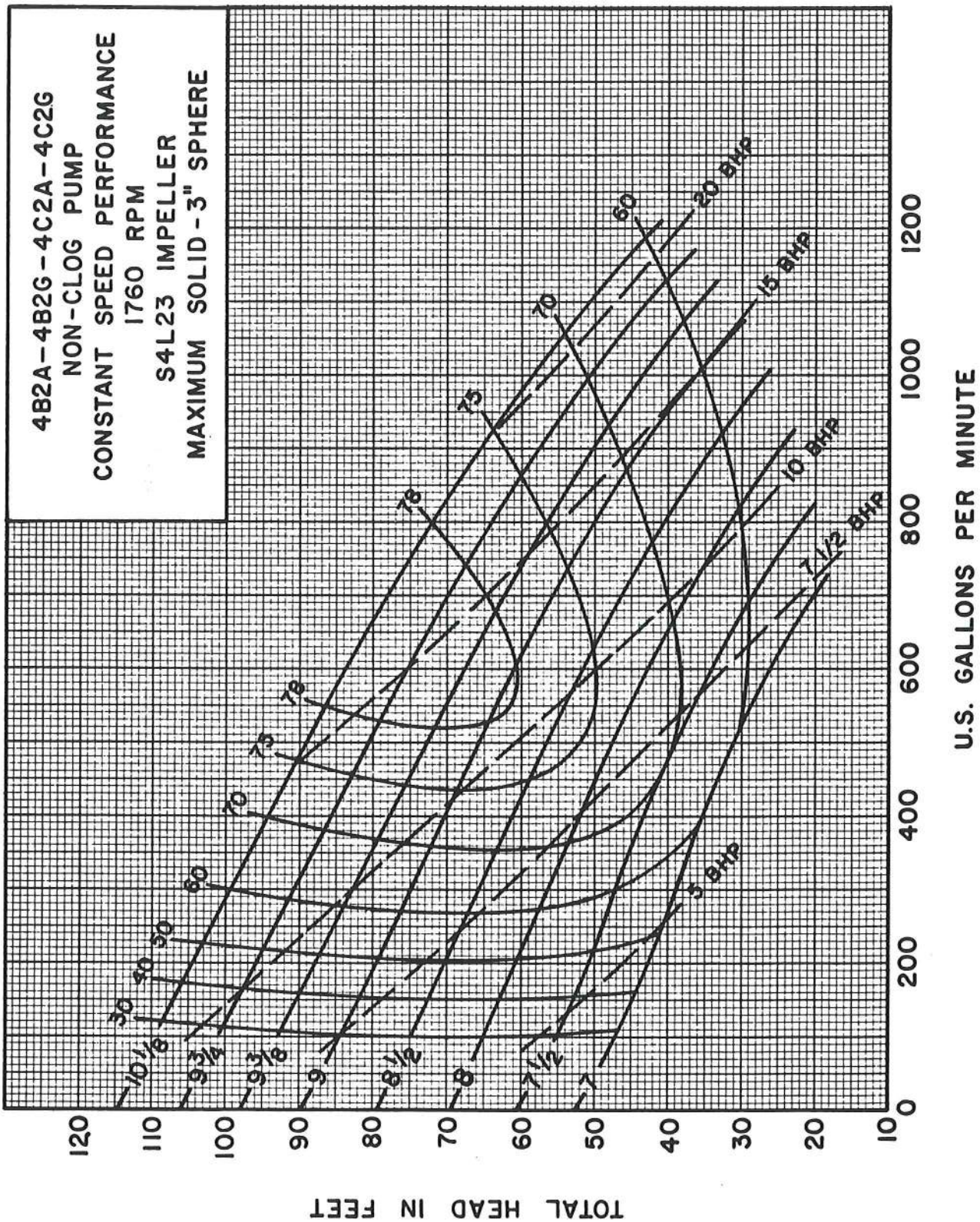
Sincerely,

Carlos A Esparza
Director of Public works

ENGINEERING DATA

Smith & ® Loveless, Inc.
14040 W. Santa Fe Trail Dr.
Lenexa, Kansas 66215

Pump Performance Curves
Constant Speed
4B2A/4B2G - 4C2A/4C2G
1760 RPM
October, 1985



PERFORMANCE CURVE

PRODUCT	MP3085.891	TYPE	HT
DATE	2008-09-17	PROJECT	CITY OF CARLIN 9-17-08
CURVE NO	63-259-00-2360	ISSUE	7

	1/1-LOAD	3/4-LOAD	1/2-LOAD
POWER FACTOR	0.92	0.90	0.85
EFFICIENCY	83.0 %	84.0 %	83.0 %
MOTOR DATA	---	---	---

RATED POWER	4	hp
STARTING CURRENT ...	32	A
RATED CURRENT ...	4.9	A
RATED SPEED	3430	rpm
TOT.MOM.OF INERTIA ...	---	
NO. OF BLADES	6	

IMPELLER DIAMETER: 150 mm

MOTOR #	STATOR	REV
15-09-2AL	12YSER	11

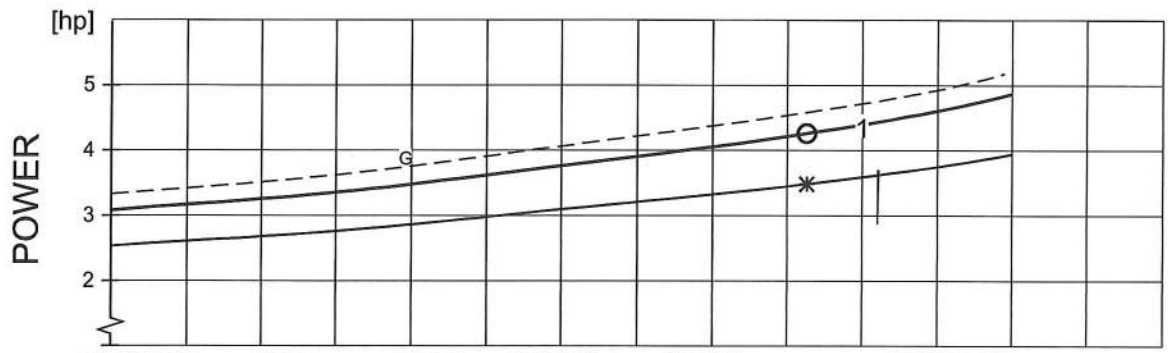
FREQ.	PHASES	VOLTAGE	POLES
60 Hz	3	460 V	2

GEARTYPE: --- RATIO: ---

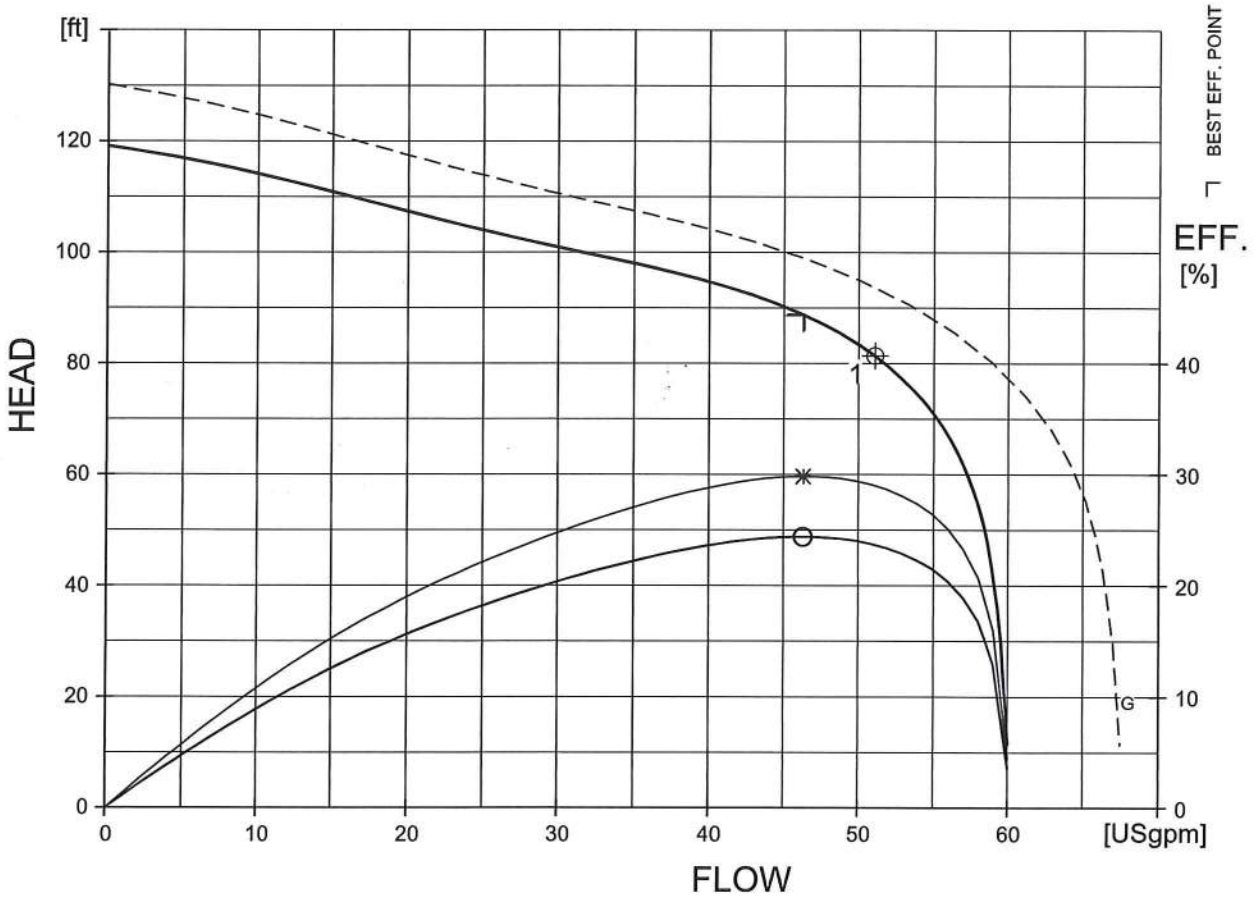
COMMENTS

INLET/OUTLET: - / 1.5 inch

IMP. THROUGHLET: ---



DUTY-POINT	FLOW[USgpm]	HEAD[ft]	POWER [hp]	EFF. [%]	NPSHre[ft]	GUARANTEE
1	51.1	81.4	4.41 (3.61)	23.7 (29.0)		
B.E.P.	46.3	88.8		24.4 (29.8)		HI level A



GUARANTEE BETWEEN LIMITS (G) ACC. TO: HI level A

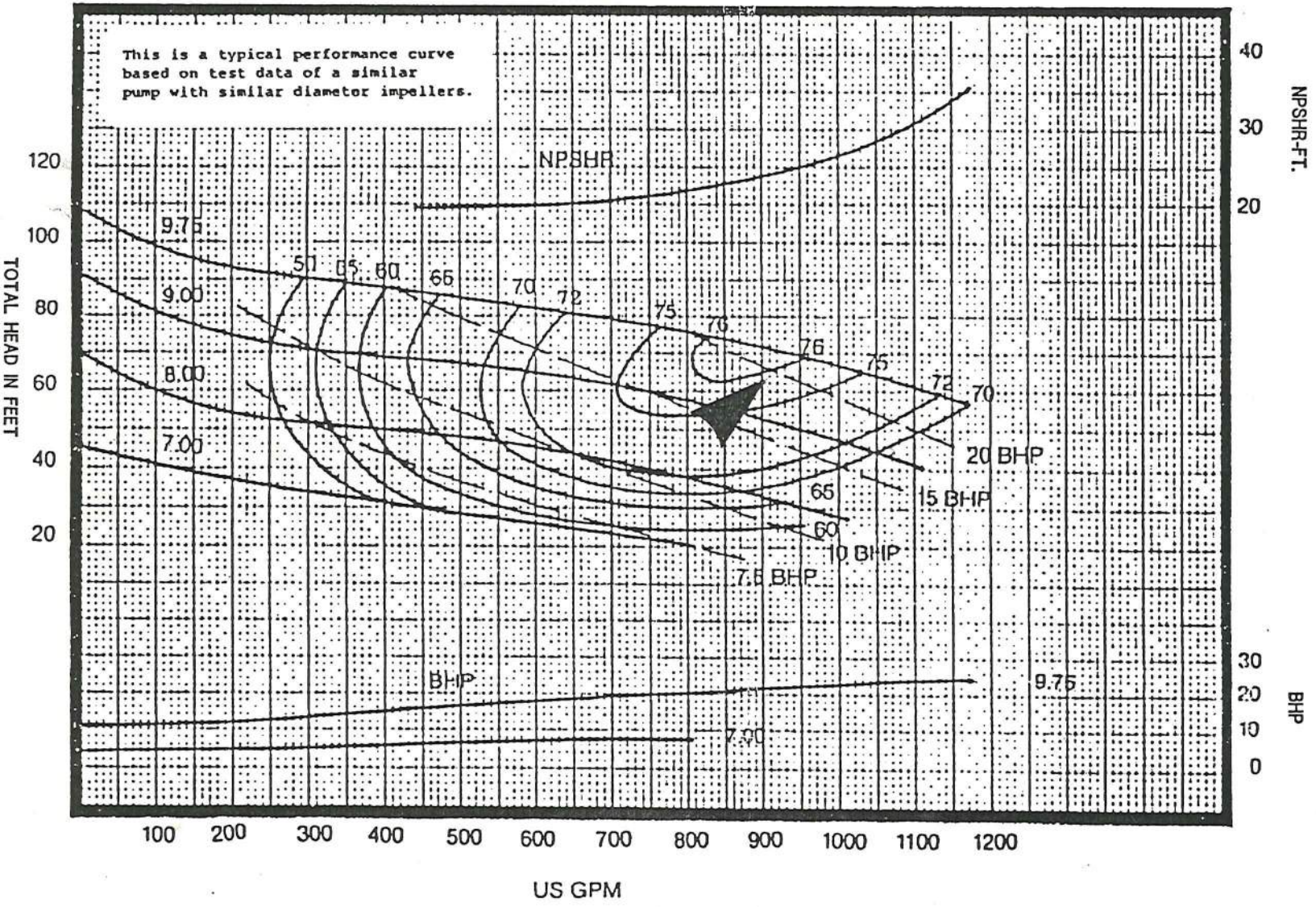
Performance with clear water and ambient temp 40 °C

FLYPS3.1.6.2 (20060531)

CK3S1-058931

PERFORMANCE CURVE

OPERATING CONDITIONS: 900 GPM AT 62 FT. TDH



4" CLV
(CENTERLINE VOLUTE)

5412
VERTICAL FOR FLEXIBLE SHAFTING

5422
HORIZONTAL

5432
VERTICAL BILTOGETHER

5432M&W
SUBMERSIBLE

5442
VERTICAL CLOSE COUPLED

1770 RPM

NO. OF VANES
2

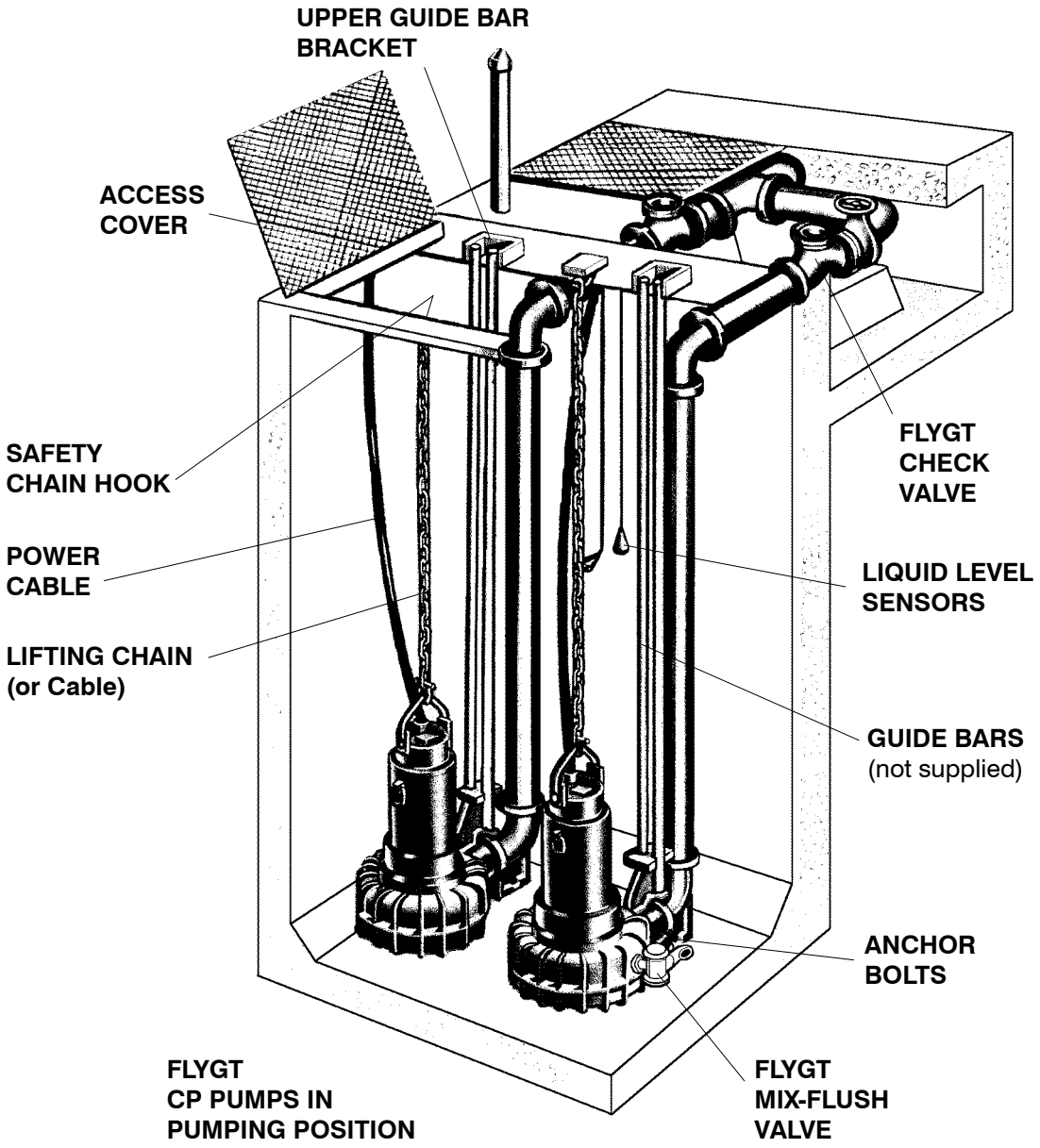
SUCTION SIZE
5422CLV: 4"
OTHER: 4" OR 6"

IMPELLER
T4B1A

EYE AREA
12.60 SQ. IN.

MAX. SPHERE
3"

Typical Flygt Duplex "CP" Pump Station



APPENDIX E

DAILY MONITORING REPORTS

Effluent Pump Station										
Summary for AUGUST 2017										
			Meter Readings	Pump Hours		Routing of Effluent {Start/Stop}				
DATE	Time	Pond Level (ft)	Totalizer	Pump #1	Pump #2	Lagoons to Res	Lagoons to Field	Lagoons to W RIB	Lagoons to E RIB	Reservoir to Fields
8/1/2017	8:20 AM		5953944.0	08086.8	30168.6		ON			
8/7/2017	10:05 AM		5953944.6	08086.8	30168.6		ON			
8/9/2017	8:20 AM		5953944.9	08086.8	30168.6		ON			
8/10/2017	11:00AM		5953945.3	08086.8	30168.6		ON			
8/14/2017	10:05 AM		5953945.4	08086.8	30168.6		ON			
8/16/2017	8:20AM		5953945 .6	08086.8	30168.6		ON			
8/17/2017	8:30 AM		5953950.9	08086.8	30168.6		ON			
8/21/2017	8:15 AM		5953952.2	08086.8	30168.6		ON			
8/22/2017	8:15 AM		5953952.3	08086.8	30168.6		ON			
8/23/2017	8:25 AM		5953953.1	08086.8	30168.6		ON			
8/28/2017	8:35 AM		5954219.8	08086.8	30168.6		ON			
8/29/2017	8:30 AM		5954259.3	08086.8	30168.6		ON			
8/30/2017	10:35 AM		5954339.9	8086.8	30168.6		ON			
8/30/2017	8:05 AM		5954356.5	08086.8	30168.6		ON			
			413							

Effluent Pump Station										
Summary for JULY 2017										
			Meter Readings	Pump Hours		Routing of Effluent {Start/Stop}				
DATE	Time	Pond Level (ft)	Totalizer	Pump #1	Pump #2	Lagoons to Res	Lagoons to Field	Lagoons to W RIB	Lagoons to E RIB	Reservoir to Fields
7/3/2017	8:10 AM		5953794.4	08086.9	30168.6		ON			
7/5/2017	8:10 AM		5953803.4	08086.9	30168.6		ON			
7/6/2017	8:45 AM		5953803.4	08086.9	30168.6		ON			
7/7/2017	10:40 AM		5953803.8	08086.9	30168.6		ON			
7/10/2017	8:50 AM		5953806.7	08086.9	30168.6		ON			
7/11/2017	8:20 AM		5953808.1	08086.9	30168.6		ON			
7/12/2017	8:20 AM		5953808.8	08086.9	30168.6		ON			
7/13/2017	1:45 AM		5953823.1	08086.9	30168.6		ON			
7/14/2017	8:10 AM		5953826.0	08086.9	30168.6		ON			
7/17/2017	8:30 AM		5953870.6	08086.9	30168.6		ON			
7/18/2017	8:35 AM		5953871.4	08086.9	30168.6		ON			
7/19/2017	8:45 AM		5953876.4	08086.9	30168.6		ON			
7/20/2017	8:05 AM		595882.5	08086.9	30168.6		ON			
7/21/2017	8:20AM		5953893.6	08086.9	30168.6		ON			
7/24/2017	8:50 AM		5953941.8	08086.9	30168.6		ON			
7/25/2017	8:30 AM		5953942.6	08086.9	30168.6		ON			
7/26/2017	11:00 AM		5953943.6	08086.9	30168.6		ON			
7/27/2017	8:15 AM		5953943.9	08086.9	30168.6		ON			
7/28/2017	8:15 AM		5953 943.9	08086.9	30168.6		ON			
7/31/2017	8:25 AM		5953944.0	08086.9	30168.6		ON			
		5.34	**150**							

Effluent Pump Station										
Summary for June 2017										
			Meter Readings	Pump Hours		Routing of Effluent {Start/Stop}				
DATE	Time	Pond Level (ft)	Totalizer	Pump #1	Pump #2	Lagoons to Res	Lagoons to Field	Lagoons to W RIB	Lagoons to E RIB	Reservoir to Fields
6/1/2017	8:15 AM		5949196.8	07999.3	30082.7		OFF	ON		

6/6/2017	9:10AM		5949208	07999.3	30082.7		OFF	ON		
6/7/2017	1:35 AM		5949209.8	7999.3	30082.7		OFF	ON		
6/8/2017	8:35 AM		5949211.1	07999.3	30082.7		OFF	ON		
6/9/2017	8:25 AM		5949211.3	07999.3	30082.7		OFF	ON		
6/12/2017	8:55 AM		5949211.5	07999.3	30082.7		OFF	ON		
6/13/2017	8:25 AM		5949211.5	07999.3	30082.7		OFF	ON		
6/16/2017	8:10 AM		5949217.7	07999.3	30082.7		OFF	ON		
6/19/2017	8:35 AM		5949236.1	07999.3	30082.7		OFF	ON		
6/26/2017	9:00AM		5949247.6	07999.3	30082.7		OFF	ON		
6/28/2017	8:00AM		5949249.3	07999.3	30082.7		OFF	ON		
6/30/2017	8:10 AM		5950234.6	08020.1	30103.5		OFF	ON		
		35	**1,038**							

Effluent Pump Station										
Summary for MAY 2017										
			Meter Readings	**Pump Hours**		**Routing of Effluent {Start/Stop}**				
DATE	**Time**	**Pond Level (ft)**	**Totalizer**	**Pump #1**	**Pump #2**	**Lagoons to Res**	**Lagoons to Field**	**Lagoons to W RIB**	**Lagoons to E RIB**	**Reservoir to Fields**
5/1/2017	8:20 AM		5906279.6	07848.0	29931.6		OFF	ON		
5/2/2017	7:45 AM		5906279.6	07848.0	29931.6		OFF	ON		
5/3/2017	1:35 AM		5906279.6	07848.0	29931.6		OFF	ON		
5/4/2017	8:35 AM		5906279.6	07848.0	29931.6		OFF	ON		
5/5/2017	8:25 AM		5920792.0	07865.4	29949.0		OFF	ON		
5/8/2017	8:55 AM		5943829.3	07919.5	30003.1		OFF	ON		
5/9/2017	8:25 AM		5943829.3	07919.5	30003.1		OFF	ON		
5/10/2017	8:10 AM		5943829.3	07919.5	30003.1		OFF	ON		
5/11/2017	8:35 AM		5943829.3	07919.5	30003.1		OFF	ON		
5/12/2017	9:00 AM		5943829.3	07919.5	30003.1		OFF	ON		
5/15/2017	8:00 AM		5943829.3	07919.5	30003.1		OFF	ON		
5/17/2017	8:10 AM		5943829.3	7919.5	30003.1		OFF	ON		
5/18/2017	8:25 AM		5943829.3	07919.5	30003.1		OFF	ON		
5/19/2017	8:35 AM		5943829.3	07919.5	30003.1		OFF	ON		
5/23/2017	8:20 AM		5947967.2	07980.4	30063.9		OFF	ON		
5/24/2017	8:25 AM		5949173.5	07999.3	30082.7		ON	OFF		
5/25/2017	8:20 AM		5949173.5	07999.3	30082.7		ON	OFF		
5/30/2017	8:25 AM		5949194.1	07999.3	30082.7		ON	OFF		
5/31/2017	8:50AM	1384	5949196.4	07999.3	30082.7		ON	OFF		
			42,917							

Effluent Pump Station										
Summary for April 2017										
			Meter Readings	**Pump Hours**		**Routing of Effluent {Start/Stop}**				
DATE	**Time**	**Pond Level (ft)**	**Totalizer**	**Pump #1**	**Pump #2**	**Lagoons to Res**	**Lagoons to Field**	**Lagoons to W RIB**	**Lagoons to E RIB**	**Reservoir to Fields**
4/3/2017	8:25 AM		5785917.6	07732.2	29815.8	ON				
4/4/2017	8:00 AM		5813 213.3	07755.8	29839.5	ON				
4/5/2017	8:00AM		5830902.1	07772.1	29855.7	ON				
4/6/2017	7:00 AM		5830902.1	07772.1	29855.7	ON				
4/7/2017	10 :35 AM		5834519.3	07776.1	29858.7	OFF		ON		
4/10/2017	9:50 AM		5839388.5	07779.3	29862.9	OFF		ON		
4/12/2017	8:10 AM		5839388.5	07779.3	29862.9	OFF		ON		
4/13/2017	7:44 AM		5839388.5	07779.3	29862.9	OFF		ON		
4/14/2017	8:15 AM		5839388.5	07779.3	29862.9	OFF		ON		
4/17/2017	8:30AM		5839388.5	07779.3	29862.9	OFF		ON		

4/18/2017	8:05 AM		5839388.5	07779.3	29862.9	OFF		ON		
4/19/2017	7:55 AM		5840761	07782.1	29865.7	OFF		ON		
4/20/2017	8:10 AM		5854683.0	07806.5	29880	OFF		ON		
4/21/2017	8:00AM		5885339.2	7830.2	29913.8	OFF		ON		
4/24/2017	8:30 AM		5906279.6	07848.0	29931.6	OFF		ON		
4/26/2017	8:30AM		5906279.6	07848.0	29931.6	OFF		ON		
4/27/2017	8:10AM		5906279.6	07848.0	29931.6	OFF		ON		
4/28/2017	8:15AM		5906279.6	07848.0	29931.6	OFF		ON		
		4814	**120,362**							

Effluent Pump Station										
Summary for March 2017										
			Meter Readings	**Pump Hours**		**Routing of Effluent {Start/Stop}**				
DATE	**Time**	**Pond Level (ft)**	**Totalizer**	**Pump #1**	**Pump #2**	**Lagoons to Res**	**Lagoons to Field**	**Lagoons to W RIB**	**Lagoons to E RIB**	**Reservoir to Fields**
3/1/2017	7:50 AM		5549120.9	7528.2	29616.9	ON				
3/3/2017	8:00AM		5599132.1	7570.2	29658.9	ON				
3/6/2017	8:20 AM		5642933.0	7611.7	29695.5	ON				
3/7/2017	9:05 AM		5642933.0	7611.7	29695.5	ON				
3/8/2017	8:15 AM		5642933.0	7611.7	29695.5	ON				
3/9/2017	8:05 AM		5642933.0	7611.7	29695.5	ON				
3/10/2017	8:15 AM		5642933.0	7611.7	29695.5	ON				
3/13/2017	8:55 AM		5642933.0	7611.7	29695.5	ON				
3/14/2017	8:10AM		5642933.0	7611.7	29695.5	ON				
3/15/2017	8:00 AM		5642933.0	7611.7	29695.5	ON				
3/16/2017	8:00AM		5642933.0	7611.7	29695.5	ON				
3/17/2017	8:00 AM		5649331.0	7616.8	29700.6	ON				
3/20/2017	8:15 AM		5733066.7	7689.1	29772.8	ON				
3/21/2017	8:10AM		5737258.3	7693.0	29776.7	ON				
3/22/2017	10:45 AM		5737258.3	7693.0	29776.7	ON				
3/23/2017	8:15AM		5737258.3	7693.0	29776.7	ON				
3/24/2017	8:00AM		5737258.3	7693.0	29776.7	ON				
3/30/2017	7:20AM		5737258.3	7693.0	29776.7	ON				
		6271	**188,137**							

Effluent Pump Station										
Summary for February 2017										
			Meter Readings	**Pump Hours**		**Routing of Effluent {Start/Stop}**				
DATE	**Time**	**Pond Level (ft)**	**Totalizer**	**Pump #1**	**Pump #2**	**Lagoons to Res**	**Lagoons to Field**	**Lagoons to W RIB**	**Lagoons to E RIB**	**Reservoir to Fields**
2/1/2017	8:05 AM		5382720.1	7372.8	29461.6	ON				
2/3/2017	8:40 AM		5400987.8	7389.9	294787	ON				
2/6/2017	8:15 AM		5400987.8	7389.9	294787	ON				
2/7/2017	8:05 AM		5400987.8	7389.9	294787	ON				
2/8/2017	8:40AM		5400987.8	7389.9	294787	ON				
2/9/2017	8:50AM		5400987.8	7389.9	294787	ON				
2/10/2017	8:20 AM		5406565.5	7394.5	29483.3	ON				
2/13/2017	7:20 AM		5485146	7465.6	29483.3	ON				
2/14/2017	8:40 AM		5511268.9	7490.9	29579.6	ON				
2/17/2017	8:10 AM		5549120.9	75282	29616.9	ON				
2/21/2017	8:10 AM		5549120.9	75282	29616.9	ON				
2/22/2017	10:45 AM		5549120.9	75282	29616.9	ON				
2/23/2017	8:25 AM		5549120.9	75282	29616.9	ON				
2/24/2017	8:15 AM		5549120.9	75282	29616.9	ON				

2/27/2017	8:15 AM		5549120.9	75282	29616.9	ON				
2/28/2017	9:00 AM		5549120.9	75282	29616.9	ON				
			166,401							

Effluent Pump Station										
Summary for January 2017										
			Meter Readings	**Pump Hours**		**Routing of Effluent {Start/Stop}**				
DATE	**Time**	**Pond Level (ft)**	**Totalizer**	**Pump #1**	**Pump #2**	**Lagoons to Res**	**Lagoons to Field**	**Lagoons to W RIB**	**Lagoons to E RIB**	**Reservoir to Fields**
1/3/2017	8:30		5135638.4	7158.4	29265.9	ON				
1/4/2017	8:35		5135638.4	7158.4	29265.9	ON				
1/6/2017	8:35		5174169.5	7191	29283.8	ON				
1/10/2017	7:45		5223043.7	7234.5	29327.2	ON				
1/11/2017	8:15		5223043.7	7234.5	29327.2	ON				
1/13/2017	8:00		5223043.7	7234.5	29327.2	ON				
1/17/2017	8:25		5245265.1	7252.4	29345.2	ON				
1/18/2017	8:10		5272793.5	7276.8	29369	ON				
1/19/2017	8:05		5299293.5	7300.1	29392.9	ON				
1/20/2017	8:05		5306150.9	7306.5	29395.3	ON				
1/25/2017	8:40		5306150.9	7306.5	29395.3	ON				
1/26/2017	8:20		5306150.9	7306.5	29395.3	ON				
1/27/2017	8:20		5306150.9	7306.5	29395.3	ON				
1/30/2017	8:45		5329298.9	7325.3	29414.1	ON				
1/31/2017	8:10		5356598	7348.9	29437.7	ON				
		7891	**220,960**							

Effluent Pump Station										
Summary for December 2016										
			Meter Readings	**Pump Hours**		**Routing of Effluent {Start/Stop}**				
DATE	**Time**	**Pond Level (ft)**	**Totalizer**	**Pump #1**	**Pump #2**	**Lagoons to Res**	**Lagoons to Field**	**Lagoons to W RIB**	**Lagoons to E RIB**	**Reservoir to Fields**
12/1/2016	8:35		49625651	7001.6	29109.2	ON				
12/2/2016	8:30		49625651	7001.6	29022.3	ON				
12/5/2016	8:20		49625651	7001.6	29022.3	ON				
12/6/2016	2:30		49625651	7001.6	29022.3	ON				
12/7/2016	8:15		49625651	7001.6	29022.3	ON				
12/8/2016	2:40		49625651	7001.6	29022.3	ON				
12/9/2016	2:25		49625651	7001.6	29022.3	ON				
12/13/2016	8:30		50449205	7077	29184.8	ON				
12/14/2016	8:20		50516139	7083.4	29191.1	ON				
12/15/2016	10:15		50516139	7083.4	29191.1	ON				
12/16/2016	8:20		50516139	7083.4	29191.1	ON				
12/19/2016	9:30		50516139	7083.4	29191.1	ON				
12/20/2016	8:25		50516139	7083.4	29191.1	ON				
12/21/2016	8:10		50516139	7083.4	29191.1	ON				
12/22/2016	9:50		50516139	7083.4	29191.1	ON				
12/23/2016	8:25		50516139	7083.4	29191.1	ON				
12/27/2016	8:30		51356384	7158.4	29265.9	ON				
12/28/2016	9:30		51356384	7158.4	29265.9	ON				
12/30/2016	8:15		51356384	7158.4	29265.9	ON				
		57691	**1,730,733**							

Effluent Pump Station
Summary for November 2016

			Meter Readings	Pump Hours		Routing of Effluent {Start/Stop}				
DATE	Time	Pond Level (ft)	Totalizer	Pump #1	Pump #2	Lagoons to Res	Lagoons to Field	Lagoons to W RIB	Lagoons to E RIB	Reservoir to Fields
11/1/2016	8:15		48927221	6914.7	29022.3			ON		
11/2/2016	8:35		48940831	6914.7	29022.3			ON		
11/3/2016	11:20		48955823	6914.7	29022.3			ON		
11/9/2016	3:00		49043573	6914.7	29022.3			ON		
11/10/2016	8:20		49054517	6914.7	29022.3			ON		
11/15/2016	8:15		49131176	6914.7	29022.3			ON		
11/16/2016	1:10		49149859	6914.7	29022.3			ON		
11/17/2016	8:15		49161844	6914.7	29022.3			ON		
11/21/2016	10:25		49226127	6914.7	29022.3			ON		
11/22/2016	8:00		49241156	6914.7	29022.3			ON		
11/23/2016	8:00		49314370	6914.7	29038.9			ON		
11/28/2016	8:30		49625615	7001.6	29109.2		ON	OFF		
11/29/2016	8:20		49625615	7001.6	29109.2		ON	OFF		
11/30/2016	7:55		49625615	7001.6	29109.2		ON	OFF		
		23280	**698,394**							

Effluent Pump Station										
Summary for October 2016										
			Meter Readings	Pump Hours		Routing of Effluent {Start/Stop}				
DATE	Time	Pond Level (ft)	Totalizer	Pump #1	Pump #2	Lagoons to Res	Lagoons to Field	Lagoons to W RIB	Lagoons to E RIB	Reservoir to Fields
10/6/2016	11:35		47792659	6812	28919.7		ON			
10/11/2016	8:35		47831284	6812	28919.7		ON			
10/12/2016	7:50		47838463	6812	28919.7		ON			
10/13/2016	8:30		47853687	6812	28919.7		ON			
10/14/2016	8:40		47869017	6812	28919.7		ON			
10/17/2016	8:35		48056203	6828.2	28935.8		ON			
10/19/2016	10:50		48472751	6878.4	28986		ON			
10/20/2016	8:10		48671175	6899.8	29007.4		ON			
10/24/2016	10:50		48833878	6914.7	29022.3		ON			
10/25/2016	8:10		48842527	6914.7	29022.3		ON			
10/27/2016	8:10		48864052	6914.7	29022.3		ON			
10/31/2016	8:45		48914193	6914.7	29022.3		ON			
		43136	**1,121,534**							

Effluent Pump Station										
Summary for September 2016										
			Meter Readings	Pump Hours		Routing of Effluent {Start/Stop}				
DATE	Time	Pond Level (ft)	Totalizer	Pump #1	Pump #2	Lagoons to Res	Lagoons to Field	Lagoons to W RIB	Lagoons to E RIB	Reservoir to Fields
9/6/2016	8:20		47531363	6812	28919.7		On			
9/7/2016	8:20		47534060	6812	28919.7		On			
9/8/2016	8:00		47538625	6812	28919.7		On			
9/9/2016	8:25		47542675	6812	28919.7		On			
9/12/2016	8:25		47551935	6812	28919.7		On			
9/15/2016	9:20		47579803	6812	28919.7		On			
9/16/2016	2:40		47592830	6812	28919.7		On			
9/19/2016	10:30		47623552	6812	28919.7		On			
9/21/2016	8:05		47641706	6812	28919.7		On			
9/22/2016	8:05		47651380	6812	28919.7		On			
9/23/2016	8:15		47661146	6812	28919.7		On			

9/26/2016	8:15		47691622	6812	28919.7		On			
9/27/2016	8:25		47702854	6812	28919.7		On			
9/29/2016	3:10		47730087	6812	28919.7		On			
9/30/2016	8:30		47738385	6812	28919.7		On			
		8281	**207,022**							

Effluent Pump Station										
Summary for August 2016										
			Meter Readings	**Pump Hours**		**Routing of Effluent {Start/Stop}**				
DATE	**Time**	**Pond Level (ft)**	**Totalizer**	**Pump #1**	**Pump #2**	**Lagoons to Res**	**Lagoons to Field**	**Lagoons to W RIB**	**Lagoons to E RIB**	**Reservoir to Fields**
8/1/2016	9:30		47418292	6812	28919.7		ON			
8/3/2016	9:00		47418292	6812	28919.7		ON			
8/8/2016	8:45		47418293	6812	28919.7		ON			
8/9/2016	8:20		47418300	6812	28919.7		ON			
8/10/2016	8:15		47418304	6812	28919.7		ON			
8/11/2016	8:15		47418309	6812	28919.7		ON			
8/12/2016	10:10		47418329	6812	28919.7		ON			
8/16/2016	11:10		47418375	6812	28919.7		ON			
8/17/2016	8:50		47418396	6812	28919.7		ON			
8/22/2016	8:30		47429353	6812	28919.7		ON			
8/23/2016	7:55		47435403	6812	28919.7		ON			
8/24/2016	2:00		47443318	6812	28919.7		ON			
8/25/2016	8:10		47449464	6812	28919.7		ON			
8/26/2016	8:05		47459377	6812	28919.7		ON			
8/29/2016	8:40		47487651	6812	28919.7		ON			
8/30/2016	8:00		47496400	6812	28919.7		ON			
8/31/2016	8:00		47504951	6812	28919.7		ON			
		2795	**86,659**							

Carlin Public Works
Influent Report

City ofCarlin, Nevada

Compilation of Data
Raw (Influent) Pump Station
Corrected for Meter Error

PUMP 1 FLOW: 708 GPM
PUMP 2 FLOW: 598 GPM

BLACK COLUMNS REQUIRE DATA ENTRY
RED COLUMNS ARE SELF-CALCULATING

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMP 2 (HRS)	TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	CORR. FLOW (MGD)	PUMP FLOW (GPM)	CHNG (%)
AUGUST 2017													
LAST READINGS FOR PREVIOUS MONTH													
7/31/2017		11173.9	9700.7				349,701						
	1			3.80	4.20	8.00		3,498	3,121	0.35	0.31	729	10.8%
8/1/2017		11177.7	09704.9				353,199						
	3			11.80	13.40	25.20		10,998	9,821	0.37	0.33	727	10.7%
8/4/2017		11189.5	09718.3				364,197						
	3			11.90	13.00	24.90		11046	9,720	0.37	0.32	739	12.0%
8/7/2017		11201.4	09731.3				375,243						
	2			7.20	8.60	15.80		6759	6,144	0.34	0.31	713	9.1%
8/9/2017		11208.6	09739.9				382,002						
	1			4.30	4.80	9.10		3933	3,549	0.39	0.35	720	9.8%
8/10/2017		11212.9	09744.7				385,935						
	4			15.00	17.00	32.00		13938	12,472	0.35	0.31	726	10.5%
8/14/2017		11227.9	09761.7				399,873						
	2			7.10	8.80	15.90		7179	6,174	0.36	0.31	753	14.0%
8/16/2017		11235.0	09770.5				407,052						
	1			9.30	9.90	19.20		8,023	7,503	0.80	0.75	696	6.5%
8/17/2017		11244.3	09780.4				415,075						
	4			11.90	13.80	25.70		10,969	10,007	0.27	0.25	711	8.8%
8/21/2017		11256.2	09794.2				426,044						
	1			3.90	4.40	8.30		3541	3,235	0.35	0.32	711	8.6%
8/22/2017		11260.1	09798.6				429,585						
	1			4.20	4.80	9.00		3836	3,506	0.38	0.35	710	8.6%
8/23/2017		11264.3	09803.4				433,421						
	5			19.10	22.00	41.10		17590	16,007	0.35	0.32	713	9.0%
8/28/2017		11283.4	09825.4				451,011						
	1			3.70	4.30	8.00		3416	3,115	0.34	0.31	712	8.8%
8/29/2017		11287.1	09829.7				454,427						
	1			4.10	4.70	8.80		3814	3,428	0.38	0.34	722	10.1%
8/30/2017		11291.2	09834.4				458,241						
	1			3.40	3.80	7.20		3116	2,808	0.31	0.28	721	9.9%
8/31/2017		11294.6	09838.2				461,357						

Average 0.345

Carlin Public Works
Influent Report

City ofCarlin, Nevada

Compilation of Data
Raw (Influent) Pump Station
Corrected for Meter Error

PUMP 1 FLOW: 708 GPM
PUMP 2 FLOW: 595 GPM

BLACK COLUMNS REQUIRE DATA ENTRY
RED COLUMNS ARE SELF-CALCULATING

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	CORR. FLOW (MGD)	PUMP FLOW (GPM)	CHNG (%)
JULY 2017													
LAST READINGS FOR PREVIOUS MONTH													
6/30/2017		11046.3	9552.8				228,256						
	3			13.10	16.00	29.10		13,159	11,306	0.44	0.38	754	14.1%
7/3/2017		11059.4	9568.8				241,415						
	2			8.70	10.40	19.10		8,529	7,427	0.43	0.37	744	12.9%
7/5/2017		11068.1	9579.2				249,944						
	1			4.10	5.00	9.10		3981	3,536	0.40	0.35	729	11.2%
7/6/2017		11072.2	9584.2				253,925						
	1			4.80	5.30	10.10		4625	3,941	0.46	0.39	763	14.8%
7/7/2017		11077.0	9589.5				258,550						
	3			12.00	14.40	26.40		11749	10,264	0.39	0.34	742	12.6%
7/10/2017		11089.0	9603.9				270,299						
	1			3.90	4.50	8.40		3832	3,271	0.38	0.33	760	14.0%
7/11/2017		11092.9	9608.4				274,131						
	1			4.20	4.90	9.10		4070	3,542	0.41	0.35	745	13.0%
7/12/2017		11097.1	9613.3				278,201						
	2			8.40	9.60	18.00		8,056	7,013	0.40	0.35	746	12.9%
7/14/2017		11105.5	9622.9				286,257						
	3			12.50	14.40	26.90		11,323	10,477	0.38	0.35	702	7.5%
7/17/2017		11118.0	9637.3				297,580						
	1			4.00	4.50	8.50		3808	3,314	0.38	0.33	747	13.0%
7/18/2017		11122.0	9641.8				301,388						
	1			4.00	4.70	8.70		3890	3,386	0.39	0.34	745	13.0%
7/19/2017		11126.0	9646.5				305,278						
	1			4.30	4.60	8.90		3924	3,477	0.39	0.35	735	11.4%
7/20/2017		11130.3	9651.1				309,202						
	1			4.60	5.10	9.70		3606	3,784	0.36	0.38	620	-4.9%
7/21/2017		11134.9	9656.2				312,808						
	3			12.00	13.80	25.80		11528	10,049	0.38	0.33	745	12.8%
7/24/2017		11146.9	9670.0				324,336						
	1			3.90	4.60	8.50		3788	3,337	0.38	0.33	743	12.7%
7/25/2017		11150.8	9674.6				328,124						
	1			4.40	5.00	9.40		4135	3,663	0.41	0.37	733	11.4%
7/26/2017		11155.2	9679.6				332,259						
	3			3.60	4.00	7.60		3298	2,964	0.11	0.50	723	10.1%
7/27/2017		11158.8	9683.6				335,557						
	3			3.80	4.40	8.20		3657	3,193	0.12	0.50	743	12.7%
7/28/2017		11162.6	9688.0				339,214						
	3			11.30	12.70	24.00		10487	9,357	0.35	0.31	728	10.8%
7/31/2017		11173.9	9700.7				349,701						
											Average	0.366	

Carlin Public Works
Influent Report

City ofCarlin, Nevada

Compilation of Data
Raw (Influent) Pump Station
Corrected for Meter Error

PUMP 1 FLOW: 708 GPM
PUMP 2 FLOW: 598 GPM

BLACK COLUMNS REQUIRE DATA ENTRY
RED COLUMNS ARE SELF-CALCULATING

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	CORR. FLOW (MGD)	PUMP FLOW (GPM)	CHNG (%)
JUNE 2017													
LAST READINGS FOR PREVIOUS MONTH													
5/31/2017		10967.7	9306.9				84,010						
6/1/2017	1	10973.7	9314.0	6.00	7.10	13.10	89,731	5,721	5,096	0.57	0.51	728	10.9%
6/2/2017	1	10977.4	9318.2	3.70	4.20	7.90	93,204	3,473	3,079	0.35	0.31	733	11.4%
6/5/2017	3	10992.1	9335.3	14.70	17.10	31.80	107,267	14063	12,380	0.47	0.41	737	12.0%
6/6/2017	1	10994.3	9344.9	2.20	9.60	11.80	112,496	5229	4,379	0.52	0.44	739	16.3%
6/7/2017	1	10999.3	9350.7	5.00	5.80	10.80	117,319	4823	4,205	0.48	0.42	744	12.8%
6/8/2017	1	10999.9	9361.2	0.60	10.50	11.10	122,288	4969	4,022	0.50	0.40	746	19.1%
6/9/2017	1	11000.5	9372.0	0.60	10.80	11.40	127,360	5072	4,130	0.51	0.41	742	18.6%
6/12/2017	3	11016.0	9390.2	15.50	18.20	33.70	142,453	15,093	13,115	0.50	0.44	746	13.1%
6/13/2017	1	11021.2	9396.2	5.20	6.00	11.20	147,415	4,962	4,362	0.50	0.44	738	12.1%
6/14/2017	1	11026.0	9402.8	4.80	6.60	11.40	152,419	5004	4,407	0.50	0.44	732	11.9%
6/16/2017	2	11036.4	9415.1	10.40	12.30	22.70	162,593	10174	8,831	0.51	0.44	747	13.2%
6/19/2017	3	11037.4	9450.2	1.00	35.10	36.10	178,579	15986	13,019	0.53	0.43	738	18.6%
6/26/2017	7	11037.4	9521.2	0.00	71.00	71.00	192,600	14021	25,475	0.20	0.36	329	-81.7%
6/27/2017	1	11037.4	9534.8	0.00	13.60	13.60	216,257	23657	4,880	2.37	0.49	2899	79.4%
6/28/2017	1	11037.4	9541.3	0.00	6.50	6.50	219,353	3096	2,332	0.31	0.23	794	24.7%
6/30/2017	2	11046.3	9552.8	8.90	11.50	20.40	228,256	8903	7,907	0.45	0.40	727	11.2%

Average 0.411

Carlin Public Works
Influent Report

City ofCarlin, Nevada

Compilation of Data
Raw (Influent) Pump Station
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PUMP 1 FLOW: 708 GPM
PUMP 2 FLOW: 598 GPM

BLACK COLUMNS REQUIRE DATA ENTRY
RED COLUMNS ARE SELF-CALCULATING

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	CORR. FLOW (MGD)	PUMP FLOW (GPM)	CHNG (%)
MAY 2017													
LAST READINGS FOR PREVIOUS MONTH													
4/28/2017		10608.5	9082.9				917,785						
	3			16.40	-978.00	-961.60		16,410	(343,940)	0.55	(11.46)	-28	2195.9%
5/1/2017		10622.9	09104.9				934,195						
	1			5.00	1006.80	1011.80		5,043	363,364	0.50	36.34	8	-7105.3%
5/2/2017		10627.9	09111.7				939,238						
	1			6.80	9.10	15.90		6782	6,154	0.68	0.62	711	9.3%
5/3/2017		10634.7	09120.8				946,020						
	1			4.10	5.50	9.60		4091	3,715	0.41	0.37	710	9.2%
5/4/2017		10638.8	09126.3				950,111						
	1			5.20	7.00	12.20		5224	4,721	0.52	0.47	714	9.6%
5/5/2017		10644.0	09133.3				955,335						
	3			16.00	21.10	37.10		16008	14,367	0.53	0.48	719	10.2%
5/8/2017		10660.0	09154.4				971,343						
	1			1.70	9.90	11.60		4972	4,274	0.50	0.43	714	14.0%
5/9/2017		10661.7	09164.3				976,315						
	1			4.80	7.20	12.00		5,192	4,622	0.52	0.46	721	11.0%
5/10/2017		10666.5	09171.5				981,507						
	1			0.00	12.10	12.10		5,233	4,341	0.52	0.43	721	17.0%
5/11/2017		10666.5	09183.6				986,740						
	1			5.00	6.30	11.30		4900	4,384	0.49	0.44	723	10.5%
5/12/2017		10671.5	09189.9				991,640						
	3			15.30	19.80	35.10		15206	13,604	0.51	0.45	722	10.5%
5/15/2017		10686.8	09209.7				6,846						
	1			2.00	8.90	10.90		4746	4,043	0.47	0.40	726	14.8%
5/16/2017		10688.8	09218.6				11,592						
	1			7.80	4.40	12.20		5166	4,892	0.52	0.49	706	5.3%
5/17/2017		10696.6	09223.0				16,758						
	1			4.40	6.30	10.70		4936	4,130	0.49	0.41	769	16.3%
5/18/2017		10901.0	09229.3				21,694						
	1			6.10	6.30	12.40		5002	4,852	0.50	0.49	672	3.0%
5/19/2017		10907.1	09235.6				26,696						
	3			15.50	18.60	34.10		14706	13,258	0.49	0.44	719	9.8%
5/22/2017		10922.6	09254.2				41,402						
	3			5.30	6.20	11.50		4981	4,476	0.17	0.50	722	10.1%
5/23/2017		10927.9	09260.4				46,383						
	3			5.20	6.30	11.50		4953	4,469	0.17	0.50	718	9.8%
5/24/2017		10933.1	09266.7				51,336						
	1			5.10	6.00	11.10		4812	4,319	0.48	0.43	723	10.2%
5/25/2017		10938.2	09272.7				56,148						
	1			4.90	5.70	10.60		4664	4,127	0.47	0.41	733	11.5%
5/26/2017		10943.1	09278.4				60,812						
	3			19.80	22.80	42.60		18579	16,592	0.62	0.50	727	10.7%
5/30/2017		10962.9	09301.2				79,391						
	3			4.80	5.70	10.50		4619	4,084	0.15	0.50	733	11.6%
5/31/2017		10967.7	09306.9				84,010				Average	0.458	

Carlin Public Works
Influent Report

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	METER AVE. (MGD)	CORR. FLOW (MGD)	CORR. AVE. (MGD)	PUMP FLOW (GPM)	CORR FLOW (GPM)	CHNG (%)
4/3/2017		10521.3	8960.10				784,240									
	1			17.3	3.0	20.3		4,636	18,938	0.46		1.89		754		0.142
4/4/2017		10538.6	8963.1				788,876									
	3			17.4	2.9	20.3		5,396	18,307	0.18		0.61		751		0.139
4/5/2017		10556.00	8966.00				794,272									
	1			13.1	3.2	16.3		4675	20,201	0.47		2.02		744		0.130
4/6/2017		10569.1	8969.2				798,947									
	1			18.9	3.4	22.3		6302	21,463	0.63		2.15		746		0.134
4/7/2017		10588.0	8972.6				805,249									
	3			47.9	8.9	56.8		16083	56,184	0.54		1.87		740		0.126
4/10/2017		10635.9	8981.5				821,332									
	1			15.1	2.8	17.9		4895	11016	1.26		1.1		754		0.142
4/11/2017		10651.0	8984.3				826,227									
	1			16.4	2.7	19.1		5407	17,045	0.42		0.36		749		0.137
4/12/2017		10667.4	8987.0				831,634									
	1			15.9	3.0	18.9		5,312	18,938	0.53		1.89		743		0.130
4/13/2017		10683.3	8990.0				836,946									
	1			16.3	3.3	19.6		5,527	20,832	0.55		2.08		752		0.141
4/14/2017		10699.6	8993.3				842,473									
	3			48.8	9.0	57.8		16012	56,815	0.53		1.89		732		0.117
4/17/2017		10748.4	9002.3				858,485									
	1			5.3	7.1	12.4		5063	44,821	0.51		4.48		745		0.134
4/18/2017		10753.7	9009.4				863,548									
	2			10.1	16.0	26.1		11083	101,004	0.55		5.05		730		0.115
4/20/2017		10763.8	9025.4				874,631									
	1			5.4	7	12.4		5410	26164	0.60		0.45		852		0.242
4/21/2017		10769.2	9032.4				880,041									
	3			15.7	20.9	36.6		15815	11847	0.65		0.57		736		0.122
4/24/2017		10784.9	9053.3				895,856									
	2			10.9	14.8	25.7		10951	93,429	0.55		4.67		730		0.115
4/26/2017		10795.8	9068.1				906,807									
	1			5.3	7.3	12.6		5433	7605	0.53		0.76		615		0.049
4/27/2017		10801.1	9075.4				912,240									
	1			5.4	7.5	12.9		5545	47,346	0.55		4.73		730		0.115
4/28/2017		10806.5	9082.9				917,785									

Carlin Public Works
Influent Report

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3/1/2017		9963.0	8,837.2				599,660									
	1			39.0	9.3	48.3		12,442	55,594	1.24		5.56		754		0.142
3/3/2017		10002.0	8846.5				612,102									
	3			56.2	16.0	72.2		17,872	95,645	0.60		3.19		751		0.139
3/6/2017		10058.2	8862.5				629,974									
	1			17.2	6.1	23.3		5927	36,465	0.59		3.65		744		0.130
3/7/2017		10075.4	8868.6				635,901									
	1			14.4	7.2	21.6		5617	43,040	0.56		4.30		746		0.134
3/8/2017		10089.8	8875.8				641,518									
	1			17.2	5.6	22.8		5635	33,476	0.56		3.35		740		0.126
3/9/2017		10107.0	8881.4				647,153									
	1			15.2	8.6	23.8		5159	11016	1.26		1.1		754		0.142
3/10/2017		10122.2	8890.0				652,312									
	3			50.0	9.6	59.6		16649	57,387	0.42		0.36		749		0.137
3/13/2017		10172.2	8899.6				668,961									
	1			16.6	2.8	19.4		5,559	16,738	0.56		1.67		743		0.130
3/14/2017		10188.8	8902.4				674,520									
	1			19.6	2.3	21.9		6,023	13,749	0.60		1.37		752		0.141
3/15/2017		10208.4	8904.7				680,543									
	1			17.0	(897.3)	(880.3)		5536	(5,363,880)	0.55		(536.39)		732		0.117
3/16/2017		10225.4	8007.4				686,079									
	1			15.7	903.9	919.6		5439	5,403,333	0.54		540.33		745		0.134
3/17/2017		10241.1	8911.3				691,518									
	3			47.6	8.6	56.2		16102	51,409	0.54		1.71		730		0.115
3/20/2017		10288.7	8919.9				707,620									
	1			16	3.4	19.4		5351	7605	0.53		0.76		615		0.049
3/21/2017		10304.7	8923.3				712,971									
	1			20.3	2.3	22.6		6541	26164	0.60		0.45		852		0.242
3/22/2017		10325.0	8925.6				719,512									
	1			13.7	2.6	16.3		4724	11847	0.65		0.57		736		0.122
3/23/2017		10338.7	8928.2				724,236									
	1			16.2	2.4	18.6		5315	14,347	0.53		1.43		730		0.115
3/24/2017		10354.9	8930.6				729,551									
	3			51.3	10.1	61.4		17292	7605	0.53		0.76		615		0.049
3/27/2017		10406.2	8940.70				746,843									
	1			12.5	2.3	14.8		4059	13,749	0.41		1.37		730		0.115
3/28/2017		10418.7	8943.0				750,902									
	2			33.7	5.7	39.4		10846	7605	0.53		0.76		615		0.049
3/30/2017		10452.4	8948.7				761,748									
	1			18.3	2.4	20.7		5544	26164	0.60		0.45		852		0.242
3/31/2017		10470.7	8951.1				767,292									

MARCH 2017

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	METER AVE. (MGD)	CORR. FLOW (MGD)	CORR. AVE. (MGD)	PUMP FLOW (GPM)	CORR FLOW (GPM)	CHNG (%)
2/1/2017		9,430.1	8,704.7				423,497									
	1			35.0	6.8	41.8		11,558	17,308	1.16		1.73		754		0.142
2/3/2017		9,465.1	8,711.5				435,055									
	3			46.8	18.4	65.2		19,325	26,483	0.64		0.88		751		0.139
2/6/2017		9,511.9	8,729.9				454,380									
	1			24.9	7.0	31.9		6463	13,089	0.65		1.31		744		0.130
2/7/2017		9,536.8	8,736.9				460,843									
	1			18.6	7.0	25.6		6756	10,413	0.68		1.04		746		0.134
2/8/2017		9,555.4	8,743.9				467,599									
	1			19.7	4.8	24.5		6377	10,091	0.64		1.01		740		0.126
2/9/2017		9,575.1	8,748.7				473,976									
	1			20.4	3.4	23.8		6410	11016	1.26		1.1		754		0.142
2/10/2017		9,595.5	8,752.1				480,386									
	3			58.5	17.9	76.4		19180	31,273	0.42		0.36		749		0.137
2/13/2017		9,654.0	8,770.0				499,566									
	1			21.6	6.1	27.7		7,007	11,364	0.70		1.14		743		0.130
2/14/2017		9,675.6	8,776.1				506,573									
	1			19.2	3.9	23.1		6,213	9,555	0.62		0.96		752		0.141
2/15/2017		9,694.8	8,780.0				512,786									
	1			18.9	4.3	23.2		6245	9,572	0.62		0.96		732		0.117
2/16/2017		9,713.7	8,784.3				519,031									
	1			18.8	3.8	22.6		7691	9,350	0.77		0.93		745		0.134
2/17/2017		9,732.5	8,788.1				526,722									
	4			75.1	13.2	88.3		22921	36,639	0.57		0.92		730		0.115
2/21/2017		9,807.6	8,801.3				549,643									
	1			22.7	4.3	27		6921	7605	0.53		0.76		615		0.049
2/22/2017		9,830.3	8,805.6				556,564									
	1			17.9	4.9	22.8		12193	26164	0.60		0.45		852		0.242
2/23/2017		9,848.2	8,810.5				568,757									
	1			19.8	3.4	23.2		1000000	11847	0.65		0.57		736		0.122
2/24/2017		9,868.0	8,813.9				568,757									
	3			59.9	14.3	74.2		19477	30,576	0.65		1.02		730		0.115
2/27/2017		9,927.9	8,828.2				588,234									
	1			18.5	5.1	23.6		6150	7605	0.53		0.76		615		0.049
2/28/2017		9,946.4	8,833.3				594,384									

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1/3/2017		9,084.3	8,529.0				255,861									
	1			4.7	6.5	11.2		4,762	4,329	0.48		0.43		754		0.142
1/4/2017		9,089.0	8,535.5				260,623									
	3			12.7	13.8	26.5		11,540	10,346	0.38		0.34		751		0.139
1/8/2017		9,101.7	8,549.3				272,163									
	3			13.9	29.6	43.5		18934	16,525	0.63		0.55		744		0.130
1/9/2017		9,115.6	8,578.9				291,097									
	1			2.2	19.5	21.7		9057	7,931	0.91		0.79		746		0.134
1/10/2017		9,117.8	8,598.4				300,154									
	1			4.5	6.9	11.4		4909	4,387	0.49		0.44		740		0.126
1/11/2017		9,122.3	8,605.3				305,063									
	1			2.2	28.1	30.3		12685	11016	1.26		1.1		754		0.142
1/13/2017		9,124.5	8,633.4				317,748									
	4			63.2	16.7	79.9		22506	32,839	0.42		0.36		749		0.137
1/17/2017		9,187.7	8,650.1				340,254									
	1			16.3	3.4	19.7		5,465	8,144	0.55		0.81		743		0.130
1/18/2017		9,204.0	8,653.5				345,719									
	1			16.5	3.2	19.7		5,573	8,157	0.56		0.82		752		0.141
1/19/2017		9,220.5	8,656.7				351,292									
	1			15.6	4.2	19.8		5574	8,134	0.56		0.81		732		0.117
1/20/2017		9,236.1	8,660.9				356,866									
	5			77.2	19.9	97.1		27611	39,935	0.55		0.80		745		0.134
1/25/2017		9,313.3	8,680.8				384,477									
	1			13.9	4.1	18.0		5142	7,376	0.51		0.74		730		0.115
1/26/2017		9,327.2	8,684.9				389,619									
	1			15.2	3.2	18.4		5264	7605	0.53		0.76		615		0.049
1/27/2017		9,342.4	8,688.1				394,883									
	3			53.4	9.7	63.1		17240	26164	0.60		0.45		852		0.242
1/30/2017		9,395.8	8,697.8				412,123									
	1			17.5	12.3	29.8		5761	11847	0.65		0.57		736		0.122
1/31/2017		9,413.3	8,710.1				417,884									

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	METER AVE. (MGD)	CORR. FLOW (MGD)	CORR. AVE. (MGD)	PUMP FLOW (GPM)	CORR FLOW (GPM)	CHNG (%)
12/1/2016		8,923.6	8,316.5				91,257									
	1			4.3	5.4	9.7		4388	3,764	0.44		0.38		754		0.142
12/2/2016		8,927.9	8,321.9				95,645									
	3			13.6	17.3	30.9		13,916	11,985	0.46		0.40		751		0.139
12/5/2016		8,941.5	8,339.2				109,561									
	1			5.6	6.9	12.5		5,581	4,855	0.56		0.49		744		0.130
12/6/2016		8,947.1	8,346.1				115,142									
	1			3.1	4.0	7.1		3177	2,752	0.32		0.28		746		0.134
12/7/2016		8,950.2	8,350.1				118,319									
	1			5.8	7.4	13.2		5860	5,119	0.59		0.51		740		0.126
12/8/2016		8,956.0	8,357.5				124,179									
	1			4.3	5.4	9.7		4333	3,764	0.43		0.38		745		0.131
12/9/2016		8,960.3	8,362.9				128,512									
	3			12.3	15.7	28		12579	10858.2	0.42		0.36		749		0.137
12/12/2016		8,972.6	8,378.6				141,091									
	1			4.9	6.2	11.1		4946	4,306	0.49		0.43		743		0.130
12/13/2016		8,977.5	8,384.8				146,037									
	1			4.2	5.5	9.7		4,374	3,758	0.44		0.38		752		0.141
12/14/2016		8,981.7	8,390.3				150,411									
	1			5.0	6.3	11.3		4,963	4,384	0.50		0.44		732		0.117
12/15/2016		8,986.7	8,396.6				155,374									
	1			5.1	6.7	11.8		5276	4,570	0.53		0.46		745		0.134
12/16/2016		8,991.8	8,403.3				160,650									
	3			14.9	19.4	34.3		15016	13,290	0.50		0.44		730		0.115
12/19/2016		9,006.7	8,422.7				175,666									
	1			5.2	7.0	12.2		4499	4,721	0.45		0.47		615		0.049
12/20/2016		9,011.9	8,429.7				180,165									
	1			5.1	6.6	11.7		5984	4534.56	0.6		0.45		852		0.242
12/21/2016		9,017.0	8,436.3				186,149									
	1			6.4	8.2	14.6		6450	5660.88	0.65		0.57		736		0.122
12/22/2016		9,023.4	8,444.5				192,599									
	1			3.6	4.8	8.4		3700	3251.52	0.37		0.33		734		0.121
12/23/2016		9,027.0	8,449.3				196,299									
	4			21.4	27.9	49.3		21876	19,101	0.55		0.48		740		0.127
12/27/2016		9,048.4	8,477.2				218,175									
	1			5.3	7.3	12.6		5384	4,871	0.54		0.49		712		0.095
12/28/2016		9,053.7	8,484.5				223,559									
	1			4.6	5.8	10.4		4673	4,035	0.47		0.40		749		0.127
12/29/2016		9,058.3	8,490.3				228,232									
	1			5.2	8.0	13.2		5568	5,079	0.56		0.51		703		0.088
12/30/2016		9,063.5	8,498.3				233,800									

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	METER AVE. (MGD)	CORR. FLOW (MGD)	CORR. AVE. (MGD)	PUMP FLOW (GPM)	CORR FLOW (GPM)	CHNG (%)
11/1/2016		8,795.5	8,154.3				963,348									
	1			4.3	5.6	9.9		4,373	3,836	0.44		0.38		736		0.123
11/2/2016		8,799.8	8,159.9				967,721									
	1			5.0	6.3	11.3		4,994	4,384	0.50		0.44		737		0.122
11/3/2016		8804.8	8166.2				972715									
	6			26.1	33.2	59.3		25,903	22,999	0.43		0.38		728		0.112
11/9/2016		8,830.9	8,199.4				998,618									
	1			3.0	3.7	6.7		2,918	2,602	0.29		0.26		726		0.108
11/10/2016		8,833.9	8,203.1				1,536									
	5			21.0	26.6	47.6		20,836	18,465	0.42		0.37		730		0.114
11/15/2016		8,854.9	8,229.7				22,372									
	1			4.8	6.1	10.9		4,829	4,228	0.48		0.42		738		0.125
11/16/2016		8,859.7	8,235.8				27,201									
	1			3.8	4.6	8.4		3,762	3,265	0.38		0.33		746		0.132
11/17/2016		8,863.5	8,240.4				30,963									
	4			17.4	22.0	39.4		17,338	15,285	0.43		0.38		733		0.118
11/21/2016		8,880.9	8,262.4				48,301									
	1			3.8	4.6	8.4		3,667	3,265	0.37		0.33		728		0.110
11/22/2016		8884.7	8267				51968									
	1			4.2	5.3	9.5		4,183	3,686	0.42		0.37		734		0.119
11/23/2016		8,888.9	8,272.3				56,151									
	5			21.4	27.0	48.4		21,413	18,778	0.43		0.38		737		0.123
11/28/2016		8,910.3	8,299.3				77,564									
	1			4.4	5.5	9.9		4,457	3,843	0.45		0.38		750		0.138
11/29/2016		8,914.7	8,304.8				82,021									
	1			4.3	5.7	10.0		4,425	3,872	0.44		0.39		738		0.125
11/30/2016		8,919.0	8,310.5				86,446									

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	METER AVE. (MGD)	CORR. FLOW (MGD)	CORR. AVE. (MGD)	PUMP FLOW (GPM)	CORR FLOW (GPM)	CHNG (%)
10/6/2016		8,669.0	8,019.6				858,791									
	2			19.5	24.3	43.8		18,789	17,002	0.94		0.85		715		0.095
10/11/2016		8,708.5	8,043.9				877,580									
	3			3.8	4.5	8.3		3,681	3,229	0.12		0.11		739		0.123
10/12/2016		8712.3	8048.4				881261									
	1			4.2	5.5	9.7		4,109	3,758	0.41		0.38		706		0.086
10/13/2016		8,716.5	8,053.9				885,370									
	1			3.8	5.3	9.1		4,120	3,516	0.41		0.35		755		0.147
10/14/2016		8,720.3	8,059.2				889,490									
	3			12.7	16.1	28.8		12,366	11,172	0.41		0.37		716		0.097
10/17/2016		8,733.0	8,075.3				901,856									
	2			8.9	11.3	20.2		8,731	7,835	0.44		0.39		720		0.103
10/19/2016		8,741.9	8,086.6				910,587									
	1			3.8	4.6	8.4		3,655	3,265	0.37		0.33		725		0.107
10/20/2016		8,745.7	8,091.2				914,242									
	1			4.1	5.1	9.2		3,989	3,572	0.40		0.36		723		0.105
10/21/2016		8,749.8	8,096.3				918,231									
	3			13.2	16.7	29.9		13,015	11,599	0.43		0.39		725		0.109
10/24/2016		8763	8113				931246									
	1			3.7	4.7	8.4		3,559	3,258	0.36		0.33		706		0.085
10/25/2016		8,766.7	8,117.7				934,805									
	2			8.1	10.1	18.2		7,868	7,065	0.39		0.35		721		0.102
10/27/2016		8,774.8	8,127.8				942,673									
	4			16.7	21.4	38.1		16,607	14,772	0.42		0.37		726		0.110
10/31/2016		8,791.5	8,149.2				959,280									

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	METER AVE. (MGD)	CORR. FLOW (MGD)	CORR. AVE. (MGD)	PUMP FLOW (GPM)	CORR FLOW (GPM)	CHNG (%)
9/1/2016		8,553.0	7,850.6				727,081									
	2			4.0	5.1	9.1		3,982	3,529	0.20		0.18		729		0.114
9/2/2016		8,557.0	7,855.7				731,063									
	3			16.1	20.0	36.1		15,667	14,015	0.52		0.47		723		0.105
9/6/2016		8573.1	7875.7				746730									
	1			3.9	4.8	8.7		3,796	3,379	0.38		0.34		727		0.110
9/7/2016		8,577.0	7,880.5				750,526									
	1			3.7	4.7	8.4		3,707	3,258	0.37		0.33		736		0.121
9/8/2016		8,580.7	7,885.2				754,233									
	1			4.0	4.9	8.9		3,874	3,457	0.39		0.35		725		0.108
9/9/2016		8,584.7	7,890.1				758,107									
	3			11.3	13.9	25.2		10,813	9,788	0.36		0.33		715		0.095
9/12/2016		8,596.0	7,904.0				768,920									
	2			7.3	9.6	16.9		7,421	6,546	0.37		0.33		732		0.118
9/14/2016		8,603.3	7,913.6				776,341									
	1			4.5	5.3	9.8		4,022	3,813	0.40		0.38		684		0.052
9/15/2016		8,607.8	7,918.9				780,363									
	1			4.9	6.0	10.9		4,784	4,234	0.48		0.42		731		0.115
9/16/2016		8612.7	7924.9				785147									
	3			10.7	13.1	23.8		10,322	9,246	0.34		0.31		723		0.104
9/19/2016		8,623.4	7,938.0				795,469									
	2			7.3	9.1	16.4		7,086	6,366	0.35		0.32		720		0.102
9/21/2016		8,630.7	7,947.1				802,555									
	1			3.7	4.7	8.4		3,619	3,258	0.36		0.33		718		0.100
9/22/2016		8,634.4	7,951.8				806,174									
	1			3.8	4.7	8.5		3,680	3,301	0.37		0.33		722		0.103
9/23/2016		8,638.2	7,956.5				809,854									
	3			11.3	13.9	25.2		10,984	9,788	0.37		0.33		726		0.109
9/26/2016		8,649.5	7,970.4				820,838									
	1			3.7	4.7	8.4		3,622	3,258	0.36		0.33		719		0.100
9/27/2016		8,653.2	7,975.1				824,460									
	2			8.8	11.0	19.8		8,510	7,685	0.43		0.38		716		0.097
9/29/2016		8662	7986.1				832970									
	1			2.8	3.4	6.2		2,627	2,409	0.26		0.24		706		0.083
9/30/2016		8664.8	7989.5				835597									

DATE	DAYS	HOUR READINGS PUMP 1 (HRS)	HOUR READINGS PUMP 2 (HRS)	PUMPING HOURS PUMP 1 (HRS)	PUMPING HOURS PUMP 2 (HRS)	PUMPING HOURS TOTAL (HRS)	METER READINGS (GAL/100)	METER VOLUME (GAL/100)	CORR. VOLUME (GAL/100)	METER FLOW (MGD)	METER AVE. (MGD)	CORR. FLOW (MGD)	CORR. AVE. (MGD)	PUMP FLOW (GPM)	CORR FLOW (GPM)	CHNG (%)
8/1/2016		8,432.4	7,698.8				609,644									
	2			3.4	4.3	7.7		3,362	2,987	0.17		0.15		728		0.111
8/2/2016		8,435.8	7,703.1				613,006									
	3			3.7	4.5	8.2		3,595	3,186	0.12		0.11		731		0.114
8/3/2016		8439.5	7707.6				616601									
	1			3.9	4.8	8.7		3,743	3,379	0.37		0.34		717		0.097
8/4/2016		8,443.4	7,712.4				620,344									
	4			14.9	18.8	33.7		14,873	13,075	0.37		0.33		736		0.121
8/8/2016		8,458.3	7,731.2				635,217									
	1			3.6	5.3	8.9		3,599	3,431	0.36		0.34		674		0.047
8/9/2016		8,461.9	7,736.5				638,816									
	1			3.9	4.8	8.7		3,763	3,379	0.38		0.34		721		0.102
8/10/2016		8,465.8	7,741.3				642,579									
	1			3.9	4.8	8.7		3,751	3,379	0.38		0.34		719		0.099
8/11/2016		8,469.7	7,746.1				646,330									
	1			4.2	5.4	9.6		4,124	3,722	0.41		0.37		716		0.098
8/12/2016		8,473.9	7,751.5				650,454									
	3			11.4	14.1	25.5		11,019	9,902	0.37		0.33		720		0.101
8/15/2016		8485.3	7765.6				661473									
	1			3.8	5.3	9.1		4,251	3,516	0.43		0.35		779		0.173
8/16/2016		8,489.1	7,770.9				665,724									
	1			4.3	5.0	9.3		3,621	3,621	0.36		0.36		649		0.000
8/17/2016		8,493.4	7,775.9				669,345									
	5			20.5	25.9	46.4		19,966	18,001	0.40		0.36		717		0.098
8/22/2016		8,513.9	7,801.8				689,311									
	1			4.0	4.9	8.9		3,835	3,457	0.38		0.35		718		0.098
8/23/2016		8,517.9	7,806.7				693,146									
	1			5.0	6.5	11.5		4,890	4,456	0.49		0.45		709		0.089
8/24/2016		8,522.9	7,813.2				698,036									
	1			2.8	3.2	6.0		2,655	2,338	0.27		0.23		737		0.120
8/25/2016		8,525.7	7,816.4				700,691									
	1			3.9	5.0	8.9		3,829	3,451	0.38		0.35		717		0.099
8/26/2016		8529.6	7821.4				704520									
	3			11.9	15.2	27.1		11,559	10,509	0.39		0.35		711		0.091
8/29/2016		8541.5	7836.6				716079									
	1			3.8	4.4	8.2		3,585	3,193	0.36		0.32		729		0.109
8/30/2016		8545.3	7841				719664									
	1			4.0	4.9	8.9		3,806	3,457	0.38		0.35		713		0.092
8/31/2016		8,549.3	7,845.9				723,470									

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	INFLUENT TESTING									EFFLUENT TESTING											
Monitoring Period	Influent Flow			Influent BOD/CBOD			Influent PH			Effluent CBOD			Effluent PH				Effluent TSS			Total Nitrogen as (N)	
Month - Year	Avg.	Max.	Units	Avg.	Max	Units	Avg	Max	Units	Avg	Max	Units	Min	Avg	Max	Units	Avg	Max	Units	Max	Units
1/1/2011	0.43	0.51	MGD		178	mg/l		8.2	S.U.		23	mg/l			8.4	S.U.		19	mg/l	16.00	mg/L N
2/1/2011	0.37	0.37	MGD		175	mg/l		8.4	S.U.		41	mg/l			8.4	S.U.		41	mg/l		mg/L N
3/1/2011	0.26	0.39	MGD		50	mg/l		7.9	S.U.		34	mg/l			8.9	S.U.		82	mg/l		mg/L N
4/1/2011	0.38	0.39	MGD		139	mg/l		8.1	S.U.		11	mg/l			7.5	S.U.		60	mg/l		mg/L N
5/1/2011	0.39	0.55	MGD		79	mg/l		7.7	S.U.		9	mg/l			8.2	S.U.		24	mg/l		mg/L N
6/1/2011	0.46	0.55	MGD		252	mg/l		8.2	S.U.		53	mg/l			7.7	S.U.		79	mg/l	11.00	mg/L N
7/1/2011	0.41	0.57	MGD		149	mg/l		7.1	S.U.		10	mg/l			8.0	S.U.		27	mg/l		mg/L N
8/1/2011	0.32	0.36	MGD		153	mg/l		7.6	S.U.		15	mg/l			7.7	S.U.		62	mg/l		mg/L N
9/1/2011	0.33	0.34	MGD		154	mg/l		7.3	S.U.		13	mg/l			7.6	S.U.		51	mg/l	6.80	mg/L N
10/1/2011	0.36	0.43	MGD		161	mg/l		7.6	S.U.		2	mg/l			8.1	S.U.		4	mg/l		mg/L N
11/1/2011	0.40	0.45	MGD		189	mg/l		7.2	S.U.		3	mg/l			7.8	S.U.		5	mg/l		mg/L N
12/1/2011	0.42	0.56	MGD		129	mg/l		7.7	S.U.		6	mg/l			8.0	S.U.		15	mg/l	9.90	mg/L N
1/1/2012	0.45	0.64	MGD		110	mg/l		7.8	S.U.		32	mg/l			8.1	S.U.		80	mg/l		mg/L N
2/1/2012	0.41	0.43	MGD		123	mg/l		7.9	S.U.		41	mg/l			8.0	S.U.		73	mg/l	18.00	mg/L N
3/1/2012	0.41	0.51	MGD		126	mg/l		7.9	S.U.		21	mg/l			7.6	S.U.		80	mg/l		mg/L N
4/1/2012	0.33	0.35	MGD		98	mg/l		8.2	S.U.		23	mg/l			8.2	S.U.		44	mg/l		mg/L N
5/1/2012	0.37	0.51	MGD		140	mg/l		7.5	S.U.		33	mg/l			8.4	S.U.		74	mg/l	12.00	mg/L N
6/1/2012	0.34	0.47	MGD		175	mg/l		7.6	S.U.		41	mg/l			7.4	S.U.		16	mg/l		mg/L N
7/1/2012	0.37	0.53	MGD		264	mg/l		7.4	S.U.		30	mg/l			7.6	S.U.		16	mg/l		mg/L N
8/1/2012	0.39	0.76	MGD		143	mg/l		7.6	S.U.		25	mg/l			8.0	S.U.		43	mg/l	8.90	mg/L N
9/1/2012	0.46	0.71	MGD		100	mg/l		7.9	S.U.		11	mg/l			8.2	S.U.		26	mg/l		mg/L N
10/1/2012	0.31	0.37	MGD		327	mg/l		7.8	S.U.		52	mg/l			8.2	S.U.		44	mg/l		mg/L N
11/1/2012	0.47	0.77	MGD		160	mg/l		7.9	S.U.		10	mg/l			7.8	S.U.		30	mg/l	16.00	mg/L N
12/1/2012	0.35	0.51	MGD																		
1/1/2013	0.47	0.68	MGD		82	mg/l		8.1	S.U.		10	mg/l			8.4	S.U.		50	mg/l		mg/L N
2/1/2013	0.36	0.48	MGD		221	mg/l		7.2	S.U.		56	mg/l			7.2	S.U.		32	mg/l	20.00	mg/L N
3/1/2013	0.41	0.82	MGD		136	mg/l		8.4	S.U.		36	mg/l			7.3	S.U.		11	mg/l		mg/L N
4/1/2013	0.28	0.42	MGD		239	mg/l		7.5	S.U.		57	mg/l			7.3	S.U.		12	mg/l		mg/L N
5/1/2013	0.49	0.87	MGD		110	mg/l		8.3	S.U.		10	mg/l			8.4	S.U.		18	mg/l	22.00	mg/L N
6/1/2013	0.53	0.86	MGD		251	mg/l		7.9	S.U.		16	mg/l			8.0	S.U.		23	mg/l		mg/L N
7/1/2013	0.34	0.60	MGD		97	mg/l		7.6	S.U.		14	mg/l			8.2	S.U.		38	mg/l		mg/L N
8/1/2013	0.40	0.48	MGD		69	mg/l		7.6	S.U.		9	mg/l			8.0	S.U.		18	mg/l	17.00	mg/L N
9/1/2013	0.44	0.58	MGD		57	mg/l		20.6	S.U.		12	mg/l			8.0	S.U.		24	mg/l		mg/L N
10/1/2013	0.43	0.51	MGD		89	mg/l		7.7	S.U.		21	mg/l			8.2	S.U.		19	mg/l		mg/L N
11/1/2013	0.39	0.47	MGD		101	mg/l		7.9	S.U.		32	mg/l			8.3	S.U.		47	mg/l	20.00	mg/L N
12/1/2013	0.46	0.51	MGD		109	mg/l		7.6	S.U.		22	mg/l			7.7	S.U.		48	mg/l		mg/L N
1/1/2014	0.45	0.56	MGD		117	mg/l		7.9	S.U.		35	mg/l			7.7	S.U.		35	mg/l		
2/1/2014	0.47	0.53	MGD		87	mg/l		7.6	S.U.		11	mg/l			7.6	S.U.		12	mg/l	20.00	mg/L N
3/1/2014	0.44	0.55	MGD		111	mg/l		7.8	S.U.		22	mg/l			7.9	S.U.		27	mg/l		
4/1/2014	0.42	0.73	MGD		97	mg/l		7.6	S.U.		46	mg/l			8.3	S.U.		102	mg/l		
5/1/2014	0.41	0.74	MGD		84	mg/l		7.6	S.U.		74	mg/l			8.1	S.U.		85	mg/l	21.00	mg/L N
6/1/2014	0.41	0.88	MGD		147	mg/l		8.4	S.U.		14	mg/l			7.9	S.U.		46	mg/l		

0.423	Jan 13 to June 14	122	Jan 13 to June 14	28	Jan 13 to June 14	36	Jan 13 to June 14
						50	Recent high SS values

APPENDIX F

BROWNFIELD STUDIES

FARR WEST
ENGINEERING

TECHNICAL MEMORANDUM #1

CITY OF CARLIN
BROWNFIELD FEASIBILITY ANALYSIS

Prepared For: Converse Consultants

Prepared By: Jennifer Heeran, P.E.

Reviewed By: Lucas Tipton, P.E.

Date: March 16, 2018

Subject: Brownfield Feasibility Analysis

1.0 INTRODUCTION

Farr West Engineering has been asked to evaluate the feasibility of serving existing undeveloped Brownfield sites with public water and sewer service by the City of Carlin.

Converse Consultants selected the sites. Farr West Engineering has provided an engineering analysis and cost estimate for extending water and sewer utilities to the sites and the impact to the existing system due to the increased water demand and sewer load.

2.0 SITE ANALYSIS

2.1 SITE 1 – INDUSTRIAL PARK

2.1.1 Description

The first site is comprised of five parcels near Griffin Street and Spruce Road, to the west of Newmont Road/SR 766. In total, the five parcels have a combined acreage of 93.717 acres. The parcels are relatively level and are readily accessible by paved or dirt roads. Water and sewer services are available to all five parcels and will require separate connections at a minimum of three locations.

2.1.2 Water Demand

The water demand for Site 1 is 93,717 gpd or 65.08 gpm, calculated with an efficiency factor of 1.0 for Industrial Land Use at 1,000 gpd/acre.

2.1.3 Sewer Load

The sewer load for Site 1 is 42,829 gpd or 29.74 gpm, calculated with an efficiency factor of 1.0 for Industrial Land Use at 457 gpd/acre.

2.1.4 Cost Estimate

The total cost for extending water service to this site is $430,000.00 which includes 12-inch C900 PVC pipe, butterfly valves, combination air valve assemblies, fire hydrant and fire service assemblies, and 3-inch water service assemblies.

The total cost for extending sewer facilities to this site is $370,000.00 which includes 8-inch SDR 35 pipe, manholes, and service connections with laterals. This cost also includes a small lift station and approximately 1,400 LF of 3" force main.

The total cost for extending water and sewer service to these parcels is $1,058,000.00 and includes mobilization, temporary erosion control and pavement patching for both the water and sewer facilities as well as design and contingency costs.

Table 1: Engineer's Opinion of Probable Construction Costs – Site 1: Industrial Site

Item	Description	Qty Total	Unit	Unit Cost	Total Cost
1	Mobilization/Demobilization	1	LS	$ 40,000.00	$ 40,000.00
2	Temporary Erosion Control	1	LS	$ 20,000.00	$ 20,000.00
3	Water Main	2,430	LF	$ 175.00	$ 430,000.00
4	Sewer Main	975	EA	$ 150.00	$ 150,000.00
5	Lift Station	1	EA	$ 150,000.00	$ 150,000.00
6	3" Force Main	1,400	LF	$ 50.00	$ 70,000.00
7	Pavement	1,900	SF	$ 3.50	$ 7,000.00
				Construction Subtotal:	$ 867,000.00
				Design (12%):	$ 104,000.00
				Contingency (10%):	$ 87,000.00
				TOTAL COST:	**$ 1,058,000.00**

2.1.5 Impact to Existing System

The existing Industrial Park Lift Station is currently at capacity. The addition of approximately 30 gallons per minute of industrial sewer at Site 1 would require an upsize of the current lift station.

2.2 SITE 2 – TOMERA RANCH ROAD & SR 278

2.2.1 Description

The second site is comprised of one 39.991-acre parcel at the northeast corner of Tomera Ranch Road and SR 278. The lot is relatively level and is readily accessible by paved road.

2.2.2 Water Demand

The water demand for Site 2 is 39,991 gpd or 27.77 gpm, calculated with an efficiency factor of 1.0 for Industrial Land Use at 1,000 gpd/acre.

2.2.3 Sewer Load

The sewer load for Site 2 is 18,276 gpd or 12.69 gpm, calculated with an efficiency factor of 1.0 for Industrial Land Use at 457 gpd/acre.

2.2.4 Cost Estimate

The total cost for extending water service to this site is $680,000.00 which includes 12-inch C900 PVC pipe, butterfly valves, combination air valve assemblies, fire hydrant and fire service assemblies, and 3-inch water service assemblies.

The total cost for extending sewer facilities to this site is $404,000.00 which includes 8-inch SDR 35 pipe, manholes, and service connections with laterals. This cost also includes a small lift station and approximately 2,600 LF of 2" force main.

The total cost for water and sewer service to these parcels is $1,445,000.00 and includes mobilization, temporary erosion control and pavement patching for both the water and sewer facilities as well as design, NDOT permitting, and contingency costs.

Table 2: Engineer's Opinion of Probable Construction Costs - Site 2: Tomera Ranch Rd & SR 278

Item	Description	Qty Total	Unit	Unit Cost	Total Cost
1	Mobilization/Demobilization	1	LS	$ 56,000.00	$ 56,000.00
2	Temporary Erosion Control	1	LS	$ 30,000.00	$ 30,000.00
3	Water Main Pipe	3,600	LF	$ 175.00	$ 630,000.00
4	Jack and Bore	1	EA	$ 50,000.00	$ 50,000.00
5	Sewer Main	1,000	EA	$ 150.00	$ 150,000.00
6	Lift Station	1	EA	$ 150,000.00	$ 150,000.00
7	2" Force Main	2,600	LF	$ 40.00	$ 104,000.00
8	Pavement	3,600	SF	$ 3.50	$ 13,000.00
				Construction Subtotal:	$ 1,183,000.00
				Design (12%):	$ 142,000.00
				Permitting - NDOT for SR 278 crossing:	$ 2,000.00
				Contingency (10%):	$ 118,000.00
				TOTAL COST:	**$ 1,445,000.00**

2.2.5 Impact to Existing System

There will be no significant impact to the existing systems by extending water and sewer service to this site.

2.3 SITE 3 – CARLIN CROSSING PHASE 1

2.3.1 Description

The third site is comprised of one 187.34-acre parcel to the west of Newmont Road, north of Interstate 80. The parcel is not consistently level and has a series of ridges and valleys running east to west. In general, the site falls in elevation from west to east, with a sharp drop on the east boundary as it approaches the adjacent valley. The parcel has a series of dirt roads surrounding the outer boundaries of the parcel.

2.3.2 Water Demand

The water demand for Site 3 is 187,340 gpd or 130.10 gpm, calculated with an efficiency factor of 1.0, for Industrial Land Use at 1,000 gpd/acre.

2.3.3 Sewer Load

The sewer load for Site 3 is 85,614 gpd or 59.45 gpm, calculated with an efficiency factor of 1.0 for Industrial Land Use at 457 gpd/acre.

2.3.4 Cost Estimate

The total cost for extending water service to this site is $140,000.00 which includes 12-inch C900 PVC pipe, butterfly valves, combination air valve assemblies, fire hydrant and fire service assemblies, and 3-inch water service assemblies. This cost also includes a jack and bore to extend water service under SR 766.

The total cost for extending sewer facilities to this site is $285,000.00 which includes 8-inch SDR 35 pipe, manholes, and service connections with laterals. This cost also includes a small lift station and approximately 1,500 LF of 4" force main.

The total cost for water and sewer service to these parcels is $575,000.00 and includes mobilization, temporary erosion control, and pavement patching for both the water and sewer facilities as well as design, NDOT permitting, and contingency costs. An NDOT permit for the water crossing at SR 766 will be required, as well as an NDOT permit for the sewer main in NDOT's I-80 right of way.

Table 3: Engineer's Opinion of Probable Construction Costs - Site 3: Carlin Crossing Ph 1

Item	Description	Qty Total	Unit	Unit Cost	Total Cost
1	Mobilization/Demobilization	1	LS	$ 22,000.00	$ 22,000.00
2	Temporary Erosion Control	1	LS	$ 15,000.00	$ 15,000.00
3	Water Main	300	LF	$ 300.00	$ 90,000.00
4	Jack and Bore	1	EA	$ 50,000.00	$ 50,000.00
5	Sewer Main	300	EA	$ 150.00	$ 45,000.00
6	Lift Station	1	EA	$ 150,000.00	$ 150,000.00
7	4" Force Main	1500	LF	$ 60.00	$ 90,000.00
8	Pavement	1800	EA	$ 3.50	$ 6,000.00
				Construction Subtotal:	$ 468,000.00
				Design (12%):	$ 56,000.00
				Permitting - NDOT for I-80, SR 766 @ $2,000 per permit:	$ 4,000.00
				Contingency (10%):	$ 47,000.00
				TOTAL COST:	**$ 575,000.00**

2.3.5 Impact to Existing System

There will be no significant impact to the existing systems by extending water and sewer service to this site.

2.4 SITE 4: INTERCHANGE OF INTERSTATE 80 AND SR 278

2.4.1 Description

The fourth site is comprised of one 16.95-acre parcel on the west side SR 278, north of the I-80 westbound on-ramp. The parcel is relatively level and is readily accessible by paved and dirt roads.

2.4.2 Water Demand

The water demand for Site 4 is 16,950 gpd or 14.17 gpm, calculated with an efficiency factor of 1.0, for Industrial Land Use at 1,000 gpd/acre.

2.4.3 Sewer Load

The sewer load for Site 4 is 9,327 gpd or 6.48 gpm, calculated with an efficiency factor of .1.0 for Industrial Land Use at 457 gpd/acre.

2.4.4 Cost Estimate

The total cost for extending water service to this site is $910,000.00 which includes 12-inch C900 PVC pipe, butterfly valves, combination air valve assemblies, fire hydrant and fire service assemblies, and 3-inch water service assemblies.

The total cost for extending sewer facilities to this site is $825,500.00 which includes 8-inch SDR 35 pipe, manholes, and service connections with laterals. This cost also includes a small lift station and approximately 950 LF of 2" force main.

The total cost for water and sewer service to these parcels is $2,303,500.00 and includes mobilization, temporary erosion control and pavement patching for both the water and sewer facilities as well as design, NDOT permitting, and contingency costs. The two NDOT permits will likely be extensive due to the close proximity to the interchange and crossings at SR 278 and I-80.

Table 4: Engineer's Opinion of Probable Construction Costs - Site 4: Interchange of I-80/SR 278

Item	Description	Qty Total	Unit	Unit Cost	Total
1	Mobilization/Demobilization	1	LS	$ 90,000.00	$ 90,000.00
2	Temporary Erosion Control	1	LS	$ 40,000.00	$ 40,000.00
3	Water Main	5,200	LF	$ 175.00	$ 910,000.00
4	Sewer Main	4,250	EA	$ 150.00	$ 637,500.00
5	Lift Station	1	EA	$ 150,000.00	$ 150,000.00
6	2" Force Main	950	LF	$ 40.00	$ 38,000.00
7	Pavement	2,100	EA	$ 3.50	$ 7,000.00
				Construction Subtotal:	$ 1,872,500.00
				Design (12%):	$ 225,000.00
				Permitting - NDOT for SR 278/I-80 (1%):	$ 19,000.00
				Contingency (10%):	$ 187,000.00
				TOTAL COST:	**$ 2,303,500.00**

2.4.5 Impact to Existing System

There will be no significant impact to the existing systems by extending water and sewer service to this site.

3.0 OVERALL IMPACT TO SYSTEM

If all four sites are developed as industrial properties, an additional 360,000 gpd of water demand and 165,000 gpd of sewer loading will be added to the existing infrastructure. An engineering analysis confirms there is capacity in the existing water supply and storage facilities to accommodate the demands added by the development of these sites. Additionally, the primary sewer lift station and force main have the capacity

to pump the additional wastewater flows. However, the wastewater treatment facility only has the excess capacity to treat up to an additional 125,000 gpd. Therefore, future development must be limited to no more than 125,000 gpd until improvements can be made to the wastewater treatment facility.

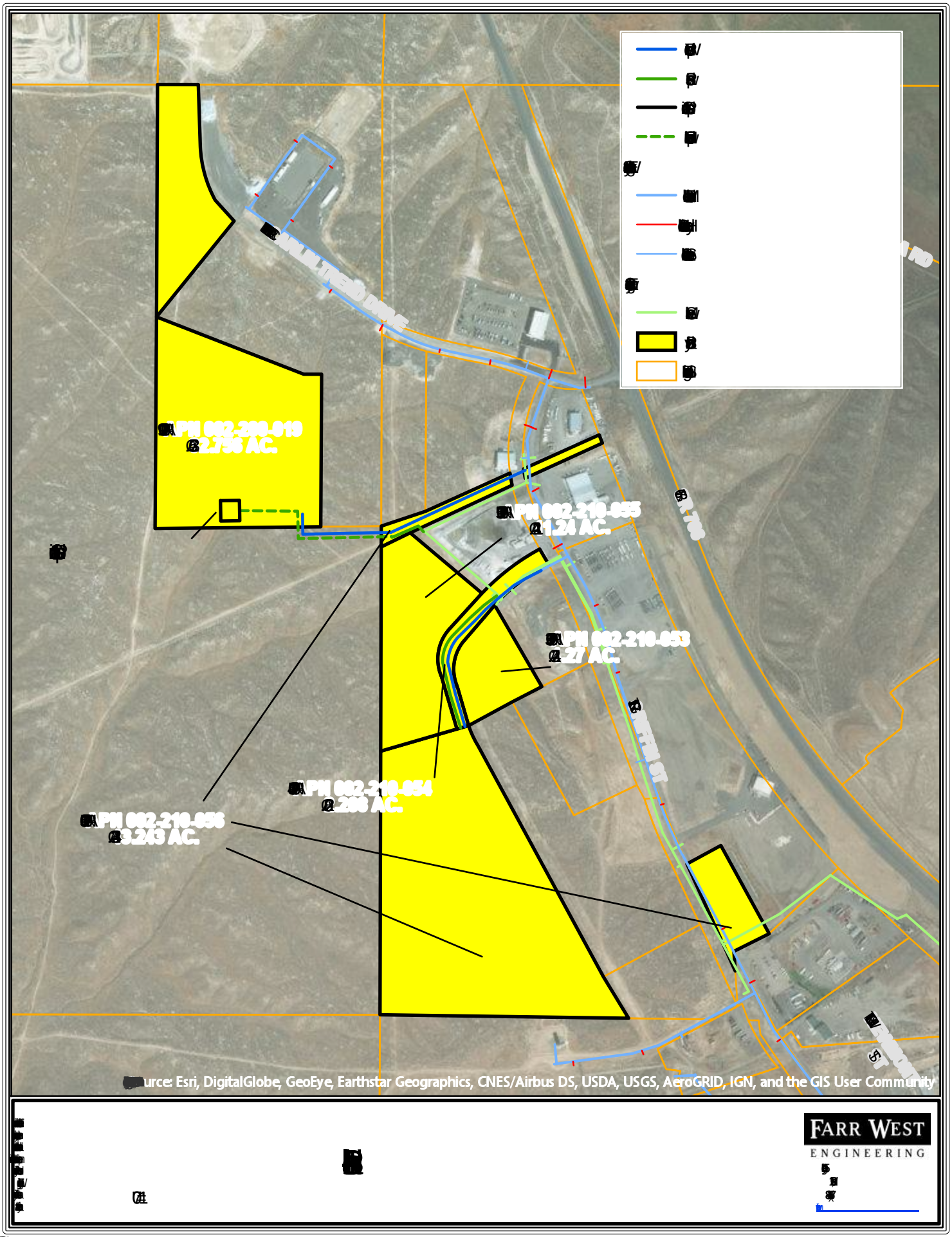
BROWNFIELD FEASIBILITY ANALYSIS
SITE FIGURES

Site 1 – Industrial Park

Site 2 – Tomera Ranch Rd & SR 278

Site 3 – Carlin Crossing Phase 1

Site 4 – Interchange of I-80/SR 278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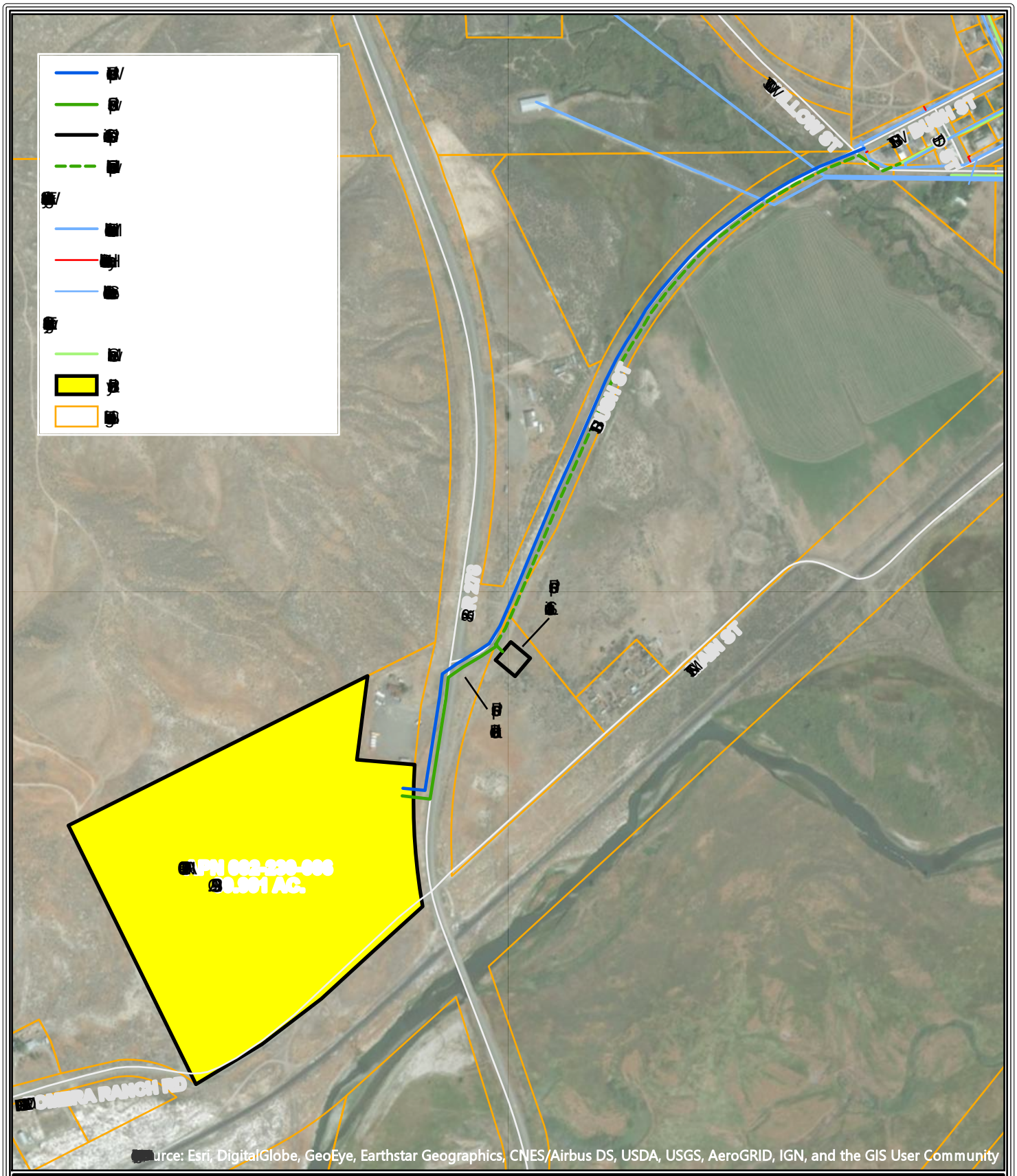
FARR WEST
ENGINEERING



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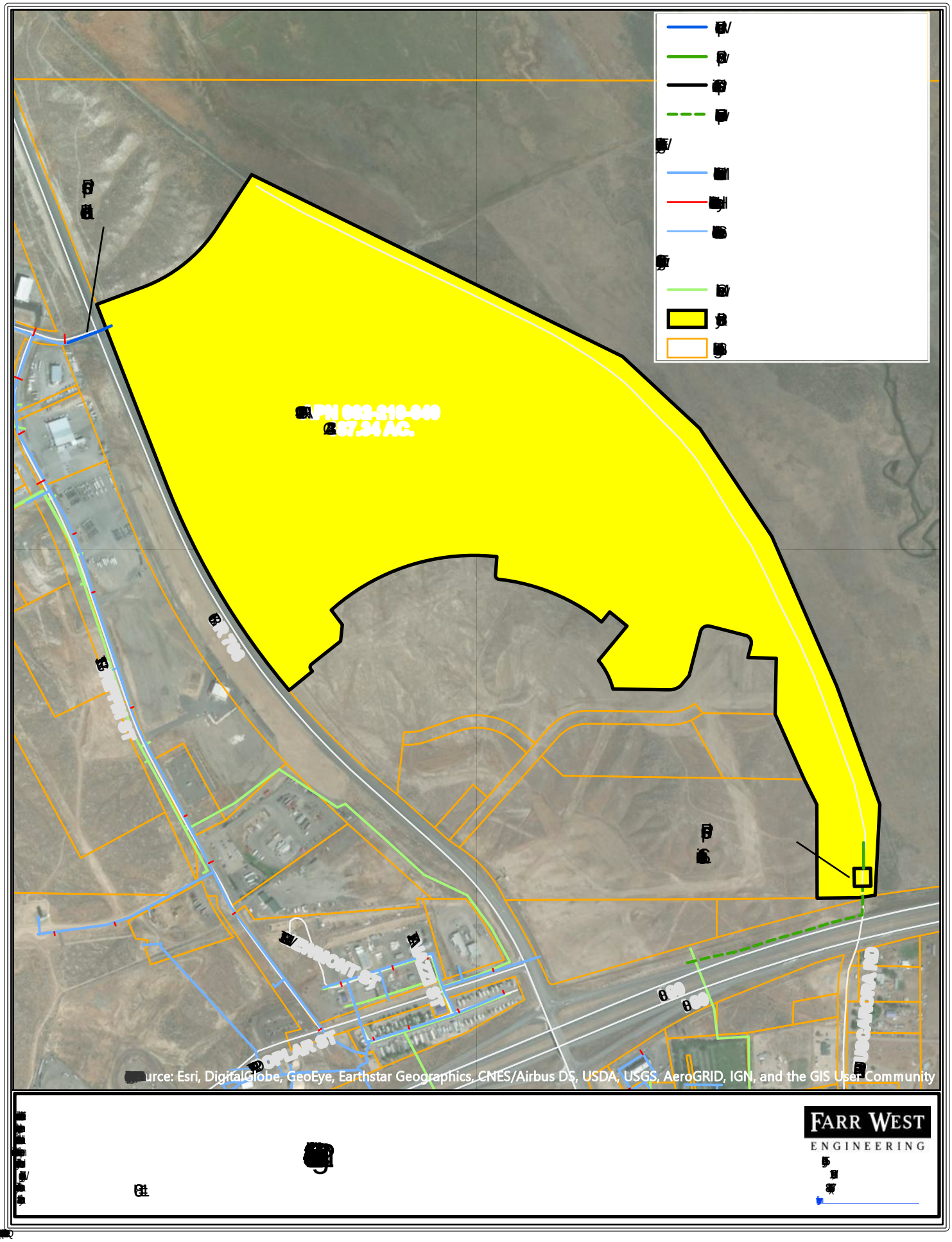

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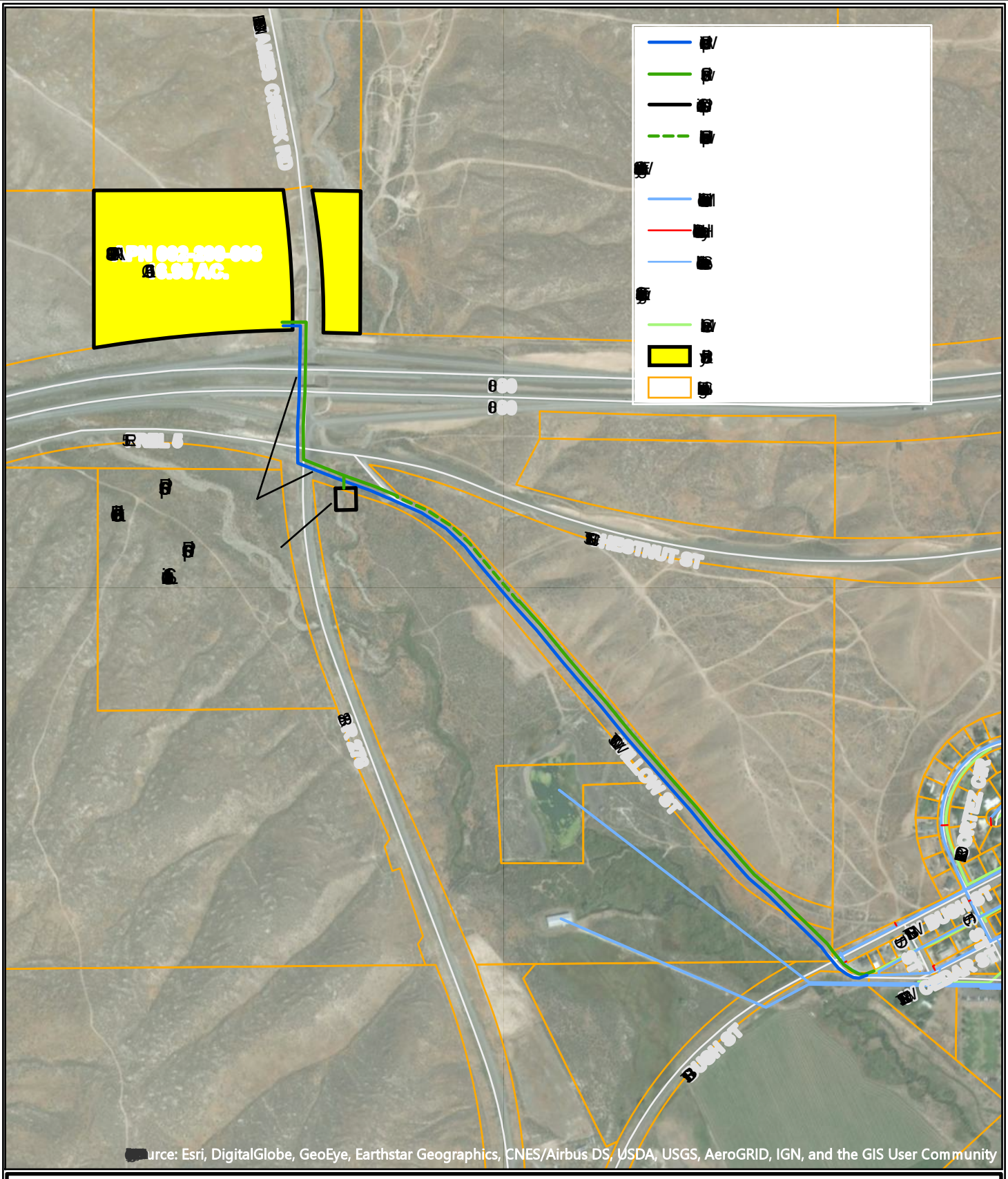

FARR WEST
ENGINEERING

BROWNFIELD FEASIBILITY ANALYSIS
APPENDIX A

System Storage Calculations

City of Carlin System Storage Calculations
Brownsfield Sites

Sizing Analysis Scenarios

1. MDD + Fire Flow with all supply facilities operational
   a. Operating Storage = 25% of Max Day Demand
   b. Emergency Storage = 75% Operating Storage
2. ADD + Fire Flow with largest supply out of service
   a. Operating Storage = 25% of Max Day Demand
   b. Emergency Storage = 75% Operating Storage

Demand Data

		Demands (gpm)		
	No. Lots	ADD	MDD	PHD
Existing System Connections	841	400	800	-
New Lots	5	249	498	-
Totals	846	649	1,298	-

Total Supply

Well	System Pump Capacity (gpm)
Hilltop Well	277
Authur Spring/SP Spring	173
Total	450
Total without Largest Well	173

Fire Flow Demand

	Flow (gpm)	Duration (hr)	Volume (gal)
Fire Demand (gpm)	2,500	2	300,000

Storage Volume (gal)

Total	2,634,000

Table 1. City of Carlin System Existing Condition

	MDD + Fire w/all sources		ADD + Fire w/o largest source	
Storage Type	**Storage Requirement (gal)**	**Storage Balance (gal)**	**Storage Requirement (gal)**	**Storage Balance (gal)**
Full Tank		2,634,000		2,634,000
City of Carlin Supply		-504,183		-326,972
Daily Capacity		2,129,817		2,307,028
Fire Storage	300,000	1,829,817	300,000	2,007,028
Operating Storage	288,046	1,541,771	288,046	1,718,982
Emergency Storage	216,034	1,325,736	216,034	1,502,948

Table 2. City of Carlin System w/ Brownsfield Sites Condition

	MDD + Fire w/all sources		ADD + Fire w/o largest source	
Storage Type	**Storage Requirement (gal)**	**Storage Balance (gal)**	**Storage Requirement (gal)**	**Storage Balance (gal)**
Full Tank		2,634,000		2,634,000
Lyon County Supply		-1,221,303		-685,532
Daily Capacity		1,412,697		1,948,468
Fire Storage	300,000	1,112,697	300,000	1,648,468
Operating Storage	467,326	645,371	467,326	1,181,142
Emergency Storage	350,494	294,876	350,494	830,648

City of Carlin System Storage Calculations
Brownsfield Sites

WWTF lagoons permit limits = 500,000 gpd average, daily max = 900,000 gpd

Influent average of consistent* data available:

WW data average influent = 399,000 gpd**

Drinking water winter average usage = 363,000 gpd**

*Inconsistencies in hand-written records of influent volume data

** Difference attributed in part to several basement sump pumps within City that discharge into the sewer system an unknown volume

WWTF available capacity = 100,000 gpd*

*Conservative for reliabe operation of the lagoons, with more accurate meter readings, likely an additional 25,000 gpd

APPENDIX G

UTILITY RATES, FINANCIAL STATEMENTS

Rate Number	Description	Service	Base Amount
101	WATER - RESIDENTIAL	1 (WATER)	32.2200
102	WATER FLAT RATE	1 (WATER)	10.0000
111	WATER-RV	1 (WATER)	12.8900
201	WATER METERED CITY LIMITS	2 (WATER METERED)	32.2200
202	WATER METERED OUTSIDE CITY	2 (WATER METERED)	.0000
203	WATER FLAT RATE	2 (WATER METERED)	.0000
301	SEWER - RESIDENTIAL	3 (SEWER)	29.8500
302	SEWER FLAT RATE RV PARKS	3 (SEWER)	7.1600
311	SEWER-RV	3 (SEWER)	7.1600
401	BULK WATER	4 (BULK WATER)	.0000
501	LANDFILL - RESIDENTIAL	5 (LANDFILL)	14.3000
502	LANDFILL - COMMERCIAL 1-3 X WK	5 (LANDFILL)	61.4900
503	LANDFILL - DUMPSTER	5 (LANDFILL)	91.6900
601	LANDFILL 3YRD 3 TO 5 TIMES PER WEEK	6 (LANDFILL - DUMPSTER)	137.3800
602	LANDFILL-2yd	6 (LANDFILL - DUMPSTER)	61.4900
701	SEWER USE FEE - RESIDENTIAL	7 (SEWER USE FEE)	.0000
901	STREET LIGHT - RESIDENTIAL	9 (STREET LIGHT)	2.3800
902	STREET LIGHT FLATE RATE RV PKS	9 (STREET LIGHT)	1.0000
911	STREET LIGHT-RV	9 (STREET LIGHT)	.5600
1301	SMALL CLAIMS FEES	13 (SMALL CLAIMS FEE)	.0000
1801	RECONNECT FEES	18 (RECONNECT FEE)	.0000
1901	PENALTY	19 (PENALTY)	15.0000
2101	NSF FEE	21 (NSF FEE)	.0000

water metered is based on fixture units x 32.22 to get base amount then .00108 per gallon.

Water metered outside city limits is .00137 per gallon.

Excess amount is still debatable. Software support says it could be manuel billing amounts.

Rate Number	Rate Description	Service	Number of Customers	Number of Units	Base/Minimum	Excess Amount	Adjustments	Total Amount	Usage
101	WATER - RESIDENTIAL	WA	800	949.7000	200,152.51	3,866.44	1,046.69-	202,972.26	750
102	WATER FLAT RATE	WA	1	1.0000	66.00	31.02	-	97.02	2
111	WATER-RV	WA	25	107.3300	8,927.95	354.53	-	9,282.48	596
201	WATER METERED CITY LIMITS	WM	11	36.4100	9,558.38	8,834.44	-	18,392.82	8,252,931
202	WATER METERED OUTSIDE CITY	WM	4	20.0000	6,770.40	3,092.25	-	9,862.65	4,660,000
301	SEWER - RESIDENTIAL	SW	777	947.9500	184,216.56	402.18	1,029.47-	183,589.27	782
302	SEWER FLAT RATE RV PARKS	SW	1	1.0000	46.54	44.46	-	91.00	2
311	SEWER-RV	SW	25	107.3300	4,957.98	211.98	-	5,169.96	605
401	BULK WATER	WA	2	2.0000	-	10.04	-	10.04	-
501	LANDFILL - RESIDENTIAL	LF	759	1,009.2000	94,861.46	1,144.36	538.98-	95,466.84	940
502	LANDFILL - COMMERCIAL 1-3 X WK	LF	26	28.0000	9,864.18	-	-	9,864.18	33
503	LANDFILL - DUMPSTER	LF	20	35.5000	11,705.76	1,639.33	-	13,345.09	654
601	LANDFILL 3YRD 3 TO 5 TIMES PER		8	16.0000	13,188.48	-	137.38-	13,051.10	84
901	STREET LIGHT - RESIDENTIAL	LT	795	993.1300	15,714.76	32.11	82.26-	15,664.61	722
902	STREET LIGHT FLATE RATE RV PK	LT	1	49.0000	319.00	-	-	319.00	319
911	STREET LIGHT-RV	LT	23	57.3300	205.21	15.68	-	220.89	283
1801	RECONNECT FEES	RE	22	22.0000	-	510.00	-	510.00	23
1901	PENALTY	PN	296	300.0000	11,880.00	-	285.00-	11,595.00	-
2101	NSF FEE	NS	9	9.0000	-	326.46	-	326.46	-
Grand Totals:			3,605	4,691.8800	572,435.17	20,515.28	3,119.78-	589,830.67	12,918,726

Rate Number	Rate Description	Service	Number of Customers	Number of Units	Base/Minimum	Excess Amount	Adjustments	Total Amount	Usage
101	WATER - RESIDENTIAL	WA	818	974.2000	343,505.50	10,740.78	1,740.11-	352,506.17	1,165
102	WATER FLAT RATE	WA	1	1.0000	116.00	56.87	-	172.87	4
111	WATER-RV	WA	28	110.3300	15,508.52	1,689.47	45.12-	17,152.87	1,140
201	WATER METERED CITY LIMITS	WM	11	36.4100	16,383.88	14,041.53	2.78	30,428.19	13,148,332
202	WATER METERED OUTSIDE CITY	WM	4	20.0000	11,606.40	3,149.66	-	14,756.06	5,622,000
301	SEWER - RESIDENTIAL	SW	796	972.9500	314,186.37	134.66	1,908.28-	312,412.75	1,184
302	SEWER FLAT RATE RV PARKS	SW	1	1.0000	82.34	81.51	-	163.85	4
311	SEWER-RV	SW	28	110.3300	8,614.55	945.67	54.93-	9,505.29	1,140
501	LANDFILL - RESIDENTIAL	LF	781	1,039.2000	162,690.97	2,821.61	1,159.14-	164,353.44	1,464
502	LANDFILL - COMMERCIAL 1-3 X WK	LF	22	23.5000	14,188.57	778.68	-	14,967.25	42
503	LANDFILL - DUMPSTER	LF	23	38.5000	23,484.24	2,871.63	98.47-	26,257.40	1,094
601	LANDFILL 3YRD 3 TO 5 TIMES PER		11	20.0000	25,054.72	-	137.38-	24,917.34	144
602	LANDFILL-2yd		2	2.0000	186.66	-	75.19-	111.47	-
701	SEWER USE FEE - RESIDENTIAL	UF	1	1.0000	-	-	.01	.01	-
901	STREET LIGHT - RESIDENTIAL	LT	812	1,016.8300	26,868.10	13.20	126.53-	26,754.77	1,062
902	STREET LIGHT FLATE RATE RV PK	LT	2	62.0000	625.58	12.00	.82-	636.76	630
911	STREET LIGHT-RV	LT	28	60.3300	316.49	67.50	2.12-	381.87	511
1801	RECONNECT FEES	RE	35	35.0000	-	1,075.00	15.00-	1,060.00	48
1901	PENALTY	PN	348	348.0000	16,230.00	-	156.90-	16,073.10	-
2101	NSF FEE	NS	8	8.0000	-	287.64	42.18	329.82	-
Grand Totals:			3,758	4,880.3800	979,648.88	38,767.42	5,475.02-	1,012,941.28	18,779,966

Rate Number	Rate Description	Service	Number of Customers	Number of Units	Base/Minimum	Excess Amount	Adjustments	Total Amount	Usage
101	WATER - RESIDENTIAL	WA	839	1,030.7000	348,096.26	12,366.47	3,062.79-	357,399.94	878
102	WATER FLAT RATE	WA	1	1.0000	116.00	56.87	-	172.87	6
111	WATER-RV	WA	27	130.3300	15,677.07	2,456.08	460.86-	17,672.29	881
201	WATER METERED CITY LIMITS	WM	12	37.4100	16,383.46	13,859.89	314.28-	29,929.07	12,568,743
202	WATER METERED OUTSIDE CITY	WM	5	21.5000	11,606.40	2,792.85	2.34-	14,396.91	4,675,000
301	SEWER - RESIDENTIAL	SW	817	1,028.9500	319,330.35	2,618.67	2,667.33-	319,281.69	916
302	SEWER FLAT RATE RV PARKS	SW	1	1.0000	82.34	81.51	-	163.85	6
311	SEWER-RV	SW	27	130.3300	8,765.45	1,364.27	530.30-	9,599.42	936
501	LANDFILL - RESIDENTIAL	LF	809	1,104.7000	163,776.74	6,158.52	3,071.45-	166,863.81	848
502	LANDFILL - COMMERCIAL 1-3 X WK	LF	21	22.5000	14,387.48	209.42	-	14,596.90	49
503	LANDFILL - DUMPSTER	LF	27	43.5000	24,695.00	2,810.28	77.39-	27,427.89	1,081
601	LANDFILL 3YRD 3 TO 5 TIMES PER		11	20.0000	26,005.99	-	148.17-	25,857.82	141
602	LANDFILL-2yd		2	2.0000	156.49	-	-	156.49	-
701	SEWER USE FEE - RESIDENTIAL	UF	1	1.0000	-	-	.01	.01	-
901	STREET LIGHT - RESIDENTIAL	LT	834	1,074.6300	27,129.61	218.47	214.83-	27,133.25	598
902	STREET LIGHT FLATE RATE RV PK	LT	2	62.0000	699.00	20.50	-	719.50	603
911	STREET LIGHT-RV	LT	24	66.3300	293.55	94.66	46.33-	341.88	318
1301	SMALL CLAIMS FEES	SC	1	1.0000	-	-	-	.00	3
1801	RECONNECT FEES	RE	35	35.0000	-	1,131.48	13.39-	1,118.09	47
1901	PENALTY	PN	380	380.0000	15,750.00	-	510.64-	15,239.36	-
2101	NSF FEE	NS	9	9.0000	-	10,120.58	9,818.56-	302.02	-
Grand Totals:			3,885	5,202.8800	992,951.20	56,360.51	20,938.65-	1,028,373.06	17,251,052

Rate Number	Rate Description	Service	Number of Customers	Number of Units	Base/Minimum	Excess Amount	Adjustments	Total Amount	Usage
101	WATER - RESIDENTIAL	WA	797	950.2000	148,315.29	6,379.59	835.51-	153,859.37	346
102	WATER FLAT RATE	WA	1	1.0000	50.00	25.85	-	75.85	1
111	WATER-RV	WA	21	111.3300	6,645.73	971.26	65.84-	7,551.15	295
201	WATER METERED CITY LIMITS	WM	12	37.4100	6,826.99	7,179.80	-	14,006.79	6,659,529
202	WATER METERED OUTSIDE CITY	WM	4	20.0000	4,836.00	2,661.31	-	7,497.31	2,749,970
301	SEWER - RESIDENTIAL	SW	787	960.9500	137,420.66	2,179.19	706.09-	138,893.76	365
302	SEWER FLAT RATE RV PARKS	SW	1	1.0000	35.80	37.05	-	72.85	1
311	SEWER-RV	SW	21	111.3300	3,691.47	539.51	48.55-	4,182.43	295
501	LANDFILL - RESIDENTIAL	LF	776	1,045.1000	71,225.06	3,094.53	827.38-	73,492.21	270
502	LANDFILL - COMMERCIAL 1-3 X WK	LF	20	21.5000	5,845.44	-	-	5,845.44	23
503	LANDFILL - DUMPSTER	LF	22	45.5000	9,584.66	3,371.51	733.52	13,689.69	458
601	LANDFILL 3YRD 3 TO 5 TIMES PER		8	17.0000	5,103.99	137.38	1,298.81-	3,942.56	47
701	SEWER USE FEE - RESIDENTIAL	UF	1	1.0000	-	2.38	-	2.38	-
901	STREET LIGHT - RESIDENTIAL	LT	798	1,006.1300	11,631.82	166.65	42.86-	11,755.60	230
902	STREET LIGHT FLATE RATE RV PK	LT	2	62.0000	300.69	5.00	8.08-	297.61	240
911	STREET LIGHT-RV	LT	18	48.3300	120.53	39.96	6.28-	154.21	55
1801	RECONNECT FEES	RE	23	23.0000	-	680.00	-	680.00	20
1901	PENALTY	PN	259	263.0000	6,720.00	-	330.00-	6,390.00	-
2101	NSF FEE	NS	4	4.0000	-	76.48	76.48	152.96	1
Grand Totals:			3,575	4,729.7800	418,354.14	27,547.43	3,359.40-	442,542.17	9,412,145

Rate Number	Description	Service	Base Amount
101	WATER - RESIDENTIAL	1 (WATER)	32.2200
102	WATER FLAT RATE	1 (WATER)	10.0000
111	WATER-RV	1 (WATER)	12.8900
201	WATER METERED CITY LIMITS	2 (WATER METERED)	32.2200
202	WATER METERED OUTSIDE CITY	2 (WATER METERED)	.0000
203	WATER FLAT RATE	2 (WATER METERED)	.0000
301	SEWER - RESIDENTIAL	3 (SEWER)	29.8600
302	SEWER FLAT RATE RV PARKS	3 (SEWER)	7.1600
311	SEWER-RV	3 (SEWER)	7.1600
401	BULK WATER	4 (BULK WATER)	.0000
501	LANDFILL - RESIDENTIAL	5 (LANDFILL)	14.3000
502	LANDFILL - COMMERCIAL 1-3 X WK	5 (LANDFILL)	61.4900
503	LANDFILL - DUMPSTER	5 (LANDFILL)	91.6900
601	LANDFILL 3YRD 3 TO 5 TIMES PER WEEK	6 (LANDFILL - DUMPSTER)	137.3800
602	LANDFILL-2yd	6 (LANDFILL - DUMPSTER)	61.4900
701	SEWER USE FEE - RESIDENTIAL	7 (SEWER USE FEE)	.0000
901	STREET LIGHT - RESIDENTIAL	9 (STREET LIGHT)	2.3800
902	STREET LIGHT FLATE RATE RV PKS	9 (STREET LIGHT)	1.0000
911	STREET LIGHT-RV	9 (STREET LIGHT)	.5600
1301	SMALL CLAIMS FEES	13 (SMALL CLAIMS FEE)	.0000
1801	RECONNECT FEES	18 (RECONNECT FEE)	.0000
1901	PENALTY	19 (PENALTY)	15.0000
2101	NSF FEE	21 (NSF FEE)	.0000

Financial Statements
June 30, 2020

City of Carlin

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CPAs & BUSINESS ADVISORS

Independent Auditor's Report

To the Honorable Mayor and Members of the City Council
City of Carlin
State of Nevada

Report on the Financial Statements
We have audited the accompanying financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City of Carlin, State of Nevada (the City), as of and for the year ended June 30, 2020, and the related notes to the financial statements, which collectively comprise the City's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the City's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City of Carlin, State of Nevada, as of June 30, 2020, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 4 through 11, budgetary comparison information on pages 47 through 50, the Schedule of Changes in the City's Total OPEB Liability and Related Ratios for the City of Carlin Employee Health Benefit Plan and State of Nevada Public Employees' Benefit Plan on pages 51 and 52, the Schedule of City's Share of Net Pension Liability on page 53 and the Schedule of the City's Contributions on page 54 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

The budgetary comparison information is the responsibility of management and was derived from and relates directly to underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statement themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the budgetary comparison information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the City's financial statements. The combining and individual nonmajor fund financial statements, budgetary comparisons and schedule of fees imposed subject to the provision of NRS 354.5989 are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The combining and individual nonmajor fund financial statements and budgetary comparisons are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the combining and individual nonmajor fund financial statements and budgetary comparisons are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The schedule of fees imposed subject to the provision of NRS 354.5989 has not been subject to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on it.

Prior-Year Comparative Information

We have previously audited, in accordance with accounting standards general accepted in the United States of America, the basic financial statements of the City as of and for the year ended June 30, 2019, and have issued a report thereon dated December 11, 2019, which expressed an unmodified opinion on the respective financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information.

The individual fund financial statements and budgetary comparisons related to the 2019 financial statements are presented for purposes of additional analysis and were derived from and relate directly to the underlying accounting and other records used to prepare the 2019 financial statements. The information has been subjected to the auditing procedures applied in the audit of the 2019 basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare those financial statements or to those financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. The combining and individual fund financial statements and budgetary comparisons are consistent in relation to the basic financial statements from which they have been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated January 22, 2021 on our consideration of the City's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the City's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City's internal control over financial reporting and compliance.

Eide Bailly LLP

Elko, Nevada
January 22, 2021

The Management's Discussion and Analysis (MD&A) is presented to provide the reader with an overview of the financial activity and financial condition of the City of Carlin (City). This document is required by the Governmental Accounting Standards Board (GASB) in Statement No. 34 and subsequent statements governing the presentation of the financial statements, MD&A, and note disclosure for state and local governments. The major components of this financial report include:

- Management's Discussion and Analysis (MD&A)
- Basic Financial Statements
- Other Required Supplementary Information (RSI)

The MD&A, a component of RSI, introduces the basic financial statements and provides an analytical overview of the City's financial activities.

Overview of the Financial Statements

The City's basic financial statements include the following elements:

Government-wide Financial Statements

Government-wide financial statements provide both long-term and short-term information about the City's overall financial condition. Changes in the City's financial position may be measured over time by increases and decreases in the Statement of Net Position. Information on how the City's net position changed during the fiscal year is presented in the Statement of Activities.

Fund Financial Statements

Fund financial statements focus on individual parts of the City, reporting the City's operations in more detail than the government-wide financial statements. Fund financial statements include the statements for governmental, proprietary and fiduciary funds.

Notes to the Financial Statements

Notes to the financial statements provide additional information that is essential to the full understanding of the data provided in the government-wide and fund financial statements.

Refer to Note 1 to the financial statements for more detailed information on the elements of the financial statements. Table 1 below summarizes the major features of the basic financial statements.

Table 1: Major Features of the Basic Financial Statements

	Government-Wide Financial Statements	Fund Financial Statements		
		Governmental Funds	Proprietary Funds	Fiduciary Funds
Scope	Entire City Government (except fiduciary funds)	Activities of the City that are not proprietary or fiduciary	Activities of the City that are operated similar to private businesses	Instances in which the City is the trustee agent for someone else's resources
Required Financial Statements	Statement of Net Position, Statement of Activities	Balance Sheet, Statement of Revenues, Expenditures and Changes in Fund Balances	Statement of Net Position, Statement of Revenues, Expenses and Changes in Net Position, Statement of Cash Flows	Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position
Accounting Basis and Measurement Focus	Accrual accounting and economic resources focus	Modified accrual accounting and current financial resources focus	Accrual accounting and economic resources focus	Accrual accounting
Types of Asset/Liability/ Deferred Inflow/Outflow Information	All assets and liabilities both financial, capital assets and short-term and long-term, deferred inflows/outflows of resources	Only assets expected to be used up and liabilities that come due during the year or soon thereafter; no capital assets included. Deferred inflows/outflows are resources for which cash will be received or expended in a future period	All assets and liabilities, both financial, capital assets and short-term and long-term, deferred inflows/outflows of resources	Assets and liabilities held in fiduciary capacity
Type of Inflow/Outflow Information	All revenues and expenses during the year, regardless of when cash is received or paid	Revenues for which cash is received during or soon after the end of the year; expenditures when goods or services have been received and payment is due during the year or soon thereafter	All revenues and expenses during the year, regardless of when cash is received or paid	Revenues and expenses during the year, regardless of when cash is received or paid

Condensed Statement of Net Position

The largest component, $7,865,351 of the City's net position reflects its investment in capital assets (i.e. land, infrastructure, buildings, equipment and others) less depreciation and any related debt outstanding that was needed to acquire or construct the assets. Capital Assets represent 52.6% of this City's total Net Position. The City uses these capital assets to provide services to the citizens and businesses in the City; consequently, these capital assets are not available for future spending. Although the City's investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities.

Table 2 below presents the City's condensed statement of net position. These are derived from the government-wide Statement of Net Position.

Table 2: Condensed Statement of Net Position

	Governmental Activates		Business-type Activities		Total	
	2020	2019	2020	2019	2020	2019
Current and other assets	$ 7,960,528	$ 7,505,504	$ 2,435,596	$ 2,463,443	$ 10,396,124	$ 9,968,947
Capital Assets	4,915,083	5,163,768	2,832,871	2,827,684	7,747,954	7,991,452
Total Assets	12,875,611	12,669,272	5,268,467	5,291,127	18,144,078	17,960,399
Deferred outflows of resources	290,594	284,532	82,314	90,294	372,908	374,826
Other liabilities	149,011	448,591	40,513	84,262	189,524	532,853
Long-term liabilities						
Due in one year	33,334	68,381	29,330	32,223	62,664	100,604
Due in more than one year	2,175,637	2,176,719	599,943	607,797	2,775,580	2,784,516
Total liabilities	2,357,982	2,693,691	669,786	724,282	3,027,768	3,417,973
Deferred inflows of resources	396,826	408,416	129,089	132,107	525,915	540,523
Net investment in capital assets	5,032,480	5,032,481	2,832,871	2,827,684	7,865,351	7,860,165
Restricted	162,373	138,786	-	-	162,373	138,786
Unrestricted	5,216,544	4,680,430	1,719,035	1,697,348	6,935,579	6,377,778
Total net position	$ 10,411,397	$ 9,851,697	$ 4,551,906	$ 4,525,032	$ 14,963,303	$ 14,376,729

Changes in Net Position

Table 3 presents the City's changes in net position, as derived from the government-wide Statement of Activities. Over time, increases and decreases measure whether the City's financial position is improving or deteriorating. During the fiscal year, the net position of the governmental activities increased by $559,700 and the net position of the business-type activities increased by $26,874.

Table 3: Change in Net Position

	Governmental Activates		Business-type Activities		Total	
	2020	2019	2020	2019	2020	2019
Program revenues						
Charges for services	$ 182,978	$ 171,393	$ 1,062,692	$ 1,031,911	$ 1,245,670	$ 1,203,304
Operating grants contributions	160,168	258,621	-	-	160,168	258,621
Capital grants and contributions	64,205	22,491	1,000	1,000	65,205	23,491
Total programs revenues	407,351	452,505	1,063,692	1,032,911	1,471,043	1,485,416
General revenues						
Taxes						
Property	462,257	439,107	-	-	462,257	439,107
Room	27,915	40,490	-	-	27,915	40,490
Fuel	50,825	52,738	-	-	50,825	52,738
Consolidated tax revenues	2,136,777	2,292,642	-	-	2,136,777	2,292,642
Interest and investment earnings	2,326	8,550	18,389	18,264	20,715	26,814
Gain on sale of capital assets	-	10,000	-	-	-	10,000
Miscellaneous	83,458	61,661	-	2,296	83,458	63,957
Total general revenues	2,763,558	2,905,188	18,389	20,560	2,781,947	2,925,748
Total revenues	3,170,909	3,357,693	1,082,081	1,053,471	4,252,990	4,411,164
Program expenses						
General government	751,105	677,106	-	-	751,105	677,106
Public safety	989,442	920,282	-	-	989,442	920,282
Judicial	66,389	56,676	-	-	66,389	56,676
Public works	355,770	310,440	-	-	355,770	310,440
Health and sanitation	101,675	100,448	-	-	101,675	100,448
Culture and recreation	341,078	344,489	-	-	341,078	344,489
Water	-	-	480,638	487,333	480,638	487,333
Garbage	-	-	156,400	151,276	156,400	151,276
Sewer	-	-	387,883	360,634	387,883	360,634
Street lights	-	-	30,286	27,590	30,286	27,590
Interest on long-term debt	5,750	6,017	-	-	5,750	6,017
Total expenses	2,611,209	2,415,458	1,055,207	1,026,833	3,666,416	3,442,291
Change in net position	559,700	942,235	26,874	26,638	586,574	968,873
Net position, beginning of year	9,851,697	8,909,462	4,525,032	4,498,394	14,376,729	13,407,856
Net position, end of year	$ 10,411,397	$ 9,851,697	$ 4,551,906	$ 4,525,032	$ 14,963,303	$ 14,376,729

Program Expenses and Revenues for Governmental Activities

Table 4 presents program expenses and revenues for governmental activities. Generally, program revenues were not sufficient to cover program expenses for governmental activities. The net program expenses of these governmental activities were, therefore, supported by general revenues, which are derived primarily from consolidated tax revenue from the State and from property taxes.

Table 4: Program Expenses and Revenues for Governmental Activities For the Fiscal Year Ended June 30, 2020

City Programs	Program Expenses	Program Revenues	Net Program (Expenses)/Revenues
General Government	$ 751,105	$ -	$ (751,105)
Public Safety	989,442	134,172	(855,270)
Judicial	66,389	-	(66,389)
Public Works	355,770	59,915	(295,855)
Health and Sanitation	101,675	979	(100,696)
Culture and Recreation	341,078	212,285	(128,793)
Interest Long-term Debt	5,750	-	(5,750)
Total	$ 2,611,209	$ 407,351	$ (2,203,858)

Program Expenses and Revenues for Business-type Activities

Table 5 presents program expenses and revenues for business-type activities. Program revenues generated from business-type activities were not sufficient to cover program expenses.

Table 5: Program Expenses and Revenues for Business-type Activities For the Fiscal Year Ended June 30, 2020

City Programs	Program Expenses	Program Revenues	Net Program (Expenses)/Revenues
Water	$ 480,638	$ 448,624	$ (32,014)
Garbage	156,400	252,265	95,865
Sewer	387,883	332,517	(55,366)
Street Lights	30,286	30,286	-
Total	$ 1,055,207	$ 1,063,692	$ 8,485

Financial highlights for the City during the fiscal year ended June 30, 2020, include the following:

- The City's total Net Position for all activities increased from $14,376,729 to $14,963,303 an increase of $586,574 (4.1%). This increase is attributable to continued expense control by all departments because of uncertain revenue projections. General Fund expenditures were lower than budgeted amounts by $1,086,063 (35.0 %). General Fund revenues were also better than projected by $211,693 (8.2 %) due to a conservative estimate of budgeted revenues during budgeting.
- Capital assets added during the year in the amount of $294,633 include improvements to City buildings and facilities, the City Park, one new cargo van for Senior Center, completion of phase one of fire station and improvements to main sewer lift station.
- The City's Business-type Activities (Utility Fund) operating revenues exceeded operating expenses by $7,485. As an Enterprise Fund, the Utility Fund is required to generate operating revenues sufficient to offset operating expenses. Excess revenues year to year are used for maintenance and eventual replacement of older infrastructure. A Preliminary Engineering Report (PER) was completed and a refurbishment plan is underway using the PER.

Fund Analysis

All Governmental Funds

At the close of the fiscal year ending June 30, 2020, the City's governmental funds reported a combined ending fund balance of $7,721,838, representing an increase of $757,566 (10.9 %) from the previous fiscal year. The increase across all governmental funds is the result of the following factors:

- Expense control by all departments.
- Increased revenue from higher than projected revenues.

General Fund

Fund balance at June 30, 2020 totaled $5,806,796 which is an increase of $376,444 (6.9%) from the previous fiscal year. The increase is due to lower than budgeted expenses and an increase in revenues from taxes.

Capital Projects Fund

Fund balance at June 30, 2020 totaled $1,009,488 which is an increase of $377,454 (59.7 %) from the previous year. The increase is due to lower than budgeted expenses.

Non-major Governmental Funds

Fund balance at June 30, 2020 totaled $905,554 which is an increase of $3,668 (0.4 %) from the previous fiscal year. The following table shows the fund balances that are included in the Non-major Governmental Funds, as of June 30, 2020 and the increase/(decrease) from the previous fiscal year:

Fund	Fund Balance June 30, 2020	Increase/ Decrease
Non-Major Governmental Funds:		
Grants Fund	$ 51,286	$ (3,682)
Open Door Senior Citizens Fund	180,927	15,016
Municipal Court Building Fund	4,510	(4,335)
Administrative Assessment Fund	11,246	2,092
Park and Recreation Fund	255,116	(4,416)
Parks and Recreation Fund #2	87,821	(1,702)
Equestrian Center Fund	81,254	19,198
Debt Service Fund	41,126	(12,100)
Police Forfeiture Fund	100,781	(7,452)
Perpetual Cemetery Care Fund	91,487	1,049
Totals	$ 905,554	$ 3,668

Proprietary Funds

The City's sole Proprietary Fund, the Utility Fund, had a net position of $4,551,906 as of June 30, 2020. Operating revenues exceeded operating expenses by $7,485.

Capital Asset and Long-term Debt Activity

Capital Asset Activity

At June 30, 2020, the City reported $4,915,083 in capital assets for governmental activities and $2,832,871 in capital assets for business-type activities. Capital asset additions included improvements to City buildings and facilities, the City Park, one new cargo van for Senior Center, completion of phase one of fire station and improvements to main sewer lift station.

Long-term Debt Activity

Long-term debt outstanding at June 30, 2020, excluding the annual required contribution for other postemployment benefits and the net pension liability, totaled $124,937, which is entirely for the Senior Center. The other postemployment benefits liability increased by $1,088 to $359,171. The City's net pension liability decreased by $17,144 to $2,237,855.

Additionally, the City estimates $116,281 for compensated absences.

For additional information, refer to Notes 6, 7 and 11 in the financial statements.

Requests for Information

This financial report is designed to provide a general overview of the financial activity of the City of Carlin to all having an interest in the City of Carlin. Questions concerning any of the information provided in this report or requests of additional financial information should be addressed to the City of Carlin, Attn: City Manager, P.O. Box 787, Carlin, Nevada 89822.

City of Carlin
Statement of Net Position
June 30, 2020

	Governmental Activities	Business-Type Activities	Total
Assets			
Cash	$ 7,367,403	$ 2,342,545	$ 9,709,948
Accounts receivable, net	86,909	88,031	174,940
Due from other governments	434,879	-	434,879
Taxes receivable, delinquent	14,783	-	14,783
Prepaid expenses	11,450	5,020	16,470
Restricted cash	45,104	-	45,104
Capital assets, net of accumulated depreciation	4,094,664	2,754,816	6,849,480
Capital assets, not being depreciated	820,419	78,055	898,474
Total assets	12,875,611	5,268,467	18,144,078
Deferred Outflows of Resources			
Deferred outflows related to other postemployment benefits	14,196	4,751	18,947
Deferred outflows related to pensions	276,398	77,563	353,961
Total deferred outflows of resources	290,594	82,314	372,908
Total Assets and Deferred Outflows of Resources	13,166,205	5,350,781	18,516,986
Liabilities			
Accounts payable and other	101,362	23,449	124,811
Accrued salaries and related liabilities	16,571	-	16,571
Due to other governments	17,717	4,810	22,527
Customer meter deposits	-	12,254	12,254
Unearned revenue - grants	13,361	-	13,361
Noncurrent liabilities portion due or payable within one year			
Compensated absences	26,700	29,330	56,030
Notes payable	6,634	-	6,634
Noncurrent liabilities portion due or payable after one year			
Compensated absences	41,278	18,973	60,251
Notes payable	118,303	-	118,303
Total other postemployment benefits liability	286,535	72,636	359,171
Net pension liability	1,729,521	508,334	2,237,855
Total liabilities	2,357,982	669,786	3,027,768
Deferred Inflows of Resources			
Deferred inflows related to pensions	396,826	129,089	525,915
Total Liabilities and Deferred Inflows of Resources	2,754,808	798,875	3,553,683
Net Position			
Net investment in capital assets	5,032,480	2,832,871	7,865,351
Restricted for			
Debt service	12,100	-	12,100
Nonspendable perpetual cemetery care	33,004	-	33,004
Perpetual cemetery care	58,483	-	58,483
Capital projects	27,454	-	27,454
Senior Center	15,576	-	15,576
Judicial fees (NRS 176)	15,756	-	15,756
Unrestricted	5,216,544	1,719,035	6,935,579
Total net position	$ 10,411,397	$ 4,551,906	$ 14,963,303

See Notes to Financial Statements

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net (Expense) Revenue and Changes in Net Position: Primary Government: Governmental Activities	Net (Expense) Revenue and Changes in Net Position: Primary Government: Business-Type Activities	Net (Expense) Revenue and Changes in Net Position: Primary Government: Total
Governmental Activities							
General government	$ 751,105	$ -	$ -	$ -	$ (751,105)	$ -	$ (751,105)
Public safety	989,442	69,967	-	64,205	(855,270)	-	(855,270)
Judicial	66,389	-	-	-	(66,389)	-	(66,389)
Public works	355,770	59,915	-	-	(295,855)	-	(295,855)
Health and sanitation	101,675	-	979	-	(100,696)	-	(100,696)
Culture and recreation	341,078	53,096	159,189	-	(128,793)	-	(128,793)
Interest on long-term debt	5,750	-	-	-	(5,750)	-	(5,750)
Total governmental activities	2,611,209	182,978	160,168	64,205	(2,203,858)	-	(2,203,858)
Business-type Activities							
Water	480,638	448,624	-	-	-	(32,014)	(32,014)
Garbage	156,400	252,265	-	-	-	95,865	95,865
Sewer	387,883	331,517	-	1,000	-	(55,366)	(55,366)
Street lights	30,286	30,286	-	-	-	-	-
Total business-type activities	1,055,207	1,062,692	-	1,000	-	8,485	8,485
Total primary government	$ 3,666,416	$ 1,245,670	$ 160,168	$ 65,205	(2,203,858)	8,485	(2,195,373)
Property taxes					462,257	-	462,257
Room taxes					27,915	-	27,915
Consolidated tax revenues - unrestricted					2,136,777	-	2,136,777
Fuel taxes					50,825	-	50,825
Interest and investment earnings					2,326	18,389	20,715
Miscellaneous revenue					83,458	-	83,458
Total general revenues					2,763,558	18,389	2,781,947
Change in Net Position					559,700	26,874	586,574
Net Position, Beginning of Year					9,851,697	4,525,032	14,376,729
Net Position, End of Year					$ 10,411,397	$ 4,551,906	$ 14,963,303

See Notes to Financial Statements

City of Carlin
Balance Sheet – Governmental Funds
June 30, 2020

	General	Capital Projects Fund	Other Governmental Funds	Total Governmental Funds
Assets				
Cash	$ 5,507,557	$ 1,003,147	$ 856,699	$ 7,367,403
Receivables, net				
Accounts	73,402	-	13,507	86,909
Taxes	14,783	-	-	14,783
Due from other governments	406,257	6,341	22,281	434,879
Prepaid expenses	8,934	-	2,516	11,450
Restricted cash	-	-	45,104	45,104
Total assets	$ 6,010,933	$ 1,009,488	$ 940,107	$ 7,960,528
Liabilities				
Accounts payable	$ 84,198	$ -	$ 16,972	$ 101,170
Accrued salaries and related liabilities	16,571	-	-	16,571
Bail and fines held	192	-	-	192
Due to other governments	16,497	-	1,220	17,717
Unearned revenue - grants	-	-	13,361	13,361
Total liabilities	117,458	-	31,553	149,011
Deferred Inflows of Resources				
Unavailable property taxes	14,783	-	-	14,783
Unavailable infrastructure tax revenue	44,225	-	-	44,225
Unavailable ambulance fees	27,671	-	-	27,671
Unavailable grant revenue	-	-	3,000	3,000
Total deferred inflows of resources	86,679	-	3,000	89,679
Fund Balances				
Nonspendable	8,934	-	35,520	44,454
Restricted for				
Debt service	-	-	12,100	12,100
Perpetual cemetery care	-	-	58,483	58,483
Capital projects	-	27,454	-	27,454
Senior Center	-	-	15,576	15,576
Judicial fees (NRS 176)	-	-	15,756	15,756
Committed for				-
Future community development	-	-	60,052	60,052
Recreational activities	-	-	282,885	282,885
Public safety	-	-	100,781	100,781
Assigned	-			-
Subsequent year operations	3,112,528	-	34,200	3,146,728
Other purposes	-	982,034	290,201	1,272,235
Unassigned	2,685,334	-	-	2,685,334
Total fund balances	5,806,796	1,009,488	905,554	7,721,838
Total Liabilities, Deferred Inflows of Resources, and Fund Balances	$ 6,010,933	$ 1,009,488	$ 940,107	$ 7,960,528

See Notes to Financial Statements

Amounts reported for governmental activities in the statement of net position are different because:

Total fund balances - governmental funds		$ 7,721,838
The net investment in capital assets is not reported in the governmental funds financial statements because they are not current financial resources, but they are reported in the statement of net position.		
Capital assets	$ 12,728,374	
Less accumulated depreciation	(8,633,710)	4,094,664
Capital assets, not being depreciated	820,419	820,419
Unavailable revenue represents amounts that are not available to fund current expenditures, and therefore, are not reported as revenue in the governmental funds.		89,679
Long-term liabilities are not due and payable in the current period and therefore are not reported in the governmental funds.		
Net pension liability	(1,729,521)	
Notes payable	(124,937)	
Other postemployment benefits	(286,535)	
Compensated absences	(67,978)	(2,208,971)
Deferred outflows and inflows of resources related to pensions and other postemployment benefits are applicable to future periods and, therefore, are not reported in the governmental funds.		
Deferred outflows of resources related to pensions	276,398	
Deferred inflows of resources related to pensions	(396,826)	
Deferred outflows of resources related to other postemployment benefits	14,196	(106,232)
Net position of governmental activities		$ 10,411,397

City of Carlin

Statement of Revenues, Expenditures, and Changes in Fund Balances – Governmental Funds

Year Ended June 30, 2020

	General	Capital Projects Fund	Other Governmental Funds	Total Governmental Funds
Revenues				
Taxes	$ 432,790	$ 39,759	$ 27,915	$ 500,464
Licenses, permits and fees	59,915	-	-	59,915
Intergovernmental	2,200,165	-	220,394	2,420,559
Charges for services	35,318	-	19,138	54,456
Fines and forfeits	25,790	-	-	25,790
Miscellaneous	45,461	3,270	63,957	112,688
Total revenues	2,799,439	43,029	331,404	3,173,872
Expenditures				
Current				
General government	744,590	-	-	744,590
Public safety	919,530	-	6,078	925,608
Judicial	50,374	-	16,367	66,741
Public works	163,452	-	-	163,452
Health and sanitation	70,707	-	-	70,707
Culture and recreation	18,012	-	275,968	293,980
Capital outlay	53,830	15,575	69,723	139,128
Debt service				
Principal	-	-	6,350	6,350
Interest	-	-	5,750	5,750
Total expenditures	2,020,495	15,575	380,236	2,416,306
Excess (Deficiency) of Revenues Over (Under) Expenditures	778,944	27,454	(48,832)	757,566
Other Financing Source (Uses)				
Transfer in	17,500	350,000	90,000	457,500
Transfer out	(420,000)	-	(37,500)	(457,500)
Total other financing sources (uses)	(402,500)	350,000	52,500	-
Net Change in Fund Balances	376,444	377,454	3,668	757,566
Fund Balances, Beginning of Year	5,430,352	632,034	901,886	6,964,272
Fund Balances, End of Year	$ 5,806,796	$ 1,009,488	$ 905,554	$ 7,721,838

See Notes to Financial Statements

Amounts reported for governmental activities in the statements of activities are different because:		
Net change in fund balances - total governmental funds		$ 757,566
Capital outlays to purchase or build capital assets are reported in governmental funds as expenditures. However, those costs are shown in the statement of net position and allocated over their estimated useful lives as depreciation expense in the statement of activities. This is the amount by which depreciation exceeded capital outlays in the current period.		
Capital outlay to purchase capital assets	$ 139,128	
Current depreciation expense	(387,813)	(248,685)
Revenue in the statement of activities that do not provide current financial resources are not reported as revenues in the funds.		
Change in unavailable property taxes	(10,292)	
Change in unavailable ambulance fees	8,859	
Change in unavailable grant revenue	3,000	
Change in unavailable infrastructure tax revenue	(4,530)	(2,963)
Long-term liabilities, include notes payable, that are not due and payable in current period and therefore are not reported in the governmental funds.		
Note payable - principal payments		6,350
Some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in governmental funds.		
Current year change in compensated absences		24,650
Governmental funds report City PERS contributions as expenditures. However, in the statement of activities, the cost of pension benefits earned is reported as pension expense:		
City PERS contributions	137,372	
City pension expense	(114,998)	22,374
The liability for other postemployment benefits is not recorded in the governmental funds, but it is reported in the statement of net position. This is the current year change in the liability, reported as an expense in the statement of activities.		
Other postemployment benefits contributions	14,198	
Other postemployment benefits expense	(13,790)	408
Change in net position of governmental activities		$ 559,700

City of Carlin
Statement of Net Position – Proprietary Fund
June 30, 2020

	Business-Type Activities Enterprise Fund Utility Fund
Assets	
Current Assets	
Cash	$ 2,342,545
Accounts receivable, net	88,031
Prepaid expenses	5,020
Total current assets	2,435,596
Noncurrent Assets	
Capital assets, net of accumulated depreciation	2,754,816
Capital assets, not being depreciated	78,055
Total noncurrent assets	2,832,871
Total assets	5,268,467
Deferred Outflows of Resources	
Deferred outflows related to other postemployment benefits	4,751
Deferred outflows related to pensions	77,563
Total deferred outflows of resources	82,314
Liabilities	
Current Liabilities	
Accounts payable	23,449
Due to other governments	4,810
Compensated absences, current portion	29,330
Customer meter deposits	12,254
Total current liabilities	69,843
Noncurrent Liabilities	
Compensated absences	18,973
Net pension liability	508,334
Total other postemployment benefits liability	72,636
Total noncurrent liabilities	599,943
Total liabilities	669,786
Deferred Inflows of Resources	
Deferred inflows related to pensions	129,089
Net Position	
Net investment in capital assets	2,832,871
Unrestricted	1,719,035
Total net position	$ 4,551,906

City of Carlin

Statement of Revenues, Expenses, and Changes in Net Position –Proprietary Fund

Year Ended June 30, 2020

	Business-Type Activities Enterprise Fund Utility Fund
Operating Revenues	
Charges for sales and services	
Water (pledge for revenue bond coverage)	$ 448,624
Garbage	252,265
Sewer	331,517
Street lights	30,286
Total operating revenues	1,062,692
Operating Expenses	
Salaries and wages	297,536
Employee benefits	145,340
Services and supplies	462,013
Depreciation	150,318
Total operating expenses	1,055,207
Operating Income	7,485
Nonoperating Revenues	
Interest and penalties earned	18,389
Income Before Capital Contributions	25,874
Capital Contributions	1,000
Change in Net Position	26,874
Net Position, Beginning of Year	4,525,032
Net Position, End of Year	$ 4,551,906

	Business-Type Activities Enterprise Fund Utility Fund
Operating Activities	
Cash received from customers	$ 1,067,476
Cash payments to employees for services and benefits	(448,661)
Cash payments to suppliers for goods and services	(511,615)
Net Cash from Operating Activities	107,200
Capital and Related Financing Activities	
Acquisition of capital assets	(155,505)
Connection fees	1,000
Net Cash used for Capital and Related Financing Activities	(154,505)
Investing Activity	
Interest on investments	18,389
Net Change in Cash	(28,916)
Cash, Beginning of Year	2,371,461
Cash, End of Year	$ 2,342,545

	Business-Type Activities Enterprise Fund Utility Fund
Reconciliation of operating income to net cash from operating activities	
Operating income	$ 7,485
Adjustments to reconcile operating income to net cash from operating activities	
Depreciation	150,318
Pension expense	29,948
City pension contributions	(35,775)
Other postemployment benefits expense	(138)
Changes in	
Accounts receivable	(26)
Prepaid expenses	(1,043)
Accounts payable	(42,949)
Accrued expenses	(620)
Total Adjustments	99,715
Net Cash from Operating Activities	$ 107,200

Note 1 - Summary of Significant Accounting Policies

The City of Carlin (the City) was incorporated April 17, 1971 per Chapter 344, Statutes of Nevada 1971. The City is governed by an elected Council of four Councilmen and a Mayor who hold the final decision-making authority and are held primarily accountable for those decisions. The Council is responsible for approving the budget, establishing spending limitations, funding any deficits and borrowing funds and/or issuing bonds to finance City operations and construction.

The accounting policies of the City conform to accounting principles generally accepted in the United States of America as applicable to governmental entities. The Governmental Accounting Standards Board (GASB) is the accepted standard setting body for establishing these accounting and financial principles.

The accounting and reporting framework and the more significant accounting policies are as follows:

Reporting Entity

The accompanying financial statements include all the activities that comprise the financial reporting entity of the City. The City is legally separate and fiscally independent of other governing bodies. No other governmental organizations are includable within the City's reporting entity.

Government-Wide and Fund Financial Statements

The basic financial statements consist of government-wide statements and the fund financial statements. The government-wide financial statements include a statement of net position and a statement of activities. The government-wide statements report information on all of the activities of the City since the City does not have any fiduciary activities. For the most part, the effect of interfund activity has been removed from these statements. Governmental activities, which normally are supported by taxes and intergovernmental revenues, are reported separately from business-type activities, which rely to a significant extent on fees and charges for support.

The statement of net position presents the consolidated financial position of the City at year-end in separate columns, for both governmental and business-type activities. The statement of activities demonstrates the degree to which the direct expenses of a given function or segment are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. Program revenues include charges to patrons who use or directly benefit from goods, services, or privileges provided by a given function, and grants and contributions that are restricted to meet the operational or capital requirements of a particular function or segment. Taxes and revenues not properly included among program revenues are reported instead as general revenues. Those programs or functions with a net cost not supported by program revenues are generally dependent on general-purpose revenues, such as taxes and unrestricted interest earnings, to remain operational. When both restricted and unrestricted resources are available for use, it is the City's policy to use restricted resources first, then unrestricted resources as they are needed.

Separate fund financial statements are provided for governmental funds, and proprietary funds. Major individual governmental funds and major individual enterprise funds are reported as separate columns in the fund financial statements. All other funds are aggregated into a single column.

Measurement Focus, Basis of Accounting, and Financial Statement Presentation

Government-Wide Financial Statements

The government-wide financial statements are reported using the economic resources measurement focus and the accrual basis of accounting, as are proprietary fund financial statements. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Property taxes are recognized as revenue in the year for which they are levied. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met. Grant revenues have been reported as unearned revenue if the funds have been received prior to meeting such requirements.

Fund Financial Statements

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered "measurable" when in the hands of intermediary collecting agents or governments. Revenues are considered available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the City considers all revenues available if they are collected within 60 days after the end of the current fiscal period. Anticipated refunds of taxes are recorded as liabilities and reductions of revenue when they are measurable, and the payment seems certain. Expenditures are generally recorded when a liability is incurred, as under accrual accounting. However, debt service expenditures, as well as expenditures related to compensated absences and claims and judgments, are recorded only when payment is due.

Property taxes, franchise taxes, licenses, and interest associated with the current fiscal period are all considered to be susceptible to accrual and so have been recognized as revenues of the current fiscal period. Only the portion of special assessments receivable due within the current fiscal period is considered to be susceptible to accrual as revenue of the current period. All other revenue items are considered to be measurable and available only when cash is received by the City.

The major revenue sources of the City include consolidated tax revenues, ad valorem (property) taxes, governmental services tax, interest income and various state and federal grants. Ad valorem taxes have been deferred in the governmental funds if they are not available to finance the activities of the current period.

The City's financial records are organized on the basis of funds, which are independent fiscal and accounting entities with a separate set of self-balancing accounts. Fund accounting segregates funds according to their intended purpose and is used to aid management in demonstrating compliance with finance-related legal and contractual provisions.

The City reports the following major governmental funds:

- General Fund is the primary operating fund of the City. It accounts for all financial resources and costs of operations traditionally associated with governments, which are not required to be accounted for in another fund.
- Capital Projects Fund accounts for financial resources used for the acquisition or construction of major capital assets.

The City reports the following major proprietary fund:

- Utility Fund accounts for all revenues and expenses used to provide water, sewer, garbage and street light services to the City's residents.

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services or producing and delivering goods in connection with the proprietary funds' principal ongoing operations. Revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

The City reports the following non-major governmental fund types:

- Special Revenue Funds account for specific financial resources that are legally restricted to expenditure for specific purposes.
- Debt Service Funds account for the servicing of general long-term debt not being financed by proprietary funds.
- Permanent Funds account for financial resources that are legally restricted to the extent that only earnings and not principal may be used for purposes that support the City's programs.

Budgets and Budgetary Accounting

The City adheres to the Local Government Budget Act incorporated in Section 354 of the Nevada Revised Statutes. The City is required to legally adopt budgets for all funds except fiduciary funds. The budgets are filed as a matter of public record with the City Clerk, the County Clerk and the State Department of Taxation. The City staff use the following procedures to establish, modify, and control the budgetary information that is included in these financial statements.

1. On or before April 15, the City Council files a tentative budget with the Nevada Department of Taxation for all funds for the fiscal year beginning the following July 1. The tentative budget is prepared by fund, function and department and includes proposed expenditures and the means of financing them.
2. Public budget hearings on the tentative budget are held in May.
3. Prior to June 1, at a public hearing, the Council indicates changes, if any, to be made to the tentative budget and adopts a final budget by the majority vote of the Council. The final budget must then be forwarded to the Nevada Department of Taxation for final approval. The above dates may be adjusted as necessary during legislative years.

4. Formal budgetary integration in the financial records of all funds is employed to enhance management control during the year, however encumbrance accounting is not utilized. All appropriations lapse at the end of the fiscal year.
5. The appropriated budget amounts may be transferred between functions, funds, or contingency accounts if the transfer does not increase the total appropriations for fiscal year amounts subject to advisement of the Council at the next subsequent meeting and must be recorded in the minutes of the meeting. Budget augmentations and amendments in excess of original budgetary amounts require prior approval of the City Council following a scheduled and noticed public hearing.
6. Budgets for all funds are adopted on a basis consistent with accounting principles generally accepted in the United States of America (GAAP). Budgeted amounts reflected in the accompanying financial statements recognize budget amendments made during the year in accordance with the above procedures.
7. In accordance with state statute, actual expenditures may not exceed budgetary appropriations of the various functions of the governmental funds, except for bond repayments, short-term financing repayment and any other long-term contract expressly authorized by law, and certain other items specified in NRS 354.626. For proprietary funds, the sum of operating and nonoperating expenses may not exceed the sum of budgeted operating and nonoperating expenses.

Property Taxes

Taxes on real property are levied and the lien attached on July 1 (the levy date) of the year for which the taxes are levied. Taxes are due on the third Monday of August; however, they may be paid in quarterly installments payable on the third Monday of August and the first Mondays in October, January and March. Any tax paid more than ten days late is assessed a penalty. In the event of nonpayment, a tax lien is taken on the first Monday in May, and the County Treasurer is authorized to hold the property for two additional years, subject to redemption upon payment of taxes, penalties and costs, together with interest at the rate of 10% per year from the date the taxes were due until paid. If delinquent taxes are not paid within the two-year redemption period, the County Treasurer, upon approval of the Board of County Commissioners, obtains a tax deed to the property free of all encumbrances. Upon receipt of a deed, the County Treasurer may sell the property to satisfy the tax lien.

The State of Nevada limits the total taxes levied by all overlapping governmental units within the boundaries of Elko County (i.e., the county, the state, the school district, the city, and any other city, town or special district) to an amount not to exceed $3.64 per $100 of assessed valuation of the property being taxed, except in cases of severe financial emergency as defined by NRS 354.705.

Property tax revenue and the related receivable have been recognized for property tax assessments in the fiscal year for which they were levied. All property taxes are collected by Elko County and remitted to the City monthly.

Cash

For purposes of the statement of cash flows, the City considers all time deposits, certificates of deposit, and all highly liquid investments, generally with original maturities of three months or less to be cash equivalents.

Cash balances from most funds are combined, held and invested by City staff. Interest earned on the cash balances is generally recognized in the fund holding the cash.

Debt loan agreements require the City to maintain a debt service reserve for each loan. These amounts are reported as restricted cash.

State statutes authorize deposits in any bank, credit union or savings and loan that are federally insured. The City may invest in the following securities:

- United States bonds and debentures, bills and notes of the United States Treasury, or obligations of the Unites States or a corporation sponsored by the government maturing within ten (10) years from the date of purchase.
- Certain farm loan bonds.
- Negotiable certificates of deposit from commercial banks, insured credit unions or insured savings and loan associations.
- State of Nevada Local Government Pooled Investment Fund.
- Certain securities issued by local governments of the State of Nevada.
- Certain "AAA" rated money market mutual funds that invest in federal securities.
- Other securities expressly provided by other statues, including repurchase agreements.
- Certain banker's acceptances not to exceed 180 days maturities or 20% of the money available for investment.
- Obligations of state and local governments rated A or higher and exempt from gross income for federal income tax purposes.
- Certain corporate or depository institution commercial paper purchased from a registered broker-dealer rated A-1, P-1, or better with maturity of no more than 270 days.

Any securities purchased by or on behalf of the City must remain in the physical possession of an appropriate officer of the City or a trust department of a designated bank (federally insured) after issuing a written acknowledgment.

Accounts Receivable

Accounts receivable are reported net of an allowance of uncollectible accounts, if applicable. No allowance for uncollectible accounts has been established since management does not anticipate any material collection loss with respect to taxes receivable. Total accounts receivable in the General Fund of $334,039 are reported at $73,402, net of a $260,637 allowance for uncollectible ambulance billings and accounts receivable in the Utility Fund of $88,083 are reported at $88,031, net of a $52 allowance for uncollectable utility billings.

Inventories

Expenditures for consumable supplies and minor equipment purchases are charged against appropriations at the time of purchase. Any inventories of such supplies at June 30 are not material to the individual funds and are not recognized in these financial statements.

Capital Assets

Capital assets, which include property, plant and equipment, and infrastructure, are recorded in the government-wide and proprietary fund financial statements. Capital assets are defined by the City as assets with an initial, individual cost of more than $1,500 and an estimated useful life in excess of one year. These assets are recorded at historical cost if purchased or constructed. Donated capital assets are recorded at their acquisition value determined at the date of donation. Interest, if applicable, is capitalized on assets acquired with tax-exempt debt for business-type activities. The amount of interest to be capitalized is determined by offsetting interest expense incurred from the date of the borrowing until completion of the project with interest earned on invested proceeds over the same period.

Depreciation of all exhaustible capital assets is recorded as an allocated expense in the Statement of Activities and the Proprietary Fund Statement of Revenues, Expenses and Changes in Net Position, with accumulated depreciation reflected in the government-wide and proprietary fund Statement of Net Position. Depreciation is provided over the assets' estimated useful lives using the straight-line method of depreciation. The range of estimated useful lives by type of asset is as follows:

Buildings	15–100 years
Equipment and vehicles	5-25 years
Infrastructure	5-50 years

In the fund financial statements, capital assets used in governmental fund operations are accounted for as capital outlay expenditures by the governmental fund upon acquisition. Capital assets used in proprietary fund operations are accounted for as capital assets in the Statement of Net Position – Proprietary Funds.

Compensated Absences

Employees may accumulate unused vacation time within certain limits. Unused vacation time is paid to the employee after his/her anniversary date. After five years of employment, employees will be paid for sick leave up to 480 hours at one-fourth of the regular rate of pay at separation from service. If employment termination is due to death, any unused sick leave will be paid at the regular rate of pay. Accumulated costs for unused vacation pay and sick leave are recognized currently for those retiring prior to year-end. Remaining costs of unused vacation and sick leave are not recorded in the governmental fund financial statements but are included in the government-wide financial statements. These benefits have typically been paid from the General Fund.

Pensions

For purposes of measuring the net pension liability and pension expense, information about the fiduciary net position of the Public Employees' Retirement System of the State of Nevada (PERS) Base Plan (Base Plan) and additions to/deductions from Base Plan's fiduciary net position have been determined on the same basis as they are reported by the Base Plan. For this purpose, benefit payments (including refund or employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Other Post-Employment Benefits

In addition to pension benefits (Public Employees Retirement System) described in Note 7 and postemployment healthcare benefits described in Note 11, the City waives monthly utility bills for certain retired employees per the City's Personnel Policy Manual section 5.16. The benefit terminates upon the death of the retiree. The City funds the benefit on a current basis and, as of June 30, 2020, the City had no retirees utilizing the benefit. The City had $0 associated with the above benefit for the year ended June 30, 2020.

Deferred Inflows and Outflows of Resources

In addition to assets, the Statements of Net Position/Governmental Funds Balance Sheet may report a separate section for deferred outflows of resources. This separate statement element represents the consumption of net position/fund balance that applies to future periods and so will not be recognized as an outflow of resources (expense/expenditure) until then. The City reported deferred outflows of resources related to other postemployment benefits resulting from the City's contributions subsequent to the measurement date of the net other postemployment liability. The City reported deferred outflows of resources related to pensions resulting from the City's contributions subsequent to the measurement date of the net pension liability, differences between expected and actual experience, changes in assumptions, and change in the employer's proportion and difference between the employer's contributions and the employer's proportionate contributions in the Statement of Net Position.

In addition to liabilities, the Statements of Net Position/Governmental Funds Balance Sheet may report a separate section for deferred inflows of resources. This separate statement element represents an acquisition of net position/fund balance that applies to future periods and so will not be recognized as an inflow of resources (revenue) until that time. The City reflects deferred inflows of resources which are unavailable revenue reported in the governmental fund balance sheet for delinquent property taxes, grants, and other taxes received beyond 60 days of year end and uncollected ambulance fees under the modified accrual basis of accounting. The City reported deferred inflows of resources related to pensions resulting from differences between expected and actual experience, net difference between projected and actual earnings on pension plan investments, and change in the employer's proportion and differences between the employer's contributions and the employer's proportionate contributions in the Statement of Net Position.

Fund Balance/Net Position

Government-wide and Proprietary Fund Financial Statements:

The government-wide and proprietary fund Statement of Net Position utilizes a net position presentation. Net position is categorized as net investment in capital assets, restricted, and unrestricted. Net investment in capital assets is the net book value of capital assets, less related debt. Related debt is the debt outstanding that relates to the acquisition, construction, or improvement of capital assets.

Governmental Fund Financial Statements:

In the governmental fund financial statements, governmental funds report the following classifications of fund balance:

- Nonspendable – Amounts that cannot be spent because they are either not spendable in form or are legally or contractually required to be maintained intact.
- Restricted – Amounts that can be spent only for specific purposes because of constitutional provisions, enabling legislation, or because of constraints that are externally imposed by creditors, grantors, contributors, or the law or regulations of other governments.
- Committed – Amounts that can only be used for specific purposes. Committed fund balance is reported pursuant to resolutions passed by the City Council, the City's highest level of decision-making authority. Committed amounts may only be established, amended, or rescinded pursuant to Council resolution.
- Assigned – Amounts that the City intends to use for a specific purpose, but do not meet the definitions of restricted or committed fund balance. Under the City's adopted policy, amounts may be assigned by the City Manager or City Clerk under the authorization of the City Council.
- Unassigned – Amounts that have not been assigned to other funds or restricted, committed, or assigned to a specific purpose within the General Fund. In accordance with an ordinance enacted by the City of Carlin on June 8, 2011, the City has adopted a policy to maintain a minimum level of unassigned fund balance for the General Fund of not less than 75% of the previous year's unrestricted general fund expenditures.

When an expenditure is incurred for purposes for which both restricted and unrestricted amounts are available, the City considers restricted funds to have been spent first. When an expenditure is incurred for which committed, assigned, or unassigned amounts are available, the City considers amounts to have been spent first out of committed funds, then assigned funds, and finally, unassigned funds, as needed, unless the City Council has provided otherwise in its commitment or assignment actions.

Risk Management

The City, like any governmental entity, is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries of employees; and natural disasters. The City assesses these risks and utilizes risk management provided through the Nevada Public Agency Insurance Pool (POOL) created through an inter-local cooperative agreement by participating Nevada governments.

The City participated in Agency programs designed to reduce risk loss by governments. Members pay an annual premium and specific deductibles, as necessary, to POOL for its general insurance coverage. POOL is considered a self-sustaining risk pool that will provide coverage for its members for up to $10,000,000 per event and a $10,000,000 general aggregate per member. POOL obtains independent coverage for insured events in excess of the $200,000 limit and claims have not exceeded these amounts during the previous three years.

The City also pays premiums based on payroll costs to the Public Agency Compensation Trust (PACT) for workers compensation coverage. PACT is considered a self-sustaining pool that will provide coverage based on established statutory limits.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from these estimates.

Comparative Data

Comparative data shown in the supplementary information sections for the prior year has been extracted from the 2018-2019 financial statements and reclassified where necessary and practical to afford better comparability between the years. It has been provided to add comparability but is not considered full disclosure of transactions for 2018-2019. Such information can only be obtained by referring to the audited financial statements for that year.

Note 2 - Compliance with Nevada Revised Statutes and Nevada Administrative Code

The City conformed to all significant statutory constraints on its financial administration during the year.

Note 3 - Cash

As defined in Note 1, Nevada Revised Statutes (NRS 355.170) set forth acceptable investments for Nevada local governments. The City has not adopted a formal investment policy that would further limit its investment choices nor further limit its exposure to certain risks as set forth below. As of and for the year ended June 30, 2020, the City had no investments, only cash balances.

Custodial Credit Risk – Custodial credit risk is the risk that in the event of a bank failure, the City's deposits may not be returned. All deposits were collateralized under the Nevada Pooled Collateral Program or insured by the Federal Deposit Insurance Corporation (FDIC).

Cash held by the City as of June 30, 2020 are allocated to the various funds as follows:

Major governmental funds	$ 6,510,704
Nonmajor governmental funds	856,699
Business-type activities/proprietary fund	2,342,545
Restricted:	
Nonmajor governmental funds	45,104
	$ 9,755,052

Note 4 - Capital Assets

The amounts recorded as capital assets are summarized as follows:

Governmental Activities

	Balance July 1, 2019	Additions	Deletions	Transfers	Balance June 30, 2020
Capital Assets, Being Depreciated					
Buildings	$ 2,475,530	$ 25,623	$ -	$ 704,674	$ 3,205,827
Office equipment	152,458	3,088	-	-	155,546
Other equipment	2,272,257	13,786	-	-	2,286,043
Vehicles	2,164,384	57,279	-	-	2,221,663
Infrastructure	4,819,943	39,352	-	-	4,859,295
Total capital assets, being depreciated	11,884,572	139,128	-	704,674	12,728,374
Less Accumulated Depreciation for					
Buildings	(993,078)	(65,855)	-	-	(1,058,933)
Office equipment	(134,085)	(3,901)	-	-	(137,986)
Other equipment	(1,565,758)	(94,021)	-	-	(1,659,779)
Vehicles	(1,797,409)	(61,058)	-	-	(1,858,467)
Infrastructure	(3,755,567)	(162,978)	-	-	(3,918,545)
Total accumulated depreciation	(8,245,897)	(387,813)	-	-	(8,633,710)
Total capital assets, being depreciated, net	3,638,675	(248,685)	-	704,674	4,094,664
Capital Assets, not Being Depreciated					
Land	820,419	-	-	-	820,419
Construction in progress	704,674	-	-	(704,674)	-
Total capital assets, not being depreciated	1,525,093	-	-	(704,674)	820,419
Governmental Activities Capital Assets, Net	$ 5,163,768	$ (248,685)	$ -	$ -	$ 4,915,083

Business-type Activities

	Balance July 1, 2019	Additions	Deletions	Transfers	Balance June 30, 2020
Capital Assets, Being Depreciated					
Buildings	$ 292,162	$ -	$ -	$ -	$ 292,162
Office equipment	21,526	-	-	-	21,526
Other equipment	497,222	2,725	-	-	499,947
Vehicles	424,545	-	-	-	424,545
Infrastructure	6,424,764	152,780	-	-	6,577,544
Total capital assets, being depreciated	7,660,219	155,505	-	-	7,815,724
Less Accumulated Depreciation for					
Buildings	(81,598)	(5,928)	-	-	(87,526)
Office equipment	(19,177)	(405)	-	-	(19,582)
Other equipment	(352,121)	(12,120)	-	-	(364,241)
Vehicles	(424,545)	-	-	-	(424,545)
Infrastructure	(4,033,149)	(131,865)	-	-	(4,165,014)
Total accumulated depreciation	(4,910,590)	(150,318)	-	-	(5,060,908)
Total capital assets, being depreciated, net	2,749,629	5,187	-	-	2,754,816
Capital Assets, Not Being Depreciated					
Land	78,055	-	-	-	78,055
Business-type Activities Capital Assets, Net	$ 2,827,684	$ 5,187	$ -	$ -	$ 2,832,871

Depreciation expense was charged to functions/programs of the City as follows:

Governmental Activities	
General government	$ 20,341
Public safety	86,429
Public works	195,958
Health and sanitation	32,656
Culture and recreation	52,429
Total Depreciation Expense – Governmental Activities	$ 387,813
Business-type Activities	
Water	$ 48,163
Sewer	102,155
Total Depreciation Expense – Business-type Activities	$ 150,318

Note 5 - Cooperative Agreement

On January 9, 2002 the City of Carlin, City of Elko, and Elko County entered into a cooperative agreement to provide financial resources for a water-line extension project. The water line initially served the University of Nevada-Reno Fire Science Academy that was deemed beneficial to the economy of the three governmental entities. The water line is the property of the City of Carlin. The project was funded by a federal grant obtained by the City of Carlin. This grant required matching funds of twenty-five percent. Therefore, a loan was obtained from the U.S. Department of Agriculture, Rural Development Agency. The cooperative agreement provides that the City of Elko and Elko County will each reimburse the City of Carlin one-third of the annual loan payments the City of Carlin will be obligated to pay to the USDA. The loan carries a maximum interest rate of 5% per year, payable over a period of forty years in annual payments of $20,398. The City of Elko and Elko County have each agreed to pay to the City of Carlin the maximum sum of $6,800 per year until the loan is paid in full or for a maximum of forty years. The loan was paid in full during the year ended June 30, 2018.

The City of Carlin has enacted an ordinance providing for a water extension connection fee. This fee will be collected by the City of Carlin as a surcharge fee from every water user connecting to City water within the "UNR Fire Science Academy Water Extension Area" for a period of forty years after the date the extension line is connected to the City of Carlin's water system. The City of Carlin agrees the proceeds collected from this water extension connection fee will be used to reimburse equally the City of Elko and Elko County for the payments made by them prior to the collection of any connection extension fees. Any excess funds collected will be used to reduce debt incurred for the project.

The City of Carlin has received pledged revenues totaling $82,826 since the cooperative agreement was put into place. Pledged revenues are a surcharge fee from every water user connecting to City water within the "UNR Fire Science Academy Water Extension Area". There was only one connection to this section of the City's water system during the year ended June 30, 2020.

Note 6 - Long-Term Liabilities

Long-term debt as of June 30, 2020, consisted of the following:

	Balance June 30, 2020
Governmental activities	
Direct Borrowing:	
Note payable United States Department of Agriculture, Rural Development, $12,100 annually including interest at 4.38%, maturing June 28, 2034. The note is for construction of a senior citizens facility and is secured by the facility.	$ 124,937

The governmental activities notes will be repaid by the Debt Service Fund. The maturity of the notes payable for the years after June 30, 2020, based upon present arrangements, is as follows:

	Government-Type Activities	
	U.S. Department of Agriculture Senior Citizens Facility	
Fiscal Year Ended June 30,	Principal	Interest
2021	$ 6,634	$ 5,466
2022	6,925	5,175
2023	7,227	4,876
2024	7,544	4,556
2025	7,874	4,226
2026-2030	44,847	15,653
2031-2034	43,886	4,950
	$ 124,937	$ 44,902

Changes in Long-Term Liabilities

	Balance July 1, 2019	Additions	Reductions	Balance June 30, 2020	Due Within One Year
Governmental activities					
Compensated absences	$ 92,628	$ 54,091	$ 78,741	$ 67,978	$ 26,700
Notes payable	131,287	-	6,350	124,937	6,634
	$ 223,915	$ 54,091	$ 85,091	$ 192,915	$ 33,334
Business-type activities					
Compensated absences	$ 48,123	$ 30,727	$ 30,547	$ 48,303	$ 29,330

The City was, in accordance with Nevada Revised Statutes, within the legal debt limit at June 30, 2020.

Note 7 - Defined Benefit Pension Plan

Plan Description

The City of Carlin contributes to the Public Employees' Retirement System of the State of Nevada (PERS). PERS administers a cost-sharing, multiple-employer, defined benefit public employees' retirement system which includes both Regular and Police/Fire members. PERS was established by the Nevada Legislature in 1947, effective July 1, 1948. PERS is administered to provide a reasonable base income to qualified employees who have been employed by a public employer and whose earnings capacities have been removed or substantially impaired by age or disability.

Benefits Provided

Benefits, as required by the Nevada Revised Statutes (NRS or statute), are determined by the number of years of accredited service at time of retirement and the member's highest average compensation in any 36 consecutive months with special provisions for members entering PERS on or after January 1, 2010 and July 1, 2015. Benefit payments to which participants or their beneficiaries may be entitled under the plan include pension benefits, disability benefits, and survivor benefits.

Monthly benefit allowances for members are computed as 2.5% of average compensation for each accredited year of service prior to July 1, 2001. For service earned on and after July 1, 2001, this multiplier is 2.67% of average compensation. For members entering PERS on or after January 1, 2010, there is a 2.5% multiplier and for regular members entering PERS on or after July 1, 2015, there is a 2.25% factor. PERS offers several alternatives to the unmodified service retirement allowance which, in general, allow the retired employee to accept a reduced service retirement allowance payable monthly during his or her lifetime and various optional monthly payments to a named beneficiary after his or her death.

Post-retirement increases are provided by authority of NRS 286.575 - .579.

Vesting

Regular members entering PERS prior to January 1, 2010, are eligible for retirement at age 65 with five years of service, at age 60 with ten years of service, or at any age with 30 years of service. Regular members entering PERS on or after January 1, 2010, are eligible for retirement at age 65 with five years of service, or age 62 with ten years of service, or any age with 30 years of service. Regular members entering PERS on or after July 1, 2015, are eligible for retirement at age 65 with five years of service, or at age 62 with ten years of service or at age 55 with 30 years of service or at any age with 33 1/3 years of service.

Police/Fire members entering PERS prior to January 1, 2010, are eligible for retirement at age 65 with five years of service, at age 55 with ten years of service, at age 50 with 20 years of service, or at any age with 25 years of service. Police/Fire members entering PERS on or after January 1, 2010, are eligible for retirement at 65 with five years of service, or age 60 with ten years of service, or age 50 with 20 years of service, or at any age with 30 years of service. Police/Fire members entering the PERS on or after July 1, 2015, are eligible for retirement at age 65 with five years of service, at age 60 with ten years of services, at age 50 with 20 years of service, and at any age with 33 1/3 years of service. Only service performed in a position as a police officer or firefighter may be counted towards to eligibility for retirement as Police/Fire accredited service.

The normal ceiling limitation on monthly benefits allowances is 75% of average compensation. However, a member who has an effective date of membership before July 1, 1985, is entitled to a benefit of up to 90% of average compensation. Both Regular and Police/Fire members become fully vested as to benefits upon completion of five years of service.

Contributions

The authority for establishing and amending the obligation to make contributions and member contribution rates, is set by statute. New hires, in agencies which did not elect the Employer - Pay Contribution (EPC) plan prior to July 1, 1983, have the option of selecting one of two contribution plans. One plan provides for matching employee and employer contributions, while the other plan provides for employer-pay contributions only. Under the matching Employee/Employer Contribution plan a member may, upon termination of service for which contribution is required, withdraw employee contributions which have been credited to their account. All membership rights and active service credit in the System are canceled upon withdrawal of contributions from the member's account. If EPC was selected, the member cannot covert to the Employee/Employer Contribution plan.

PERS' basic funding policy provides for periodic contributions at a level pattern of cost as a percentage of salary throughout an employee's working lifetime in order to accumulate sufficient assets to pay benefits when due.

PERS receives an actuarial valuation on an annual basis indicating the contribution rates required to fund PERS on an actuarial reserve basis. Contributions actually made are in accordance with the required rates established by the Nevada Legislature. These statutory rates are increased/decreased pursuant to NRS 286.421 and 286.450.

The actuary funding method used is the Entry Age Actuarial Cost Method. It is intended to meet the funding objective and result in a relatively level long-term contributions requirement as a percentage of salary.

For the fiscal year ended June 30, 2020 the Statutory Employer/employee matching rate was 15.25% for Regular and 22.00% for Police/Fire. The Employer-Pay Contribution (EPC) rate for the fiscal year ending June 30, 2020, was 29.25% for Regular and 42.50% for Police/Fire.

The City's contributions were $172,414 for the year ended June 30, 2020.

PERS Investment Policy

PERS' policies which determine the investment portfolio target asset allocation are established by the PERS Board. The asset allocation is reviewed annually and is designed to meet the future risk and return needs of the System.

The following was the PERS Board adopted policy target asset allocation as of June 30, 2019:

Asset Class	Target Allocation	Expected Real Rate of Return
Domestic equity	42%	5.50%
International equity	18%	5.50%
Domestic fixed income	28%	0.75%
Private markets	12%	6.65%

As of June 30, 2019, PERS' long-term inflation assumption was 2.75%.

Net Pension Liability

At June 30, 2020, the City reported a liability of $2,237,855 for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2019, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The City's proportion of the net pension liability was based on the City's share of contributions in PERS pension plan relative to the total contributions of all participating PERS employers and members. At June 30, 2019, the City's proportion was 0.01641 percent, which is a decrease of 0.00012 from its proportion measured as of June 30, 2018 of 0.01653 percent.

Pension Liability Discount Rate Sensitivity

The following presents the net pension liability of the City as of June 30, 2019, calculated using the discount rate of 7.50%, as well as what the City's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current discount rate.

	1% Decrease in Discount Rate (6.50%)	Discount Rate (7.50%)	1% Increase in Discount Rate (8.50%)
Net pension liability	$ 3,465,048	$ 2,237,855	$ 1,217,747

Pension Plan Fiduciary Net Position and Additional Information

Detailed information about the pension plan's fiduciary net position and additional information is available in the PERS Comprehensive Annual Financial Report, available on the PERS website (www.nvpers.org).

Actuarial Assumptions

The City's net pension liability was measured as of June 30, 2019, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The total pension liability was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation rate	2.75%
Investment rate of return	7.50%
Productivity pay increase	0.50%
Projected salary increases	Regular: 4.25% to 9.15%, depending on service Police/Fire: 4.55% to 13.90%, depending on service Rates include inflation and productivity increases
Consumer price index	2.75%
Other assumptions	Same as those used in the June 30, 2019 funding actuarial valuation

Mortality rates for healthy members were based on the Headcount-Weighted RP-2014 Healthy Annuitant Table projected to 2020 with Scale MP-2016, set forward one year for spouses and beneficiaries. For ages less than 50, mortality rates are based on the Headcount-Weighted RP-2014 Employee Mortality Tables. Those mortality rates are adjusted by the ratio of the mortality rate for healthy annuitants at age 50 to the mortality rate for employees at age 50. The mortality rates are then projected to 2020 with Scale MP-2016. Mortality rates for disabled were based on the Headcount-Weighted RP-2014 Disabled Retiree Table, set forward four years. Mortality rates for pre-retirement were based on Headcount-Weighted RP-2014 Employee Table, projected to 2020 with Scale MP-2016. The additional projection of six years is a provision made for future mortality improvement.

Actuarial assumptions used in the June 30, 2019 valuation were based on the results of the experience review completed in 2017.

The discount rate used to measure the total pension liability was 7.50% as of June 30, 2019. The projection of cash flows used to determine the discount rate assumed that employee and employer contributions will be made at the rate specified in statute. Based on that assumption, the pension plan's fiduciary net position at June 30, 2019, was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2019.

Pension Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2020, the City recognized pension expense of $144,946. At June 30, 2020, the City reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 83,917	$ 64,548
Net difference between projected and actual earnings on pension plan investments	-	111,325
Changes in assumptions	91,071	-
Changes in the employer's proportion and differences between the employer's contributions and the employer's proportionate contributions	6,559	350,042
City contributions subsequent to the measurement date	172,414	-
	$ 353,961	$ 525,915

The $172,414 reported as deferred outflows of resources related to pensions resulting from City contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending June 30, 2021.

The average of the expected remaining service lives of all employees that are provided with pensions through PERS (active and inactive employees) determined is 6.18 years.

Other estimated amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended June 30,	
2021	$ (80,839)
2022	(131,508)
2023	(70,738)
2024	(53,741)
2025	(8,011)
Thereafter	469

Additional Information

The PERS Comprehensive Annual Financial Report (CAFR) is available on the PERS website at www.nvpers.org under Quick Links – Publications.

Note 8 - Fund Equity

As defined in Note 1, fund equity may be reported in various classifications. Specific restrictions of fund balance/net position accounts are summarized below:

Unrestricted/Unassigned – Amounts that have not been assigned to other funds or restricted, committed, or assigned to a specific purpose.

Nonspendable for Perpetual Cemetery Care – In accordance with an ordinance enacted by the City on December 9, 1970, a minimum reserve of $33,004 will be left in the Perpetual Cemetery Care Fund. The earnings can be withdrawn and deposited to the General Fund to be used for perpetual cemetery care.

Restricted for Debt Service – In accordance with the agreement from the USDA Rural Development for the loan for the Carlin Senior Center, the City is required to set-aside fund balance/net position of one-tenth of the annual payment amount for each loan until one full payment has been set-aside. The restricted debt service requirement for the year ended June 30, 2020 for the Carlin Senior Center in the Debt Service Fund is currently $12,100.

Restricted for Perpetual Cemetery Care – In accordance with an ordinance enacted by the City on December 9, 1970, the earnings on the minimum reserve in the Perpetual Cemetery Care Fund are restricted for perpetual cemetery care.

Restricted for the Senior Center– In accordance with the donor-imposed use that the amount be used for the Senior Center.

Restricted for Judicial Fees – In accordance with Nevada Revised Statutes 176.059 and 176.0611, the administrative assessments collected under these statutes are restricted for the use outlined in each statute. The administrative assessment collected in accordance with Nevada Revised Statute 176.059 is restricted for the use of the municipal court. The administrative assessment collected in accordance with Nevada Revised Statute 176.0611 is restricted for the acquisition, construction and improvement of court facilities, acquisition of advanced technology for use in court facilities or for the payment of debt service on any bonds issued for the acquisition of land or facilities.

Committed for Future Community Development – In accordance with a revised ordinance enacted by the City on December 11, 2008, this represents the amount the City Council has specifically designated for future projects that will enhance the community.

Committed for Recreational Activities – In accordance with the Carlin City Code, this represents the amount the City Council has specifically designated for recreational purposes.

Committed for Public Safety – In accordance with the Carlin City Code, this represents the amount the City Council has specifically committed for public safety purposes.

Assigned for Subsequent Year Operations –This is the amount of the City's current year ending fund balance that the City intends to use to meet the next years' operating expenditures.

Assigned for Other Purposes –These are amount that the City intends to use in future periods for the purpose of the fund.

Unassigned –The residual classification for the General Fund that is available to spend.

The City Council has formally designated, per City Code, a portion of user charges to be set aside for major capital improvements, such as water wells and sewer improvements. These amounts do not meet the definition of restricted net position and are not included in the Statement of Net Position.

	Balance July 1, 2019	Net Change	Balance June 30, 2020
Water system	$ 312,015	$ -	$ 312,015
Water capital improvement	54,666	2,110	56,776
Sewer capital improvement	231,396	1,000	232,396

Note 9 - Interfund Items

Interfund transfers are shown as other financing sources or uses in all governmental funds. Transfers between funds during the year ended June 30, 2020 are as follows:

	Transfer In	Transfer Out	Net
General Fund	$ 17,500	$ (420,000)	$ (402,500)
Capital Projects Fund	350,000	-	350,000
Nonmajor Governmental Funds			
Open Door Senior Citizens Center Fund	70,000	-	70,000
Parks and Recreation Fund	-	(30,000)	(30,000)
Municipal Court Building Fund	-	(7,500)	(7,500)
Equestrian Center Fund	20,000	-	20,000
	$ 457,500	$ (457,500)	$ -

The General Fund subsidized the Open Door Senior Citizens Center Fund whose funding sources were not large enough to support the entire cost of their programs in accordance with budgetary authority. The General Fund transferred monies to the Capital Projects Fund to fund future capital projects. The Parks and Recreation Fund transferred monies to the Equestrian Center Fund and the General Fund to reimburse for certain park improvement costs. The Municipal Court Building Fund transferred monies to the General Fund to reimburse for certain municipal court building improvement costs.

Note 10 - Enterprise Fund Revenue-Supported Debt Information

The City of Carlin maintains an Enterprise Fund that provides water, sewer, streetlight and garbage services. Selected additional revenue-supported debt information is provided for those enterprise activities with outstanding debt obligations. Information for the year ended June 30, 2020 is provided for the water service as follows:

Condensed Statement of Net Position	
Assets	
Current assets	$ 1,512,247
Capital assets, net of accumulated depreciation	750,383
Total assets	2,262,630
Deferred Inflows of Resources	
Deferred inflows of resources related to pensions	55,729
Deferred inflows of resources related to other postemployment benefits	3,006
Total deferred inflows of resources	58,735
Liabilities	
Current liabilities	44,084
Noncurrent liabilities	316,755
Total liabilities	360,839
Deferred Outflows of Resources	
Deferred outflows of resources related to pensions	96,925
Net Position	
Net investment in capital assets	750,383
Unrestricted	1,113,218
Total net position	$ 1,863,601
Condensed Statement of Activities	
Operating Revenues	
Charges for services	$ 448,624
Operating Expenses	
Depreciation	48,163
Other operating expenses	442,554
Total operating expenses	490,717
Operating Income	(42,093)
Nonoperating Revenue (Expense)	
Miscellaneous income	7,763
Change in Net Position	(34,330)
Net Position, Beginning of Year	1,897,931
Net Position, End of Year	$ 1,863,601
Condensed Statement of Cash Flows	
Net cash from (used for)	
Operating activities	$ (63,675)
Capital and related financing activities	(15,620)
Investing activities	7,763
Net Increase in Cash	(71,532)
Cash, Beginning of Year, as restated*	1,546,616
Cash, End of Year	$ 1,475,084

*The beginning cash balance for water services for footnote purposes only was restated due to the allocation between current assets and capital assets, net of accumulated depreciation being incorrectly reported.

Note 11 - Postemployment Healthcare Plan

The City provides other postemployment benefits (OPEB) for eligible retired employees through either participation in the City's health insurance program or the Nevada Public Employees' Benefits Plan (PEBP) under NRS 287.023.

Plan Descriptions – The City's defined benefit OPEB plan, City of Carlin Employee Health Benefits Plan (CCEHBP), provides OPEB for all eligible employees on retirement from the City. Additionally, the City contributes to the defined OPEB plan, Public Employees' Benefits Plan (PEBP).

CCEHBP is a single employer defined benefit OPEB plan administered by the City. In accordance with Nevada Revised Statute 287.010, the CCEHBP was adopted to provide postemployment benefits to full-time employees on retirement. Eligibility requirements, benefit levels, employee contributions, and employer contributions are governed by the City and can only be amended by the City. The City changed their health insurance plan during the year to medical premiums paid based on age and, as such, are not expected to result in an implicit subsidy liability for the City if retirees elect to continue the coverage. The result of this change in the health insurance plan is that there is no liability for CCEHBP as of June 30, 2020.

PEBP is a single employer defined benefit OPEB plan administered by a nine-member governing board. Nevada Revised Statute 287.023 allows certain retired employees of governmental entities within the State of Nevada to join the State's Public Employee Benefits Program. Nevada Revised Statute 287.023 sunsetted the option to join PEBP for City employees who retired from the City after September 1, 2008. Eligibility and subsidy requirements are governed by statutes of the State of Nevada and can only be amended through legislation. No assets are accumulated in a trust that meets the criteria in paragraph 4 of Statement 75; no separate financial reports are issued.

Benefits Provided - CCEHBP provides medical, vision, dental and life insurance for eligible retirees and their dependents. Employees retiring from the City under PERS are allowed to continue participation in the City's group health insurance program (medical, dental, vision and life insurance). Retirees are responsible for the payment of their premiums, as well as, premium for eligible dependents.

PEBP provides medical, prescription, vision, life and accident insurance, and dental for retirees. Retirees can choose between a self-funded preferred provider organization (PPO) and a health maintenance organization (HMO) plan. Retirees are responsible for payment of unsubsidized premiums. The City is required to provide a subsidy for their retirees who have elected to join PEBP. Contribution requirements for plan members and the participating employers are assessed by the PEBP Board annually. The contributions required for PEBP subsidies depend on the date of retirement and years of PERS service former employees earned in total and while working for the City. The subsidy ranges from a minimum of $3 to a maximum of $1,095 per month. Subsidies for retiree premiums participating in the PEBP are paid directly to the State when due. The City's obligation for subsidies is limited to payment of the statutorily required contribution. The statutes were revised with an effective date of November 30, 2008, to create new participation limitations so that only active members of PEBP can elect coverage after retirement. Based on the statute revision, former City employees and retirees must have retired and joined PEBP by September 1, 2008 to elect PEBP membership. Consequently, no employees retiring from the City on or after September 1, 2008 will be eligible to participate in the PEBP plan as a retiree at the City's expense.

Employee Covered by Benefit Terms – At June 30, 2019 the following employees were covered by the benefit terms:

	CCEHBP	PEBP	Total
Inactive employees or beneficiaries currently receiving benefits	-	11	11
	-	11	11

Total OPEB Liability - The City's total OPEB liability of $359,170 was measured as of June 30, 2019 and was determine by an actuarial valuation as of that date.

	CCEHBP	PEBP	Total
Total OPEB Liability	$ -	$ 359,171	$ 359,171

Assumptions and Other Inputs - The total OPEB liability in the June 30, 2019 actuarial valuation was determined using the following actuarial assumptions and other inputs for PEBP, applied to all periods included in the measurement, unless otherwise specified:

	CCEHBP	PEBP
Actuary funding method	N/A	Entry age normal, closed group, level percent of pay
General inflation	N/A	2.75%
Salary increases	N/A	N/A
Assumed wage inflation	N/A	N/A
Discount rate	N/A	2.79%
Health care trend rates	N/A	6.00% for 2020, decreasing 0.25% per year to an ultimate rate of 5.00% for 2024 and later years
Retirees' share of benefit - related costs	N/A	0% to 100% of premium amounts based on years of service

The discount rate for PEBP was based on the S & P General Obligation Municipal Bond 20 Year High Grade Index.

For the PEBP Plan, mortality rates for regular members were based on the Headcount-Weighted RP-2014 Healthy Annuitant Table set forward one year. Morality rates for disabled regular members were based on the Headcount-Weighted RP-2014 Disabled Retiree Table set forward four years. Adjustments for mortality improvements were based on applying the MacLeod Watts Scale 2018 on a generational basis from 2018 forward, based on data from the Society of Actuaries Mortality Improvement Scale MP-2017 Report and the demographic assumptions used in the 2017 Annual Report of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds.

Changes in the Total OPEB Liability –

	CCEHBP	PEBP	Total
Balance at June 30, 2019	$ -	$ 358,083	$ 358,083
Changes for the year			
Interest	-	10,413	10,413
Changes in benefit terms	-	-	-
Differences between expected and actual experience	-	-	-
Changes in assumptions or other inputs	-	7,989	7,989
Benefit payments	-	(17,314)	(17,314)
Net Changes	-	1,088	1,088
Balance at June 30, 2020	$ -	$ 359,171	$ 359,171

Changes in Assumptions - CCEHBP and PEBP changes in assumptions and other inputs reflect a change in discount rate from 2.98% to 2.79%.

Sensitivity of the Total OPEB Liability to Changes in the Discount Rate - The following presents the total OPEB liability of the City, as well as what the City's Total OPEB liability would be if it were calculated using a discount rate that is 1-percentage lower (1.79%) or 1-percentage-point higher (3.79%) than the current discount rate:

	1% Decrease in Discount Rate	Discount Rate	1% Increase in Discount Rate
CCEHBP OPEB Liability	$ -	$ -	$ -
PEBP OPEB Liability	407,044	359,171	320,531
	$ 407,044	$ 359,171	$ 320,531

Sensitivity of the Total OPEB Liability to Changes in the Healthcare Cost Trend Rates - The following presents the total OPEB liability of the City, as well as what the City's total OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage lower (5.5%) or 1-percentage-point higher (7.5%) than the current healthcare cost trend rates:

	1% Decrease in Healthcare Cost Trend Rate	Healthcare Cost Trend Rate	1% Increase in Healthcare Cost Trend Rate
CCEHBP OPEB Liability	$ -	$ -	$ -
PEBP OPEB Liability	321,821	359,171	404,470
Total OPEB Liability	$ 321,821	$ 359,171	$ 404,470

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB - For the year ended June 30, 2020, the City recognized OPEB expense (negative OPEB expense) of ($81,804):

CCEHBP	$ -
PEBP	18,402
	$ 18,402

At June 30, 2020, the City reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	PEBP		Total	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Contributions Subsequent to the Measurement Date	$ 18,947	$ -	$ 18,947	$ -

The $18,947 reported as deferred outflows of resources related to OPEB resulting from City contributions subsequent to the measurement date will be recognized as a reduction of the total OPEB liability in the year ending June 30, 2021.

Note 12 - Commitments and Contingent Liabilities

Legal counsel for the City is aware of one pending lawsuit. The ultimate effect to the City has not been determined.

On September 28, 2018, the City entered into a development agreement with a third party to construct and operate a grocery store in the City. The agreement requires the City to make annual payments of $10,000 for the next five years to the owner of the grocery store as long as the grocery store continues to operate during this time.

Note 13 - Subsequent Events

On August 12, 2020, the City Council approved the purchase of vehicle for the police department in the amount of $40,152.

On October 28, 2020, the City Council approved insulating the Water Storage Building in the amount of $27,475.

General Operations

The City has been negatively impacted by the effects of the world-wide coronavirus pandemic. The City is closely monitoring its operations, liquidity, and capital resources and is actively working to minimize the current and future impact of this unprecedented situation. As of the date of issuance of these financial statements, the full impact to the City's financial position is not known.

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual – General Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budgeted Amounts			Final Budget	
	Original	Final	Actual	Variance	2019
Revenues					
Taxes					
Ad valorem taxes	$ 435,246	$ 435,246	$ 432,790	$ (2,456)	$ 402,348
Licenses, permits and fees					
Franchise fees	13,500	13,500	6,954	(6,546)	13,311
Business licenses	18,500	18,500	18,656	156	19,574
Liquor licenses	5,000	5,000	5,295	295	4,860
Local gaming licenses	8,000	8,000	7,690	(310)	8,899
Animal licenses	2,000	2,000	1,989	(11)	2,198
Building permits	15,000	15,000	16,871	1,871	15,576
Work permits	1,000	1,000	-	(1,000)	-
Other permits and fees	1,000	1,000	2,460	1,460	2,165
	64,000	64,000	59,915	(4,085)	66,583
Intergovernmental					
Consolidated tax revenues	1,950,000	1,950,000	2,097,082	147,082	1,985,202
Motor vehicle fuel tax	55,000	55,000	50,825	(4,175)	52,738
Share of county gaming license	8,000	8,000	8,033	33	8,145
Infrastructure tax	-	-	44,225	44,225	46,403
Regional street and highway tax	-	-	-	-	258,685
	2,013,000	2,013,000	2,200,165	187,165	2,351,173
Charges for services					
Ambulance charges	15,000	15,000	35,318	20,318	12,287
Ambulance supplies	5,000	5,000	-	(5,000)	-
Facility Use Fees	-	-	-	-	798
	20,000	20,000	35,318	15,318	13,085
Fines and forfeits					
Court fines and fees	16,500	16,500	22,191	5,691	12,564
Animal fines and fees	4,500	4,500	2,373	(2,127)	1,178
Other	-	-	1,226	1,226	-
	21,000	21,000	25,790	4,790	13,742
Miscellaneous					
Interest income	4,500	4,500	2,256	(2,244)	8,338
Other income	-	-	20,891	20,891	58,108
Sales and rentals	-	-	386	386	464
Leases and contracts	18,000	18,000	21,928	3,928	13,601
Local grants	12,000	12,000	-	(12,000)	-
	34,500	34,500	45,461	10,961	80,511
Total revenues	2,587,746	2,587,746	2,799,439	211,693	2,927,442

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual – General Fund

Year Ended June 30, 2020

(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budgeted Amounts			Final Budget	
	Original	Final	Actual	Variance	2019
Expenditures					
Current					
General government					
Finance administration					
Salaries and wages	$ 150,500	$ 150,500	$ 147,944	$ 2,556	$ 142,365
Employee benefits	86,000	86,000	85,388	612	81,905
Services and supplies	21,050	21,050	27,578	(6,528)	16,539
Capital outlay	25,000	25,000	-	25,000	1,990
	282,550	282,550	260,910	21,640	242,799
Legislative					
Salaries and wages	14,500	14,500	13,020	1,480	13,020
Employee benefits	7,000	7,000	4,481	2,519	4,336
Services and supplies	3,600	3,600	1,582	2,018	2,689
	25,100	25,100	19,083	6,017	20,045
Other					
Services and supplies	558,000	558,000	387,732	170,268	388,070
Capital outlay	-	-	25,792	(25,792)	3,696
	558,000	558,000	413,524	144,476	391,766
City manager					
Salaries and wages	80,000	80,000	60,795	19,205	20,307
Employee benefits	35,000	35,000	12,848	22,152	9,314
Services and supplies	5,000	5,000	3,222	1,778	3,359
Capital outlay	35,000	35,000	-	35,000	23,685
	155,000	155,000	76,865	78,135	56,665
Total general government	1,020,650	1,020,650	770,382	250,268	711,275
Public safety					
Police					
Salaries and wages	405,000	405,000	359,921	45,079	375,478
Employee benefits	295,000	295,000	197,768	97,232	204,606
Services and supplies	130,658	130,658	119,434	11,224	113,275
Capital outlay	38,000	38,000	4,045	33,955	2,450
	868,658	868,658	681,168	187,490	695,809
Animal control					
Salaries	35,000	35,000	35,486	(486)	31,298
Employee benefits	23,000	23,000	22,255	745	20,092
Services and supplies	1,500	1,500	720	780	332
	59,500	59,500	58,461	1,039	51,722

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual – General Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budgeted Amounts			Final Budget	
	Original	Final	Actual	Variance	2019
Fire and ambulance					
Salaries	$ 60,000	$ 60,000	$ 62,604	$ (2,604)	$ 52,651
Employee benefits	40,000	40,000	29,984	10,016	30,628
Services and supplies	119,750	119,750	91,358	28,392	72,143
Capital outlay	79,000	79,000	1,773	77,227	12,945
	298,750	298,750	185,719	113,031	168,367
Total public safety	1,226,908	1,226,908	925,348	301,560	915,898
Judicial					
Municipal court					
Salaries and wages	35,000	35,000	33,992	1,008	31,000
Employee benefits	14,500	14,500	13,990	510	14,484
Services and supplies	5,300	5,300	2,392	2,908	8,280
Capital outlay	7,500	7,500	2,816	4,684	-
Total judicial	62,300	62,300	53,190	9,110	53,764
Public works					
Highways and streets					
Salaries and wages	45,500	45,500	41,622	3,878	40,624
Employee benefits	25,800	25,800	27,785	(1,985)	22,587
Services and supplies	186,000	186,000	94,045	91,955	104,517
Capital outlay	350,000	350,000	13,041	336,959	30,948
Total public works	607,300	607,300	176,493	430,807	198,676
Health and sanitation					
Public health administration					
Services and supplies	21,000	21,000	11,878	9,122	4,704
Cemetery					
Salaries and wages	38,500	38,500	34,503	3,997	34,338
Employee benefits	23,200	23,200	19,087	4,113	22,689
Services and supplies	8,000	8,000	5,239	2,761	11,317
	69,700	69,700	58,829	10,871	68,344
Total health and sanitation	90,700	90,700	70,707	19,993	73,048

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual – General Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budgeted Amounts			Final Budget	
	Original	Final	Actual	Variance	2019
Culture and recreation					
Parks					
Salaries and wages	$ 20,000	$ 20,000	$ -	$ 20,000	$ -
Employee benefits	13,000	13,000	-	13,000	-
Services and supplies	33,000	33,000	15,098	17,902	16,822
Capital outlay	30,000	30,000	6,363	23,637	29,271
	96,000	96,000	21,461	74,539	46,093
Library					
Services and supplies	2,700	2,700	2,914	(214)	2,748
Total culture and recreation	98,700	98,700	24,375	74,325	48,841
Total expenditures	3,106,558	3,106,558	2,020,495	1,086,063	2,001,502
Excess (Deficiency) of Revenues over (under) Expenditures	(518,812)	(518,812)	778,944	1,297,756	925,940
Other Financing Sources (Uses)					
Sale of capital assets	-	-	-	-	10,000
Transfers in	17,500	17,500	17,500	-	15,000
Transfers out	(420,000)	(420,000)	(420,000)	-	(316,800)
Contingency	(70,000)	(70,000)	-	70,000	-
Total other financing sources (uses)	(472,500)	(472,500)	(402,500)	70,000	(291,800)
Net Change in Fund Balance	(991,312)	(991,312)	376,444	1,367,756	634,140
Fund Balance, Beginning of Year	4,188,160	4,188,160	5,430,352	1,242,192	4,796,212
Fund Balance, End of Year	$ 3,196,848	$ 3,196,848	$ 5,806,796	$ 2,609,948	$ 5,430,352

City of Carlin

Schedule of Changes in the City's Total OPEB Liability and Related Ratios – City of Carlin Employee Health Benefit Plan (CCEHBP)

Last Ten Fiscal Years

	2020	2019	2018
Total OPEB Liability			
Service cost	$ -	$ -	$ 18,849
Interest	-	-	3,106
Changes in benefit terms	-	(114,727)	-
Changes of assumptions or other inputs	-	-	(3,629)
Benefit payments	-	-	(1,282)
Net Change in Total OPEB Liability	-	(114,727)	17,044
Total OPEB Liability, Beginning of Year	-	-	97,683
Total OPEB Liability, End of Year	$ -	$ (114,727)	$ 114,727
Covered Payroll	$ -	$ -	$ 897,280
Total OPEB Liability as a Percentage of Covered Payroll	N/A	N/A	12.79%

Notes to Schedule:

Changes of Assumptions: In 2019, the City changed their heath insurance plan during the year to medical premiums paid based on age and, as such, are not expected to result in an implicit subsidy liability for the City if retirees elect to continue the coverage. The result of this change in the health insurance plan is that there is no liability for CCEHBP as of June 30, 2019.

The City adopted GASB Statement No.75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions,* for the year ended June 30, 2018. GASB Statement No. 75 requires ten years of information to be presented in this table. However, until ten years of data is available, the City will present information only for those years for which information is available.

No assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement No. 75.

City of Carlin

Schedule of Changes in the City's Total OPEB Liability and Related Ratios – State of Nevada Public Employees' Benefit Plan (PEBP)
Last Ten Fiscal Years

	2020	2019	2018
Total OPEB Liability			
Interest	$ 10,413	$ 10,413	$ 9,634
Difference between expected and actual experience	-	9,443	-
Changes of assumptions or other inputs	7,989	13,631	(20,789)
Benefit payments	(17,314)	(16,169)	(15,085)
Net Change in Total OPEB Liability	1,088	17,318	(26,240)
Total OPEB Liability, Beginning of Year	358,083	340,765	367,005
Total OPEB Liability, End of Year	$ 359,171	$ 358,083	$ 340,765
Covered Payroll	N/A	N/A	N/A
Total OPEB Liability as a Percentage of Covered Payroll	N/A	N/A	N/A

Notes to Schedule:

Changes of Assumptions: In 2020, the discount rate changed fro 2.98% to 2.79%.

In 2019, the changes of assumptions and other inputs reflected updated mortality assumptions and change in the discount rate from 3.13% to 2.98%.

The City adopted GASB Statement No.75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions,* for the year ended June 30, 2018. GASB Statement No. 75 requires ten years of information to be presented in this table. However, until ten years of data is available, the City will present information only for those years for which information is available.

No assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement No. 75.

City of Carlin

Schedule of City's Share of Net Pension Liability

Public Employees' Retirement System of Nevada (PERS)

Last Ten Fiscal Years*

	2019	2018	2017	2016	2015	2014
City's portion of the net pension liability	0.01641%	0.01653%	0.01944%	0.01992%	0.02078%	0.02057%
City's proportionate share of the net pension liability	$ 2,237,855	$ 2,254,999	$ 2,586,083	$ 2,680,474	$ 2,381,517	$ 2,143,875
City's covered payroll	$ 1,033,736	$ 1,063,064	$ 1,125,719	$ 1,013,674	$ 1,141,555	$ 1,061,682
City's proportionate share of the net pension liability as a percentage of its covered payroll	216.48%	212.12%	229.73%	264.43%	208.62%	201.93%
Plan fiduciary net position as a percentage of the total pension liability	76.46%	75.24%	74.42%	72.23%	75.13%	76.30%

* GASB Statement No. 68 requires ten years of information to be presented in this table. However, until a full ten-year trend is compiled, the City will present information for those years for which information is available.

City of Carlin

Schedule of City's Contributions
Public Employees' Retirement System of Nevada (PERS)
Last Ten Fiscal Years*

	2020	2019	2018	2017	2016	2015
Statutorily required contribution	$ 172,414	$ 157,254	$ 161,000	$ 174,622	$ 168,881	$ 160,391
Contributions in relation to the statutorily required contribution**	$ 172,414	$ 157,254	$ 161,000	$ 174,622	$ 168,881	$ 160,391
Contribution (deficiency) excess	$ -	$ -	$ -	$ -	$ -	$ -
City's covered payroll	$ 1,100,523	$ 1,033,736	$ 1,063,064	$ 1,125,719	$ 1,013,684	$ 1,141,555
Contributions as a percentage of covered payroll	15.67%	15.21%	15.14%	15.51%	16.66%	14.05%

* GASB Statement No. 68 requires ten years of information to be presented in this table. However, until a full ten-year trend is compiled, the City will present information for those years for which information is available.

** All contributions shown reflect employer-paid contributions only. Member contributions are excluded.

Supplementary Information
June 30, 2020

City of Carlin

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City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual – Capital Projects Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budgeted Amounts			Final Budget	
	Original	Final	Actual	Variance	2019
Revenues					
Taxes					
Ad valorem taxes	$ 30,000	$ 30,000	$ 39,759	$ 9,759	$ 24,958
Miscellaneous					
Donations	5,000	5,000	3,270	(1,730)	10,692
Total revenues	35,000	35,000	43,029	8,029	35,650
Expenditures					
Current					
General government					
Finance administration					
Capital outlay	50,000	50,000	15,575	34,425	-
Fire and Ambulance					
Capital outlay	250,000	250,000	-	250,000	-
Public works					
Highway and streets					
Capital outlay	-	-	-	-	247,770
Total expenditures	300,000	300,000	15,575	284,425	247,770
Excess (Deficiency) of Revenues over (under) Expenditures	(265,000)	(265,000)	27,454	292,454	(212,120)
Other Financing (Uses)					
Transfers in	350,000	350,000	350,000	-	250,000
Net Change in Fund Balance	85,000	85,000	377,454	292,454	37,880
Fund Balance, Beginning of Year	22,154	22,154	632,034	609,880	594,154
Fund Balance, End of Year	$ 107,154	$ 107,154	$ 1,009,488	$ 902,334	$ 632,034

City of Carlin
Combining Balance Sheet – Nonmajor Governmental Funds
June 30, 2020

	Special Revenue Funds									Permanent Fund	
	Grants Fund	Open Door Senior Citizens Center Fund	Parks and Recreation Fund	Municipal Court Building Fund	Administrative Assessment Fund	Parks and Recreation Fund #2	Equestrian Center Fund	Police Forfeiture	Debt Service Fund	Perpetual Cemetery Care Fund	Total
Assets											
Cash	$ 57,259	$ 161,002	$ 253,431	$ 4,380	$ 11,162	$ 87,821	$ 81,254	$ 100,781	$ 41,126	$ 58,483	$ 856,699
Accounts receivable, net	10,388	-	2,083	130	906	-	-	-	-	-	13,507
Due from other governments	-	22,281	-	-	-	-	-	-	-	-	22,281
Prepaid expenses	-	2,516	-	-	-	-	-	-	-	-	2,516
Restricted cash	-	-	-	-	-	-	-	-	12,100	33,004	45,104
Total assets	$ 67,647	$ 185,799	$ 255,514	$ 4,510	$ 12,068	$ 87,821	$ 81,254	$ 100,781	$ 53,226	$ 91,487	$ 940,107
Liabilities											
Accounts payable	$ -	$ 4,872	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,100	$ -	$ 16,972
Due to other goverments	-	-	398	-	822	-	-	-	-	-	1,220
Unearned revenue - grants	13,361	-	-	-	-	-	-	-	-	-	13,361
Total liabilities	13,361	4,872	398	-	822	-	-	-	12,100	-	31,553
Deferred Inflows of Resources											
Unavailable grant revenue	3,000	-	-	-	-	-	-	-	-	-	3,000
Fund Balance											
Nonspendable	-	2,516	-	-	-	-	-	-	-	33,004	35,520
Restricted for											
Debt service	-	-	-	-	-	-	-	-	12,100	-	12,100
Perpetual cemetery care	-	-	-	-	-	-	-	-	-	58,483	58,483
Senior center	11,809	3,767	-	-	-	-	-	-	-	-	15,576
Court facilities fees (NRS 176.0611)	-	-	-	4,510	-	-	-	-	-	-	4,510
Judicial fees (NRS 176.059)	-	-	-	-	11,246	-	-	-	-	-	11,246
Committed for											
Future community development	-	-	60,052	-	-	-	-	-	-	-	60,052
Recreational activities	-	-	195,064	-	-	87,821	-	-	-	-	282,885
Public safety	-	-	-	-	-	-	-	100,781	-	-	100,781
Assigned											
Subsequent year operation	-	34,200	-	-	-	-	-	-	-	-	34,200
Other purposes	39,477	140,444	-	-	-	-	81,254	-	29,026	-	290,201
Total fund balance	51,286	180,927	255,116	4,510	11,246	87,821	81,254	100,781	41,126	91,487	905,554
Total Liabilities and Fund Balance	$ 67,647	$ 185,799	$ 255,514	$ 4,510	$ 12,068	$ 87,821	$ 81,254	$ 100,781	$ 53,226	$ 91,487	$ 940,107

City of Carlin

Combining Statement of Revenues, Expenditures, and Changes in Fund Balances – Nonmajor Governmental Funds

Year Ended June 30, 2020

	Special Revenue Funds								Debt Service Fund	Permanent Fund	Total
	Grants Fund	Open Door Senior Citizens Center Fund	Parks and Recreation Fund	Municipal Court Building Fund	Administrative Assessment Fund	Parks and Recreation Fund #2	Equestrian Center Fund	Police Forfeiture		Perpetual Cemetery Care Fund	
Revenues											
Taxes	$ -	$ -	$ 27,915	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 27,915
Intergovernmental	64,205	156,189	-	-	-	-	-	-	-	-	220,394
Charges for services	-	19,138	-	-	-	-	-	-	-	-	19,138
Miscellaneous	-	7,326	-	3,165	18,459	12,766	21,192	-	-	1,049	63,957
Total revenues	64,205	182,653	27,915	3,165	18,459	12,766	21,192	-	-	1,049	331,404
Expenditures											
Current											
Public safety	6,078	-	-	-	-	-	-	-	-	-	6,078
Judicial	-	-	-	-	16,367	-	-	-	-	-	16,367
Culture and recreation	-	237,175	2,331	-	-	14,468	21,994	-	-	-	275,968
Capital outlay	61,809	462	-	-	-	-	-	7,452	-	-	69,723
Debt service											
Principal	-	-	-	-	-	-	-	-	6,350	-	6,350
Interest	-	-	-	-	-	-	-	-	5,750	-	5,750
Total expenditures	67,887	237,637	2,331	-	16,367	14,468	21,994	7,452	12,100	-	380,236
Excess (Deficiency) of Revenues Over Expenditures	(3,682)	(54,984)	25,584	3,165	2,092	(1,702)	(802)	(7,452)	(12,100)	1,049	(48,832)
Other Financing Sources (Uses)											
Transfers in	-	70,000	-	-	-	-	20,000	-	-	-	90,000
Transfers out	-	-	(30,000)	(7,500)	-	-	-	-	-	-	(37,500)
Total other financing sources (uses)	-	70,000	(30,000)	(7,500)	-	-	20,000	-	-	-	52,500
Net Change in Fund Balance	(3,682)	15,016	(4,416)	(4,335)	2,092	(1,702)	19,198	(7,452)	(12,100)	1,049	3,668
Fund Balances, Beginning of Year	54,968	165,911	259,532	8,845	9,154	89,523	62,056	108,233	53,226	90,438	901,886
Fund Balances, End of Year	$ 51,286	$ 180,927	$ 255,116	$ 4,510	$ 11,246	$ 87,821	$ 81,254	$ 100,781	$ 41,126	$ 91,487	$ 905,554

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual – Grants Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Intergovernmental				
Grants	$ 130,000	$ 64,205	$ (65,795)	$ 15,491
Expenditures				
Current				
Public Safety				
Services and supplies	-	6,078	(6,078)	1,984
Capital outlay	130,000	61,809	68,191	-
Total expenditures	130,000	67,887	62,113	1,984
Excess (Deficiency) of Revenues over (under) Expenditures	-	(3,682)	(3,682)	13,507
Other Financing Sources (Uses)				
Transfers in	-	-	-	10,000
Net Change in Fund Balance	-	(3,682)	(3,682)	23,507
Fund Balance (Deficit), Beginning of Year	31,461	54,968	23,507	31,461
Fund Balance, End of Year	$ 31,461	$ 51,286	$ 19,825	$ 54,968

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Open Door Senior Citizens Center
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Intergovernmental				
Federal grants	$ 55,000	$ 53,290	$ (1,710)	$ 56,982
Cash match	159,000	101,011	(57,989)	122,785
USDA	8,000	1,888	(6,112)	12,565
	222,000	156,189	(65,811)	192,332
Charges for services	25,250	19,138	(6,112)	21,320
Miscellaneous				
Contributions	-	6,317	6,317	23,697
In-kind revenue	3,000	1,009	(1,991)	1,082
	3,000	7,326	4,326	24,779
Total revenues	250,250	182,653	(67,597)	238,431
Expenditures				
Current				
Culture and recreation				
Salaries and wages	118,000	99,348	18,652	108,106
Employee benefits	94,000	67,887	26,113	63,545
Services and supplies	107,300	69,940	37,360	66,177
Capital outlay	-	462	(462)	-
Total expenditures	319,300	237,637	81,663	237,828
Excess (Deficiency) of Revenues over (under) Expenditures	(69,050)	(54,984)	14,066	603
Other Financing Sources (Uses)				
Transfers in	70,000	70,000	-	56,800
Net Change in Fund Balance	950	15,016	14,066	57,403
Fund Balance, Beginning of Year	108,508	165,911	57,403	108,508
Fund Balance, End of Year	$ 109,458	$ 180,927	$ 71,469	$ 165,911

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Parks and Recreation Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Taxes				
Room tax revenues	$ 53,000	$ 27,915	$ (25,085)	$ 40,490
Expenditures				
Current				
Culture and recreation				
Services and supplies	5,000	2,331	2,669	3,888
Excess (Deficiency) of Revenues over (under) Expenditures	48,000	25,584	(22,416)	36,602
Other Financing Sources (Uses)				
Transfers out	(30,000)	(30,000)	-	(49,000)
Net Change in Fund Balance	18,000	(4,416)	(22,416)	(12,398)
Fund Balance, Beginning of Year	252,480	259,532	7,052	271,930
Fund Balance, End of Year	$ 270,480	$ 255,116	$ (15,364)	$ 259,532

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Municipal Court Building Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Miscellaneous				
Building assessments	$ 2,500	$ 3,165	$ 665	$ 1,465
Other Financing Sources (Uses)				
Transfers out	(7,500)	(7,500)	-	(5,000)
Net Change in Fund Balance	(5,000)	(4,335)	665	(3,535)
Fund Balance, Beginning of Year	9,880	8,845	(1,035)	12,380
Fund Balance, End of Year	$ 4,880	$ 4,510	$ (370)	$ 8,845

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Administrative Assessment Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Miscellaneous				
Administrative assessments	$ 13,500	$ 18,459	$ 4,959	$ 8,746
Expenditures				
Current				
Judicial				
Services and supplies	16,500	16,367	133	7,476
Net Change in Fund Balance	(3,000)	2,092	5,092	1,270
Fund Balance, Beginning of Year	9,154	9,154	-	7,884
Fund Balance, End of Year	$ 6,154	$ 11,246	$ 5,092	$ 9,154

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Parks and Recreation Fund #2
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Miscellaneous				
Other income	$ 15,000	$ 12,766	$ (2,234)	$ 14,988
Expenditures				
Current				
Culture and recreation				
Parks				
Services and supplies	15,000	14,468	532	11,564
Capital outlay	30,000	-	30,000	25,108
Total expenditures	45,000	14,468	30,532	36,672
Excess (Deficiency) of Revenues over (under) Expenditures	(30,000)	(1,702)	28,298	(21,684)
Other Financing Sources				
Transfers in	-	-	-	24,000
Net Change in Fund Balance	(30,000)	(1,702)	28,298	2,316
Fund Balance, Beginning of Year	101,707	89,523	(12,184)	87,207
Fund Balance, End of Year	$ 71,707	$ 87,821	$ 16,114	$ 89,523

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Equestrian Center Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Miscellaneous				
Other income	$ 40,000	$ 21,192	$ (18,808)	$ 31,464
Expenditures				
Current				
Culture and recreation				
Parks				
Services and supplies	30,000	21,994	8,006	34,882
Capital outlay	25,000	-	25,000	-
Total expenditures	55,000	21,994	33,006	34,882
Excess (Deficiency) of Revenues over (under) Expenditures	(15,000)	(802)	14,198	(3,418)
Other Financing Sources				
Transfers in	20,000	20,000	-	15,000
Net Change in Fund Balance	5,000	19,198	14,198	11,582
Fund Balance, Beginning of Year	46,474	62,056	15,582	50,474
Fund Balance, End of Year	$ 51,474	$ 81,254	$ 29,780	$ 62,056

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Police Forfeiture Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Fines and forfeits				
Forfeitures	$ 10,000	$ -	$ (10,000)	$ -
Expenditures				
Current				
Public safety				
Police				
Services and supplies	12,000	-	12,000	-
Capital outlay	10,000	7,452	2,548	-
Total expenditures	22,000	7,452	14,548	-
Excees (Deficiency of Revenues over (under) Expenditures	(12,000)	(7,452)	4,548	-
Net Change in Fund Balance	(12,000)	(7,452)	4,548	-
Fund Balance, Beginning of Year	86,233	108,233	22,000	108,233
Fund Balance, End of Year	$ 74,233	$ 100,781	$ 26,548	$ 108,233

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Debt Service Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Expenditures				
Debt service				
Principal	$ 6,360	$ 6,350	$ 10	$ 6,083
Interest	5,740	5,750	(10)	6,017
Total expenditures	12,100	12,100	-	12,100
Net Change in Fund Balance	(12,100)	(12,100)	-	(12,100)
Fund Balance, Beginning of Year	53,226	53,226	-	65,326
Fund Balance, End of Year	$ 41,126	$ 41,126	$ -	$ 53,226

City of Carlin

Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual –
Perpetual Cemetery Care Fund
Year Ended June 30, 2020
(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Revenues				
Miscellaneous				
Contributions from individuals	$ 3,000	$ 979	$ (2,021)	$ 1,950
Interest income	100	70	(30)	212
Total revenues	3,100	1,049	(2,051)	2,162
Net Change in Fund Balance	3,100	1,049	(2,051)	2,162
Fund Balance, Beginning of Year	88,826	90,438	1,612	88,276
Fund Balance, End of Year	$ 91,926	$ 91,487	$ (439)	$ 90,438

City of Carlin

Schedule of Revenues, Expenses, and Changes in Net Position – Budget and Actual – Utility Fund

Year Ended June 30, 2020

(With Comparative Actual Amounts for the Year Ended June 30, 2019)

	Budget	Actual	Variance	2019
Operating Revenues				
Utility fees				
Water	$ 405,000	$ 448,624	$ 43,624	$ 435,458
Garbage	240,000	252,265	12,265	247,211
Sewer	325,000	331,517	6,517	323,948
Street lights				
Use fees	27,500	30,286	2,786	27,590
Total operating revenues	997,500	1,062,692	65,192	1,034,207
Operating Expenses				
Water				
Salaries and wages	205,000	188,262	16,738	182,915
Employee benefits	99,000	92,777	6,223	61,687
Services and supplies	82,300	58,835	23,465	92,185
	386,300	339,874	46,426	336,787
Garbage				
Services and supplies	88,500	104,369	(15,869)	92,592
Sewer				
Salaries and wages	146,500	109,274	37,226	87,358
Employee benefits	79,000	52,563	26,437	22,446
Services and supplies	82,800	55,583	27,217	71,844
	308,300	217,420	90,880	181,648
General				
Services and supplies	275,500	243,226	32,274	266,000
Depreciation	160,000	150,318	9,682	149,806
	435,500	393,544	41,956	415,806
Total operating expenses	1,218,600	1,055,207	163,393	1,026,833
Operating Income (Loss)	(221,100)	7,485	228,585	7,374
Nonoperating Revenues				
Interest and penalties earned	18,500	18,389	(111)	18,264
Miscellaneous income	16,000	-	(16,000)	-
Interest expense	-	-	-	-
Total nonoperating revenues (expenses)	34,500	18,389	(16,111)	18,264
Income (Loss) Before Capital Contributions	(186,600)	25,874	212,474	25,638
Capital contributions	-	1,000	1,000	1,000
Change in Net Position	$ (186,600)	26,874	$ 213,474	26,638
Net Position, Beginning of Year		4,525,032		4,498,394
Prior period adjustment		-		-
Net Position, Beginning of Year, as Restated		4,525,032		4,498,394
Net Position, End of Year		$ 4,551,906		$ 4,525,032

City of Carlin

Schedule of Fees Imposed Subject to the Provisions of NRS 354.5989

Year Ended June 30, 2020

Flat Fixed Fees		
Business license revenue for the year ended June 30, 1991 (base year) adjusted through June 30, 2019		$ 42,925
Adjustment of Base		
Base year		
1. Percentage increase in population of local government	0.15%	
2. Percentage increase in the Consumer Price Index for the year ending on December 31 next preceding the year for which the limit is being calculated	2.8%	
		3.0%
		1,268
Adjusted base at June 30, 2020		44,193
Actual revenue		18,656
Amount under allowable amount		$ 25,537

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Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

To the Honorable Mayor and Council
City of Carlin
State of Nevada

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City of Carlin, State of Nevada (the City), as of and for the year ended June 30, 2020, and the related notes to the financial statements, which collectively comprise the City's basic financial statements, and have issued our report thereon dated January 22, 2021.

Internal Control over Financial Reporting
In planning and performing our audit of the financial statements, we considered the City's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control. Accordingly, we do not express an opinion on the effectiveness of the City's internal control.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control over financial reporting that might be material weakness or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. However, as described in the accompanying schedule of findings and responses, we identified certain deficiencies in internal control that we consider to be material weaknesses and significant deficiencies.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the City's financial statements will not be prevented or detected and corrected on a timely basis. We consider the deficiency described in the accompanying schedule of findings and responses to be a material weakness (2020-001).

A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance. We consider the deficiency described in the accompanying schedule of findings and responses to be a significant deficiency (2020-002).

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the City's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

City of Carlin's Response to Findings

The City's response to the findings identified in our audit is described in the accompanying schedule of findings and responses. The City's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the City's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Eide Bailly LLP

Elko, Nevada
January 22, 2021

2020-001 **Report Preparation**
Material Weakness

Criteria: Management of the City of Carlin (the City) is responsible for establishing and maintaining an effective system of internal control over financial reporting. One of the key components of an effective system of internal control is a finance staff with adequate resources available to prepare the financial statements in accordance with generally accepted accounting principles.

Condition: Management does not prepare financial statements in accordance with generally accepted accounting principles. The City contracts with the external audit firm to prepare the City's audited financial statements and related note disclosures from the general ledger and applicable City records provided by the City's staff.

Cause: Given the daily responsibilities of management, the resources of time and training necessary to prepare the City's financial statements in accordance with generally accepted accounting principles are not available. As a result, the City has chosen to contract with Eide Bailly LLP to prepare the financial statements. This circumstance is not unusual in an organization of this size, due to time constraints of management and costs associated with compliance of the standards.

Effect: The City's internally prepared records upon which the financial statements are prepared do not contain all information required by generally accepted accounting principles.

Recommendation: Management should perform a detailed review of all financial statements and fund trial balances throughout the year to ensure that all significant transactions have been appropriately reported. In addition, management and those charged with governance should annually make the decision to accept the degree of risk associated with this condition because of costs or other considerations.

Management's Response: The City hired a third-party CPA consultant in June 2018. With the help and recommendations of the CPA consultant, management has been reviewing the financial statements throughout the year to ensure that all transactions have been appropriately reported. Also, at year-end, all year-end reconciliation and lead schedules have been prepared for the auditors. With our CPA consultant's help, management has been overseeing the City's financial statements preparation function. The City believes that outsourcing the financial preparation function to the external auditors is the most cost-effective.

2020-002 **Ambulance Billings**
Significant Deficiency

Criteria: Management is responsible for establishing and maintaining an effective system of internal controls over financial reporting. One of the key components of an effective system of internal control is the ability to ensure that accounting records accurately reflect the activities and transactions of the City.

Condition: During our audit procedures, we noted that the City has not fully implemented a system of internal controls to ensure that all billable ambulance calls are reported to the third party biller for proper billing. City staff had designed a system of internal controls to ensure that all billable ambulance calls are reported to the third-party biller for billing. However, this internal control was not fully implemented during the year and monthly meeting were not always held.

Cause: Internal controls in place were not sufficient to ensure that all billable ambulance calls are billed in a timely manner.

Effect: Improper reporting of ambulance revenue and receivables.

Recommendation: We recommend that the City enhance internal controls over ambulance billing to ensure that all ambulances calls are billed in a timely manner. Monthly meetings with the third party biller should be scheduled and held.

Management's Response: Management understands the importance of correcting this deficiency. Please note that the monthly meeting between Management and the third-party biller was not a key internal control. It was more a tool Management was using to understand the processes and needs for the new third-party biller who took over in October 2019. Management, with the CPA consultant's help, will review the city's internal control procedures. Then we will adequately document all needed procedures to ensure all billable ambulance calls are reported to the third-party biller.

EideBailly

CPAs & BUSINESS ADVISORS

Auditor's Comments

To the Honorable Mayor and Council
City of Carlin
Carlin, Nevada

In connection with our audit of the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City of Carlin (the City) as of and for the year ended June 30, 2020, and the related notes to the financial statements, nothing came to our attention that caused us to believe that the City failed to comply with the specific requirements of Nevada Revised Statutes other than those cited below. However, our audit was not directed primarily toward obtaining knowledge of such noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding the City's noncompliance with the requirements of Nevada Revised Statutes cited below, insofar as they relate to accounting matters.

Current Year Statute Compliance
Compliance with Nevada Revised Statues is contained in Note 2 of the financial statements.

Progress on Prior Year Statute Compliance
The City of Carlin conformed to all significant statutory constraints on its financial administration for the year ended June 30, 2019.

Disposition of Prior Year Recommendations
Prior year audit findings were implemented, with the exception of finding 2019-A and 2019-B which are included in the current year as findings 2020-001 and 2020-002.

Current Year Audit Recommendations
See items noted in the Schedule of Findings and Responses.

Eide Bailly LLP

Elko, Nevada
January 22, 2021

APPENDIX H

SHORT-LIVED ASSETS

City of Carlin

SEWER SYSTEM SHORT LIVED ASSETS - 2020

COMPONENT	Unit Cost	# of Units	Total Cost	Est. Equip Life years	Annual Depreciation (S.L.)
Lift Station					
Oak Street Lift Station Pump	$28,000	2	$56,000	12	$4,667
Oak Street Lift Station Pump Motor	$56,000	2	$112,000	10	$11,200
Oak Street Lift Station Pump Motor (	$28,000	1	$28,000	15	$1,867
Industrial Lift Station Pump	$12,000	2	$24,000	12	$2,000
Industrial Lift Station Pump Motor	$12,000	2	$24,000	10	$2,400
Industrial Lift Station Pump Motor Co	$14,000	1	$14,000	15	$933
Effluent Pump	$28,000	2	$56,000	12	$4,667
Effluent Pump Motor	$56,000	2	$112,000	10	$11,200
Effluent Pump and Motor Controls	$28,000	1	$28,000	15	$1,867
SCADA System	$150,000	1	$150,000	12	$12,500
Treatmemt					
5.0 HP Aeration Mixers	$4,000	2	$8,000	12	$667
7.5 HP Aeration Mixers	$7,000	2	$14,000	12	$1,167
Level Sensors (Oak St wet well repla	$28,000	2	$56,000	15	$3,733
Collection					
Flow Meters (Varies)	$3,000	2	$6,000	10	$600
Sewer System Tools & Equipment					
Back Up Power Generator	$112,000	1	$112,000	15	$7,467
Office Furniture	$5,000	1	$5,000	10	$500
1-5 Year Annual Cost					$0.00
6-10 Year Annual Cost					$25,900.00
11-15 Year Annual Cost					$41,533.33
SHORT LIVED ASSET TOTAL	**$571,000**		**$805,000**		**$67,433**