

# Standley Lake for the Sustainable Northglenn

Standley Lake is a reservoir in Westminster, Colorado. The surface area covers 1,603-acres, and it is the third largest reservoir in the Denver metropolitan area. Standley Lake is not only a water-storage facility but also a multi-purpose recreation facility and drinking water supply for three nearby cities, i.e.: Westminster, Northglenn, and Thornton (City of Westminster, 2021)

The lake offers various potential for leisure, from paddling, hiking, camping, wildlife observation, to other recreational activities. It is very convenient to visit Standley Lake for a short walk with our pet or to go fishing or paddle boarding since the lake is around 18 minutes of driving away from where I live in Northglenn. It is a perfect get away when we get tired of the city.



*Standley Lake (Source: private collection)*

The first time I visited there, it was the end of January 2020. We were supposed to be in the middle of winter, but it was quite warm then. Of course, it was not warm enough for a tropical person like me, but for Colorado, winter at that time did not bring enough snowpack to fill crucial reservoirs like Standley Lake. We had drought and severe wildfires later that year. According to 9News (2021), we experienced more than 100 days of fire and land loss of total 400,000 acres due to two of the biggest wildfires in state history in 2020.

## The Impact of Climate Change to Standley Lake and Northglenn

As climate is changing globally from the accumulation of anthropogenic greenhouse gases, Colorado is most likely to experience the impacts. The IPCC sixth assessment report clarified that the global temperature will likely increase 1.50C between 2030 and 2052 if global warming occurs at current rate (IPCC, 2018). Paris Agreement, the latest legally binding international treaty on climate change, aims to limit global warming to well below 20 C, preferably to 1.50 C, compared to pre-industrial levels. To achieve the goal, countries have submitted their climate action plans via the nationally determined contributions (NDCs) document by 2020. On November 9, during the COP 26 in Glasgow and when I am writing this article, Climate Action Tracker reported that full implementation of 2030 NDC targets from 122 countries that have submitted their document to the United Nations Framework Convention on Climate Change (UNFCCC) will still lead the temperature increase at 2.40 C by 2100 (Climate Action Tracker, 2021).

The increasing temperature trend is something inevitable in my opinion. So, it is important to be aware of its impacts on the future of our biosphere, which we live on. Standley Lake is one of the critical ecosystems for my city, Northglenn. Any changes to the lake will drastically impact the people in Northglenn.

The biggest impact of climate change to Standley Lake is the decreasing water supply from the snowpack which melts in spring and summer. Tamara Moon, the Environmental Manager at the City of Northglenn, agreed. In our talks on February 11, 2022, she expressed her concerns about the shifts when the water in storage at Standley Lake is at its peak in the last five years (see Fig. 1). In the 10-year average, the water is at peak during March – June. The peak shifted to June – July in 2019 and May – July in 2021. On the other hand, our water usage increased significantly due to the warming weather. In November 2021, the water usage increased 106.8% from the 10-year average water usage according to Tamara.

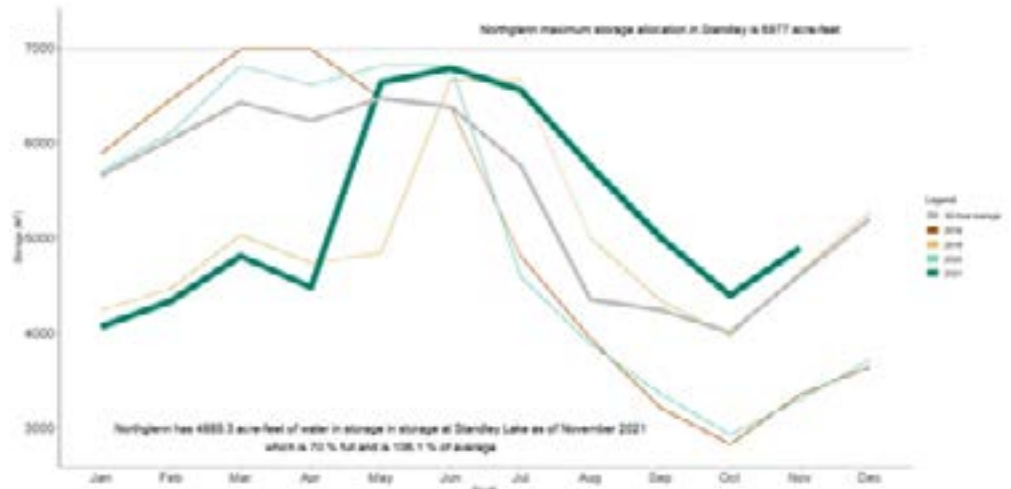


Figure 1. Northglenn Maximum Water Storage History



Illustration of Standley Lake water storage 2021 (Source: The City of Northglenn, 2021)

While climate change affects the lake in form of the changing water supply, it hits the people of Northglenn with various hazards, from drought, wildfires, to pests. Let alone the impacts on human health from more extreme weather (such as heatwave and more frequent snow-storm) to air pollution from wildfires and ground-level ozone. Northglenn residences will have to deal with different hazards when water supply from Standley Lake is critical. In 2021, the City of Northglenn implemented Stage 1 of drought from their Drought Mitigation Plan (The City of Northglenn, 2021). At this stage, we were encouraged to voluntarily reduce 10% our water use compared to the average year citywide. This action was taken because Standley Lake water storage per April 30 was 4,472 Acre Feet from its maximum capacity at 6,977 Acre Feet. The situation was quite concerning for me. I am very relieved (temporarily), knowing that we did not have to move to the next stage in 2021, but who knows what will happen next year and the coming years?

## The Sustainability Plan in Northglenn

The City of Northglenn realized the magnitude of climate change impacts and other relevant challenges to its residences. The City has started to integrate sustainability into the development comprehensively. I learned that the City adopted Sustainability Plan in 2018 to address social, economic, and environmental issues. The plan does not only address the problem about Standley Lake and potential extreme drought due to climate change, but I think it encompasses the greater purpose of Northglenn’s future development. It is very essential because social, economic, and environmental issues do not stand in isolation. They are very interrelated. Therefore, a comprehensive approach is necessary to answer the challenges.

Thinking about the meaning of Standley Lake for me, as a Northglenn resident, and how climate change could affect it raises questions, such as how we can make a difference as a small city with around 38,000 in population. I believe we have the capability and opportunity to combat climate change. In addition, Tamara Moon is confident that the City of Northglenn has residents and City Council who are committed to sustainable environment and community. Perhaps we can start making a difference by being more caring of a common resource shared among three cities, like Standley Lake, as well as being mindful with our water usage.

## References

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