

**CITY OF SHOREWOOD  
CITY COUNCIL WORK SESSION  
MONDAY, JANUARY 24, 2022**

**5755 COUNTRY CLUB ROAD  
COUNCIL CHAMBERS  
6:00 P.M.**

For those wishing to listen live to the meeting, please go to [ci.shorewood.mn.us/current\\_meeting](https://ci.shorewood.mn.us/current_meeting) for the meeting link. Contact the city at 952.960.7900 during regular business hours with questions.

### **AGENDA**

#### **1. CONVENE CITY COUNCIL WORK SESSION**

##### **A. Roll Call**

Mayor Labadie \_\_\_\_\_  
Siakel \_\_\_\_\_  
Johnson \_\_\_\_\_  
Callies \_\_\_\_\_  
Gorham \_\_\_\_\_

##### **B. Review Agenda**

### **ATTACHMENTS**

#### **2. POLLINATOR POLICY**

**Director of Public Works Memo**

#### **3. ADJOURN**



## City of Shorewood Council Meeting Item

**Title/Subject:** Pollinator Policy  
**Meeting Date:** Monday, January 24, 2022  
**Prepared by:** Larry Brown, Director of Public Works  
**Attachments:** Resolution, Lesco Safety Data Sheet, EPA Article 2,4-D, Beyond Pesticides Database Excerpt

**Policy Consideration:** How should the City meet its legal obligations to control noxious weeds, meet safety requirements for ballfields and sports activities, and maintain the parks in acceptable condition, all while meeting the requirements of the pollinator policy?

**Background / Previous Action:** On July 28, 2014, the Shorewood City Council approved Resolution 14 -066, "A Resolution Endorsing Bee Safe Policies and Procedures." The Resolution included as Attachment 1, states the primary statements:

1. The City shall undertake its best efforts to become a Bee-Safe City by undertaking best management practices in the use of plantings and pesticides in all public places within the City.
2. The City shall refrain from the use of systemic pesticides on Shorewood City property including pesticides from the neonicotinoid family.
3. The City shall undertake its best efforts to plant flowers favorable to bees and other pollinators in the City's public spaces.
4. The City shall designate Bee-Safe areas in which future City plantings are free from systemic pesticides including neonicotinoids.

Not long after the city passed the Bee Safe Resolution, Public Works moved forward with planting three clover patches, in an attempt to create bee safe habitats. Patches were located at Freeman Park, Cathcart Park and the Southshore Park. While an attempt was made at maintaining the habitats, the patches became overrun with weeds and were eventually tilled and returned to turf.

Public Works staff also researched the use of organic or natural herbicides to control noxious weeds in the turf areas and warning tracks of the parks. Reviews of the elements in production and trials at that time rendered less than favorable results.

Per the first declaration of Resolution 14-066: "*The City shall undertake its best efforts to become a Bee -Safe City by undertaking best management practices in the use of plantings and pesticides in all public places within the City.*" [emphasis mine].



This statement alone does not prohibit the use of pesticides or herbicides. It simply declares that best management practices will be utilized.

Staff directed that the two contractors hired to apply herbicide to turf areas and warning tracks within the parks and roadsides, where needed, to use bee friendly chemicals. Attachment 2 is the Lesco Safety Data Sheet for the chemical that was utilized.

The main ingredient for the solution applied is 2,4-D. In accordance with the Environmental Protection Agency (EPA) information, 2,4-D was considered “bee safe.” Staff relied upon the citing from the EPA as a reliable source which has been included to this report as Attachment 3. The following link from the EPA states that 2,4-D is considered acceptable for bee habitat in the doses applied “...and is practically nontoxic to honeybees.”

Link: <https://www.epa.gov/ingredients-used-pesticide-products/24-d>.

Staff has also consulted other sources to check the impacts of the chemicals used against bee friendly information sites. One such site is:

Link: <https://www.beyondpesticides.org/resources/pesticide-gateway?bees=1&joiner=AND#searchstart>

Attachment 4 is the results of the search of the chemicals that are considered hazardous to bees, from the above site. The chemicals found on the Lesco Safety Data Sheet do not appear on the database list for chemicals considered hazardous to bees. Therefore, staff attempted to follow the best management practices for a bee friendly environment for the use in turf areas of the parks and roadsides, where needed.

Dicamba is also listed as a component of the Lesco solution. Issues regarding this component center around plants affected outside the application zone, due to wind drift. Licensed applicators are required to account for wind conditions when they apply such chemicals. Log sheets provided list the wind conditions noted at time of application.

Other concerns have been raised about toxicity of the chemicals used. Once chemicals are dried on the plants, the threat of toxicity due to contact is not an issue. Staff confirmed this with the Poison Control Center.

Declaration 2 of the resolution states:

*“The City shall refrain from the use of [systemic pesticides] on Shorewood City property including pesticides from the [neonicotinoid family.]” [emphasis mine].*

The licensed contracted applicator for application of Lesco in turf areas of the parks or along roadsides, where needed, did not use neonicotinoid herbicides. These applications were all performed by a licensed applicator and applied per the manufacturer’s directions.



However, it was an error on my part that the chemicals that were used are considered “systemic herbicides.” At the time or focus was on adhering to being bee friendly and not of the neonicotinoid family. It was an oversight on my part that these chemicals that were used are systemic herbicides.

Staff has been directed to detail any and all pesticide and herbicide applications applied to city properties. The following is a detailed listing for the applications.

<b>Date Range</b>	<b>Description</b>
10/12/2015	Broadleaf Weed Control Manor, Cathcart, Freeman, Silverwood, Badger and Southshore Parks
5/23-31/2016	Broadleaf Weed Control Roadsides, where needed
6/6/2016	Broadleaf Weed Control City Offices and Public Works Sites
6/9/2016	Broadleaf Weed Control Police and Fire Station
6/12/2016	Broadleaf Weed Control Police and Fire Station
9/25-27/16	Broadleaf Weed Control Manor, Cathcart, Freeman, Silverwood Parks
5/19/2017	Broadleaf Weed Control Police and Fire Station, Public Works Sites
6/12/2017	Broadleaf Weed Control Roadsides, where needed
9/1/2017	Emerald Ash Borer Tree Injections
9/14-23/2017	Broadleaf Weed Control Manor, Cathcart, Freeman, Silverwood, Badger and Southshore Parks
11/30/2017	Buckthorn Removal Waterford Area
6/18/2018	Broadleaf Weed Control Roadsides, where needed
10/2-16/2018	Broadleaf Weed Control Manor, Cathcart, Freeman, Silverwood and Southshore Parks
5/20/2019	Broadleaf Weed Control City Offices and Public Works Sites
5/20/2019	Broadleaf Weed Control Police and Fire Station
5/28/2019	Broadleaf Weed Control Roadsides, where needed
5/28/2019	Broadleaf Weed Control Roadsides, Intersection CR 19 and Smithtown Road
10/2/2019	Broadleaf Weed Control Manor, Cathcart, Freeman, Silverwood, Badger and Southshore Parks
4/29/2020	Manor Park Pond Treatment
5/11/2020	Broadleaf Weed Control City Offices and Public Works Sites
5/11/2020	Broadleaf Weed Control Police and Fire Station
5/12/2020	Broadleaf Weed Control Intersection CR 19 and Smithtown Road
5/19/2020	Broadleaf Weed Control Roadsides, where needed
5/22/2020	Manor Park Pond Treatment
7/15/2020	Manor Park Pond Treatment
10/20/2020	Broadleaf Weed Control Manor, Cathcart, Freeman, Silverwood, Badger and Southshore Parks
11/19/2020	Buckthorn Removal Waterford Area
6/9/2021	Badger Park Trail Restoration Issue
7/27/2021	Broadleaf Weed Control to Freeman Park Infields and Warning Tracks
8/28/2021	Emerald Ash Borer Tree Injections

## Policy Issues:

With the current policy in place, there are a number of issues and responsibilities for our department that appear to be in conflict with the policy.

1. **Noxious Weeds:** Minnesota State Statute mandates that each city or public land owner shall manage all noxious weeds.

*“MS18.78 NOXIOUS WEEDS CONTROL AND MANAGEMENT.*

*§Subdivision 1. Generally. A person owning land, a person occupying land, or a person responsible for the maintenance of public land must manage all noxious weeds, according to the noxious weed categories under section 18.771, on the land at a time and in a manner ordered by an inspector or county-designated employee.”*

This statute goes on to state that if the agency fails to perform their duties, the County will perform the duties mandated and will charge the agency responsible.

This includes all publicly owned lands and public rights of way. Public Works routinely receives complaints regarding invasives along roadways that must be addressed, such as poison ivy, poison oak and garlic mustard.

2. **Public Grounds:** As noted above, the city has the legal responsibility to manage noxious weeds on public grounds. Currently, organic compounds that are promoted as control mechanisms are only slightly effective. If all chemical use in the parks is to be prohibited, then it must be with the understanding that there will likely be a significant increase in the presence of weeds in the turf and recreation areas.
3. **Ballfield Safety:** Staff has been heavily pressured by the sports leagues to maintain the warning tracks and infields weed free, as the weeds in these areas are considered trip hazards and can lead to injury of players. This is especially key in the warning track and infield aggregate areas. “3-D” herbicide was applied to the infield areas and Roundup was utilized on the warning tracks for weed control.
4. **Buckthorn Treatment:** Buckthorn is considered an invasive species that is on the State’s invasive species list to be controlled. Systemic herbicides and pesticides that are considered hazardous to bees have been used for the control of buckthorn. These were applied by licensed contractors directly individual stumps to the stumps of fresh cut buckthorn, versus broadcasting the chemical.



5. **Ash Tree Injections:** To manage the effects of the Emerald Ash Borer (EAB), the city has hired a firm to inject systemic herbicides into ash trees that are considered mature specimen trees that were identified by the licensed arborist as being key trees that significantly add to the aesthetics of the city, versus just removing them. Over the past three years, 26 to 30 trees per year were identified by the arborist and injected. Based on the prohibition of the use of systemic pesticides the city will be forced to remove all of the ash trees.

It is noteworthy that ash trees are not pollinated by bees. Therefore, it does not seem plausible that bees or pollinators would be negatively impacted by the ash tree injections. However, they are considered a systemic pesticide that is prohibited by the current policy.

6. **Invasive Control for Infrastructure:** The city contracted to have a looped trail constructed in 2020 around the new lacrosse field of Badger Park. In the spring of 2021, it was noted that willow roots had undermined and destroyed portions of the new trail. The contractor that constructed the trail was consulted as warranty work. They were informed of the policy regarding pollinators and pesticides. The contractor removed that portion of the trail, applied Roundup to the cut roots, and reconstructed that portion of the trail. It was learned later that Roundup was used and is a systemic and bee unfriendly herbicide. The area impacted was a very limited area to address a very specific issue.
7. **Manor Park Pond Treatment:** In 2019 the city commenced with chemical treatment of Manor Park pond, due to filamentous algae, duck weed and other plant materials. The contractor typically performs three to four treatments per year. The primary chemical proposed was alum, which is a flocculant. However, in our research for this memo, it was determined that an additional chemical to kill the algae and plants is a copper sulfate-based compound. This compound is considered hazardous to bees and is also considered a systemic herbicide.
8. **Wasp Nest Removals:** There have been numerous instances where residents have issued concerns regarding the presence of wasp nests within various parks. Public Works has responded on several occasions, applied wasp killers to the nest, prior to removal. These chemicals used to safely remove the nests are obviously dangerous to bees and considered a neonicotinoid.

In the instances above, I failed to abide by the abstention of systemic pesticides with some of the chemicals being hazardous to bees. What was utilized is believed to have been applied in accordance with manufacturer's directions and by licensed pesticide applicators in a responsible way.

As the Director of Public Works, it is not, or never was the desire to intentionally harm pollinators or violate city policy. As noted above, it was an oversight on my part that chemicals used are considered systemic herbicides.

The city has taken steps to provide bee friendly habitats, (albeit a failed trial), refrained from utilizing herbicides from the neonicotinoid family (with exception of removal of bee or wasp nests) and the city has conducted tree sales insuring trees supplied were neonicotinoid free. All of these efforts taken were an attempt to meet the principles of the policy, while meeting the demands and responsibilities of our department.

At this juncture, it is unclear how staff is to proceed to address the responsibilities placed on the department from a legal responsibility, from a safety perspective, and of the practical operations within the Department of Public Works, while abiding by the current policy.

Staff therefore seeks direction from the City Council as to how to proceed.



## **CITY OF SHOREWOOD**

### **RESOLUTION NO. 14-066**

#### **A RESOLUTION ENDORSING "BEE-SAFE" POLICIES AND PROCEDURES**

**WHEREAS**, the Shorewood City Council and Park Commission have undertaken several work sessions dedicated to the study and understanding of promoting a healthy natural environment through the reduction and elimination of harmful pesticides; and

**WHEREAS**, bees and other pollinators are integral to a wide diversity of essential foods including fruit, nuts, and vegetables; and

**WHEREAS**, native bees and honey bees are threatened due to habitat loss, pesticide use, pathogens and parasites; and

**WHEREAS**, recent research suggests that there is a link between pesticides that contain neonicotinoids and the die-off of plant pollinators, including honey bees, native bees, butterflies, moths, and other insects; and

**WHEREAS**, neonicotinoids are synthetic chemical insecticides that are similar in structure and action to nicotine, a naturally occurring plant compound; and

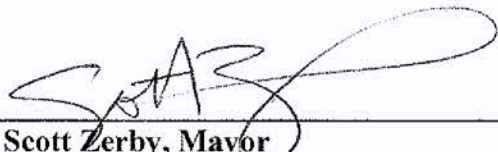
**WHEREAS**, the City Council finds it is in the public interest and consistent with adopted City policy for the City to demonstrate its commitment to a safe and healthy community environment through the implementation of pest management practices in the maintenance of the city parks, open spaces and city property.

**NOW, THEREFORE, BE IT RESOLVED** by the City Council of the City of Shorewood:

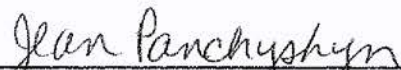
1. The City shall undertake its best efforts to become a Bee-Safe City by undertaking best management practices in the use of plantings and pesticides in all public places within the City.
2. The City shall refrain from the use of systemic pesticides on Shorewood City property including pesticides from the neonicotinoid family.
3. The City shall undertake its best efforts to plant flowers favorable to bees and other pollinators in the City's public spaces.
4. The City shall designate Bee-Safe areas in which future City plantings are free from systemic pesticides including neonicotinoids.
5. The City shall undertake best efforts to communicate to Shorewood residents the importance of creating and maintaining a pollinator-friendly habitat.
6. The City shall publish a Bee-Safe City Progress Report on an annual basis.



**ADOPTED BY THE CITY COUNCIL OF THE CITY OF SHOREWOOD** this 28th  
day of July, 2014.

  
\_\_\_\_\_  
Scott Zerby, Mayor

**ATTEST:**

  
\_\_\_\_\_  
Jean Panchyshyn, City Clerk

1301 East 9<sup>th</sup> Street, Suite 1300, Cleveland, OH 44114-1849  
**EMERGENCY PHONE:** LESCO: (800) 321-5325  
**CHEMTREC:** (800) 424-9300

**DATE ISSUED:** 8/01/06  
**SUPERSEDES:** 10/02/02

### I. PRODUCT IDENTIFICATION

**PRODUCT NAME:** LESCO Three-Way Selective Herbicide  
**Chemical Family:** Mixture  
**Chemical Name/Synonyms:** 2,4-D, MCPP-p, Dicamba

### II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%(by/wt.)	CAS #	PEL/TLV
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	30.56	2008-39-1	10 mg/M3 (2,4-D Acid)
Dimethylamine Salt of (+)-R- 2-(2-Methyl-4-Chlorophenoxy) propionic Acid	8.17	66423-09-4	Not Established
Dimethylamine Salt of Dicamba (3,6-Dichloro-o-Anisic Acid)	2.77	2300-66-5	Not Established
Water and Sequesterents	58.50	Mixture	Not Established

### III. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Primary Route(s) of Entry: Eyes, Skin, Inhalation, Ingestion

**POTENTIAL HEALTH EFFECTS:** Causes irreversible eye damage. Harmful if swallowed or inhaled. May cause muscle weakness, lethargy, loss of appetite, abdominal pains, headache, or shortness or breath. May irritate the respiratory tract or cause dizziness.

**EYE:** Direct and prolonged exposure to the concentrated product may cause corneal opacity, irreversible eye damage.

**SKIN:** Considered a minimal skin irritant and is not a dermal sensitizer. Harmful if absorbed through skin.

**INHALATION:** Avoid inhaling vapors or mist. May irritate the respiratory tract or cause dizziness.

**INGESTION:** May cause muscle weakness, nausea, diarrhea, and abdominal pain. Fall in blood pressure or myotonia (prolonged muscular spasm) may occur under extreme exposure conditions. Can be fatal.

**MEDICAL CONDITIONS AGGRAVATED:** Skin exposure may aggravate existing skin conditions. Exposure to mist may aggravate existing respiratory conditions.

**POTENTIAL ENVIRONMENTAL HAZARDS:** This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. When cleaning equipment, do not pour the washwater on the ground; spray or drain over a large area away from wells and other water sources. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irrigation system. Do not contaminate domestic or irrigation waters.

### IV. FIRST AID MEASURES

**EYES:** Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**SKIN:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice.

**INHALATION:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**INGESTION:** Call a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to by the poison control center or doctor. Do not give anything by mouth to an unconscious person.



### V. FIRE FIGHTING MEASURES

**Flash Point (Method Used):** Not Applicable (non-aqueous solution)

**Lower Explosion Limits:** Not Applicable

**NFPA/HMIS Rating:** Health: 2

**EXTINGUISHING MEDIA:**

☒

Foam (large fire)

☐

Alcohol Foam

☒

Water Spray (to cool containers)

☒

Water Fog or Stream (large fire)

☒

Dry Chemical (small fire)

☒

CO<sub>2</sub> (small fire)

**Auto Ignition Temperature:** Not Applicable

**Upper Explosion Limits:** Not Applicable

Fire: 1

Reactivity: 0

**EXPLOSION HAZARDS:** Drums of product will burst from steam pressure under prolonged fire conditions.

**FIRE FIGHTING PROCEDURES:** Use positive pressure self-contained breathing apparatus and acid resistant protective clothing. Any water used to extinguish the fire should be contained by diking to prevent contamination of the public water system.

**HAZARDOUS COMBUSTION PRODUCTS:** May produce toxic and noxious fumes under extreme fire conditions. May include, but are not limited to hydrogen chloride, carbon oxides, nitrogen oxides and organochlorides.

### VI. ACCIDENTAL RELEASE MEASURES

**RELEASE NOTES:** If material is spilled, wear the suggested safety equipment when cleaning large spills. Surround with impervious material such as dirt to prevent run-off. Absorb product with an inert absorbent such as clay granules or wood shavings. Contain all affected material in a closed, marked container for proper disposal. Treat contaminated area with detergent and water. 2,4-D spills are subject to CERCLA (Superfund) reporting requirements. Reportable Quantity (RQ) = 41 gallons.

### VII. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Always use original container to store pesticides in a secured warehouse or storage building. Do not store near seeds, fertilizers, insecticides, or fungicides. Store at temperatures above 32F. If allowed to freeze, remix before using. Freezing does not alter this product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not contaminate water, food, or feed by storage or disposal.

**OTHER PRECAUTIONS:** If this container is over one gallon and less than five gallons, then persons engaged in open pouring of this product must also wear coveralls or a chemical resistant apron. If this container is five gallons or more in capacity, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. Keep out of reach of children.

### VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Open ventilation. Reduce all mist with local exhaust. If this container is five gallons or more in capacity, do not open our product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

**PERSONAL PROTECTION EQUIPMENT:**

**EYES AND FACE:** Wear splash goggles, face shield, or safety glasses with front, brow, and temple protection.

**RESPIRATORY:** Respiratory protection is not normally required. Use a NIOSH/MSHA approved respirator when directly exposed to mist.

**GLOVES:** Rubber or chemical-resistant gloves

**PROTECTIVE CLOTHING:** Long sleeved shirt, long pants, socks, and shoes. Persons engaged in open pouring must wear coveralls or a chemical resistant apron. (See Precautionary Statement on product label for details)



**WORK HYGENIC PRACTICES:** Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### IX. PHYSICAL AND CHEMICAL PROPERTIES

**BOILING POINT:** >212F  
**FREEZING POINT:** 32F  
**VAPOR DENSITY (air = 1):** Not Established

**ODOR:** Slight ammonia odor  
**APPEARANCE:** Dark liquid  
**pH:** 7.5 – 8.5

**SPECIFIC GRAVITY (H<sub>2</sub>O=1):** 1.147  
**EVAPORATION RATE:** Not Established  
**VAPOR PRESSURE (mmHg@20C):** Equal to water  
**SOLUBILITY IN WATER:** 100%  
**PERCENT VOLATILE:**  
**BULK DENSITY (lbs./gal):** 9.55

### X. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Avoid heat conditions  
**STABILITY:** Stable  
**POLYMERIZATION:** Will not occur  
**INCOMPATIBLE MATERIALS:** Strong oxidizers or acids  
**HAZARDOUS DECOMPOSITION PRODUCTS:** No Data

### XI. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** (Rabbit): corrosive, irreversible corneal damage  
**SKIN EFFECTS:** (Rabbit): minimal irritant  
**DERMAL LC<sub>50</sub>:** (Rabbit): >2 g/kg  
**ORAL LD<sub>50</sub>:** (Male Rat): >0.5 g/kg; (Female Rat): 0.93 g/kg  
**INHALATION LC<sub>50</sub>:** (Rabbit): >3.57 mg/L; no mortality at max obtainable concentration  
**SENSITIZATION:** (Guinea Pig): not a sensitizer  
**ACUTE EFFECTS FROM OVEREXPOSURE:** May irritate the respiratory tract or cause dizziness. Direct and prolonged eye exposure to the concentrated product may cause corneal opacity, irreversible eye damage. Considered a minimal skin irritant. Harmful if absorbed through skin. May cause similar symptoms to ingestion. Ingestion may cause muscle weakness, nausea, diarrhea, and abdominal pain. Fall in blood pressure or myotonia (prolonged muscular spasm) may occur under extreme exposure conditions. Can be fatal.  
**CHRONIC EFFECTS FROM OVEREXPOSURE:** Repeated or prolonged overexposure to phenoxy herbicides may cause liver, kidney, gastrointestinal or muscular system effects.  
**CARCINOGENICITY:** The EPA's Science Advisory Panel has given 2,4-D and Dicamba a class D classification (not classifiable as to human carcinogenicity). Various epidemiological studies have yielded conflicting results with the majority being negative. The current scientific consensus is that there is no proven causal association between 2,4-D and cancer. Recent studies have not shown 2,4-D to be a mutagen or teratogenic. Animal tests with Dicamba have not demonstrated carcinogenic, teratogenic, or other reproductive effects with the exception of slightly reduced fetal body weights and post implantation losses reported at the Maximum Tolerated Dose level. The majority of evidence shows that it is not a mutagen. Other chronic effects of MCPP-p have not been determined.  
**IARC:** Not Listed  
**NTP:** Not Listed  
**OSHA:** Not Listed  
**OTHER:** Not Listed

### XII. ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** 2,4-D, MCPP-p, and Dicamba each have a relatively short half-life of (on average) 6 to 9 days, 5 to 17 days, and 1 to 4 weeks, respectively. Phenoxy herbicides and Dicamba are biodegraded by soil microbes and aquatic microorganisms. The active ingredients in this product do not bioaccumulate to any significant degree in animals.  
**ECOTOXICOLOGICAL INFORMATION:** This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants.

### XIII. DISPOSAL CONSIDERATIONS



### DISPOSAL METHODS:

**Pesticide:** Pesticide wastes are toxic. Improper disposal of excess pesticide spray mixtures or rinsate is a violation of federal law and may contaminate groundwater. If product cannot be disposed of by use according to the label, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**Container:** Triple rinse (or equivalent) and offer for recycling, or puncture and dispose of in a sanitary landfill. Plastic containers are also disposable by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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### XIV. TRANSPORTATION INFORMATION:

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#### DOT Transportation:

Regulated (container size 55 gal., 220 gal., & 260 gal) **(All smaller containers sizes are NOT regulated)**

#### Proper Shipping Name:

RQ Environmentally Hazardous Substances, Liquid, N.O.S. (2,4-D Salt)

#### Hazard Class:

9

#### ID NO.:

UN 3082

#### U.S. Surface Freight Class:

Packing Group: III; Guide No.: 171

#### Reportable Quantity (RQ):

100# of 2,4-D or approx. 41 gal

#### Marine Pollution #1:

Not Applicable

#### HM 181 Shipping Name:

Not Applicable

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### XV. REGULATORY INFORMATION – UNITED STATES

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#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

##### SEC 311/312:

Y Immediate (Acute Health)

Y Delayed (Chronic Health)

N Fire

N Sudden Release of Pressure

N Reactivity

SEC 302 (Extremely Hazardous Substance): Not Applicable

SEC 304 (Emergency Release Notification): Not Applicable

SEC 313 (Toxic Chemicals): Dimethylamine of Dicamba (2300-66-5)

**CERCLA RQ:** 100# of 2,4-D acid equivalent or approx. 41 gallons. For releases greater than the RQ, contact the National Response Center at (800) 424-8802.

**CAA RQ:** Not Applicable

**EPA Registration No.:** 10404-43

Preparation and distribution of this Material Safety Data Sheet is done for LESCO, Inc., pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The information contained herein is based on available data. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof; and you should make your investigation to determine safety for the use you contemplate. LESCO makes no warranty of merchantability of fitness for a particular use, nor is there any other express or implied warranty except as may be specifically provided otherwise on product.

LESCO, Inc. assumes no responsibility or liability for any incidental or consequential damages whether related to personal injury or property damage, to vendees, users or third parties, caused by the material and LESCO's responsibility is limited to replacement of, or repayment of, the purchase price for the material(s) with respect to which any damages are claimed. All vendees or users assume all risk associated with the use of the material(s).

For further information, contact: LESCO, Inc. • 1301 East 9<sup>th</sup> Street, Suite 1300 • Cleveland, OH 44114-1849 or (800) 321-5325.

Related Topics: [Ingredients Used in Pesticide Products](#)[CONTACT US](#)

# 2,4-D

## News

- [Registration of Enlist Duo](#)

2,4-D is a widely used herbicide that controls broadleaf weeds that has been used as a pesticide since the 1940s. It is used in many places including turf, lawns, rights-of-way, aquatic sites, forestry sites, and a variety of field, fruit and vegetable crops. It may also be used to regulate the growth of citrus plants. Products are sold in liquid (concentrated or ready-to-use), dust, or granule formulations.

2,4-D products can be safely used by following label directions. The toxicity depends on its chemical forms, including salts, esters, and an acid form. 2,4-D generally has low toxicity for humans, except certain acid and salt forms can cause eye irritation. Swimming is restricted for 24 hours after application of certain 2,4-D products applied to control aquatic weeds to avoid eye irritation. 2,4-D generally has moderate toxicity to birds and mammals, is slightly toxic to fish and aquatic invertebrates, and is practically nontoxic to honeybees. The ester forms of 2,4-D can be highly toxic to fish and other aquatic life. Carefully follow label directions to avoid harmful effects.

2,4-D is not Agent Orange. Agent Orange was a mixture of two different herbicides: 2,4,5-T and 2,4-D (as well as kerosene and diesel fuel). 2,4,5-T contained high levels of dioxin, a contaminant, found to cause cancer and other health problems in people. Dioxins are no longer found at detectable levels in 2,4-D products sold and used in the United States. Furthermore, EPA has canceled all uses of 2,4,5-T in 1985 and no longer allow its use in the United States.

We have been evaluating the safety of 2,4-D, including the following activities:

- 2005 - Comprehensive review
- 2012 - Evaluated new state-of-the-art reproductive studies, and requests in a petition



- 2014 – Evaluated the choline salt of 2,4-D in response to a company’s request to modify the registration.

2,4-D and the related compounds are currently undergoing [registration review](#), a program that re-evaluates all pesticides on a 15-year cycle.

## Additional Information

- [Chemical Search](#) (EPA risk assessments, decisions, and other documents)
- [2,4-D General Factsheet \(PDF\)](#) [EXIT](#) (NPIC)
- [2,4-D Technical Factsheet](#) [EXIT](#) (NPIC)

[Contact Us](#) to ask a question, provide feedback, or report a problem.



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SEARCH

ACTIVE INGREDIENTS

PRODUCT NAME

HEALTH EFFECTS

ENVIRONMENTAL EFFECTS

DEFECTS

ACCEPTED

If one selects the chemical ingredients tab, skip to Step 4. If not, proceed to step number 3

3. To find the active ingredient(s) on the label, search for the page in the document containing the date of registration. *Usually, the active ingredients section occurs within the first few pages of the label document.*

MASTER LABEL FOR EPA REG. NO. 71995-49

Product Name: 2,4-D

Active Ingredients:

Active Ingredient	Concentration
2,4-D	75.0%
2,4-DE	25.0%
TOTAL	100.0%

CAUTION

ACCEPTED

4. Return to the Gateway and search for the active ingredient name in the yellow box to the right

[Return to Top](#)

### Read about the Gateway

Each pesticide name below will take you to *chemical information pages* with links to factsheets, basic chemical, alternatives, health and environmental effects, regulatory status, key studies and more. See also Beyond Pesticides' [pest management resources](#), [health effects and other factsheets](#) and [activist tools](#).

For more general information, read [What is a Pesticide?](#)

Scroll down this page to see the list of featured pesticides, or search for specific ones using the box on the right.

## CHEMICALS HAZARDOUS TO BEES

**SEARCH**

Start typing a **chemical name**, then click in the list that appears:

OR, start typing a **product name**, then click in the list that appears:

OR, select one or more of the **effects** below:

- | Health Effects                                       | Environmental Effects                                    |
|------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Cancer                      | <input type="checkbox"/> Detected in Groundwater         |
| <input type="checkbox"/> Endocrine Disruption        | <input type="checkbox"/> Detected in Streams             |
| <input type="checkbox"/> Reproductive Effects        | <input type="checkbox"/> Potential Leacher Effects       |
| <input type="checkbox"/> Neurotoxicity               | <input type="checkbox"/> Toxic to Birds                  |
| <input type="checkbox"/> Kidney/Liver Damage         | <input type="checkbox"/> Toxic to Fish/Aquatic Organisms |
| <input type="checkbox"/> Sensitizer/Irritant         | <input checked="" type="checkbox"/> <b>Toxic to Bees</b> |
| <input type="checkbox"/> Birth/Developmental Defects | <input type="checkbox"/> Toxic to Mammals                |
|                                                      | <input type="checkbox"/> Long-Range Transport            |
- ☒ Find pesticides that have ALL of the above effects  
☐ Find pesticides that have ANY of the above effects

**SEARCH**

### THE FOLLOWING CHEMICALS MATCH YOUR SEARCH CRITERIA

- |                         |                                 |                           |                          |
|-------------------------|---------------------------------|---------------------------|--------------------------|
| 2,4-D                   | Deltamethrin                    | Fluometuron               | Phosmet                  |
| Abamectin/Avermectin B1 | Diazinon                        | Fluvalinate               | Prallethrin              |
| Acephate                | Dichlorvos (DDVP)               | Fosthiazate               | Profenofos               |
| Acetamiprid             | Dimethoate                      | Glyphosate                | Propoxur                 |
| Acetochlor              | Dinotefuran                     | Imazamox                  | Pyrethrins               |
| Aldicarb                | Disodium Methanearsonate (DSMA) | Imazapyr                  | Pyridaben                |
| Allethrin               | Disulfoton                      | Imidacloprid              | Pyriproxyfen             |
| Amitraz (BAAM)          | Dithiopyr                       | Indoxacarb                | Resmethrin               |
| Azinphos-methyl (Bt)    | Diuron                          | Lambda-cyhalothrin        | Rotenone                 |
| Bacillus Thuringiensis  | Dodine                          | Lindane                   | Sabadilla                |
| Bendiocarb              | Emamectin Benzoate              | Malathion                 | Sethoxydim               |
| Bensulide               | Esfenvalerate                   | Mancozeb                  | Spinetoram               |
| Bifenthrin              | Ethoprop (ethoprophos)          | MCPA                      | Spinosad                 |
| Carbaryl                | Etofenprox                      | Methamidophos             | Spirodiclofen            |
| Chlorantraniliprole     | Fenamiphos                      | Methidathion              | Spiroxamine              |
| Chlorfenapyr            | Fenazaquin                      | Methomyl                  | Sulfoxaflor              |
| Chlorpyrifos            | Fenpropathrin                   | Methyl parathion          | Tefluthrin               |
| Clothianidin            | Fenvalerate                     | Mevinphos                 | Terbufos                 |
| Coumaphos               | Flonicanid                      | Naled                     | Tetrachlorvinphos (TCVP) |
| Crotoxyphos             | Fludioxonil                     | Nithiazine                |                          |
| Cyfluthrin              |                                 | Oxamyl                    |                          |
| Cypermethrin            |                                 | Parathion/Ethyl parathion |                          |
| Dacthal (DCPA)          |                                 | Permethrin                |                          |
|                         |                                 | Phenothrin                |                          |
|                         |                                 | Phorate                   |                          |
|                         |                                 |                           | Tribenuron-methyl        |





- [Pesticides Trigger Parkinson's Disease](#)
- [Pesticides That Disrupt Endocrine System Still Unregulated By EPA](#)
- [Facing Scientific Realities, Debunking the "Dose Makes the Poison" Myth: Linking pesticide science and health effects](#)
- [Asthma, Children and Pesticides: What You Need to Know](#)

#### Other factsheets and articles

- [What Is a Pesticide?](#)
- [Pollinators and Pesticides: Escalating crisis demands action](#)
- [How Safe is Your Bait?: Pesticides may be labeled as "nonvolatile," but still release poisons into the air](#)
- [Pesticides and Pets: What you should know to keep your pets safe](#)
- [Taking Off the Blindfold: EPA ignores toxic exposures in risk assessment](#)
- [Synergy: The big unknowns of pesticide exposure](#)

