**Are glyphosate-based herbicides safe?**

According to EPA, use of the currently registered pesticide glyphosate in accordance with the labeling specified will not pose unreasonable risks or adverse effects to humans or the environment. Glyphosate-based herbicides were first registered with EPA in 1974, and were last evaluated by EPA in 1993.

**Are there any new safety concerns about the use of Glyphosate-based herbicides?**

Glyphosate is currently undergoing EPA [registration review](https://www.regulations.gov/docket?D=EPA-HQ-OPP-2009-0361), a program that re-evaluates all pesticides on a 15-year cycle. The is to ensure that it continues to meet the statutory standard of no unreasonable adverse effects.

In November 2015 the IARC (World Health Organization’s International Agency for Research on Cancer), and world’s leading independent authority on research on cancer, declared that glyphosate was a “probable carcinogen”. The EPA will analyze these findings as well as the impact of glyphosate on 1,500 endangered species, something it has never done before.

**How common is the use of glyphosate-based products?**

Glyphosate agricultural use has exploded. Glyphosate is in the air, drinking water and in rain. [A study released in February](http://www.ewg.org/release/study-monsanto-s-glyphosate-most-heavily-used-weed-killer-history) found that glyphosate use by U.S. farmers rose from 12.5 million pounds in 1995 to 250 million pounds in 2014 – a 20-fold increase. This explosion has caused the creation of super weeds that are resistant to glyphosate. The EPA’s Office of Inspector General [said Friday](https://www.epa.gov/sites/production/files/2016-03/documents/newstarts_03-25-16_herbicidetolerancemanagement.pdf) (March 25, 2016) it will open an investigation into the spread of super weeds, and how farm workers are affected by the toxic chemicals used to combat them.

**Due to Glyphosate wide-spread use, what other testing needs to be done to ensure it’s safe?**

According to National Geographic, “Glyphosate is not included in the U.S. government’s testing of food for pesticide residues or the monitoring of chemicals in human blood and tissues. As a result, there is no information on how much people are exposed to from using it in their yards, living near farms or eating foods from treated fields… the really big unanswered question is the potential health effect of low levels over extended periods of time.”

**How could the use of glyphosate impact wildlife at Lake Calavera Preserve?**

Milkweed is a protected native plant at Lake Calavera Preserve and the only food source of the Monarch caterpillar. Glyphosate is a potent killer of milkweed and thought by scientists to be the primary contributor to the dramatic plunge in monarch butterfly population. Environmental groups sued to have the EPA declare the Monarch butterfly an endangered species, which has resulted in a settlement giving Wildlife agencies until 2019 to decide to protect the Monarch butterfly as an endangered species.

For a glyphosate fact sheet from the EPA website: <http://npic.orst.edu/factsheets/glyphogen.html>

Sources: EPA, Environmental Working Group, National Geographic, Center for Biological Diversity, Natural Resources Defense Council, Environmental Health, Center for Food Safety.

**General info on glyphosate:**

**Glyphosate (N-(phosphonomethyl)glycine) C3H8NO5P or**

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| **HOOCCH2NHCH2PO(OH)2** |

EPA Watchdog looking into glyphosate environmental impacts MARCH 28, 2016: <http://www.ewg.org/agmag/2016/03/epa-watchdog-investigate-monsanto-gmos-and-superweeds>

World Health Organization Labels Glyphosate Probable Carcinogen: <http://www.ewg.org/release/world-health-organization-labels-glyphosate-probable-carcinogen>

EPA Pesticide **Registration Review Process:** [**https://www.epa.gov/pesticide-reevaluation/registration-review-process**](https://www.epa.gov/pesticide-reevaluation/registration-review-process)

**Glyphosate General Fact Sheet:** [**http://npic.orst.edu/factsheets/glyphogen.html**](http://npic.orst.edu/factsheets/glyphogen.html)

**EPA Herbicide environmental pathway conceptual diagram:** [**https://www3.epa.gov/caddis/ssr\_herb4s.html**](https://www3.epa.gov/caddis/ssr_herb4s.html)

**NRDC policy library:** [**https://www.nrdc.org/policy-library?f[0]=field\_issue\_term%3A31**](https://www.nrdc.org/policy-library?f%5B0%5D=field_issue_term%3A31)

**NRDC PETITION TO CONDUCT INTERIM ADMINISTRATIVE REVIEW FOR THE PESTICIDE GLYPHOSATE, IN LIGHT OF SERIOUS HARM TO MONARCH BUTTERFLIES**

**Filed February 24, 2014 :** [**PETITION TO CONDUCT INTERIM ADMINISTRATIVE REVIEW FOR THE PESTICIDE GLYPHOSATE, IN LIGHT OF SERIOUS HARM TO MONARCH BUTTERFLIES Filed February 24, 2014**](PETITION%20TO%20CONDUCT%20INTERIM%20ADMINISTRATIVE%20REVIEW%20FOR%20THE%20PESTICIDE%20GLYPHOSATE,%20IN%20LIGHT%20OF%20SERIOUS%20HARM%20TO%20MONARCH%20BUTTERFLIES%20Filed%20February%2024,%202014)

**EU Food Safety Authority States Glyphosate is ‘Unlikely Carcinogenic’ in Tragic Report:** [**http://sustainablepulse.com/2015/11/12/eu-food-safety-authority-states-glyphosate-is-unlikely-carcinogenic-in-tragic-report/ - .V6tf1LTEDbb**](http://sustainablepulse.com/2015/11/12/eu-food-safety-authority-states-glyphosate-is-unlikely-carcinogenic-in-tragic-report/#.V6tf1LTEDbb)

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| **Agreement: Monarch Butterfly to Get Endangered Species Act Protection Decision by 2019**  ***Butterfly Declined by 80 Percent Over Past Decades ;*** [***https://www.biologicaldiversity.org/news/press\_releases/2016/monarch-butterfly-07-05-2016.html***](https://www.biologicaldiversity.org/news/press_releases/2016/monarch-butterfly-07-05-2016.html)  ***State of California Pesticide Regulation Enforcement Branch Headquarters and regional offices:***  [***http://www.cdpr.ca.gov/docs/enforce/romap.pdf***](http://www.cdpr.ca.gov/docs/enforce/romap.pdf)  **CA State Office of Environmental Health Hazard Assessment (OEHHA):** [**http://oehha.ca.gov/**](http://oehha.ca.gov/)  **Article: Is Glyphosate legal?:** [**http://www.longlifefarm.com/wp-content/uploads/2016/04/Is-Glyphosate-Legal.pdf**](http://www.longlifefarm.com/wp-content/uploads/2016/04/Is-Glyphosate-Legal.pdf) |

**Article: GMOs and Pesticides: Helpful or Harmful?:** [**http://sitn.hms.harvard.edu/flash/2015/gmos-and-pesticides/**](http://sitn.hms.harvard.edu/flash/2015/gmos-and-pesticides/)

**Challenging Evolution: How GMOs Can Influence Genetic Diversity:** [**http://sitn.hms.harvard.edu/flash/2015/challenging-evolution-how-gmos-can-influence-genetic-diversity/**](http://sitn.hms.harvard.edu/flash/2015/challenging-evolution-how-gmos-can-influence-genetic-diversity/)

**The six steps to extinction:** [**https://www.sciencedaily.com/releases/2016/08/160809122125.htm**](https://www.sciencedaily.com/releases/2016/08/160809122125.htm)

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| **June 23, 2015 Article: Settlement: EPA to Analyze Impacts of World's Two Most Widely Used Pesticides on**  **1,500 Endangered Species**  ***Historic Settlement Means Harms of Atrazine, Roundup Will Be Assessed*** |

[**https://www.biologicaldiversity.org/news/press\_releases/2015/pesticides-06-23-2015.html**](https://www.biologicaldiversity.org/news/press_releases/2015/pesticides-06-23-2015.html)

**check out above**

**Differences in the carcinogenic evaluation of glyphosate between the International Agency for Research on Cancer (IARC) and the European Food Safety Authority (EFSA):** [**http://jech.bmj.com/content/early/2016/03/03/jech-2015-207005.full - ref-1**](http://jech.bmj.com/content/early/2016/03/03/jech-2015-207005.full#ref-1)

Chemical*W*atch Factsheet **Glyphosate:** [**http://www.beyondpesticides.org/assets/media/documents/pesticides/factsheets/Glyphosate.pdf**](http://www.beyondpesticides.org/assets/media/documents/pesticides/factsheets/Glyphosate.pdf)

Trends in glyphosate herbicide use in the United States and globally : <http://nebula.wsimg.com/7cd7b4d04249e066a50527453da41a6b?AccessKeyId=F8EFA7E56875355794EB&disposition=0&alloworigin=1>

May 2, 2016 Article: EPA takes offline report that says glyphosate not likely carcinogenic: <http://www.reuters.com/article/us-usa-glyphosate-epa-idUSKCN0XU01K>

Lawsuit: Plaintiffs **Center for Food Safety and Center for Biological Diversity** (Plaintiffs or Centers) bring this action under the Endangered Species Act, 16 U.S.C. §§ 1531-1544 (ESA), to challenge the failure of the Secretary of the United States Department of Interior (Secretary) and the U.S. Fish and Wildlife Service (FWS) to

comply with the nondiscretionary requirements of the ESA. Defendants have failed to take required action on Plaintiffs’ petition to protect the monarch butterfly (*Danaus plexippus plexippus*) as a threatened species under the ESA. 16 U.S.C. § 1533(b)(3)(A) and (B)…: <http://www.biologicaldiversity.org/species/invertebrates/monarch_butterfly/pdfs/Monarch_12_Mo_Complaint.pdf>

**Newspaper articles:**

City postpones plan to kill palm grove:<http://www.sandiegouniontribune.com/news/2016/jun/29/city-postpones-plan-to-kill-palm-grove/>

City proceeds with herbicide plan: <http://www.sandiegouniontribune.com/news/2016/jul/20/residents-renew-concerns-about-herbicide/>

Residents upset over removal of non-native trees:<http://www.thecoastnews.com/2016/07/20/residents-upset-over-removal-of-non-native-trees/>

City begins applying herbicide on non-native trees: <http://www.thecoastnews.com/2016/08/10/city-begins-applying-herbicide-on-non-native-trees/>

Check out lymphoma lawsuit cases vs Monsanto

Long term low dose exposure

Google question does epa pesticide registration process say pesticides are safe?

Label Review Manual Revised July 2014 Chapter 7: Precautionary Statements

<https://www.epa.gov/sites/production/files/2015-03/documents/chap-07-jul-2014.pdf>

[https://en.wikipedia.org/wiki/Glyphosate - cite\_ref-Schinasi\_11-1](https://en.wikipedia.org/wiki/Glyphosate#cite_ref-Schinasi_11-1)

Independent scientists warn over Monsanto herbicide: <http://www.dw.com/en/independent-scientists-warn-over-monsanto-herbicide/a-18886833>

**Pesticides and Children:** [**http://npic.orst.edu/health/child.html**](http://npic.orst.edu/health/child.html)

What Do We Really Know About Roundup Weed Killer?: <http://news.nationalgeographic.com/2015/04/150422-glyphosate-roundup-herbicide-weeds/>

**Open letter: Review of the Carcinogenicity of Glyphosate by EFSA and BfR**

<http://www.zeit.de/wissen/umwelt/2015-11/glyphosat-offener-brief.pdf>

U.N. experts find weed killer glyphosate unlikely to cause cancer: <http://www.reuters.com/article/us-health-who-glyphosate-idUSKCN0Y71HR>

GLYPHOSATE AND CANCER RISK:

FREQUENTLY ASKED QUESTIONS

<http://www.centerforfoodsafety.org/files/glyphosate-faq_64013.pdf>

PC Website Q&A: Lake Calavera Improvements Project

Endangered species glyphosate: <https://www.biologicaldiversity.org/news/press_releases/2015/pesticides-06-23-2015.html>

Fact sheet: s<http://www.reuters.com/article/us-usa-glyphosate-epa-idUSKCN0XU01K>

Fact sheets :<http://npic.orst.edu/factsheets/glyphogen.html>

monarchs: <https://www.biologicaldiversity.org/news/press_releases/2016/monarch-butterfly-07-05-2016.html>

Environmental and Related Chemicals Measured in Blood, Serum or Urine in NHANES

<http://www.cdc.gov/nchs/data/nhanes/nhanes_03_04/environmentalhealth_03.pdf>

Alteration of estrogen-regulated gene expression in human cells induced by the agricultural and horticultural herbicide glyphosate: <http://www.cdc.gov/niosh/nioshtic-2/20033248.html>

EPA R.E.D. Facts Glyphosate Reregistration: <https://www3.epa.gov/pesticides/chem_search/reg_actions/reregistration/fs_PC-417300_1-Sep-93.pdf>

April 5, 2016: Open letter to the Director General of the BBC and the former Defra Minister Lord de Mauley about Monsanto

<http://farmwars.info/wp-content/uploads/2016/04/Open-letter-to-the-Director-General-of-the-BBC-and-the-former-Defra-Minister-Lord-de-Mauley-about-Monsanto.pdf>

EPA Watchdog to Investigate Monsanto GMOs and Super weeds: <http://www.ewg.org/agmag/2016/03/epa-watchdog-investigate-monsanto-gmos-and-superweeds>

Concerns over use of glyphosate-based herbicides and risks associated with exposures: a consensus statement: <https://ehjournal.biomedcentral.com/articles/10.1186/s12940-016-0117-0>

Project Notification:  
Evaluation of EPA’s Management of Resistance Issues Related to Herbicide Tolerant Genetically Engineered Crops  
Project No. OPE-FY16-0023

<https://www.epa.gov/sites/production/files/2016-03/documents/newstarts_03-25-16_herbicidetolerancemanagement.pdf>

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Study: Monsanto’s Glyphosate Most Heavily Used Weed-Killer In History

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