



Use of Glyphosate in County Operations

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Public Works Agency

Board of Supervisors Meeting
October 22, 2019

Report Back to your board:

1. Provide an assessment of the extent to which glyphosate-based herbicides are used for vegetation management purposes;
2. Identify protocols that lead to the use of glyphosate as an abatement agent;
3. Explore alternatives to the use of glyphosate and identify recommended strategies that do not involve its use;
4. Identify the Best Practices that other jurisdictions use; and
5. Report back to the Board on findings and alternatives within 90 days.

Glyphosate Task Force

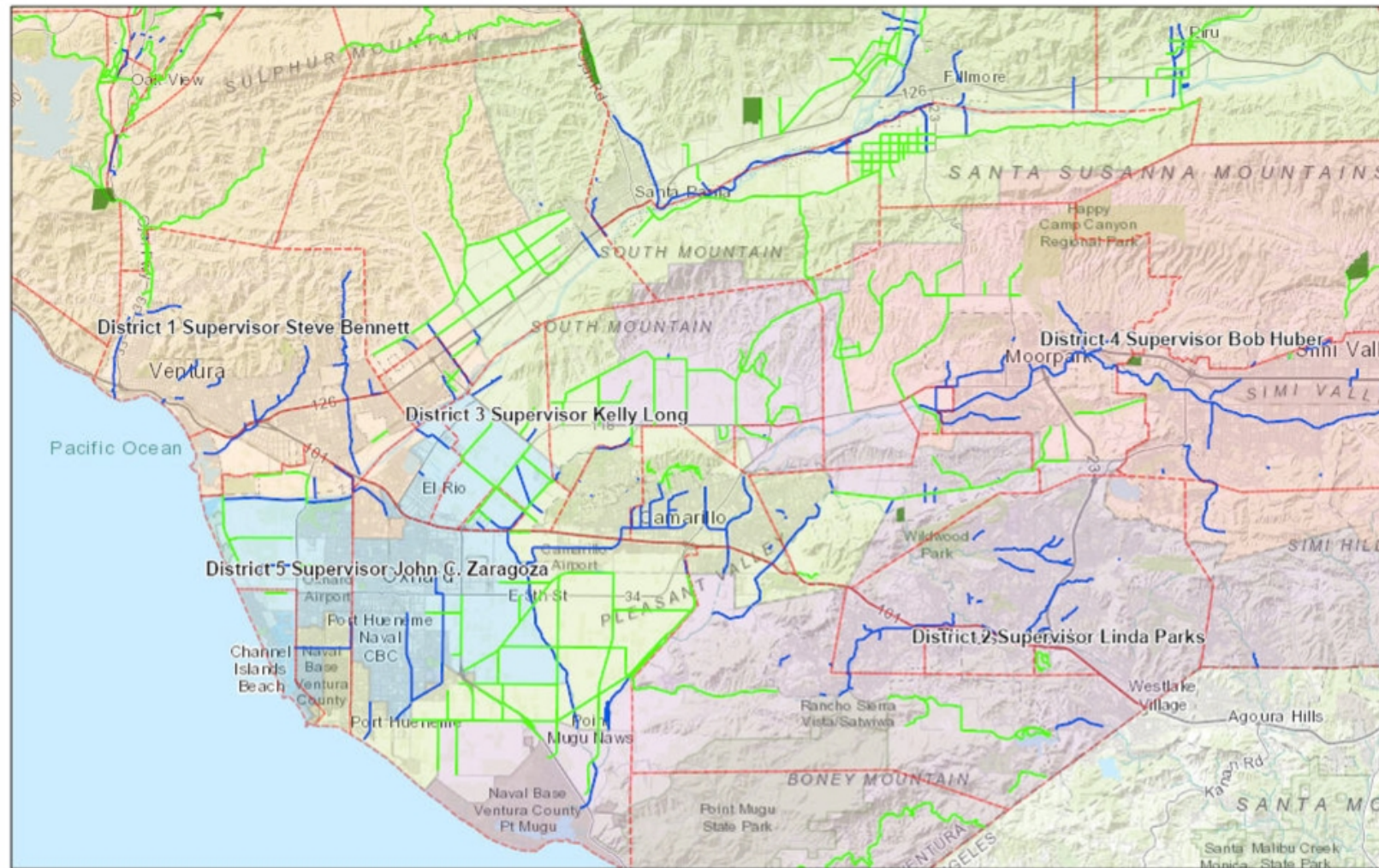


1. Provide an assessment of the extent to which glyphosate-based herbicides are used for vegetation management purposes

| AGENCY USE AND COST METRICS | | | | | |
|-----------------------------|-------|---------|--------------------|---------|--------------|
| Agency | Acres | Gallons | Total \$ by Agency | \$/Acre | Gallons/Acre |
| PWA | 3,460 | 1,403 | \$ 692,000 | \$ 200 | 0.41 |
| Airports | 208 | 292 | \$ 65,000 | \$ 313 | 1.40 |
| GSA Parks | 230 | 48 | \$ 38,000 | \$ 165 | 0.21 |
| Fire | 20 | 2 | \$ 500 | \$ 28 | 0.10 |
| GSA Parks Leaseholds | 280 | 15 | \$ 0 | \$ 0 | 0.05 |
| GSA Grounds | 134 | 0 | \$ 0 | \$ 0 | 0.00 |
| Harbor | 36 | 0 | \$ 0 | \$ 0 | 0.00 |
| Total | 4,368 | 1,760 | \$ 795,500 | \$ 182 | 0.40 |

- ◆ GSA Grounds Division has not used glyphosate since 2015.
- ◆ GSA Parks Leaseholds costs are not direct County costs.
- ◆ The Harbor Department ceased using glyphosate in spring 2017 as a result of feedback from some of the harbor-area residents.

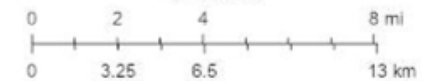
Ventura County Glyphosate Use By Supervisorial District



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- Override 1 Supervisorial District
- Override 1
- Override 2

1:288,895



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS.

2. Identify protocols that lead to the use of glyphosate as an abatement agent

Regulatory Agency Determination

1st approved by EPA in 1974

Health Canada, January, 2019

- “No pesticide regulatory authority in the world currently considers glyphosate to be a cancer risk to humans at the levels at which humans are currently exposed.”

Environmental Protection Agency (EPA) April 30 and August 8, 2019

- “EPA continues to find that there are no risks to public health when glyphosate is used in accordance with its current label and that glyphosate is not a carcinogen.”
- “EPA will no longer approve product labels claiming glyphosate is known to cause cancer...”

2. Identify protocols that lead to the use of glyphosate as an abatement agent (continued)

Operations and Maintenance Best Management Practice

- California Department of Fish and Game

Safety Considerations

- Flood control structures, roadside vegetation, airport runways and taxiways

Habitat Restoration/Non-Native Species Removal

- Various federal and state agencies use glyphosate

Complaints/Aesthetics/“Good Neighbor” Practices

- Buildings, trails, parks, wastewater treatment plants

Regulatory Requirements

- Eradicate invasive plants

Infrastructure Inspection and Protection

- Roads, dams, levees, harbor perimeters, streambanks

Agreements

- Leased property requirements

Safety, Effectiveness, and Cost Considerations

- Agencies use proper notifications, signage, safety protocols, and personal protective equipment
- Areas receiving glyphosate are typically not accessible to the public on PWA and DOA properties
- Alternatives to glyphosate are less cost effective
- Glyphosate continues to be the most cost-effective herbicide available

3. Explore alternatives to the use of glyphosate and identify recommended strategies that do not involve its use

A comparative cost analysis of the alternative methods of treatment is shown below:

Glyphosate application cost per acre treated = \$100 to \$300
depending upon the amount of hand and boom-truck spraying

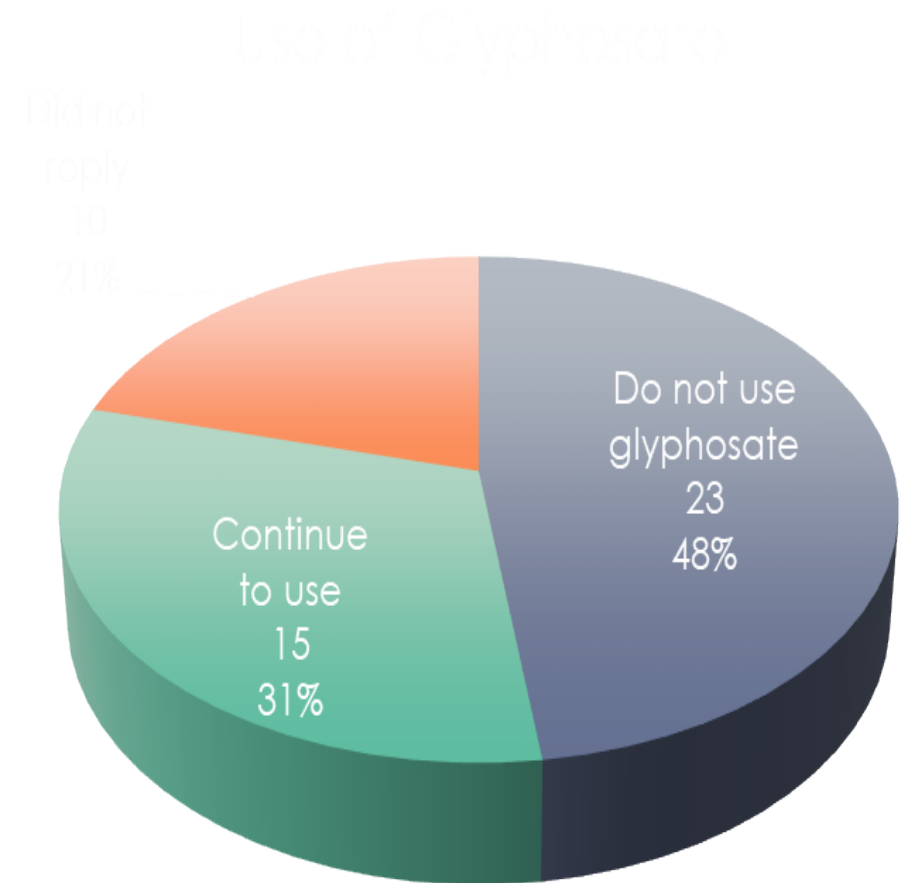
| Estimated Cost of using glyphosate (\$) | | | Estimated cost of not using glyphosate (\$) | | | |
|---|--------------|--------------------|---|----------------|----------------|-----------------|
| Agency | *Area(Acres) | Total \$ by Agency | Chemical | Plow/Cut/Mow | Manual | Electrical |
| PWA | 3,460 | \$ 692,000 | \$ 3.5M | \$ 10.4M | \$27.7M | \$ 69.2M |
| Airports *** | 208 | \$ 65,000 | \$ 91,000 | 0 | 0 | \$ - |
| Harbor | 36 | \$ - | \$ - | \$ - | \$ 60,000 | \$ - |
| GSA Parks **** | 230 | \$ 38,000 | \$ 46,000 | 0 | \$180,000 | \$ - |
| GSA Parks Leaseholds | 280 | \$ - | \$ - | \$ - | \$ - | \$ - |
| GSA Grounds | 134 | \$ - | \$ - | \$ - | \$ 53,000 | \$ - |
| Fire | 20 | \$ 500 | \$ - | \$ - | \$ 4,000 | \$ - |
| Total | 4,368 | \$ 795,500 | \$ 3.6M | \$10.4M | \$28.0M | \$ 69.2M |

4. Identify best practices regarding methods other jurisdictions use

- Follow safety protocols, proper notification practices, and post appropriate signage.
- Minimize the use of herbicides whenever possible.
- Use the least toxic alternative whenever possible.
- Be more tolerant of weed growth.
- Avoid irrigation overspray or watering of unwanted weeds.
- Improve fertilizer application techniques.
- Reduce off-target application of herbicides.
- Utilize free labor to perform hand weeding.
- Mulch, mow, and string trim weed growth.
- Continue to experiment with other non-glyphosate herbicides.

Survey of other Jurisdictions

- 48 jurisdictions were surveyed, including cities, counties, school districts, park districts, airports, and harbors.
- Responses were mixed.
- No shared common practice was discovered.
- Those that do not use glyphosate noted that alternatives are less effective and have a higher cost.



Conclusion

- Glyphosate is used extensively throughout the US. It is effective and low in cost.
- Alternatives are less effective and more expensive.
- Glyphosate is one of the most studied herbicides on the market.
- Other herbicides may require additional research to determine their impact on the environment.
- There is no single viable, effective alternative.
- Each of the alternatives researched and surveyed need to be part of the County's "tool box" in our effort to manage and control vegetation.



Questions?
