

City-Wide Integrated Pest Management Policy

City Council
January 9, 2024

Outline

- Goal of IPM
- Existing Guidance
- Impacts of product bans on operations
- Typical IPM
- Staff Recommendations
- Next Steps

Definitions

- Pesticide: Chemical used to eradicate pests, includes herbicides, insecticides, fungicides, rodenticides, etc.
- Glyphosate: Active ingredient in Roundup recognized as an effective herbicide. The various trade names used for Glyphosate are based on the types of applications that they are approved for e.g., "Rodeo" is Glyphosate mixed with other chemicals for use in aquatic environments (less toxic to amphibians)
- Neonicotinoids: Broad spectrum group of pesticides that kill more than the intended species. Has been shown to have dramatic effect on bee populations

Reasons to decrease pesticide use

- Pesticides and fertilizers were used to help launch the Green Revolution. Increasing crop yields and preventing hundreds of millions of people from starving
- Pesticide use began to have significant environmental impacts as they were over-used, killed non-target species, and were linked to human health impacts

Concerns with Glyphosate

- Persists in the environment for days or months
- Widely used in agriculture and landscape maintenance
- Listed as a probable carcinogen by the International Agency for Research on Cancer
- Lawsuits have filed and won against the chemical manufacturer
- Health risks are most acute to pesticide applicator

Integrated Pest Management

- Goal is to develop a City-Wide Integrated Pest Management (IPM) Policy
- This policy will provide guidance to staff and contractors working for the City to ensure landscapes are designed and maintained in a manner that reduces the need for fossil fuel powered equipment, herbicides, insecticides, and other anthropomorphic inputs that have an ability to exacerbate climate change
- Ensure policy supports the City's ability to protect against increased fire severity due to invasive species and climate change

City-Wide IPM Applicability

- Only applies on City-owned properties
- Is not building code dictating personal use
- Does not affect County, State, Federal, or School District owned properties

UC Davis study on various herbicides

<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=44211>



Polycymaker Feedback

City Council feedback for landscape contracts:

- August 2018, Council approved renewal of the Landscape contract and directed contract and city staff to discontinue the use of glyphosates.
- On September 24, 2019, Council held a study session on citywide contracted landscape services and landscape maintenance options for city sites. Council provided feedback discouraging the use of products with glyphosates and neonicotinoids.
- On October 1, 2019, Council approved a contract with Coast Landscape Management with a scope of work limited to mowing operations. The landscape maintenance portion of the scope of work was not funded or approved.

Board of Public Utilities for landscape contracts:

- Developed landscape contract that implements the Russian River Friendly Landscape Guidelines (No outright bans)

Impacts of Pesticide Bans Parks Landscapes

- Less control, greater infestations, potential fire fuels to accumulate
- Glyphosate (Roundup) exclusion in contracts increased costs
 - 2018 - \$549,789/year (no ban)
 - 2019 - \$1,078,056/year (ban)
- Increased weeds in ballfields, civic landscapes, and street medians

Impacts of Pesticide Bans Parks Landscapes

- 58% increase in cost to remove weeds mechanically vs. IPM
- 32,200 additional labor hours
- Equivalent to 15.03 FTEs
- Cost to remove weeds with spray \$2.2 million
- Cost to remove weeds with no chemicals \$3.7 million

Impacts of Pesticide Avoidance Santa Rosa Water properties

- Landscape contract costs increased by approximately \$300,000 / year for Russian River Friendly Landscape Practices
- Increased weeds in paved areas
- Increased use of grazing on levees (separate contracts)
- Slight increase in weeds in restoration areas (perennial pepperweed and invasive grasses)

Impacts of Pesticide Bans

Parking properties

- Increased weeds in lots, in landscaped areas of lots and garages, and sidewalks where single space/multispacer meters are located
- Parking opted out of the Landscape contract in 2022 to cut costs, completing all work with City staff
- If no Glyphosate (Roundup) allowed would need to add two more FTEs for an annual increase of \$250,000/year to maintain current level of service
- Parking currently uses mechanical (two-stroke engine) methods to control weeds, multiple days per week, and with large scale projects coming next year this will be affected

Impacts of Pesticide Bans Traffic Medians

- More dangerous due to staff exposure to high-traffic areas (#1 reason for workplace mortality)
- Increased weeds in medians
- Gives appearance landscapes are poorly maintained
- Non-glyphosate herbicides and mechanical removal is less effective and more expensive



Impacts of Pesticide Bans

Fire Department

- Increased growth of vegetation along evacuation routes and open space
 - In burn scars, invasive broom and other vegetation requires vegetation control beyond mechanical means
 - Excessive growth and regrowth of seasonal grasses in medians and along right of ways
- Current Mitigation Efforts Include:
 - Awarded \$2.1 million HMGP grant for fuel reduction along evacuation routes (cost share 25%)
 - Targeted fuel treatments (Weed Abatement \$ & PG&E Settlement \$)
- IPM policy can support Community Wildfire Protection Plan (CWPP) and Hazardous Vegetation and Fuels Management Ordinance

CWPP & Hazardous Vegetation and Fuels Management Ordinance

- CWPP provided framework for IPM to reduce fire risk.
- Ordinance Based on recommendations from CWPP:
 - Removal of dead and downed trees in burn scars
 - Prohibition of certain mulch types within 30' of a structure
 - Defensible Space Inspections within the entire Wildland Urban Interface Fire Area
 - Removal of highly flammable invasive vegetation (e.g., Scotch and French broom) in certain areas.
- IPM policy should align and support the Ordinance and allow for shift in priority work to mitigate risk from multiple fronts.

Typical IPM Policy

- Pest identification
- Research least toxic methods to address impacts to pests
- If action needed, apply least toxic methods first then evaluate
- If further action needed, apply next least toxic method



Start with non-pesticide actions first

- Planting spaces with dense plantings
- Mechanical removal where possible
- Avoid problematic species where possible
- Use pesticides as a last resort and following a least-toxic approach first

Mulched
areas to
prevent
weeds



Pesticide Labels – Signal Words

Danger – Highly toxic

Warning – Moderately
toxic

Caution – Lowest toxicity

Pest Management Solutions - Insects

- Tolerate
- Identify disease
- Mechanical removal of diseased parts (Spidermites)
- Spray with appropriate pesticide
- Replace with pest resistant species (except: Luther Burbank Gardens)



Pest Management Solutions – Weeds

- Tolerate
- High density plantings
- Mulch 3” deep apply annually
- Mechanical removal
- Grazing
- Herbicides

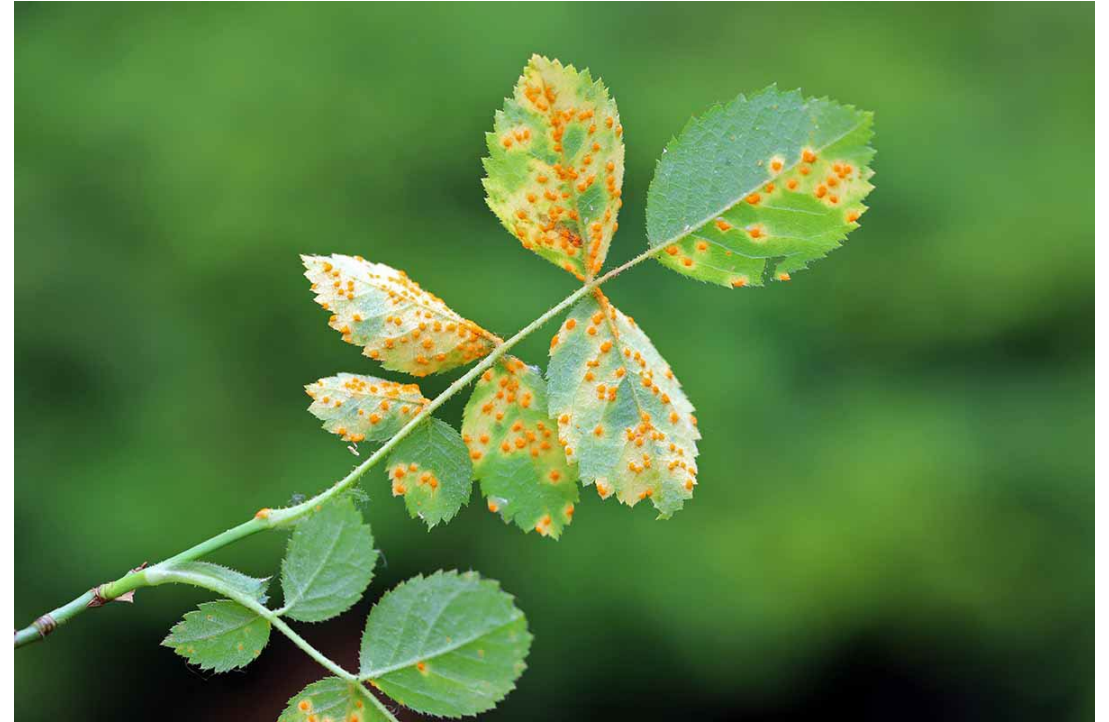




Mechanical
weed removal
of infields

Pest Management Solutions – Plant Diseases

- Tolerate
- Identify disease
- Mechanical removal of diseased parts (Fireblight)
- Spray with appropriate pesticide (Copper sulphate, Sulfur, or other)
- Replace with pest resistant species (except: Luther Burbank Gardens)



Staff Suggestions on Pesticide Bans

- Complete ban of neonicotinoids
- Minimize the use of all pesticides throughout the City using IPM policy
- Require staff to have Certified Pesticide Applicator to apply or supervise
- When spraying any pesticide staff will use goggles, chemical resistant clothing (Tyvek suit), chemical resistant gloves, and rubber boots

Staff Suggestions on Pesticide Bans

- Ban Glyphosate use in most sensitive areas:
 - Playgrounds
 - Public gathering spaces
 - Picnic areas
 - Other areas with identified sensitive receptors
- Include specific exceptions

Exceptions to Glyphosate Ban

- Allow use in cases of public health and safety
- Allow use on road medians and parking structures
- Allow on ball fields that are closed for renovations, not active fields
- Allow use on invasive plants (non-routine activities)
- Once objectives are achieved, decrease use or eliminate completely

Pesticide-Use Transparency


- Create website to highlight activities to prevent pesticide use
 - IPM Policy
 - Tips for managing pests without pesticides
 - Annual report of pesticide use on city properties
- All pesticide applications will be posted prior to listed date of application
- When planning to apply pesticides, close area to the public and post signs about pesticide application

Example

The screenshot shows the City of Davis website. At the top, there is a navigation bar with links for Contact Us, City Council, Agendas, Jobs, Staff Directory, Calendar, and Social Media. The Davis California logo is on the left. A search bar and a language selection dropdown are on the right. Below the navigation bar is a green menu with categories: ABOUT DAVIS, CITY HALL, RESIDENTS, BUSINESS, VISITORS, HOW DO I?, and SUSTAINABILITY. The main content area is titled 'INTEGRATED PEST MANAGEMENT' and includes a breadcrumb trail: City Hall » Public Works Utilities and Operations. The page features a detailed introduction to IPM, a section for the '2017 Integrated Pest Management Plan Update' with a list of links, and a section for the 'Anticipated Pesticide Application Calendar' with a link to the calendar. A right-hand sidebar contains social media icons, a navigation tree with 'Integrated Pest Management' selected, and a 'Contact Information' box with phone and email details.

Contact Us | City Council | Agendas | Jobs | Staff Directory | Calendar | Social Media


Davis CALIFORNIA

Search...   Select Language  Tra

ABOUT DAVIS | CITY HALL | RESIDENTS | BUSINESS | VISITORS | HOW DO I? | SUSTAINABILITY

City Hall » Public Works Utilities and Operations

INTEGRATED PEST MANAGEMENT

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Integrated Pest Management (IPM) is a decision-making process to determine pest levels and tolerance thresholds and combines biological, cultural, physical, and chemical tools to minimize health, environmental, and financial risks. The method uses extensive knowledge about pests, such as infestation thresholds, life histories, environmental requirements, and natural enemies to complement and facilitate biological and other natural control of pests.

It coordinates the use of pest biology, environmental information, and available technology to prevent unacceptable levels of pest damage by the most economical means, while posing the least possible risk to people, property, resources, and the environment.

2017 Integrated Pest Management Plan Update

On November 7, 2017, the City Council approved a significant policy and procedures update for the city's Integrated Pest Management Program. The plan was developed with the guidance of public input, through community workshops, and meetings with the Natural Resource Commission (NRC) Hazardous Materials Subcommittee, as well as the Open Space and Habitat Commission, the Tree Commission, and the Recreation and Parks Commission.

- [Staff Report to Council on IPM Policy Update - November 7, 2017](#)
- [City of Davis Integrated Pest Management Policies and Procedures](#)



Anticipated Pesticide Application Calendar

Due to public desire to know where and what pesticides are being applied in and along our parks, greenbelts, and miscellaneous landscaped areas that people are most likely to enter, the city has established a calendar connected to an eNotification system to provide this information. As always, no pesticide applications take place within playground areas.

The Anticipated Pesticide Application Calendar is located [here](#).

The calendar will notice where and when pesticides are applied 48 hours prior to the application. An eNotification will be sent when the calendar notice of spraying is posted.

Sign up to receive notification of upcoming anticipated pesticide applications.

Public Works Utilities and Operations

- Greener Davis
- ▾ Integrated Pest Management
 - Pesticides and Stormwater
 - Pests in the Home and Garden
 - Landscape Management & Weeds
 - Anticipated Pesticide Application Calendar
 - Pesticide Use Justification Forms
- Solid Waste and Recycling
- Stormwater
- Streets
- Wastewater
- Water
- Urban Wildlife

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Questions?