

YEAR 2: DAVIS COUNTY JAPANESE BEETLE (JB) ERADICATION PROJECT



Summary

- Japanese beetle (JB) *Popillia japonica* (Newman) is an invasive insect first detected in the United States (U.S.) in 1920; it infests most states east of Utah.
- Larvae are severe pests of turf and adults feed on the foliage of over 300 host plants. These include popular fruit, vegetable and ornamental plants.
- Infested states annually spend \$460 million on JB damage.¹ Because Utah is uninfested, Utahns do not have to bear any of these costs.
- In 2021, UDAF conducted pesticide applications on 210 acres of land in Davis County to eliminate a beetle population found in 2020. Trapping later in the year revealed that **eradication efforts were highly effective and resulted in a 76% decrease in captures from the previous year.**
- The Utah Department of Agriculture and Food (UDAF) has declared a Plant Pest Emergency and is continuing eradication efforts so that JB does not become established in your area and spread to the rest of the state.
- A treatment will be applied to irrigated turf on your property at no charge.
- This informational document provides details of the eradication and explains your responsibilities. Your cooperation is greatly appreciated.

Background

UDAF monitors for invasive insects statewide. These pests cause significant damage to agricultural industries, managed landscapes, parks, gardens and natural resources. When they become established, production costs and pesticide use increase. JB is a destructive, invasive pest that is not established in Utah. UDAF monitors for JB state-wide by placing thousands of traps. In 2021, 15 JB were detected via trapping in Centerville and Kaysville. **This was a substantial decrease in captures from the year before and indicates that the eradication efforts are working.** UDAF has declared a Plant Pest Emergency per UCA § 4-35-101 *et. seq.* and devised an eradication plan to ensure JB does not establish.

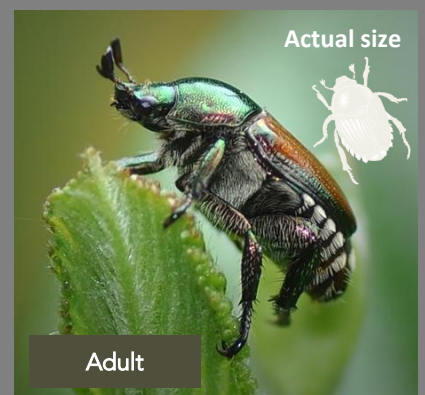
Results of Inaction

The quality of plants around the state and on your property will decline. Pesticide use will increase and keeping plants healthy will become more expensive. A recent economic impact analysis determined that if the JB population is allowed to grow and establish, under the most likely damage scenario, **Utah would suffer a cumulative cost of \$234 million dollars worth of turf injury and \$1.6 million dollars in corn losses** by the year 2027.² These costs would fall on the state's farmers, landscape and park managers, golf courses, cities and residents like you.

JAPANESE BEETLE IDENTIFICATION



- Lives in soil underneath turf
- Ranges from 1/2 – 2 inches in length depending on age
- White, c-shaped, with 3 pair of legs
- Difficult to distinguish from other white grubs



- Averages 1/2 inch in length
- Metallic green head and thorax; burgundy wings
- Five white hairy patches on sides of abdomen; one pair on the back of the abdomen

CITATIONS & PHOTO CREDITS

1. USDA-APHIS (2000). Managing the Japanese Beetle. A Home Owner's Handbook. US Department of Agriculture https://www.aphis.usda.gov/plant_health/plant_pest_info/jb/downloads/JBhandbook.pdf
 2. Grundon, S.J. and Schuker (2020). Economic Risk Analysis: Utah and the Japanese Beetle on Turf and Corn. <https://ag.utah.gov/wp-content/uploads/2020/06/Risk-Analysis-of-JB-in-Utah.pdf>
 3. U.S. Environmental Protection Agency (2008). Pesticide Fact Sheet: Chlorantraniliprole.
 4. Dinter, A., Brugger, K., Frost, N., and Woodward, M.D. (2010). Chlorantraniliprole (Rynaxypyr): A novel DuPont™ insecticide with low toxicity and low risk for honey bees (*Apis mellifera*) and bumble bees (*Bombus terrestris*) providing excellent tools for uses in integrated pest management. 10th International Symposium of the ICP-Bee Protection Group.
 5. Larson, J.L., Redmond, C.T. and Potter, D.A. (2011). Comparative impact of an anthranilic diamide and other insecticidal chemistries on beneficial invertebrates and ecosystem services in turfgrass. Pest Management Science, 68: 740-748
- Photo 1: David Cappaert, Bugwood.org Photo 2: Jon Yuschok, Bugwood.org

Response plan

UDAF will contract a licensed commercial pest control operator to apply a larvicidal treatment on areas identified at high-risk of JB establishment (see Maps 1-2 on subsequent pages). A single treatment is planned for these areas; applications will begin in April. However, additional treatments may be required later in the season, in subsequent years and in other areas. This application is applied at no charge to residents and property owners in the affected area. It will take contractors approximately 2-4 weeks to reach all parcels in the eradication areas.

Materials treated

The eradication project's strategy is to control beetles while they are underground in the larval stage. Therefore, the project will exclusively treat irrigated turfgrass. Trees, shrubs and fruit or vegetable plants will not be treated.

Notification

Residents and business owners in the eradication area will be given 48-72 hours notice before treatments begin. Correspondence will be made by door-to-door contact and/or written notices left at the residence/business if personal contact is not possible.

What am I required to do?

To maximize the treatment's effectiveness, please mow the lawn prior to the application date. During the pesticide application, residents and business owners are asked to close windows and doors, open exterior fence gates, bring people and pets indoors and move lawn furniture and other outdoor items away from turfgrass. After the application, please irrigate the lawn if rain is not forecasted in the next 48 hours. People and pets may resume activity on the lawn once it has dried.

2022 Project Timeline



Safety and environmental protection

UDAF has selected Acelepryn®, a non-restricted use pesticide for the project. The pesticide is proven effective in controlling JB and it has low toxicity for humans, pets, bees, birds and earthworms.^{3,4,5} It is classified by the U.S. Environmental Protection Agency as a Reduced Risk Pesticide. It is a commonly used control product for turf pests in residential landscapes.

State pesticide enforcement officials will supervise pesticide applications to ensure all federal and state rules are followed, so that residents, water quality and the environment are protected. The state Apiary Program will notify area beekeepers in advance of applications and train the pest control company in best practices for pollinator protection.

Medical waiver

Owners or occupants of property may prohibit treatment by presenting an affidavit from the owner's or occupant's attending physician or physician assistant to the department which states that the treatment as planned is a danger to the owner's or occupant's health. The form is enclosed and can be mailed, delivered in person or scanned and emailed (see form for instructions). Medical waivers must be completed, signed and received by Friday, April 1st, 2022. Persons granted a medical waiver will need to complete approved non-chemical measures to control the JB population.

How can I learn more or get involved?

UDAF will be hosting a virtual public meeting to provide more information about the project (see below). Residents, employees and property owners in the eradication areas are encouraged to attend. Stakeholders interested in helping with this effort can learn to identify JB (see previous page) and report sightings of the pest to UDAF.



JAPANESE BEETLE ERADICATION PROJECT VIRTUAL OPEN HOUSE

Have questions or concerns? Want to learn more or get involved? Come to our virtual open house meeting where you can meet the subject matter experts working on this project.

**ZOOM VIDEO
CONFERENCE
EVENT**

Thursday, March 24th 2022 — 6:00 pm to 8:00 pm
Visit ag.utah.gov/jberadication for more information
and the Zoom meeting link.

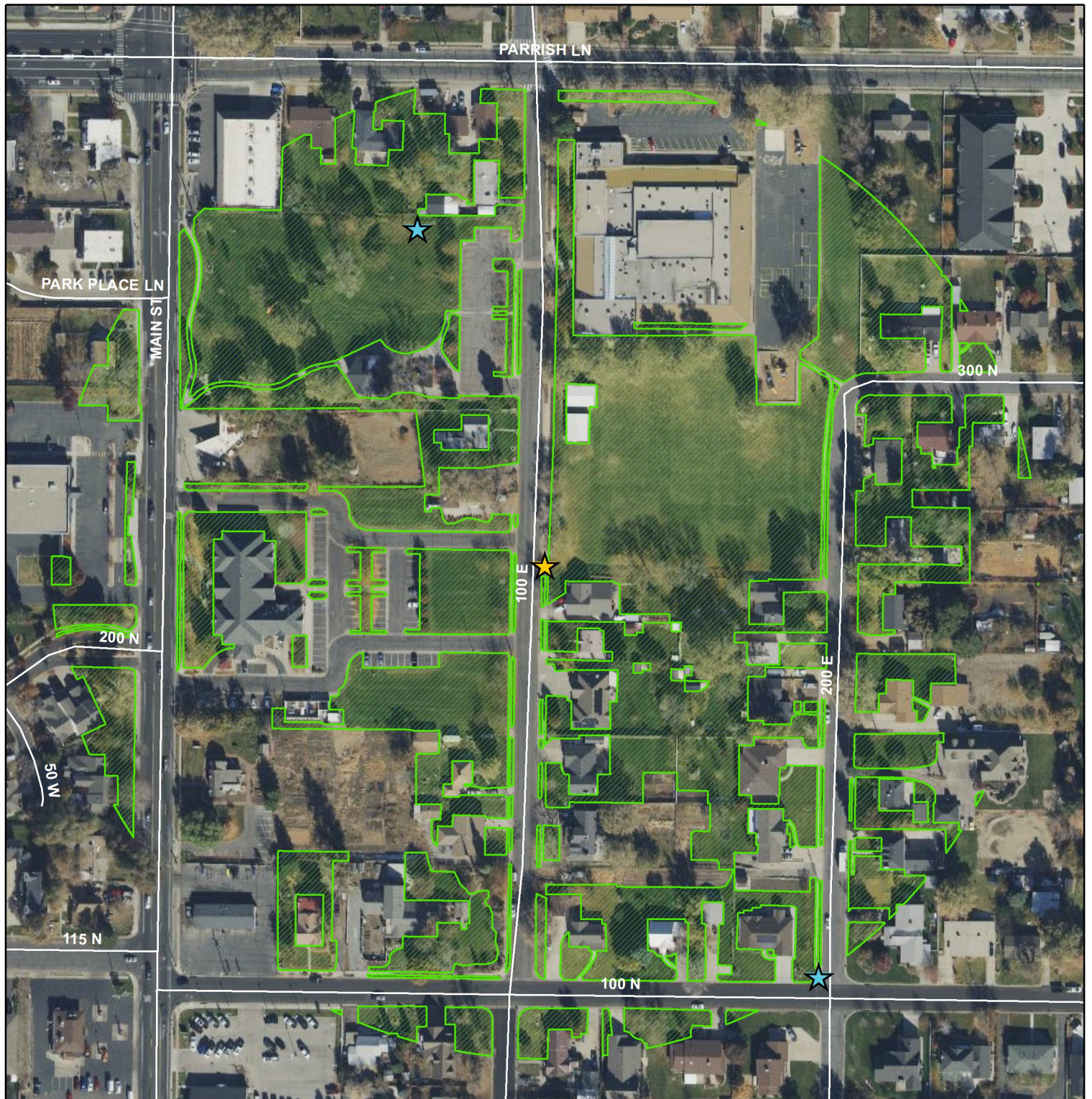
Can't attend but want more information?


Phone - 801-972-1669


Email - UDAF-Insects@utah.gov



Spring 2022 Japanese Beetle Treatment Area - Centerville 13.5 acres



 JB treatment area

 JB female or 2+ captures

 JB male



0 100 200 400
 Feet


Map Scale 1:2,200

1 inch = 183 feet



Spring 2022 Japanese Beetle Treatment Area - Kaysville 13.3 acres



 JB treatment area

 JB female or 2+ captures

 JB male



0 100 200 400
 Feet

Map Scale 1:2,200
1 inch = 183 feet