

## WSR 24-13-074

## PROPOSED RULES

## DEPARTMENT OF AGRICULTURE

[Filed June 17, 2024, 6:27 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 24-10-104.

Title of Rule and Other Identifying Information: Chapter 16-470 WAC, Quarantine—Agricultural pests. The department of agriculture (department) is proposing expanding the boundaries of the Japanese beetle internal quarantine.

The department is also proposing to amend the rule chapter to:

- Add soil samples to the list of regulated articles in WAC 16-470-710(2), as well as conditions governing the movement of soil samples.
- Clarify, in WAC 16-470-710(7), that cut flowers exposed to open air environments during their harvest, transportation, or trade are included as a regulated article.
- Add conditions governing the movement of cut flowers for decorative purposes.
- The rule amendment would require businesses that are located within the internal quarantine area and are selling regulated articles under WAC 16-470-710 (4) or (7) to post signage to alert customers purchasing regulated articles that they may not be transported outside of the quarantine area.

Hearing Location(s): On August 6, 2024, at 2:00 p.m., via Microsoft Teams conference call. Join on your computer, mobile app, or room device [https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_YzY0ZGJmNDMtNmFkNS00YzE3LTk1ODUtMDhhMzhmM2I0YWZm%40thread.v2/0?context=%7b%22Tid%22%3a%2211d0e217-264e-400a-8ba0-57dcc127d72d%22%2c%22Oid%22%3a%22838c55c7-c187-44ae-8de0-2be684ce5d4a%22%7d, Meeting ID 227 355 433 524, Passcode MxYsLN; or dial in by phone +1 564-999-2000,,810804665# United States, Olympia, Phone conference ID 810 804 665#](https://teams.microsoft.com/l/meetup-join/19%3ameeting_YzY0ZGJmNDMtNmFkNS00YzE3LTk1ODUtMDhhMzhmM2I0YWZm%40thread.v2/0?context=%7b%22Tid%22%3a%2211d0e217-264e-400a-8ba0-57dcc127d72d%22%2c%22Oid%22%3a%22838c55c7-c187-44ae-8de0-2be684ce5d4a%22%7d, Meeting ID 227 355 433 524, Passcode MxYsLN; or dial in by phone +1 564-999-2000,,810804665# United States, Olympia, Phone conference ID 810 804 665#).

Date of Intended Adoption: August 13, 2024.

Submit Written Comments to: Gloriann Robinson, Rules Coordinator, P.O. Box 42560, Olympia, WA 98504-2560, email [wsdarulescomments@agr.wa.gov](mailto:wsdarulescomments@agr.wa.gov), fax 360-902-2092, by 5:00 p.m., August 6, 2024.

Assistance for Persons with Disabilities: Contact Autumn Dryden, phone 360-902-2061, email [Autumn.Dryden@agr.wa.gov](mailto:Autumn.Dryden@agr.wa.gov), by 5:00 p.m., July 30, 2024.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The current permanent internal quarantine specified in chapter 16-470 WAC covers 49 square miles in the southeastern corner of Yakima County and the southwestern corner of Benton County. Japanese beetle catches from the 2022 and 2023 trapping seasons indicate that a permanent expansion of the internal quarantine is necessary to prevent further infestation of this pest in nonquarantined areas.

Topsoil containing vegetative material has already been identified as a potential pathway in which Japanese beetle could spread and is currently regulated under the quarantine. Soil samples pose a similar risk and have been identified as another way the beetle could

spread. Adding soil samples to the regulated articles list will help prevent further spread of this pest.

Cut flowers are already a regulated article under the quarantine. The proposed amendments clarify that cut flowers exposed to open air environments during their harvest, transportation, or trade are regulated.

Requiring businesses to post signage located within the internal quarantine area and where selling regulated articles under WAC 16-470-710 (4) or (7) will alert customers purchasing plants to keep them within the quarantine area.

Reasons Supporting Proposal: Japanese beetle (*Popillia japonica* Newman) is a highly invasive plant pest native to Japan. It has been known to cause severe damage to more than 300 species of ornamental and agricultural plants, including roses, grapes, and hops. Adult beetles damage plants by skeletonizing foliage and feeding on buds, flowers, and fruit. The larvae also damage the roots of plants such as turf grass. Although this feeding does not always kill the plant, it weakens it and may reduce the plant's overall yield.

In 2021, the department caught 24,048 Japanese beetles in the current internal quarantine area. Throughout 2021, 2022, and 2023, the department took extensive measures to reduce the spread of the beetle, with an ultimate goal of eradicating it. Measures that have been taken include treating residential and public properties with pesticide, trapping, and establishing an internal quarantine. Despite these efforts, by the end of the 2022 trapping season, numerous Japanese beetles, which indicate a reproducing population, were caught outside of the currently established internal quarantine area. This occurred again in 2023, with beetles being caught even further outside of the internal quarantine area than in 2022. Due to this, immediate action is needed to expand the internal Japanese beetle quarantine to reflect the area of infestation more accurately and strengthen the quarantine's protections. Further, the department believes that adding soil samples as a regulated article, requiring signage be posted for businesses selling certain regulated articles, and clarifying the requirement around cut flowers is necessary to prevent the beetles' further dissemination within this state and to protect the state's forest, agricultural, horticultural, floricultural, beekeeping, and environmental interests.

If Japanese beetle becomes permanently established throughout the state, it could severely threaten several of Washington's agricultural industries. The threat this pest poses is particularly concerning due to the area in which the detections have occurred. There are a number of farms and nurseries in close proximity to the detection sites growing plant species known to be targeted by Japanese beetle. Not only do these beetles pose a threat to the plants themselves, but if established they have the potential to impact the availability of export markets for agricultural commodities grown in the area. Expanding the Japanese beetle internal quarantine and other proposed quarantine amendments will help prevent the spread of this invasive pest and protect Washington's agricultural industries, as well as maintain access to national and international markets.

Statutory Authority for Adoption: RCW 17.24.011 and 17.24.041.

Statute Being Implemented: Chapter 17.24 RCW.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of agriculture, governmental.

Name of Agency Personnel Responsible for Drafting, Implementation, and Enforcement: Sven Spichiger, 7321 Linderson Way S.W., Suite 102, Tumwater, WA 98501, 360-280-6327.

A school district fiscal impact statement is not required under RCW 28A.305.135.

A cost-benefit analysis is not required under RCW 34.05.328. The department is not a listed agency under RCW 34.05.328 (5) (a) (i).

Scope of exemption for rule proposal:

Is not exempt.

The proposed rule does impose more-than-minor costs on businesses.

### Small Business Economic Impact Statement

Chapter 16-470 WAC

Quarantine—Agricultural Pests

Japanese Beetle Quarantine

June 18, 2024

**SECTION 1: Describe the proposed rule, including: A brief history of the issue; an explanation of why the proposed rule is needed; and a brief description of the probable compliance requirements and the kinds of professional services that a small business is likely to need in order to comply with the proposed rule.**

Overview and Background: The department is proposing to amend and expand the Japanese beetle quarantine to include additional portions of Yakima and Benton counties. Japanese beetles have been found in these extended areas surrounding the original quarantine area. In a continued effort to stop the spread of the beetles, the department seeks to expand the current internal quarantine specified in chapter 16-470 WAC in nearly every direction to include areas where Japanese beetles have been detected. Soil samples will be added to the list of regulated articles, and a clarification will be made that cut flowers exposed to open air environments are a regulated article.

Businesses located within the quarantine area selling regulated articles, as defined in WAC 16-470-710, must post signage which is clearly visible at all business entrances, as well as points of sale and aisles where regulated articles are being sold. Businesses must use signage developed by the department, which clearly states that regulated articles purchased cannot be transported outside of the quarantine area. The required signage may be found on the department's website (<http://agr.wa.gov/beetles>) and must be, at minimum, 8.5" x 11".

Japanese beetle (*Popillia japonica* Newman) is a highly invasive plant pest native to Japan. It has been known to cause severe damage to more than 300 species of ornamental and agricultural plants, including roses, grapes, and hops. Adult beetles damage plants by skeletonizing foliage and feeding on buds, flowers, and fruit. The larva also damage the roots of plants such as turf grass. Although this feeding does not always kill the plant, it weakens it and may reduce the plant's overall yield.

Since June 2021, the department has collected thousands of Japanese beetles in traps around the city of Grandview in Yakima County. Each year, the department conducted extensive eradication work and placed thousands of traps in and around the affected areas to monitor the infestation. Many beetles have been collected from traps in nearby Benton County indicating an established population and a general spread of the infestation. The beetle's presence poses a serious

threat to gardens, parks, and farms by destroying vegetation. If Japanese beetle becomes permanently established throughout the state, it could threaten many of Washington's agricultural industries. The threat this pest poses is particularly concerning due to the area in which the detections have occurred. There are dozens of farms and nurseries near detection sites growing plants targeted by Japanese beetle.

Not only do these beetles pose a threat to the plants themselves, but if established, they have the potential to impact export markets for agricultural commodities grown in the area. Expanding the Japanese beetle quarantine to include additional portions of Yakima and Benton counties, will help prevent the spread of this invasive pest and protect Washington's agricultural industries, as well as maintain access to national and international markets.

**Proposed Rule Amendments:** The proposed rule amendments would expand the existing internal quarantine boundary for Japanese beetle in the southeastern corner of Yakima County and the southwestern corner of Benton County, including the city of Sunnyside and portions of the cities of Outlook and North Prosser.

**Regulated Articles:** The existing rule restricts the movement of regulated articles from within the quarantine area to outside the quarantine area. The following are proposed amendments to regulated articles in both the current and expanded quarantine areas:

- Add soil samples to the list of regulated articles in WAC 16-470-710(2);
- Clarify, in WAC 16-470-710(7), that cut flowers exposed to open air environments during their harvest, transportation, or trade are a regulated article.

**Business Signage:** As proposed in WAC 16-470-710, businesses are now required to post signage near entrance(s) clearly stating that regulated articles purchased cannot be transported outside of the quarantine area.

Businesses in the expanded quarantine area will have to comply with the conditions governing the movement of regulated articles in order to transport articles to areas outside the quarantined area. These conditions (treatment options) include:

1. *The upper eight inches of topsoil containing vegetative material from all properties, humus and compost (except when produced commercially), and growing media (except when commercially packaged):*
  - a. Steam-heated to a temperature of 140°F for one hour to kill all life stages of Japanese beetle.
  - b. Other treatments determined to be effective at eradicating Japanese beetle and approved in writing by the director.
2. *Yard debris:*
  - a. Steam-heated to a temperature of 140°F for one hour to kill all life stages of Japanese beetle.
  - b. When consisting solely of woody materials containing no soil, yard debris may be chipped to a screen size of one inch in two dimensions or smaller during the Japanese beetle adult flight season.
    - i. Woody material containing no soil can be moved outside of the Japanese beetle adult flight season without chipping.
    - c. Another treatment determined to be effective at eradicating Japanese beetle and approved in writing by the director.
3. *Plants for planting and propagation except when dormant, bare-root, and free from soil or growing media: All plants with roots, plant crowns or roots, bulbs, corms, tubers and rhizomes, and turf-*

*grass (sod)*: Each shipment must comply with the treatment or inspection requirements detailed under WAC 16-470-717 (3) (a) - (f). Before the shipment moves outside the quarantined area, the shipment must be approved by the department. Approval will be documented by the issuance of a certificate of treatment or inspection when the department verifies that the shipment is in compliance with the treatment or inspection requirements. The certificate must accompany the shipment while the shipment is in transit. Treated plants must be safeguarded from reinfestation prior to shipping. Plants shipped dormant and bare-root with no soil or growing media attached are exempt from these requirements and should be identified as bareroot on shipping documents. WAC 16-470-717 (3) (a) - (f) requirements include:

- a. Production in an approved Japanese beetle-free greenhouse/screenhouse.
- b. Production during a pest-free window.
- c. Application of approved regulatory treatments.
- d. Dip treatment - not an approved treatment.
- e. Drench treatments for container plants only. Not approved for ornamental grasses or sedges.
- f. Media (granule) incorporation for container plants only. Not approved for ornamental grasses or sedges.

4. *Hop bines and unshucked corn ears*:

- a. Fields where hops or corn (intended to be shipped unshucked) are planted must be trapped and monitored by the department and found free of Japanese beetle for the entire adult flight period (May 15 through October 15), or from the date of planting up to the date of harvest if both dates are within the flight period. Fields that are not sufficiently trapped will not be considered free from Japanese beetle. If the field is found free of Japanese beetle by the department, unshucked corn ears may be moved outside the quarantined area.
- b. If the department determines there is evidence of Japanese beetle presence, bines and unshucked corn ears must be treated prior to harvest or movement by a method approved by the director in advance.

- c. All shipments of hop bines and unshucked corn ears to areas outside the quarantined area must be accompanied by a compliance document issued by the department stating the field of origin and destination addresses. If a shipment is found to contain Japanese beetles, any further shipments from that field must be in vehicles sufficiently closed/covered to prevent reinfestation after treatment.

5. *Soil samples (proposed)*:

- a. Soil samples may be transported to a laboratory for testing outside of the quarantine area if they are securely double bagged and clearly labeled with the following statement: "This soil sample originates from a Japanese beetle quarantine area. Sample must either be securely double bagged prior to disposal or incinerated."
- b. Laboratories located within Washington state that are receiving soil samples originating from the quarantine area must either securely double bag the samples prior to disposal or incinerate the samples.

Required Professional Services: The proposed rule amendment would not require professional services. A business may choose to hire professional services to assist in applying a Japanese beetle treatment or taking soil samples; however, it would not be mandatory.

**SECTION 2: Identify which businesses are required to comply with the proposed rule using the North American Industry Classification System (NAICS) codes and what the minor cost thresholds are.**

NAICS Code (4, 5 or 6 Digit)	NAICS Business Description	1% of Average Annual Payroll*	0.3% of Average Annual Revenue**	Minor Cost Threshold ***
111150	Corn Farming	\$2,759.57	\$2,435.67	\$2,759.57
111219	Other Vegetable (except Potato) and Melon Farming	\$3,503.04	\$12,815.87	\$12,815.87
111331	Apple Orchards	\$9,820.23	\$4,178.42	\$9,820.23
111332	Grape Vineyards	\$5,461.08	\$479.56	\$5,461.08
111334	Berry (except Strawberry) Farming	\$3,422.69	\$10,768.61	\$10,768.61
111335	Tree Nut Farming	Redacted	\$650.33	\$650.33
111339	Other Non-Citrus Fruit Farming	\$2,941.04	\$755.89	\$2,941.04
111421	Nursery and Tree Production	\$5,322.57	\$2,712.36	\$5,322.57
111422	Floriculture Production	\$7,268.96	\$718.29	\$7,268.96
111940	Hay Farming	\$1,384.56	\$4,522.70	\$4,522.70
111998	All Other Miscellaneous Crop Farming (Hops Farming)	\$11,775.64	\$2,882.31	\$11,775.64
236118	Residential Remodelers	\$1,448.44	\$1,079.77	\$1,448.44
444220	Nursery; Garden Center and Farm Supply Stores	\$4,675.20	\$3,612.25	\$4,675.20
541320	Landscape Architectural Services	\$4,874.25	\$987.60	\$4,874.25
561730	Landscape Services	\$2,131.66	\$905.21	\$2,131.66
562111	Solid Waste Collection	\$14,106.51	\$22,689.65	\$22,869.55

\* Data source: 2022 Dataset pulled from USBLS, and ESD

\*\* Data source: 2022 Dataset pulled from DOR

\*\*\* The Minor Cost Threshold is the larger amount between 1% average annual payroll and 0.3% average annual revenue

**SECTION 3: Analyze the probable cost of compliance. Identify the probable costs to comply with the proposed rule, including: Cost of equipment, supplies, labor, professional services, and increased administrative costs; and whether compliance with the proposed rule will cause businesses to lose sales or revenue.**

The industries impacted by the proposed rule vary greatly due to the large amount of host material targeted by Japanese beetle and the widespread availability of it within the proposed quarantine area. Likewise, the possible impact to businesses varies depending on the number of regulated articles a business handles and if those articles are moved outside of the proposed quarantine area. Some businesses may handle only one regulated article, whereas others handle multiple. The time of year a business moves regulated articles, whether during adult flight season or not, may also impact potential costs. Additionally, proposed regulated articles may be a product that is created and sold (which may impact revenue), or a waste by-product of a business operation (which the business needs to dispose of).

Businesses located within the quarantine area selling regulated articles, as defined in WAC 16-470-710, must post signage which is clearly visible at all business entrances, as well as points of sale and aisles where regulated articles are being sold. Businesses must use signage developed by the department which clearly states that regulated articles purchased cannot be transported outside of the quarantine area. The required signage may be found on the department's website (<http://agr.wa.gov/beetles>) and must be, at minimum, 8.5" x 11" in size. Businesses will initially be provided with signage from the department to be used. Should the provided signage become damaged, illegible, or discarded, businesses will be able to access and print department-approved signage to maintain compliance with WAC

16-470-710(4). Thus, should a business need to replace any of its signage, they will likely experience an added cost of compliance to account for the following, if not already on hand:

1. Internet access through an internet service provider;
2. A personal computer (PC) with minimum technical specifications allowing for access to the internet;
3. Printer with minimum technical specifications to produce approved department signage found at <http://agr.wa.gov/beetles>; and
4. Standard 8.5" x 11" printer paper, also referred to as "multi-purpose copy paper."

Businesses impacted by the proposed rule amendments are likely to experience a loss in sales or revenue if they sell any of the regulated articles and are unable to transport them outside of the proposed quarantine area. In order to transport these items, businesses will need to utilize one or more of the treatment options provided in the current rule (discussed under Section 1). Depending on which treatment is used, businesses may see an increase in costs related to equipment, supplies, labor, and administration. To analyze these potential cost impacts, this section has been broken into two parts. One analyzes the potential loss in revenue and the other analyzes additional costs associated with the implementation of treatment options.

The department estimates there are around 50 businesses in the proposed quarantine area that could potentially be affected by the proposed rule amendments. However, it is not clear how many of these businesses would actually be impacted, as not enough information was available to make a determination. Below is a breakdown of the businesses by industry type and a list of the proposed regulated articles the businesses could be affected by if transport restrictions were in place.

**Soil Samples:** Businesses in both the original and expanded quarantine areas will need to attach labels to any soil samples shipped to laboratories outside of the quarantine. The department will supply labels at no cost to businesses and third-party companies that take soil samples. However, there may be a small amount of additional labor costs related to physically applying the labels to the samples, which will vary based on the number of samples a business takes per year.

The department contacted three laboratories that accept soil samples in Washington state that are located outside of the quarantine area, and each business reported that the proposed rule change that will require attaching disposal instructions to soil samples will not lead to additional costs or price increases on their end.

Treatment Options - Requirements and Estimated Costs:

**1. The upper eight inches of topsoil containing vegetative material from all properties, humus and compost (except when produced commercially), and growing media (except when commercially packaged):**

a. *Steam-heated to a temperature of 140°F for one hour to kill all life stages of Japanese beetle:* Topsoil containing vegetative material may be securely covered with a tarp or plastic sheeting and steamed to kill any Japanese beetle contained within. Equipment needed for this treatment would include a steam generator, fuel to run the generator, reinforced rubber hoses for transporting the steam, and tarps or plastic coverings. Estimated set-up costs for the steam generator and tarps would be around \$46,000. Fueling costs for a diesel steam generator would be around \$22.50 per hour (using five gallons per hour at \$4.50 per gallon) and the cost for staff to run the system would be around \$19.68 per hour (assuming the employee is paid minimum wage and includes costs associated with employer taxes). Additional

costs will include a compliance agreement with the department and inspection costs. A compliance agreement costs \$58 per year for licensed nurseries and \$72.50 per year for all other businesses. Estimated costs for an inspection in the Grandview area are as follows:

- Eighty-eight miles round trip (from the department office in Pasco or Yakima to Grandview) at \$0.67 per mile equaling \$58.96.
- One and a half hours travel time at \$72.50 per hour (\$58 per hour for licensed nursery) equaling \$108.75 or \$87, respectively.
- Half hour minimum inspection cost at \$72.50 per hour (\$58 per hour for licensed nurseries) equaling \$36.25 or \$29, respectively.

Total estimated costs (calculated for nonlicensed nursery) to set up and run this treatment option for two hours would be \$46,355.60. After the initial set-up costs, the ongoing costs for a business to continue utilizing this treatment method would be \$40.23 per hour.

Since 2022, the department has worked with the City of Grandview to maintain an area within the quarantine area where regulated yard debris can be taken at no cost to businesses. This site is free for residents and businesses located within the quarantine area, with proof of address (such as a utility bill). The site is open Monday - Friday from 8:00 a.m. to 5:00 p.m. There will not likely be increased transportation costs associated with this, as the typical disposal facility is located outside of the quarantine area and further away. Some businesses stated they might see a decrease in transport costs due to this. The department's ability to continue to provide this drop-off site is dependent on funding.

**2. Yard debris:**

a. *Option 1 - Steam-heated to a temperature of 140°F for one hour to kill all life stages of Japanese beetle:* The yard debris must first be chipped in a woodchipper to aid in the distribution of steam. It would then be loaded into a covered container, such as a roll-off container. A tarp may be used over the pile in addition to the container's covering to aid in the steaming process. The material would be steamed to a temperature of at least 140°F for one hour. Additional costs will include a compliance agreement with the department and inspection costs. A compliance agreement costs \$58 per year for licensed nurseries and \$72.50 per year for all other businesses. Estimated costs for an inspection in the Grandview area are as follows:

- Eighty-eight miles round trip (from the department office in Pasco or Yakima to Grandview) at \$0.67 per mile equaling \$58.96.
- One and a half hours travel time at \$72.50 per hour (\$58 per hour for licensed nursery) equaling \$108.75 or \$87, respectively.
- Half hour minimum inspection cost at \$72.50 per hour (\$58 per hour for licensed nurseries) equaling \$36.25 or \$29, respectively.

The total estimated cost (calculated for nonlicensed nursery) for this treatment option to set up and run for two hours (allowing one hour for container to reach temperature) would be around \$67,655.60. If a business were to set up their own system, the estimated cost would be as follows:

Equipment/Resources	Details	Cost Occurrence	Estimated Cost
Wood chipper	To chip yard debris prior to treatment	One time cost	~\$14,500 (depends on size needed)
Steam generator	Sioux SF-20	One time cost	\$45,000



Equipment/Resources	Details	Cost Occurrence	Estimated Cost
Fuel - diesel	\$4.50 per gallon using 5 gallons per hour	Once per week	\$22.50 per hour
Roll-off container	Vessel for steaming	One time cost	~\$6,800
Tarp	Cover yard debris	One time cost	\$1,000
Labor (assuming minimum wage employee and includes benefits and taxes)	Staff to run steamer	Once per week	\$19.27 - \$19.68 per hour

After the initial set-up costs, the ongoing costs for a business to continue utilizing this treatment method would be \$40.23/hour.

b. *Option 2 - Chipping of woody material containing no soil:* Yard debris consisting of woody material that contains no soil can be moved outside of adult Japanese beetle flight season without any treatments. During May 15 through October 15, this material must first be chipped to a size of one inch in two dimensions or smaller, prior to being moved outside of the proposed quarantine area. Estimated costs associated with this option would include the cost of a chipper (~\$14,500), fuel (using three gallons per hour at a cost of \$4.50 per gallon), and labor to run the chipper (\$19.68 per hour). Additional costs will include a compliance agreement with the department and inspection costs. A compliance agreement costs \$58 per year for licensed nurseries and \$72.50 per year for all other businesses. Estimated costs for an inspection in the Grandview area are as follows:

- Eighty-eight miles round trip (from the department office in Pasco or Yakima to Grandview) at \$0.67 per mile equaling \$58.96.
- One and a half hours travel time at \$72.50 per hour (\$58 per hour for licensed nursery) equaling \$108.75 or \$87, respectively.
- Half hour minimum inspection cost at \$72.50 per hour (\$58 per hour for licensed nurseries) equaling \$36.25 or \$29, respectively.

The total estimated cost to purchase a chipper and run it for one hour, along with the annual compliance agreement and inspection costs, would be around \$14,807.15. After the initial set-up costs, the ongoing costs for a business to continue utilizing this treatment method would be \$32.01/hour.

In 2022, the department worked with the City of Grandview to set up an area within the quarantine area where regulated yard debris could be taken at no cost to businesses. This site is free for residents and businesses located within the quarantine area, with proof of address (such as a utility bill). The site is open Monday - Friday from 8:00 a.m. to 3:00 p.m. There will not likely be increased transportation costs associated with this, as the typical disposal facility is located outside of the quarantine area and further away. Some businesses stated they might see a decrease in transport costs due to this. The department's ability to continue providing this drop off site is dependent on funding.

**3. Plants for planting and propagation except when dormant and bareroot and free from soil or growing media: All plants with roots, plant crowns or roots, bulbs, corms, tubers, and rhizomes, and turf-grass (sod):**

These regulated articles (except for turfgrass/sod) are exempt from quarantine restrictions if shipped dormant and bareroot without soil or growing media attached to the roots. Dormant and bareroot plants do not require further treatment.

A certificate of treatment or inspection will be issued for shipments in compliance. Treated plants must be safeguarded from reinfestation prior to shipping. Plants shipped bareroot with no soil or growing media attached should be identified as bareroot on shipping documents. Shipments from the proposed quarantine area, into the pest-free areas of Washington, must meet **one** of the following certification options. Dip treatment is not an approved treatment option.

*a. Option 1 - Production in an approved Japanese beetle-free greenhouse/screenhouse. All the following criteria apply to be approved as a Japanese beetle-free greenhouse/screenhouse. All media must be sterilized and free of soil. All planting stock must be free of soil (bareroot) before planting into the approved medium. The potted plants must be maintained within the greenhouse/screenhouse during the entire adult flight period (May 15 - October 15). During the adult flight period the greenhouse/screenhouse must be made secure so that adult Japanese beetles cannot enter. Such security measures must be approved by the department. No Japanese beetle-contaminated material shall be allowed into the secured area at any time. The greenhouse/screenhouse will be officially inspected by the department for presence of all life stages of Japanese beetle and must be specifically approved as a secure area. The plants and their growing medium must be appropriately protected from subsequent infestation while being stored, packed, and shipped. Certified greenhouse/screenhouse nursery stock may not be transported into or through any infested areas unless identity is preserved and adequate safeguards are applied to prevent possible infestation. Each greenhouse/screenhouse operation must be approved by the department as having maintained the above criteria. The certificate accompanying the plants shall bear the following additional declaration: "The rooted plants (or crowns) were produced in an approved Japanese beetle free greenhouse or screenhouse and were grown in sterile, soilless media."*

Some businesses may already have a greenhouse/screenhouse but need to secure it against Japanese beetle. Costs for purchasing anti-insect netting to secure a greenhouse/screenhouse is around \$231 for 7.1ft x 150ft. For those businesses that do not already have a greenhouse/screenhouse and choose to purchase one, it would cost around \$40,000 depending on the size and type. It is unlikely that businesses would choose to purchase a new greenhouse/screenhouse, as there are other options available with a substantially lower cost.

Costs to businesses associated with this treatment option would include a compliance agreement fee of \$58 per year for licensed nurseries and \$72.50 for all other businesses, inspection costs, and certification issuance costs. It is assumed that all businesses utilizing this treatment will be a licensed nursery. This is because any business with over \$100 of sales which grows or handles plants must be licensed. Estimated costs for an inspection in the Grandview area and certification would be the following:

- Eighty-eight miles round trip (from the department office in Pasco or Yakima to Grandview) at \$0.67 per mile equaling \$58.96.
- One and a half hours travel time at \$58 per hour equaling \$87.
- Half hour minimum inspection cost at \$58 per hour equaling \$29.
- Certificate charge - \$20 per phytosanitary certificate.

Total estimated costs for inspection and certification of a licensed nursery would be \$193.64 per inspection. The total estimated cost to a business that already has a greenhouse/screenhouse would be \$251.64 for one inspection plus the cost of an annual compliance

agreement. With the additional cost of purchasing anti-insect netting, the total cost would be around \$482.64. For a business that chose to purchase a greenhouse/screenhouse, an estimated \$40,000 would be added to bring the total to \$40,251.64 (cost of anti-insect netting not included). As previously stated, it is unlikely that a business would choose to purchase a new greenhouse when other lower cost options are available. Businesses will likely need more than one inspection annually, but the exact number will vary based on business practices.

b. *Option 2 - Production during a pest-free window. The entire rooted plant production cycle (planting, growth, harvest, and shipping) will be completed within a pest-free window (October 16 - May 14), in clean containers with sterilized and soilless growing medium, i.e., planting, growth, harvest, and shipment will occur outside the adult Japanese beetle flight period, which is May 15 - October 15. The accompanying phytosanitary certificate shall bear the following additional declaration: "These plants were produced outside the Japanese beetle flight season and were grown in sterile, soilless media."*

Costs to businesses associated with this treatment option would include a compliance agreement fee of \$58 per year, inspection costs, and certification issuance costs. Inspection and certification costs would be \$193.64 (see Option 1 for breakdown of costs). The total estimated costs a business might pay under this treatment option would be \$251.64 for one inspection plus the cost of an annual compliance agreement. Businesses will likely need more than one inspection annually, but the exact number will vary based on business practices.

c. *Option 3 - Application of approved regulatory treatments. All treatments will be performed under direct supervision of the department, or under a compliance agreement. Treatments and procedures under a compliance agreement will be monitored closely throughout the season. State phytosanitary certificates listing and verifying the treatment used must accompany the shipment. Note that not all treatments or methods approved in the U.S. Domestic Japanese Beetle Harmonization Plan are acceptable for use within Washington state. The phytosanitary certificate shall bear the following additional declaration: "The rooted plants are in soilless media and were treated to control Popillia japonica according to the criteria for shipment to Category 1 states as provided in the U.S. Domestic Japanese Beetle Harmonization Plan and Washington State's Japanese beetle quarantine."*

Costs under this treatment option would be associated with developing a standard operating procedure for application of treatments, purchasing of pesticide spray, application equipment, labor, department inspection and certification costs, and a compliance agreement. Developing a standard operating procedure for application of treatments would be a one-time cost to create a manual for treatments applied for Japanese beetle. Estimated costs to develop this would be around \$787.20 for one full time employee working 40 hours at \$19.68 per hour. The average estimated cost associated with a pesticide spray, application equipment, labor, and fuel would be around \$147.50 per acre.

Additional costs would include a compliance agreement fee of \$58 per year, inspection costs, and certification issuance costs. Inspection and certification costs would be \$193.64 (see Option 1 for breakdown of costs). For a five-acre operation, the total estimated cost a business might pay under this treatment option would be \$1,776.34.

d. *Option 4 - Drench treatments - container plants only. Not approved for ornamental grasses or sedges. Not approved for field potted plants. Potting media used must be sterile and soilless, containers*

*must be clean. Only containerized nursery stock with root balls 12 inches in diameter or smaller and free from field soil are eligible. This is a prophylactic treatment protocol targeting eggs and early first instar larvae. If the containers are exposed to a second flight season they must be retreated with an approved insecticide. Chemicals approved for drench treatments of container plants under this protocol can be found in the Japanese Beetle National Harmonization Plan for shipping to a Category 1 state and must be labeled for use in Washington state.*

Costs under this treatment option would be associated with developing a standard operating procedure for application of treatments, purchasing of drench treatment, application equipment, labor, department inspection and certification costs, and a compliance agreement. Developing a standard operating procedure for application of treatments would be a one-time cost to create a manual for treatments applied for Japanese beetle. Estimated costs to develop this would be around \$787.20 for one full time employee working 40 hours at \$19.68 per hour. The average estimated cost to purchase drench treatment insecticide would be around \$60.00 for 128 ounces. It's unclear how many ounces a business will require for treatment. Typically, businesses will already have the necessary equipment to apply the treatment. Assuming it takes a business eight hours of labor to apply the treatment, the total estimated cost associated with drench treatment would be around \$217.44 per 128 ounces of insecticide treatment used.

Additional costs would include a compliance agreement fee of \$58 per year, inspection costs, and certification issuance costs. Inspection and certification costs would be \$193.64 (see Option 1 for breakdown of costs). Total costs for setting up and applying treatment would be around \$1,256.28. Ongoing costs after set up would be around \$79.68 per hour plus \$193.64 weekly/monthly for inspection.

*e. Option 5 - Media (granule) incorporation - container plants only. Not approved for ornamental grasses or sedges. Only containerized nursery stock with rootballs 12 inches in diameter or smaller, planted in approved growing media, and free from field soil are eligible. Plants grown in field soil and then potted into soilless container substrates are not eligible for certification using this protocol, unless all field soil is removed from the roots so plants are bare root at the time of potting. All pesticides used for media incorporation must be mixed thoroughly into the media before potting and plants should be watered at least two times following media incorporation before shipment can begin. Approved growing media used must be free from soil and consist of synthetic or other substances (other than soil) used singly or in combinations. Examples of approved growing media include conifer bark, hardwood bark, expanded or baked clay pellets, expanded polystyrene beads, floral foam, ground coconut husk, ground cocoa pods, ground coffee hulls, ground rice husk, peat, perlite, pumice, recycled paper, rock wool, sawdust, sphagnum, styrofoam, synthetic sponge, vermiculite, and volcanic ash or cinder. The media shall contain only substances that were not used previously for growing plants or other agricultural purposes. It must be free of plant pests, sand, and related matter, and safeguarded in such a manner as to prevent the introduction of all life stages of Japanese beetle to the media. The granules must be incorporated into the media before potting. Plants being stepped up into treated potting media must first have undergone an approved drench treatment to eliminate any untreated volume of potting medium. This treatment protocol targets eggs and early first instar larvae and allows for certification of plants that have*

been exposed to only one flight season after application. If the containers are to be exposed to a second flight season they must be re-potted with a granular incorporated mix or retreated using one of the approved drench treatments. Chemicals approved for media (granule) incorporation for container plants under this protocol can be found in the Japanese Beetle National Harmonization Plan for shipping to a Category 1 state, and must be labeled for use in Washington state.

Costs under this treatment option would be associated with developing a standard operating procedure for media incorporation, purchasing of media (granule), application equipment, labor, department inspection and certification costs, and a compliance agreement. Developing a standard operating procedure for media incorporation would be a one-time cost to create a manual for treatments applied for Japanese beetle. Estimated costs to develop this would be around \$787.20 for one full-time employee working 40 hours at \$19.68 per hour. Other costs would include those associated with purchasing the media product itself. This would be around \$40 for a 25-pound bag. There would not be additional costs for application equipment, labor, or fuel, as the media would be put into a hopper that will automatically apply it at the required rate as the business mixes their potting media. Businesses will already have this equipment. Costs for purchasing soilless growing media would be around \$25 for a 10 lb bag. Businesses are currently required to use soilless growing media. Under the proposed rule amendment, a business would only need to purchase soilless growing media if the plants were exposed to a second flight season of Japanese beetle.

Additional costs would include a compliance agreement fee of \$58 per year, inspection costs, and certification issuance costs. Inspection and certification costs would be \$193.64 (see Option 1 for breakdown of costs). Total costs for setting up and applying this treatment option would be around \$1,158.84 (estimate for 75 pounds of media). Ongoing costs after set up would be around \$40 (25-lb bag) plus weekly/monthly inspection costs.

#### **4. Hop bines and unshucked corn ears:**

a. *Option 1 - Hop bines and unshucked corn ears: fields where hops or corn (intended to be shipped unshucked) are planted must be trapped and monitored by the department and found free of Japanese beetle for the entire adult flight period (May 15 - October 15), or from the date of planting up to the date of harvest if both dates are within the flight period. Fields that are not sufficiently trapped will not be considered free from Japanese beetle. If the field is found free of Japanese beetle by the department, unshucked corn ears may be moved outside the quarantined area. If evidence of the presence of Japanese beetle is present during trapping, the business must follow Option 2 to ship out of the quarantine area.*

All businesses transporting hop bines outside of the proposed quarantine area must enter into a compliance agreement with the department. This will cost a business \$72.50 per year, plus inspection costs. Estimated costs for an inspection in the Grandview area would be the following:

- Eighty-eight miles round trip (from the department office in Pasco or Yakima to Grandview) at \$0.67 per mile equaling \$58.96.
- One and a half hours travel time at \$72.50 per hour equaling \$108.75.
- Half hour minimum inspection cost at \$72.50 per hour equaling \$36.25.

Total estimated costs for an inspection would be \$202.64. Overall total costs for a compliance agreement and inspection would be \$275.14. There are no anticipated costs to businesses associated with trapping. The department will conduct all surveying for Japanese beetle and assumes its costs.

b. *Option 2: If the department determines there is evidence of Japanese beetle presence, bines and unshucked corn ears must be treated prior to harvest or movement by a method approved by the director in advance. All shipments of hop bines and unshucked corn ears to areas outside the quarantined area must be accompanied by a compliance document issued by the department with the field of origin and destination addresses. If a shipment is found to contain Japanese beetles, any further shipments from that field must be in vehicles sufficiently closed/covered to prevent reinfestation after treatment.*

**5. Cut flowers for decorative purposes, including those exposed to open air environments during their harvest, transportation, or trade:**

a. *Option 1 - Production in an approved Japanese beetle-free greenhouse/screenhouse. All the following criteria apply to be approved as a Japanese beetle-free greenhouse/screenhouse. The potted plants must be maintained within the greenhouse/screenhouse during the entire adult flight period (May 15 - October 15). During the adult flight period, the greenhouse/screenhouse must be made secure so that adult Japanese beetles cannot enter. Such security measures must be approved by the department. No Japanese beetle contaminated material shall be allowed into the secured area at any time. The greenhouse/screenhouse will be officially inspected by the department for presence of all life stages of Japanese beetle and must be specifically approved as a secure area. The plants and their growing medium must be appropriately protected from subsequent infestation while being stored, packed, and shipped. Certified greenhouse/screenhouse nursery stock may not be transported into or through any infested areas unless identity is preserved, and adequate safeguards are applied to prevent possible infestation. Each greenhouse/screenhouse operation must be approved by the department as having maintained the above criteria.*

All businesses transporting shipments of cut flowers grown in the quarantined area to areas outside the quarantined area must be accompanied by a compliance document issued by the department stating the field of origin and destination address. This will cost a business \$72.50 per year, plus inspection costs. Estimated costs for an inspection would be the following:

- Eighty-eight miles round trip (from the department office in Pasco or Yakima to Grandview) at \$0.67 per mile equaling \$58.96.
- One and a half hours travel time at \$72.50 per hour equaling \$108.75.
- Half hour minimum inspection cost at \$72.50 per hour equaling \$36.25.

Total estimated costs for an inspection would be \$202.64. Overall total costs for a compliance agreement and inspection would be \$275.14. There are no anticipated costs to businesses associated with trapping. The department will conduct all surveying for Japanese beetle and assumes its costs.

b. *Option 2: If the department determines there is evidence of Japanese beetle presence, cut flowers for decorative purposes must be treated with an insecticide labeled to control adult Japanese beetles prior to movement by a method approved by the director in advance. All*

*shipments of cut flowers for decorative purposes to areas outside the quarantined area must be accompanied by a compliance document issued by the department with the field of origin and destination addresses. If a shipment is found to contain Japanese beetles, any further shipments from that field must be in vehicles sufficiently closed/covered to prevent reinfestation after treatment. Further, in order to remain in compliance with this option, growers must also personally inspect their cut flowers plant stock and remove any adult Japanese beetles if present.*

If Japanese beetle is detected, the business must enter into a compliance agreement with the department. This will cost a business \$72.50 per year, plus inspection costs. Estimated costs for an inspection in the Grandview area and certification would be the following:

- Eighty-eight miles round trip (from the department office in Pasco or Yakima to Grandview) at \$0.67 per mile equaling \$58.96.
- One and a half hours travel time at \$72.50 per hour equaling \$108.75.
- Half hour minimum inspection cost at \$72.50 per hour equaling \$36.25.

Total estimated costs for an inspection would be \$202.64. Other costs to businesses under this treatment option would be associated with purchasing pesticide treatment for Japanese beetle and labor costs associated with spraying fields. Average estimated costs associated with a pesticide spray, application equipment, labor, and fuel would be around \$147.50 per acre. Therefore, estimated costs for treating a 100-acre field at \$147.50 per acre would be around \$14,750. With the compliance agreement, inspection, and certification costs, this would be an annual cost of around \$15,025.14.

In addition to costs associated with treatment, some businesses may be required to cover vehicles prior to leaving the proposed quarantine area. This is only if Japanese beetle is detected in shipments from that field. Covering a vehicle may require some businesses to purchase and apply different types of covering products. One of these products could be a tarp, but this is not the only option. Costs associated with purchasing a tarp would be around \$500 per truck, with the cost for labor to apply the tarp around \$19.68. Total costs associated with covering vehicles would be an estimated \$519.68 per truck. This could bring the total estimated annual cost for a 100-acre field to \$15,544.82. Multiple tarps may be necessary depending on the number of trucks operated by a business. Tarps can be reused throughout their useful life, which will vary depending on the quality of tarp and how often it will be used.

Overview of Estimated Costs for Treatment Options: Table 3.3 shows a breakdown of all treatment options by regulated article groups and their estimated costs. Businesses may need to implement one or more of the treatment options if they want to move regulated articles out of the proposed quarantine area. There is insufficient data to determine exact costs businesses may incur as a result of the proposed rule amendments. This is because regulated articles will differ between businesses and treatment options used will vary.

**Table 3.3 Treatment Options by Regulated Article Groups**

Regulated Item	Treatment Option	Details	Cost Occurrence	Estimated Cost Totals
Soil*	Option 1	Steam generator, fuel, tarp, and labor. <b>No anticipated costs to businesses.</b> Department provided service.	One time set-up cost. Monthly ongoing cost for running system.	Total: \$46,355.60; Ongoing cost: \$40.23/hour <b>Or no cost to business if soil is dropped off at drop site.</b>
Yard debris	Option 1	Steam generator, fuel, tarp, container, and labor. <b>No anticipated costs to businesses.</b> Department provided service.	One time set-up cost. Monthly ongoing cost for running system.	Total: \$67,655.60; Ongoing cost: \$40.23/hour <b>Or no cost to business, if dropped at drop site.</b>
Yard debris	Option 2	Woodchipper, fuel, and labor. <b>No anticipated costs to businesses.</b> City of Grandview provided service.	One time set-up cost. Monthly ongoing cost for running system.	Total: \$14,807.15; Ongoing cost: \$32.01/hour <b>Or no cost to business, if dropped at drop site.</b>
Nursery articles**	Option 1	Purchase of greenhouse (unlikely), compliance agreement, inspection, and certification costs.	One time set-up cost. Weekly inspection/certification costs.	Total: \$40,251.64; Ongoing cost: \$193.64 per inspection/certification
Nursery articles**	Option 2	Compliance agreement, inspection, and certification costs.	One time cost for compliance agreement, then weekly inspection/certification costs.	Total cost: \$251.64; Ongoing cost: 193.64 per inspection/certification
Nursery articles**	Option 3	Purchase of pesticide, application equipment, labor, developing application procedure. Additionally, compliance agreement, inspection, and certification costs.	Per acre treatment cost for pesticide and application equipment. One time cost for procedure and weekly inspection/certification costs.	Total (5 acres): \$1,776.34; Per acre treatment cost \$147.50
Nursery articles**	Option 4	Purchase of drench insecticide treatment, labor, developing application procedure. Additionally, compliance agreement, inspection, and certification costs.	Weekly or monthly cost for labor, drench insecticide, inspection/certification. One time cost for procedure.	Total: \$1,256.28; Ongoing cost \$79.68 per hour, plus \$193.64 weekly/monthly for inspection/certificate.
Nursery articles**	Option 5	Purchase of media (granule) treatment and developing application procedure. Additionally, compliance agreement, inspection, and certification costs.	Per treatment cost for media (granule). One time cost for procedure and weekly inspection/certification costs.	Total: \$1,158.84; Ongoing cost \$40 per hour, plus \$193.64 weekly/monthly for inspection/certificate.
Hops/Corn	Option 1	<b>No anticipated costs to businesses for surveying.</b> Department provided service. Costs for compliance agreement and inspection.	Annual compliance agreement and per inspection cost.	\$275.14 per inspection and annual compliance agreement
Hops/Corn	Option 2	Cost for pesticide and treatment, compliance agreement, inspection/certification, plus purchasing one-tarp and labor costs per vehicle.	Annual treatment cost and compliance agreement; one time purchase cost for tarp; per vehicle covering cost for labor; ongoing inspection/certification costs.	Total: \$15,025.14 (if tarp used); Per acre treatment cost \$147.50
Cut Flowers***	Option 1	Purchase of greenhouse (unlikely), cost of foliar pesticide, compliance agreement, inspection, and certification costs.	One time set-up cost. Ongoing pesticide application/inspection/certification costs.	Total: \$40,251.64; Ongoing cost: \$193.64 per inspection/certification + \$147.50 'per acre' treatment cost.



Regulated Item	Treatment Option	Details	Cost Occurrence	Estimated Cost Totals
Cut Flowers***	Option 2	Costs for compliance agreement and inspection.	Annual compliance agreement and per inspection cost + weekly or monthly cost of labor for grower to remove adult beetles if present.	Total cost: \$251.64; Ongoing cost: \$193.64 per inspection/certification + grower's labor rate to remove beetles if present

\* The upper eight inches of topsoil containing vegetative material from all properties, including but not limited to residential, agricultural, and commercial properties (including construction sites); humus, compost (except when produced commercially), and growing media (except when commercially packaged).

\*\* Plants for planting and propagation except when dormant and bareroot and free from soil or growing media: all plants with roots, plant crowns or roots, bulbs, corms, tubers and rhizomes, and turfgrass (sod).

\*\*\* The treatment costs incurred for cut flowers are contingent on both the businesses' size of greenhouse(s) and flower stock needing treatment. These costs are estimates based on data for similar treatments of different plant stock. For option 2, once growers visually inspect the flowers at harvest and find them to be free of Japanese beetles, the cut flowers must immediately be safeguarded in an enclosed vehicle or screened facility until shipment. If any adult Japanese beetles are found during the visual inspection, all adult beetles must be manually dislodged, and the cleaned cut plant material must immediately be safeguarded in an enclosed vehicle or screened facility until shipment.

**SECTION 4: Analyze whether the proposed rule may impose more-than-minor costs on businesses in the industry.**

As previously stated, there is insufficient data to determine exact costs businesses may incur because of the proposed rule amendments. This is because regulated articles will differ between businesses and treatment options used will vary. The size of the business may also change the cost required to comply. For example, a large business with 300 acres of hops may have costs of over \$44,250 if they choose the more expensive treatment options, whereas a smaller business with two acres may only have costs around \$295. For hop producers, if Japanese beetle is detected at one business and not the other, this will also affect costs.

It is assumed that businesses will choose the least expensive treatment option. Businesses that choose to purchase expensive capital equipment like steam generators will likely do so because the equipment can be used to bring in additional revenue from other projects and uses.

Businesses in the expanded quarantine area will not have more-than-minor costs imposed on them if they choose the cheaper treatment and inspection options that are available to them. Businesses will exceed the minor cost threshold if they choose to purchase the more expensive equipment, but that choice is not required by the rule.

Table 4.1 shows a range of estimated costs for treatment options for businesses in varying industries (identified by NAICS code). These treatment options can be as low as \$0 and as high as \$46,355.60 to purchase a new steam generator to treat soil. In Table 4.1, the red highlighted cells indicate the potential for costs to exceed the minor cost threshold.

**Table 4.1: Estimated treatment costs compared to minor cost threshold by NAICS code.**

NAICS Business Description	*Minor Cost Threshold	Mitigation Treatment Cost Range
Corn Farming (111150)	\$2,759.57	\$0 - \$976.48 (calculated for 5 acres)
Nursery and Tree Production (111421)	\$5,322.57	\$251.64 - \$40,251.64
Floriculture Production (111422)	\$7,268.96	\$193.64 - \$40,251.64
All Other Miscellaneous Crop Farming (111998) (includes hop farming)	\$11,775.64	\$38.98 - \$15,523.98 (calculated for 100 acres)
Residential Remodelers (236118)	\$1,448.44	\$0 - \$46,330.90

NAICS Business Description	*Minor Cost Threshold	Mitigation Treatment Cost Range
Other Farm Product Raw Material Merchant Wholesalers (424590) (includes sod merchant wholesalers)	\$8,809.55	\$0 - \$67,655.60
Farm Supplies Merchant Wholesalers (424910)	\$46,474.97	\$251.64 - \$40,251.64
Nursery; Garden Center; and Farm Supply Stores (444220)	\$4,675.20	\$251.64 - \$40,251.64
Landscape Architectural Services (541320)	\$4,874.25	\$0 - \$67,655.60
Landscaping Services (561730)	\$2,131.66	\$0 - \$67,655.60
Solid Waste Collection (562111)	\$22,869.55	\$0 - \$67,655.60

\* Of the minor cost thresholds list for each NAICS code in section 2, the higher minor cost threshold was used for comparison.

There are several industries that will be impacted by the proposed rule changes related to how soil samples are taken. However, it was determined that businesses in these industries will not incur additional costs related to attaching labels and double bagging soil samples. These industries are: 111219, Other Vegetable (except Potato) and Melon Farming, 111331 Apple Orchards, 111332 Grape Vineyards, 111334 Berry (except Strawberry) Farming, 111335 Tree Nut Farming, 111339 Other Non-citrus Fruit Farming, and 111940 Hay Farming.

**SECTION 5: Determine whether the proposed rule may have a disproportionate impact on small businesses as compared to the 10 percent of businesses that are the largest businesses required to comply with the proposed rule.**

RCW 19.85.040(1) requires the department to compare the cost of compliance for small businesses with the cost of compliance for the 10 percent of businesses that are the largest businesses required to comply with the proposed rules using one or more of the following as a basis for comparing costs: (a) Cost per employee; (b) cost per hour of labor; or (c) cost per \$100 of sales.

Although there will be businesses in industries like construction and home remodeling that will service the expanded quarantine area, general contractors and excavation companies from anywhere in Washington state may take construction contracts in the quarantine area and it is difficult to identify who these businesses will be; there is not sufficient data to calculate the cost of compliance using the criteria from RCW 19.85.040(1).

Five corn-growing businesses were located inside the expanded quarantine area but employment information for these businesses could not be found.

Three landscaping companies that service the expanded quarantine area were identified, but employee information could not be found. It is difficult to measure the impacts to the landscaping industry because of the lack of employment information available.

Of the six hops growers that were found in the expanded quarantine area, five were small businesses and one was large. There will be disproportionate impacts on hop-producing small businesses based on the information collected.

Three nurseries were found in the expanded quarantine area and all three are small businesses. Large businesses in the nursery industry were not found in the expanded quarantine area, and all impacts will be to small businesses.

There will be businesses in several industries that must comply with the rule because of the soil sample requirements, but these businesses are not expected to see any cost increases at all.

Three businesses were identified in the expanded quarantine area that transport cut flowers to areas outside of the quarantine.

Table 5.1 shows the average cost per employee for large and small businesses by business description. The average cost range was divided by the average number of employees in each business type (small and large businesses calculated separately), but the department was not able to determine employee numbers for all impacted businesses.

**Table 5.1: Average cost per employee for large and small businesses.**

Business Description	Average Cost Range	Average Cost per Employee for Small Businesses	Average Cost per Employee for Large Businesses
Hops Production	\$275.14 - \$15,025.14	\$25.01 - \$1,365.92	\$1.57 - \$85.86
Nursery	\$251.64 - \$ 40,251.64	\$125.82 - \$20,125.82	*

\* No businesses in size category for the specified NAICS code.  
Data pertaining to the number of employees for all impacted businesses was obtained from Buzzfile.

Determining which treatment option a business will use is difficult, as some may already have the necessary equipment and supplies available. Treatment costs for nurseries will likely be higher for larger businesses, as they will require more plants to be treated and longer inspections, as well as more certificates issued. Treatment costs per acre for hop producers will likely be similar, with larger businesses seeing a higher cost due to treating more acres. The total costs may differ depending on the industry and specific scenario. However, when costs are spread out over the total number of employees that a business has, the cost per employee will be larger for smaller businesses and will create disproportionate impacts.

**SECTION 6: If the proposed rule has a disproportionate impact on small businesses, identify the steps taken to reduce the costs of the rule on small businesses. If the costs cannot be reduced provide a clear explanation of why.**

RCW 19.85.030(2) requires consideration of the following methods of reducing the impact of the proposed amendment on small businesses:

(a) *Reducing, modifying, or eliminating substantive regulatory requirements:* As a result of legislature funding, the department has been able to waive the compliance agreement and "Certificate of Quarantine Compliance" (CQC) document fee. The CQC, in essence, allows for a business to reuse a single CQC document for a shipping season's entirety and simply add treatments to it. In doing so, the business is able to avoid further regular inspection fees. Shipping nurseries with a CQC effectively save, on average, \$6,000.00 on annual phytosanitary certificates and inspections. Businesses may expect these fee waivers so long as there is available funding from the legislature.

Additionally, the department will be providing the newly required handling and disposal advice labels to businesses which take soil samples from within the quarantine area and send them outside of the quarantine area. In doing so, the department is actively attempting to offset the label requirement costs which would otherwise be incurred by businesses.

Any additional reduction, modification, or elimination of the regulatory requirements of the proposed rule amendment could increase the risk of Japanese beetle spreading to other areas of Washington. This could threaten multiple Washington industries, which grow crops targeted by the pest. Additionally, there could be impacts to trade both domestically and internationally if Japanese beetle were to spread to other parts of the state.

(b) *Simplifying, reducing, or eliminating recordkeeping and reporting requirements:* The reporting requirements in the proposed rule amendment are necessary to verify shipments leaving the proposed quarantine area have been treated and no longer pose a high risk for spreading Japanese beetle into other areas of Washington. It is not possible to simplify, reduce, or eliminate these requirements and still ensure that the quarantine restrictions are being met.

(c) *Reducing the frequency of inspections:* Inspections are required to monitor treatments of regulated articles prior to movement out of a proposed quarantine area. The inspections determine the effectiveness of the treatment at neutralizing Japanese beetle. Any reduction in the frequency of inspections could result in the spread of this pest.

(d) *Delaying compliance timetables:* Delaying compliance timetables is not a viable mitigation measure. Any delay will result in a higher risk of spread for Japanese beetle. Although delaying compliance timetables is not an option, the department will continue to work with businesses to develop other effective treatment options.

(e) *Reducing or modifying fine schedules for noncompliance:* This rule does not contain any fines for noncompliance.

(f) *Any other mitigation techniques including those suggested by small businesses or small business advocates:* The department has worked closely with industry groups in developing the rule amendments and no other mitigation techniques were suggested by small businesses or small business advocates. The department will continue to work with small businesses to develop cost-effective treatment options.

**SECTION 7: Describe how small businesses were involved in the development of the proposed rule.**

Industry groups representing small businesses were involved throughout the development of the proposed rule amendments. The department presented about Japanese beetle to stakeholders at over 25 meetings, open houses, and conventions. Some of these groups included WA Friends of Farms and Forests, WA State Grape Society, WA Grapevine Advisory Committee, WA Foundation Block Advisory Group, WA Nursery Advisory Committee, WA Hop Commission, WA Mint Commission, multiple pest boards, and private companies that operate in the area like Wilbur Ellis and GS Long. These presentations allowed the department to share information about the proposed rule amendment to stakeholders and gather feedback from them.

Draft rule language was shared with the hops, grape, and mint commissions so that they could present it at their internal meetings and keep their members informed. Feedback was sought from the commissions and their members to better understand any impacts from the original quarantine and estimate any impacts to businesses in the new expansion area, or from the draft rule changes.

Open houses in the quarantine area were available to the public to provide information on the draft rule changes, answer questions about the quarantine in general, and seek treatment consent from the local population. Department staff also attended the open houses to reach small business owners who may not be members of any commissions and may not be on any department email subscriber lists. Information was available at the open houses for small business owners and department contact information was handed out so that staff could be available for any follow-up questions from the businesses.

When the original quarantine was put in place in 2022, small businesses in multiple industries were contacted by the department directly to gain insight into their business practices and feedback on

possible mitigation measures. It was through this and consultation with experts that the treatment option list was developed.

Three laboratories in Washington state that process and analyze soil samples were contacted to determine what the impacts of the rule changes would be for businesses that collect soil samples and send them to be tested. These laboratories confirmed that they will continue to accept samples sent from the quarantine area and will not increase fees based on the disposal recommendations. Hops and grape commissioners also confirmed that their growers do not object to the labels being attached and understand the need for the rule change.

Surveys were emailed or mailed to businesses that are located inside or operate within the original quarantine area that was established in 2022, seeking feedback on the impacts to business processes caused by the quarantine. These surveys asked for information about any revenue or job losses that resulted from businesses having to comply with the rule and provided an opportunity for businesses to provide any other feedback about their experiences operating inside the quarantine area, but the department has not received any responses.

**SECTION 8: Identify the estimated number of jobs that will be created or lost as the result of compliance with the proposed rule.**

Any business that chooses the lower option from the mitigation treatment cost range will likely not experience any job losses. The less costly options are not enough to impact the marginal cost of production for any one business and these smaller increases in actual costs would not result in a loss of labor hours. However, if a business chose the more expensive option from the mitigation treatment cost range and did not utilize the capital goods purchase to increase revenue in any other areas, the additional costs would likely result in job losses. The exact number of jobs that would be impacted is difficult to determine without knowing which end of the mitigation cost range any of the impacted businesses will choose, and without knowing what equipment a business might already own. Expensive equipment purchases would likely not be made primarily for the purpose of complying with the rule as there are cheaper options available, and if a business chose to purchase a steam generator or greenhouse, they would do so because the equipment would increase revenue and company profit through other uses.

A copy of the statement may be obtained by contacting Gloriann Robinson, Rules Coordinator, P.O. Box 42560, Olympia, WA 98504-2560, phone 360-902-1802, fax 360-902-2092, TTY 800-833-6388, email [wsdarulescomments@agr.wa.gov](mailto:wsdarulescomments@agr.wa.gov).

June 17, 2024  
Greg Haubrich  
Assistant Director

**OTS-5250.1**

AMENDATORY SECTION (Amending WSR 22-17-068, filed 8/15/22, effective 9/15/22)

**WAC 16-470-705 Areas under quarantine.** (1) Exterior: The entire states of Alabama, Arkansas, Colorado, Connecticut, Delaware, Georgia,

Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, the District of Columbia, the Provinces of Ontario and Quebec, and any other state, province, parish, or county where infestations of Japanese beetle are detected are declared to be under quarantine for Japanese beetle.

(a) The director may exempt individual counties of the states under quarantine from meeting the conditions in WAC 16-470-715 if the director determines that:

(i) The state has adopted and is enforcing restrictions on the interstate and intrastate movement of regulated articles that are equivalent to or exceed the restrictions placed on the movement of regulated articles as provided in WAC 16-470-715; and

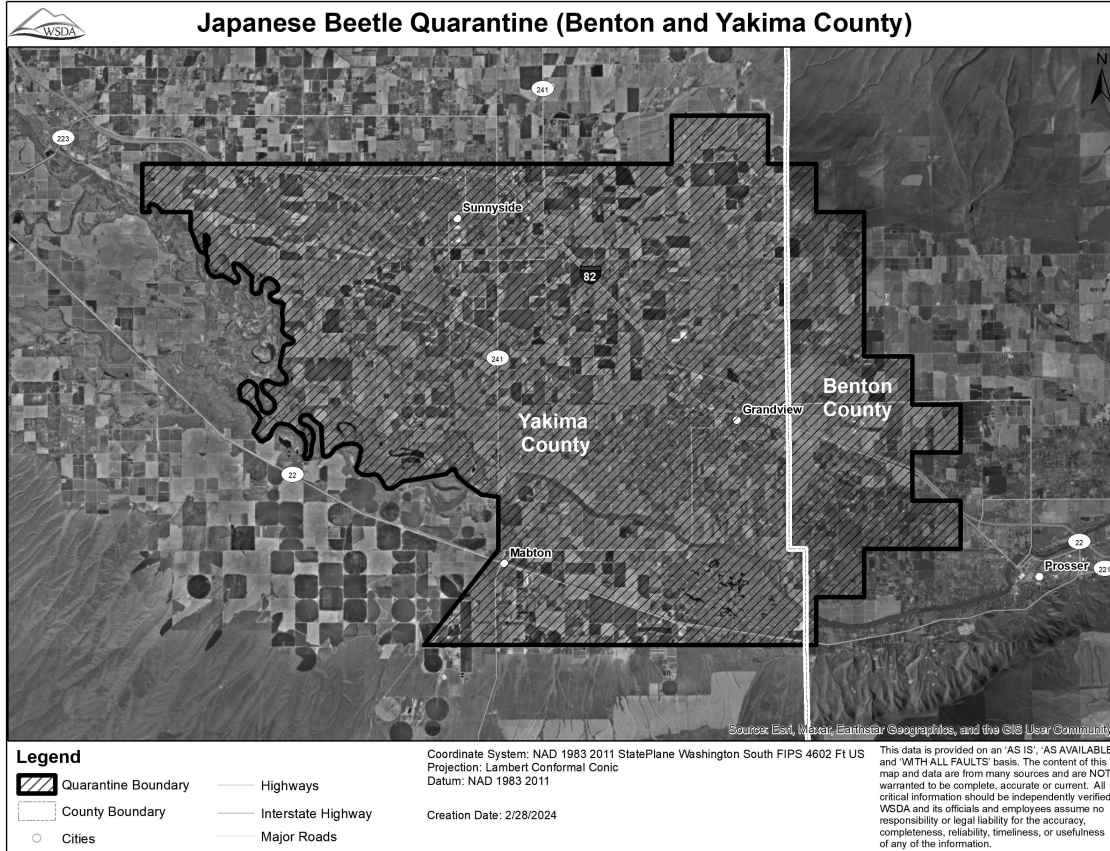
(ii) Annual surveys are conducted in such counties and the results of these surveys are negative for Japanese beetle; and

(iii) One or more neighboring counties are not subject to an unacceptable heavy Japanese beetle infestation.

(b) A plant health official of any state may request exemption of one or more counties under this subsection. The request must be in writing, and it must state the area surveyed, the survey method, personnel conducting the survey, and dates of any previous Japanese beetle infestations in that county.

(2) Interior: Within the state of Washington, those areas where infestations of Japanese beetle exist are declared to be under quarantine. These areas include the portion of Yakima and Benton counties designated as follows: Beginning within Yakima County at latitude (~~(N46°18'8" and longitude W120°0'26"; thence easterly across the Yakima-Benton County line to latitude N46°18'5" and longitude W119°51'39"; thence southerly to latitude N46°16'21" and longitude W119°51'40"; thence easterly to longitude W119°50'25"; thence southerly to latitude N46°13'44" and longitude W119°50'27"; thence westerly to latitude N46°13'44" and longitude W119°51'42"; thence southerly to latitude N46°12'00" and longitude W119°51'42"; thence westerly across the Yakima-Benton County line to latitude N46°12'3" and longitude W119°59'14"; thence northerly to latitude N46°14'39" and longitude W119°59'12"; thence westerly to longitude W120°0'28")~~) N46°19'54" and longitude W120°09'12"; thence easterly to latitude N46°19'51" and longitude W119°55'24"; thence northerly to latitude N46°20'43" and longitude W119°55'23"; thence easterly to latitude N46°20'42" and longitude W119°52'53"; thence southerly to N46°19'50" and longitude W119°52'53"; thence easterly across the Yakima-Benton County line to latitude N46°19'50"; and longitude W119°51'38" southerly to latitude N46°18'57" and longitude W119°51'39"; thence easterly to latitude N46°18'57" and longitude W119°50'24"; thence southerly to latitude N46°16'21" and longitude W119°50'25"; thence easterly to latitude N46°16'20" and longitude W119°49'10"; thence southerly to latitude N46°15'28" and longitude W119°49'11"; thence easterly to latitude N46°15'28" and longitude W119°47'56"; thence southerly to latitude N46°14'35" and longitude W119°47'56"; thence westerly to latitude N46°14'36" and longitude W119°49'12"; thence southerly to latitude N46°13'44" and longitude W119°49'12"; thence easterly to N46°13'43" and longitude W119°47'57"; thence southerly to latitude N46°12'51" and longitude W119°47'58"; thence westerly to latitude N46°12'52" and longitude W119°50'28"; thence southerly to latitude N46°11'60" and longitude W119°50'29"; thence westerly to latitude N46°12'00" and longitude W119°51'44";

thence southerly to latitude N46°11'08" and longitude W119°51'44";  
thence westerly to latitude N46°11'11" and longitude W120°01'55";  
thence northerly and easterly along the Yakama Nation Reservation  
boundary line; thence northerly and turning westerly along the Yakama  
Nation Reservation boundary to latitude N46°18'42" and longitude  
W120°07'57"; then northerly to latitude N46°19'02" and longitude  
W120°07'57"; then westerly to latitude N46°19'02" and longitude  
W120°08'42"; thence northerly and westerly and turning southerly along  
the Yakama Nation Reservation boundary to latitude N46°19'02" and lon-  
gitude W120°09'00"; thence westerly to latitude N46°19'02" and longi-  
tude W120°09'12"; thence northerly to the point of beginning.



AMENDATORY SECTION (Amending WSR 22-17-068, filed 8/15/22, effective 9/15/22)

**WAC 16-470-710 Regulated articles.** The following are declared to be hosts or possible carriers of Japanese beetle and are regulated articles under the Japanese beetle quarantine:

- (1) The upper eight inches of topsoil containing vegetative material from all properties including, but not limited to, residential, agricultural, and commercial properties (including construction sites);
- (2) Humus and compost (except when produced commercially), ((and)) growing media (except when commercially packaged), and soil samples;

(3) Yard debris, meaning plant material commonly created in the course of maintaining yards and gardens and through horticulture, gardening, landscaping, or similar activities. Yard debris includes, but is not limited to, grass clippings, leaves, branches, brush, weeds, flowers, roots, windfall fruit, and vegetable garden debris;

(4) Plants for planting and propagation, except when dormant and bareroot and free from soil or growing media, including:

- (a) All plants with roots;
- (b) Plant crowns or roots;
- (c) Bulbs;
- (d) Corms;
- (e) Tubers; and
- (f) Rhizomes;

(5) Turfgrass (sod);

(6) Hop bines and unshucked corn ears harvested during the Japanese beetle adult flight season (May 15th through October 15th);

(7) Cut flowers for decorative purposes, including those exposed to open air environments during their harvest, transportation, or trade; and

(8) Any other plant, plant part, article, or means of conveyance when it is determined by the director to present a hazard of spreading live Japanese beetle due to either infestation, or exposure to infestation.

#### NEW SECTION

**WAC 16-470-711 Signage requirements.** Any business selling regulated articles under WAC 16-470-710 (4) or (7) which is located within the interior quarantine area (see WAC 16-470-705(2)) must post signage which is clearly visible at all business entrances, as well as points of sale and aisles in areas where these regulated articles are being sold. Businesses must use signage developed by or approved by the department, which must clearly state that regulated articles purchased cannot be transported outside of the quarantine area. Signs may be found on the department's website at <http://agr.wa.gov/beetles> and must be a minimum of 8.5" x 11" in size.

AMENDATORY SECTION (Amending WSR 22-17-068, filed 8/15/22, effective 9/15/22)

**WAC 16-470-717 Conditions governing the movement of regulated articles from internal quarantined areas.** Regulated articles within the state of Washington quarantined areas are prohibited from moving outside the quarantined area (from all properties, including commercial and private properties), except as provided for below:

(1) The upper eight inches of topsoil containing vegetative material from all properties; humus and compost (except when produced commercially), ~~((and))~~ growing media (except when commercially packaged), and soil samples, may be allowed to move from the quarantine area if they are first treated by one of the following methods. Treatments must be monitored by the department for compliance.

(a) Steam heated to a temperature of 140 degrees Fahrenheit for one hour, to kill all life stages of Japanese beetle;



(b) Soil samples may be transported to a laboratory for testing outside of the quarantine area if they are securely double bagged and clearly labeled with the following statement, "This soil sample originates from a Japanese beetle quarantine area. Sample must either be securely double bagged prior to disposal or incinerated." Laboratories located within Washington state that are receiving soil samples originating from the quarantine area must either securely double bag the samples prior to disposal or incinerate the samples.

(c) Other treatments determined to be effective at eradicating Japanese beetle and approved in writing by the director.

(2) Yard debris may be allowed to move from the quarantine area if it is first treated by one of the following methods. Treatments must be monitored by the department for compliance.

(a) Steam heated to a temperature of 140 degrees Fahrenheit for one hour, to kill all life stages of Japanese beetle;

(b) When consisting solely of woody materials containing no soil, yard debris may be chipped to a screen size of one inch in two dimensions or smaller during the Japanese beetle adult flight season (May 15th through October 15th). Woody material containing no soil can be moved outside of the Japanese beetle adult flight season without chipping;

(c) Another treatment determined to be effective at eradicating Japanese beetle and approved in writing by the director.

(3) Plants for planting and propagation (except when dormant and bareroot and free from soil or growing media), all plants with roots, plant crowns or roots, bulbs, corms, tubers and rhizomes, and turf-grass (sod) may be allowed to move from the quarantine area if each shipment complies with one of the treatment or inspection requirements detailed under (a) through (f) of this subsection. Before the shipment moves outside the quarantined area, the shipment must be approved by the department. Approval will be documented by the issuance of a certificate of treatment or inspection when the department determines that the shipment is in compliance with the treatment or inspection requirements. The certificate must accompany the shipment while the shipment is in transit. Treated plants must be safeguarded from reinfestation prior to shipping. Plants shipped dormant and bareroot with no soil or growing media attached are exempt from these requirements, and should be identified as bareroot on shipping documents.

(a) Production in an approved Japanese beetle free greenhouse/screenhouse. All the following criteria apply to be approved as a Japanese beetle free greenhouse/screenhouse. All media must be sterilized and free of soil. All planting stock must be free of soil (bareroot) before planting into the approved medium. The potted plants must be maintained within the greenhouse/screenhouse during the entire adult flight period (May 15th through October 15th). During the adult flight period, the greenhouse/screenhouse must be made secure so that adult Japanese beetles cannot enter. Such security measures must be approved by the department. No Japanese beetle contaminated material shall be allowed into the secured area at any time. The greenhouse/screenhouse will be officially inspected by the department for the presence of all life stages of Japanese beetle and must be specifically approved as a secure area. The plants and their growing medium must be appropriately protected from subsequent infestation while being stored, packed, and shipped. Certified greenhouse/screenhouse nursery stock may not be transported into or through any infested areas unless identity is preserved and adequate safeguards are applied to prevent possible infestation. Each greenhouse/screenhouse operation must be approved by the

department as having met and maintained the above criteria. The certificate accompanying the plants shall bear the following additional declaration: "The rooted plants (or crowns) were produced in an approved Japanese beetle free greenhouse or screenhouse and were grown in sterile, soilless media."

(b) Production during a pest free window. The entire rooted plant production cycle (planting, growth, harvest, and shipping) will be completed within a pest free window (October 16th through May 14th), in clean containers with sterilized and soilless growing medium, and shipment will occur outside the adult Japanese beetle flight period (May 15th through October 15th). The accompanying phytosanitary certificate shall bear the following additional declaration: "These plants were produced outside the Japanese beetle flight season and were grown in sterile, soilless media."

(c) Application of approved regulatory treatments. All treatments will be performed under direct supervision of the department or under a compliance agreement. Treatments and procedures under a compliance agreement will be monitored throughout the season. State phytosanitary certificates listing and verifying the treatment used must accompany the shipment. Note that not all treatments or methods approved in the U.S. Domestic Japanese Beetle Harmonization Plan are acceptable for use within Washington state. The phytosanitary certificate shall bear the following additional declaration: "The rooted plants are in soilless media and were treated to control *Popillia japonica* according to the criteria for shipment to Category 1 states as provided in the U.S. Domestic Japanese Beetle Harmonization Plan and Washington state's Japanese beetle quarantine."

(d) Dip treatment - Not an approved treatment.

(e) Drench treatments - Container plants only. Not approved for ornamental grasses or sedges. Not approved for field potted plants. Potting media used must be sterile and soilless, containers must be clean. Only containerized nursery stock with rootballs 12 inches in diameter or smaller and free from field soil are eligible. This is a prophylactic treatment protocol targeting eggs and early first instar larvae. If the containers are exposed to a second flight season, they must be retreated with an approved insecticide. Chemicals approved for drench treatments of container plants under this protocol can be found in the Japanese Beetle National Harmonization Plan for shipping to a Category 1 state, and must be labeled for use in Washington state.

(f) Media (granule) incorporation - Container plants only. Not approved for ornamental grasses or sedges. Only containerized nursery stock with rootballs 12 inches in diameter or smaller, planted in approved growing media, and free from field soil are eligible. Plants grown in field soil and then potted into soilless container substrates are not eligible for certification using this protocol, unless all field soil is removed from the roots so plants are bareroot at the time of potting. All pesticides used for media incorporation must be mixed thoroughly into the media before potting and plants should be watered at least two times following media incorporation before shipment can begin. Approved growing media used must be free from soil and consist of synthetic or other substances (other than soil) used singly or in combinations. Examples of approved growing media include conifer bark, hardwood bark, expanded or baked clay pellets, expanded polystyrene beads, floral foam, ground coconut husk, ground cocoa pods, ground coffee hulls, ground rice husk, peat, perlite, pumice, recycled paper, rock wool, sawdust, sphagnum, styrofoam, synthetic sponge, vermiculite, and volcanic ash or cinder. The media shall contain only

substances that were not used previously for growing plants or other agricultural purposes. It must be free of plant pests, sand, and related matter, and safeguarded in such a manner as to prevent the introduction of all life stages of Japanese beetle to the media. The granules must be incorporated into the media before potting. Plants being stepped up into treated potting media must first have undergone an approved drench treatment to eliminate any untreated volume of potting medium. This treatment protocol targets eggs and early first instar larvae and allows for certification of plants that have been exposed to only one flight season after application. If the containers are to be exposed to a second flight season, they must be repotted with a granular incorporated mix or retreated using one of the approved drench treatments. Chemicals approved for media (granule) incorporation for container plants under this protocol can be found in the Japanese Beetle National Harmonization Plan for shipping to a Category 1 state, and must be labeled for use in Washington state.

(4) Hop vines and unshucked corn ears: Fields where hops or corn (intended to be shipped unshucked) are planted must be trapped and monitored by the department and found free of Japanese beetle for the entire adult flight period (May 15th through October 15th), or from the date of planting up to the date of harvest if both dates are within the flight period. Fields that are not sufficiently trapped will not be considered free from Japanese beetle. If the field is found free of Japanese beetle by the department, vines and unshucked corn ears may be moved outside the quarantined area. If the department determines there is evidence of Japanese beetle presence, vines and unshucked corn ears must be treated prior to harvest or movement by a method approved by the director in advance. All shipments of hop vines and unshucked corn ears to areas outside the quarantined area must be accompanied by a compliance document issued by the department stating the field of origin and destination addresses. If a shipment is found to contain Japanese beetles, any further shipments from that field must be in vehicles sufficiently closed/covered to prevent reinfestation after treatment.

(5) Cut flowers for decorative purposes: All shipments of cut flowers grown in the quarantined area, to areas outside the quarantined area must be accompanied by a compliance document issued by the department stating the field of origin and destination address. If a shipment is found to contain Japanese beetles, any further shipments from that field must be in vehicles sufficiently closed/covered to prevent reinfestation after treatment.