

WSR 22-13-049

PROPOSED RULES

DEPARTMENT OF AGRICULTURE

[Filed June 8, 2022, 8:41 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 21-17-136.

Title of Rule and Other Identifying Information: Chapter 16-470 WAC, Quarantine—Agricultural pests. The proposed rule amendments establish an internal quarantine for Japanese beetle within Washington state. The quarantine area covers 49 square miles in the southeastern corner of Yakima County and the southwestern corner of Benton County. The proposed quarantine prohibits the movement of regulated articles located inside the quarantine area from moving outside of it, unless they are treated in a manner described in the rule.

Hearing Location(s): On August 2, 2022, at 10:00 a.m., at The Learning Center, 313 Division Street, Grandview, WA 98930. Microsoft Teams conference call, join on your computer or mobile app [Date of Intended Adoption: August 9, 2022.](https://teams.microsoft.com/l/meetup-join/19%3ameeting_OWExNDcyZDQtZWU0My00ODRiLTg3YTQtNzU1MGI2Zjc50TY1%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; or call in (audio only) +1 564-999-2000,,29145981#, United States, Olympia, Conference ID 291 459 81#.</p></div><div data-bbox=)

Submit Written Comments to: Gloriann Robinson, Agency Rules Coordinator, P.O. Box 42560, Olympia, WA 98504-2560, email wsdarulescomments@agr.wa.gov, fax 360-902-2092, by 5:00 p.m., August 2, 2022.

Assistance for Persons with Disabilities: Contact Deanna Painter, phone 360-902-2061, TTY 800-833-6388 or 711, email dpainter@agr.wa.gov, by July 26, 2022.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: 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. A quarantine against Japanese beetle has already been declared for certain areas outside of the state of Washington.

Under the proposed rule amendments, a quarantine will be established for certain areas within the state of Washington and regulated articles will be prohibited from moving outside the quarantined areas unless treated in a manner described in the rule.

Regulated articles are articles that pose a high risk of transporting Japanese beetle and include the following:

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).

3. Yard debris, meaning plant material commonly created in the course of maintaining yards and gardens and through horticulture, gardening, landscaping, or similar activities. This 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: All plants with roots, plant crowns or roots, bulbs, corms, tubers, and rhizomes. Garlic, allium, and other edible plant bulbs will not be regulated under the proposed quarantine, if free from soil.

5. Turfgrass (sod).

6. Hop vines and unshucked corn ears harvested during the Japanese beetle adult flight season (May 15 - October 15).

7. Cut flowers for decorative purposes.

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

The proposed amendments establish conditions governing the movement of regulated articles from within quarantined areas of Washington to areas outside the quarantined area.

Lastly, the proposed amendments allow the director to issue compliance agreements as defined in RCW 17.24.007, admitting regulated articles specified in WAC 16-470-710, from areas within the external or internal quarantine, that are not otherwise eligible for entry or movement from the area under quarantine. Compliance agreements will include conditions and provisions which the director may prescribe to prevent the introduction, escape, or spread of Japanese beetle.

Reasons Supporting Proposal: Since June 2021, the department has collected thousands of Japanese beetles in traps around the city of Grandview in Yakima County. Many beetles were also collected from traps in nearby Benton County, indicating an established population in these areas. Its presence poses a serious threat to gardens, parks, and farms by destroying vegetation. If Japanese beetle becomes permanently established throughout the state, it could result in a severe economic threat to several of Washington's agricultural industries. The threat this pest poses is particularly concerning due to the area in which the detection occurred. There are a number of farms and nurseries in close proximity to the detection site that grow 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 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.

The proposed amendments are intended to prevent the spread of Japanese beetle in Washington state by reducing the risk of infested host material moving outside of the quarantine area.

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: Washington state department of agriculture (WSDA), governmental.

Name of Agency Personnel Responsible for Drafting, Implementation, and Enforcement: Greg Haubrich, 1111 Washington Street [S.E.], Olympia, WA 98504, 360-902-2071.

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. WSDA is not a listed agency under RCW 34.05.328 (5)(a)(i).

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

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: WSDA is proposing to amend and expand the Japanese beetle quarantine to include portions of Yakima County and Benton County. The current quarantine specified in chapter 16-470 WAC is solely an exterior quarantine that applies to over 30 states, encompassing most of the midwest, south, and northeast areas of the United States.

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.

Since June 2021, WSDA has collected thousands of Japanese beetles in traps around the city of Grandview in Yakima County. Many beetles were also collected from traps in nearby Benton County, indicating an established population in these areas. Its 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 several of Washington's agricultural industries. The threat this pest poses is particularly concerning due to the area in which the detection occurred. There are a number of farms and nurseries in close proximity to the detection site, 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 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 establish an internal quarantine for Japanese beetle within Washington State. The quarantine area would cover 49 square miles in the southeastern corner of Yakima County and the southwestern corner of Benton County. The proposed quarantine would prohibit the movement of regula-

ted articles located inside the quarantine area, from moving outside of it. Regulated articles are articles that pose a known risk of transporting Japanese beetle and include the following:

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). Only backyard or residential compost will be considered a regulated article. Compost that is produced commercially will not be regulated under the proposed quarantine.

3. Yard debris, meaning plant material commonly created in the course of maintaining yards and gardens and through horticulture, gardening, landscaping, or similar activities. This 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: All plants with roots, plant crowns or roots, bulbs, corms, tubers, and rhizomes. Garlic, allium, and other edible plant bulbs will not be regulated under the proposed quarantine, if free from soil.

5. Turfgrass (sod).

6. Hop bines and unshucked corn ears harvested during the Japanese beetle adult flight season (May 15 - October 15). Corn silage and corn that has been processed or shucked will not be regulated under the proposed quarantine.

7. Cut flowers for decorative purposes.

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

The proposed amendments would also establish conditions governing the movement of regulated articles from commercial and private properties within quarantined areas of Washington, to areas outside the quarantined area. WSDA will monitor any treatment methods applied to regulated articles for compliance. Proposed 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 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): 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 WSDA. Approval will be documented by the issuance of a certificate of treatment or inspection when WSDA 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. 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 WSDA 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 WSDA, bines and unshucked corn ears may be moved outside the quarantined area.

b. If WSDA 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 WSDA 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.

The proposed amendments would allow the director to issue compliance agreements as defined in RCW 15.13.250, admitting regulated articles specified in WAC 16-470-710, from areas within the external or internal quarantine, that are not otherwise eligible for entry or movement from the area under quarantine. Compliance agreements will include conditions and provisions that the director may prescribe to prevent the introduction, escape, or spread of Japanese beetle.

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; 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	*Minor Cost Threshold = 1% of Average Annual Payroll	**Minor Cost Threshold = 0.3% of Average Annual Revenue
111150	Corn Farming	\$2,759.57	\$2,743.80
111421	Nursery and Tree Production	\$5,428.08	\$2,313.03
111998	All Other Miscellaneous Crop Farming (hop farming)	\$11,782.08	\$3,518.45
112120	Dairy Cattle and Milk Production	\$6,187.97	\$21,237.13
236118	Residential Remodelers	\$1,457.74	\$901.20
424590	Other Farm Product Raw Material Merchant Wholesalers (includes sod merchant wholesalers)	\$3,948.77	\$7,750.68
424910	Farm Supplies Merchant Wholesalers	\$10,501.05	\$35,044.58
444220	Nursery; Garden Center; and Farm Supply Stores	\$4,675.20	\$3,798.35
445110	Supermarkets and Other Grocery (except Convenience) Stores	\$24,632.97	\$39,505.18
454390	Other Direct Selling Establishments (includes Christmas tree sellers)	\$4,034.18	\$2,740.36
541320	Landscape Architectural Services	\$4,874.31	\$906.94
561730	Landscaping Services	\$2,131.66	\$798.41
562111	Solid Waste Collection	\$14,106.51	\$23,689.65

* Data source: 2020 Employment security department or United States Bureau of Labor Statistics

** Data source: 2020 Department of 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, or a waste byproduct of a business' operation. Businesses impacted by the proposed rule amendment 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 proposed under section 1. Depending on which treatment is used, businesses may see an increase in costs related to equipment, supplies, labor, and administration. To cover these potential cost impacts, this section has been broken into two parts. One covers the potential loss in revenue and the other covers additional costs associated with the implementation of treatment options.

WSDA estimates there are around 59 businesses in the proposed quarantine area that could 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.

- Six plant producers - likely most affected by restrictions on:
 - 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)
- Seven garden stores - likely most affected by restrictions on:
 - 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)
- Ten landscaping businesses - likely most affected by restrictions on:
 - 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 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 and compost (except when produced commercially), and growing media (except when commercially packaged)
 - Yard debris
- Nineteen construction companies - likely most affected by restrictions on:
 - 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 and compost (except when produced commercially), and growing media (except when commercially packaged)
- Two waste companies - likely most affected by restrictions on:
 - 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 and compost (except when produced commercially), and growing media (except when commercially packaged)
 - Yard debris
- Eight dairies - likely most affected by restrictions on:
 - Humus and compost (except when produced commercially), and growing media (except when commercially packaged)
- Seven hop producers - likely most affected by restrictions on:
 - Hop bines

WSDA attempted to contact businesses that may be growing corn in the proposed quarantine area. These attempts were largely unsuccessful, aside from two businesses, one of which no longer grows corn and the other that would not be affected by the proposed quarantine. Additionally, WSDA was not able to identify any businesses growing cut flowers in the area.

Loss of Sales or Revenue: A survey was sent directly to businesses that could be impacted by the proposed rule amendments. The survey was also posted by WSDA on multiple social media outlets reaching an estimated 8,146 people and further shared by other sources reaching an

additional 29,883 people. After several months, WSDA received a total of 41 survey responses, only 12 of which were completed (or almost completed). The other 29 responses did not contain enough information to determine if the business would be impacted. Some of the questions asked in the survey included:

- What proposed regulated items does your business handle (if any)?
- Are these items created/sold or a waste byproduct?
- Are these items moved/shipped out of the proposed quarantine area?

If so, are they moved during adult flight season (May 15 - October 15)?

- What is the estimated annual revenue generated by these items?
- What is the estimated loss in revenue if these items could not be moved?
- If unable to transport items, would your business experience increased costs related to supplies, labor, professional services, or administrative costs?
- Would any jobs be created or lost if items could not be moved?
- How are regulated items moved out of the proposed quarantine area?

Table 3.1 shows results for the 12 businesses that completed the survey. The results show which regulated articles are handled by each business. Of these businesses, nine are considered small businesses and three are large. At the time the survey was sent, WSDA was considering regulating all manure and compost, corn stalks/silage, and all soil. Survey results and feedback from the industry prompted the agency to reconsider these articles. WSDA found that regulating these articles would be a substantial financial cost to many businesses in the proposed quarantine area. The agency conducted extensive research and consulted with experts on the potential risk these items posed for transporting Japanese beetle. From that, the agency was able to narrow down specific pathways of risk for each item and exclude anything considered a relatively low risk for transporting the pest. **Table 3.1 shows articles included in the survey that are no longer proposed as regulated articles. These articles include manure and corn stalks/silage.** Updated regulated articles that resulted from stakeholder feedback include narrowing regulated soil to only the upper eight inches of topsoil containing vegetative material, excluding commercially produced compost, and only regulating unshucked corn ears.

Table 3.1 - Proposed regulated articles handled by businesses. Manure and corn stalk/silage are no longer proposed regulated articles.

Business ID	Business size	Proposed regulated articles created/sold	Proposed regulated articles waste byproduct	Articles moved out of proposed quarantine area	Articles moved during adult flight season (May 15 - Oct 15)
15	Small	None	None	Manure*	Yes
14	Small	Humus, manure*	Manure*	Yes, both	Yes, both
9	Small	Soil, potted plants	Humus	None	Soil and potted plants
8	Large	Humus, manure*, corn stalks/silage*	Humus, manure*	Yes	Yes
1	Large	Yard debris, humus, potted plants, plant crowns, hop bines	Yard debris	Yes, humus, potted plants, plant crowns, and hop bines	Yes, humus, potted plants, and hop bines

Business ID	Business size	Proposed regulated articles created/ sold	Proposed regulated articles waste byproduct	Articles moved out of proposed quarantine area	Articles moved during adult flight season (May 15 - Oct 15)
17	Small	Humus, manure*, corn stalks/silage*, corn ears	Humus, manure	Yes	Yes
18	Small	Humus, manure*	Humus, manure*	Yes, both	Yes, both
19	Small	Plant crowns, hop bines	None	Yes	Yes, hop bines
26	Small	Manure*	Manure*	Yes	Yes
37	Small	Humus, manure*, corn stalks/silage*	Humus, manure*	Yes, humus, manure*	Yes, humus, manure*
39	Small	Potted plants	None	Yes	Yes
40	Large	Potted plants, plant crowns, hop bines	Yard debris, humus, potted plants, plant crowns, hop bines	Yes, soil, yard debris, humus, manure*, potted plants, plant crowns	Yes

* No longer a proposed regulated article.

Of the 12 businesses shown in Table 3.1, eight handle manure and/or corn stalks/silage. Five of these businesses stated in the survey that they would be greatly impacted if these articles were regulated.

Table 3.2 analyzes the estimated annual revenue generated by the proposed regulated articles (this includes manure and corn stalk/silage), as well as the estimated loss in revenue and additional costs if the items could no longer be transported outside of the proposed quarantine area. Under the proposed rule amendments, regulated articles can be moved out of the quarantine area if conditions outlined in section 1 are met.

Table 3.2 - Estimated loss in revenue and cost increase to businesses if unable to transport regulated articles.

Business	Primary business activity	Est. annual revenue generated from articles	Est. loss in revenue if articles could not be moved outside of proposed quarantine area	Additional costs if unable to move articles out of proposed quarantine area (does not include treatment costs)
15	Other crop production	\$50,000,000	\$0	Supplies
14	Beef feedlot and manure composting	\$800,000	\$1,000,000	Supplies, labor, administrative
9	Nursery (including retailers that also sell live plants or cut flowers)	\$300,000	\$0	Equipment, labor, and other
8	Dairy	\$2,000,000 - \$3,000,000	Substantial losses - unable to estimate	No data provided
1	Nursery (including retailers that also sell live plants or cut flowers)	\$9,000,000	\$9,000,000	Equipment, supplies, labor, administrative
17	Dairy	\$500,000	\$500,000	Equipment, supplies, labor, professional services, administrative, other (compliance issues w/ nutrient management program)

Business	Primary business activity	Est. annual revenue generated from articles	Est. loss in revenue if articles could not be moved outside of proposed quarantine area	Additional costs if unable to move articles out of proposed quarantine area (does not include treatment costs)
18	Other (construction, waste management, dairy)	\$2,000,000	\$12,000,000	No data provided
19	Hop production	\$6,000,000	\$6,000,000	Equipment, labor
26	Alfalfa	\$100,000	\$100,000	Equipment, labor, professional services, administrative
37	Dairy	No data provided	No data provided	Equipment, supplies, labor, professional services, and administrative
39	Nursery (including retailers that also sell live plants or cut flowers)	\$100,000	\$100,000	Equipment
40	Hop production	\$60,000,000	\$30,000,000	Equipment, supplies, labor, professional services, administrative

Table 3.2 shows the substantial financial impact some businesses could have if they were unable to move regulated articles out of the proposed quarantine area. Losses in revenue and estimated additional costs listed for businesses 8, 14, 15, 17, 18, 26, and 37 may be far less than what is reflected in Table 3.2. This is because a large portion of their loss in revenue was associated with manure, commercial compost, and/or corn stalks/silage. Since these articles are no longer proposed for regulation, their estimated financial impact would likely be substantially reduced.

Businesses 1, 9, and 39 listed their primary business activity as nursery. Business 9 stated they would not likely see a loss in revenue because they are located outside the proposed quarantine area. Business 1 (large business) and 39 (small business) reported the total annual revenue generated by the regulated articles would be lost if they were unable to transport the items outside of the proposed quarantine area. This is similar to business 19 (small business), a hop production business, which also reported that they would lose all revenue generated by their hops if they were unable to transport them outside of the quarantine area. Another hop production, business 40 (large business), has half their acreage in the proposed quarantine area and reported they would lose half their revenue if they could not transport hops outside the quarantine area. There are an estimated 4,838 acres of hops in the proposed Japanese beetle quarantine area.

Probable Costs to Comply: Conditions for Moving Regulated Articles - Treatment Option Costs: A major financial impact to businesses under the proposed rule would be if they were unable to move regulated articles outside of the proposed quarantine area. However, under WAC 16-470-717, regulated articles may be moved outside of the quarantine area if they have first undergone a treatment to mitigate the risk of spreading Japanese beetle. Costs associated with treatments are difficult to determine, as they will vary depending on which regulated article is being treated, which treatment method is used, and what equipment a business already has available. The following describes requirements for each treatment option. All regulated article groups (WAC 16-470-717 (1) - (4)) also have an additional option for "another treatment determined to be effective at eradicating Japanese beetle and approved in writing by the director." This language allows for the

director to approve additional treatments in the future that could be utilized until the rule language is updated. A cost analysis was not conducted on this option, as there currently are no other treatments approved by the director and it is unclear at this time what those options might be in the future.

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 setup costs for the steam generator and tarps would be around \$46,000. Fueling costs for a diesel steam generator would be around \$27.85 per hour (using five gallons per hour at \$5.57 per gallon) and the cost for staff to run the system would be around \$18.11 per hour (assuming the employee is paid minimum wage and includes costs associated with benefits and taxes). Additional costs will include a compliance agreement with WSDA and inspection costs. A compliance agreement costs \$50 per year for licensed nurseries and \$62.50 per year for all other businesses. Estimated costs for an inspection in the Grandview area are as follows:

- Eighty-eight miles round trip (from WSDA Pasco or Yakima office to Grandview) at \$0.585 per mile.
- One and one half hours travel time at \$62.50 per hour (\$50 per hour for licensed nursery).
- One half hour minimum inspection cost at \$62.50 per hour (\$50 per hour for licensed nurseries).

Total estimated costs (calculated for nonlicensed nursery) to set up and run this treatment option for two hours would be \$46,330.90. After the initial setup costs, the ongoing costs for a business to continue utilizing this treatment method would be \$45.96 per hour.

WSDA plans to set up an area within the proposed quarantine area where regulated soil could be transported and steamed at no cost to businesses. There will not be a fee for dropping material off. Businesses will not likely experience any increased transport costs associated with this, as the typical disposal facility is outside of the quarantine area and further [farther] away. The agency's ability to provide this service would be dependent on funding. If funding were no longer available, estimated costs for a business to set up their own steaming system would be as described above.

(2) Yard debris:

(a) *Option 1 - Steam heated to a temperature of 140°F for 1 hour, to kill all life stages of Japanese beetle:* The yard debris would 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 WSDA and inspection costs. A compliance agreement costs \$50 per year for licensed nurseries and \$62.50 per year for all other businesses. Estimated costs for an inspection in the Grandview area are as follows:

- Eighty-eight miles round trip (from WSDA Pasco or Yakima office to Grandview) at \$0.585 per mile.
- One and one half hours travel time at \$62.50 per hour (\$50 per hour for licensed nursery).
- One half hour minimum inspection cost at \$62.50 per hour (\$50 per hour for licensed nurseries).

The total estimated cost (calculated for nonlicensed nursery) for this treatment option to set up and run for two hours (allowing 1 hour for container to reach temperature) would be around \$67,630.90. 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
Fuel - diesel	\$5.57 per gallon using five gallons per hour	Once per week	\$27.85 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	\$18.11 per hour

After the initial setup costs, the ongoing costs for a business to continue utilizing this treatment method would be \$45.96/hour.

WSDA has worked with the city of Grandview to set up an area within the proposed quarantine area where regulated yard debris could be taken at no cost to businesses. This site will be free for residents and businesses located within the proposed quarantine area, with proof of address (such as a utility bill). The site will be open Monday to Friday from 8:00 a.m. to 5:00 p.m. There will not be a fee for dropping material off. There will not likely be increased transport costs associated with this, as the typical disposal facility is located outside of the quarantine area and further [farther] away. Some businesses stated they might see a decrease in transport costs due to this. The agency's ability to provide this steaming service would be dependent on funding.

(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 \$5.57 per gallon), and labor to run the chipper (\$18.11 per hour). Additional costs will include a compliance agreement with WSDA and inspection costs. A compliance agreement costs \$50 per year for licensed nurseries and \$62.50 per year for all other businesses. Estimated costs for an inspection in the Grandview area are as follows:

- Eighty-eight miles round trip (from WSDA Pasco or Yakima office to Grandview) at \$0.585 per mile.
- One and one half hours travel time at \$62.50 per hour (\$50 per hour for licensed nursery).

- One half hour minimum inspection cost at \$62.50 per hour (\$50 per hour for licensed nurseries).

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 \$14,773.80. After the initial setup costs, the ongoing costs for a business to continue utilizing this treatment method would be \$34.82/hour.

WSDA has worked with the city of Grandview to set up an area within the proposed quarantine area where regulated yard debris could be taken at no cost to businesses. This site will be free for residents and businesses located within the proposed quarantine area, with proof of address (such as a utility bill). The site will be open Monday to Friday from 8:00 a.m. to 5:00 p.m. There will not be a fee for dropping material off. There will not likely be increased transport costs associated with this, as the typical disposal facility is located outside of the quarantine area and further [farther] away. Some businesses stated they might see a decrease in transport costs due to this. The agency's ability to provide this steaming service would be 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 WSDA. No Japanese beetle contaminated material shall be allowed into the secured area at any time. The greenhouse/screenhouse will be officially inspected by WSDA 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 WSDA 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, soil-less 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 7.71 ft x 150 ft. 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 \$50 per year for licensed nurseries and \$62.50 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 WSDA Pasco or Yakima office to Grandview) at \$0.585 per mile.
- One and one half hours travel time at \$50 per hour.
- One half hour minimum inspection cost at \$50 per hour.
- Certificate charge - first certificate issued is free with additional certificates at \$8.25 per certificate.

Total estimated costs for inspection and certification would be \$151.48 per inspection. The total estimated cost to a business that already has a greenhouse/screenhouse would be \$201.48 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 \$432.48. For a business that chose to purchase a greenhouse/screenhouse, an estimated \$40,000 would be added to bring the total to \$40,201.48 (cost of anti-insect netting not included). As previously stated, it is unlikely that a business would choose to purchase a new greenhouse/screenhouse, 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 \$50 per year, inspection costs, and certification issuance costs. Inspection and certification costs would be \$151.48 (see option 1 for breakdown of costs). The total estimated costs a business might pay under this treatment option would be \$201.48 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 WSDA, or under a compliance agreement. Treatments and procedures under a compli-

ance 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 United States 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 United States 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, WSDA inspection and certification costs, and WSDA 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 \$724.40 for one full-time employee working 40 hours at \$18.11 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 \$50 per year, inspection costs, and certification issuance costs. Inspection and certification costs would be \$151.48 (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 \$1,663.38.

(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 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.*

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, WSDA inspection and certification costs, and WSDA 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 \$724.40 for one full-time employee working 40 hours at \$18.11 per hour. The average estimated cost to purchase drench treatment insecticide would be around \$50 for 96 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 \$194.88 per 96 ounces of insecticide treatment used.

Additional costs would include a compliance agreement fee of \$50 per year, inspection costs, and certification issuance costs. Inspection and certification costs would be \$151.48 (see Option 1 for breakdown of costs). Total costs for setting up and applying treatment

would be around \$1,120.76. Ongoing costs after setup would be around \$68.11 per hour plus \$151.48 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 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.

Costs under this treatment option would be associated with developing a standard operating procedure for media incorporation, purchasing of media (granule), application equipment, labor, WSDA inspection and certification costs, and WSDA 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 \$724.40 for one full-time employee working 40 hours at \$18.11 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 \$0.75 per pound. 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 \$50 per year, inspection costs, and certification issuance costs. Inspection and certification costs would be \$151.48 (see option 1 for break-

down of costs). Total costs for setting up and applying this treatment option would be around \$1,045.88 (estimate for 75 pounds of media). Ongoing costs after setup 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 WSDA 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 WSDA, bines and 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 WSDA. This will cost a business \$62.50 per year, plus inspection costs. Estimated costs for an inspection in the Grandview area would be the following:

- Eighty-eight miles round trip (from WSDA Pasco or Yakima office to Grandview) at \$0.585 per mile.
- One and one half hours travel time at \$62.50 per hour.
- One half hour minimum inspection cost at \$62.50 per hour.

Total estimated costs for an inspection would be \$176.48. Overall total costs for a compliance agreement and inspection would be \$238.98. There are no anticipated costs to businesses associated with trapping. WSDA will conduct all surveying for Japanese beetle. WSDA will cover all costs associated with surveying.

(b) *Option 2: If WSDA 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 WSDA 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.*

If Japanese beetle is detected, the business must enter into a compliance agreement with WSDA. This will cost a business \$62.50 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 WSDA Pasco or Yakima office to Grandview) at \$0.585 per mile.
- One and one half hours travel time at \$62.50 per hour.
- One half hour minimum inspection cost at \$62.50 per hour.

Total estimated costs for an inspection would be \$176.48. 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 \$14,988.98.

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 \$35. Total costs associated with covering vehicles would be an estimated \$535 per truck. This could bring the total estimated annual cost for a 100-acre field to \$15,523.98. Multiple tarps may be necessary depending on the number of trucks operated by a business. Tarps can be reused throughout their useful life. WSDA was initially going to require businesses to cover trucks if Japanese beetle was detected in their field, despite treatments also being required. After WSDA received suggestions and feedback from the hop industry, the proposed requirement was changed so that vehicle coverings would only be required if Japanese beetle was detected in a shipment.

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 and their estimated costs.

Regulated Item	Treatment Option	Details	Cost Occurrence	Estimated Cost Totals
Soil*	Option 1	Steam generator, fuel, tarp, and labor. No anticipated costs to businesses. WSDA provided service.	One time set-up cost. Monthly ongoing cost for running system.	Total: \$46,330.90; Ongoing cost: \$45.96/hour Or no cost to business, provided funding is available.
Yard debris	Option 1	Steam generator, fuel, tarp, container, and labor. No anticipated costs to businesses. WSDA provided service.	One time set-up cost. Monthly ongoing cost for running system.	Total: \$67,630.90; Ongoing cost: \$45.96/hour Or no cost to business, provided funding is available.
Yard debris	Option 2	Wood chipper, fuel, and labor. No anticipated costs to businesses. City of Grandview provided service.	One time set-up cost. Monthly ongoing cost for running system.	Total: \$14,773.80; Ongoing cost: \$34.82/hour Or no cost to business, provided funding is available.
Nursery articles**	Option 1	Purchase of greenhouse (unlikely), compliance agreement, inspection, and certification costs.	One time set-up cost. Weekly inspection/certification costs.	Total: \$40,201.48; Ongoing cost: \$151.48 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: \$201.48; Ongoing cost: \$151.48 per inspection/certification.

Regulated Item	Treatment Option	Details	Cost Occurrence	Estimated Cost Totals
Nursery articles**	Option 3	Purchase of pesticide, application equipment, labor, and 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): \$1,663.38; Per acre treatment cost \$147.50.
Nursery articles**	Option 4	Purchase of drench insecticide treatment, labor, and 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: \$1,120.76; Ongoing cost \$68.11 per hour, plus \$151.48 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: \$1,045.88; Ongoing cost \$40 per hour, plus \$151.48 weekly/monthly for inspection/certificate.
Hops/Corn	Option 1	No anticipated costs to businesses for surveying. WSDA provided service. Costs for compliance agreement and inspection.	Annual compliance agreement and per inspection cost.	\$238.98.
Hops/Corn	Option 2	Cost for pesticide and treatment, compliance agreement, inspection/certification, plus purchasing 1 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: \$15,523.98 (if tarp used); Per acre treatment cost \$147.50.

* 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).

Overall, anticipated costs to businesses related to treatment options for soil (WAC 16-470-717(1)) would be around \$46,330.90 to set a steaming system up and an ongoing cost of \$45.96 per hour of steaming. However, WSDA spoke with a number of construction companies in the Grandview area and found that many keep the soil on the project site and do not typically move it. Due to this practice, some businesses in the proposed quarantine area may not see any cost increase. For yard debris, anticipated costs would be \$67,630.90 to set up a steaming system with an ongoing cost of \$45.96 per hour of steaming. WSDA is developing a treatment system for soil, as well as collaborating with the city of Grandview to develop treatment systems and drop-off areas for businesses to take yard debris within the proposed quarantine area. This is dependent on available funding. If WSDA were successful at developing these treatment systems, there would be no anticipated costs to businesses. There may actually be a cost decrease to businesses disposing of yard debris, as the distance needed to transport it may be much shorter than taking it to a transfer station or land-fill.

Costs associated with nursery articles (WAC 16-470-717(3)) will vary depending on which treatment option is utilized. Some businesses may already have treatments or practices in place that would satisfy the requirements of the proposed amendment, whereas others might not.

Treatment option costs for nursery articles could range from \$201.48 to \$40,201.48. All businesses wanting to move regulated articles outside of the quarantine area will need to do so under a compliance agreement (\$50 annually), as well as have regular inspections and certification documents issued (\$151.48). The amount of inspections and certifications needed will vary from business to business depending on the equipment already on hand and the frequency of shipments outside of the quarantine area.

For businesses wanting to transport hop bines and unshucked corn ears, there will be costs associated with an annual compliance agreement and inspection costs. This will be around \$238.98. WSDA will be conducting all surveying for Japanese beetle, so businesses will not incur any costs from this. If Japanese beetle is detected, businesses must treat the regulated articles with an approved pesticide prior to harvest or movement. Additionally, if Japanese beetle is detected in a shipment, the business must cover all vehicles transporting hop bines or unshucked corn ears from that field. Costs associated with this include a \$535 one-time cost for a tarp and labor to cover the truck. Costs per acre for application of a pesticide treatment would be around \$147.50 for the pesticide, application equipment, fuel, and labor costs. A business growing 100 acres could see costs over \$15,523.98. Due to the high cost of treatments, some growers may decide not to lease land within the proposed quarantine boundary, which could affect land lease values going forward. This is especially true for corn, which does not require special infrastructure to grow, unlike hops. However, no businesses selling unshucked corn ears were identified in the proposed quarantine area.

Compliance Agreements: Proposed amendments to WAC 16-470-720 would allow the director to issue compliance agreements admitting regulated articles that are not otherwise eligible for movement from the area under quarantine. If agreed to by the director, these articles would be transported under a compliance agreement listing specific conditions reducing the risk of moving Japanese beetle into non-quarantined areas of the state. Compliance agreements are issued by the plant services program and cost \$50 per year for licensed nurseries and 62.50 per year for all other businesses. Businesses would also need to pay for any inspections conducted by WSDA, which cost \$62.50 per hour plus drive time and mileage from the closest plant services office. Inspections would typically occur weekly, bimonthly, or monthly, depending on the volume of plant shipments a business was transporting outside of the quarantine area. An average inspection in the Grandview area would cost \$176.48 for a business not licensed as a nursery:

- Eighty-eight miles round trip (from Pasco or Yakima offices) at \$0.585 per mile.
- One and one half hour travel time at \$62.50 per hour.
- One half hour minimum inspection at \$62.50 per hour.
- Issuance of one phytosanitary certificate at \$0 (first one free), \$10 for each additional.

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 as a result 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, 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.

Table 4.1 shows a range of estimated costs for treatment options per NAICS code. The \$0 cost reflects WSDA having available funding to set up treatment areas for yard debris and soil (WAC 16-470-717(1)), as well as WSDA covering survey costs for detection of Japanese beetle. The \$0 cost for Dairy Cattle and Milk Production (112120) is due to survey results indicating that regulation of manure and commercial compost would have the greatest impact. These are no longer being proposed as regulated articles. 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)	\$5,428.08	\$201.48 - \$40,201.48
All Other Miscellaneous Crop Farming (111998) (includes hop farming)	\$11,782.08	\$238.98 - \$15,523.98 (calculated for 100 acres)
Dairy Cattle and Milk Production (112120)	\$21,237.13	\$0 - \$46,091.92
Residential Remodelers (236118)	\$1,457.74	\$0 - \$46,330.90
Other Farm Product Raw Material Merchant Wholesalers (424590) (includes sod merchant wholesalers)	\$7,750.68	\$0 - \$67,630.90
Farm Supplies Merchant Wholesalers (424910)	\$35,044.58	\$201.48 - \$40,201.48
Nursery; Garden Center; and Farm Supply Stores (444220)	\$4,675.20	\$201.48 - \$40,201.48
Supermarkets and Other Grocery (except Convenience) Stores (445110)	\$39,505.18	\$201.48 - \$40,201.48
Other Direct Selling Establishments (454390) (includes Christmas tree sellers)	\$4,034.18	\$201.48 - \$40,201.48
Landscape Architectural Services (541320)	\$4,874.31	\$0 - \$67,630.90
Landscaping Services (561730)	\$2,131.66	\$0 - \$67,630.90
Solid Waste Collection (562111)	\$23,689.65	\$0 - \$67,630.90

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

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 WSDA 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 one hundred dollars of sales.

Although some businesses were willing to answer survey questions related to the proposed amendments, WSDA did not receive enough data to make a determination. Due to this and the variability of treatment options for each business, there is not sufficient data to calculate this comparison using the criteria from RCW 19.85.040(1).

Of the 12 businesses that participated in the survey, three were large and nine were small. Seven of these businesses will not likely

be impacted due to manure, commercial compost, and corn stalks/silage no longer being proposed for regulation. Of the five other businesses that completed the survey, three are considered small businesses and two are large. One of the small businesses that identified as a nursery, will not be impacted due to them being located outside of the proposed quarantine area. The other two small businesses identified themselves as a nursery and a hop producer. The two large businesses also identified themselves as a nursery and a hop producer. Table 5.1 shows a comparison of costs between the two large and two small businesses.

Table 5.1 - Cost comparison of large and small businesses by industry.

Business and Size	Industry	Annual Revenue	Est. loss in revenue if articles could not be moved outside of proposed quarantine area
21 - Small	Nursery	\$100,000	\$100,000
15 - Large	Nursery	\$9,000,000	\$9,000,000
18 - Small	Hop production	\$6,000,000	\$6,000,000
40 - Large	Hop production	\$60,000,000	\$30,000,000

It is difficult to determine a disproportionate impact, based on estimated loss in revenue alone, as treatment options can be used to move articles outside of the proposed quarantine area. Additionally, determining which treatment option a business will use is also 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. However, this scenario may differ depending on the industry and specific scenario. For example, there is not a strong correlation between the size of a construction company and the amount of soil or landscape waste it handles. This could also be the case for a large business, such as a hardware store or garden center, in which nursery stock is only a small portion of their inventory.

It is difficult to determine exact costs from the survey data collected because of the variability of treatment options used and the number of industries impacted. Due to this, it can be assumed that small businesses will likely be disproportionately impacted by the proposed rule amendment.

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.

It is concluded that the proposed rule amendment will have a disproportionate impact on small businesses. The following information is provided for further explanation and clarification.

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:

WSDA has worked with stakeholders to reduce regulatory requirements for the proposed articles and the treatment options for moving regulated articles outside of the proposed quarantine area. Initially, WSDA intended to regulate all soil, compost, manure, and corn. After hearing concerns from stakeholders about the economic burden this

would impose, WSDA consulted with experts to determine the risk of Japanese beetle spreading from these items. From that, WSDA reduced the proposed regulated articles to include the upper eight inches of vegetative topsoil, only regulating unshucked corn ears, not regulating commercial compost, and not regulating manure at all.

Additionally, WSDA modified the treatment option for hop bines after assessing concerns raised by the industry. Initially, WSDA was going to require all hop bines transported out of the quarantine area to be covered. This was revised to only require transported bines be covered if Japanese beetle is detected in a shipment from a field where the pest has been detected.

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 the Washington.

(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, WSDA expects 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: WSDA has worked closely with industry groups in developing the proposed rule amendments. The agency has already modified the articles it is proposing to regulate due to conversations with businesses. WSDA will continue to work with 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. WSDA presented about Japanese beetle to stakeholders at over 16 meetings. Some of these groups included the NW Foundation Block Advisory Group, WSDA Grapevine Advisory Committee, Clean Plant Center NW Advisory Board, NCPN Hop Tier 2, NW Nursery Improvement Institute, Washington Blueberry Commission, Washington Hop Commission, NW Vegetable Association, Washington State Grape Society, and multiple pest boards. These presentations allowed WSDA to provide information about the proposed rule amendment to stakeholders and gather feedback from them.

Small businesses in multiple industries were contacted by WSDA 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. As previously stated, after communication with small and large businesses in the dairy, hop, construction, and other industries, the agency revised the list of proposed regulated articles.

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

Results from the survey suggested that if regulated articles could not be moved out of the proposed quarantine area, then a large number of jobs could be lost. Under the conditions listed in WAC 16-470-717, businesses can move regulated articles outside of the proposed quarantine area if they have met treatment requirements. Due to this, the agency does not anticipate jobs will be created or lost as a result of compliance with the proposed rule.

A copy of the statement may be obtained by contacting Gloriann Robinson, Agency 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.

June 8, 2022
Brad White
Assistant Director

OTS-3793.2

AMENDATORY SECTION (Amending WSR 00-23-098, filed 11/21/00, effective 12/22/00)

WAC 16-470-700 Quarantine—Japanese beetle. A quarantine is established under this chapter against all live life stages of the insect pest Japanese beetle (*Popillia japonica* Newman), a member of the family Scarabaeidae. The Japanese beetle is a persistent, serious, and highly destructive pest, attacking the roots, leaves, and fruits of over (~~three hundred~~) 300 kinds of plants including fruit trees, ornamentals, and field and vegetable crops. The director of agriculture has determined that the regulation and exclusion of Japanese beetle is necessary to protect the environmental quality, forests, horticulture, floriculture, and agricultural crops of the state of Washington.

[Statutory Authority: Chapter 17.24 RCW. WSR 00-23-098, § 16-470-700, filed 11/21/00, effective 12/22/00; WSR 90-15-042 (Order 2049), § 16-470-700, filed 7/16/90, effective 8/16/90.]

AMENDATORY SECTION (Amending WSR 00-23-098, filed 11/21/00, effective 12/22/00)

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, Vir-

ginia, 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.

~~((2))~~ (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:

~~((a))~~ (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

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

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

~~((3))~~ (b) A plant health official of any state may request exemption of one or more counties under ~~((subsection (2) of))~~ this ~~((section))~~ 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"; thence northerly to the point of beginning.

[Statutory Authority: Chapter 17.24 RCW. WSR 00-23-098, § 16-470-705, filed 11/21/00, effective 12/22/00; WSR 90-15-042 (Order 2049), § 16-470-705, filed 7/16/90, effective 8/16/90.]

AMENDATORY SECTION (Amending WSR 00-23-098, filed 11/21/00, effective 12/22/00)

WAC 16-470-710 Regulated articles. The following are declared to be hosts or possible carriers of Japanese beetle and are ~~((prohibited entry into this state from an area under quarantine as declared in WAC 16-470-705 either directly, indirectly, diverted or reconsigned, except as provided for in WAC 16-470-715:~~

~~(1) Soil, humus, compost, and manure (except when commercially packaged);~~

~~(2) All plants with roots (except bareroot plants free from soil in amounts that could contain concealed Japanese beetle eggs, larvae or pupae);~~

~~(3) Grass sod;~~

~~(4) Plant crowns or roots for propagation (except when free from soil);~~

~~(5) Bulbs, corms, tubers, and rhizomes of ornamental plants (except when free of soil);~~

~~(6-)) 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);~~

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

~~(7) Cut flowers for decorative purposes; 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.~~

[Statutory Authority: Chapter 17.24 RCW. WSR 00-23-098, § 16-470-710, filed 11/21/00, effective 12/22/00; WSR 90-15-042 (Order 2049), § 16-470-710, filed 7/16/90, effective 8/16/90.]

AMENDATORY SECTION (Amending WSR 00-23-098, filed 11/21/00, effective 12/22/00)

WAC 16-470-715 Conditions governing the movement of regulated articles into Washington state from external quarantine areas. Regulated articles are prohibited entry into this state from a state or other area under quarantine listed in WAC 16-470-705(1), either directly, indirectly, diverted or reconsigned, except as provided for below.

(1) Prior notification is required. Persons shipping regulated articles as specified in WAC 16-470-710 into this state from areas ((under)) within the external quarantine must notify the department's plant services program by sending via ((telex/facsimile)) email to nursery@agr.wa.gov or other method approved by the department, a copy of the applicable phytosanitary certificate as described in subsection (2) of this section for each shipment. The phytosanitary certificate must state the nature and quantity of the shipment, ((its expected date of arrival at destination,)) the name of the intended receiver,

and the destination. The person to whom the commodities are shipped must hold the shipment until it is inspected and released by the department.

(2) Each shipment of regulated articles must be accompanied by a phytosanitary certificate from the state of origin certifying that the commodity, soil, or means of conveyance is treated with methods and procedures approved and prescribed by the director. Approved methods and procedures include those specified in the National Plant Board U.S. Domestic Japanese Beetle Harmonization Plan Appendix 1. Shipment to Category 1 States, as amended June 20, 2016. A copy of this plan can be accessed at <https://agr.wa.gov/beetles>.

(3) Privately owned houseplants grown indoors may be allowed entry into this state if a department official inspects the plants and determines that they are free from Japanese beetle.

[Statutory Authority: Chapter 17.24 RCW. WSR 00-23-098, § 16-470-715, filed 11/21/00, effective 12/22/00; WSR 90-15-042 (Order 2049), § 16-470-715, filed 7/16/90, effective 8/16/90.]

NEW SECTION

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), 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) 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.

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AMENDATORY SECTION (Amending WSR 00-23-098, filed 11/21/00, effective 12/22/00)

WAC 16-470-720 ((~~Special permits~~)) Compliance agreements. The director may issue ((~~special permits~~)) compliance agreements as defined in RCW 15.13.250, admitting regulated articles specified in WAC 16-470-710, from areas within the external or internal quarantine, that are not otherwise eligible for entry or movement from the area under quarantine ((~~, subject to~~)). Compliance agreements will include conditions and provisions which the director may prescribe to prevent the introduction, escape, or spread of Japanese beetle.

[Statutory Authority: Chapter 17.24 RCW. WSR 00-23-098, § 16-470-720, filed 11/21/00, effective 12/22/00; WSR 90-15-042 (Order 2049), § 16-470-720, filed 7/16/90, effective 8/16/90.]