



***Plant Risk Evaluator -- PRE™  
Evaluation Report***

***Rosa multiflora -- Minnesota***

***2017 Farm Bill PRE Project***

**PRE Score:** 16 -- Reject (high risk of invasiveness)

**Confidence:** 81 / 100

**Questions answered:** 18 of 20 -- Valid (80% or more questions answered)

**Privacy:** Public

**Status:** Completed

**Evaluation Date:** August 29, 2017

*This PDF was created on June 15, 2018*



## Plant Evaluated

*Rosa multiflora*



Image by JoJan, Wikipedia user



## Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Rosa multiflora*) in an effort to understand the invasive history, reproductive strategies, and the impact, if any, on the region's native plants and animals. This research reflects the data available at the time this evaluation was conducted.

## Summary

*Rosa multiflora* invades a wide range of areas and can form dense thickets that block the movement of humans and/or animals. It also crowds out populations of native plants. It is a restricted noxious weed in Minnesota. Importation, transportation, and sale of multiflora rose propagating parts is prohibited (Minnesota DNR).

## General Information

**Status:** Completed

**Screener:** Mike Monterusso

**Evaluation Date:** August 29, 2017

## Plant Information

**Plant:** *Rosa multiflora*

## Regional Information

**Region Name:** Minnesota

## Climate Matching Map

To answer four of the PRE questions for a regional evaluation, a climate map with three climate data layers (Precipitation, UN EcoZones, and Plant Hardiness) is needed. These maps were built using a toolkit created in collaboration with GreenInfo Network, USDA, PlantRight, California-Invasive Plant Council, and The Information Center for the Environment at UC Davis.

Click [here](#) to see the generated climate matching map for this region. This climate match database is hosted by GreenInfo Network and publicly accessible.





## Evaluation Questions

These questions are based in an original article published at the University of California, Davis, and can be found on the PLOS One website, here: <https://doi.org/10.1371/journal.pone.0121053>

### Invasive History and Climate Matching (Questions 1 - 6)

#### 1. Has the species (or cultivar or variety, if applicable; applies to subsequent "species" questions) become naturalized where it is not native?

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

*Rosa multiflora* has naturalized in several US states.

#### Reference(s):

- United States Department of Agriculture (2017). Plants Profile for *Rosa multiflora* (multiflora rose).
  - GBIF (2016). *Rosa multiflora* Murray.
- 

#### 2. Is the species (or cultivar or variety) noted as being naturalized in the US or world in a similar climate?

- Answer: **Yes**, which contributes **2** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

*R. multiflora* has naturalized in Minnesota and Wisconsin.



**Reference(s):**

- United States Department of Agriculture (2017). Plants Profile for *Rosa multiflora* (multiflora rose).
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**3. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?**

- Answer: **Yes**, which contributes **2** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

"Multiflora rose is extremely prolific and can form dense thickets, excluding native plants species. This non-native invasive rose invades open woodlands, forest edges, early succession pastures and fields. It also invades fence rows, right-of ways, roadsides, and margins of swamps and marshes."

**Reference(s):**

- Cornell University (2017). NYIS.
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**4. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar climate?**

- Answer: **Yes**, which contributes **3** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

Multiflora rose is invasive in Wisconsin.

**Reference(s):**

- Wisconsin Department of Natural Resources (2013). Multiflora rose - Wisconsin DNR.
-



**5. Are other species of the same genus (or closely related genera) invasive in a similar climate?**

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

"*R. rugosa* ...is now found in natural areas in Australia, New Zealand, Europe and North America."

**Reference(s):**

- The University of Georgia - Center for Invasive Species and Ecosystem Health (2016). Seaside rose: *Rosa rugosa* (Rosales: Rosaceae): Invasive Plant Atlas of the United States.
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**6. Is the species (or cultivar or variety) found predominately in a climate matching the region of concern?**

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

Most occurrences of *R. multiflora* are in Europe and Eastern US.

**Reference(s):**

- GBIF (2016). *Rosa multiflora* Murray.
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## Impact on Native Plants and Animals (Questions 7 - 10)

### 7. Does this plant displace native plants and dominate (overtop or smother) the plant community in areas where it has established?

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeener* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

"Multiflora rose is extremely prolific and can form dense thickets, excluding native plants species."

#### Reference(s):

- Cornell University (2017). NYIS.
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### 8. Is the plant noted as promoting fire and/or changing fire regimes?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeener* has a **High** confidence in this answer based on the available literature.

#### Answer / Justification:

"Information about multiflora rose and fire is lacking. Research is needed that examines the interactions of fire and multiflora rose, and the effects these interactions may have on native communities and ecosystems and their respective fire regimes."

#### Reference(s):

- Munger, G. T. (2002). *Rosa multiflora*. In: Fire Effects Information System.
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**9. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting grazing systems?**

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

"The stiff, sharp, backward curved thorns have a wide base and usually occur in pairs."

**Reference(s):**

- USDA Forest Service, Forest Health Staff (2017). Microsoft Word - DJE-MultifloraRose-DONE.doc - multiflora-rose.pdf.
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**10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?**

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

"Multiflora rose is extremely prolific and can form dense thickets, excluding native plants species."

**Reference(s):**

- Cornell University (2017). NYIS.
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## Reproductive Strategies (Questions 11 - 17)

### 11. Does this species (or cultivar or variety) reproduce and spread vegetatively?

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeener* has a **High** confidence in this answer based on the available literature.

#### Answer / Justification:

"Multiflora rose reproduces by seed and sucker ing, as well as by branch tips that root upon contact with soil."

#### Reference(s):

- USDA Forest Service, Forest Health Staff (2017). Microsoft Word - DJE-MultifloraRose-DONE.doc - multiflora-rose.pdf.
- 

### 12. If naturally detached fragments from this plant are capable of producing new plants, is this a common method of reproduction for the plant?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeener* has a **Medium** confidence in this answer based on the available literature.

#### Answer / Justification:

No evidence found. This is not a common method of reproduction.

#### Reference(s):

- D&R Greenway Land Trust (2017). Multiflora rose fact sheet.
  - Bergmann, C., & Swearingen J. M. (2009). PCA Alien Plant Working Group - Multiflora Rose (*Rosa multiflora*).
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### 13. Does the species (or cultivar or variety) commonly produce viable seed?

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeener* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

"Large plants can produce 500,000 to 1 million seeds a year."

#### Reference(s):

- USDA Forest Service, Forest Health Staff (2017). Microsoft Word - DJE-MultifloraRose-DONE.doc - multiflora-rose.pdf.
- 

### 14. Does this plant produce copious viable seeds each year (> 1000)?

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeener* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

"Large plants can produce 500,000 to 1 million seeds a year" (USDA Forest Service). "Individual plants may produce up to 500,000 seeds per year" (Munger).

#### Reference(s):

- USDA Forest Service, Forest Health Staff (2017). Microsoft Word - DJE-MultifloraRose-DONE.doc - multiflora-rose.pdf.
  - Munger, G. T. (2002). *Rosa multiflora*. In: Fire Effects Information System.
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### 15. Is there significant germination (>25%) of seeds the next growing season, with no requirement of an infrequent environmental condition for seeds to germinate (i.e. fire) or long dormancy period?



**Answer / Justification:**

Lack of information -- question left blank.

**Reference(s):**

- [Anonymous] .
- 

**16. Does this plant produce viable seed within the first three years (for an herbaceous species) to five years (for a woody species) after germination?**

**Answer / Justification:**

Lack of information -- question left blank.

**Reference(s):**

- [Anonymous] .
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**17. Does this plant continuously produce seed for >3 months each year or does seed production occur more than once a year?**

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeener* has a **Medium** confidence in this answer based on the available literature.

**Answer / Justification:**

Flowers and sets seed once in spring/summer.

**Reference(s):**

- Bergmann, C., & Swearingen J. M. (2009). PCA Alien Plant Working Group - Multiflora Rose (*Rosa multiflora*).
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## Dispersal (Questions 18 - 20)

### 18. Are the plant's propagules frequently dispersed long distance (>100 m) by mammals or birds or via domestic animals?

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeener* has a **High** confidence in this answer based on the available literature.

#### Answer / Justification:

"Hips are consumed by a wide array of birds. American robins, cedar waxwings, and northern cardinals are especially fond of these rose hips. Passage of the seed through the digestive tract of a bird significantly increases the likelihood of the seed's germination. Birds, then, represent significant symbionts for the multiflora rose by accomplishing both seed dispersal and scarification."

#### Reference(s):

- Galbraith, L. (2005). Multiflora Rose.
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### 19. Are the plant's propagules frequently dispersed long distance (>100 m) by wind or water?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeener* has a **Medium** confidence in this answer based on the available literature.

#### Answer / Justification:

No evidence found.

#### Reference(s):

- Munger, G. T. (2002). *Rosa multiflora*. In: Fire Effects Information System.
  - Bergmann, C., & Swearingen J. M. (2009). PCA Alien Plant Working Group - Multiflora Rose (*Rosa multiflora*).
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**20. Are the plant's propagules frequently dispersed via contaminated seed (agriculture or wildflower packets), equipment, vehicles, boats or clothing/shoes?**

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.

**Answer / Justification:**

No evidence found.

**Reference(s):**

- [Anonymous] .
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**Total PRE Score**

**PRE Score:** 16 -- Reject (high risk of invasiveness)

**Confidence:** 81 / 100

**Questions answered:** 18 of 20 -- Valid (80% or more questions answered)

**PRE Score Legend**

The PRE Score is calculated by adding the point totals for each (answered) question.

< 13 : accept (low risk of invasiveness)

13 - 15 : evaluate further

> 15 : reject (high risk of invasiveness)

**Questions Answered Legend**

It is important to answer at least 16 questions to consider a PRE Score as "valid".

>= 16 : valid (80% or more questions answered)

<= 15 : invalid (not enough questions answered)



## **Organization Ownership and Content Privacy**

**Organization:** 2017 Farm Bill PRE Project

**Content Privacy:** Public



## Evaluation Reviewers

The PRE approach is to base decisions on science and make decisions by consensus of diverse horticultural stakeholders. The literature review and process of answering PRE's questions are based on science; the decisions of which plants to prioritize are based on consensus. To ensure this process is in place and that PRE is collaborative, volunteer stakeholders are recruited from each region to review evaluations. The following experts in their profession (plant science, conservation, or horticultural trade) have participated as volunteer PRE reviewers for this evaluation:

- Laura Van Riper November 27, 2017
- Tom Buechel November 9, 2017

This evaluation has a total of 2 reviewer(s).





## Evaluation Issues

The following section lists all public issues for this evaluation. Issues provide a way for stakeholder reviewers to communicate any concerns or suggestions they might have with the plant or evaluation. Please email [PlantRight@suscon.org](mailto:PlantRight@suscon.org) if additional action is required to resolve open issues.

### Issue ID # 6320

**Date Created:** January 22, 2018 - 8:02pm

**Date Updated:** January 24, 2018 - 1:33pm

**Submitted by:** Matthew Kaproth

**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

**Scope:** Evaluation as a whole

### Issue Description

Many questions unanswered. Species needs more evidence for the later questions too.

### Issue Resolution (Screener's Response to Issue)

Issue resolved by PRE Data Manager -- added more sources and information to many questions. Q15 and Q16 left blank due to lack of information.

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## **About PRE and this Plant Evaluation Report**

The PlantRight Plant Risk Evaluator -- PRE is an online database and platform enabling those involved in non-native, terrestrial plant production to know before they grow if a plant poses a regional invasive risk. This tool offers many benefits, and we encourage you to visit the PRE website (<https://pre.ice.ucdavis.edu>) for more information.

If you are a nursery trade association, or involved in the research, development or distribution of horticultural plants we invite you to join the PRE community. If you are a plant scientist, affiliated with a horticultural college or botanic garden, and would like to learn more about becoming a PRE Screener, please drop us an email, [PlantRight@suscon.org](mailto:PlantRight@suscon.org), requesting a PRE Account.

PRE beta funding is provided by Sustainable Conservation (<http://www.suscon.org/>) and a USDA Farm Bill grant.