



***Plant Risk Evaluator -- PRE<sup>TM</sup>  
Evaluation Report***

***Carex pendula -- Washington***

*2021 Western IPM Grant Project*

**PRE Score:** 17 -- High Potential Risk

**Confidence:** 73 / 100

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

**Privacy:** Public

**Status:** Completed

**Evaluation Date:** August 11, 2021

*This PDF was created on October 15, 2023*

*This project was funded in part by the USDA National Institute of Food and Agriculture through the Western Integrated Pest Management Center, grant number 2018-70006-28881.*



## Plant Evaluated

*Carex pendula*



Image by Kurt Stüber



## Evaluation Overview

A PRE<sup>™</sup> screener conducted a literature review for this plant (*Carex pendula*) 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

Reports from Washington, California, and New Zealand describe *Carex pendula* as an aggressive invader able to quickly occupy riparian and wetland habitats in climates similar to those in western Washington. While unlikely to spread vegetatively, *C. pendula*'s prolific seed production and high germinability coupled with its ability to disperse via water along stream corridors and through wetlands enables the species to proliferate over large reaches of suitable habitat in a relatively short time.

## General Information

**Status:** Completed

**Screener:** Jim Evans

**Evaluation Date:** August 11, 2021

## Plant Information

**Plant:** *Carex pendula*

## Regional Information

**Region Name:** Washington



## **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 on an article published by PLOS One, which can be found 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** point(s) to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

*Carex pendula* is native to Europe, western Asia, and northern Africa. Observations in western Washington (Washington State Noxious Weed Control Board. 2021), the Willamette Valley (Native Plant Society of Oregon 2008), California (Zika et al. 2015), and New Zealand (New Zealand Biosecurity 2020).

#### Reference(s):

- Washington State Noxious Weed Control Board (2020). Draft Written Findings, Hanging Sedge (*Carex pendula*)..
- Zika, P.F. (2015). Jepson eFlora: *Carex pendula*. (Hipp, A. L., Ed.).
- Biosecurity, N. Zealand (2020). National Pest Plant Accord. 148 pp..
- Oregon, N. Plant Soci (2008). Exotic Gardening and Landscaping Plants Invasive in Native Habitats of the Southern Willamette Valley. 2021,

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#### 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** point(s) to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.



**Answer / Justification:**

*Carex pendula* already occurs in Washington. The species' distribution in similar climates also includes California, Oregon, Tasmania, and New Zealand (PlantRight Climate Match [[http://websites.greeninfo.org/images.tmp/6362f8e9fb4d215b8336d6846f4f4fee/Matching\\_Results.pdf](http://websites.greeninfo.org/images.tmp/6362f8e9fb4d215b8336d6846f4f4fee/Matching_Results.pdf)], GBIF)

**Reference(s):**

- GBIF (2021). *Carex pendula* Huds..
  - [Anonymous] (0). PlantRight.
- 

**3. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?**

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

**Answer / Justification:**

Reports from Washington (Shaw 2020), California (Bikle 2014), and New Zealand (New Zealand Biosecurity 2020) describe an aggressive invader able to quickly occupy riparian and wetland habitats.

**Reference(s):**

- Shaw, S. (2020). Hanging Sedge (*Carex pendula*). 5 pp..
  - Bikle, B. Wanner (2014). It takes a village... to get rid of an invasive!. Cal-IPC News. 22(2), 4-5.
  - Biosecurity, N. Zealand (2020). National Pest Plant Accord. 148 pp..
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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** point(s) to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.



**Answer / Justification:**

Reports from coastal California (Bikle 2014), and New Zealand (New Zealand Biosecurity 2020) describe invasions of riparian and wetland habitats in climates similar to western Washington (see also PlantRight Climate Match

[[http://websites.greeninfo.org/images.tmp/6362f8e9fb4d215b8336d6846f4f4fee/Matching\\_Results.pdf](http://websites.greeninfo.org/images.tmp/6362f8e9fb4d215b8336d6846f4f4fee/Matching_Results.pdf)] and GBIF).

**Reference(s):**

- Bikle, B. Wanner (2014). It takes a village... to get rid of an invasive!. Cal-IPC News. 22(2), 4-5.
  - Biosecurity, N. Zealand (2020). National Pest Plant Accord. 148 pp..
  - [Anonymous] (0). PlantRight.
  - GBIF (2021). *Carex pendula* Huds..
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**5. Are other species of the same genus (or closely related genera) invasive in a similar climate?**

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

**Answer / Justification:**

The genus *Carex* is globally very large, but the *screeners* was unable to identify any *Carexes* known to be invasive in climates similar to the Pacific Northwest.

**Reference(s):**

- [Anonymous] .
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**6. Is the species (or cultivar or variety) found predominately in a climate matching the region of concern?**

- Answer: **Yes**, which contributes **2** point(s) to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.



**Answer / Justification:**

*Carex pendula*'s global distribution is somewhat greater in similar climates such as California, Oregon, Europe and the British Isles, Tasmania, and New Zealand, although a significant portion of the species' distribution is in dissimilar climates, such as in Spain and the Mediterranean (PlantRight Climate Match [[http://websites.greeninfo.org/images.tmp/6362f8e9fb4d215b8336d6846f4f4fee/Matching\\_Results.pdf](http://websites.greeninfo.org/images.tmp/6362f8e9fb4d215b8336d6846f4f4fee/Matching_Results.pdf)], GBIF)

**Reference(s):**

- GBIF (2021). *Carex pendula* Huds..
  - [Anonymous] (0). PlantRight.
- 

## 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** point(s) to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

**Answer / Justification:**

Reports from Washington (Washington State Noxious Weed Control Board 2020), California (Bikle 2014), and New Zealand (New Zealand Biosecurity 2020) describe the species forming dense infestations in wetlands and riparian areas, displacing native vegetation.

**Reference(s):**

- Washington State Noxious Weed Control Board (2020). Draft Written Findings, Hanging Sedge (*Carex pendula*)..
  - Bikle, B. Wanner (2014). It takes a village... to get rid of an invasive!. Cal-IPC News. 22(2), 4-5.
  - Biosecurity, N. Zealand (2020). National Pest Plant Accord. 148 pp..
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## 8. Is the plant noted as promoting fire and/or changing fire regimes?

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

### Answer / Justification:

Published information does not mention an impact on fire or fire regimes. The species' primarily wetland and riparian habitats, though not fire-proof, are less fire-prone than upland areas.

### Reference(s):

- Washington State Noxious Weed Control Board (2020). Draft Written Findings, Hanging Sedge (*Carex pendula*)..
  - USDA, Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Plant Protection and Quarantine, Animal and Plant Health Inspection Service (2013). Weed Risk Assessment for *Carex pendula* Huds. (Cyperaceae) – Pendulous sedge.
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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: **No**, which contributes **0** point(s) to the total PRE score.
- The *screeners* has a **Very Low** confidence in this answer based on the available literature.

### Answer / Justification:

Available literature provided no mention of risks to human, livestock, or wildlife health.

### Reference(s):

- Washington State Noxious Weed Control Board (2020). Draft Written Findings, Hanging Sedge (*Carex pendula*)..
  - USDA, Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Plant Protection and Quarantine, Animal and Plant Health Inspection Service (2013). Weed Risk Assessment for *Carex pendula* Huds. (Cyperaceae) – Pendulous sedge.
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## 10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screeners* has a **Low** confidence in this answer based on the available literature.

### Answer / Justification:

Plant is a caespitose perennial herb up to 2.0 m without armoring (Zika et al. 2015).

### Reference(s):

- Zika, P.F. (2015). Jepson eFlora: *Carex pendula*. (Hipp, A. L., Ed.).
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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** point(s) to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.

### Answer / Justification:

Zika et al. (2015) describe the species as caespitose. However, the Weed Risk Assessment for *Carex pendula*... (USDA 2013) lists rhizomes as a means of reproduction.

### Reference(s):

- Zika, P.F. (2015). Jepson eFlora: *Carex pendula*. (Hipp, A. L., Ed.).
  - USDA, Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Plant Protection and Quarantine, Animal and Plant Health Inspection Service (2013). Weed Risk Assessment for *Carex pendula* Huds. (Cyperaceae) – Pendulous sedge.
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**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** point(s) to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.

**Answer / Justification:**

A. Forrestel (cited in Brusati 2016) states that "reproduction from [rhizome] fragments is not a concern with this species."

**Reference(s):**

- Brusati, E. (2016). *Carex pendula* - California. *Carex pendula* Risk Assessment.
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**13. Does the species (or cultivar or variety) commonly produce viable seed?**

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

**Answer / Justification:**

Brandel (2005) and Schutz (2000) reported production of large numbers of seeds/ plant and high rates of germination in laboratory trials. Brandel and Schutz (2005) reported similar high rates of germination in field trials.

**Reference(s):**

- Schutz, W. (2000). Ecology of seed dormancy and germination in sedges (*Carex*). *Perspectives in Plant Ecology, Evolution and Systematics*. 3, 67-89.
  - Brändel, M. (2005). The effect of stratification temperatures on the level of dormancy in primary and secondary dormant seeds of two *Carex* species. *Plant Ecology*. 178, 163–169.
  - Brandel, M. (2005). Temperature effects on dormancy levels and germination in temperate forest sedges (*Carex*). (Schutz, W., Ed.). *Plant Ecology* 176:245-261. 176, 245-261.
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**14. Does this plant produce copious viable seeds each year (> 1000)?**

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

**Answer / Justification:**

Brandel and Schutz (2005) report production of 20,000 seeds/plant.

**Reference(s):**

- Brandel, M. (2005). Temperature effects on dormancy levels and germination in temperate forest sedges (*Carex*). (Schutz, W., Ed.). *Plant Ecology* 176:245-261. 176, 245-261.
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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: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

Brandel (2005) and Schütz (2000) both reported germination of > 80% in laboratory and field trials. Dormancy in the species was broken by common overwinter field conditions (Brandel 2005).

**Reference(s):**

- Brandel, M. (2005). Temperature effects on dormancy levels and germination in temperate forest sedges (*Carex*). (Schutz, W., Ed.). *Plant Ecology* 176:245-261. 176, 245-261.
  - Schutz, W. (2000). Ecology of seed dormancy and germination in sedges (*Carex*). *Perspectives in Plant Ecology, Evolution and Systematics*. 3, 67-89.
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**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: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.

**Answer / Justification:**

USDA-APHIS extrapolates from the species perennial habit and herbaceous growth form to suggest that reproductive maturity is likely within 3-5 years, but empirical information is lacking.

**Reference(s):**

- USDA, Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Plant Protection and Quarantine, Animal and Plant Health Inspection Service (2013). Weed Risk Assessment for *Carex pendula* Huds. (Cyperaceae) – Pendulous sedge.
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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** point(s) to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

**Answer / Justification:**

According to Zika et al. (2015) the fruiting period on the West Coast is limited to 3 months, April-June.

**Reference(s):**

- Zika, P.F. (2015). Jepson eFlora: *Carex pendula*. (Hipp, A. L., Ed.).
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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: **No**, which contributes **0** point(s) to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

#### Answer / Justification:

Seeds are primarily dispersed by water. USDA-APHIS 2013.

#### Reference(s):

- USDA, Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Plant Protection and Quarantine, Animal and Plant Health Inspection Service (2013). Weed Risk Assessment for *Carex pendula* Huds. (Cyperaceae) – Pendulous sedge.
- 

### 19. Are the plant's propagules frequently dispersed long distance (>100 m) by wind or water?

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

#### Answer / Justification:

Seeds are dispersed primarily by water along streams, ditches, and in wetlands. USDA-APHIS 2013.

#### Reference(s):

- USDA, Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Plant Protection and Quarantine, Animal and Plant Health Inspection Service (2013). Weed Risk Assessment for *Carex pendula* Huds. (Cyperaceae) – Pendulous sedge.
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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** point(s) to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

### Answer / Justification:

Natural dispersal of seeds is primarily by water. Although plants and seeds are dispersed deliberately via the horticultural trade, available information does not suggest any significant dispersal via contamination or other unintentional means (USDA-APHIS 2013).

### Reference(s):

- USDA, Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Plant Protection and Quarantine, Animal and Plant Health Inspection Service (2013). Weed Risk Assessment for *Carex pendula* Huds. (Cyperaceae) – Pendulous sedge.

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## Total PRE Score

**PRE Score:** 17 -- High Potential Risk

**Confidence:** 73 / 100

**Questions answered:** 20 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 : Low Potential Risk

13 - 15 : Moderate Potential Risk

> 15 : High Potential Risk

## 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:** 2021 Western IPM Grant 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:

- |                     |                  |
|---------------------|------------------|
| • Lizbeth Seebacher | October 17, 2021 |
| • Alex Simmons      | August 31, 2021  |
| • Wendy Descamp     | August 31, 2021  |
| • Justin Bush       | August 18, 2021  |

This evaluation has a total of 4 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 [info@plantright.org](mailto:info@plantright.org) if additional action is required to resolve open issues.

### Issue ID # 7034

**Date Created:** September 15, 2021 - 6:10pm

**Date Updated:** November 30, 2021 - 12:41pm

**Submitted by:** Jutta Burger

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q15. 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?

### Issue Description

Would be good to add that *Carex pendula* does have dormancy (both primary and secondary) but that dormancy requirements are typically met in the field. Looks like Brandel reports optimal germination after 4 wks at 5degrees C. - Jutta Burger

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

Added language to reflect the suggestion.

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### Issue ID # 7033

**Date Created:** September 15, 2021 - 6:06pm

**Date Updated:** November 30, 2021 - 1:11pm

**Submitted by:** Jutta Burger



**Status:** Fixed

**Type:** Comment

**Severity:** Minor

**Scope:** Q12. If naturally detached fragments from this plant are capable of producing new plants, is this a common method of reproduction for the plant?

### Issue Description

Jepson again may not be a good reference for this. - Jutta Burger

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

Referred to Brusati (2016) that rhizome fragmentation was not a significant mechanism of dispersal. Answer (No) and confidence (Medium) were not changed.

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## Issue ID # 7032

**Date Created:** September 15, 2021 - 6:04pm

**Date Updated:** November 26, 2021 - 7:55am

**Submitted by:** Jutta Burger

**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

**Scope:** Q11. Does this species (or cultivar or variety) reproduce and spread vegetatively?

### Issue Description

USDA Weed Risk Assessment reports that *Carex pendula* also reproduces by rhizome. Jepson does not make reference to modes of reproduction. Should be "Yes" with at least medium confidence. - Jutta Burger

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

I took Zika et al (2015)/ Jepson as authoritative, but accept suggestion to include USDA mention of rhizomes, which I had taken to be less authoritative. Changed answer to 'Yes' with medium confidence; language now reads "Zika et al. (2015) describe the specie as cespitose. However, the Weed Risk Assessment for *Carex Pendula*... (USDA 2013) lists rhizomes as a means of reproduction."



### **Issue ID # 7031**

**Date Created:** September 15, 2021 - 6:00pm

**Date Updated:** November 30, 2021 - 12:24pm

**Submitted by:** Jutta Burger

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q08. Is the plant noted as promoting fire and/or changing fire regimes?

#### **Issue Description**

Consider even higher confidence for "no". You are using inference with some published documentation to support it. Solid inference is "medium" confidence. - Jutta Burger

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

Made the suggested change to Medium confidence. Appreciated the guidance.

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### **Issue ID # 7030**

**Date Created:** September 15, 2021 - 5:51pm

**Date Updated:** November 30, 2021 - 12:19pm

**Submitted by:** Jutta Burger

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q06. Is the species found predominately in a climate matching the region of concern?

#### **Issue Description**



List out the regions that do not overlap as well. There are large parts of Spain, Corsica, and the Mediterranean where it occurs that don't match Washington's climate, so so though it looks like over 50% of the GBIF cells overlap (meaning answer is yes), "medium" confidence is definitely justified. - Jutta Burger

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

Changed language in the answer to reflect the suggestion.

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#### **Issue ID # 7029**

**Date Created:** September 15, 2021 - 5:42pm

**Date Updated:** November 30, 2021 - 12:07pm

**Submitted by:** Jutta Burger

**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

**Scope:** Q05. Are other species of the same genus invasive in a similar climate?

#### **Issue Description**

Cyperus is not close enough to be considered 'closely related'. If there are no other species in *Carex* (or a genus that previously had been *Carex*) that are invasive in Washington's climate then the answer to this question should be "no". - Jutta Burger

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

As I was unable to identify *Carex* species that are considered invasive in climates similar to the Pacific Northwest I changed this answer to No with Medium confidence.

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#### **Issue ID # 6962**



**Date Created:** August 31, 2021 - 4:09pm

**Date Updated:** November 30, 2021 - 12:22pm

**Submitted by:** Wendy Descamp

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q07. Does this plant displace native plants and dominate the plant community in areas where it has been established?

### Issue Description

Hi Jim, I emailed with Jutta and while the State Weed Board's publication date will be automatically updated in other questions' reference sections when you change it in the bibliography, any date references in the justification text will not and will need to be manually updated. So, in question 7, the 2021 will need to be changed to 2020 by you. sorry about that and thanks!

Wendy

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

Made the correction.

[No need to apologize, Wendy - thank you for catching it!]

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### Issue ID # 6959

**Date Created:** August 31, 2021 - 1:57pm

**Date Updated:** November 30, 2021 - 12:11pm

**Submitted by:** Wendy Descamp

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q01. Has the species (or cultivar or variety, if applicable) become naturalized where it is not native?

### Issue Description



Hello! There is a very minor correction to be made to the Washington State Noxious Weed Control Board reference - it was published online in 2020, not in 2021. thanks! Wendy

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

Made the correction.

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#### **Issue ID # 6883**

**Date Created:** August 19, 2021 - 10:48am

**Date Updated:** August 26, 2021 - 1:58pm

**Submitted by:** Alex Simmons

**Status:** Fixed

**Type:** Comment

**Severity:** Minor

**Scope:** Q13. Does the species (or cultivar or variety) commonly produce viable seed?

#### **Issue Description**

Is there any evidence of high seed production outside of laboratory trials (i.e. in natural environments)?  
(Alex Stubblefield)

#### **Issue Resolution**

No resolution has been entered for this issue.

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#### **Issue ID # 6882**

**Date Created:** August 19, 2021 - 10:47am

**Date Updated:** August 26, 2021 - 1:42pm

**Submitted by:** Alex Simmons



**Status:** Fixed

**Type:** Comment

**Severity:** Minor

**Scope:** Q10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?

### Issue Description

I think based on the resources provided and appropriate inferences, you can bump the confidence up to "Low" instead of "Very Low". (Alex Stubblefield)

### Issue Resolution

No resolution has been entered for this issue.

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## Issue ID # 6881

**Date Created:** August 19, 2021 - 10:46am

**Date Updated:** August 26, 2021 - 1:41pm

**Submitted by:** Alex Simmons

**Status:** Fixed

**Type:** Comment

**Severity:** Minor

**Scope:** Q08. Is the plant noted as promoting fire and/or changing fire regimes?

### Issue Description

Lack of evidence for this question is allowed to default to a "no". I think based on the resources provided and appropriate inferences, you can bump the confidence up to "Low" instead of "Very Low". (Alex Stubblefield)

### Issue Resolution

No resolution has been entered for this issue.

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## Issue ID # 6880

**Date Created:** August 19, 2021 - 10:46am

**Date Updated:** August 26, 2021 - 1:38pm

**Submitted by:** Alex Simmons

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q01. Has the species (or cultivar or variety, if applicable) become naturalized where it is not native?

### Issue Description

Please state where the species is native to. (Alex Stubblefield)

### Issue Resolution

No resolution has been entered for this issue.

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## Issue ID # 6879

**Date Created:** August 19, 2021 - 10:45am

**Date Updated:** November 26, 2021 - 7:32am

**Submitted by:** Alex Simmons

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q02. Is the species (or cultivar or variety) noted as being naturalized elsewhere in the US or world in a similar climate?

### Issue Description

Since it is present in Washington as well, you can also mention this as a "similar" climate. (Alex Stubblefield)



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

The answer states that the speies occurs in Washington

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

The Plant Risk Evaluator (PRE) is an online database and platform designed to assess the risk of a plant becoming invasive in a given region. This tool offers many benefits, and we encourage you to visit the PRE website (<https://pretool.org>) for more information.

If you would like to learn more about PRE, please email us at [info@plantright.org](mailto:info@plantright.org), requesting a PRE Account.

PRE beta funding was provided by Sustainable Conservation (<https://www.suscon.org/>) and a USDA Farm Bill grant. Additional funding has been provided by the Western Integrated Pest Management Center.