Plant Risk Evaluator -- PRE™
Evaluation Report

Limonium sinuatum -- California

California Invasive Plant Council (Cal-IPC)

PRE Score: 12 -- Low Potential Risk
Confidence: 78 / 100
Questions answered: 20 of 20 -- Valid (80% or more questions answered)

Privacy: Public
Status: Completed

Evaluation Date: December 27, 2024

This PDF was created on August 21, 2025

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

Limonium sinuatum

Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Limonium sinuatum*) 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

Limonium sinuatum is an herbaceous plant native to the Mediterranean region. It is a popular ornamental plant with many cultivar varieties that has become naturalized in several places throughout the world. In South Africa, it is on the National Environmental Management Biodiversity Act (NEMBA) invasive species list as a catergorry 1b species, meaning it has been assessed to have a high invasive potential and must be controlled by a government sponsored invasive species management program. must be controlled . In California, it has established in coastal habitats and disturbed areas in Southern California and scattered locations North to the San Francisco Bay area, and is targeted for control by several land management agencies. It often grows in salt marsh and other wetland habitats.

General Information

Status: Completed
Screener: Tom Reyes
Evaluation Date: December 27, 2024

Plant Information

Plant: *Limonium sinuatum*

If the plant is a cultivar, how does its behavior differs from its parent's?
This plant is a widely cultivated ornamental with many varieties of cultivars often with different calyx color. One study found that different cultivars had differing tolerance to salinity, which suggests that they could be more adept at invading salt-marsh ecosystems.

Regional Information

Region Name: California

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 *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Limonium sinuatum has become naturalized in several regions outside its native range, including California, South Africa, and Australia. In California, it has established is coastal marsh, wetland and disturbed areas in the Bay Area and Southern California.

Reference(s):

- Dept of Environment, Forestry and Fisheries (2020). NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 - ALIEN AND INVASIVE SPECIES LISTS.
- Queensland Government (2011). Fact Sheet - Limonium sinuatum.
- Calflora (2025). Limonium sinuatum Observation Search - Calflora.
- Invasives South Africa (0). Statice.

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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 *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

This species has established in areas with a similar Mediterranean climate such as South Africa and Australia.

Reference(s):

- Queensland Government (2011). Fact Sheet - Limonium sinuatum.
- Invasives South Africa (0). Statice.
- Calflora (2025). Limonium sinuatum Observation Search - Calflora.

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

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

Answer / Justification:

This species is a widely cultivated ornamental species and is naturalized in many places throughout the world. It is classified as NEMBA Category 1b in Northern Cape and Western Cape in South Africa, which is their second highest ranking and mandates that property owners control it on their properties. It is also listed by World Wildlife Fund Australia as a potentially invasive garden plant.

Reference(s):

- Dept of Environment, Forestry and Fisheries (2020). NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 - ALIEN AND INVASIVE SPECIES LISTS.
- WWF Australia (2006). National list of naturalised invasive and potentially invasive garden plants.

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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 *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

This species is classified as a NEMBA Category 1b in Northern Cape and Western Cape in South Africa in similar Mediterranean climate. While it is not listed as invasive in Australia, World Wildlife Fund notes that it could potentially become invasive in their area.

Reference(s):

- Dept of Environment, Forestry and Fisheries (2020). NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 - ALIEN AND INVASIVE SPECIES LISTS.
- WWF Australia (2006). National list of naturalised invasive and potentially invasive garden plants.

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

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

Answer / Justification:

Two other species of Limonium are listed in the Cal-IPC Inventory, Algerian sea lavender (Limonium ramosissimum) and European sea lavender (Limonium duriusculum). All three species grow in coastal areas of California in similar habitats and can co-occur in the same sites.

Reference(s):

- California Invasive Plant Council (2025). The Cal-IPC Inventory.

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

Answer / Justification:

This species is naturalized in many places throughout the world, however, it is most abundant in locations with similar Mediterranean climates such as the Mediterranean, Western and Southern Australia, and South Africa.

Reference(s):

- Dept of Environment, Forestry and Fisheries (2020). NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 - ALIEN AND INVASIVE SPECIES LISTS.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.
- Queensland Government (2011). Fact Sheet - Limonium sinuatum.

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

Answer / Justification:

While this species has become naturalized in many areas, it is generally not reported to create monocultures or dominate plant communities where it is established. Several organizations in California, including Nature Collective and US Fish and Wildlife Service are controlling this species to prevent further spread.

Reference(s):

- Collective, N. (2024). Wavyleaf Sea Lavender (not native).
- Calflora (2025). Limonium sinuatum Observation Search - Calflora.
- ESRI ArcWatch (2015). 4-H Team Maps Invasive Sea Lavender near San Diego, California. 2025,

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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 *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

There is no evidence of this species altering or changing fire regimes. The short and relatively sparse stature of the plant likely does not contribute to the fire regime, it's a relatively short plant that does not carry a lot of fuel, and would not add much more fuel than native vegetation in communities it is invasive.

Reference(s):

- Collective, N. (2024). Wavyleaf Sea Lavender (not native).
- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.

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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 *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

This species is a commonly utilized ornamental and has been used as a food source in the Mediterranean region. It is reported to contain several medicinally beneficial compounds. Rare development of allergies to this species has been reported by people who work with the plant occupationally. There are no reports of significant impacts to aquatic ecosystems or grazing systems.

Reference(s):

- Wiszniewska, M., Pa?czy?ski C., Krawczyk-Szulc P., Wittczak T., Cyran A., & Walusiak-Skorupa J. (2011). Occupational allergy to Limonium sinuatum—a case report. International journal of occupational medicine and environmental health. 24, 304–307.
- Baysal, I., Ekizoglu M., Ertas A., Temiz B., Agalar H. Gamze, Yabanoglu-Ciftci S., et al. (2021). Identification of phenolic compounds by LC-MS/MS and evaluation of bioactive properties of two edible halophytes: Limonium effusum and L. sinuatum. Molecules. 26, 4040.
- Lopez, J., & Gonzalez A. (2008). Ornamental Limonium grown in Mediterranean conditions. Floriculture, ornamental and plant biotechnology. 5, 496–503.

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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 *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

This is an herbaceous species the usually grows to be less than 0.5m tall. Dense populations may impact the movement of small mammals, but would not have a significant impact on humans and most other livestock or wildlife.

Reference(s):

- Queensland Government (2011). Fact Sheet - Limonium sinuatum.
- Preston, R. E., & McClintock E. (2012). Limonium sinuatum.
- Invasives South Africa (0). Statice.

Reproductive Strategies (Questions 11 - 17)

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

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

Answer / Justification:

This species only reproduces from seed, and does not reproduce vegetatively.

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.
- Lopez, J., & Gonzalez A. (2008). Ornamental Limonium grown in Mediterranean conditions. Floriculture, ornamental and plant biotechnology. 5, 496–503.

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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 *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

This species does not reproduce from separated fragments

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.
- Lopez, J., & Gonzalez A. (2008). Ornamental Limonium grown in Mediterranean conditions. Floriculture, ornamental and plant biotechnology. 5, 496–503.

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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 *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

This species and cultivar can produce viable seed. It commonly escapes cultivation or from seed in flower arrangements and becomes naturalized.

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.
- Lopez, J., & Gonzalez A. (2008). Ornamental Limonium grown in Mediterranean conditions. Floriculture, ornamental and plant biotechnology. 5, 496–503.

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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 *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

This plant can produce hundreds to potentially more than 1000 seeds per year under favorable conditions.

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.

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

Answer / Justification:

There are no infrequent environmental conditions that are required for these seeds to germinate. Seeds can germinate under saline conditions that are unsuitable for many other plants.

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.
- Lopez, J., & Gonzalez A. (2008). Ornamental Limonium grown in Mediterranean conditions. Floriculture, ornamental and plant biotechnology. 5, 496–503.
- Sheffield's Seeds (2024). Limonium sinuatum.

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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 *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

This species is a short lived perennial and can produce seed within its first few years. In warm climates such as CA, it can be cultivated as either an annual or perennial species.

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Lopez, J., & Gonzalez A. (2008). Ornamental Limonium grown in Mediterranean conditions. Floriculture, ornamental and plant biotechnology. 5, 496–503.
- NC State Extension (0). North Carolina Extension Gardener Plant Toolbox - Limonium sinuatum.

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

Answer / Justification:

It typically blooms from late spring to early fall (approximately 4–5 months in Mediterranean or mild climates), with flowers mature and set seed through the growing season. Calflora reports this species to be flowering year-round, and is prized as an ornamental for its long flowering period.

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.
- Lopez, J., & Gonzalez A. (2008). Ornamental Limonium grown in Mediterranean conditions. Floriculture, ornamental and plant biotechnology. 5, 496–503.
- Calflora (2025). Limonium sinuatum Observation Search - Calflora.

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 *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

While birds or mammals might occasionally move seeds (e.g., through fur/feathers), there is no significant evidence of frequent long-distance dispersal by animals. The species lacks fleshy fruits, sticky structures, or other adaptations to attract or rely on animal dispersers.

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.
- Preston, R. E., & McClintock E. (2012). Limonium sinuatum.

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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 *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

While there is not direct literature about the seed dispersal of L. sinuatum in water, it is well documented that other species of Limonium and other halophytes are dispersed through the tides in tidal marshes, and regularly use water as a seed dispersal mechanism. Wind dispersal of seeds has not been documented in L. sinuatum, however it has been noted in other Limonium species not present in California (Botanical Realm).

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Preston, R. E., & McClintock E. (2012). Limonium sinuatum.
- Archbald, G., & Boyer K. E. (2014). Potential for spread of Algerian sea lavender (Limonium ramosissimum subsp. provinciale) in tidal marshes. Invasive Plant Science and Management. 7, 454–463.
- Boorman, LA. (1968). Some aspects of the reproductive biology of Limonium vulgare Mill., and Limonium humile Mill.. Annals of Botany. 32, 803–824.
- Huiskes, AHL., Koutstaal BP., Herman PMJ., Beeftink WG., Markusse MM., & De Munck W. (1995). Seed dispersal of halophytes in tidal salt marshes. Journal of ecology. 559–567.
- Botanical Realm (2025). (Limonium protohermaeum).

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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 *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Seeds are readily available for purchase as an ornamental plant, but there are no reports of it as a contaminant in other seed mixes. Since seeds are small, there is the potential for spread through hitchhiking on footwear or clothing, or movement of soil.

Reference(s):

- Whipker, B. E., & P Hammer A. (1994). Growth and yield characteristics of field-grown Limonium sinuatum (L.). HortScience. 29, 638–640.
- Gabaldón, A., García L. Gutiérrez, Téllez T. Ruiz, & Salas J. Blanco (2019). Limonium sinuatum (L.) Mill.. Folia Botanica Extremadurensis. 139–141.
- Preston, R. E., & McClintock E. (2012). Limonium sinuatum.

Total PRE Score

PRE Score: 12 -- Low Potential Risk
Confidence: 78 / 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: California Invasive Plant Council (Cal-IPC)
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:

• Ron Vanderhoff	April 1, 2025
• Jutta Burger	March 21, 2025
• Elizabeth D. Brusati	March 21, 2025
• Justin Valliere	March 20, 2025
• Chris McDonald	March 5, 2025

This evaluation has a total of 5 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 if additional action is required to resolve open issues.

Issue ID # 11159

Date Created: March 21, 2025 - 8:21am
Date Updated: March 31, 2025 - 7:39pm

Submitted by: Elizabeth D. Brusati

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Evaluation as a whole

Issue Description

Please add a sentence or two to describe what the South African NEMBA listing means since you cite it in multiple answers. I looked at the linked pdf and had trouble understanding whether these plants have documented impacts in South Africa or if functions more like a proactive risk assessment and prevention measure. This is particularly important since you scored most of the questions related to impacts as No. So why is it considered invasive in South Africa?

Issue Resolution
No resolution has been entered for this issue.

Issue ID # 11158

Date Created: March 21, 2025 - 8:17am
Date Updated: March 31, 2025 - 6:12am

Submitted by: Elizabeth D. Brusati

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Q20. Are the plant’s propagules frequently dispersed via contaminated seed, equipment, vehicles, boats or clothing/shoes?

Issue Description

To count as a Yes, this question needs documentation (or else good logical deduction) that at least one of these methods of dispersal is common (not just possible or occasional). I do not see documentation for this in your answer. I would change the score to No with medium confidence.

Issue Resolution
No resolution has been entered for this issue.

Issue ID # 11157

Date Created: March 21, 2025 - 8:10am
Date Updated: March 31, 2025 - 7:41pm

Submitted by: Elizabeth D. Brusati

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Q03. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

Issue Description

Please focus on documented invasive impacts in this section, not potential impacts. Also, this question is asking if the plant is invasive, not just naturalized. It's a step in severity above the previous questions, which means impacts need to be documented in order to count as a Yes.

Issue Resolution
No resolution has been entered for this issue.

Issue ID # 11156

Date Created: March 21, 2025 - 8:08am
Date Updated: March 31, 2025 - 7:34am

Submitted by: Elizabeth D. Brusati

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

Add the California naturalization information to this question as well.

Issue Resolution (Screener's Response to Issue)

Added info and reference for CA distribution

Issue ID # 11146

Date Created: March 20, 2025 - 10:34am
Date Updated: March 31, 2025 - 6:35pm

Submitted by: Justin Valliere

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: General Information

Issue Description

Might be useful to mention the invasive status of the plant in South Africa in the summary, which has a very similar climate.

Issue Resolution
No resolution has been entered for this issue.

Issue ID # 11145

Date Created: March 20, 2025 - 9:55am
Date Updated: April 6, 2025 - 10:13pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q19. Are the plant’s propagules frequently dispersed long distance (>100 m) by wind or water?

Issue Description

Did you locate any evidence of dispersal by wind? I could only find one anectdotal reference to wind dispersal (https://greg.app/limonium-lifecycle/). Maybe a comment about what you found about wind dispersal would be helpful.

Issue Resolution (Screener's Response to Issue)

Aded a mention and reference about wind, but not enough to say it is dispersed by wind

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Issue ID # 11144

Date Created: March 20, 2025 - 9:40am
Date Updated: March 31, 2025 - 7:22am

Submitted by: Ron Vanderhoff

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

While this answer satisfies the question of not needing an infrequent environmental condition for germination it does not address te question of >25% seed germination the next growing season.

Issue Resolution (Screener's Response to Issue)

Added info and reference for germination rates

Issue ID # 11143

Date Created: March 20, 2025 - 9:28am
Date Updated: April 6, 2025 - 10:00pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q04. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar climate?

Issue Description

The reference "2004 - ALIEN AND INVASIVE SPECIES LISTS. WWF Australia (2006)" is not used in this answer and should therefore be removed.

Issue Resolution (Screener's Response to Issue)

Added information related to WWF reference

Issue ID # 11142

Date Created: March 20, 2025 - 9:25am
Date Updated: March 31, 2025 - 7:03am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q03. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

Issue Description

I agree with the prior comment on this question. I would also note that the statement "It is also listed by World Wildlife Fund Australia as a potentially invasive garden plant" does not state invasive, but ***potentially*** invasive and should not impact the scoring, and not be a factor in the confidence.

Issue Resolution
No resolution has been entered for this issue.

Issue ID # 11141

Date Created: March 20, 2025 - 9:13am
Date Updated: April 6, 2025 - 10:14pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Evaluation as a whole

Issue Description

A brief note in parentheses in the text of the answer to the corresponding reference should be added. Otherwise, the reader has to guess which reference connects to the specific statement. Add them like this:

"This species has been documented as naturalized in South Africa (SANBI) and parts of Australia (Inv. Species Cncl.)."

Issue Resolution
No resolution has been entered for this issue.

Issue ID # 11097

Date Created: March 14, 2025 - 9:56am
Date Updated: March 20, 2025 - 7:05am

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Q07. Does this plant displace native plants and dominate the plant community in areas where it has been established?

Issue Description

The justification here needs to be stronger for a "yes" (echo-ing the other reviewer's comments). At a minimum, confidence should be lower (moderate) if the only reference is The Nature Collective. Also if no one has a specific account of this species over-topping or outcompeting natives, then reconsider whether this question should be answered with a "yes". - JB

Issue Resolution (Screener's Response to Issue)

Updated answer to "no" since it does not seem to dominate plant communities

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Issue ID # 11008

Date Created: March 5, 2025 - 9:39am

Date Updated: March 18, 2025 - 7:29am

Submitted by: Chris McDonald

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q08. Is the plant noted as promoting fire and/or changing fire regimes?

Issue Description

Could add to the answer that the stature of the plant likely does not contribute to the fire regime, it's a relatively short plant that does not carry a lot of fuel, and would not add much more fuel than native vegetation in communities it is invasive.

Issue Resolution (Screener's Response to Issue)

Added info about plant stature

Issue ID # 11007

Date Created: March 5, 2025 - 9:35am
Date Updated: March 18, 2025 - 8:45am

Submitted by: Chris McDonald

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: General Information

Issue Description

Should add somewhere that the plant in warm climates can be grown as an annual and is also a perennial. https://plants.ces.ncsu.edu/plants/limonium-sinuatum/ And then add to Q 16 as well. - CM

Issue Resolution (Screener's Response to Issue)

Added info about duration to general info and Q16

Issue ID # 11006

Date Created: March 5, 2025 - 9:29am
Date Updated: March 18, 2025 - 7:23am

Submitted by: Chris McDonald

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q06. Is the species found predominately in a climate matching the region of concern?

Issue Description

I think this looks correct the majority of locations are outside a climate that matches CA. I would add in the description that the most abundant populations of this species are found in climates that match CA. Mediterranean, W. and southern Australia, South Africa.

Issue Resolution (Screener's Response to Issue)

Updated answer about distribution

Issue ID # 11004

Date Created: March 5, 2025 - 9:24am
Date Updated: March 18, 2025 - 7:18am

Submitted by: Chris McDonald

Status: Fixed

Type: Suggestion
Severity: Minor
Scope: Q03. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

Issue Description

Please add a description what NEMBA 1b means. It seems to be the second highest invasive plant category in South Africa and may be similar to a listed noxious weed in US or perhaps a CDFA A rated weed. And then because it is listed as 1B it should be very high as confidence- CM

Issue Resolution (Screener's Response to Issue)

Added information about NEMBA, etc.

Issue ID # 11003

Date Created: March 5, 2025 - 9:20am
Date Updated: March 20, 2025 - 6:42am

Submitted by: Chris McDonald

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Plant Information

Issue Description

I would clarify here that there are many ornamental varieties of L. sinuatum, as its commonly used in the ornamental trade. I would assume the cultivars perform similarly as the straight species, but I don't know? - CM

Issue Resolution (Screener's Response to Issue)

Added information on cultivars and a reference

Issue ID # 10930

Date Created: February 26, 2025 - 10:24pm
Date Updated: March 18, 2025 - 8:39am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q19. Are the plant’s propagules frequently dispersed long distance (>100 m) by wind or water?

Issue Description

Although I could not locate any direct documentation about wind or water seed dispersal for this species, this is rather well documented in related Limonium taxons. Seed dispersal by water is well documented for the CA invasives L. duriusulum and L. ramosissimum. Wind dispersal is documented in a few non-California Limoniums.

Not sure there is positively enough for a YES answer, but this potential (from related species) should at least be mentioned. If NO is retained as the answer here I think a confidence of no higher than MEDIUM would be more appropriate, I might even say LOW.

Issue Resolution (Screener's Response to Issue)

Updated response, added references

Issue ID # 10929

Date Created: February 26, 2025 - 9:57pm
Date Updated: March 18, 2025 - 8:09am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Comment
Severity: Minor
Scope: Q17. Does this plant continuously produce seed for >3 months each year or does seed production

occur more than once a year?

Issue Description

I agree with the score and comments. I did notice that Calflora observations show images of flowering plants at every month of the year. Calflora also lists flowering year round on their taxon page for the species. This might be worth an additional mention and reference supporting your answer.

Issue Resolution (Screener's Response to Issue)

Added additional information and references

Issue ID # 10928

Date Created: February 26, 2025 - 9:41pm
Date Updated: March 18, 2025 - 8:07am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q09. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting grazing systems?

Issue Description

Stating that the plant "is a commonly used ornamental species" is fine, but this does not infer toxicity, or not toxicity. Its NOT being a health risk to humans seems to be well documented in numerous references, so just be sure to add at least a couple of those.

Issue Resolution
No resolution has been entered for this issue.

Issue ID # 10927

Date Created: February 26, 2025 - 9:30pm
Date Updated: March 20, 2025 - 7:05am

Submitted by: Ron Vanderhoff

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

I suggest at least a couple more specific references that supports the species ability to outcompete and displace native flora, especially if giving the answer a high confidence. . Abundance is not necessarily equal to measurable impacts to native species.

Issue Resolution (Screener's Response to Issue)

Updated answer to "no" since it does not seem to dominate plant communities

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Issue ID # 10926

Date Created: February 26, 2025 - 8:49pm
Date Updated: March 20, 2025 - 6:27am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Evaluation as a whole

Issue Description

Tom, it looks like you have not finished adding your references, so I might have jumped the gun starting my review.

Perhaps we should wait until those references are addded before completing our final reviews.

Issue Resolution (Screener's Response to Issue)

Finished adding references throughout evaluation

Issue ID # 10925

Date Created: February 26, 2025 - 8:38pm
Date Updated: March 18, 2025 - 8:39am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: General Information

Issue Description

Looking at distribution on Calflora and iNat it apprears to be scatterred in coastal California up to the San Francisco Bay area. Rather than "established in coastal habitats and disturbed areas in Southern California and the Bay area" I wonder if it would be better more accurate to say "established in coastal habitats and disturbed areas in Southern California and scatterred locations North to the San Francisco Bay area".

Issue Resolution
No resolution has been entered for this issue.

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, requesting a PRE Account.

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