



SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE



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Implementing WRDA 2020: *Prevention Priority List and TF Recommendations*

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Agenda

- Overview of Progress Update
- Priority *Prevention* Species List: WRDA Part 2
- Implementing WRDA Part 2
 - Laws & Authorities
 - Recommended Prevention Actions
 - Recommended Response Actions
- Next Steps

Part 1: Progress Update

- Convene a group of experts ✓
- Identify existing priority lists ✓
- Identify and refine a prioritization tool ✓
- Develop a Priority List for Prevention ✓
- Begin WRDA Part 2 for Prevention ←
 - Add applicable Laws and Authorities
 - Develop TF Recommendations
- Develop Task Force priority lists for:
 - Eradication through EDRR (Early Detection & Rapid Response)
 - Established Species (Containment and Long-term Management)

Implementing WRDA 2020 Part 2

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WRDA 2020 Direction

Part 1: Develop a **priority list** of invasive species.



Part 2: Focus on **cooperative and collaborative efforts** to:

- Guide applied research
- Develop innovative strategies and tools
- Implement specific management, control, and eradication activities, including prevention

Photo Credits from left to right: Midas cichlid illustrated by Diane Peebles, African clawfoot frog provided by FWC, Northern African rock python by <https://animalstime.com/african-rock-python-facts/>, Lygodium by Jennifer Possléy, and Conehead Termite <http://www.pestworld.org/pest-guide/termites/conehead-termites/>.

WRDA Part 2: TF's Action Items

Shall be used by the Task Force and agencies and entities represented on the Task Force to focus cooperative and collaborative efforts—

“(I) to guide applied research;

“(II) to develop innovative strategies and tools to facilitate improved management, control, or eradication of listed invasive species;

“(III) to implement specific management, control, or eradication activities at the appropriate periodicity and intensity necessary to reduce or neutralize the impacts of listed invasive species, including the use of qualified skilled volunteers when appropriate; and

“(IV) to develop innovative strategies and tools to prevent future introductions of nonnative species.”

Taxa Teams

Plants

Matt Phillips, FWC

Bill Thomas, FWS Refuge

Deah Lieurance, UF IFAS

Bill Thomas, FWS Refuge

LeRoy Rodgers, SFWMD

Nathan Fikkert, USDA

Janet Gil, Miami-Dade County

Dennis Giardina, ECISMA

Alexandra Onisko/ Michael Yustin, TC CISMA

Brenda Hovde, PBC

Veronica Runge, City of Sanibel

Freshwater Verts and Inverts

John Galvez, USFWS Fisheries/Aquatic Invasive Species Program

Craig Van Der Heiden, Kevin Donaldson, and Amy Castenada,
Miccosukee Tribe

Wes Daniel, USGS (NAS screening)

Marine

- **Wes Daniel, USGS (NAS screening)**
- Kelli O'Donnell, NOAA

Terrestrial Animals

- **Art Roybal, FWS Ecological Services**
- Jessica Spencer, USACE
- Christina Romagosa (Animal screening tool)
- Tylan Dean, NPS
- Sarah Funck, FWC
- Dr. Eric Rohrig and Dr. Patti Anderson, FDACS
- Valerie Schneider and Carlos Pages, FWS ports
- Mitch Barazowski, SW CISMA

Recommended Actions for SFERTF:

Interrupting Pathways:

Prevent them from getting here

- Regulations
- Distribute
- Outreach and Education

Response Planning:

If they get here can we react swiftly, do we have the tools?

- Research
- Monitoring
- Strategic planned responses

Fresh Water Invertebrates (2)

- *Procambarus clarkia* (red swamp crayfish)
- *Limnoperna fortunei* (golden mussel)

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Applicable Laws & Authorities

FW Invertebrates

Red Swamp Crayfish

- **FWC** Listed as “conditional” species. Aquaculture permit allowed in small part of the panhandle in Florida, but prohibited in South Florida. Direct sales of live animals In South Florida currently allowed for food purposes.
- **FDACs (AQ) Certification** This provides a certificate for private distributors to sell live food (red crayfish) in Florida.

Golden Mussel

- **U.S. DOI via the USCG (inspection)** The National Invasive Species Act of 1996 –ballast water rule to prevent the introduction and spread of aquatic nuisance species.
- **International Maritime Organization (IMO)** The International Convention for the Control and Management of Ships' Ballast Water and Sediments, International treaty amended to prevent the spread of potentially invasive species in ships' ballast water.

Recommended Actions

FW Invertebrates - Interrupting Pathways

➤ Regulations

- Red Swamp Crayfish Prohibit Live food shipments to Florida
- Highlight golden mussel to USCG for NISA and IMO enforcement and inspection (ballast water and biofouling rules)

➤ Distribute List

- TF, WG, SCG members, OERI, CISMAs, Aquatic Nuisance Species Task Force, and other Florida invasive species groups to share list as appropriate
 - Port inspection agencies and enforcement agencies such as the U.S. Coast Guard
 - Invasive species POCs for all TF organizations (local rules, site specific rules)

➤ Outreach and Education

- TF, WG, SCG members encourage CISMAs, Aquatic Nuisance Species Task Force, and other Florida invasive species groups to:
 - Adopt the prevention lists, post on their websites, use for outreach including activities to involve the public in the early detection and reporting of this species

Fresh Water Vertebrates (4)

- *Tilapia zillii* (Redbelly tilapia)
- *Xenopus laevis* (African Clawed Frog)
- *Rana ridibunda* (Marsh frog)
- *Pseudorasbora parva* (Stone moroko)



Applicable Laws & Authorities

FW Vertebrates

- FWC Non-Native Species - Florida Administrative Rules
<https://flrules.org/gateway/ChapterHome.asp?Chapter=68-5>
- Some general county facility regulations for things like contamination
- FWC disaster response Captive Wildlife
- Center for Disease Control regulates importation of animals use for laboratory research

Recommended Actions

FW Vertebrates - Interrupting Pathways

➤ Regulation

- Restricting importation and possession of species through regulation using appropriate authorities
- Add FWS authorities to inspect domestic containers that carry wildlife using tools such as the FWS Lacey Act

➤ Distribute the List

TF, WG, SCG members, OERI, CISMAs, ANSTF and others receive and share list as appropriate

- **Add** to list of intercepted target species ports and other entry points, such as quarantine facilities
- Invasive species POC's for all TF organizations (local rules, site specific rules)

➤ Education and Outreach

- Encourage CISMAs and other Florida invasive species groups to adopt the prevention lists and post on their websites
- TF encourage CISMAs , ANSTF, and others to use developed materials and distribute as appropriate
 - General public, research facilities , ports, e-commerce; and other target audiences

Marine (3)

- *Kappaphycus alvarezii*, *Kappaphycus striatum* (Agar-agar)
- *Halophila stipulacea* (Halophila seagrass)
- *Mycale (Mycale) grandis* (orange keyhole sponge)



Applicable Laws & Authorities

Marine

- EPA acts with authority over ballast water discharge under the Clean Water Act (33 U.S.C. 1251 et seq.) under the National Pollutant Discharge Elimination Systems (NPDES).
- EPA sets numerical discharge standards and the USCG is responsible for developing regulations to enforce the standards of the Vessel Incidental Discharge Act (VIDA): These are latest regulations applying to ballast water regulations.
- "Secretary of the department in which the Coast Guard is operating provides International Antifouling Certificate" required as part of the Clean Hull Act of 2009 (33 U.S.C. 3801).
- USDA National Aquaculture Act of 1980 (16 U.S.C. 2801-2810) serves to promote aquaculture in the United States; USDA is designated as the lead federal agency
*Applicable to Agar agar.
- Designated by the Secretary of Commerce and managed by NOAA National Marine Sanctuaries Act of 1972.

Recommended Actions

Marine - Interrupting Pathways

➤ Regulations

- Watercraft inspections between ports-Halophila-Moved on recreational vessels
- Orange Keyhole sponge prevent introduction through live trade (corals/ sponges not part of Lacey act)
- Commercial Aquaculture of Agar agar should be prevented

➤ Distribute

- TF, WG, SCG members, OERI, and CISMAs receive and share list as appropriate
 - Port inspection agencies and enforcement agencies such as, the U.S. Coast Guard
 - Invasive species POC's for all TF organizations (local rules, site specific rules)

➤ Outreach and Education

- TF, WG, SCG members encourage CISMAs, Aquatic Nuisance Species Task Force, and other Florida invasive species groups to:
 - Adopt the prevention lists, post on their websites, use for outreach including activities to involve citizen-scientist and the public in the early detection and reporting of this species

Plants (5)

- *Phalaris arundinacea* (reed canary grass)
- *Persicaria hydropiper* , *Polygonum hydropiper* (Marsh pepper knotweed)
- *Nypa fruticans* (nipa palm, mangrove palm)
- *Bruguiera* spp.* (Asian mangrove in the family Rhizophoraceae)
- *Lumnitzera* spp.* (Indo-West Pacific mangrove)

* Includes all genus

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Phalaris arundinacea (reed canary grass)-By Franz Xaver - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=7997933>

Applicable Laws & Authorities

Plants

- **Local Government** Stopgap rule county level such as Miami Dade
- **USPS** Rules for shipping species (state-to-state)
- **U.S. Department of Interior** (DOI, FWS, NPS)
 - NEPA, NPS, and USFWS Categorical Exclusions (Cat Ex), NPS Policies 2006 (4.4.4.1, 4.4.4.2, and 4.4.5.3), NPS-77 (1991) – IPM, and NPS Organic Act
- **FDACS** Florida Noxious Weed List (c.2023)
 - Florida Administrative Code, Florida Noxious Weeds: Rule 5B-57, Prohibited Aquatic Plants: Rule 5B-64
- **State of Florida /FWC** Statute (F.S. 369.252) –
 - Permits management/treatment of invasive plants on Florida public lands
- **USDA APHIS**
 - Federal Noxious Weed List (2021)

Recommended Actions

Plants - Interrupting Pathways

➤ Regulation

- Encourage regulation on the 5 plant species.
- Add plants to noxious weed lists (Federal, Local, and State)
 - (Petition already in for 2 Genus Mangroves) Plant Protection and Quarantine has officially prohibited the importation of species in the genera of *Lumnitzera* and *Bruguiera* through the "Not Authorized Pending Pest Risk Analysis (NAPPRA)."

➤ Distribute the List

TF, WG, SCG members, OERI, and CISMAs receive and share list as appropriate

- Port inspection agencies, invasive species staff and leadership for all TF organizations
- USDA APHIS PPQ -intercepted target species at entry points, including quarantine check point

➤ Education and Outreach

TF Agencies encourage CISMAs to develop materials such as BOLO lists and distribute as appropriate

- Botanical gardens, Florida nurseries, plant enthusiasts/general public, chain store outlets, e-commerce, and TF,WG and SCG leadership and key invasive species staff
- Encourage CISMA's and other Florida invasive species groups to adopt the prevention lists and post on their websites

Terrestrial Vertebrates (5)

- *Macaca fascicularis* (crab-eating macaque, long-tailed macaque)
- *Rattus tanezumi* (Tanezumi Rat, Asian House Rat, Asian Rat)
- *Varanus indicus* (Mangrove Monitor, Western Pacific Monitor Lizard)
- *Ploceus cucullatus* (Village Weaver Bird)
- *Pycnonotus cafer* (red-vented bulbul)



From Wikimedia Commons, the free media repository - Pycnonotus cafer (red-vented bulbul)

Applicable Laws & Authorities

Animals

- FWC currently regulated Mangrove monitors as Class III wildlife in Florida
- FWC disaster response Captive Wildlife FWC (Crab eating Macaque)
- Endangered Species Act
- CITES Appendix II listed
- Port quarantine regulations (All Birds must be quarantined Avian Flu and other diseases)
- USPS Laws transport of live animals
- NPS Organic Act
- Local County Rules for things like contamination

Recommended Actions

Animals - Interrupting Pathways

➤ Regulation

Restricting importation and possession of species through regulation using appropriate authorities

- Prevent trade allowances since not currently in trade

Add authorities to inspect domestic containers that carry wildlife using tools such as the FWS Lacey Act

➤ Distribute the List

TF, WG, SCG members, OERI and CISMAs receive and share list as appropriate

- Port inspection agencies
- Invasive species POC's for all TF organizations (local rules, site specific rules)
- Add to list of intercepted target species at entry points other than ports such as quarantine facilities (bird quarantine facilities due to diseases such as avian flu)

➤ Education and Outreach

- Encourage CISMAs and other Florida invasive species groups to adopt the prevention lists and post on their websites
- TF encourage CISMAs to use developed materials, adapted as needed, and distribute as appropriate
 - General public, research facilities, ports (Asian rats), Pet store chains, e-commerce; and other target audiences

Recommended Actions

Response Planning

TF, WG & SCG members and CISMAs

➤ Research

- Preferred habitat to establish target areas
- Identify likely points of entry
- Possible control methods

➤ Add to existing monitoring programs and develop new as needed

Formal Monitoring: EDDmaps , general plant monitoring surveys, NPS Caribbean Network Monitoring program Everglades Invasive Reptile Monitoring Program (Mangrove monitor), Everglades Freshwater monitoring systems, Inspect drainage structures for golden mussel biofouling, Port inspections reports.

Informal Monitoring: field biologists, contractors, citizen-scientist, recreation users, seasonal hires, volunteers

➤ Strategic planned responses

- Encourage development of response action plans/teams

Next Steps

Implementing WRDA 2020 Part 2: [Prevention](#)

- April 11 through 24 – Taxa Groups Report Out/provide input
- April 26 Update ECISMA – Ask to Adopt Prevention List
- **May 2 Report to WG/SCG – Update on Recommendations/request for input**
- May 9, May 22, and May 25 – WRDA 2020 teams continue to provide input
- **June 1 report to TF in June**
- June 7 WRDA 2020 teams meet
- **June 29, WG/SCG Meeting**
- TF Meeting Fall 2023

Continue Implementing WRDA 2020 Part 1:

- **EDRR:** Summer 2023 develop, calibrate, and validate Risk Assessment Tool with a workshop in fall
- **CONTAINMENT/LONG-TERM MANAGEMENT:** Established species refinement process Summer 2023

Thank you!

- Taxa Team Coordinators
 - Wes Daniel, Marine
 - John Galvez, Freshwater
 - Art Roybal, FWS
 - Matt Phillips, Plants
- Panel of Experts
- Leadership
- GEER
- Special Thanks to University of Florida (UF) and FWCC for Developing the Horizon Scan Tool