



**NOAA
FISHERIES**

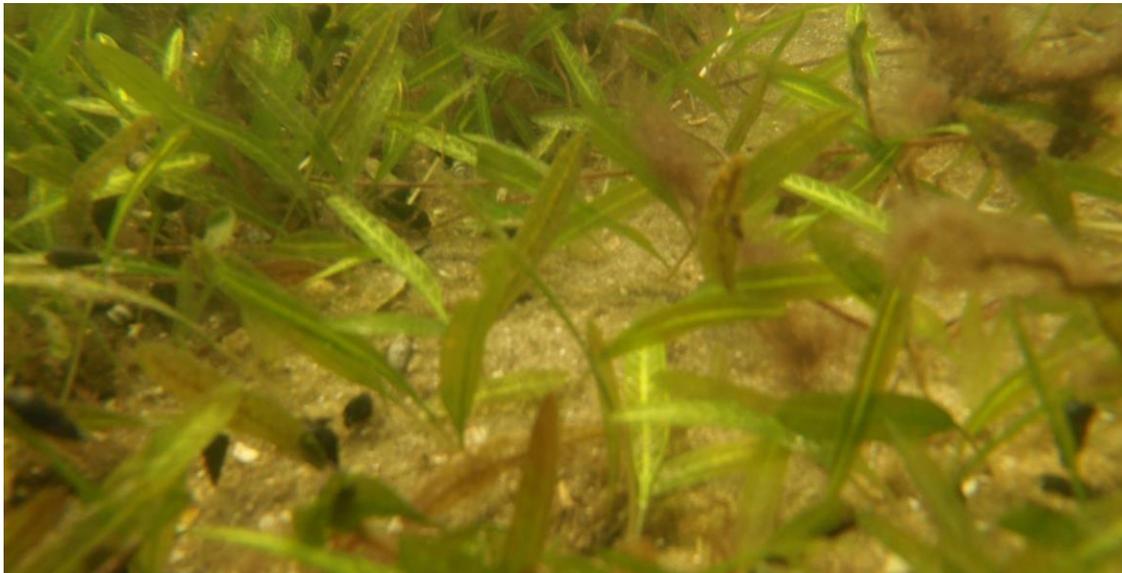
Johnson's Seagrass (*Halophila johnsonii*)

How Effective is the Final Recovery Plan?

April 20, 2016

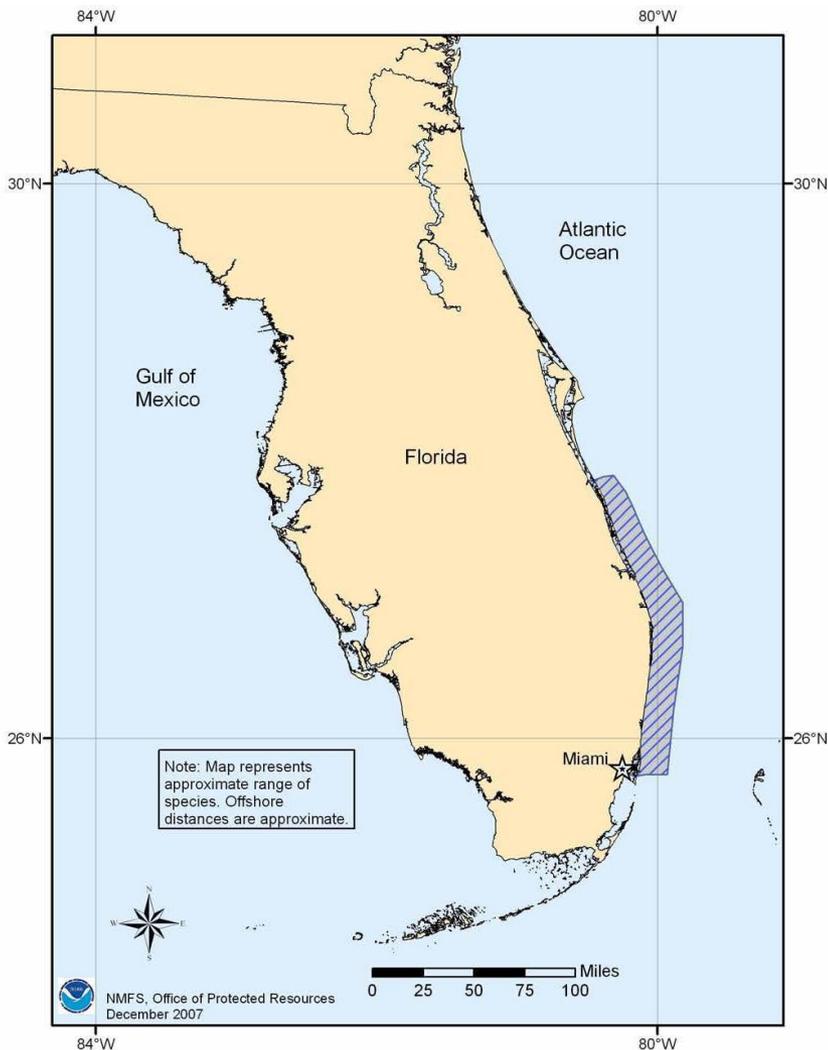
Introduction – Johnson’s seagrass

- Listed as **threatened** in September 1998
- Recovery Plan published September 2002 (before the new guidance was established)
- Developed by a multi-agency recovery team



Species Distribution

- Limited to a small (about 200 km) section of coastal area along southeast Florida (Sebastian Inlet to north Biscayne Bay)



Species Information

- Patchy, non-contiguous distribution in water depths from intertidal to 3 meters
- Wide tolerance range for salinity, temperature, water clarity, and irradiance
- Survives periodic desiccation
- Very small in size: 2-5 cm
- Only asexual reproduction
- Current status - **stable**



Threats

- Shoreline construction and modification
- Dredge and fill
- Siltation (burial)
- Storm events
- Prop scarring
- Changes in water quality
- Competition with other larger seagrass species



Recovery Criteria

Three recovery criteria identified in the plan

1. Geographic range remains stable for at least 10 years
2. Self-sustaining populations are present throughout the range at distances less than or equal to the maximum dispersal distance to allow for stable vegetative recruitment and genetic diversity
3. Populations and supporting habitat in its geographic range have long-term protection

Recovery Criteria (continued)

Are the recovery criteria objective, measurable, and appropriate?

1. Geographic range remains stable for at least 10 years
 - Yes

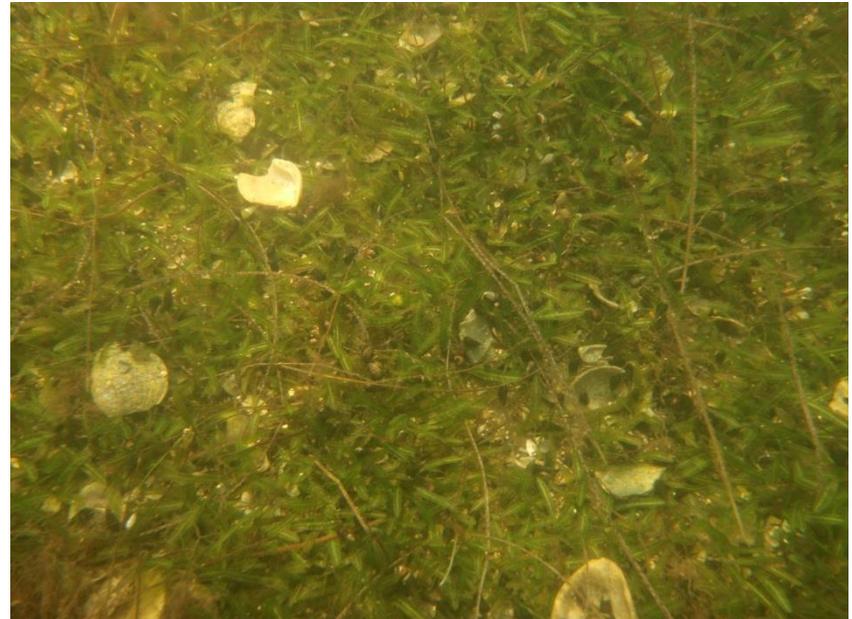
2. Self-sustaining populations are present throughout the range at distances less than or equal to the maximum dispersal distance to allow for stable vegetative recruitment and genetic diversity
 - Sort of for criterion 2
 - Appropriate but could be refined
 - Self-sustaining needs to be defined
 - New data can be used to calculate maximum dispersal distance to make the criterion measurable

3. Populations and supporting habitat in its geographic range have long-term protection
 - No for criterion 3
 - Appropriate but not measurable as written

Site Specific Recovery Actions

No site-specific recovery actions

- Why?
 - Lack of data at the time of plan development
 - Small geographic range of the species
 - Pulsating tendencies



Recovery Plan Effectiveness

- Easy to locate online using search engines
- Executive summary is concise and provides the recovery goal, criteria, and actions (plan does not contain objectives)
- Further details provided within the main document
- Responsible parties identified for each recovery action in the implementation schedule
- Recovery actions are not linked to specific criteria

Is the Recovery Plan Current?

- No, but the implementation team has drafted a new plan which is in the review process at SERO
- Why is the plan not current?
 - Limited data at time of plan development
 - Hard to measure criteria



Synthesis

- Recovery plan has flaws but is generally well laid out and easy to read
- It has served as a guidance document for prioritizing research and increasing our knowledge of the species since its development
 - In turn, this has directed recovery efforts moving forward
- Increased knowledge has led to the need for updating the plan, including the criteria

Successes...

- A very active implementation team
- Framework for monitoring recovery has been established
- 1st iteration laid the foundation for the updated plan

Remaining Challenges...

- Uncertainty associated with the taxonomic status
 - Relationship between Johnson's seagrass and similar species in Antigua and Australia
- Keeping up with technological advances in genetic analyses