

Roadblocks to Seagrass Recovery

Seagrass Recovery Potential Model for Panhandle estuaries

Light available to seagrass
2016



What these data show

This dataset shows light availability to seagrasses as percent surface irradiance for these Panhandle estuaries: Perdido Bay, Big Lagoon, Santa Rosa Sound, Pensacola Bay, Escambia Bay, East Bay Pensacola Bay, Choctawhatchee Bay, St. Andrew Bay, and St. Joseph Bay.

Light attenuation or k was calculated from the formula $k = (\text{mean chlorophyll concentration} * \text{slope chlorophyll}) + (\text{mean color intensity} * \text{slope color}) + (\text{mean turbidity} * \text{slope turbidity}) + \text{Y-intercept}$. Percent surface irradiance was calculated from the formula $\text{Percent Surface Irradiance} = e^{(-k * z)}$, where 'z' is depth in meters.

This dataset consists of grids with each cell having an area of 1 hectare. The grid cells were joined with the yearly mean water chlorophyll, color, and turbidity concentrations from the closest site to the individual cell.

A comparison between percent surface irradiance and seagrass coverage was created by joining the 2015 seagrass coverage map with the percent surface irradiance grid cells. Each grid cell then shows the presence or absence of seagrass and the calculated percent surface irradiance.

The projection of the shapefiles in this dataset is NAD83 UTM Zone 17N.

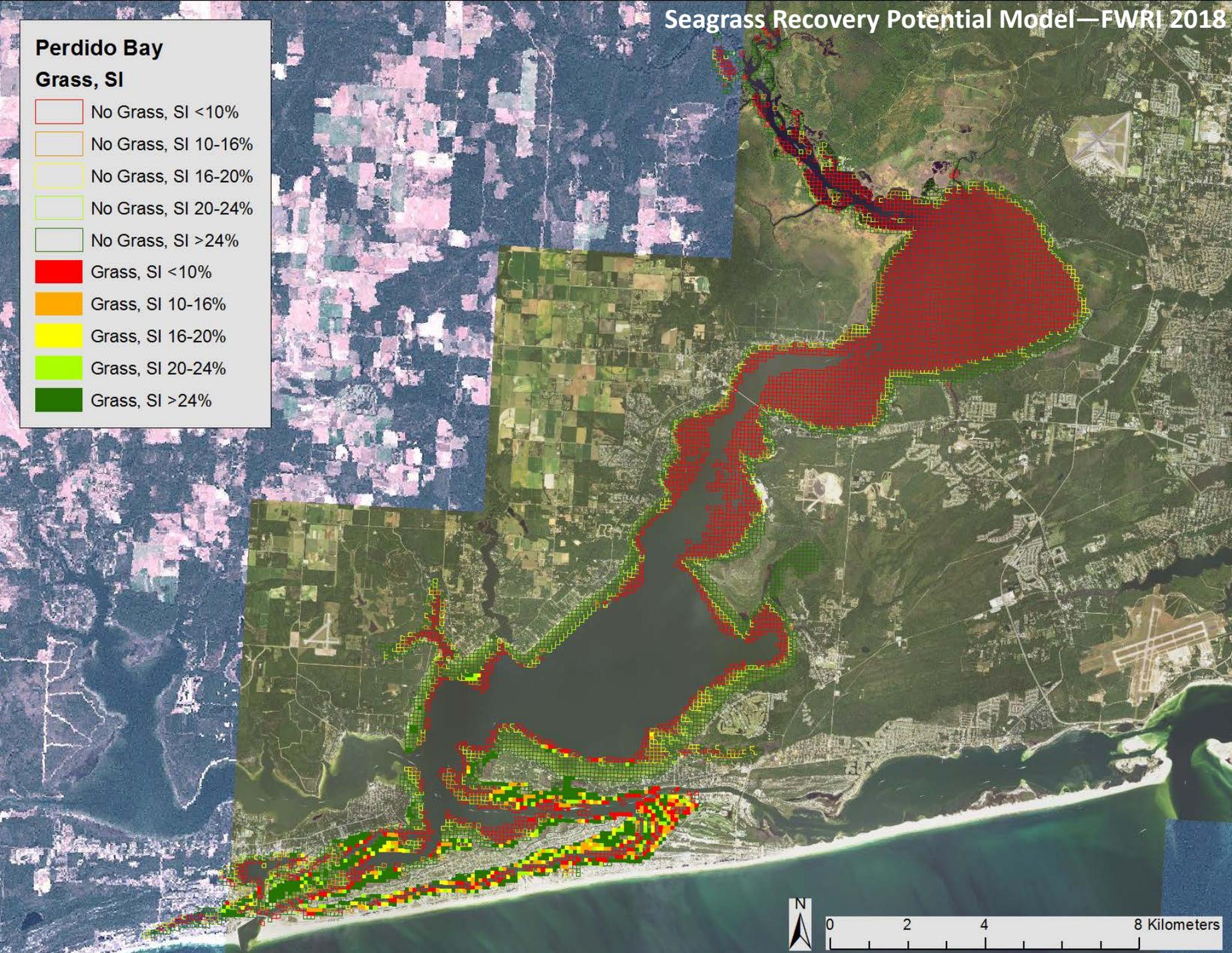
This project was completed by the Florida Fish and Wildlife Conservation Commission Fish and Wildlife Research Institute and funded by the Gulf Environmental Benefit Fund of the National Fish and Wildlife Federation.

Seagrass Recovery Potential Model—FWRI 2018

Perdido Bay

Grass, SI

- No Grass, SI <10%
- No Grass, SI 10-16%
- No Grass, SI 16-20%
- No Grass, SI 20-24%
- No Grass, SI >24%
- Grass, SI <10%
- Grass, SI 10-16%
- Grass, SI 16-20%
- Grass, SI 20-24%
- Grass, SI >24%



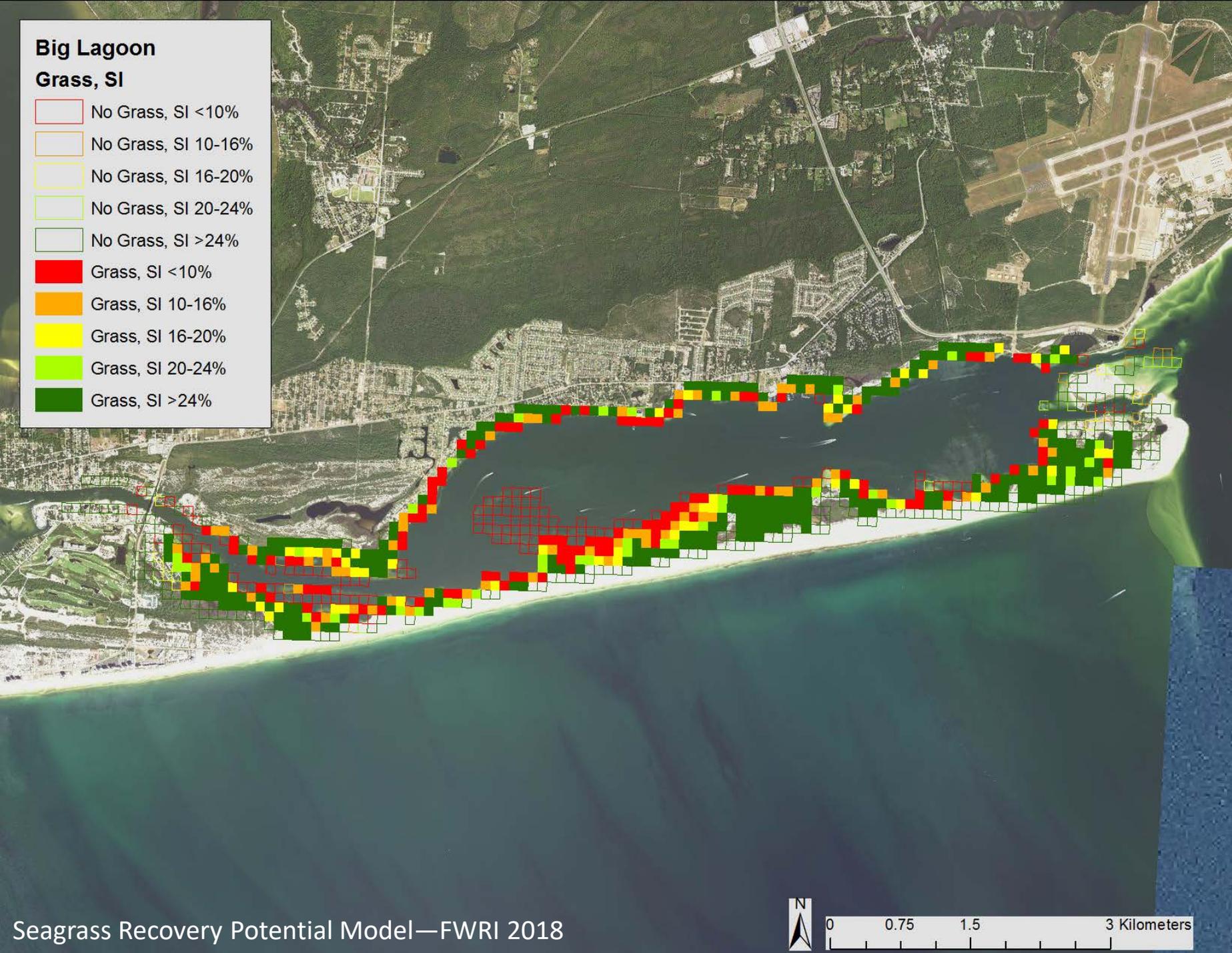
Perdido Bay



Big Lagoon

Grass, SI

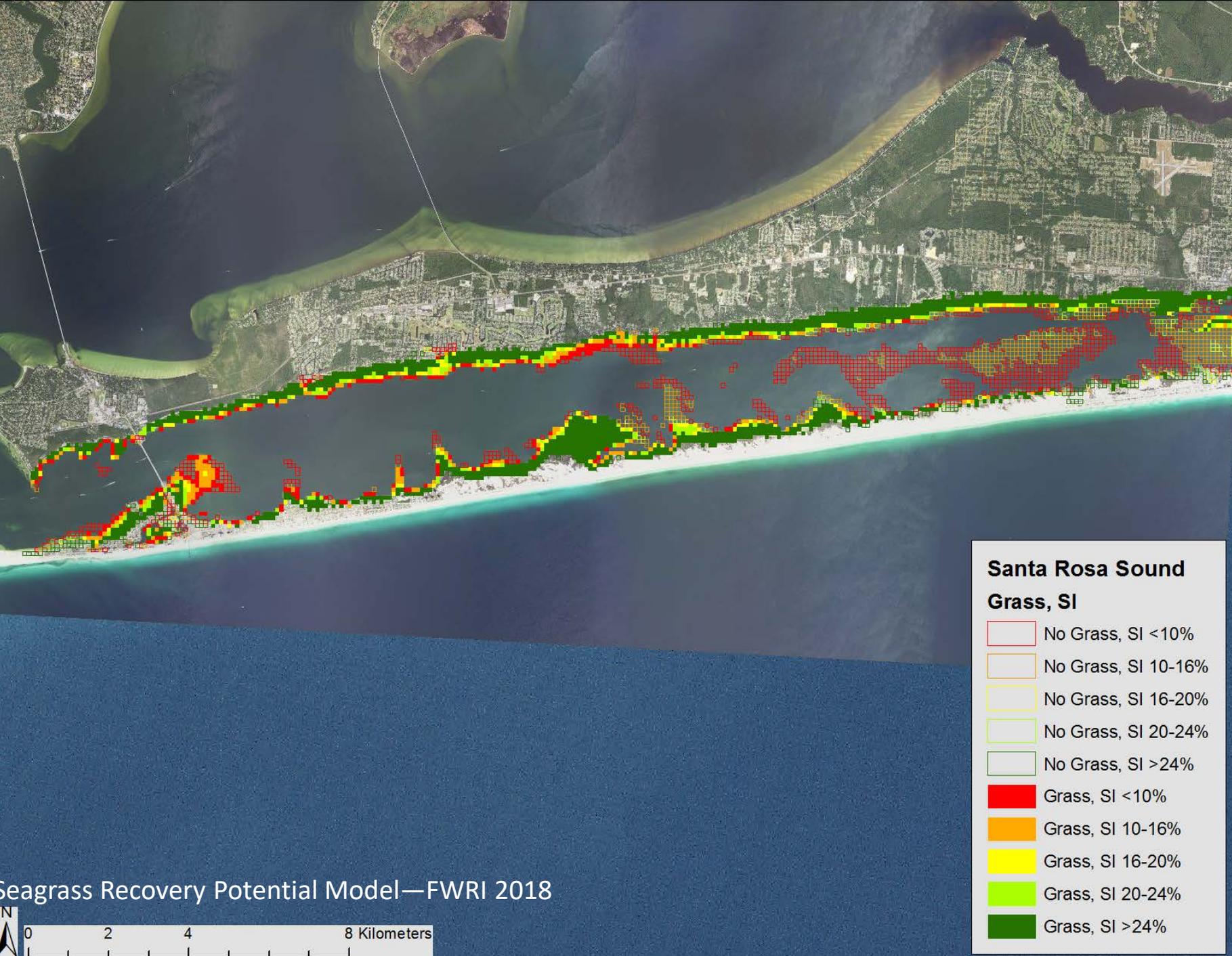
- No Grass, SI <10%
- No Grass, SI 10-16%
- No Grass, SI 16-20%
- No Grass, SI 20-24%
- No Grass, SI >24%
- Grass, SI <10%
- Grass, SI 10-16%
- Grass, SI 16-20%
- Grass, SI 20-24%
- Grass, SI >24%



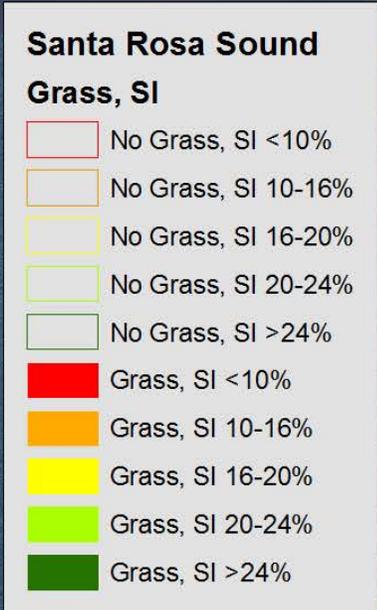
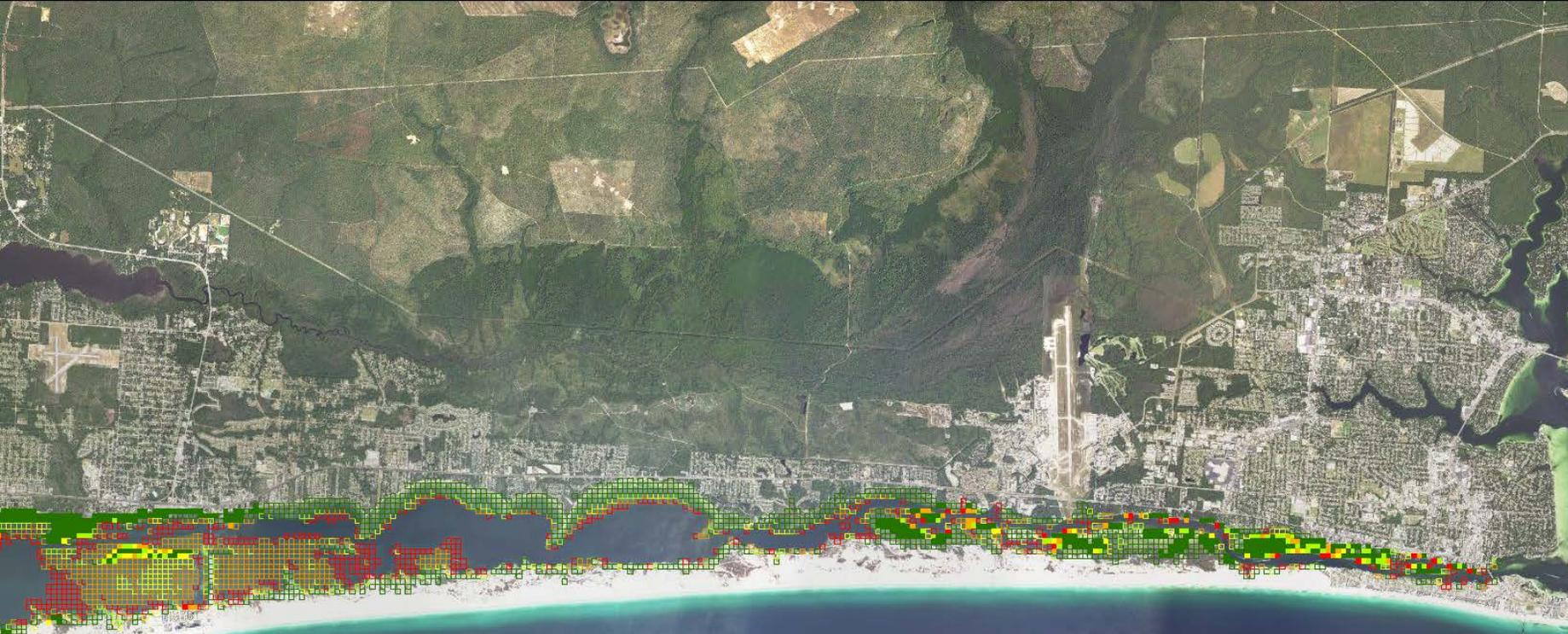
Big Lagoon



Western Santa Rosa Sound



Eastern Santa Rosa Sound



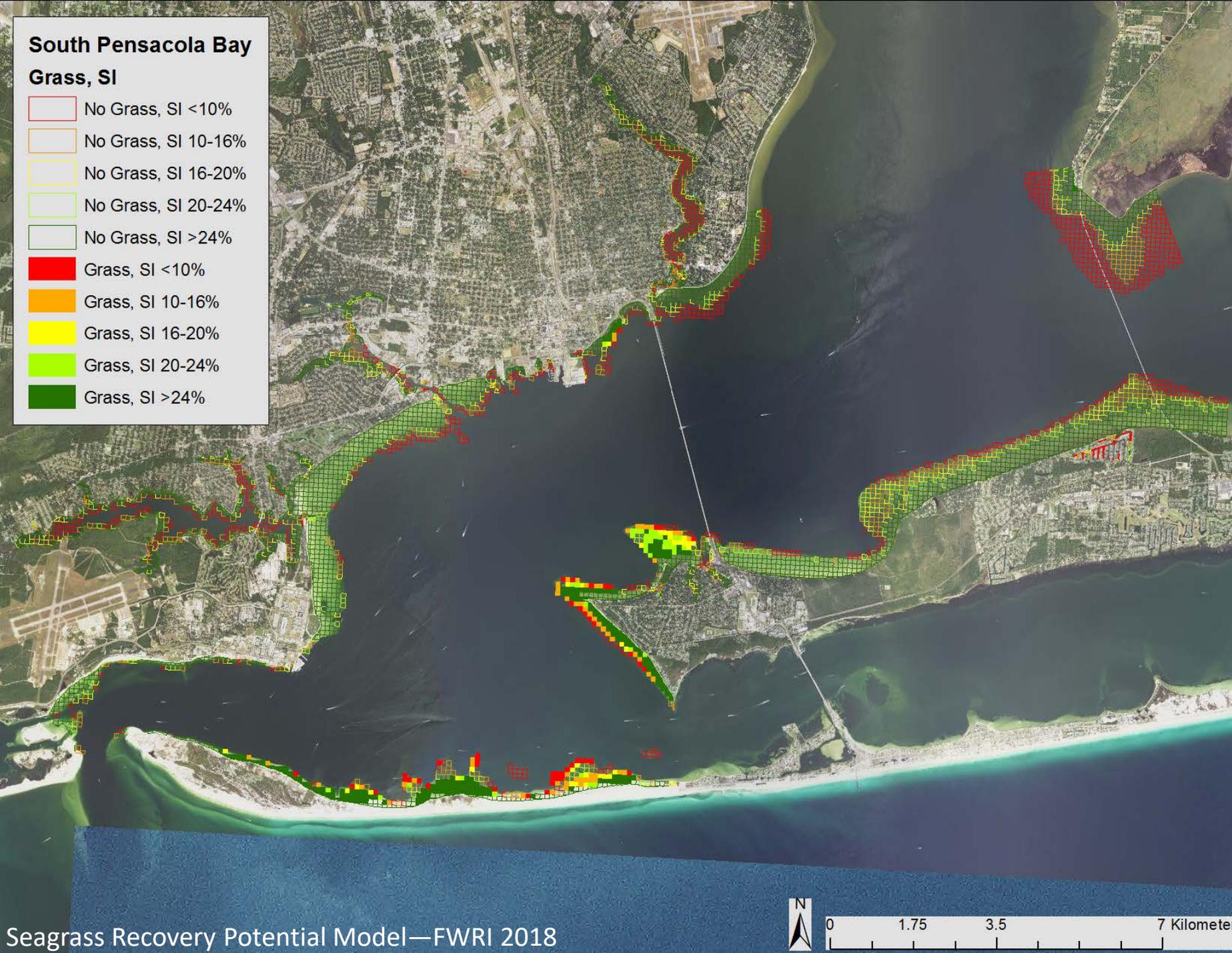
Seagrass Recovery Potential Model—FWRI 2018



South Pensacola Bay

Grass, SI

- No Grass, SI <10%
- No Grass, SI 10-16%
- No Grass, SI 16-20%
- No Grass, SI 20-24%
- No Grass, SI >24%
- Grass, SI <10%
- Grass, SI 10-16%
- Grass, SI 16-20%
- Grass, SI 20-24%
- Grass, SI >24%

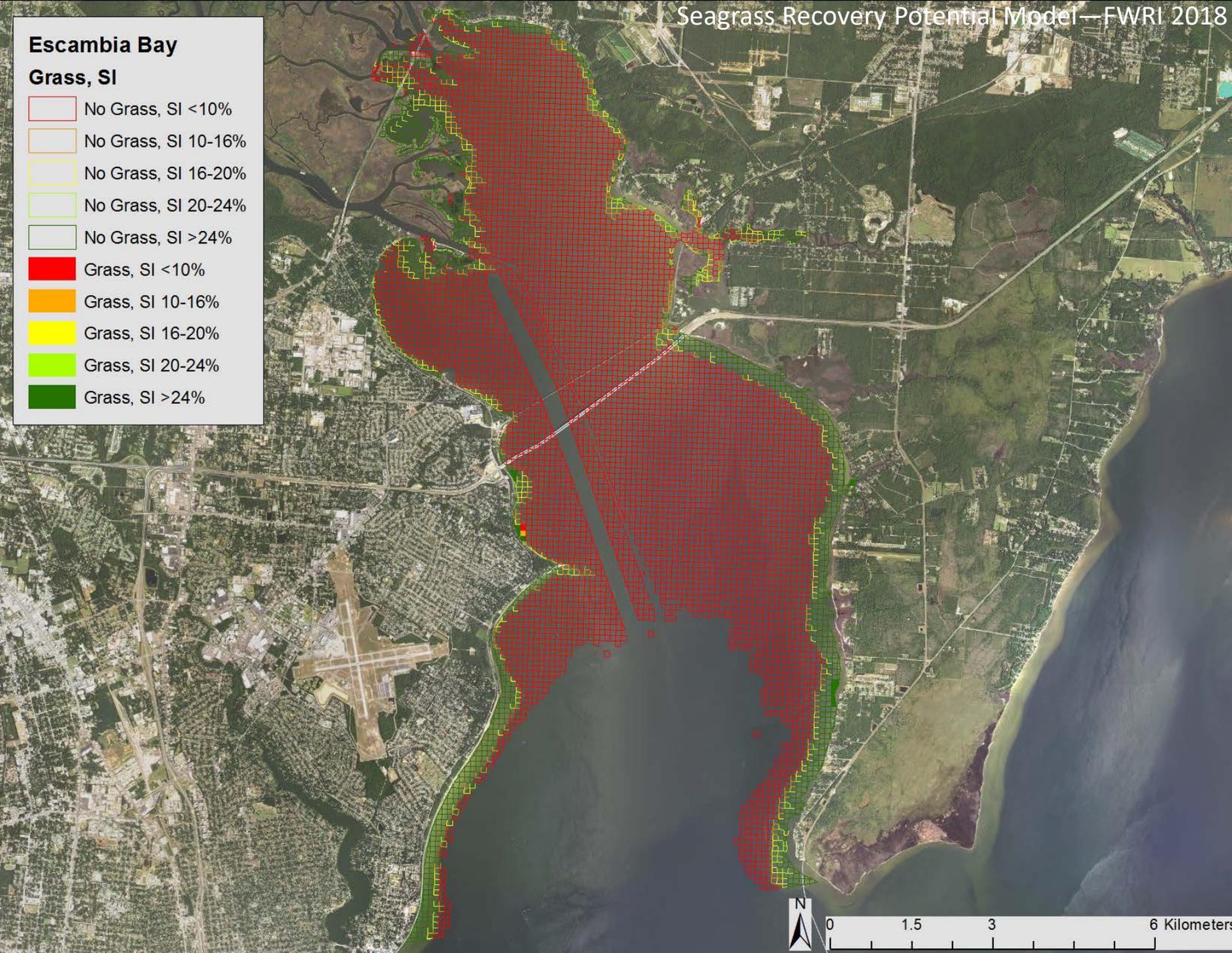


Pensacola Bay



Escambia Bay
Grass, SI

White	No Grass, SI <10%
Light Yellow	No Grass, SI 10-16%
Yellow	No Grass, SI 16-20%
Light Green	No Grass, SI 20-24%
White	No Grass, SI >24%
Red	Grass, SI <10%
Orange	Grass, SI 10-16%
Yellow	Grass, SI 16-20%
Light Green	Grass, SI 20-24%
Dark Green	Grass, SI >24%

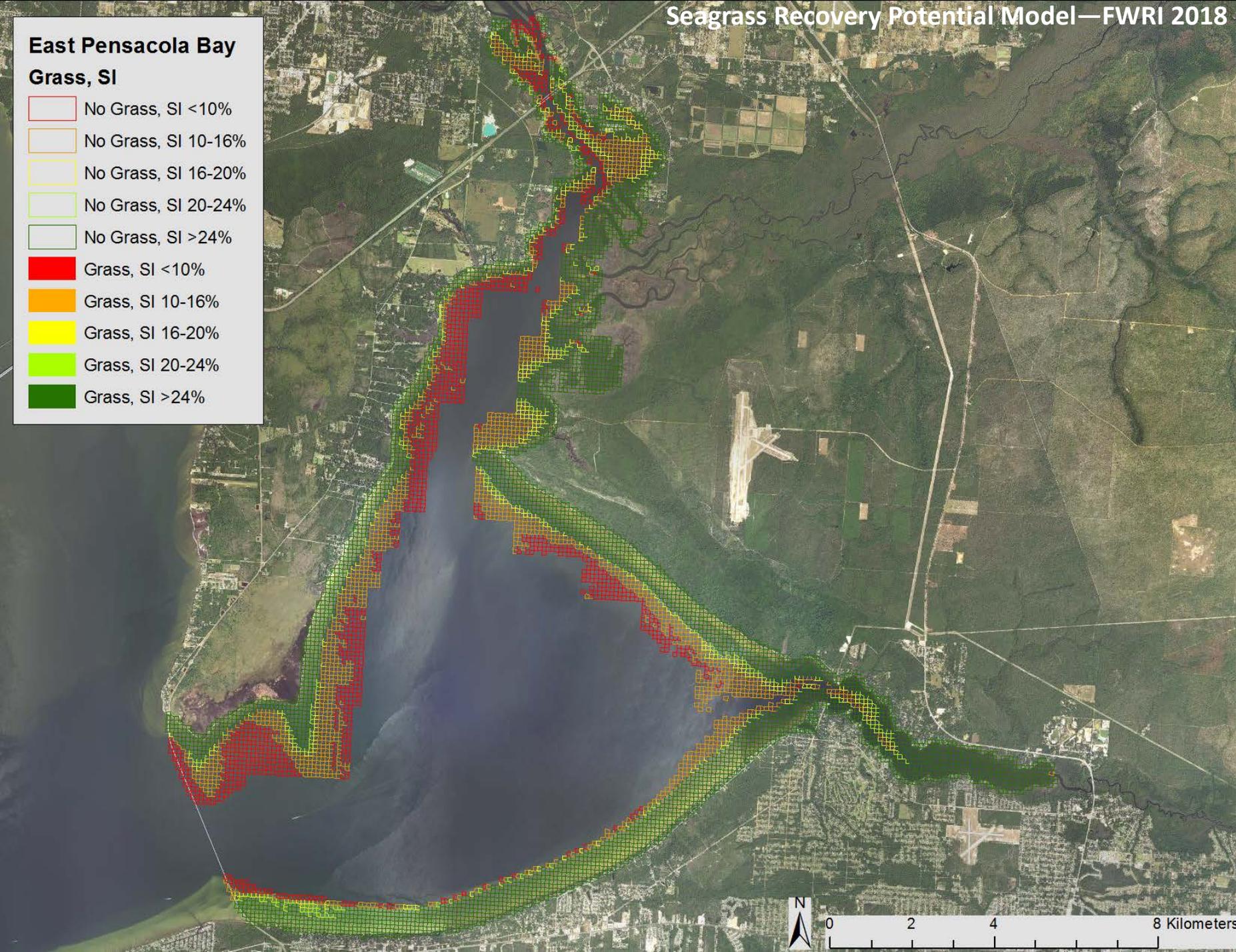


Escambia Bay



**East Pensacola Bay
Grass, SI**

White	No Grass, SI <10%
Light Yellow	No Grass, SI 10-16%
Yellow	No Grass, SI 16-20%
Light Green	No Grass, SI 20-24%
White	No Grass, SI >24%
Red	Grass, SI <10%
Orange	Grass, SI 10-16%
Yellow	Grass, SI 16-20%
Light Green	Grass, SI 20-24%
Dark Green	Grass, SI >24%



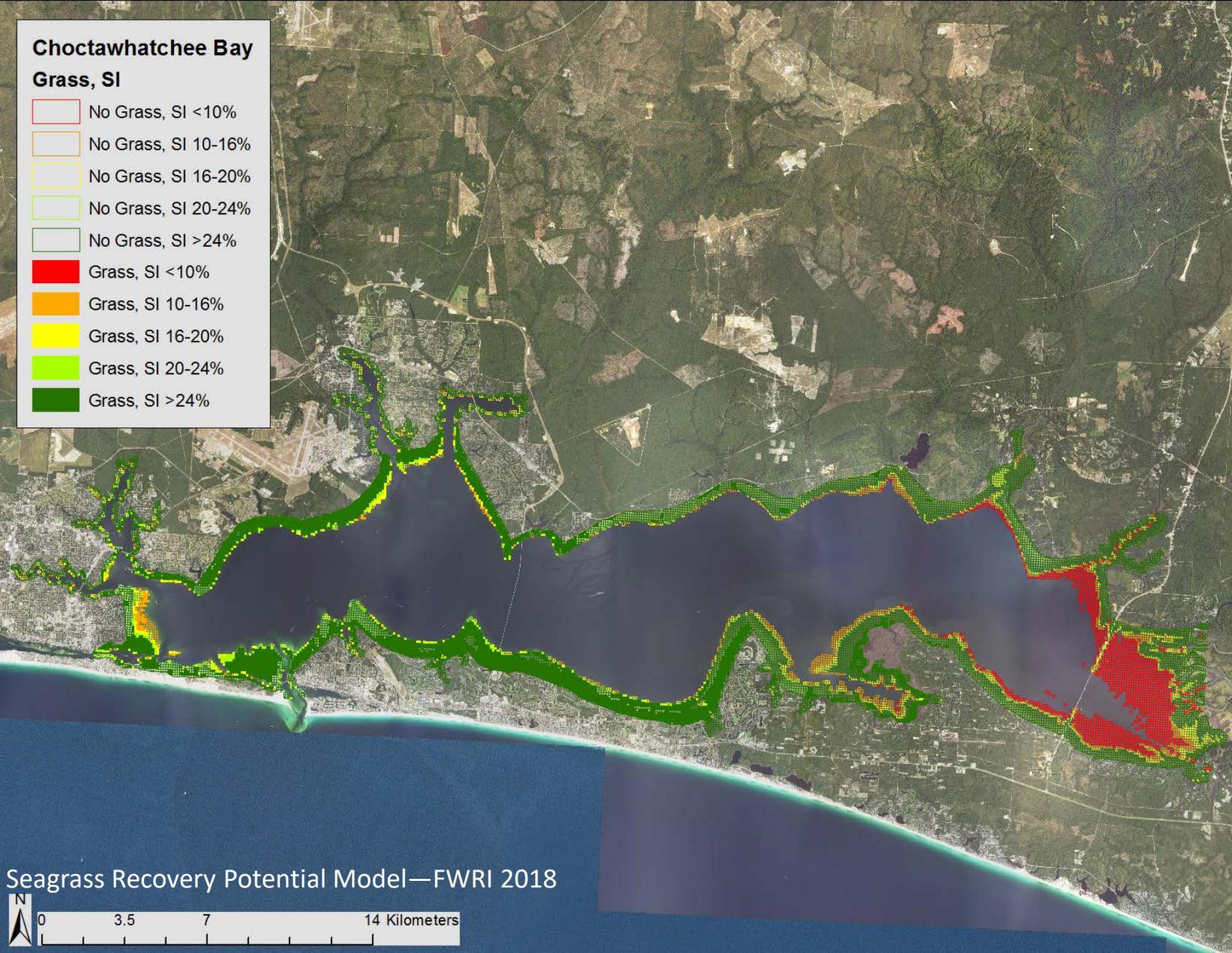
East Bay Pensacola Bay



Choctawhatchee Bay

Grass, SI

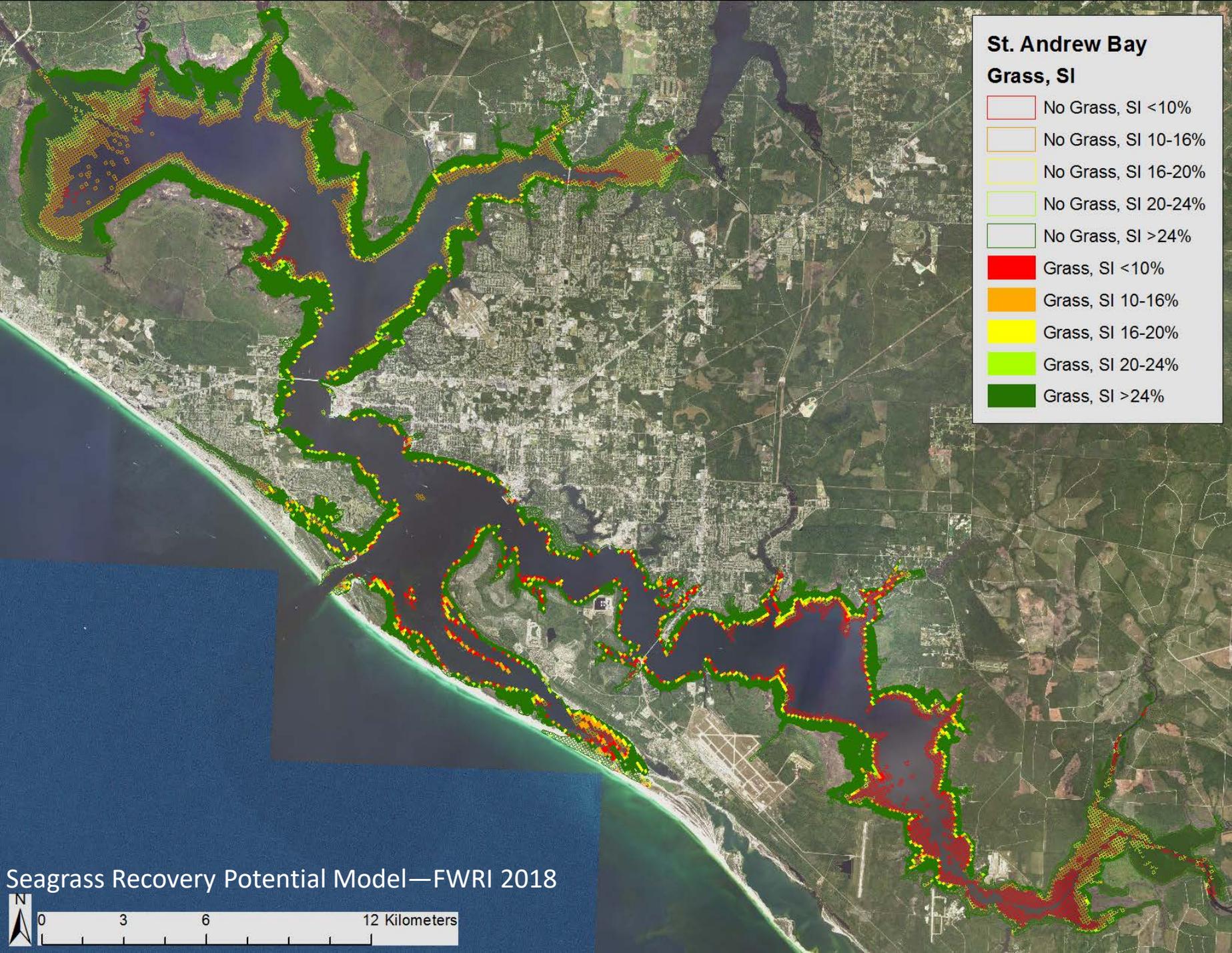
- No Grass, SI <10%
- No Grass, SI 10-16%
- No Grass, SI 16-20%
- No Grass, SI 20-24%
- No Grass, SI >24%
- Grass, SI <10%
- Grass, SI 10-16%
- Grass, SI 16-20%
- Grass, SI 20-24%
- Grass, SI >24%



Choctawhatchee Bay

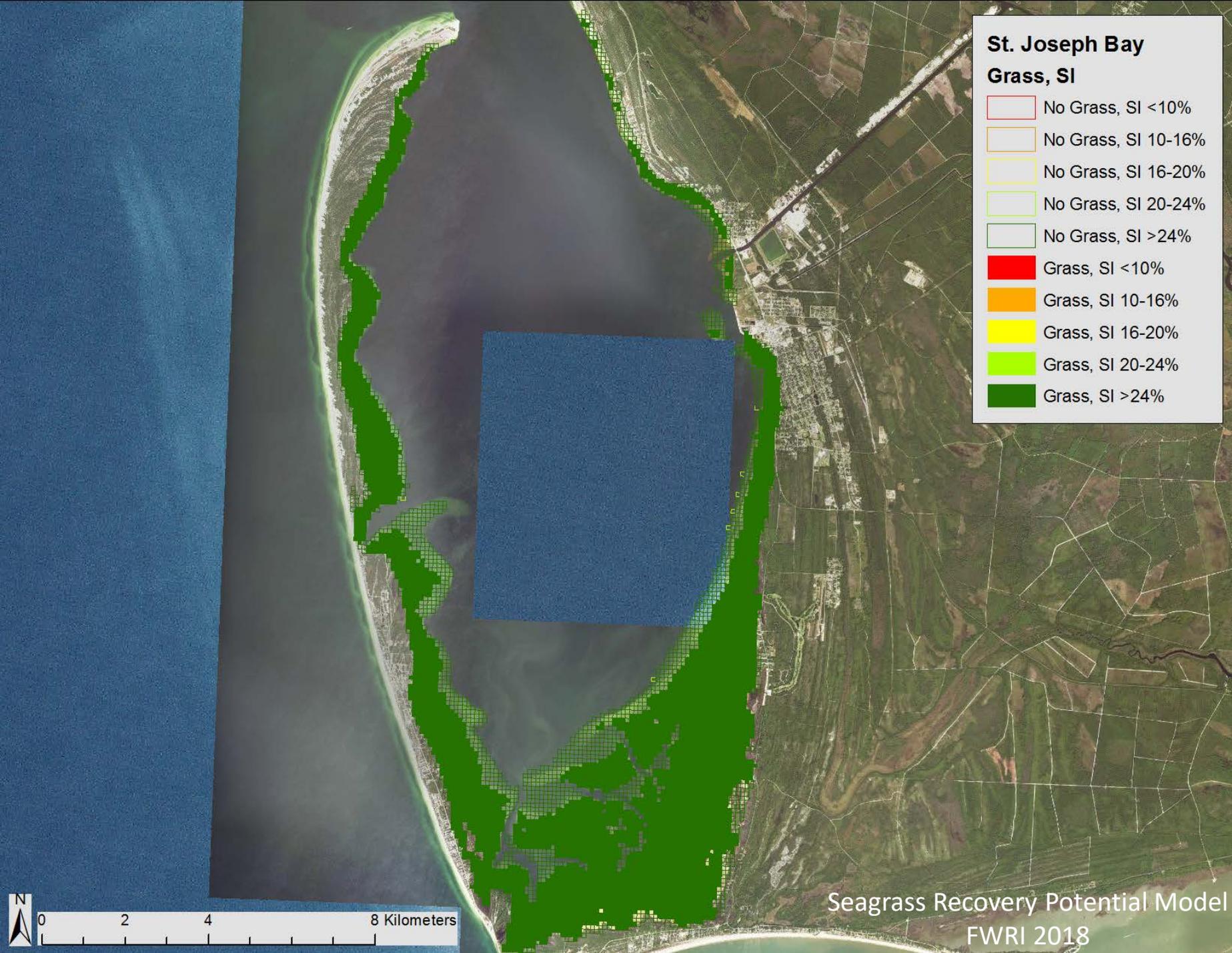
Seagrass Recovery Potential Model—FWRI 2018





St. Andrew Bay





St. Joseph Bay

Grass, SI

- No Grass, SI <10%
- No Grass, SI 10-16%
- No Grass, SI 16-20%
- No Grass, SI 20-24%
- No Grass, SI >24%
- Grass, SI <10%
- Grass, SI 10-16%
- Grass, SI 16-20%
- Grass, SI 20-24%
- Grass, SI >24%

St. Joseph Bay



Seagrass Recovery Potential Model
FWRI 2018