## Submerged Aquatic Vegetation (SAV)

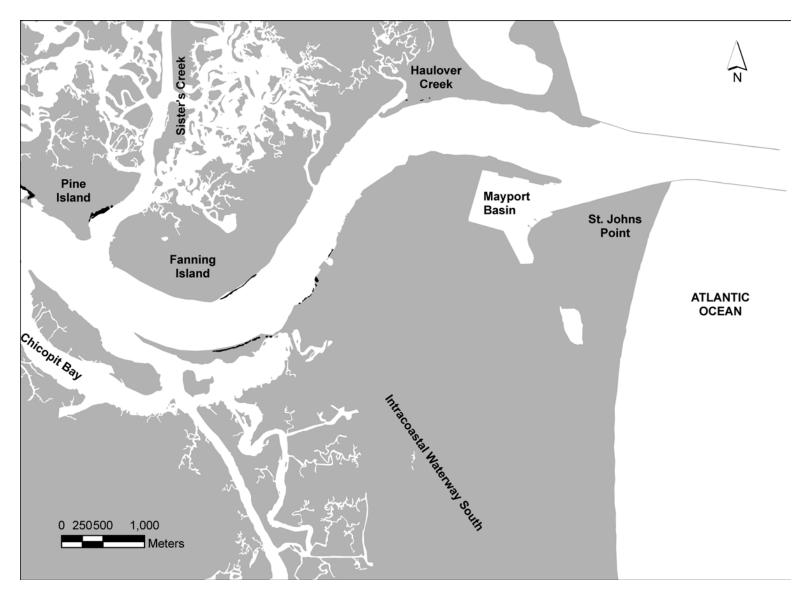
1998 Photo interpreted data was used to illustrate the extents of SAV. Photo interpretation underestimated SAV extent at approximately 50% of ground truth sites. In this section photo identified areas of SAV are presented with detection beginning south of Christopher Creek (east bank) and south of Pirates Cove (west bank) of LSJR. SAV was not detected North of Ortega River and in those areas emergent vegetation only is indicated in these maps (Dobberfuhl, 2002).

Dobberfuhl, D., 2002. Distribution of submerged aquatic vegetation in the Lower St. Johns River: 1998 atlas. SJRWMD, Professional Paper SJ2002-PP1.

Hyperspectral imagery was obtained and mapped for 2003 to determine SAV extents. Imagery was not obtained north of the Fuller Warren Bridge. Data has been included where appropriate following the respective 1998 map. Photo interpretation and delineation of the 2001 imagery was performed on computer monitors using scanned aerial imagery. This methodology was unsuccessful and failed to identify SAV in many areas of the river (Dobberfuhl and Trahan 2003). In 2003, the decision was made to obtain hyperspectral imagery focusing on those spectral bands thought to be characteristic of important vegetative and benthic features. This imagery appears to be more sensitive than the true color imagery previously obtained and better characterizes grass bed features. Hyperspectral imagery classification was generally successful and appeared to identify a greater proportion of the existing SAV than previous attempts using true color photo interpretation (Dobberfuhl D., and C. Hart. 2004).

Dobberfuhl, D., and C. Hart 2004 (unpub). Distribution of submerged aquatic vegetation in the Lower St. Johns River: 2004 atlas. SJRWMD, Professional Paper SJ2004-PP1.

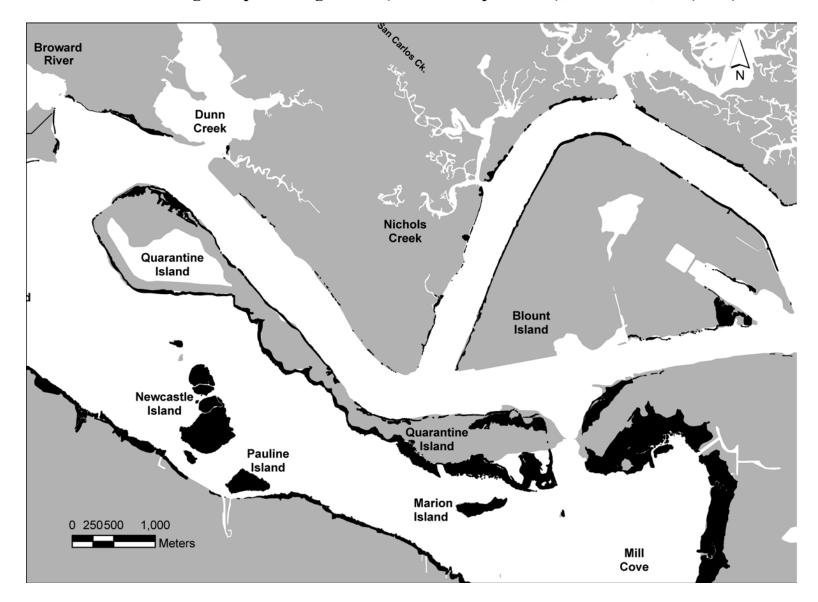
## **SERIES C – SUBMERGED AQUATIC VEGETATION (SAV)**



SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

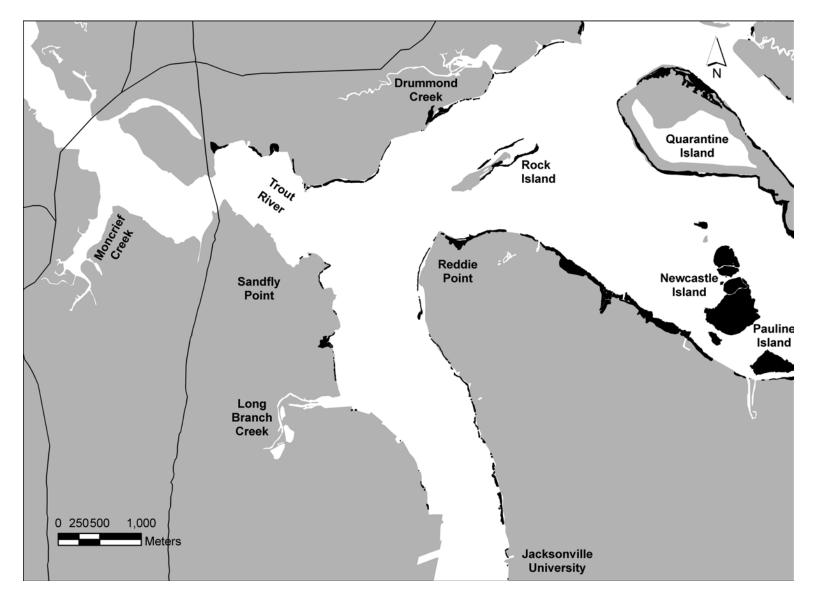


SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).



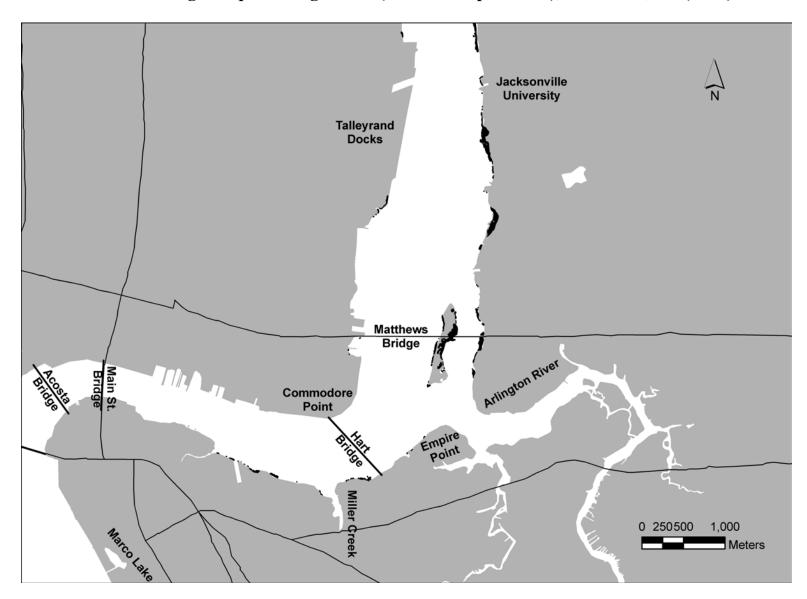
SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

Source: SJRWMD 2002. Note emergent vegetation (black shaded areas). No SAV (white polygons). Note: Photo interpretation tended to under estimate the abundance of SAV.



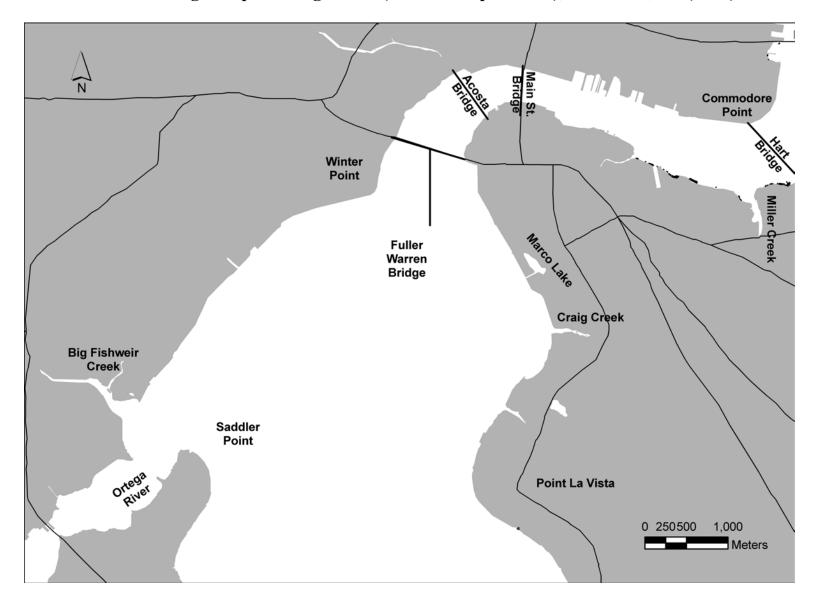
SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

Source: SJRWMD 2002. Note emergent vegetation (black shaded areas). No SAV (white polygons). Note: Photo interpretation tended to under estimate the abundance of SAV.

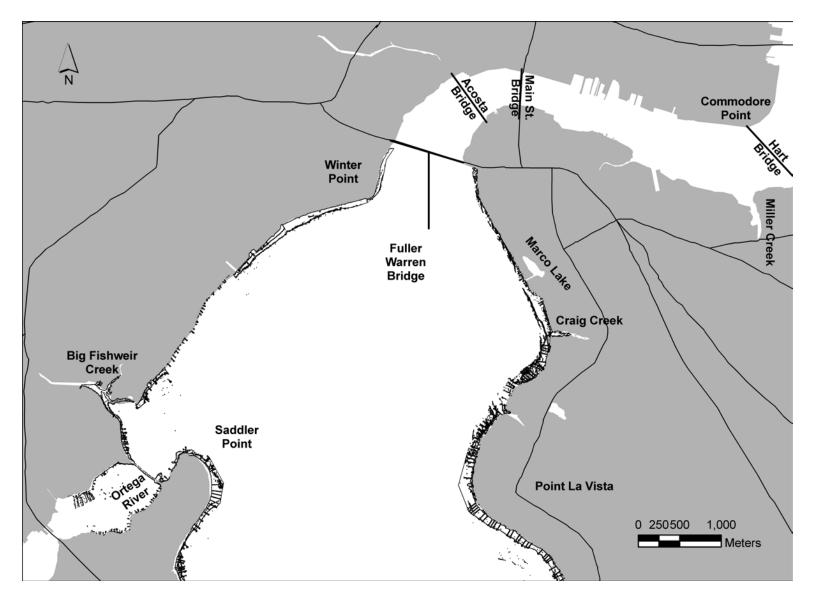


SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

Source: SJRWMD 2002. Note emergent vegetation (black shaded areas). No SAV (white polygons). Note: Photo interpretation tended to under estimate the abundance of SAV.

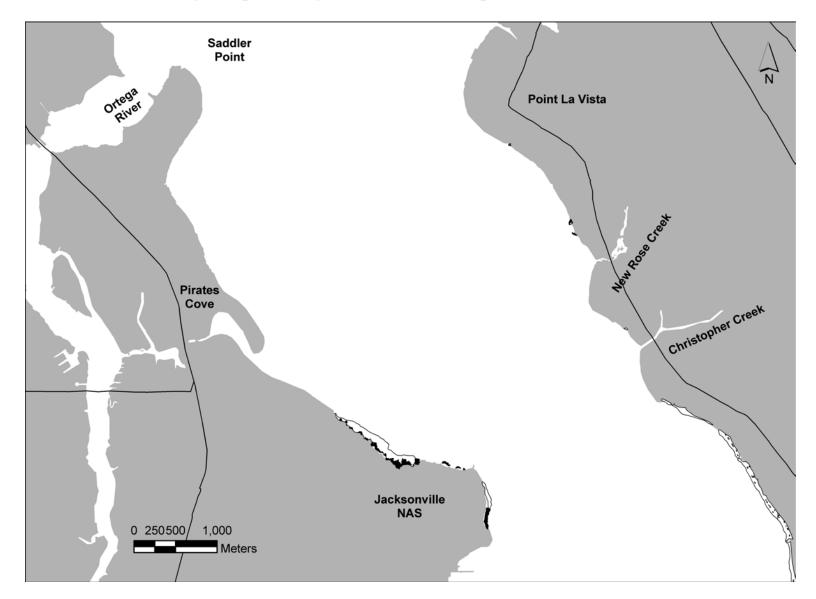


SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).



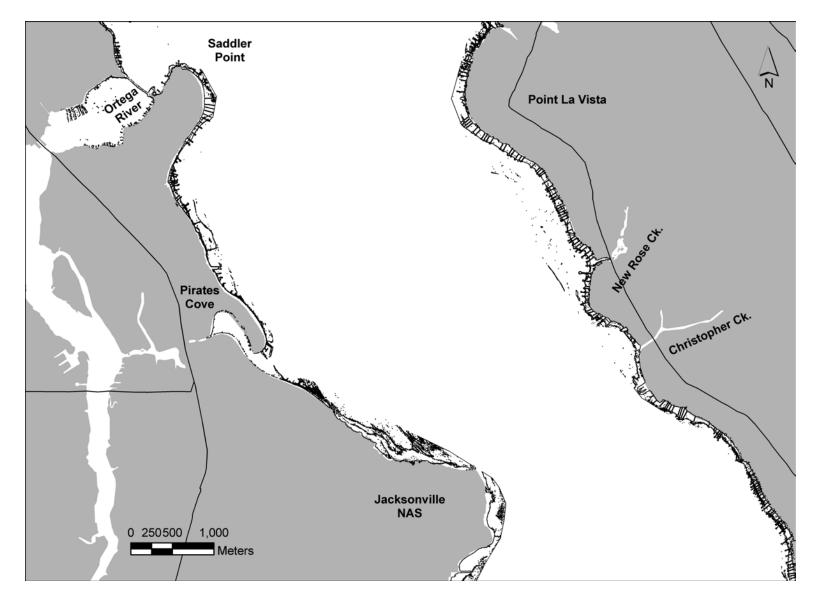
SERIES C – Submerged Aquatic Vegetation (Hyperspectral), Duval Co., FL (2003).

Source: SJRWMD 2003. Note SAV only.



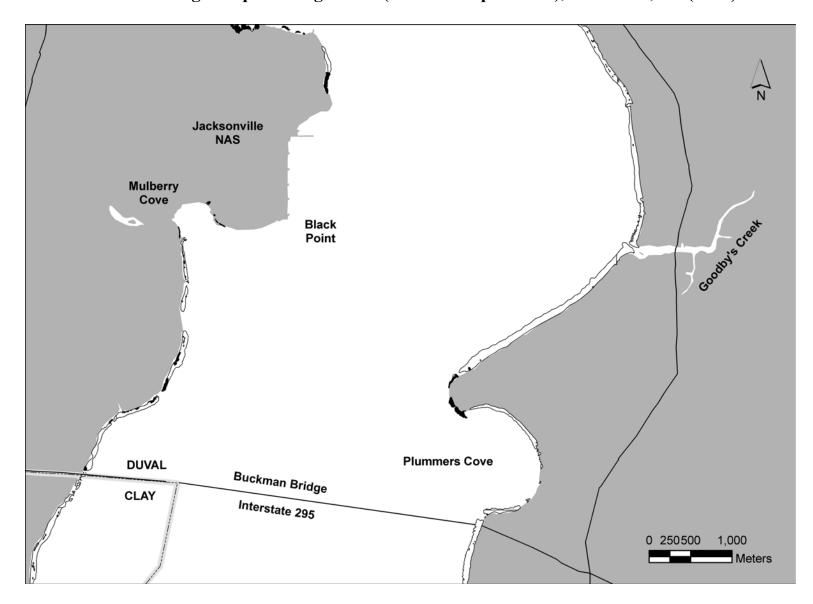
SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

Source: SJRWMD 2002. Note emergent vegetation (black shaded areas) and SAV (white polygons). Note in this map **SAV BEGINS** south of Christopher Creek (east bank) and south of Pirates Cove (west bank). Note: Photo interpretation tended to under estimate the abundance of SAV.

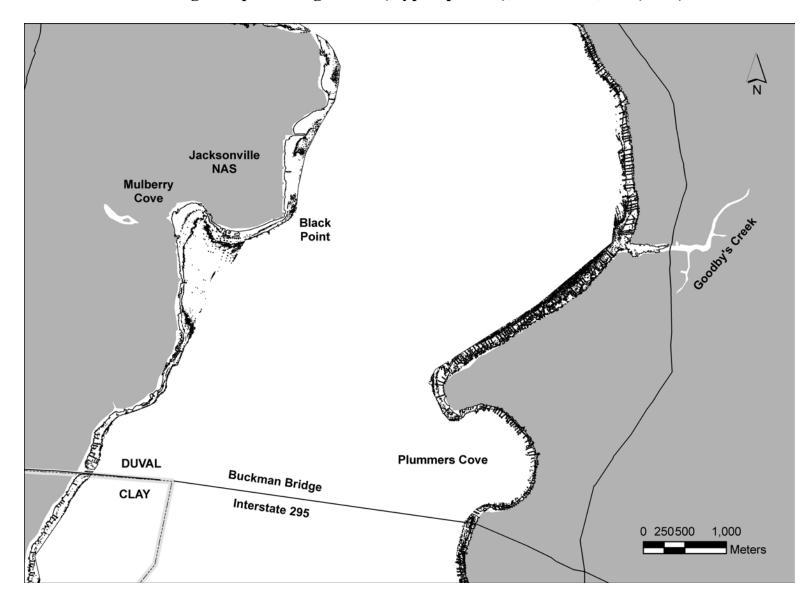


SERIES C – Submerged Aquatic Vegetation (Hyperspectral), Duval Co., FL (2003).

Source: SJRWMD 2003. Note SAV only.

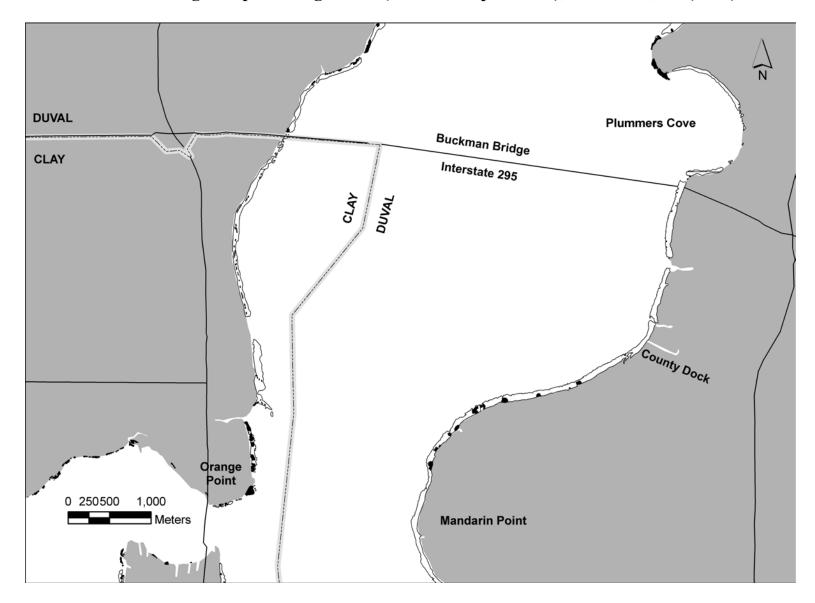


SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

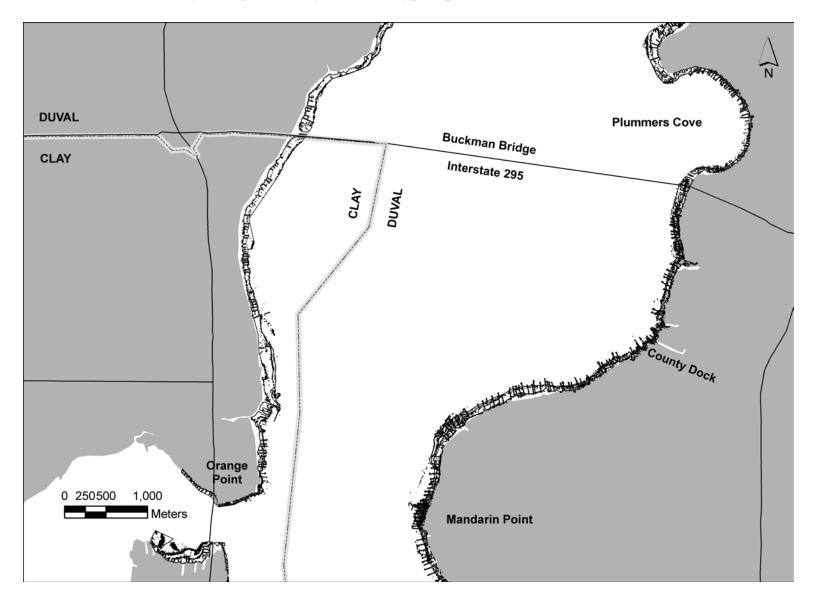


SERIES C – Submerged Aquatic Vegetation (Hyperspectral), Duval Co., FL (2003).

Source: SJRWMD 2003. Note SAV only.

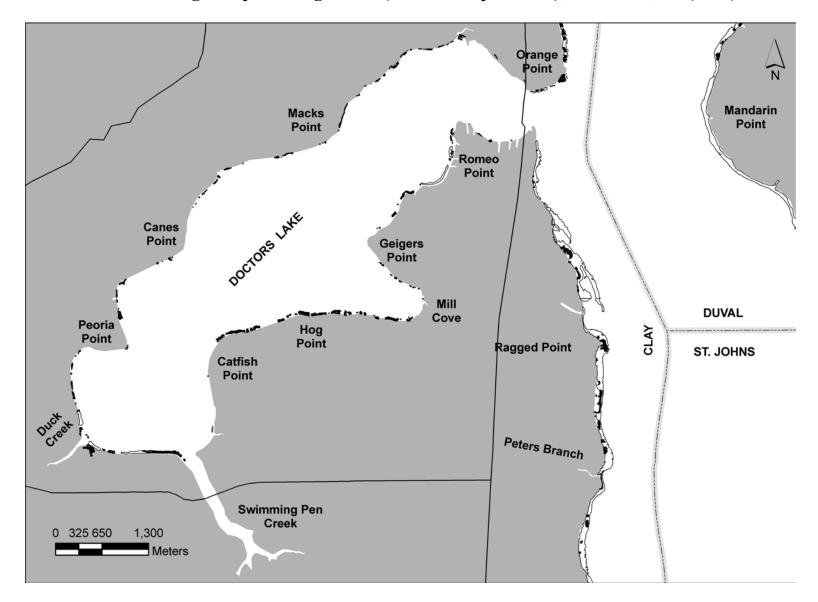


SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

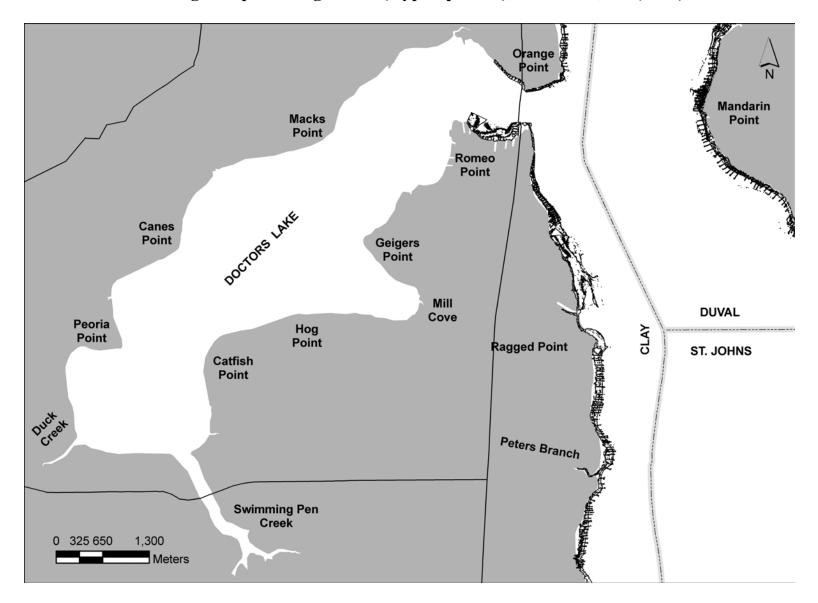


SERIES C – Submerged Aquatic Vegetation (Hyperspectral), Duval Co., FL (2003).

Source: SJRWMD 2003. Note SAV only.

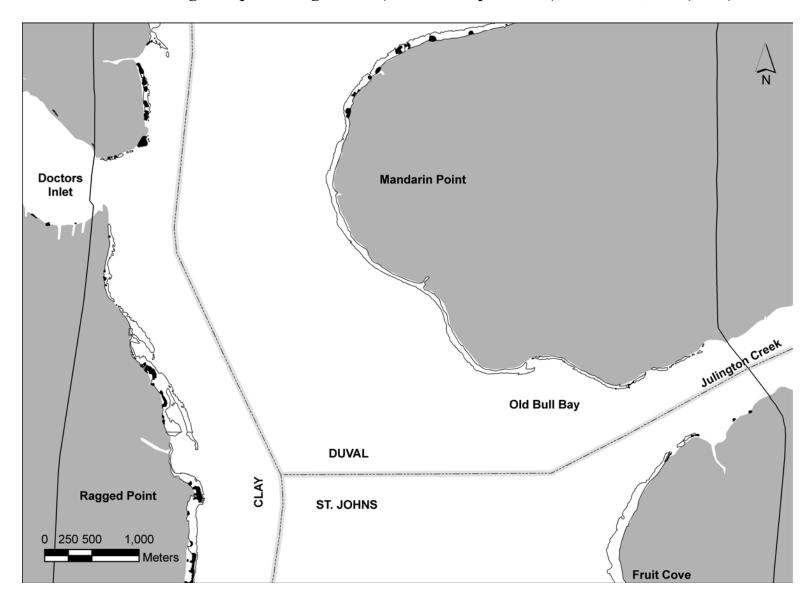


SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

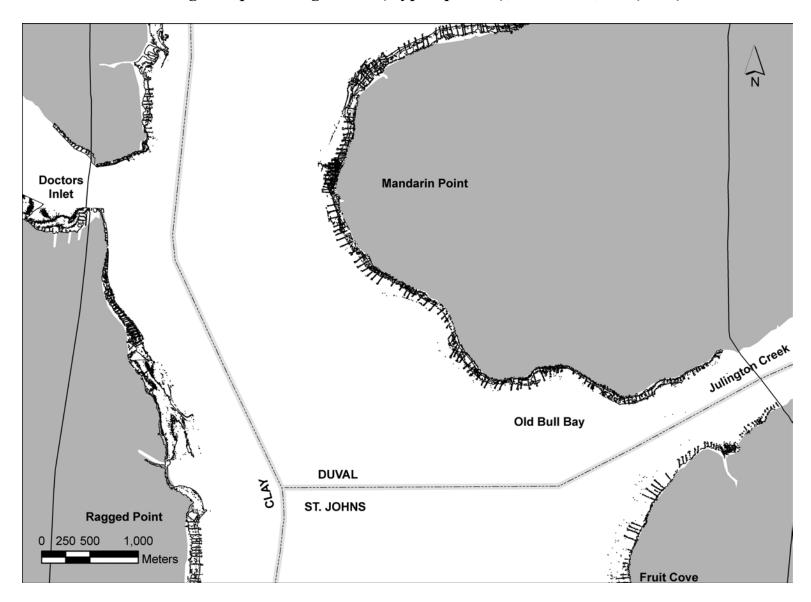


SERIES C – Submerged Aquatic Vegetation (Hyperspectral), Duval Co., FL (2003).

Source: SJRWMD 2003. Note SAV only. Doctors Lake not included.

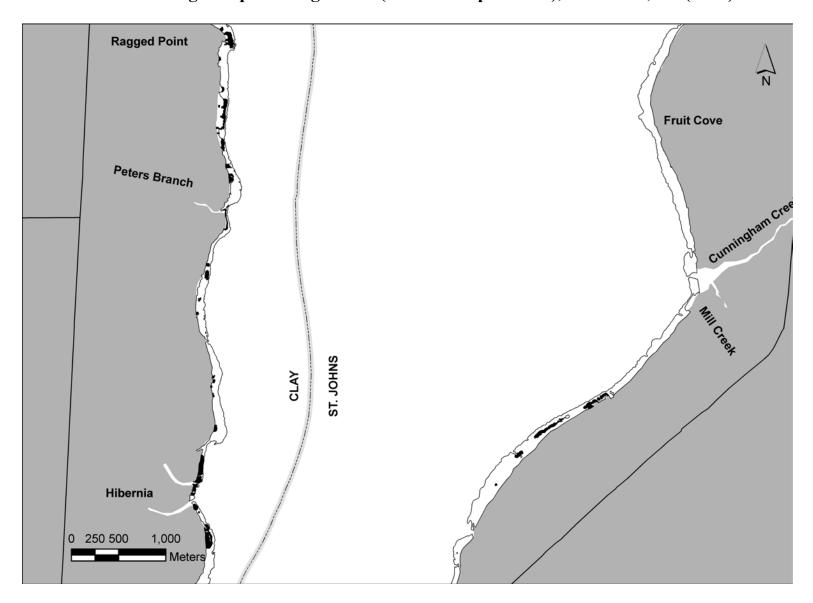


SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).



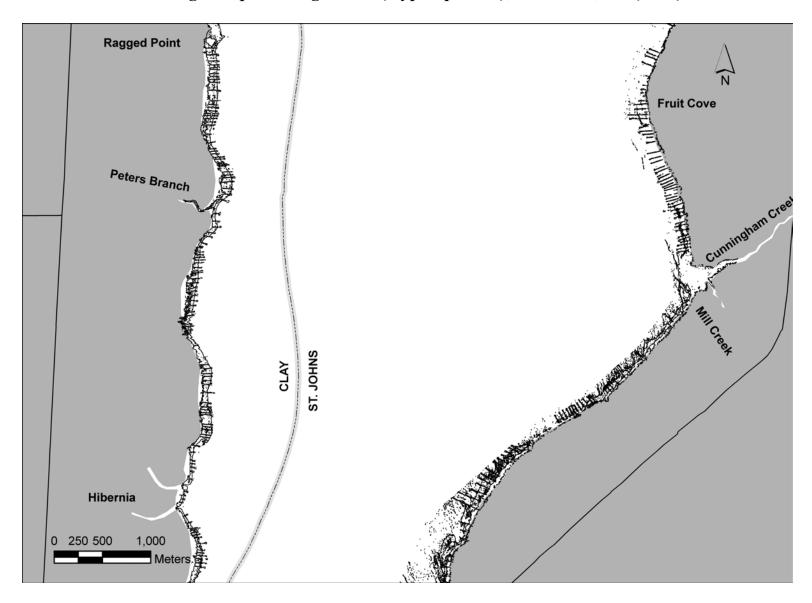
SERIES C – Submerged Aquatic Vegetation (Hyperspectral), Duval Co., FL (2003).

Source: SJRWMD 2003. Note SAV only.



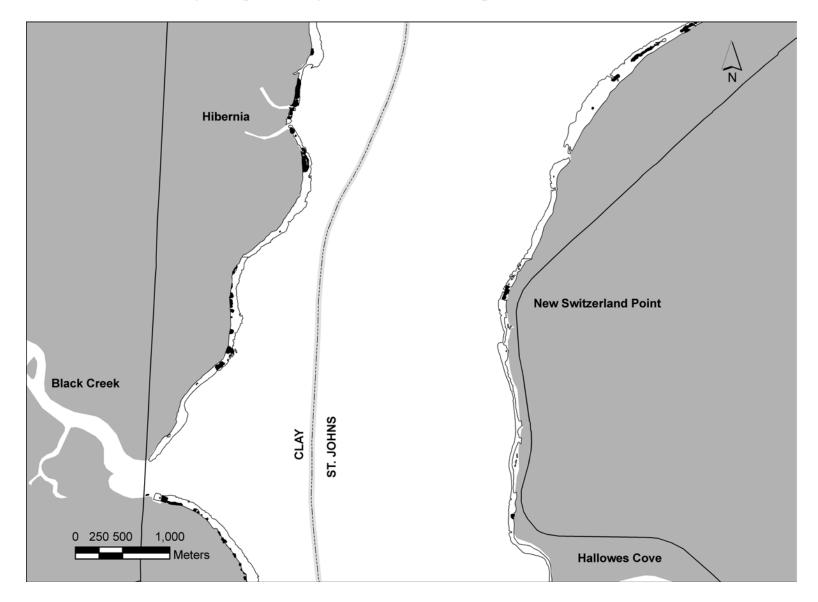
SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

Source: SJRWMD 2002. Note emergent vegetation (black shaded areas) ands SAV (white polygons). Note: Photo interpretation tended to under estimate the abundance of SAV.



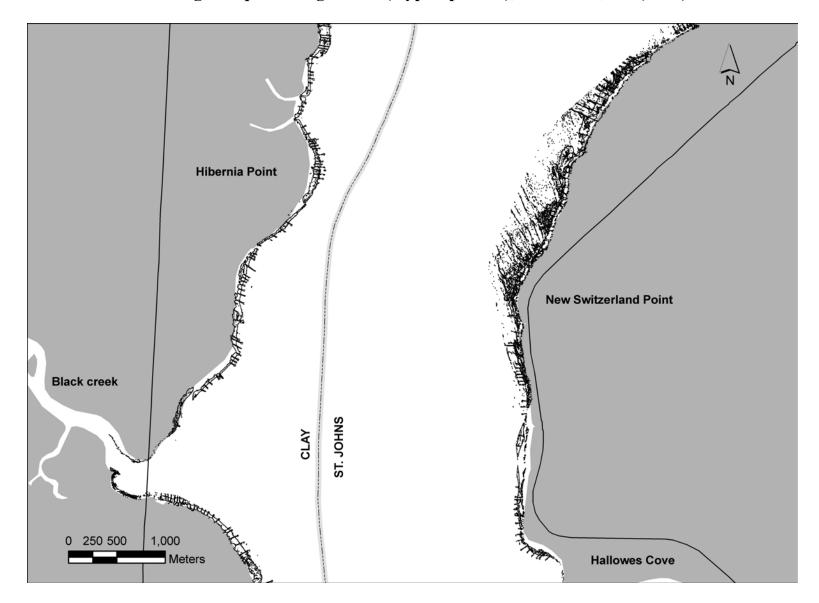
SERIES C – Submerged Aquatic Vegetation (Hyperspectral), Duval Co., FL (2003).

Source: SJRWMD 2003. Note SAV only.



SERIES C – Submerged Aquatic Vegetation (Photo Interpretation), Duval Co., FL (1998).

Source: SJRWMD 2002. Note emergent vegetation (black shaded areas) and SAV (white polygons). Note: Photo interpretation tended to under estimate the abundance of SAV.



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