

FIGURES

Figure 1. Map of seagrass study area in Texas Coastal Bend region.

Study Area for Seagrass Project and Quadrangle Map Index

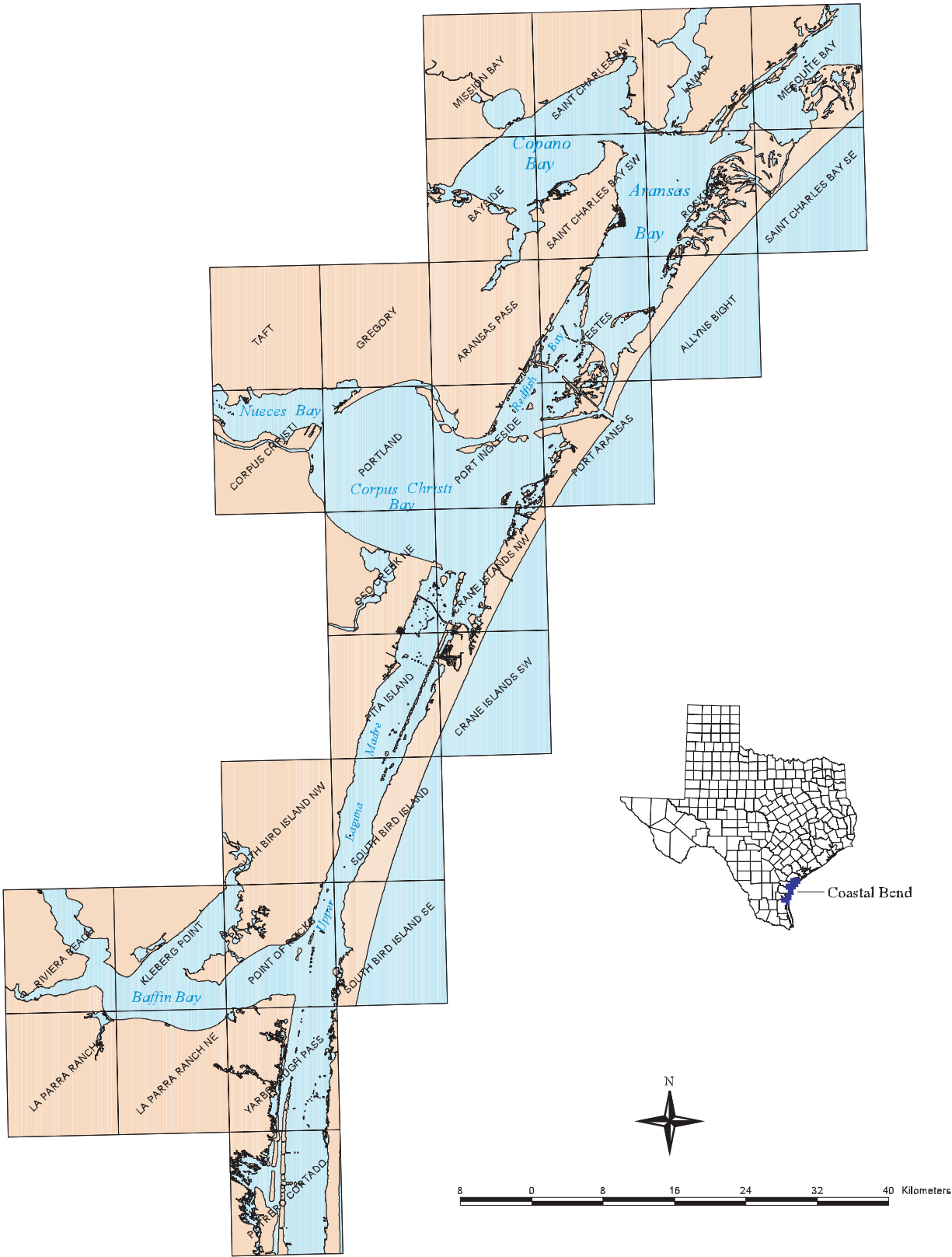
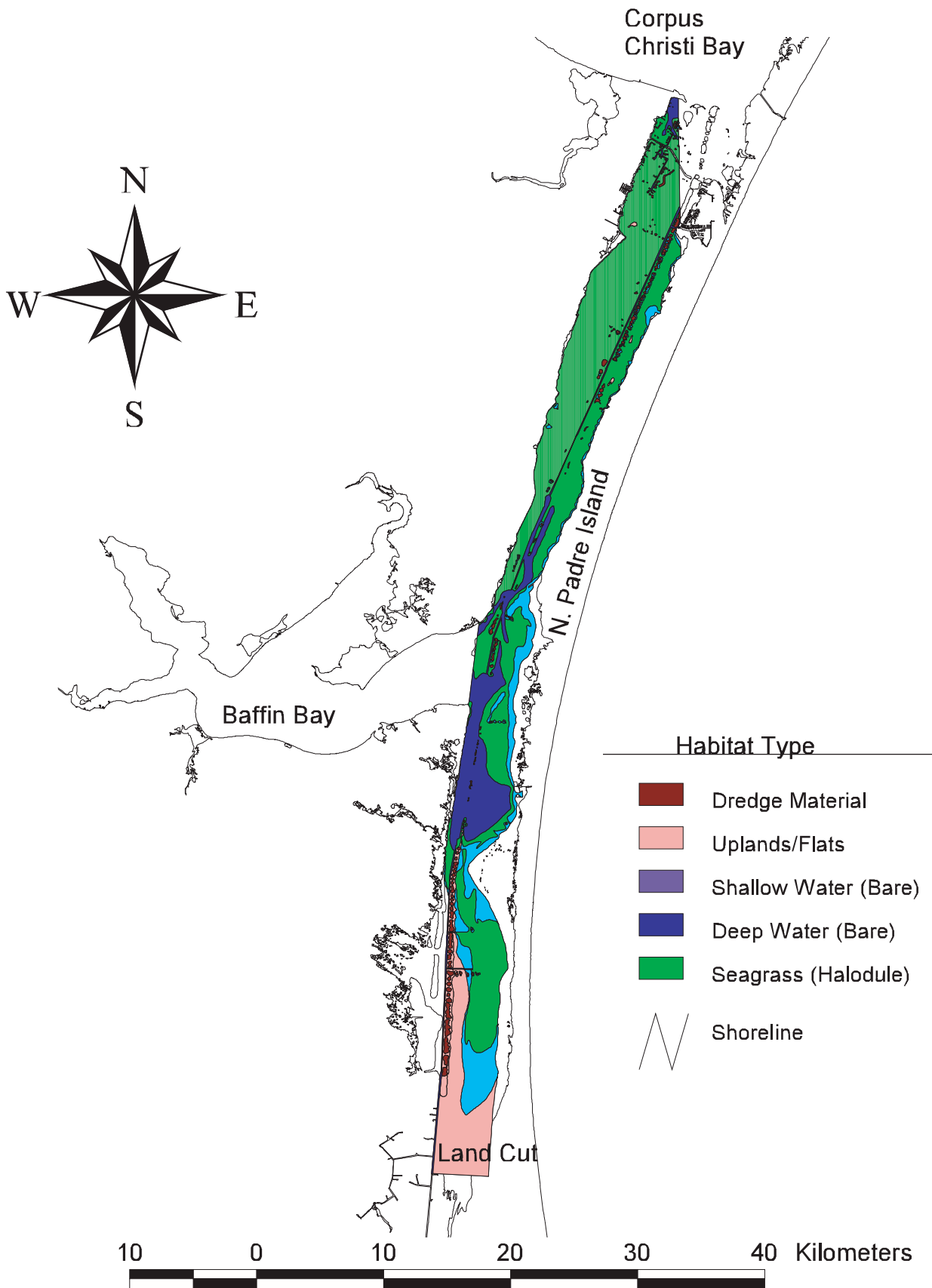


Figure 2. Seagrass distribution in 1988 in upper Laguna Madre. From Quammen and Onug (1993).

1988 Seagrass Distribution in Upper Laguna Madre



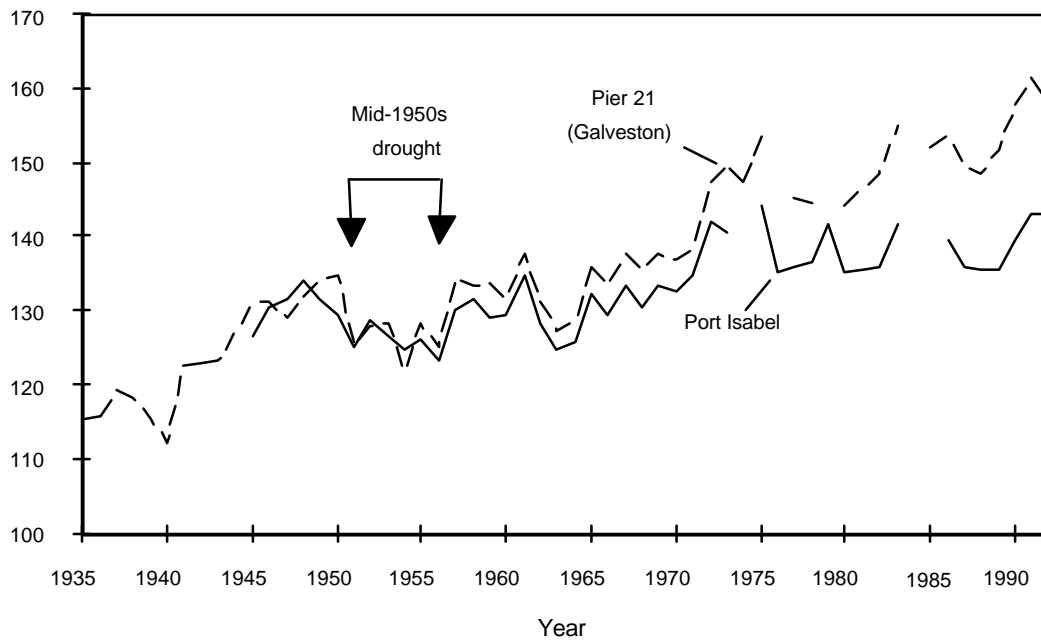


Figure 3. Water level changes at Galveston Pier 21 and Port Isabel tide gauges. The drop in water levels in the mid-1950s reflects the severe drought during that period. Tide gauge data from Lyles et al. (1988) and NOAA.

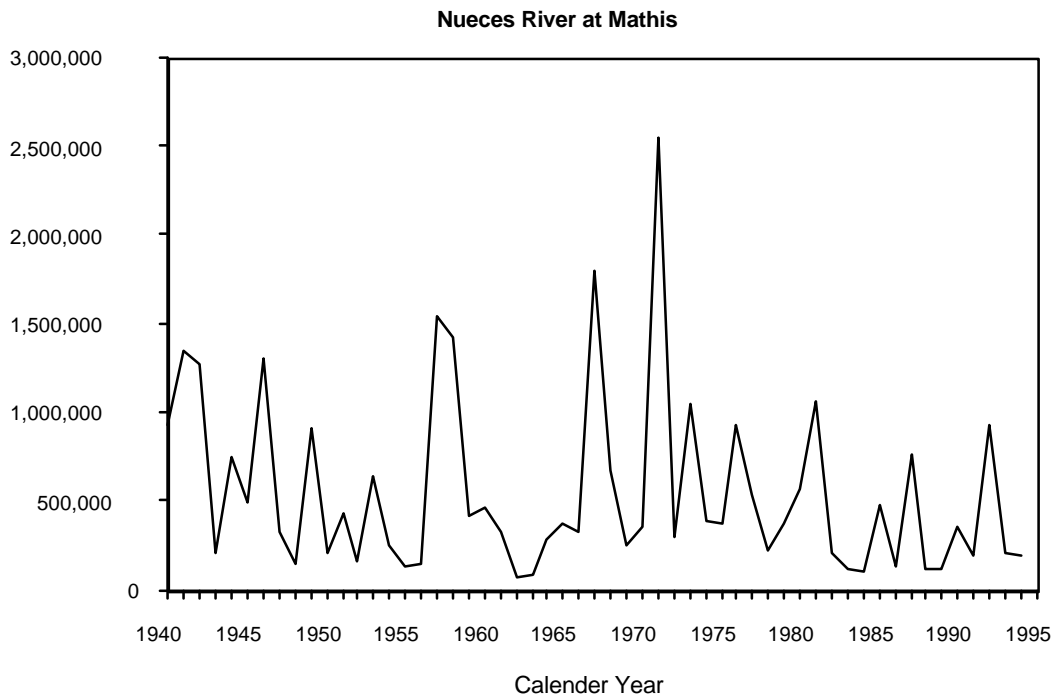


Figure 4. Mean annual streamflow of the Nueces River at Mathis. Data from Texas Water Development Board and U.S. Geological Survey.

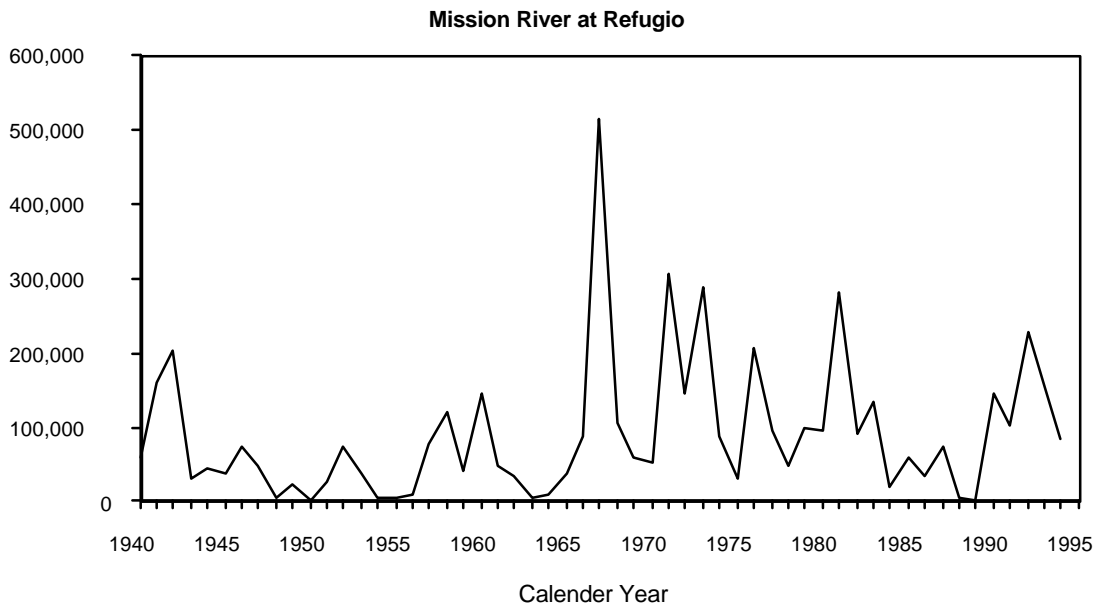


Figure 5. Mean annual streamflow of the Mission River at Refugio. Data from U.S. Geological Survey.

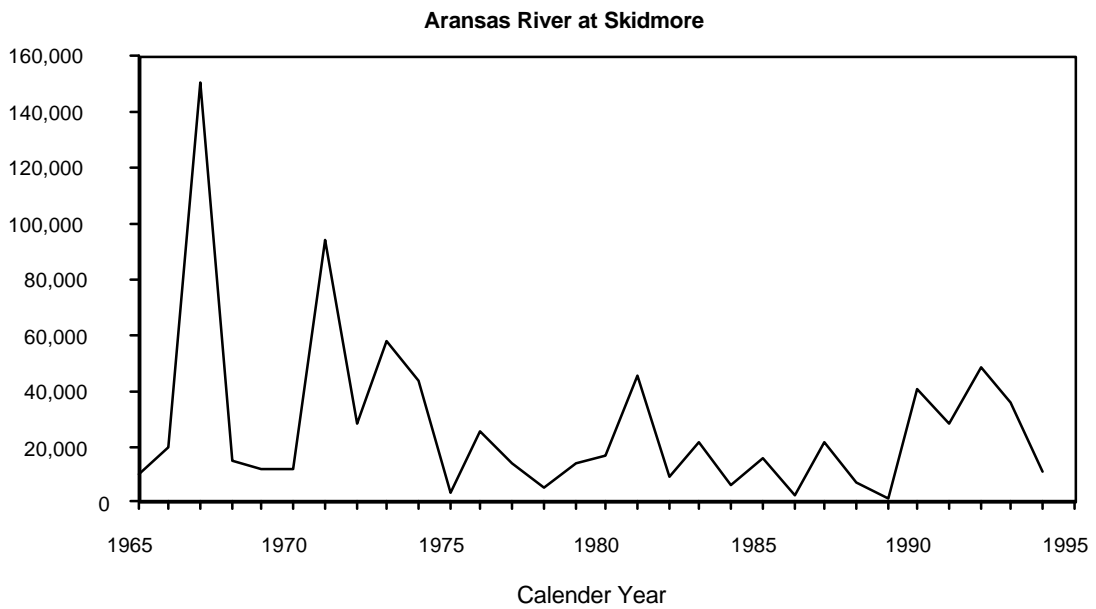


Figure 6. Mean annual streamflow of the Aransas River at Skidmore. Data from U.S. Geological Survey.

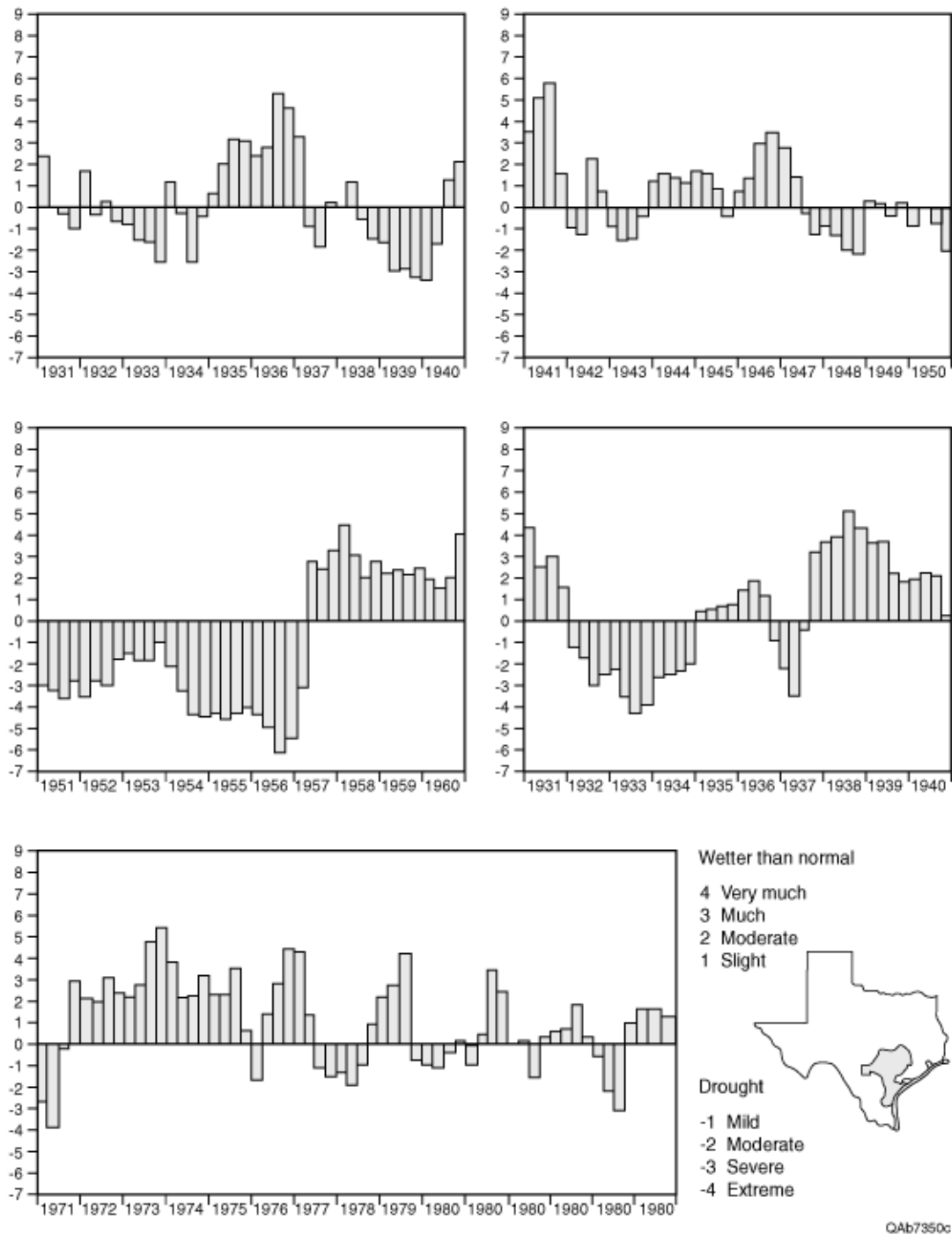


Figure 7. Index of wetter than normal and drier than normal periods in South Texas including the Corpus Christi Bay system. From Riggio et al. (1987).

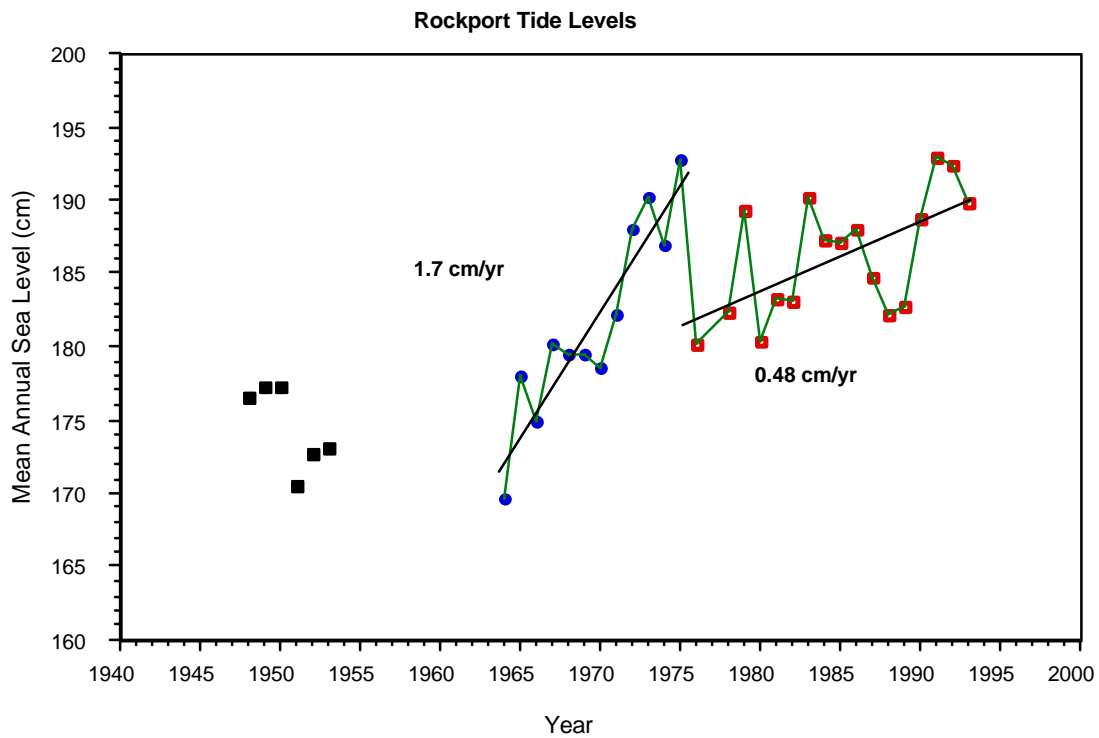


Figure 8. Rates of sea level rise for two periods at the Rockport tide gauge. Tide gauge data from NOAA.

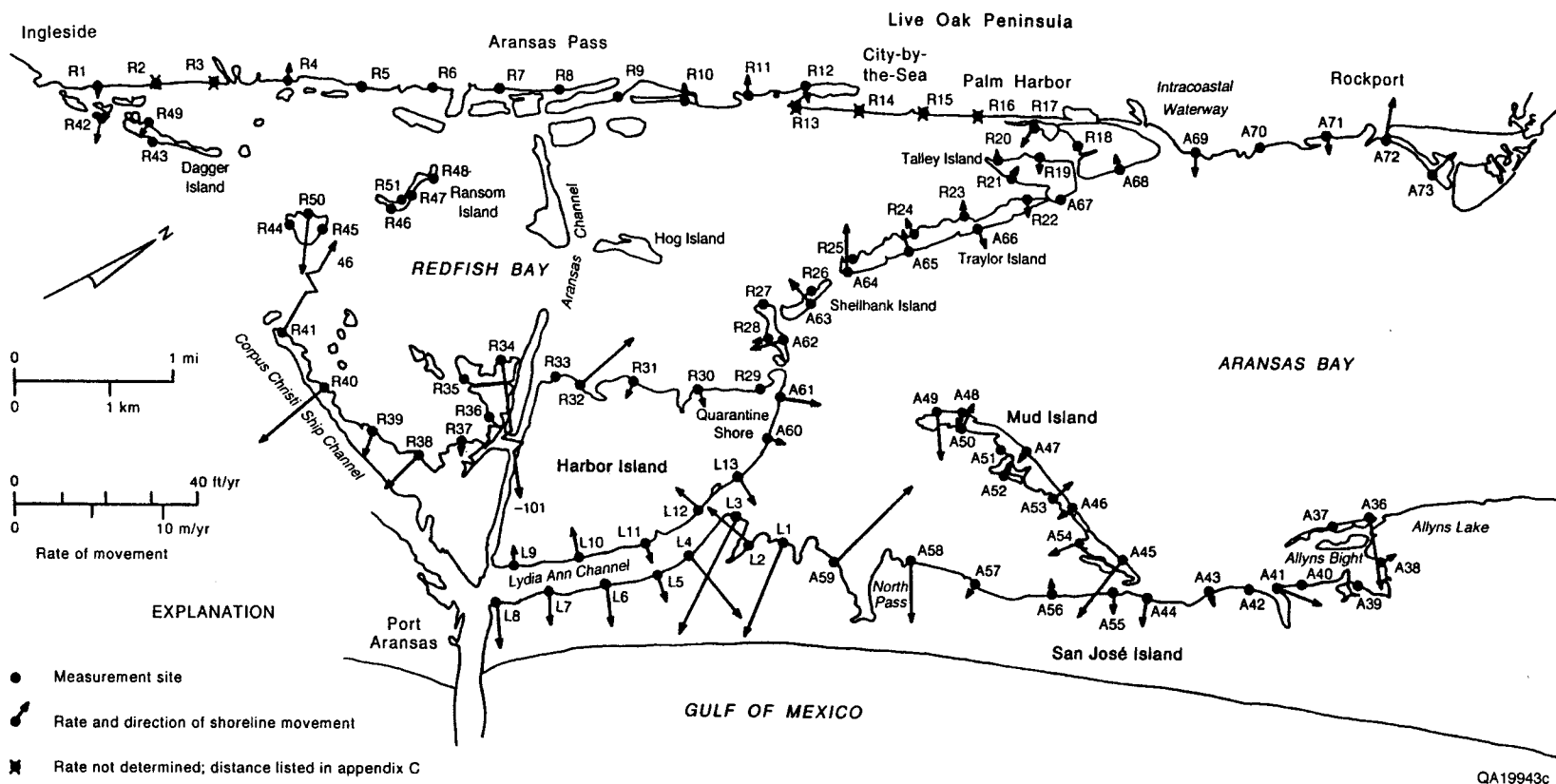


Figure 9. Shoreline station locations and changes in shoreline position from 1958-1983 in the Redfish Bay area. From Paine and Morton (1993)






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Figure 10. Map showing location of USACOE dredged channels and disposal areas in Redfish/Corpus Christi Bays region.

Corps of Engineers Dredging/Deposit Areas Redfish Bay/Harbor Island

DREDGED CHANNELS

-  Channel to Aransas Pass
-  Corpus Christi Ship Channel
-  GIWW
-  Jetty Channel
-  Lydia Ann Channel

OTHER

-  Deposit Areas
-  Hydrology
-  Channels

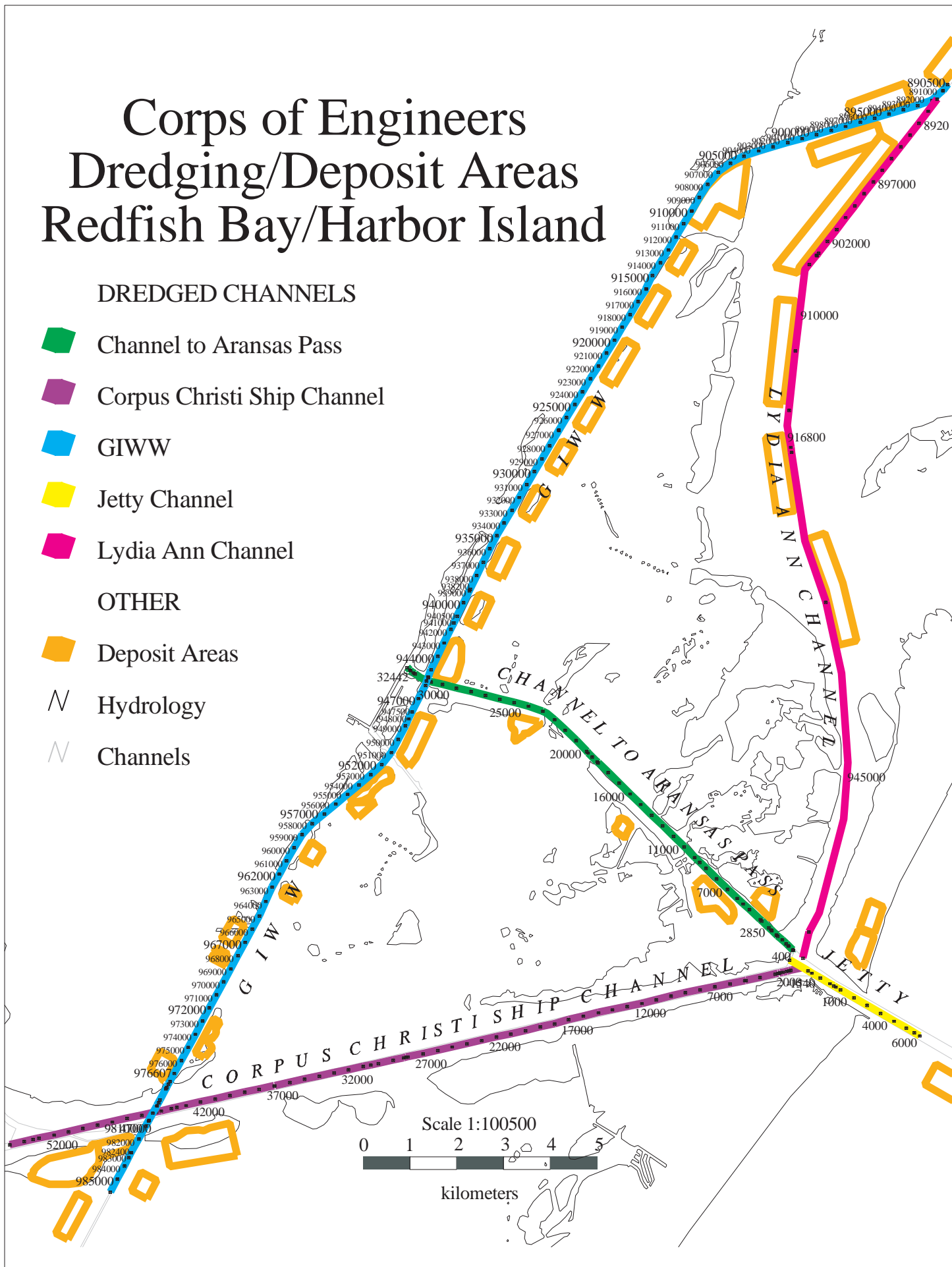




Figure 11. Aerial photograph taken in 1958 showing examples of interbay channels and recently deposited dredged material in south Redfish Bay.

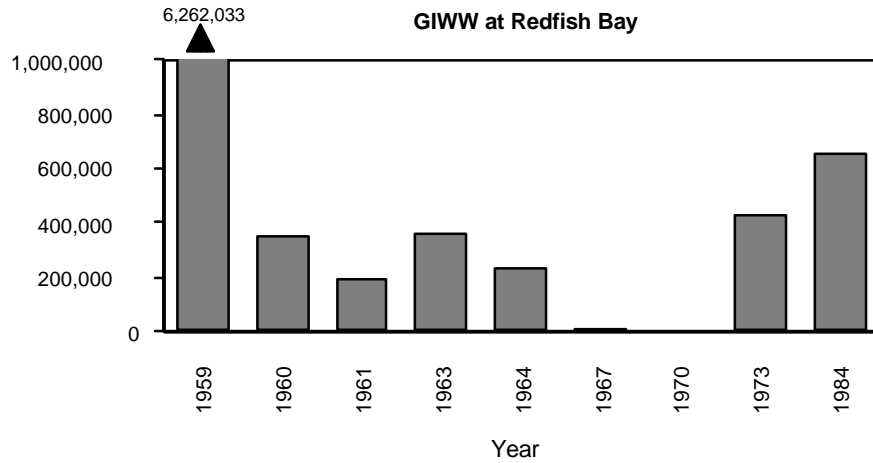


Figure 12. Year and volume of material dredged from Redfish Bay area. From USACOE records.

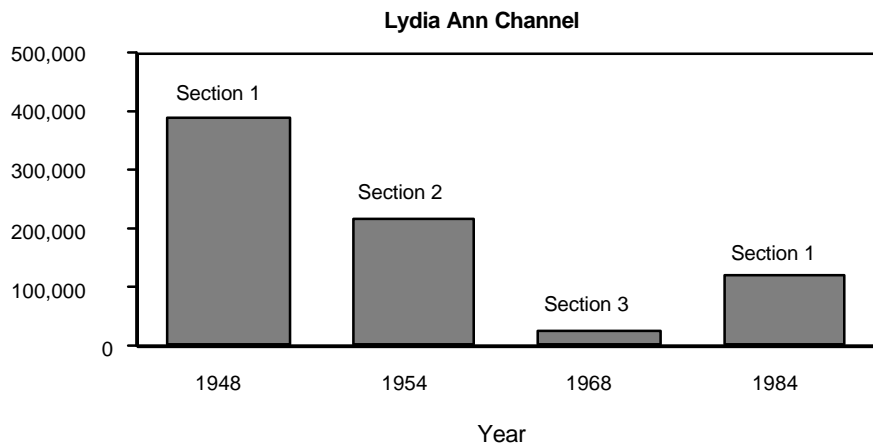


Figure 13. Year and volume of material dredged from Lydia Ann Channel including extension to the GIWW in Aransas Bay. From USACOE records.

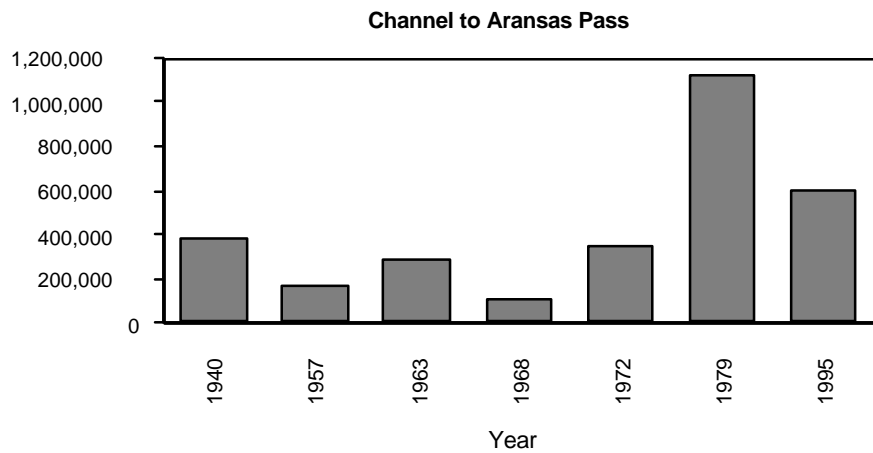
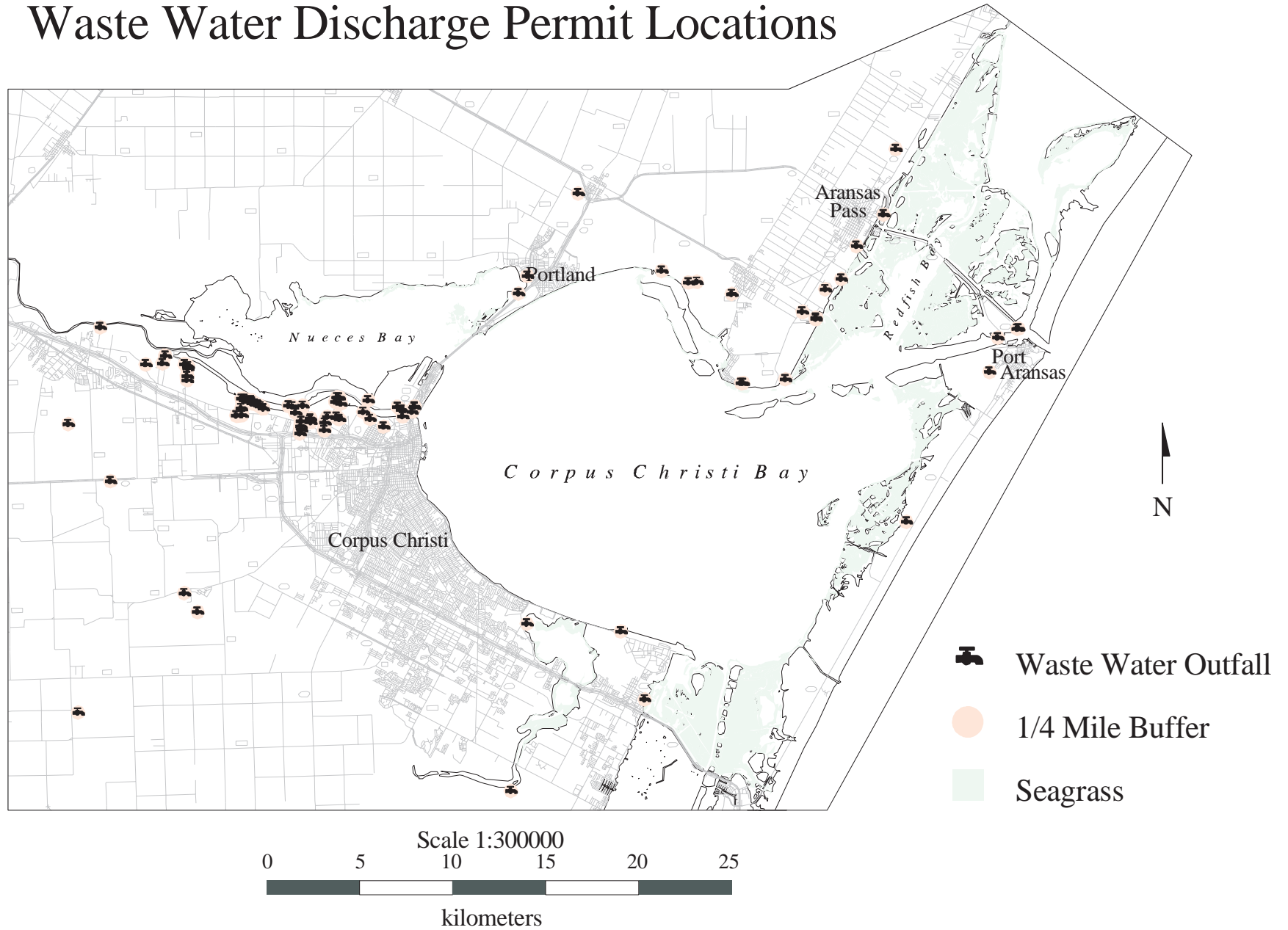


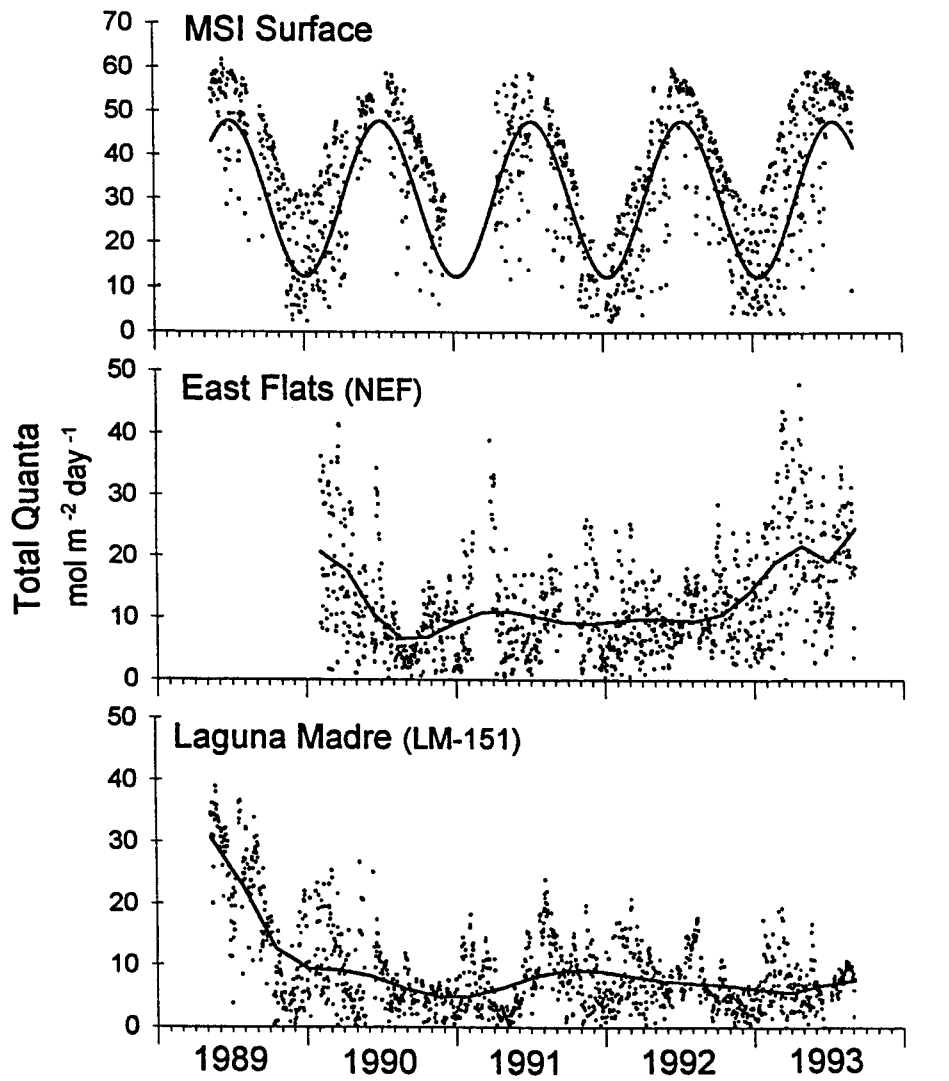
Figure 14. Year and volume of material dredged from channel to Aransas Pass. From USACOE records.

Figure 15. Wastewater discharge permit locations in Corpus Christi Bay System. From TNRCC permit records.

Texas Natural Resource Conservation Commission Waste Water Discharge Permit Locations



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Figure 16. Daily, underwater and surface, total quantum flux measurements collected at three sites in CCBNEP study area from May 1989 to September 1993. Based on continuous 1-hr integrations. From Dunton (1994).

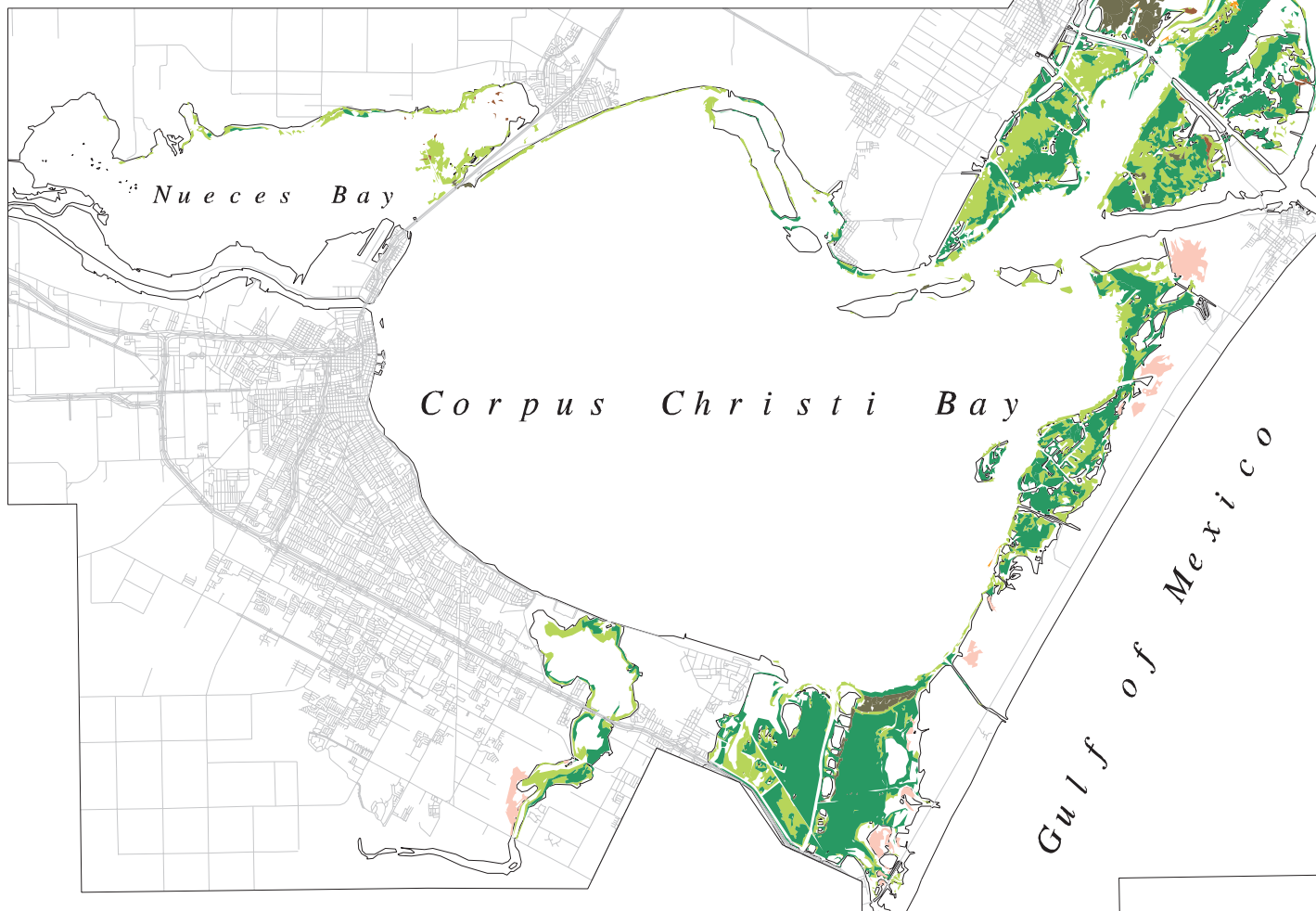
Figure 17. Seagrass bed distribution in 1994 for Corpus Christi Bay System.

Corpus Christi Bay Seagrass Study Area

Scale 1:250000

0 5 10 15 20 25

kilometers









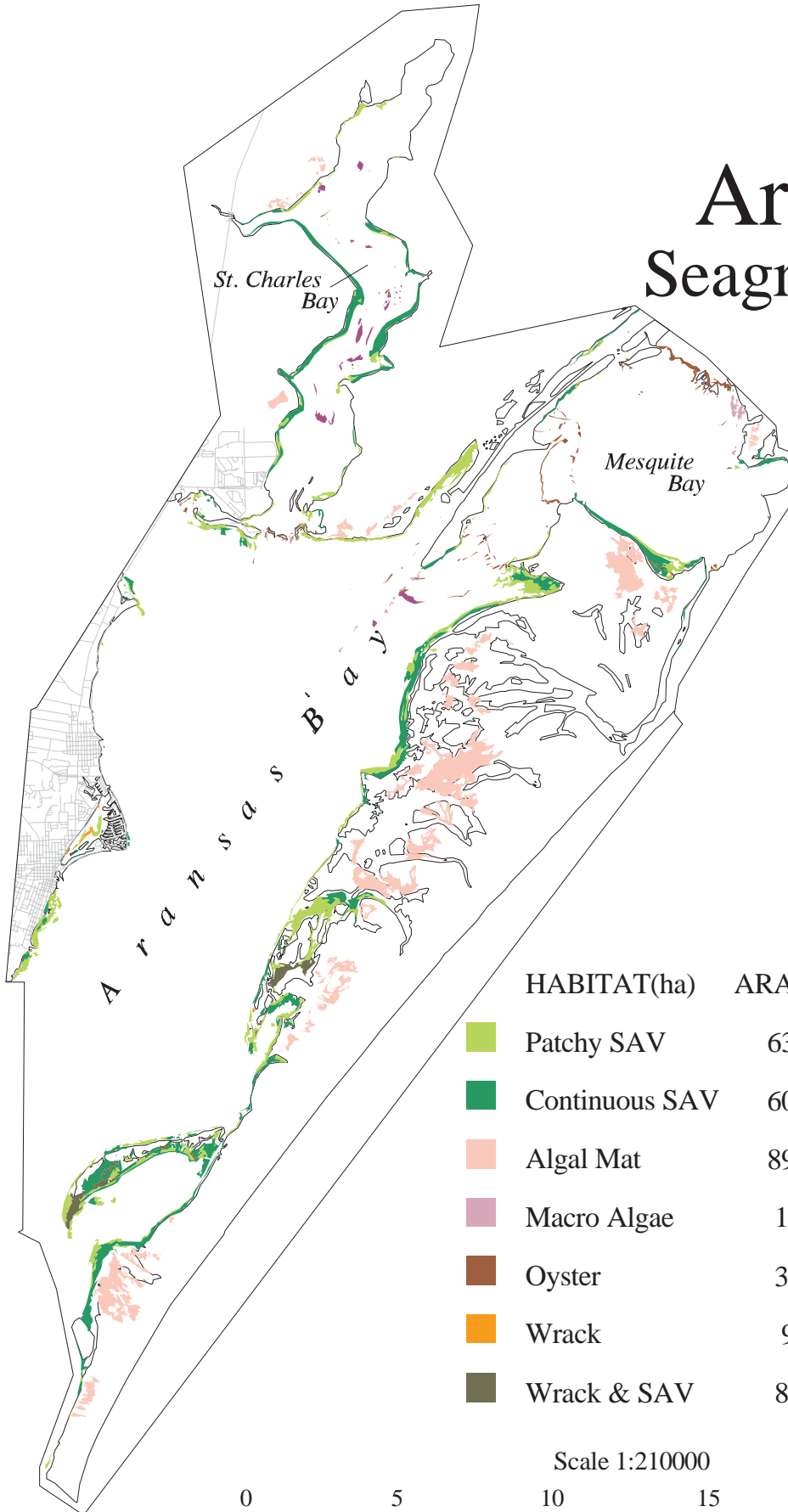







HABITAT(ha)	CORPUS	LAGUNA	NUECES	RED/HAR
 Patchy SAV	1086.05	448.50	279.05	2156.88
 Continuous SAV	1117.68	1873.93	20.77	2893.24
 Algal Mat	326.90	83.96	0.00	35.23
 Oyster	0.46	0.00	10.12	45.57
 Wrack	2.56	0.00	0.00	151.72
 Wrack & SAV	10.69	110.61	2.08	694.04

Figure 18. Seagrass bed distribution in 1994 for Aransas Bay System.

Aransas Bay Seagrass Study Area



HABITAT(ha)	ARANSAS	MESQUITE	ST. CHARLES
 Patchy SAV	634.13	122.10	102.72
 Continuous SAV	601.92	113.90	244.76
 Algal Mat	897.93	186.44	41.22
 Macro Algae	19.30	17.38	51.84
 Oyster	36.76	80.59	24.46
 Wrack	9.34	0.00	0.00
 Wrack & SAV	89.94	0.00	0.00

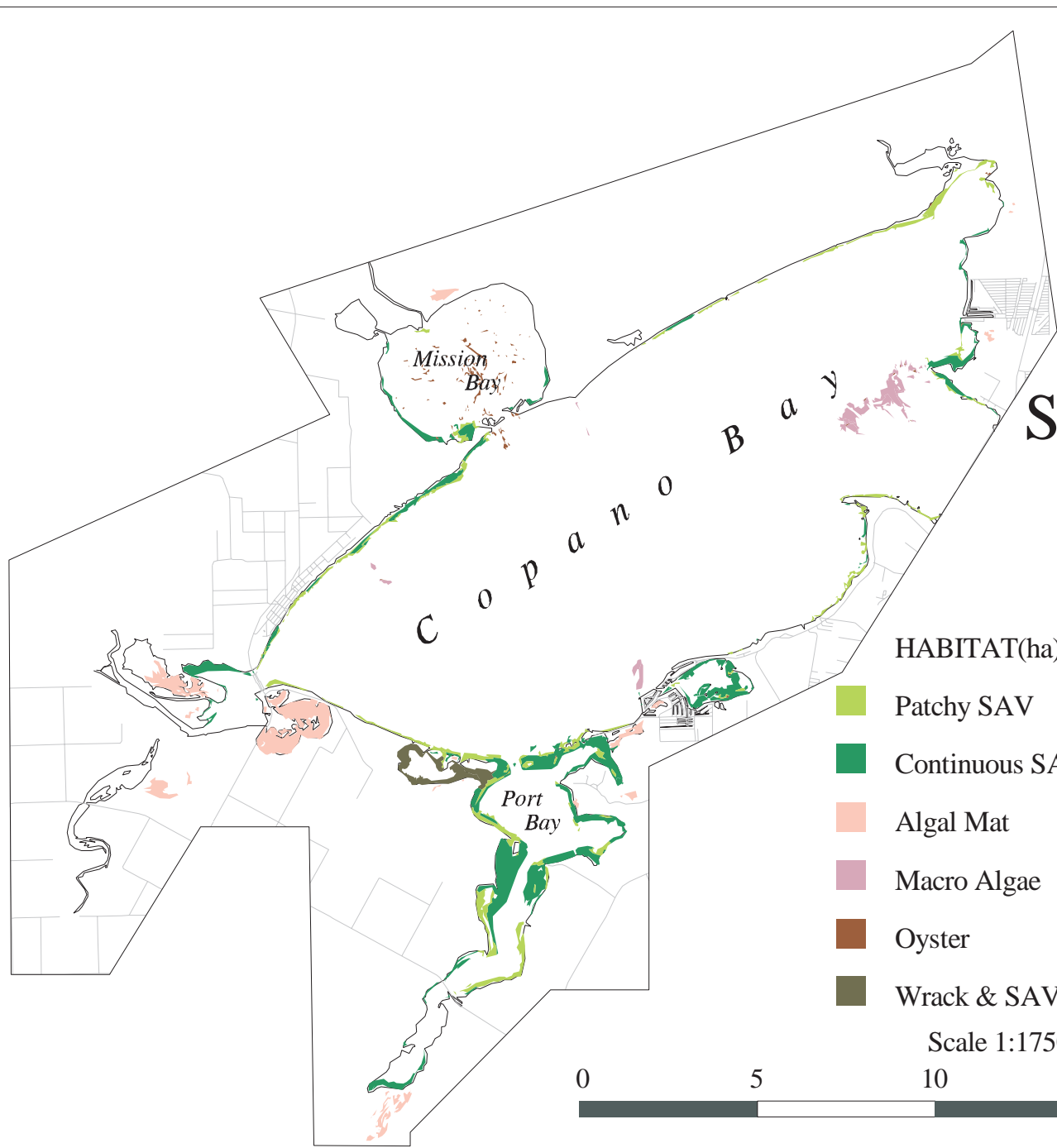
Scale 1:210000









kilometers

Figure 19. Seagrass bed distribution in 1994 for Copano Bay System.

Copano Bay Seagrass Study Area



HABITAT(ha)	COPANO/MISSION	PORT/SWAN
 Patchy SAV	182.92	188.00
 Continuous SAV	289.90	439.55
 Algal Mat	285.51	59.79
 Macro Algae	112.62	0.00
 Oyster	57.64	0.43
 Wrack & SAV	0.00	96.48

Scale 1:175000



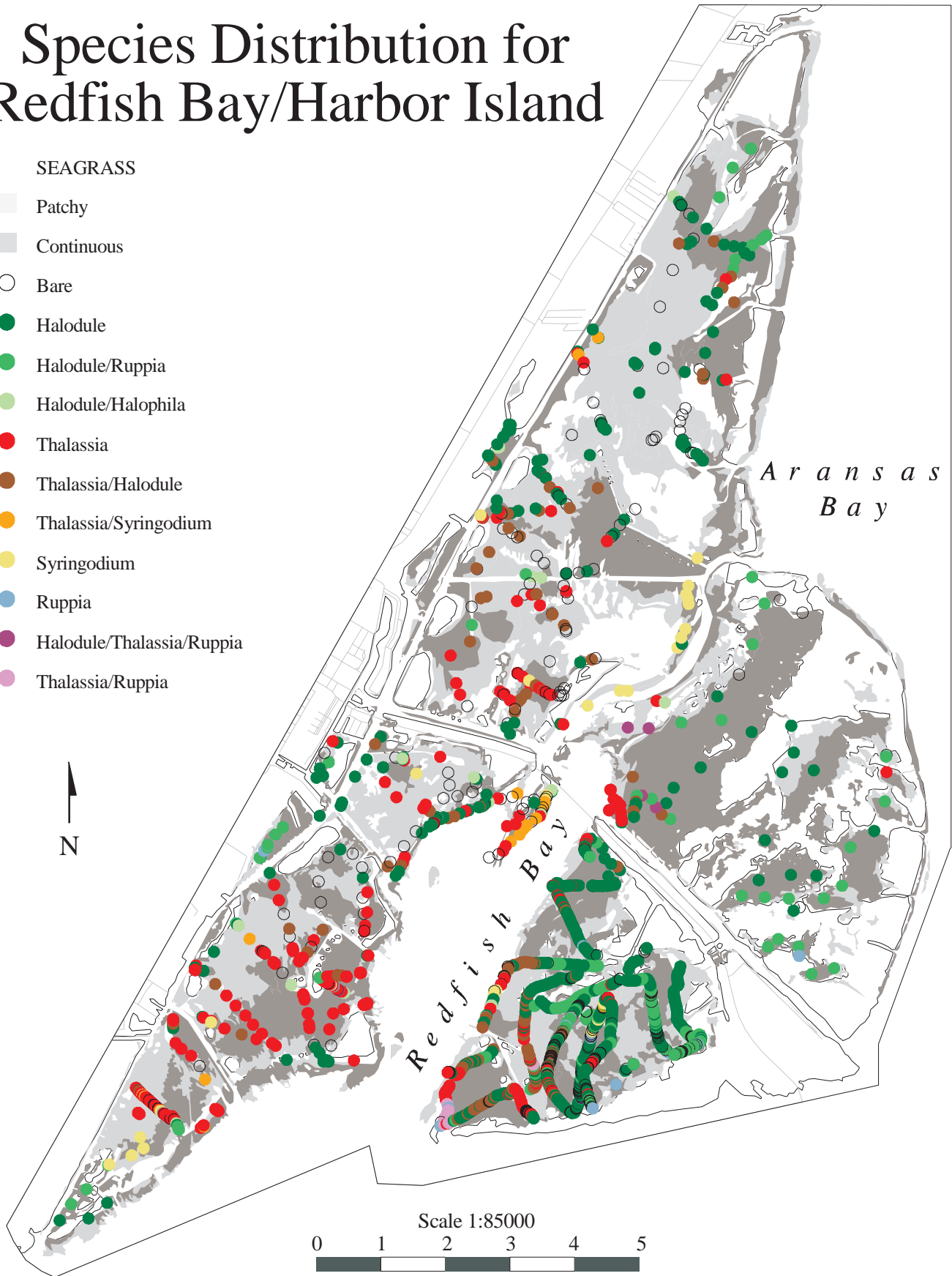
kilometers

Figure 20. Seagrass species distributions in 1994 for Redfish Bay/Harbor Island complex.

Species Distribution for Redfish Bay/Harbor Island

SEAGRASS

- Patchy
- Continuous
- Bare
- Halodule
- Halodule/Ruppia
- Halodule/Halophila
- Thalassia
- Thalassia/Halodule
- Thalassia/Syringodium
- Syringodium
- Ruppia
- Halodule/Thalassia/Ruppia
- Thalassia/Ruppia



Scale 1:85000

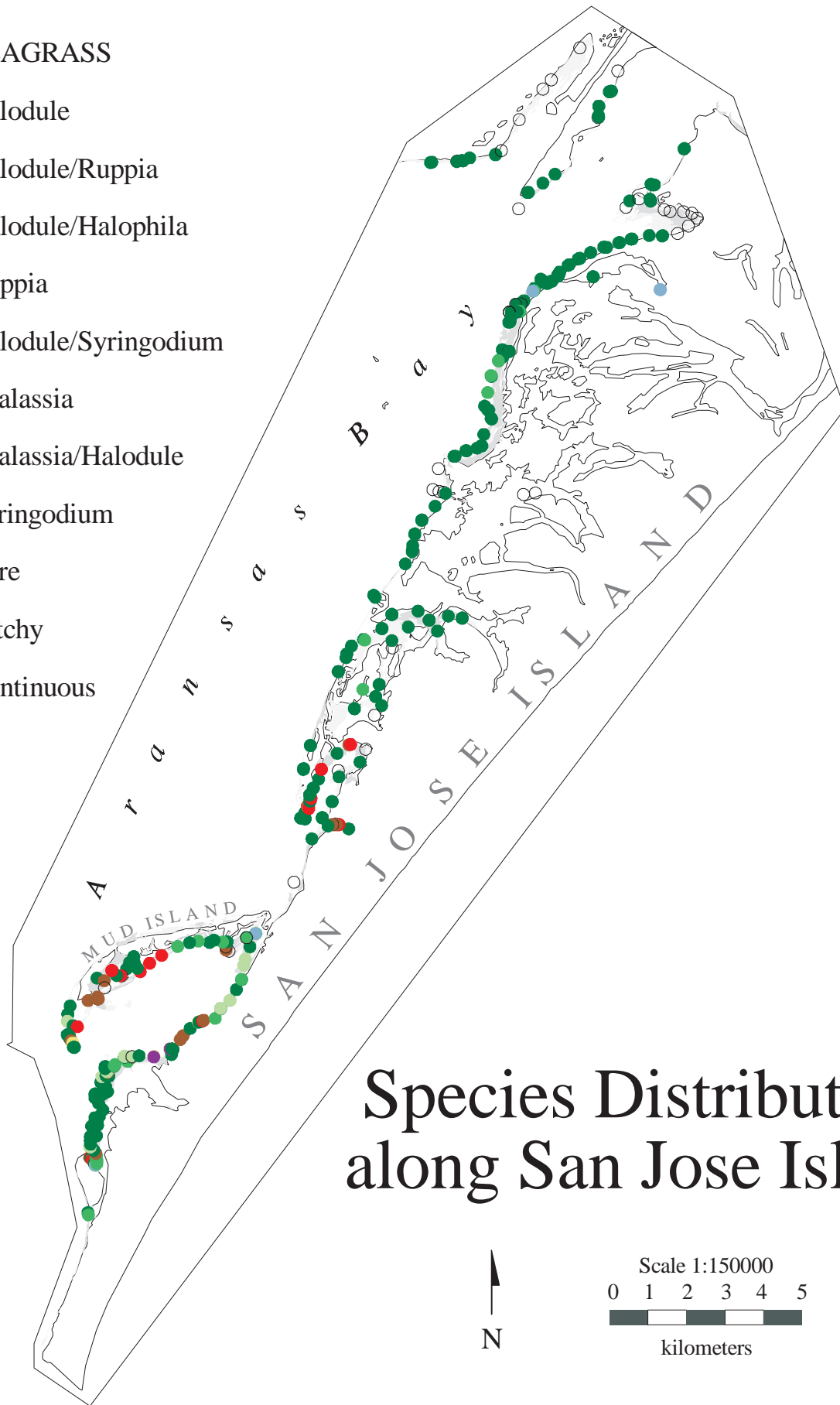


kilometers

Figure 21. Seagrass species distribution in 1994 for San Jose Island area.

SEAGRASS

- Halodule
- Halodule/Ruppia
- Halodule/Halophila
- Ruppia
- Halodule/Syringodium
- Thalassia
- Thalassia/Halodule
- Syringodium
- Bare
- Patchy
- Continuous



Species Distribution along San Jose Island

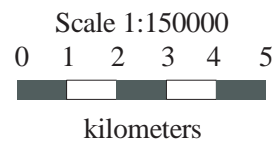


Figure 22. Seagrass species distribution in 1994 for Mustang Island area.

Species Distribution along Mustang Island

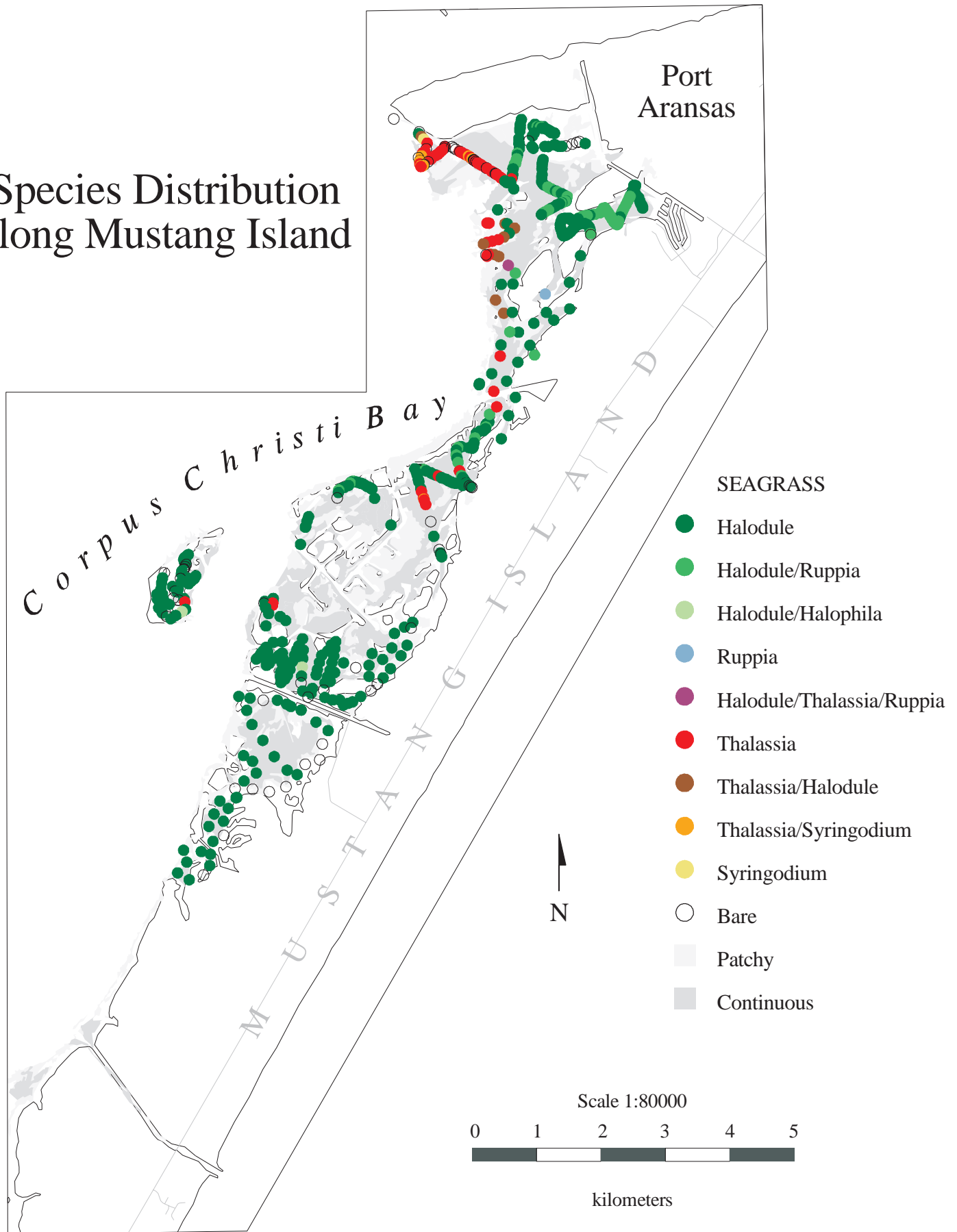






Figure 23. Seagrass distribution in 1958 for Redfish Bay/Harbor Island complex.

Redfish Bay/Harbor Island Complex Seagrass 1958

Seagrass(ha)	
	Patchy 1263.91
	Continuous 4120.42
	Other
	Reefs 24.43
	Spoil 293.20

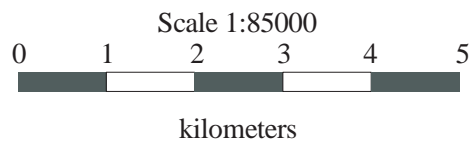
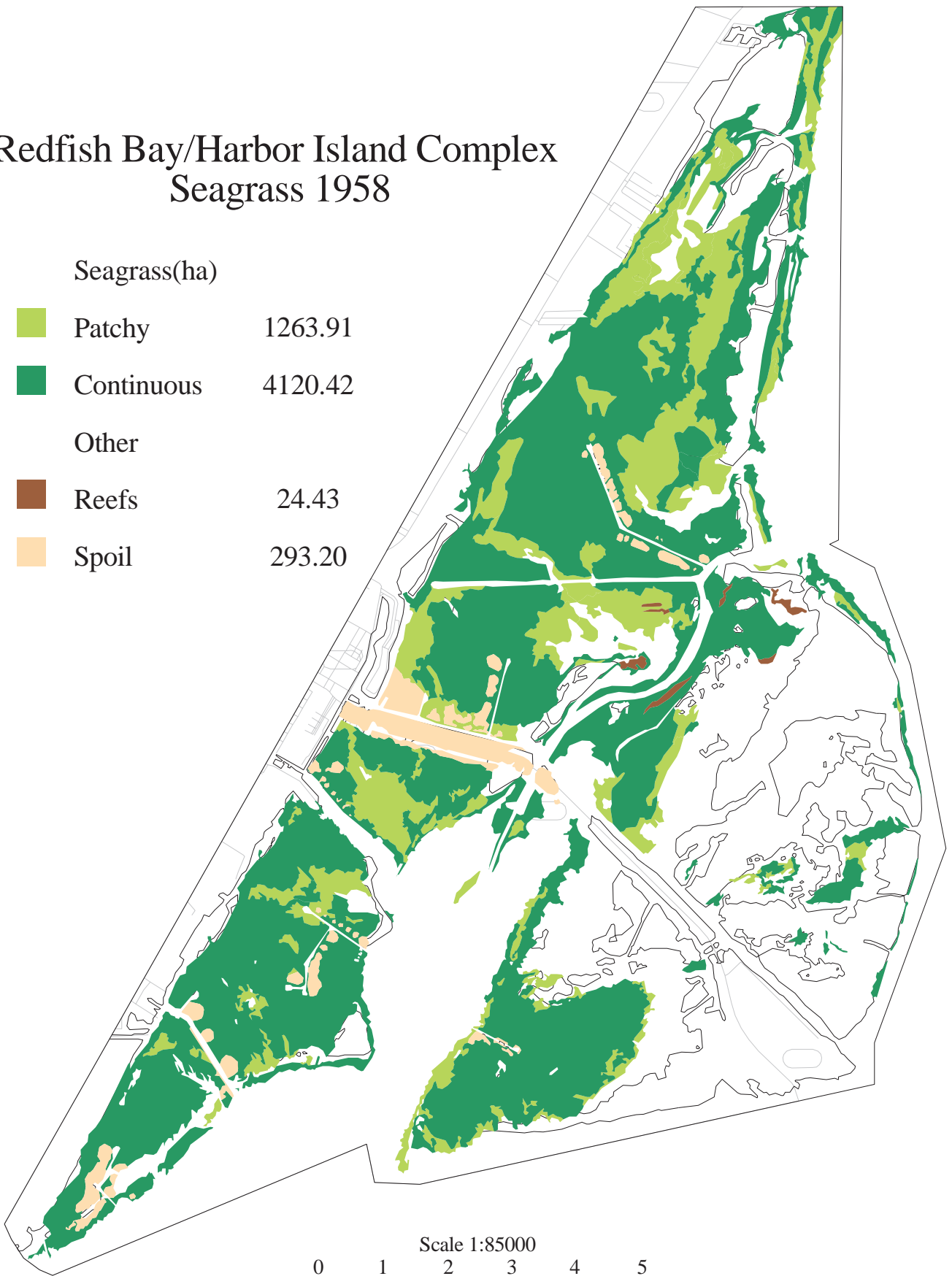




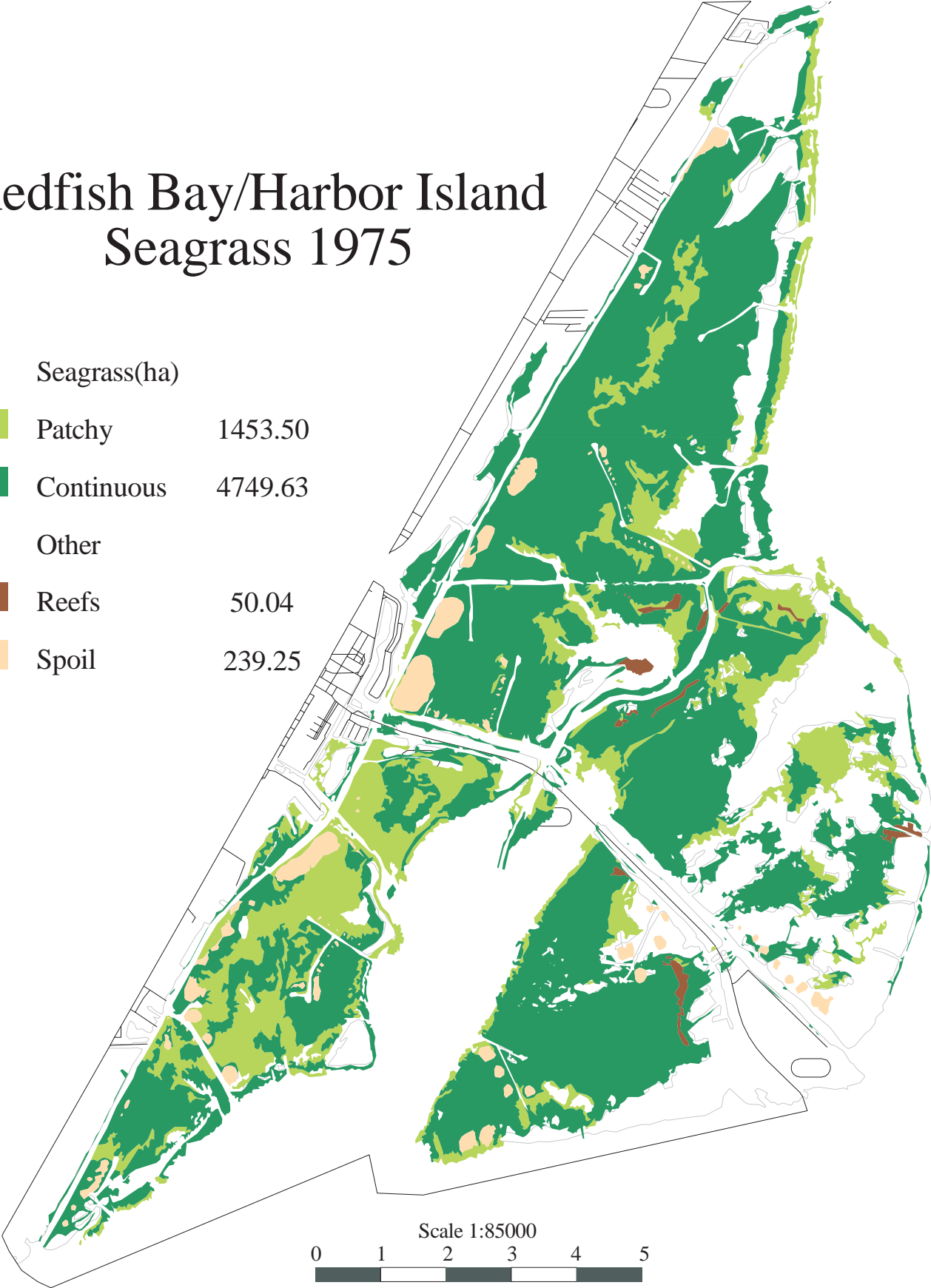


Figure 24. Seagrass distribution in 1975 for Redfish Bay/Harbor Island complex.

Redfish Bay/Harbor Island Seagrass 1975





Seagrass(ha)	
	Patchy 1453.50
	Continuous 4749.63
Other	
	Reefs 50.04
	Spoil 239.25

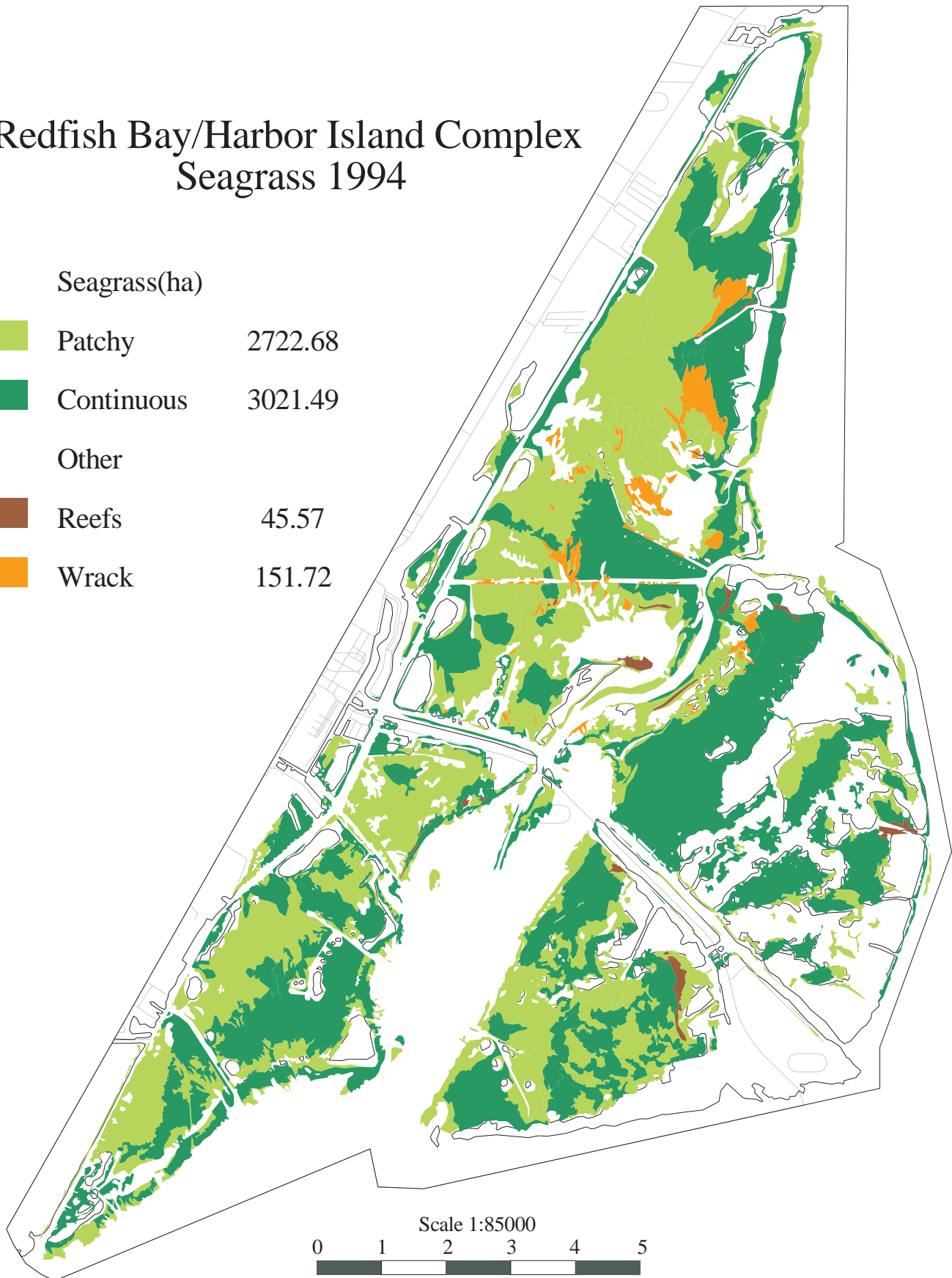


Scale 1:85000
0 1 2 3 4 5
kilometers

Figure 25. Seagrass distribution in 1994 for Redfish Bay/Harbor Island complex.

Redfish Bay/Harbor Island Complex Seagrass 1994

Seagrass(ha)	
	Patchy 2722.68
	Continuous 3021.49
Other	
	Reefs 45.57
	Wrack 151.72



Scale 1:85000
0 1 2 3 4 5
kilometers