

# **SEA TURTLE MEETING**

**NOVEMBER 10, 1999**

B/2

**Meeting Agenda  
St. Lucie Plant  
November 10, 1999**

**Purpose:** To discuss the reinitiation of consultation with National Marine Fisheries Service (NMFS) and other information and developments regarding endangered and threatened species at St. Lucie Plant. The second part of the meeting is intended to satisfy the requirement for the biannual meeting, as discussed in the St. Lucie Plant Technical Specifications, Appendix B, "Environmental Protection Plan."

**Agenda**

- 0830 - 0835 Arrival at FPL Land Utilization Building (plant entrance "B") and introductions (FPL, NRC, NMFS, State of Florida)
- 0835 - 0945 Tour of FPL facilities; plant intake canal; plant screens; net structures; turtle recovery area. (All)
- 1000 - 1010 Start of Public Meeting; required announcements to General Public (NRC)
- 1010 - 1145 General discussion (All)
- 1145 - 1200 Conclusion of Public Meeting and schedule for future meetings

Topics

- "Take" Status Update
- Reinitiation of Consultation with NMFS
- Discussion Of Options
- Discussion of information and developments regarding endangered and threatened species at St. Lucie Plant

1200 - 1245 Lunch on site

1245 If business complete; depart site

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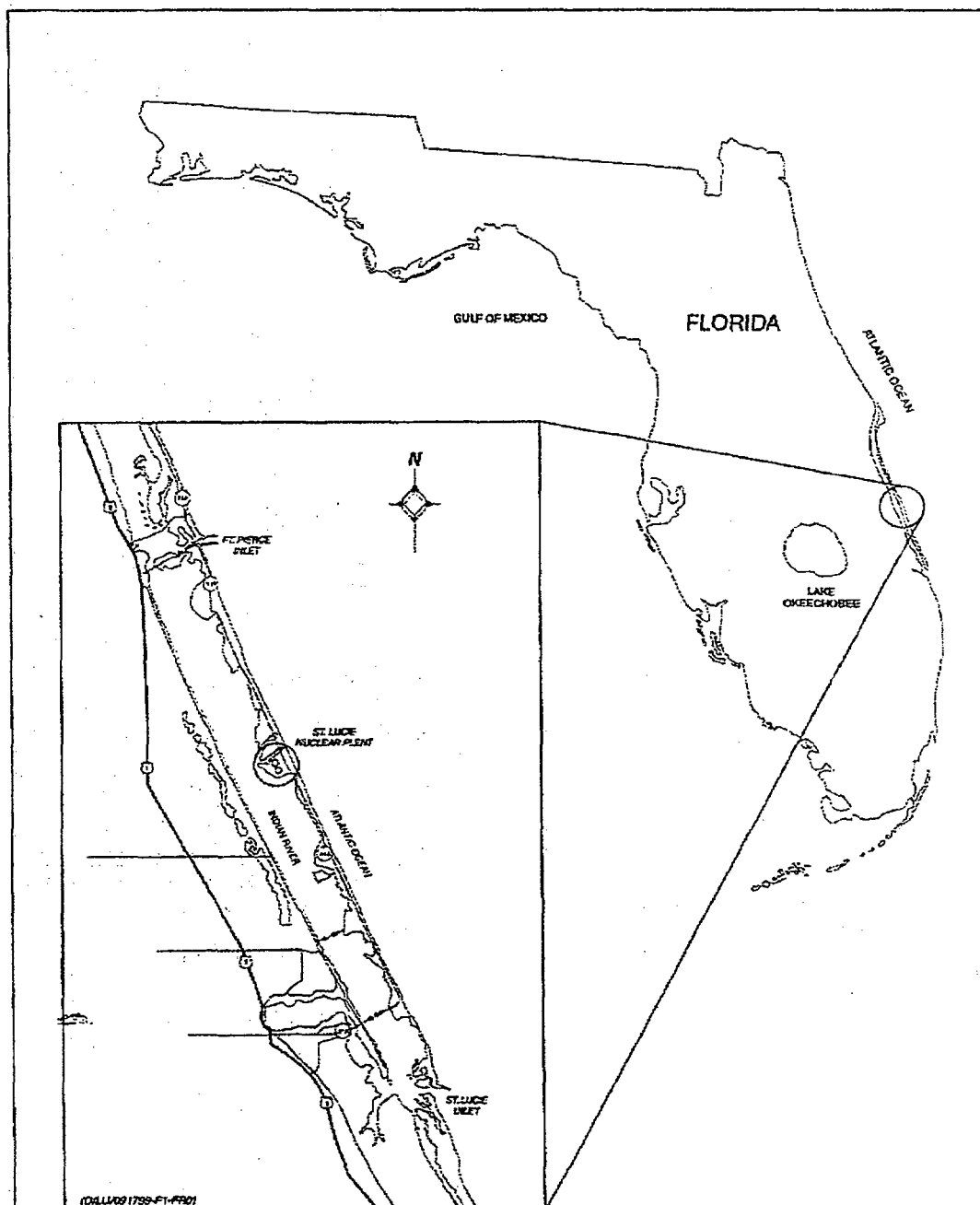


FIGURE 1. Location of the St. Lucie plant on the east coast of Florida. The plant is located on South Hutchinson Island, barrier island, and is about 7 miles (11.3 km) south of Ft. Pierce and about 7 miles (11.3 km) north of Stuart.

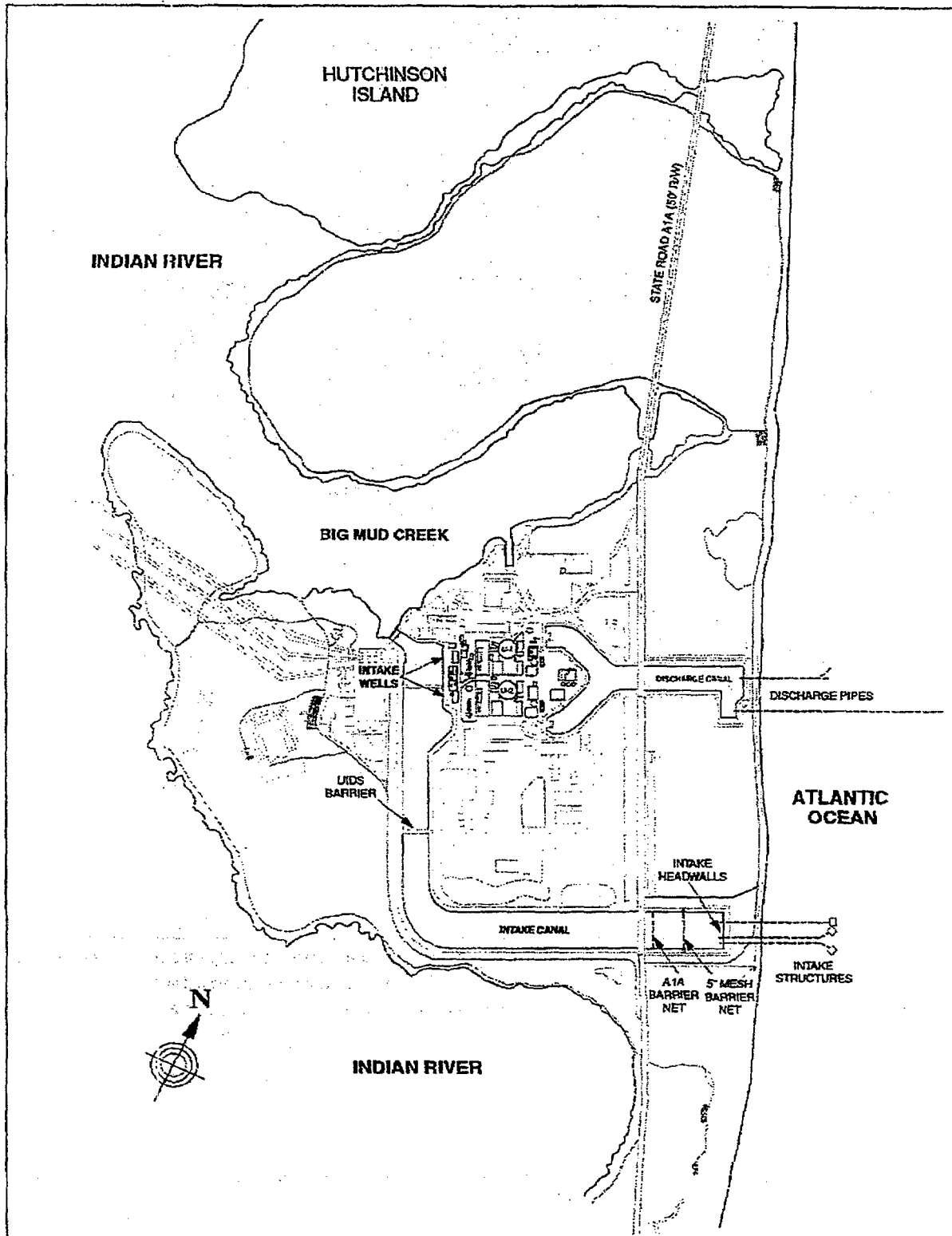


Figure 2. Design of the st. lucie plant showing the relationship between units 1 and 2 and the configuration of the cooling water intake and discharge system with key features labeled.

# ST. LUCIE PLANT INTAKE VELOCITY CAPS

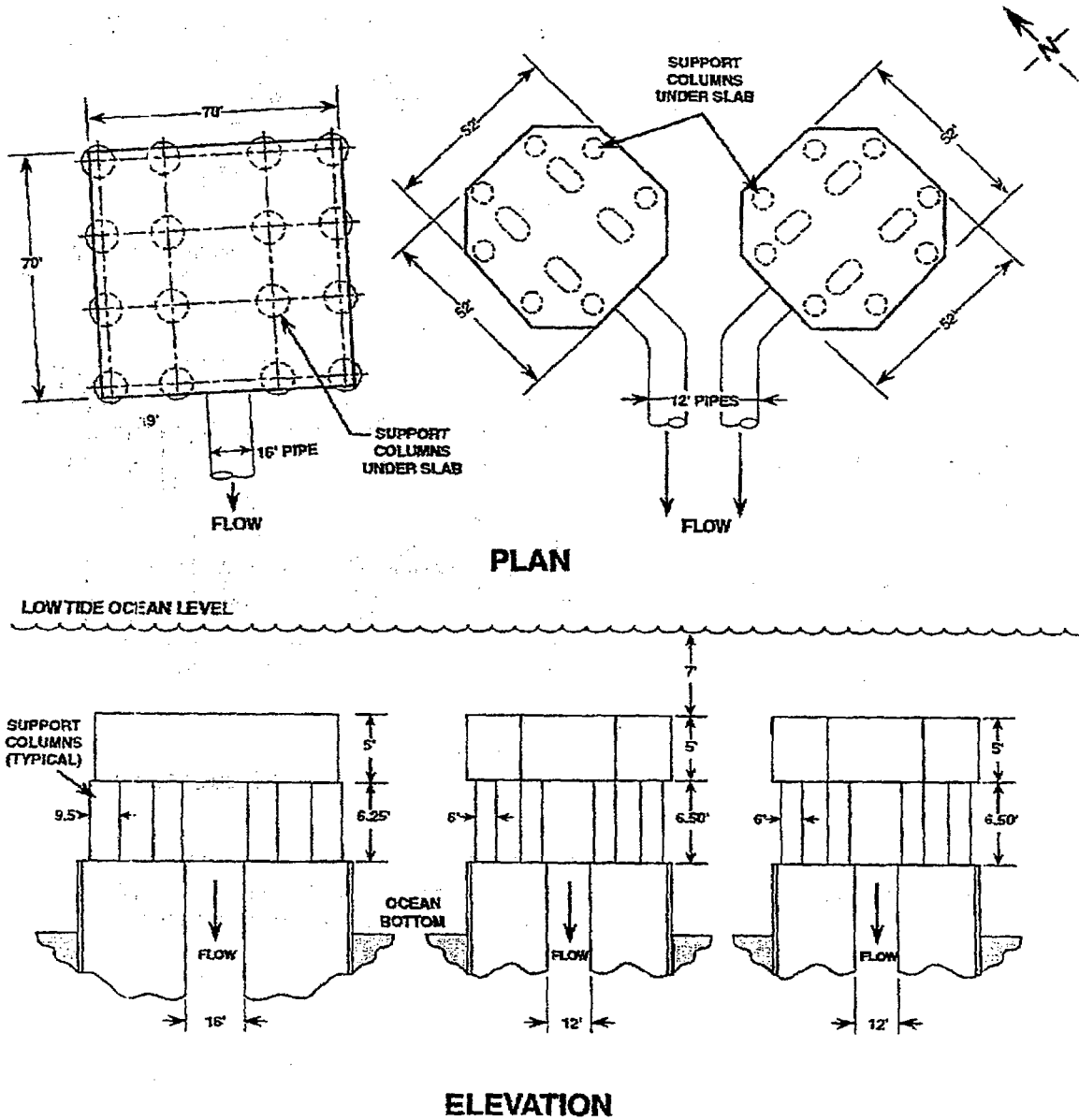


Figure 3. Diagram of the intake structures located 1200 feet (365 m) offshore of the shoreline at the St. Lucie Plant.

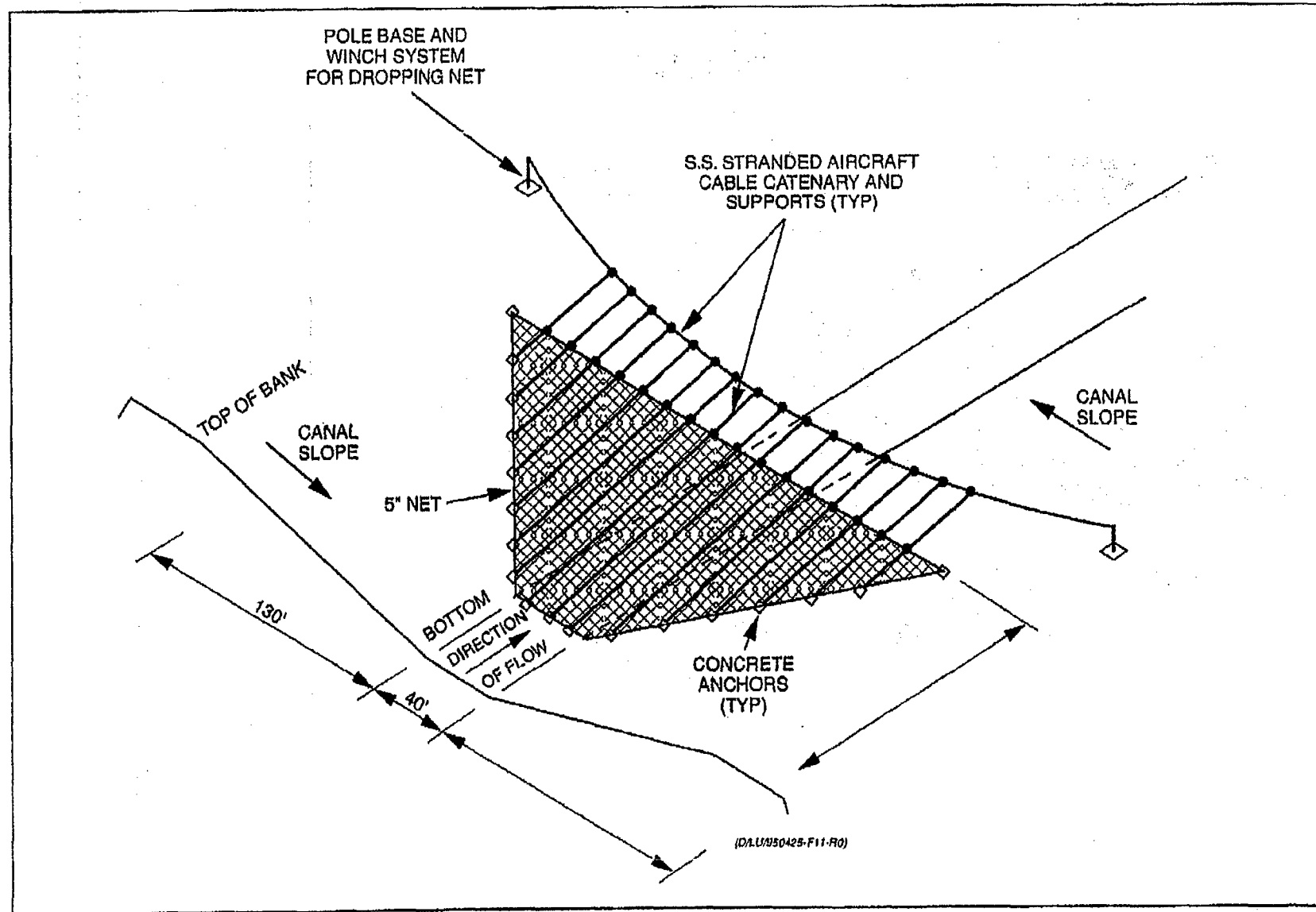


Figure 11. Conceptual design for a 5 inch (12.7 cm) square mesh barrier net to be installed in the intake canal of the St. Lucie Plant.

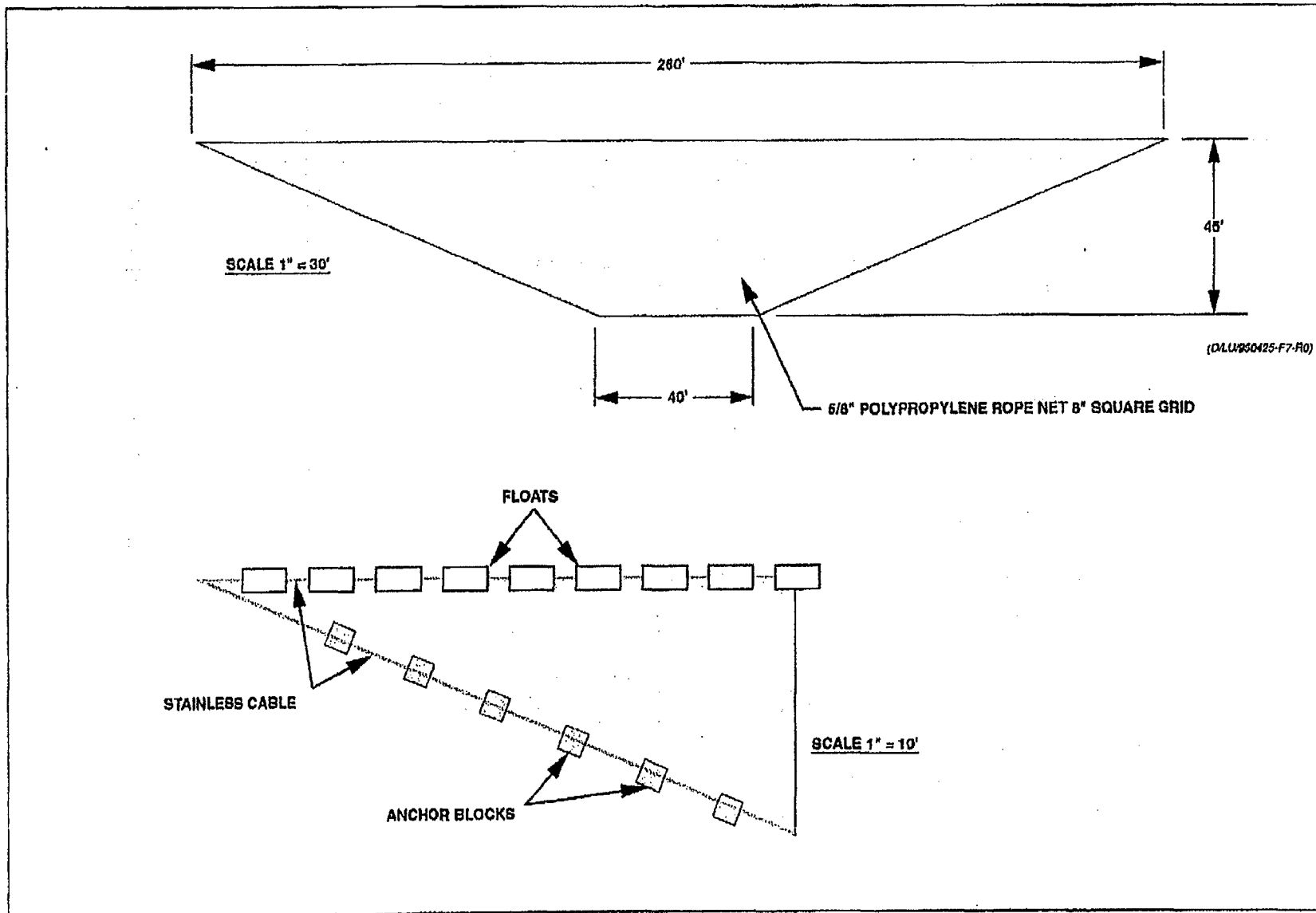


Figure 7. Diagram of the turtle barrier net used in the intake canal of the St. Lucie Plant. This net is located at the A1A bridge (see Figure 2)

# **ST. LUCIE PLANT UNDERWATER INTRUSION DETECTION SYSTEM (TYPICAL SECTION)**

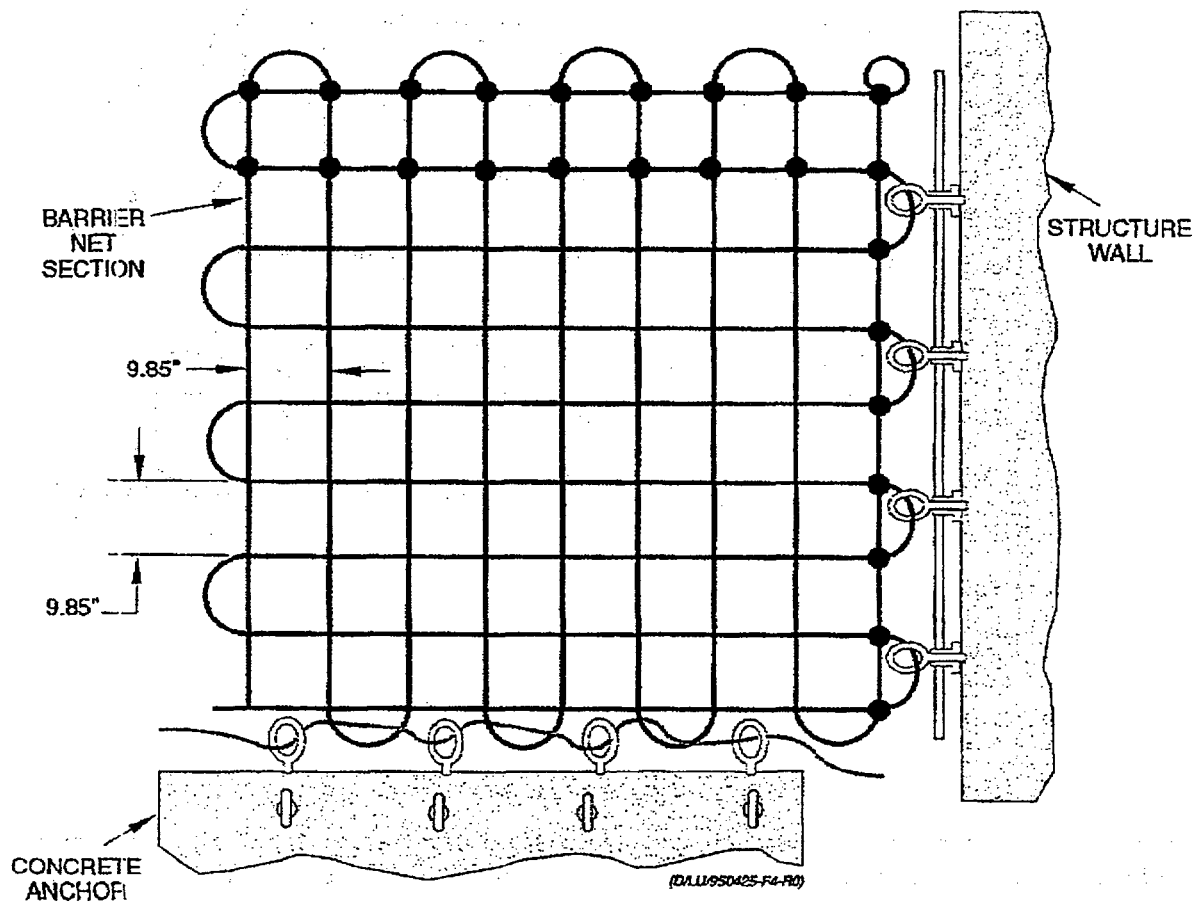


Figure 4. Diagram of the Underwater Intrusion Detection System at the St. Lucie Plant.



# ST. LUCIE PLANT INTAKE WELL STRUCTURE (SIDE VIEW)

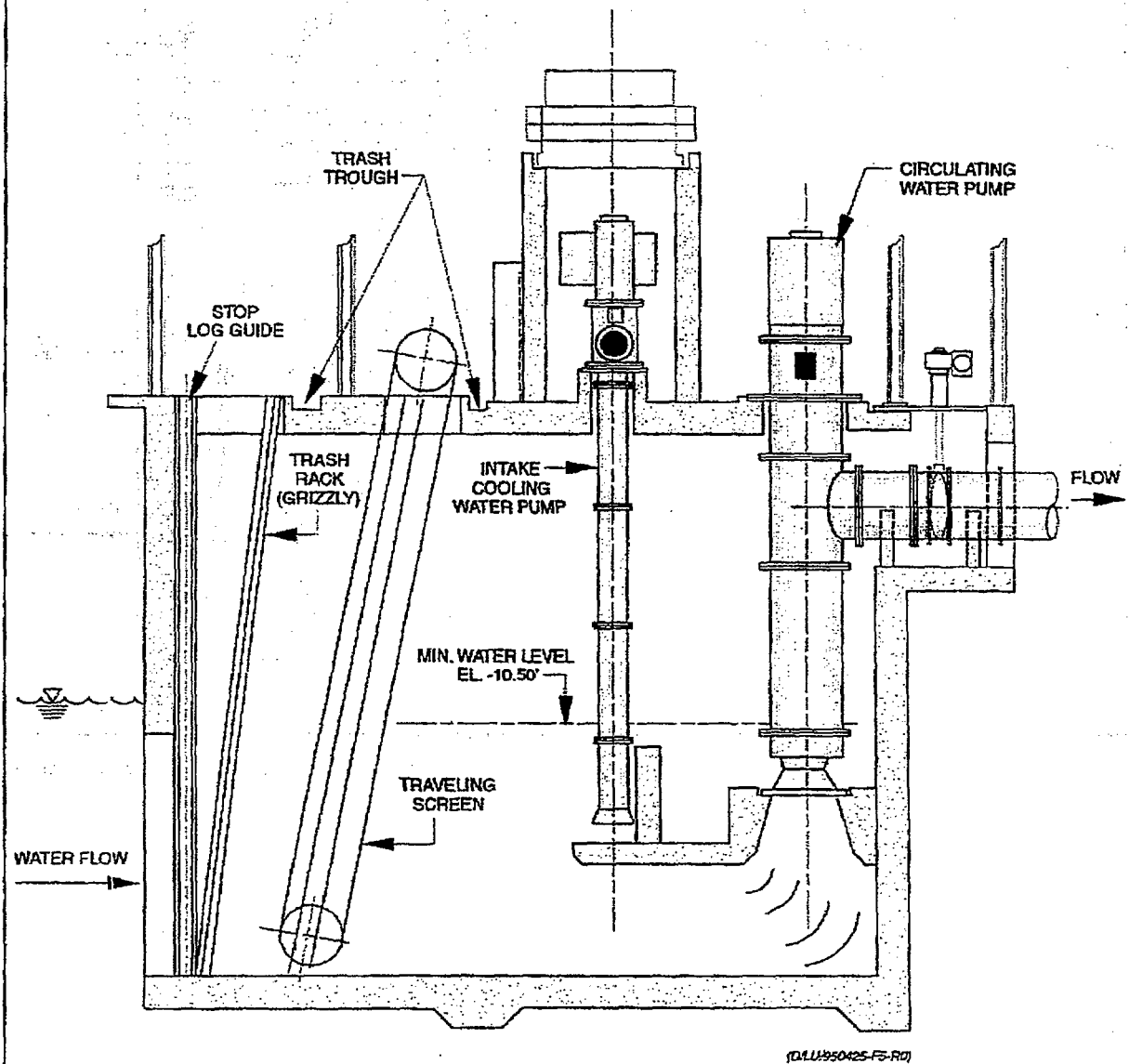
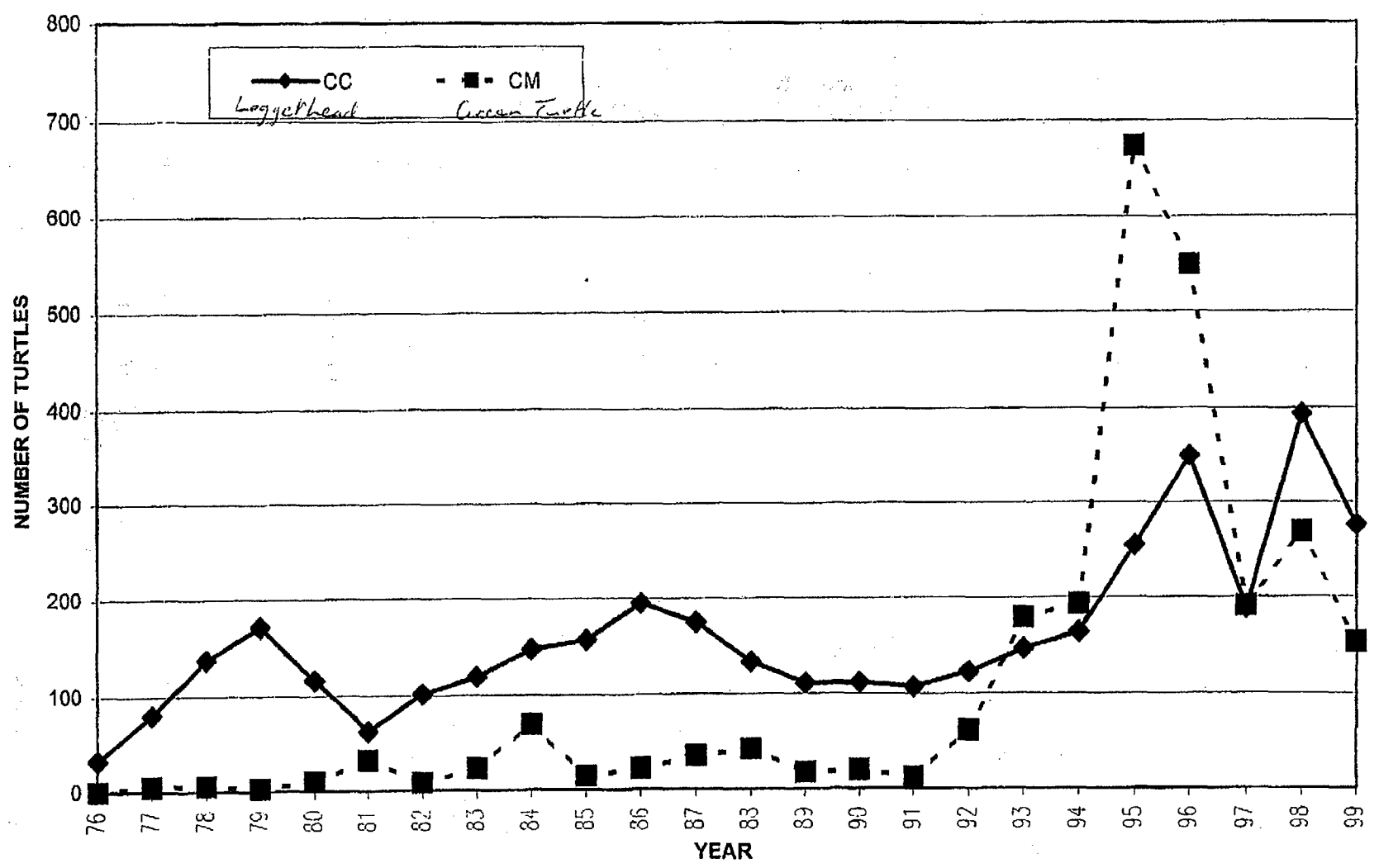


Figure 5. Diagram of an intake well at the St. Lucie Plant.

CANAL CAPTURES ST. LUCIE POWER PLANT, 1976-1999\*



\* 1999 captures through October.

## SEA TURTLES CAPTURED AT PSL - 1998

MONTH	GREEN	LOGGERHEAD	KEMPS RIDLEY	HAWKSBILL	LEATHERBACK	TOTAL
Mortality Limit as per NMFS	3 or 1.5%, whichever is greater	2 or 1.5%, whichever is greater	1 or 1.5%, whichever is greater	1 or 1.5%, whichever is greater	1 or 1.5%, whichever is greater	
JANUARY	25	36	0	0	0	61
FEBRUARY	58	28	2	0	0	88
MARCH	30	60	0	0	0	90
APRIL	20	47	0	0	0	67
MAY	35	29	0	1	0	65
JUNE	16	26	0	0	1	43
JULY	7	57	0	0	0	64
AUGUST	22	44	0	0	0	66
SEPTEMBER	10	17	0	0	0	27
OCTOBER	27	25 (1)	0	1	0	53 (1)
NOVEMBER	10	10	0	0	0	20
DECEMBER	9	13	0	0	0	22
TOTAL TO DATE	269	392 (1)	2	2	1	666 (1)

↑ mortality

( ) Mortalities

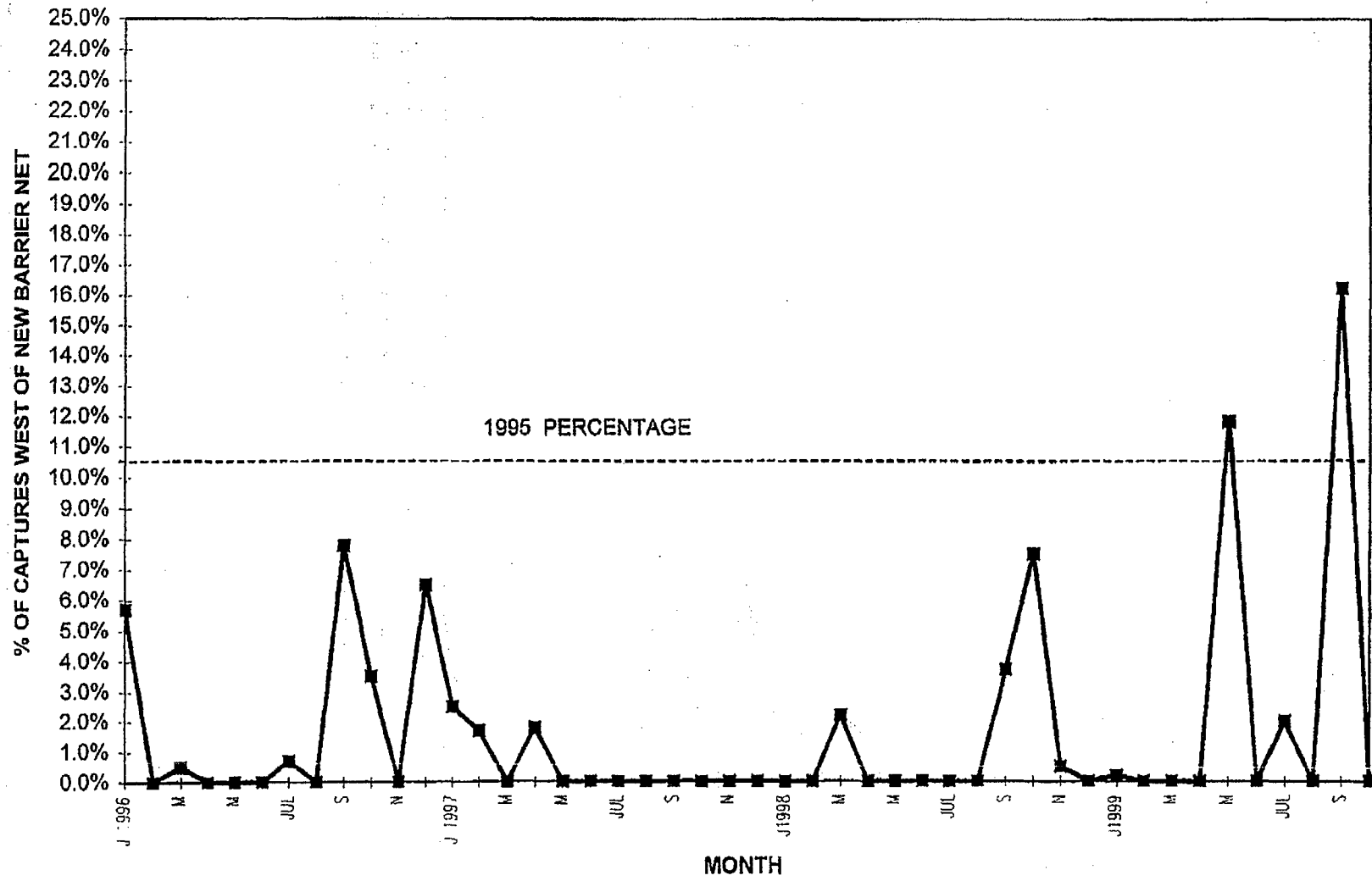
## SEA TURTLES CAPTURED AT PSL - 1999

MONTH	GREEN	LOGGERHEAD	KEMPS RIDLEY	HAWKSBILL	LEATHERBACK	TOTAL
Mortality Limit as per NMFS	3 or 1.5%, whichever is greater	2 or 1.5%, whichever is greater	1 or 1.5%, whichever is greater	1 or 1.5%, whichever is greater	1 or 1.5%, whichever is greater	
JANUARY	17	38	0	0	0	55
FEBRUARY	12 (1)	24	0	0	0	36 (1)
MARCH	8	14	0	0	1	23
APRIL	7	28	0	0	0	33
MAY	12	39	0	0	0	51
JUNE	7	29	0	0	0	36
JULY	10	41 (1)	0	0	0	51 (1)
AUGUST	15	25	0	0	0	40
SEPTEMBER	39 (3)	28	0	0	0	67 (3)
OCTOBER	21	11	0	1	0	33
NOVEMBER						
DECEMBER						
TOTAL TO DATE	148 (4)	275 (1)	0	1	1	425 (5)

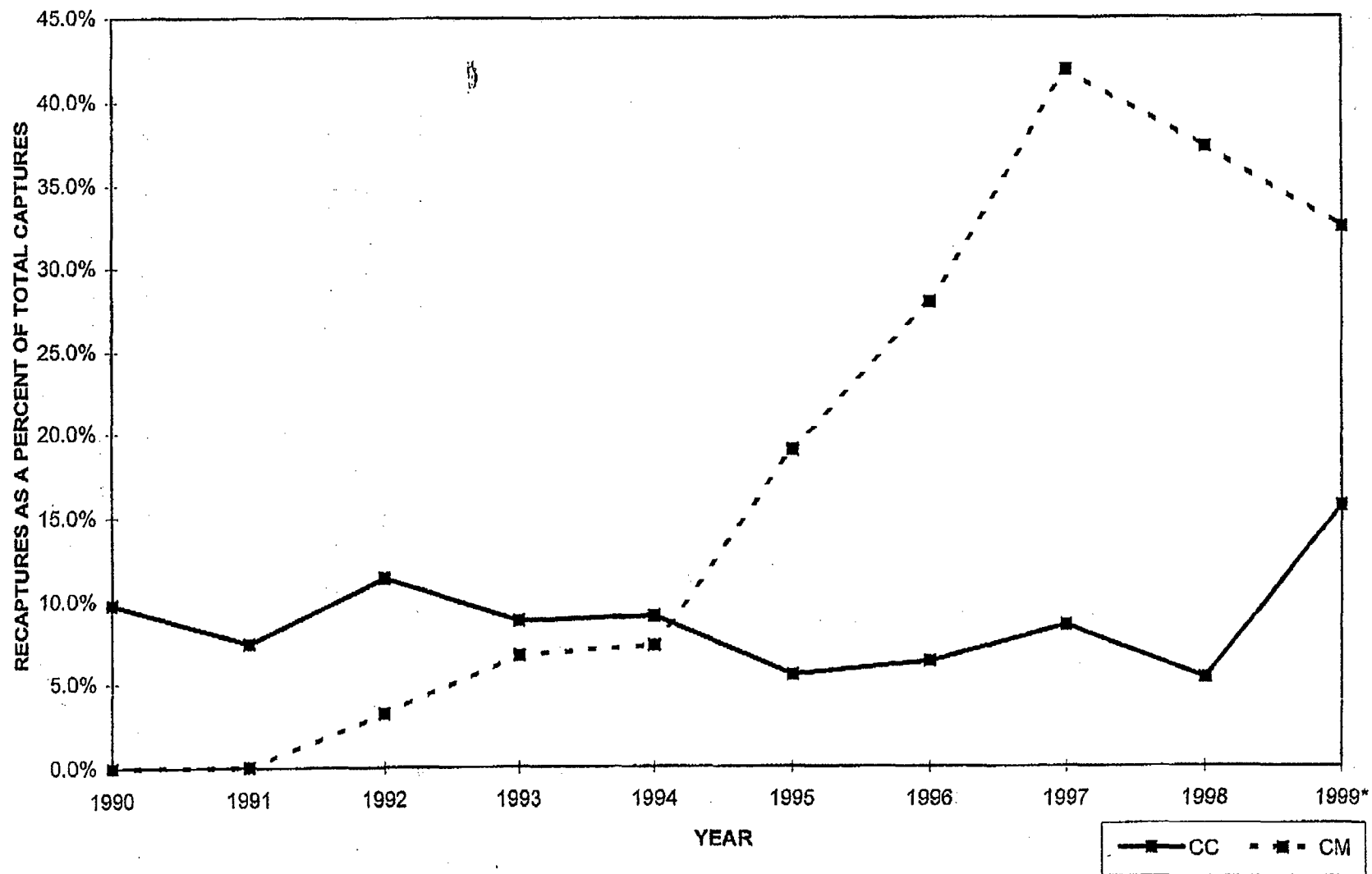
↑  
mortality exceeds limit of 3

( ) Mortalities

# BARRIER NET PERFORMANCE

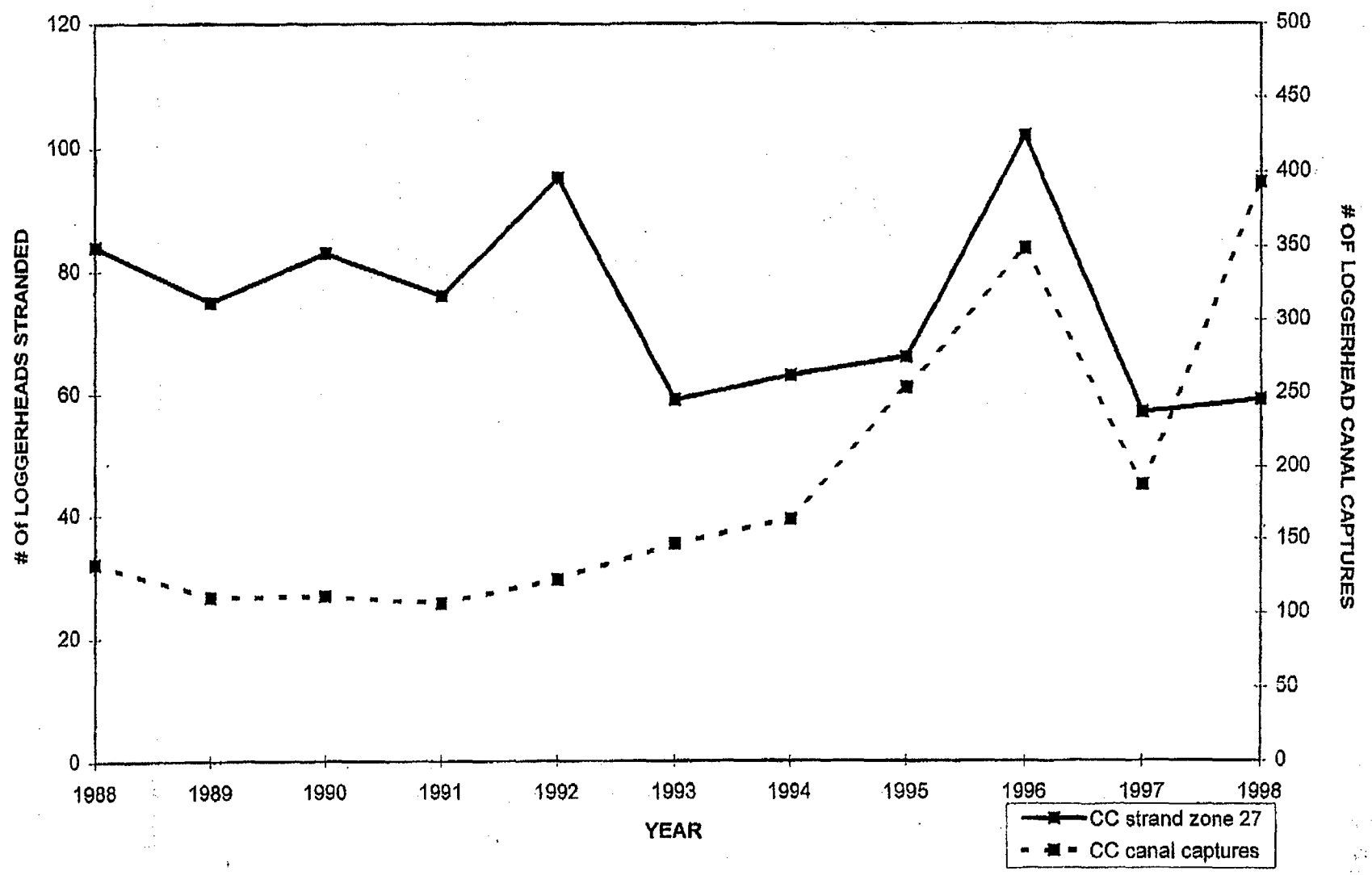


## PERCENT RECAPTURES, INTAKE CANAL 1990 -1999\*



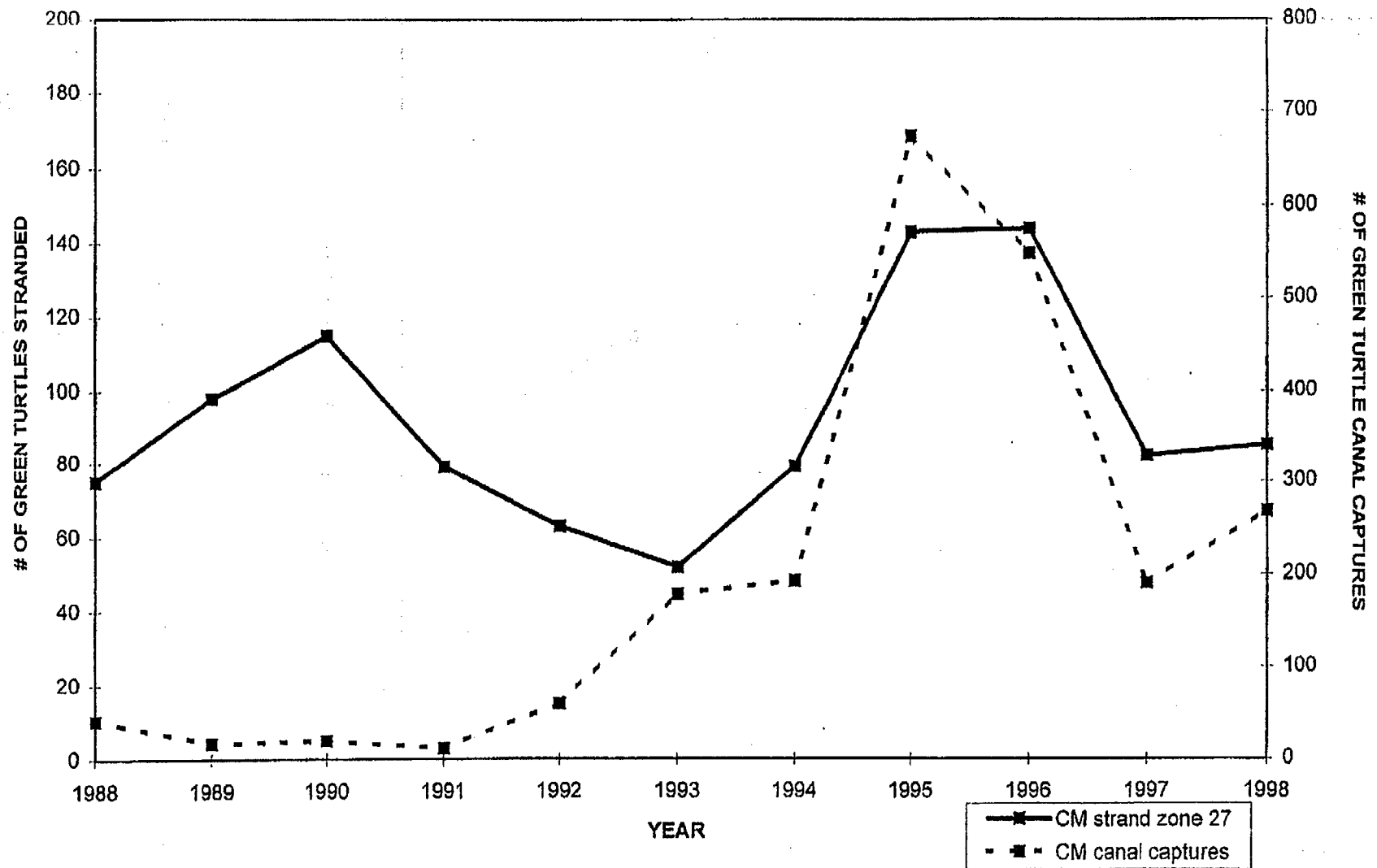
\*1999 data through October.

# LOGGERHEAD STRANDING\* AND CANAL CAPTURE DATA 1988 - 1998



\*Florida Fish and Wildlife Conservation Commission, Florida Marine Research Institute, Sea Turtle Stranding and Salvage Network Database, October 25, 1998

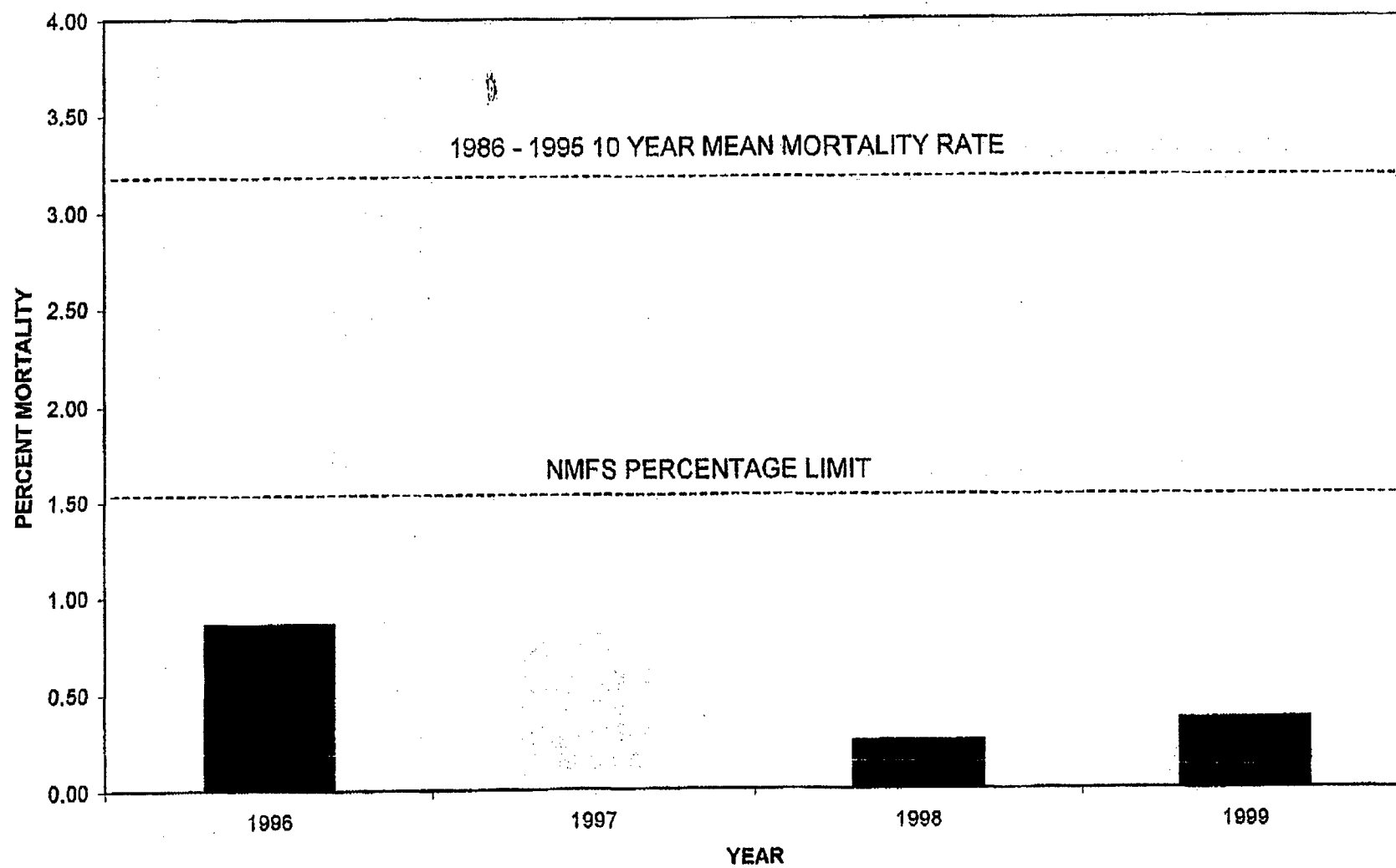
## GREEN TURTLE STRANDING\* AND CANAL CAPTURE DATA 1988 - 1998



\*Florida Fish and Wildlife Conservation Commission, Florida Marine Research Institute, Sea Turtle Stranding and Salvage Network Database, October 25, 1999.

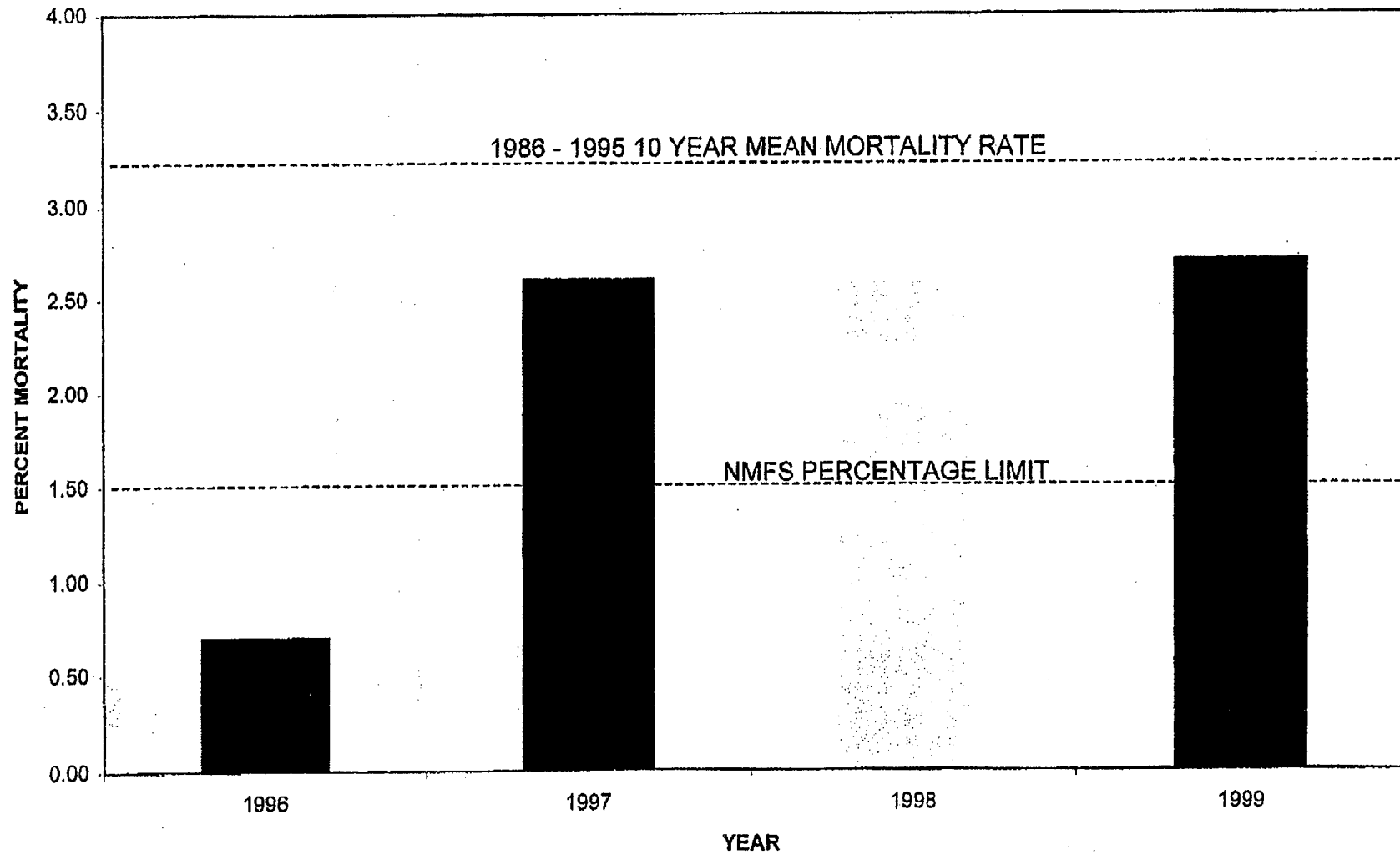


## LOGGERHEAD TURTLE MORTALITY RATES, 1996 - 1999\*



\* 1999 through October  
OVERALL MORTALITY RATE = 0.415%

# GREEN TURTLE MORTALITY RATES, 1996 - 1999\*



\* 1999 through October  
OVERALL MORTALITY RATE = 1.1%

## STATUS OF RELATED SEA TURTLE PROTECTION ACTIVITIES

### 1. Turtle Stranding and Salvage Network:

FPL responded to 20 sea turtle strandings in 1998 and 28 strandings to date in 1999 from the local area.

### 2. Public Service Turtle Walks:

FPL conducted a total of 52 public service turtle walks during the 1998 and 1999 nesting seasons. A total of approximately 2,200 members of the public attended these events.

### 3. Study to Elucidate the Effect of Various Factors on Turtle Entrapment:

The study scope approved by NMFS is currently being conducted by Ecological Associates, Inc. The first progress report was completed October 11, 1999. Final report is due March 1, 2000.