

FOIA/PA REQUEST

Case No: 2000-0029
Date Recd: 10-27-99
Action Off: Brown
Related Case: _____

October 27, 1999

Russell Powell, Chief
FOIA-LPDR Branch
Division of Freedom of Information and Publication Services
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555

BY FAX: (301) 415-5130

Dear Mr. Powell:

On behalf of Nuclear Information and Resource Service (NIRS), and pursuant to the Freedom of Information Act, 5 U.S.C. 552(b), et. seq., I hereby request that you make available copies of all documents in the U.S. Nuclear Regulatory Commission's possession which describe or discuss the takings of endangered and threatened sea turtles, as described more fully below. This request covers but is not limited to all draft and final reports, correspondence, memoranda, notes, records of telephone contacts, all types of camera images, electronic communications including fax transmissions and Email, or other written records, whether in paper or computer files, preserved via the use of any medium (e.g., paper documents, final notes, or word processors or computer discs, diskettes, hard drives, or network systems.) In addition, this request includes studies, analyses, work papers, internal or external communications of any sort, testimony, press releases, reports, memoranda of the like concerning, recording or in any way related to:

1) All communications between Carolina Power & Light's Brunswick nuclear power station and the Nuclear Regulatory Commission pertaining to reports of "incidental capture" of threatened and endangered sea turtles (Kemp's ridley, Loggerhead, Leatherback or Hawksbill and Atlantic Green) for the years 1996, 1997, 1998, and 1999. These documents would not only include actual reports not publicly filed, but also documents referencing reports and reporting requirements for both live and dead sea turtles captures. "Incidental captures" shall include, but not be limited to incidental captures, unintentional or intentional captures, detainment, maiming, injuries, killings, and/or explained or unexplained death.

2) All camera documentation (video, 16 mm, slides, disc images and photographs) of live and dead captures of threatened and endangered sea turtles (Kemp's ridley, Loggerhead, Leatherback or Hawksbill and Atlantic Green) sea turtles beginning with the commercial operation of the Brunswick units in 1977 to present in 1999.

3) All correspondence between CP&L and NRC staff pertaining to proposed limits for incidental taking, capturing and/or killing of endangered and threatened sea turtles (Kemp's ridley, Loggerhead, Leatherback or Hawksbill and Atlantic Green) for the years 1996, 1997, 1998, 1999.

4) All documents between CP&L and any state representative or employee of any state agency pertaining to the reports or communications of incidental captures of threatened or endangered sea turtles for the years from and including 1996 to and including 1999 that are in the possession of any employee of the NRC.

5) All documents between the NRC and the United States Fish and Wildlife Service (USFWS) pertaining to the reports or communications of incidental captures of threatened or endangered sea turtles for the years from and including 1996 to and including 1999.

6) All documents and correspondence between the NRC and the USFWS concerning the number of permitted takes under any federal law or statute allocated to CP&L.

7) All documents between the NRC and the United States National Marine Fisheries Service (NMFS) pertaining to reports or communications of incidental captures of threatened or endangered sea turtles for the years from and including 1996 to and including 1999.

8) All documents and correspondence between the NRC and the NMFS concerning the number of permitted takes under any federal law or statute allocated to CP&L.

9) All documents and correspondence exchanged within the NRC between the Office of General Counsel, the various NRC Project Managers for Brunswick and Nuclear Reactor Regulation staff pertaining to the kill or capture of endangered or threatened species of turtles at Brunswick station.

Pursuant to this request, please provide all documents and communications prepared or utilized by, in the possession of, or routed through the NRC related to items 1-9.

For any portion of the request that you deem appropriate to deny, NIRS requests that you describe the information that is denied, identify the exception to the FOIA on which you rely, and explain how that exception applies to the withheld information.

Pursuant to NRC regulations at 10 CFR 9.41, NIRS requests that any searching and copying fees incurred as a result of this search be waived, and provides the following information in response to the eight criteria listed in Section 9.41(b):

1) Purpose of request:

The purpose of the request is to gather information on the protection from capture of endangered and threatened species and regulatory compliance at nuclear power stations. The requested information is currently not available in the NRC's Public Document Room.

2) Extent to which NIRS will extract and analyze the substantive content of the records:

NIRS is qualified to make use of the requested information. The staff has demonstrated the ability to interpret information and communicate that information in a form comprehensible to the general public. Members of the NIRS staff have published articles in such national journals as The Progressive, Nuclear Times, Newsday and Bulletin of Atomic Scientists. NIRS is quoted as a reliable source of information on nuclear issues and environmental protection in newspapers across the country, including the New York Times, The Washington Post, and The San Francisco Chronicle.

NIRS has a working relationship with attorneys, physicists, nuclear engineers, medical doctors, biologists and other respected professionals who contribute to the full understanding of nuclear regulatory compliance and endangered or threatened species.

3) Nature of the specific activity or research in which the records will be used and NIRS's qualifications to utilize the information for the intended use in such a way that it will contribute to public understanding:

NIRS seeks the requested information solely to contribute to and help shape the public debate on regulatory compliance and the protection of endangered or threatened species. NIRS intends to use the information in order to advance the concerns for public understanding of nuclear regulatory compliance and protection of endangered and threatened species.

4) Likely impact on the public's understanding of the subject as compared to the level of understanding of the subject prior to disclosure:

The public understanding of the issues of nuclear regulatory compliance and environmental protection will be enhanced by the contribution of this information.

5) Size and nature of the public to whose understanding a contribution will be made:

NIRS has an active subscribing membership of over 1500 throughout the United States. Several thousand additional members periodically receive mailings from NIRS. NIRS provides resource material to electronic and print media outlets with very broad outreach to a safety conscious audience. Additionally, NIRS has a web site (www.nirs.org) which receives on average of 700 visitors per day where postings on this issue will be made available.

6) Means of distribution of the requested information:

NIRS will use its own newsletter publication The Nuclear Monitor and our media contacts in both the electronic and print media outlets to provide very broad outreach to the safety conscious public. NIRS will also share information with other interested parties concerned about regulatory compliance and endangered or threatened species. Additionally, NIRS will post information on its web site (www.nirs.org) which receives on average of 700 visitors per day.

7) Whether free access to information will be provided:

NIRS will provide the information without charge to all members of the public. Information prepared from the FOIA requested will be posted on the web site for downloading free of charge. NIRS will also provide a copy of information to all interested parties without charge.

8) No commercial interest by NIRS or any other party:

NIRS has no commercial interest in obtaining the requested information. This information is provided to all public requests without charge. The sole interest of NIRS is to promote a policy debate on nuclear regulatory compliance and the protection of endangered and threatened species.

Sincerely,



Paul Gunter, Director
Reactor Watchdog Project
Nuclear Information and Resource Service
1424 16th Street NW Suite 404
Washington, DC 20036
202-328-0002

IC (lethal trap) 86-94

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08/11/97

YR 86
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 2
CAUSE 5.3
COMMENTS BRUNSWICK INTAKE

YR 86
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 1
CAUSE 5.5
COMMENTS TURTLE WAS STRUCK AND KILLED BY A CP&L BOAT

YR 86
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 1
CAUSE 5.3
COMMENTS BRUNSWICK INTAKE

YR 86
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 4
CAUSE 5.3
COMMENTS

YR 86
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 1
CAUSE 5.3
COMMENTS

YR 87
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 1
CAUSE 5.3
COMMENTS BRUNSWICK INTAKE

YR 88
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 1
CAUSE 5.3
COMMENTS

B/1

Page No. 3
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YR 91
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 2
CAUSE 5.3
COMMENTS NO OBVIOUS WOUNDS

YR 91
AFFILIAT CP&L
SPECIES CM
COUNTY IC
CONDITION 1
CAUSE 5.3
COMMENTS FOUND ON TRASH RACKS AT INTAKE STRUCTURE OF BRUNSWICK PLANT

YR 93
AFFILIAT CP&L
SPECIES LK
COUNTY IC
CONDITION 1
CAUSE 5.3
COMMENTS DIVERS REMOVED TURTLE FROM TRASH RACK UNITS BELOW THE LOW TIDE LEVEL.

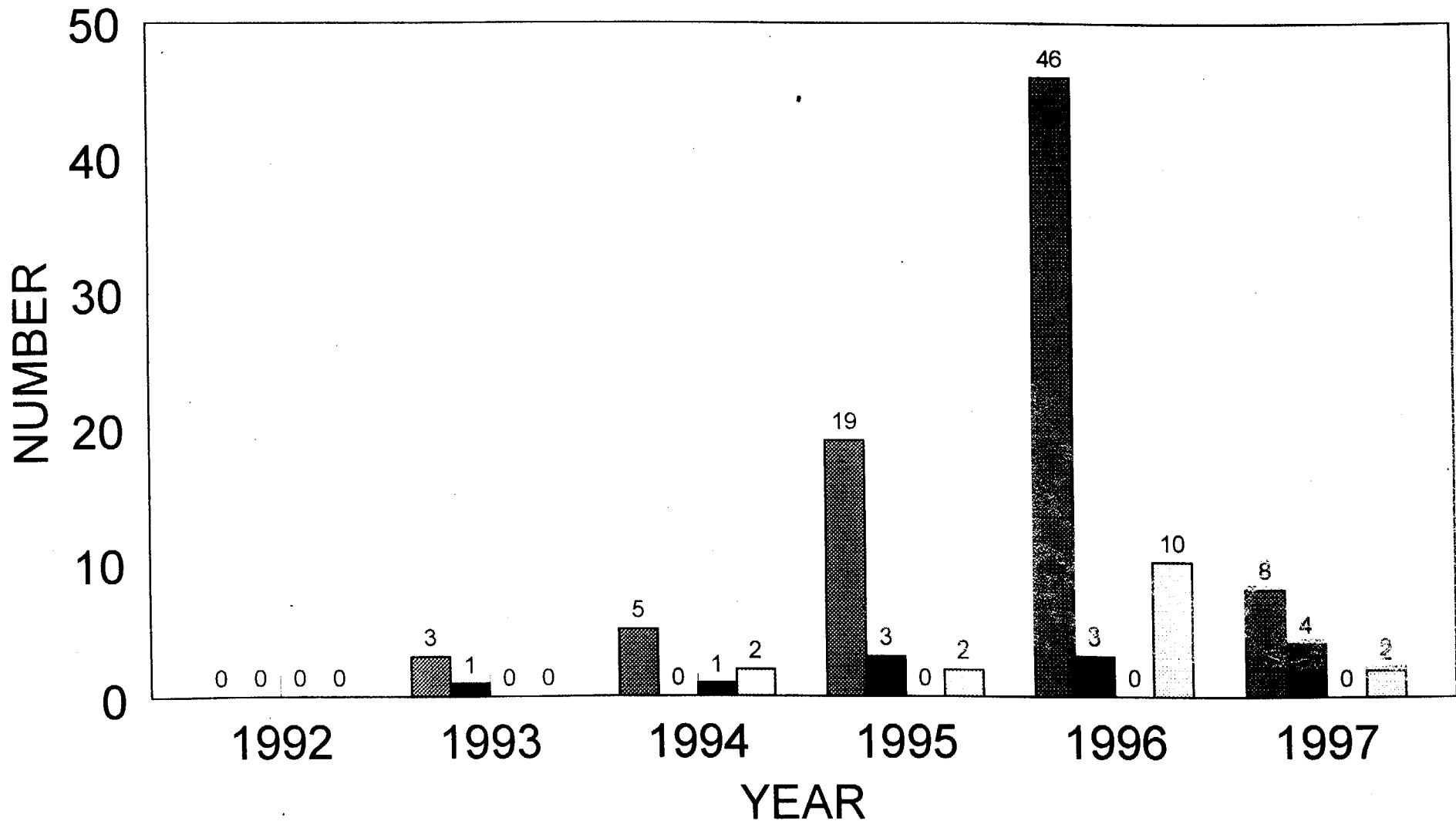
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YR 97
AFFILIAT CP&L
SPECIES CC
COUNTY IC
CONDITION 5
CAUSE 5.3
COMMENTS SKULL ONLY - FOUND AT THE BOTTOM OF THE TRASH RACKS. APPROX. 6 IN. LONG AND 4 IN. WIDE.

YR 97
AFFILIAT CP&L
SPECIES LK
COUNTY IC
CONDITION 1
CAUSE 5.3
COMMENTS NO VISIBLE WOUNDS. SALVAGED FOR WRC. 2.2 LBS.

BRUNSWICK SEA TURTLE RECOVERY

INCIDENTAL vs NON-INCIDENTAL CAPTURE



IC = INCIDENTAL CAPTURE
NI = NON-INCIDENTAL CAPTURE

**Sea Turtle Capture History in the Brunswick Nuclear Power Plant's Intake Canal
1986 - 1997**

YEAR	TOTAL CAPTURES*	INCIDENTAL CAPTURES	LETHAL INCIDENTAL CAPTURES
1986	(5) 5 Cc	(5) 5 Cc	(5) 5 Cc
1987	(7) 7 Cc	(7) 7 Cc	(1) 1 Cc
1988	(12) 10 Cc. 1 Cm. 1 Lk	(12) 10 Cc. 1 Cm. 1Lk	(5) 4 Cc. 1 Lk
1989	0	0	0
1990	(9) 8 Cc. 1 Lk	(8) 7 Cc. 1 Lk	(2) 2Cc
1991	(12) 7 Cc. 1 Cm. 4 Lk	(12) 7 Cc. 1 Cm. 4 Lk	(3) 2Cc. 1 Cm
1992	0	0	0
1993	(4) 3 Cc. 1 Lk	(4) 3 Cc. 1 Lk	(1) 1 Lk
1994	(8) 5 Cc. 2 Cm. 1 Lk	(5) 4 Cc. 1 Cm	0
1995	(24) 16 Cc. 7 Cm. 1 Lk	(22) 14 Cc. 7 Cm. 1 lk	(3) 2Cc. 1 Cm
1996	(59) 49 Cc. 4 Cm. 5 Lk. 1 Un	(48) 41 Cc. 3 Cm. 4 Lk	(2) 1 Cc. 1 Cm
1997	(16) 10 Cc. 6 Lk	(12) 6 Cc. 6 Lk	(4) 1 Cc. 3 Lk
TOTALS	(156) 120 Cc. 15 Cm. 20 Lk. 1 Un	(135) 104 Cc. 13 Cm. 18 Lk	(26) 18 Cc. 3 Cm. 5 Lk

* Numbers in parentheses represent cell totals.

CC = loggerheads CM = Green turtles LK = Kemp's ridleys UN = Unknown species

Brunswick Intake Canal

- Once through cooling system
- Intake approximately 5.7 miles upstream from mouth of Cape Fear River
- Intake canal approximately 3 miles long (Ship channel to plant)
- Intake canal approximately 300 feet wide and 18 feet deep (msl)
0.5 miles from intake → plant
- Water withdrawal mainly from surface layer of river
- Water discharged through 6 mile long canal to Atlantic Ocean
- Permanent diversion structure completed in November 1982
- Trash racks and traveling screens located at plant intake structure
2.5 miles from intake
on traveling screens
- Impinged organisms returned to estuary via return flume
at intake

- Six inch mesh blocker screens to prevent turtle entry through blown out small mesh screens
installed ~ month ago
- Blowouts repaired daily by maintenance crews
- Routine maintenance includes daily inspections and cleaning

Diversion Structure

- Completed November 1982
- Original purpose - to prevent movement of large fish, shrimp, crabs, etc. into intake canal
- Also effective at reducing sea turtle movement into intake canal
- 37 sets of 3/8 x 5/8 inch mesh copper/nickel screens
- Screens attached to 134 - 4 x 10 foot movable frames
- Water depth ranges from about 4 feet in end bays to about 18 feet at apex
- V shaped to increase screen area and reduce flow velocity
- Screens designed to release (blowout) under extreme loads to prevent major damage
- Blowouts result from riverine debris accumulation on screens

Diversion Structure Blowouts

- Diversion structure blowouts are designed to occur when the head pressure on the structure reaches predetermined levels. This is necessary to prevent major damage to the structure because of excessive head pressure.
- Blowouts are defined as the release and subsequent opening of a portion of a screen panel.
- Blowouts usually measure approximately 2x4 feet to 3x4 feet.
- One blowout represents an opening of approximately 0.25% of the diversion structure.
- Blowouts are repaired during the daily maintenance of the diversion structure.

blowouts are not
1d' x 2'

Sea Turtle Sighting and Capturing

Sea Turtle Patrols

diversion &

- Inspect the intake trash racks daily during turtle season (late April through August). Conduct inspections at or near low tide.
- Inspections of the trash racks should include close-up inspection of each rack and 30 to 60 minutes in the area to observe for sea turtle surfacing.
- Observe the diversion structure area for 30 to 60 minutes.

Live Sea Turtle Sightings

- If a live sea turtle is observed by other employees, question them about;
 - the species,
 - the approximate size,
 - the exact location.
- If a live sighting is reported, observe the area for one hour.
- If a live turtle is observed by you, set the turtle capture net.
- Use the 200 foot net if the turtle is observed near the plant intake structure.
 - Net should be securely tied to the fence post directly across the canal from the intake structure
 - Deploy the net toward the intake structure until the net is completely set
 - The net may be left unattended for only a few minutes at a time
 - If a turtle becomes tangled in the net, remove it immediately
- Use the 300 foot net if the turtle is observed near the diversion structure.
 - Net should be securely tied to a ladder or cleat on the diversion structure near the area where the turtle was last observed
 - Deploy the net until it is completely set
 - Observe the net in the water flow and make adjustments as needed
 - The net may be left unattended for only a few minutes at a time
 - If a turtle becomes tangled in the net, remove it immediately

low
1 ft
200 ft
4' in mesh
8' in mesh

Sea Turtle Tagging

- All live sea turtles should be tagged except those under eight pounds
- Place a tag in the second scale from the shoulder on each front flipper
- Ensure that the tag is locked into place

1-2 yrs for metal tags
due to tags
is d. w/ state
elect. tagging
permanent

Stranding and Tagging Reports

- Complete a sea turtle stranding report for each turtle captured
- Complete a sea turtle tagging report for each tagged turtle
- Give reports to CP&L sea turtle coordinator

Sea Turtle Release

- Photograph turtle
- Transport sea turtle to Yaupon Beach and release it in the surf
- Ensure that you have the Endangered Species Permit in your possession

State & NMFS
forms
→ 1-2 yrs d.
SP permit
issued from
atl. auth.
d. w/ FWS

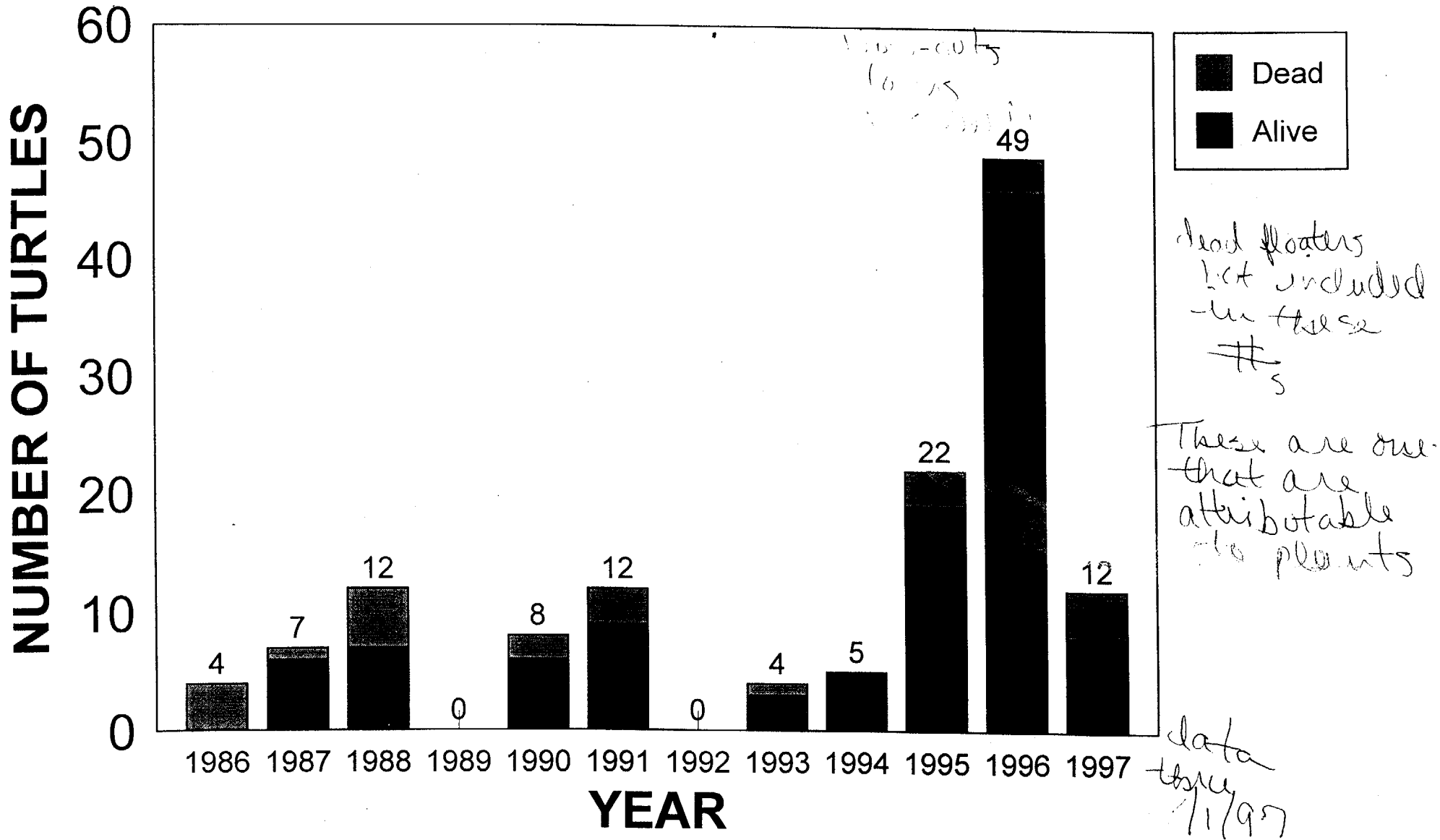
Dead Sea Turtles

- Remove sea turtle from canal
- Complete the Sea Turtle Stranding Report
- Call Ruth Boettcher (919) 729-1359
- Photograph the turtle
- Bury the turtle on site near the LCID landfill
- Give report to CP&L Sea Turtle coordinator

injured

BNP SEA TURTLE RECOVERY

INCIDENTAL CAPTURE

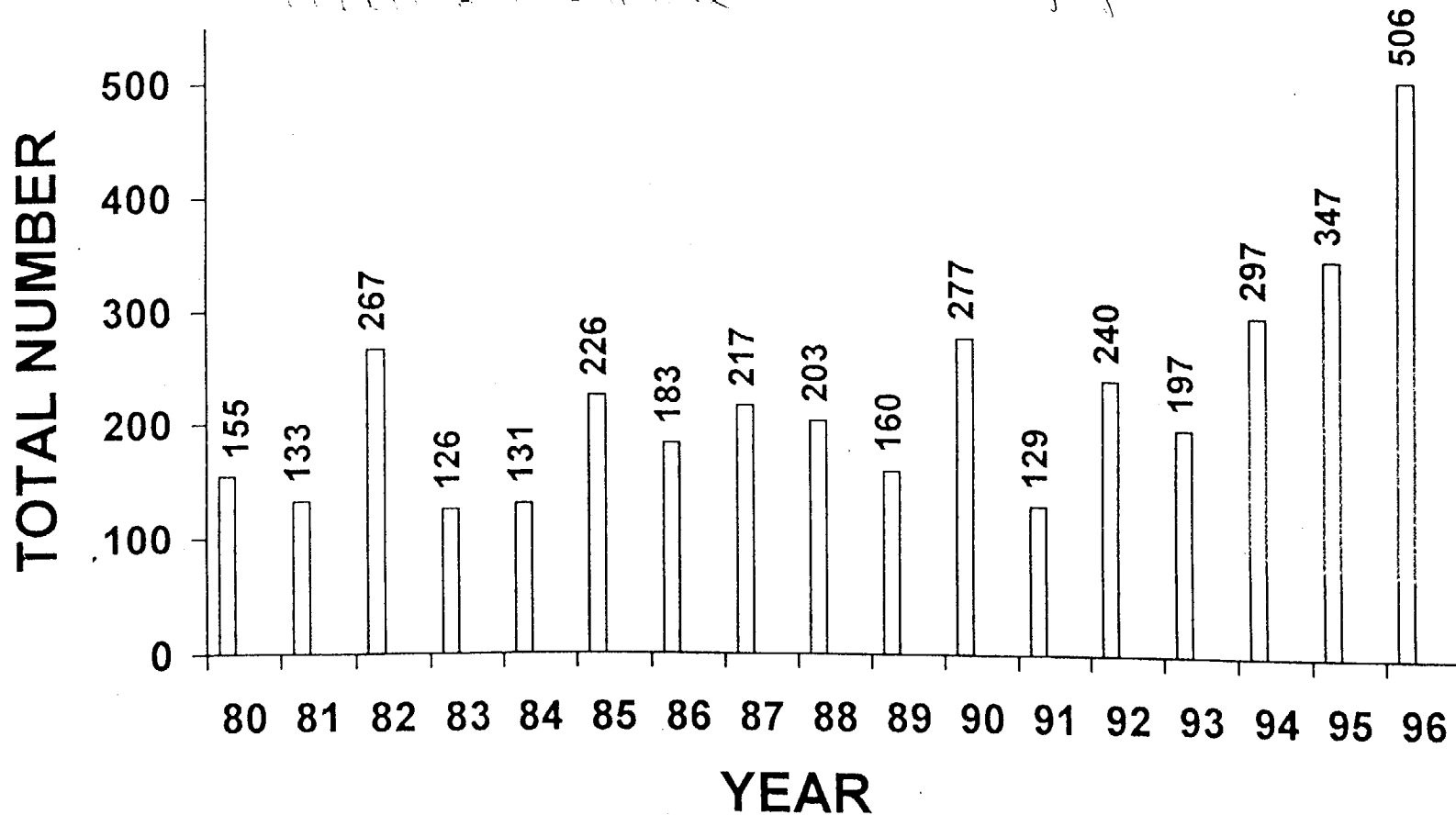


T. dorsalis mostly juveniles

ANNUAL STATEWIDE SEA TURTLE STRANDING TOTALS, 1980 - 1996

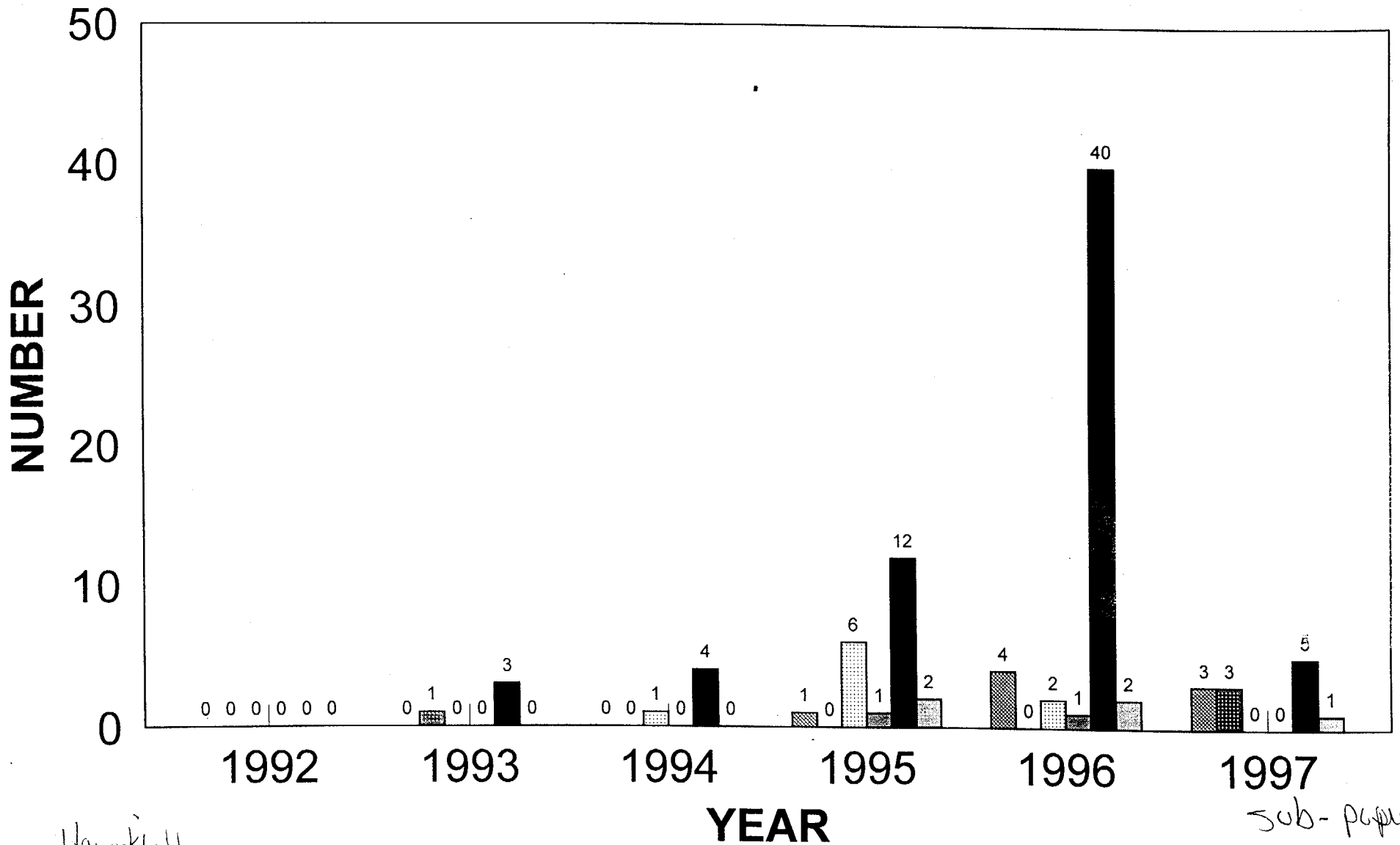
mostly juveniles

mostly juveniles



BRUNSWICK SEA TURTLES

INCIDENTAL BY SPECIES



sub-population

Thankfully
Leatherback
will be
at Brunswick



Measures to Reduce Sea Turtle Occurrence in BNP Intake Canal

- Diversion maintenance seven days per week to reduce diversion screen blowouts when debris is heavy.
- Twice daily patrols of the intake canal from trash racks to diversion structure.
- Environmental personnel on call 24 hours per day.
- Capture efforts undertaken when sea turtles are observed.
- Diversion crews on lookout while on duty.
- Security on lookout while patrolling intake area.
- New turtle capture boat.
- Four turtle capture nets on hand.
- Installation of Semi-permanent Blocker screens on the BNP diversion structure.

Expanded Sea Turtle Program

- All live sea turtles tagged with flipper tags
- All live sea turtles tagged with Passive Injectable Transponders (PIT)
- Injured sea turtles are attended to by veterinarian
- Necropsies performed on mortalities
- Repository for turtle flippers collected by area volunteers for age analysis
- Assist State Sea Turtle Coordinator with reported strandings
- Sea turtle educational display at visitor's center

*Educational program on sea turtles
Beach station*

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"Non-incident" Captures of turtles
found dead in intake canal

86-94

YR 90
AFFILIAT CP&L
SPECIES CC
COUNTY BR
CONDITION 2
CAUSE 2.0
COMMENTS SMALL HOLE IN CARAPACE.

YR 94
AFFILIAT CP&L
SPECIES CC
COUNTY BR
CONDITION 2
CAUSE 5.2
COMMENTS FISH HOOK IN FLESH BETWEEN RT FF; TAGGED BY CP&L 7/6/94 PPX995,996

YR 94
AFFILIAT CP&L
SPECIES LK
COUNTY BR
CONDITION 2
CAUSE 2.0
COMMENTS HEAD LEFT POSTERIOR AREA MISSING; NUMEROUS PUNCTURE WOUNDS ON TOP AND BOTTOM SHELL; RIPPED OPEN; APPEARS ATTACKED BY ALLIGATOR.

Condition
CP&L
BR
2
2.0

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YR 96
AFFILIAT CP&L
SPECIES CC
COUNTY BR
CONDITION 2
CAUSE 1.0
COMMENTS NO VISIBLE WOUNDS. WASHED INTO INTAKE CANAL DEAD.

YR 96
AFFILIAT CP&L
SPECIES UN
COUNTY BR
CONDITION 5
CAUSE 0.0
COMMENTS ONLY FOUND SKULL AND RIB BONE.

YR 96
AFFILIAT CP&L
SPECIES CM
COUNTY BR
CONDITION 1
CAUSE 1.0
COMMENTS OPEN SORES ON FLESH, PLAST., & CARA. (NECROSIS AROUND SORES) HEAVY TR
EMATODE LOAD IN WALLS OF STOMACH & SM INTESTINE AND IN MESENTARY. DIFF FROM CC.

YR 96
AFFILIAT CP&L
SPECIES CC
COUNTY BR
CONDITION 1
CAUSE 5.3
COMMENTS PLASTRON SUNKEN IN, DISCOLORED NECROTIC FLIPPERS (PURPLE; FLIPPER BON
ES EXPOSED), UNDERWT., LIGHT BARNACLE LOAD. NEC. BY VET. SCHOOL.

YR 96
AFFILIAT CP&L
SPECIES CC
COUNTY BR
CONDITION 2
CAUSE 2.0
COMMENTS 2 TO 3 SUPERFICIAL SCRATCHES ON THE TOP OF THE HEAD WITH A SMALL AMT.
OF BLEEDING. TURTLE WAS TAGGED BY CP&L ON 6/28/96 (SSP907-908).

YR 96
AFFILIAT CP&L
SPECIES CC
COUNTY BR
CONDITION 2
CAUSE 1.0
COMMENTS NO VISIBLE WOUNDS; NO MEASUREMENTS WERE TAKEN.

YR 97
AFFILIAT CP&L
SPECIES CC
COUNTY BR
CONDITION 2
CAUSE 2.0
COMMENTS DISTAL HALF OF THE RIGHT REAR FLIPPER MISSING AND A HALF-MOON SHAPE P
IECE OF SHELL MISSING ALONG THE RIGHT MARGIN OF CARAPACE. APPROX. 170 LBS.

Memo

To: Mr. David Trimble
From: Glen M. Thearling
Date: June 19, 1997
Re: Supporting information on BSEP's Diversion Structure

As the picture of the intake canal diversion structure I FAX'd was not legible, enclosed are some pictures of the structure. If additional information is needed, call me at 1 (910) 457-2038

Diversion Structure Blowouts

Diversion structure blowouts are designed to occur when the head pressure on the structure reaches predetermined levels. This is necessary to prevent major damage to the structure because of excessive head pressure.

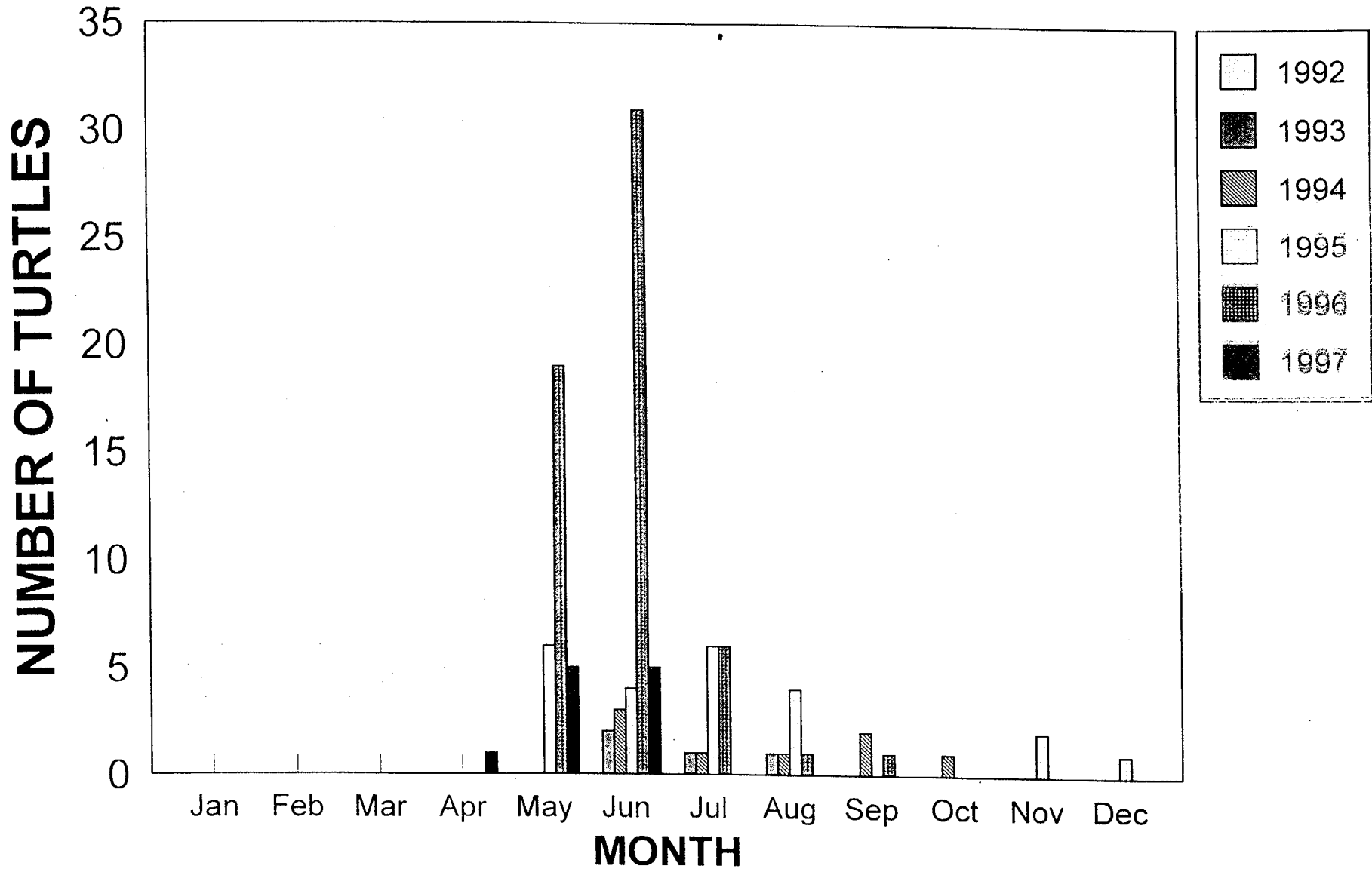
Blowouts are defined as the release and subsequent opening of a portion of a screen panel.

Blowouts usually measure approximately 2x4 feet to 3x4 feet.

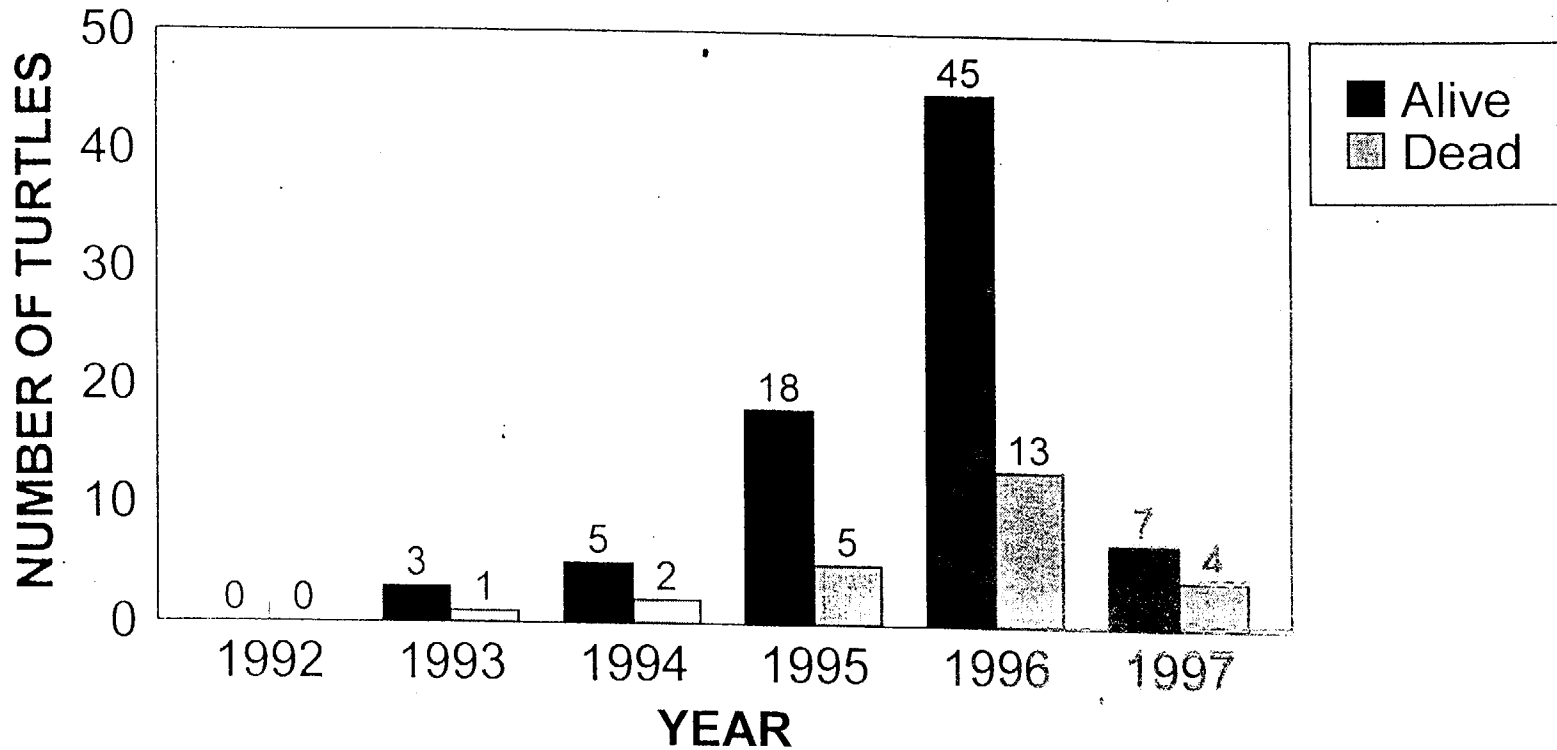
One blowout represents an opening of approximately 0.25% of the diversion structure.

Blowouts are repaired during the daily maintenance of the diversion structure.

BNP SEA TURTLE RECOVERY BY MONTH



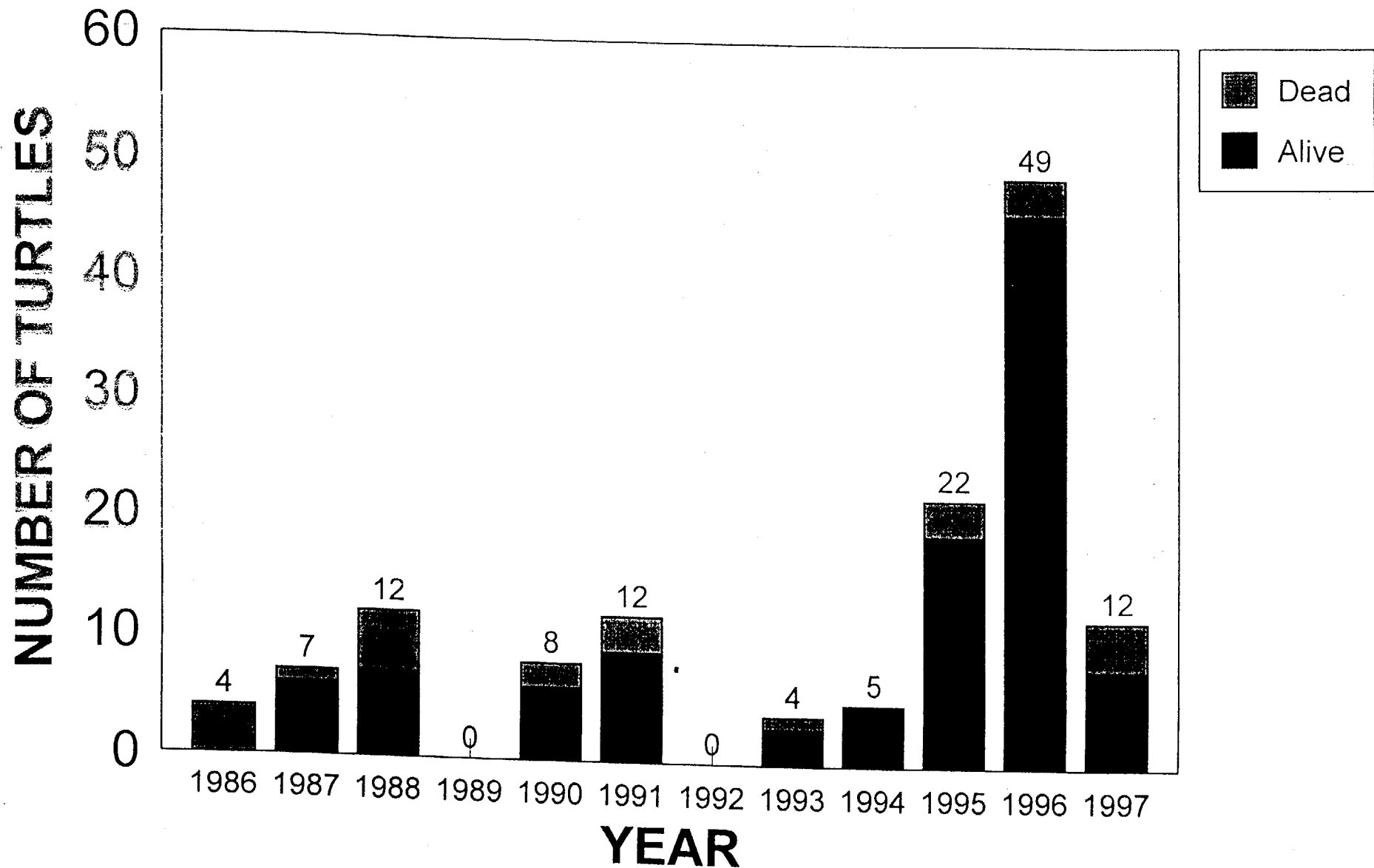
BNP SEA TURTLE RECOVERY



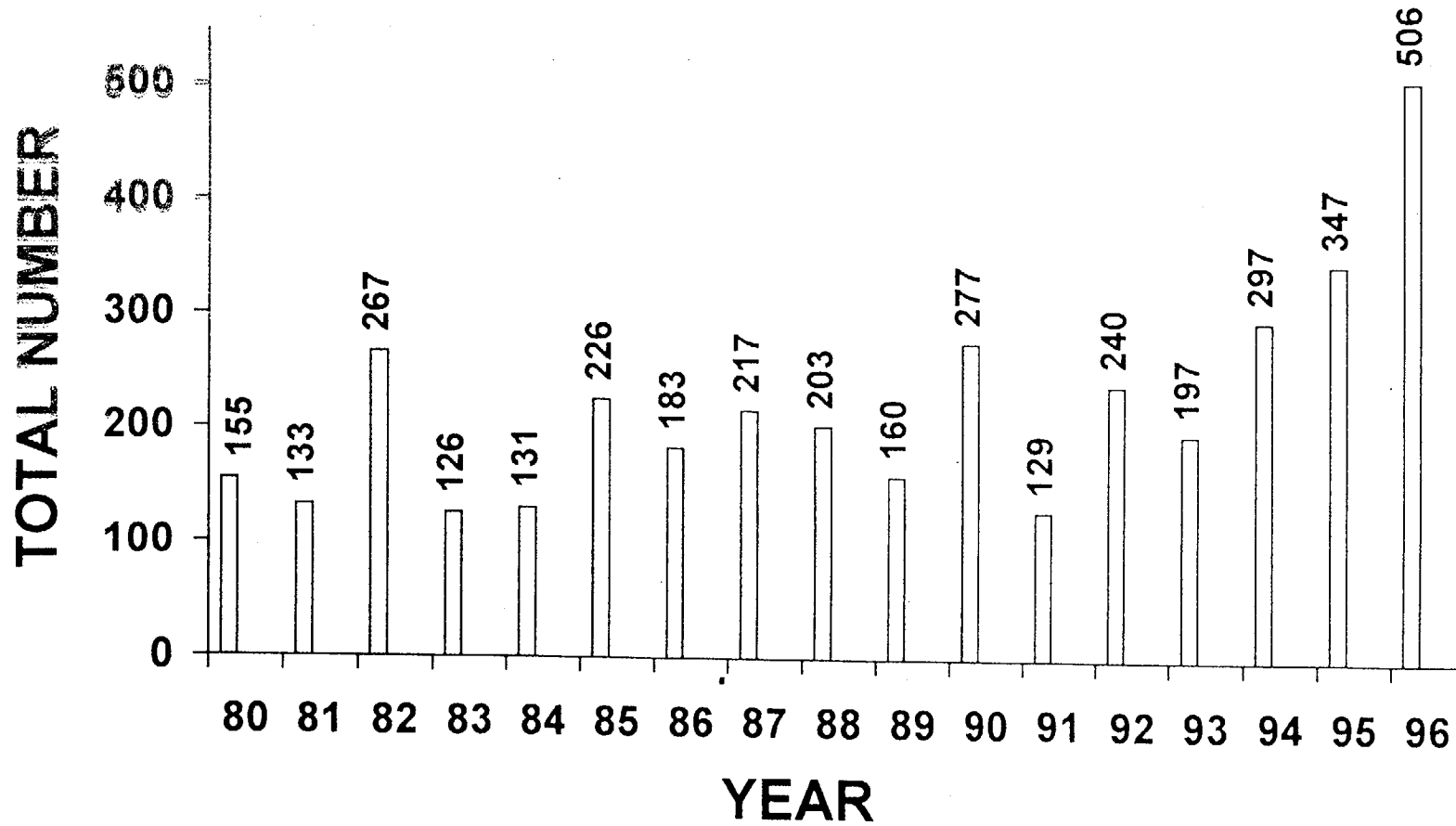
- 1992 : Dual Unit Outage
- 1995 : 2 dead turtles were recovered from outside of intake canal
- 1996 : 1 live and 2 dead turtles were recovered from outside of intake canal

BNP SEA TURTLE RECOVERY

INCIDENTAL CAPTURE



ANNUAL STATEWIDE SEA TURTLE STRANDING TOTALS, 1980 - 1996



BRUNSWICK SEA TURTLES

INCIDENTAL BY SPECIES

