SERO

- NMFS SOUTHEAST REGIONAL OFFICE, ST. PETERSBURG, FLORIDA

- SERO COVERS TEXAS THROUGH NORTH CAROLINA

- PROTECTED RESOURCES DIVISION CONSISTS OF 7 BIOLOGISTS AND 2 SUPPORT PERSONNEL
HOPPERS AND TURTLES

• HOPPER DREDGING EFFECTS ON LISTED SPECIES, ESPECIALLY SEA TURTLES, IN THE NMFS SOUTHEAST REGION
1978, FIRST NMFS SER ESA CONSULTATION ON H-D

• IN 1978, NMFS TRAWL SURVEYS VERIFIED SEA TURTLES WERE ABUNDANT IN CANAVERAL CHANNEL, FLORIDA

• ESA CONSULTATION CONCLUDED THERE WAS INSUFFICIENT INFO TO DETERMINE IF H-D WAS LIKELY TO JEOPARDIZE SEA TURTLES…

• MORE TRAWL SURVEYS SUPPORTED BY COE AND USN ($$) WERE IMPLEMENTED
JANUARY 22, 1980, OPINION

• BO RECOMMENDED:

• NMFS-APPROVED OBSERVERS BE ABOARD TO MONITOR FOR SEA TURTLE PRESENCE

• DREDGING BE DONE DURING SEASONAL WINDOW AUG TO NOV 1
MORE ON THE JANUARY 1980 OPINION

- CONCLUDED THAT DREDGING MAY RESULT IN MANY TAKES OF LOGGERHEADS BUT WAS NOT LIKELY TO JEOPARDIZE T-C-E OF EITHER LOGGERHEADS OR KEMP’S RIDLEYS

- THE POTENTIAL FOR TURTLE TAKE WAS RECOGNIZED BUT NO EVIDENCE OF TAKE BY HOPPERS EXISTED AT THIS POINT
BUT THEN…

• 71 TURTLE TAKES BY H-D WERE DOCUMENTED FROM JULY-NOV 1980, IN CANAVERAL CHANNEL

• NMFS CONSIDERED THESE TAKES TO BE MINIMUM ESTIMATES OF MORTALITY SINCE MANY TAKES LIKELY GO UNDETECTED
1980-1986

NMFS BO’S AUTHORIZED TAKES

NMFS, COE, AND NAVY CONTINUED EFFORTS TO ELIMINATE TAKES BY H-D IN CANAVERAL CHANNEL

TURTLE TAKES WERE REDUCED
EFFORTS INCLUDED ATTEMPTS TO SCARE TURTLES AWAY

• DETECT AND CAPTURE THEM

• REMOVE AND RELOCATE THEM

• PHYSICALLY DEFLECT TURTLES AWAY FROM THE SUCTION DRAGHEAD
NOTHING WORKED......

• TURTLES WERE EVEN FOUND SLEEPING ATOP NOISY ACOUSTIC DETERRENT DEVICES (SOUND GUNS).

• ZZZZZZZZZZZZZZzzzzzzzzzzzzzzzzzzzzz........
SO, THE BOTTOM LINE WAS...

• NO ACCEPTABLE MEANS WAS FOUND OF ELIMINATING H-D TAKE OF TURTLES

• TAKES CONTINUED IN CANAVERAL

• BUT THEN, FINALLY,

• SOME GOOD NEWS – UNLESS YOU WERE A CANAVERAL TURTLE...
1981-82 COE/USN TRAWL SURVEYS OF 5 MAJOR EAST COAST CHANNELS SHOWED

• WHILE HUNDREDS WERE COLLECTED AT CANAVERAL…

• ONLY 1-2 TURTLES WERE COLLECTED IN EACH OF THE SURVEYED CHANNELS
NMFS DECIDED THAT... THE CANAVERAL PROBLEM WAS UNIQUE, SO...

- ADDITIONAL CHANNEL ABUNDANCE SURVEYS WERE NOT REQUIRED

- MEANWHILE, WORK CONTINUED ON A TECHNICAL SOLUTION
CORPS OF ENGINEERS ENGINEER
THE ORIGIN OF MUTANT NINJA TURTLES: SEA TURTLES AND NAVY NUKES

• IN 1986, USN REINITIATED CONSULT. ON PROPOSED DREDGING AT KINGS BAY, GA, TRIDENT SUB BASE

• ACTION INVOLVED DEEPENING AND, WIDENING, AND EXTENDING CHANNEL 17 MILES
THE NAVY CONSERVATION MEASURES INCLUDED

• ENDANGERED SPECIES OBSERVERS

• DREDGED MATERIAL SCREENING

• TURTLE RELOCATION TRAWLERS

• IN KINGS BAY, FROM JULY 87-DEC 89, 21 TURTLES TAKEN BY H-D
POLICY SHIFT

• KINGS BAY TAKES RESULTED IN MAJOR CHANGES IN NMFS H-D POLICY

• K-B WAS THE FIRST DOCUMENTED TAKE OF TURTLES OUTSIDE OF CANAVERAL

• CANAVERAL TAKES HAD ALL BEEN LOGGERHEADS (THREATENED); K-B TAKES INCLUDED GREENS (3) AND KEMP’S (3) (ENDANGERED)
HMMMMM....

- NMFS BEGAN TO CONSIDER THE ADDITIVE CONSEQUENCES OF HOPPER DREDGING ALONG THE SOUTHEAST ATLANTIC COAST
1988 WAS A VERY GOOD YEAR FOR TURTLES

• NMFS ASSISTANT ADMINISTRATOR FOR FISHERIES WROTE THE COMMANDER OF THE ARMY CORPS OF ENGINEERS REQUESTING FORMAL CONSULTATION FOR ALL AREAS WHERE HOPPER DREDGING WAS PROPOSED

• OBSERVERS WERE REQUIRED ON 25-100% OF ALL HOPPER DREDGING ACTIVITIES IN BRUNSWICK, SAVANNAH, AND WILMINGTON
NOV 25, 1991 “JEOPARDY”
OPINION TO COE

• IN RESPONSE TO HIGH OBSERVED TAKES AND NEARBY STRANDINGS, IN BRUNSWICK AND SAVANNAH CHANNELS

• BO FOUND THAT CONTINUED UNRESTRICTED H-D IN SE ATLANTIC COAST CHANNELS COULD JEOPARDIZE THE CONTINUED EXISTENCE OF SEA TURTLES
REASONABLE AND PRUDENT ALTERNATIVE

• PROHIBITED ALL H-D IN CANAVERAL CHANNEL (AT LAST! AT LAST!)

• ESTABLISHED SEASONAL RESTRICTIONS (H-D ONLY FROM DEC THROUGH MARCH) FROM OREGON INLET, NC - CANAVERAL

• NON HOPPER-TYPE DREDGES WERE OKAYED YEAR-ROUND, EVERYWHERE
THE REGIONAL APPROACH

• NOV 1991 BO WAS NMFS’ FIRST “CUMULATIVE AREA” ESA CONSULT. WITH COE ON HOPPER DREDGING

• BO CONCLUDED NO ADVERSE EFFECTS TO LISTED SPECIES LIKELY TO OCCUR FROM CLAMSHELL OR PIPELINE DREDGES
THE 1991 REGIONAL BO

• AUTHORIZED THE ANNUAL TAKE OF:
  • 50 LOGGERHEADS, OR
  • 5 GREENS, HAWKSBILLS, OR LEATHERBACKS, IN COMBINATION, OR
  • 2 KEMP’S RIDLEY

• THE GOOD NEWS –
  • BETWEEN 1992-1995 ONLY 14 TAKES WERE OBSERVED (3 ALIVE)
1994 CHANNEL SURVEYS & THE CORPS COWCATCHER

• OCT 1994: COE WES CONCLUDED TURTLE ABUNDANCE RESEARCH ON 6 SER CHANNELS (DICKERSON ET AL. 1994)

• MOREHEAD CITY, CHARLESTON, SAVANNAH, BRUNSWICK, FERNANDINA – ST. MARYS RIVERS, AND CANAVERAL

• WES DEVELOPED PROMISING DRAGHEAD “COWCATCHER” TURTLE DEFLECTOR
THE CORPS RENEGOTIATES

• NOV 1994: BASED ON WES WORK, COE SAD REQUESTS NEW BO WITH LESS RESTRICTIVE H-D CONDITIONS
WES SURVEY RESULTS

• EXPECT MODERATE TO HIGH ABUNDANCE OF SEA TURTLES WHEN WATER TEMPS ARE 21 DEG C. OR +

• LOWER ABUNDANCES OBSERVED WHEN TEMPS WERE 16 DEG C. OR –

• CANAVERAL SUPPORTS TURTLES YEAR-ROUND, ESPECIALLY WINTER
WES SURVEY RESULTS...

• LOGGERHEADS WERE MOST ABUNDANT (N=645), THEN KEMP’S (N=20), THEN GREENS (N=5)

• NORTH OF CANAVERAL, TURTLES SEASONALLY ABUNDANT, LOWER NUMBERS IN DEC-FEB
AND…

- RECAPTURES OF RELOCATED TURTLES SHOWED SOME SITE FIDELITY

- EFFECTIVENESS OF RELOCATION SEEMED RELATED TO RELOCATION DISTANCE
CPUE IN 5 WES-SURVEYED CHANNELS (ALL SEASONS, CUMULATIVELY)

- CANAVERAL – 1.43 TURTLES/HOUR
- KINGS BAY – 0.571
- BRUNSWICK HARBOR – 0.489
- CHARLESTON HARBOR – 0.206
- MOREHEAD CITY HARBOR – 0.025
AUG 25, 1995, REGIONAL BO

• REVISED 1991 BO RESTRICTIONS AND MONITORING REQUIREMENTS FOR COE HOPPER DREDGING ACTIVITIES IN SEUS

• SET MONITORING WINDOWS FOR SEA TURTLES/WHALES
• REQUIRED DEFLECTING DRAGHEAD DURING HIGH TURTLE ABUNDANCE MONTHS, UNLESS NMFS WAIVER…

• ALLOWED CANAVERAL DREDGING WITH HOPPER, BUT ONLY IN EMERGENCIES

• REQUIRED 100% INFLOW SCREENING; RECOMMENDED 100% OVERFLOW SCREENING, UNLESS NMFS WAIVER…
MORE ON THE 1995 RBO...

• COVERS CHANNELS FROM NC TO KEY WEST, FL

• AUTHORIZED ANNUAL TAKES OF -
  • 20 LOGGERHEADS
  • 7 KEMPS AND 7 GREENS
  • 2 HAWKBILLS
  • 5 SHORTNOSE STURGEON
• RECONSULT WHEN 75% OF I.T.L. IS MET
THE 1997 “INTERIM” BO

• HIGH TURTLE TAKES DURING H-D IN 1997

• COE RECONSULTED TO COMPLETE ONGOING WORK IN WILMINGTON AND MOREHEAD CITY; AND MIAMI AND MYRTLE BEACH SAND BORROW AREAS

• INTERIM BO ADDED 15 LOGGERHEADS TO 1995 ITS
SEPT 25, 1997, RBO

• SUPERSEDED 1997 INTERIM RBO

• IS THE CURRENT BO AUTHORIZING COE SAD TAKES OF LISTED SPECIES BY H-D

• MAINTAINED TAKE LEVELS SET IN INTERIM BO (35 LH, 7 KR, 7 GR, 2 HB, 5 SNS)
MORE ON SEPT 25, 1997, RBO

- INCLUDED TERMS/CONDITIONS OF 1995 RBO, ALSO...

- RECONSULT IF 75% OF I.T.L. MET, 2 OR MORE TURTLES TAKEN IN ONE DAY, OR 5 TURTLES TAKEN PER PROJECT

- “VALID” FOR 5 YEARS FROM ISSUE DATE
COE SAD IN-HOUSE HOPPER DREDGING PROTOCOL

COE SAD SUBDIVIDES AND ALLOCATES NMFS’ “TURTLE/SNS QUOTA” FROM 1997 RBO ITS AMONG ITS RESPECTIVE COE DISTRICTS IN SEUS

• SAD TERMINATES INDIVIDUAL DREDGING PROJECTS WHEN 5 TURTLES ARE TAKEN
RELOCATION TRAWLING

• PROTOCOL CALLS FOR DISTRICT TO CALL IN RELOCATION TRAWLERS IF 2 TURTLES ARE TAKEN IN 24 HOURS

• MAY OCCUR WHEN TAKE LEVELS ARE SO HIGH THAT COE SAD IS ON THE VERGE OF TERMINATING A DISTRICT’S PROJECT BEFORE ALL NECESSARY DREDGING HAS BEEN COMPLETED
MORE ON RELOCATION

TRAWLING...

• BUYS THE COE TIME TO FINISH CRITICAL PORTIONS OF DREDGING PROJECTS

• BUT IT’S EXPENSIVE (LAST-DITCH)

• MULTIPLE TRAWLERS MAY BE USED

• IT’S ALSO A PAIN BECAUSE IT REQUIRES NMFS-APPROVED ESO’S ABOARD WHO HAVE PERMITS TO HANDLE TURTLES
EFFECTIVENESS OF RELOCATION TRAWLING

• SEPT 2000, ST. PETE HARBOR DREDGING, 3 TURTLES WERE RELOCATED IN 8 DAYS OF TRAWLING (80 TOWS TOTALING 29 HOURS OF DRAG TIME)

• FEB-MAR 1999, BRUNSWICK HARBOR, GA, TRAWLERS MOVED 19 LOGGERHEADS OUT OF PATH OF H-D IN APPROX. 3 WKS

• WOULD THEY HAVE MOVED BEFORE THE HOPPER DREDGE ATE THEM?
TURTLE TAKES - SAD

• 1992 - 1995 – 16 TURTLES
• 1996 - 9
• 1997 – 28
• 1998 – 6
• 1999 – 7
• 2000 – 15
• 2001 – 4 - INCLUDES FIRST-EVER DOCUMENTED TAKE FROM OFFSHORE SAND BORROW AREA (BREVARD CO., FL)
TAKES OF OTHER SPECIES
BY HOPPER DREDGE

• NO HAWKSBILLS OR LEATHERBACKS IN SEUS OR GOM

• NO SHORTNOSE, (OR GULF STURGEON IN GOM) THOUGH OCCASIONAL TAKES OF ATLANTIC STURGEON (NOT ESA-LISTED)

• NO WHALES (H-D HAVE HAD TO GIVE WAY ON OCCASION)

• JSG NOT LIKELY TO BE WHERE H-D ARE
GULF OF MEXICO HOPPER DREDGING

• BEFORE 1995, CONSULTATIONS CONDUCTED PRIMARILY CASE BY CASE, INFORMAL

• FEB 1995, NMFS LEARNED OF GREEN TURTLE TAKES BY H-D IN BRAZOS PASS, SO. TEXAS

• THESE WERE FIRST DOCUMENTED TAKES OF SEA TURTLES BY H-D IN THE GULF OF MEXICO
FIRST REGIONAL GULF OPINION ON H-D

• SEPT 22, 1995, NMFS ISSUED A REGIONAL BO TO THE COE GALVESTON AND NEW ORLEANS DISTRICTS FOR H-D IN TEXAS AND LOUISIANA NAVIGATION CHANNELS
1995 GOM COMBINED RBO

- RECOMMENDS H-D BETWEEN DEC 1-MAR 31, WHENEVER POSSIBLE, IN GOM WATERS AND UP TO 1 MILE IN RIVERS

- REQUIRES ESO’S ABOARD FROM CORPUS CHRISTI SW TO BRAZOS PASS, TX

- IF NO TAKES IN DEC THEN OBSERVERS NOT REQUIRED IN JAN AND FEB OR UNTIL WATER TEMPS RISE TO 12 DEG C.
MORE ON THE GOM COMBINED RBO…

• CHANNELS NE OF CORPUS CHRISTI, OBSERVERS REQUIRED WHEN TEMPS = OR + 12 DEG C AND BETWEEN APR 1 - NOV 30.

• 100% INFLOW SCREENING REQUIRED, 100% OVERFLOW SCREENING RECOMMENDED. IF…THEN…

• RIGID DRAGHEAD DEFLECTOR REQUIRED

• SEPARATE ITS FOR EACH DISTRICT
AUTHORIZED ANNUAL TAKE

• NEW ORLEANS DISTRICT:
  • 15 LOGGERHEADS
  • 7 KEMP’S RIDLEY
  • 3 GREENS
  • 1 HAWKSBILL

• GALVESTON DISTRICT:
  • SAME, EXCEPT 5 GREENS (MORE GREENS IN TEXAS WATERS THAN LOUISIANA)
OBSERVED GOM TURTLE TAKES SINCE 1995

- 1995 - NOD – 0; GD – 10; 5 KR, 2 LH, 3 GR
- 1996 – NOD – 1; GD – 5; 6 LH
- 1997 – NOD – 5; GD – 1; 6 LH
- 1998 -
- 1999 – NOD – 2; GD – 11; 4 KR, 4 LH, 5 GR
- 2000 – NOD – 2; GD – 2; 1 KR, 3 LH
- 2001 – NOD – 12; GD – 0; 1 KR; 11 LH

- APPROX. COMBINED DISTRICT YEARLY AVERAGE: 11 TURTLES PER YEAR
GOM NOD AND GD COE
HOPPER DREDGING PROJECTS

- SABINE PASS (SABINE-NECHES WATERWAY)
- GALVESTON HARBOR CHANNEL
- CORPUS CHRISTI SHIP CHANNEL
- PORT MANSFIELD
- BRAZOS ISLAND HARBOR
- LOWER MISSISSIPPI RIVER
- MISS. RIVER GULF OUTLET (MRGO)
- MRGO BAR CHANNEL
- MISS. RIVER SOUTHWEST PASS
AS WE SPEAK…

• COE-GD HAS REINITIATED CONSULTATION WITH NMFS AND IS PUTTING RELOCATION TRAWLERS ON STANDBY AT MRGO BECAUSE ONE MORE LOGGERHEAD TAKE PUTS THEM OVER 75% OF THEIR LOGGERHEAD TAKE LIMIT
COMING SOON…

• NMFS IS REWRITING THE 1995 GOM RBO TO MAKE IT GULF-WIDE

• NMFS EXPECTS TO INCLUDE COE JAX DISTRICT’S FL WEST COAST HOPPER DREDGING PROJECTS, AS WELL AS MOBILE DISTRICT’S H-D PROJECTS

• NEW BO WILL MAINTAIN SEPARATE I.T. LEVELS FOR GD, NOD, MOB, AND JAX