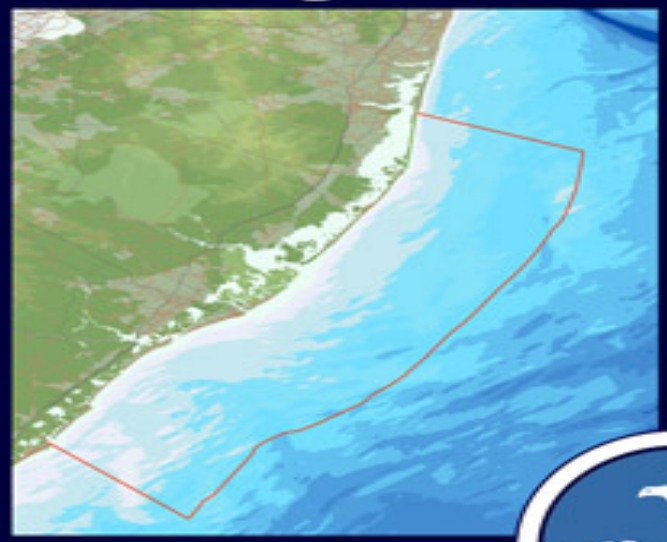
Ocean/Wind Power Ecological Baseline Studies



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
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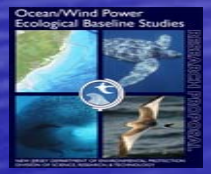


Ocean / Wind Power Ecological Baseline Studies

Gary A. Buchanan, Ph.D.
Project Manager
Bureau of Natural Resources Science
Division of Science, Research & Technology
NJDEP

Interested Party Group (IPG)

- Organizations that have an interest in offshore power (e.g., environmental, natural resource or development standpoint)
- DEP outreach
  - Provide updates on the project's progress and results

STATE OF NEW JERSEY

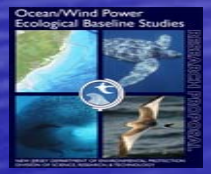
Blue Ribbon Panel on Development of Wind Turbine Facilities in Coastal Waters

FINAL REPORT

TO

GOVERNOR JON S. CORZINE

APRIL 2006

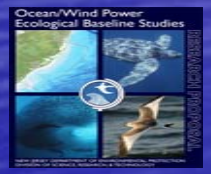


Background

- New Jersey's Blue Ribbon Panel on Development of Wind Turbine Facilities in Coastal Waters
- Recommendations
  - Natural Resources
  - Economics, Tourism
  - Ocean Uses

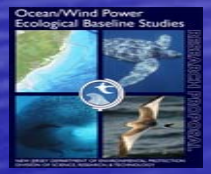
Project Objectives

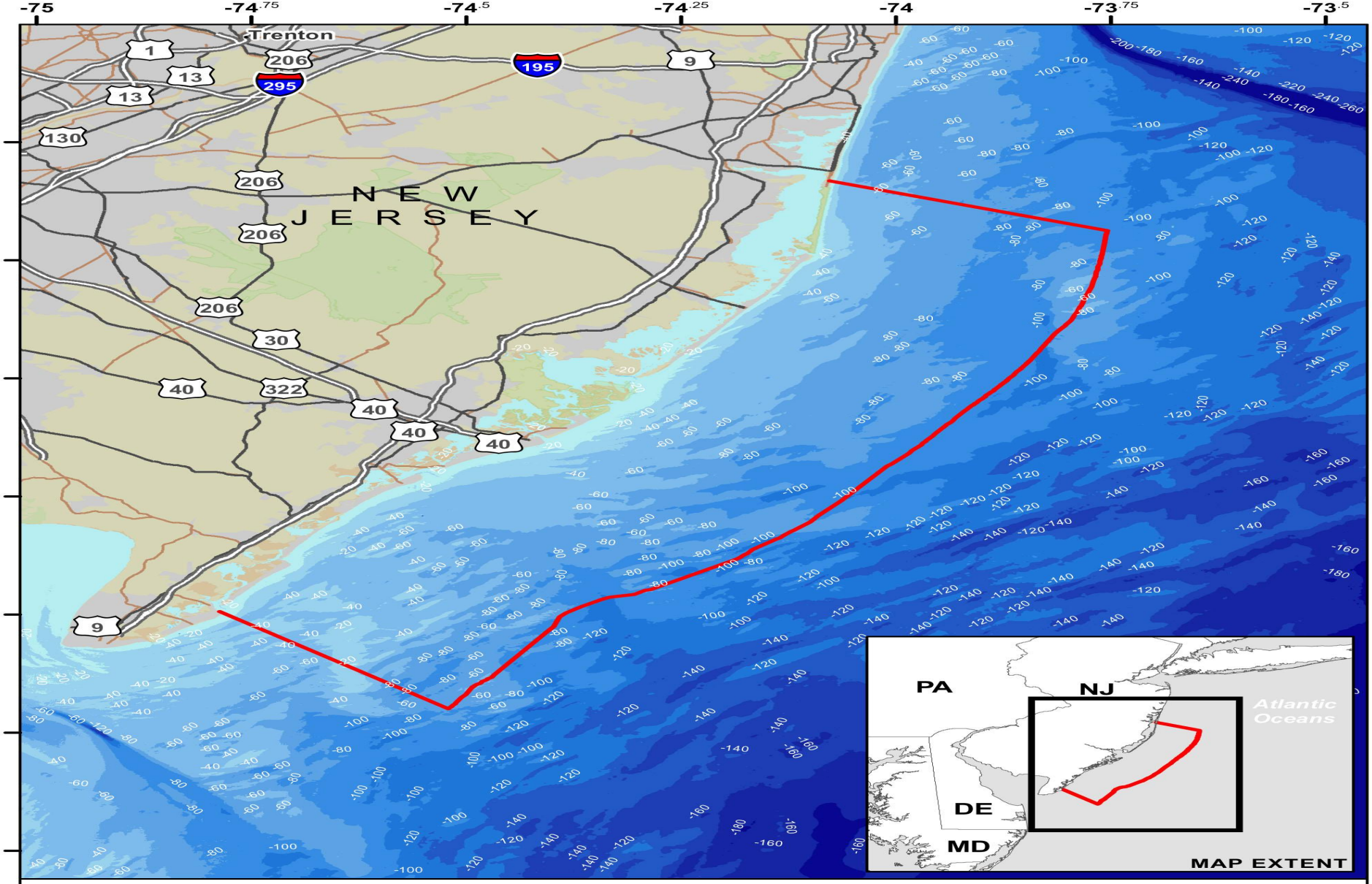
- Address Natural Resource portion of Blue Ribbon Panel Recommendation No. 4:
  - "Baseline data should be collected regarding the distribution, abundance, and migratory patterns of avian species, fish, marine mammals and turtles in the offshore area where development may be feasible."



Project Design

- Blue Ribbon Panel
- European Studies
- Technical Review Committee
  - USFWS, NMFS, MMS, NJDEP
  - North American Methods





Bathymetry (Feet)

Project Boundary

0 - -20
-20 - -40
-40 - -60
-60 - -80
-80 - -100
-100 - -120
-120 - -140
-140 - -160
-160 - -180
> -180

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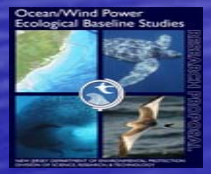
Specific Objectives

- In the Study Area, what are the abundance, distribution, and utilization of:
  - Bird Species (flight behavior)
  - Marine Mammals
  - Sea Turtles

Specific Objectives

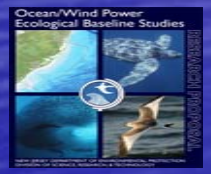
- What are the abundance, utilization, and distribution of other marine biota (e.g., fish, shellfish) in the Study Area?

- What is the distribution of other existing natural resources, including, but not limited to, shoals, sand borrow areas, artificial reef sites, and other pre-existing resources in the Study Area?



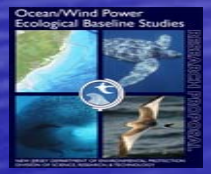
Specific Objectives

- Using predictive modeling, mapping, and environmental assessment methodologies what portions of the study area are more or less suitable for wind/alternative energy power facilities based on potential ecological/environmental impacts?



Field Studies

- Three Primary Surveys:
  - Avian
  - Marine Mammal
  - Sea Turtle
- Supporting Studies:
  - Oceanographic



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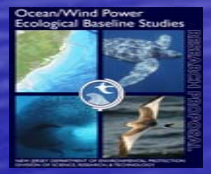
DELL
SIBLEY BIRDS II

Other Studies

- Literature Review
- Data Compilation (digital and historical)
- Model Development
- Impact Assessment
- GIS
- Reporting

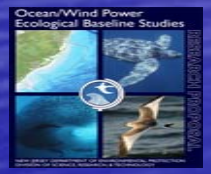
Budget

- $4.9 million
- Baseline Surveys: >80% of budget
- Remaining Budget:
  - Literature Review/Data Compilation
  - Predictive Modeling
  - Impact Assessment
  - Reporting



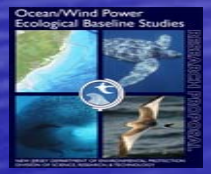
Overall Process

- Technical Review Committee – State & Federal Agencies
- Peer Review Group – Independent Review
- Interested Party Group



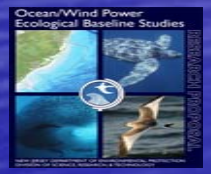
Challenges/Issues

- Weather – Visual surveys need to be conducted under good conditions
- Vessels – Limitations on operation (e.g., storms, availability)
- Aerial Surveys
- Radar Lift Boat – damaged Oct. 19



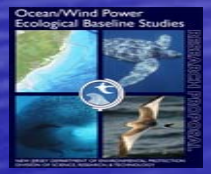
Schedule

- 18-month study
- Field Work: 1/2008 – 6/2009
- Interim Report – January (Feb) 2009
- Draft Final Report – September 2009
- Final Report – December 2009



Status

- 10 months of surveys (56%) complete
- Literature Review ongoing
- Data compilation and analysis continuing
- Interim Report



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Related Sites

Blue Ribbon Panel on Development of Wind Turbine Facilities in Coastal Waters

The New Jersey Department of Environmental Protection (NJDEP), Division of Science, Research & Technology (DSRT) issued a Solicitation for Research Proposals (SRP) in order to address the need for baseline ecological/natural resource data as recommended by the State of New Jersey Blue Ribbon Panel on Development of Wind Turbine Facilities in Coastal Waters.

The objective of this study is to conduct baseline studies in waters off New Jersey's coast to determine the current distribution and usage of this area by ecological resources. The scope of work includes the collection of data on the distribution, abundance and migratory patterns of avian, marine mammal, sea turtle and other species in the study area over an 18-month period.

- Agenda - Interested Party Group Meeting, November 9, 2007
- Response to Bidders Questions (May 11, 2007)
- Addendum (May 11, 2007)
- Solicitation of Proposal - Ocean/Wind Power Ecological Baseline Studies (April 19, 2007)

For more information regarding this project, please contact Gary A. Buchanan, Ph.D., Bureau of Natural Resources Science Division of Science, Research & Technology, NJDEP.

http://www.nj.gov/dep/dsr/ocean-wind/