

New Jersey Hurricane Sandy
Recovery Support Using
ArcGIS Online

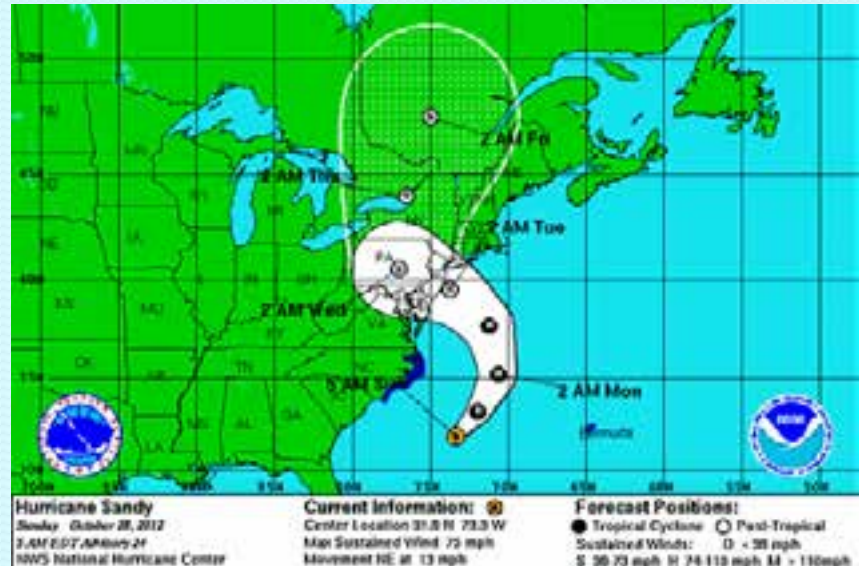
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Hurricane Sandy



- **October 22-November 5, 2012** - Hurricane Sandy, as a hurricane and a post-tropical cyclone, kills at least 117 people in the United States and 69 more in Canada and the Caribbean.
- 37 fatalities in New Jersey

- \$65 Billion estimated damage to the United States.
- \$ 30 Billion estimated damages to New Jersey



New Jersey Department of Environmental Protection (NJDEP)

Projects Utilizing ArcGIS Online (AGO)

- 1. Waterway Debris Removal Project**
- 2. HUD Environmental Review Tool**

Waterway Debris Removal Project

FEMA Eligibility

- Debris must be removed within 6 months of storm event
 - NJ applied for and received a 6 month extension
- Debris must be removed in accordance to all Applicable Environmental Laws and Executive Orders (Federal & State)
 - Coastal Barrier Resource Act, Endangered Species Act, Wild and Scenic Rivers Act, etc.

Examples of Waterway Debris

- Located in the Atlantic Ocean, Bays, and Rivers
- Included Household items, Vehicles, Boats, and other items
- Also includes sand washed into the bay from barrier islands


























Waterway Debris Removal Project

– Build an internet map for the project with the applicable layers

1. Debris Zones
2. Natural Historic Preservation (NHR)
3. Threatened and Endangered Species
4. Removed - Temporary Debris Management Areas (TMDA)
5. NJ Lakes within surge extent
6. Waterway Debris Survey Locations
7. Abandoned Vessels
8. Submerged Aquatic Vegetation 2012 (SAV)
9. Aquaculture Lease Area
10. Aquaculture Oyster Beds
11. NJ Marinas
12. NJ State Channels
13. Intercoastal Waterway
14. US Army Corps of Engineers Project Areas
15. Known Contaminated Sites
16. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
17. Resource Conservation and Recovery Act (RCRA)
18. Stormwater Outfalls
19. Stormwater Outfalls
20. NJPDES Surface Water Discharge
21. Coastal Barrier Resource Act (CBRS)
22. Wild & Scenic Rivers
23. Wetlands
24. NJ Coastal Zone
25. FEMA Sandy Surge Extent
26. Delaware State Boundary
27. Federal Owned Lands
28. State Owned Open Space
29. County Owned Open Space
30. Municipal Owned Open Space
31. Wildlife Management Areas
32. High Mean Tide
33. NJ Streams
34. Political Boundaries
35. Roadways
36. Aerial Orthophotographs



Legend

-  Abandoned Vessels
-  NJ Marinas
-  Known Contaminated Sites (Sandy)
-  NJPDES SW Discharge Outfall
-  Sewer Outfalls
-  Temporary Debris Management Area
-  Delaware State Boundary
-  Intercoastal Waterway
-  NJ State Channel
-  US Army Core Engineers Project
-  Wild & Scenic Rivers
-  Canal/Ditch
-  Stream/River
-  NOAA Mean High Water Line
-  Sensitive Wildlife Areas
-  Surge Areas Lakes
-  Coastal Barrier Resources Act
-  Historic District
-  Historic Property
-  Federal Lands
-  Waterway Debris Areas
-  Submerged Aquatic Vegetation
-  Wetlands (Land Use 2007)
-  NJ Coastal Zone



NJDEP - Waterway Debris Removal Project

NEW MAP

Details Add Basemap

Save Share Print Directions Measure Bookmarks

First address or place

About Content Legend

Legend

Sensitive Wildlife Areas



Cultural/Historic Targets



Intracoastal Waterway



Wild & Scenic Rivers



Coastal Barrier Resources Act



Federal Lands



Submerged Aquatic Vegetation



DWS FEMA Hurricane Sandy Surge Extent

Waterway Debris Harborage Zones



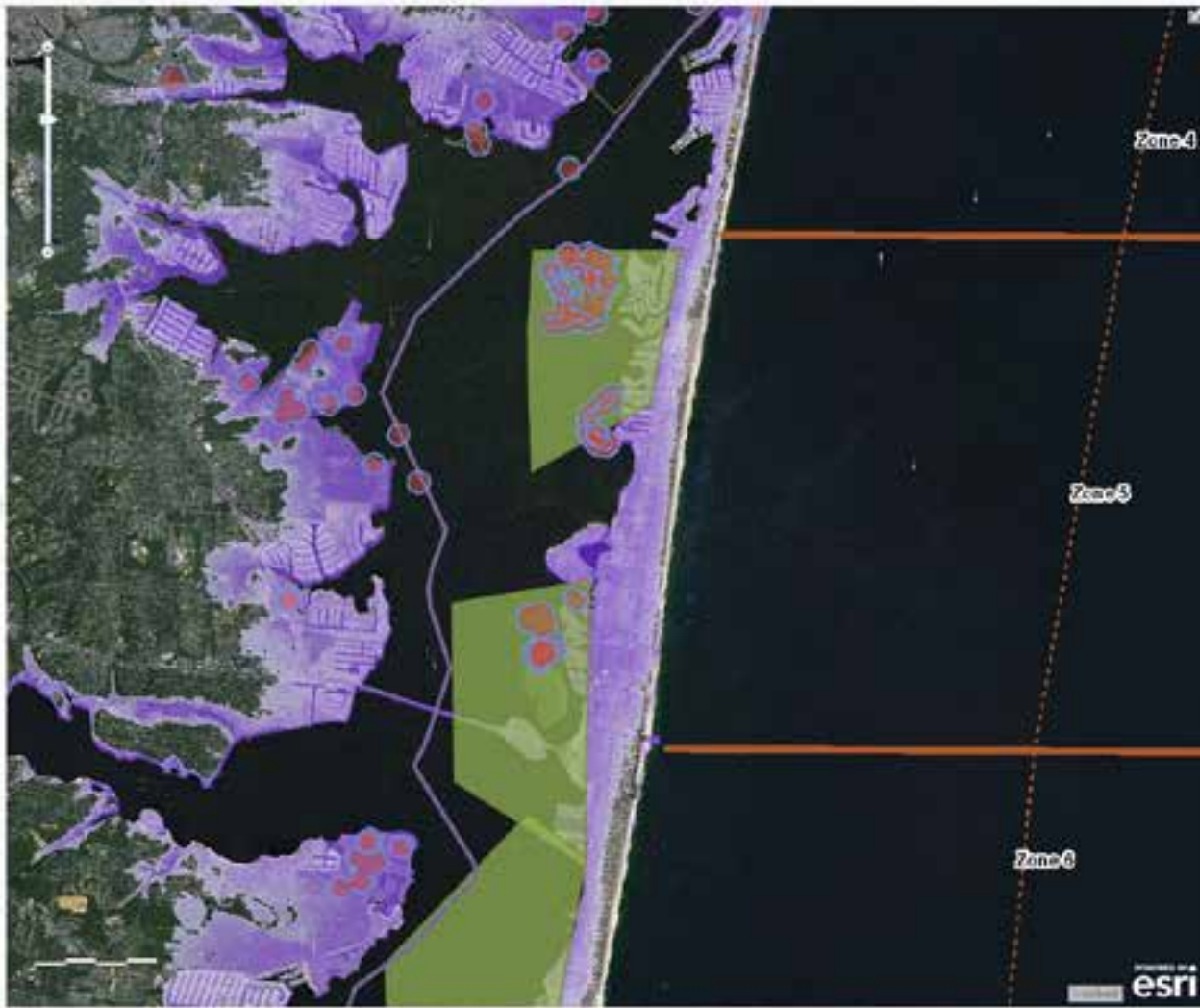
FEMA Sandy Surge Extents



High : 19

Low : 0

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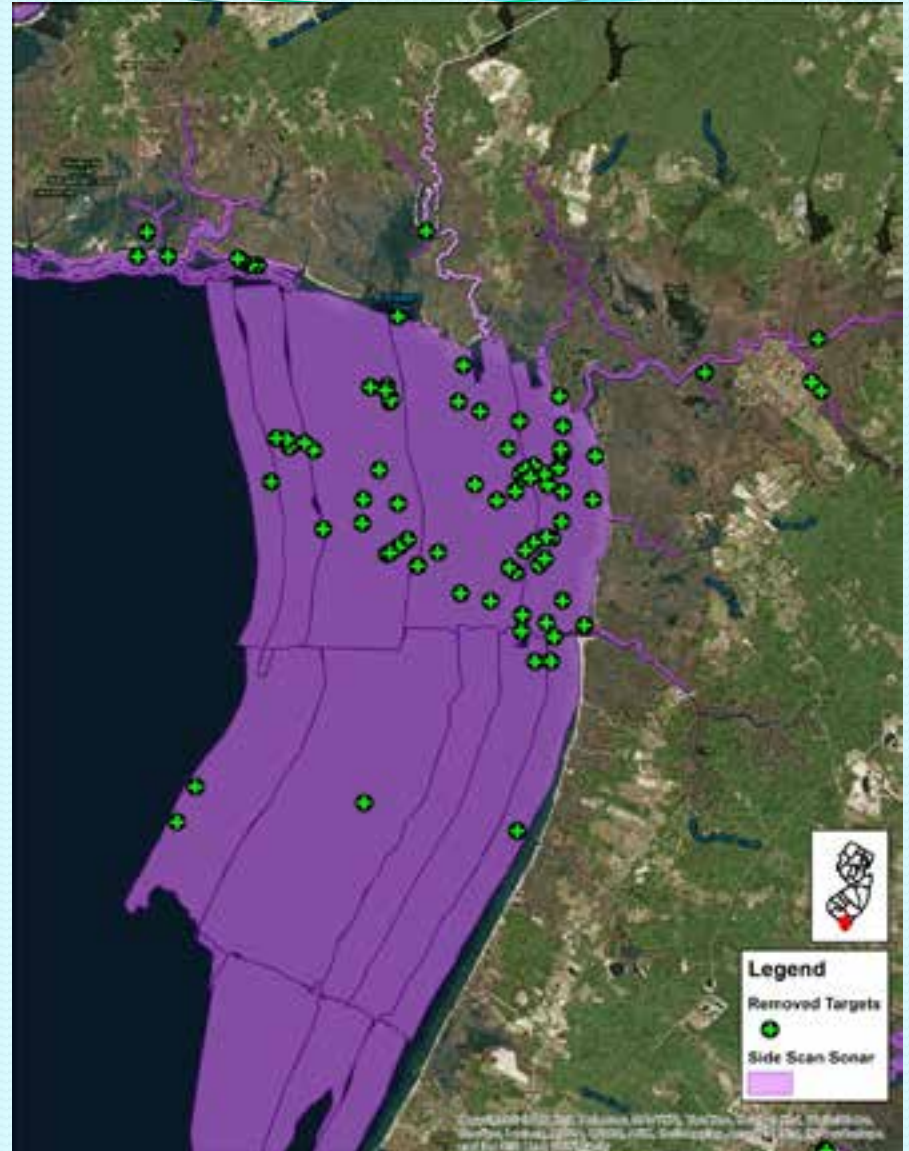
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AGO Map Benefits

- 3 Debris removal contractors, 3 Monitor contractors, Program Manager, FEMA, NJDEP, others needed access to map
- Control access via Arc GIS Online
- Performance issues with WMS
- Map maintenance simplified
- Enabled mobile devices for field operations
- Multiple basemaps

Debris Removal Process

- Use towed side scan sonar to identify under water debris locations
- Identify and confirm FEMA eligibility for each target
- Remove targets
- Confirm removal
- Dredge channels and shoaling





Seaside Heights (<http://www.fema.gov>)



Elizabeth River (<http://www.nj.gov/dep/>)



Barnegat Bay (Andrew Mills/The Star-Ledger)

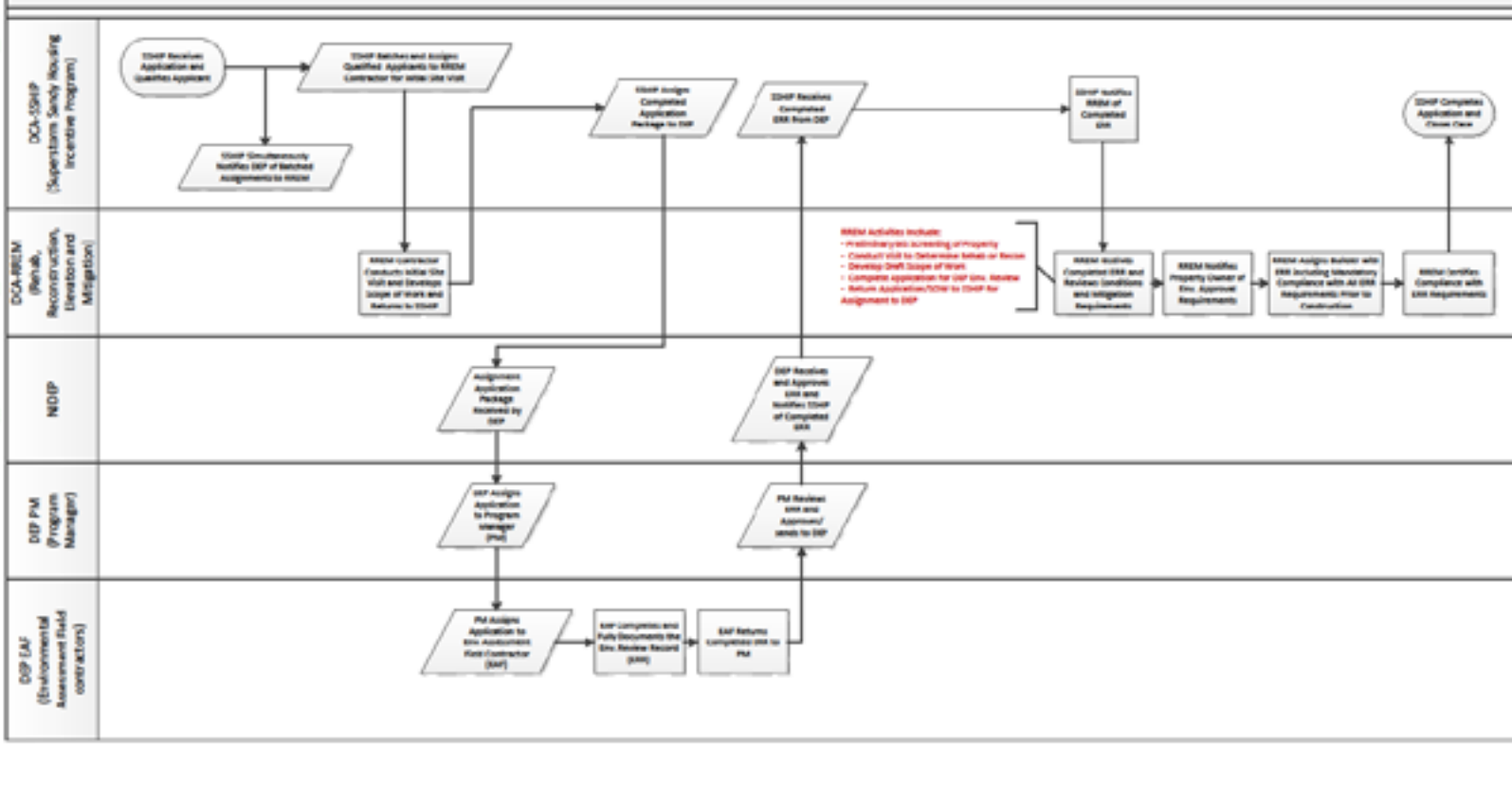


Mantoloking (<http://www.nypost.com>)

HUD Environmental Review Tool

- **Grant Programs:**
- **RREM: Rehabilitation, Reconstruction, Elevation, Mitigation**
(private homeowners, up to \$150,000)
- **HMGP: Hazard Mitigation Grant Program**
(elevation grants, up to \$30,000)
- **EDA: Economic Development Assistance**
(businesses)

Environmental Review Process



Environmental Review Guidance Document

Tier 2: Environmental Review Record Guidance Document

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DEP/DMU, LLC
Tier 2: RUD/DPF Site Specific Review Guidance Document
July 2011

Tier 2: Site Specific Review New Jersey RREM and Small Rental Properties Programs and HMGP Elevation Program (8-20-13)

(Intended for use following DEP and RA level Tier 1 environmental reviews conducted for rehabilitation, reconstruction, relocation and integration of residential structures with 1 to 4 units)

Agency Name	NJ Department of Community Affairs (DCA)
Date Assigned to DEP	
Date Review Completed and Submitted to DCA	
Program Type	DPD Down, RR/CM or DP/DP or HMGP
Application ID Number	
FWAs, PFA Number	
DCA Grant Number	9-15-09-34-0001
Applicant Name	
Project Location (address and block and lot)	
Project Description	
Finding of Tier 2 Review	<p>Note: Throughout this associated form, explanatory language is in blue font.</p> <p>Introduction for all activities:</p> <p>A Tier 1 Environmental Assessment (EA) was completed for New Jersey's Rehabilitation, Reconstruction, Elevation and Mitigation (RREM) Program and Small Rental Properties program. This is the site specific review for activities eligible under this program:</p> <ul style="list-style-type: none"> For rehabilitation: <p>The proposed activity is rehabilitation of the (insert number) unit residential structure at the address listed above. The structure was damaged as a result of Superstorm Sandy. The structure was constructed in (insert year). Renovations would include addressing storm-related damage and bringing the property up to current minimum property standards and compliance with applicable ADA requirements. All activities would be limited to the disturbed area of the previously developed lot.</p> <p>A map showing the location of the proposed activity is provided in Appendix A. (Attach map from DEP NJ OneWeb screening form)</p> <ul style="list-style-type: none"> For reconstruction of an existing building: <p>The proposed activity is reconstruction of the (insert number)</p>

Version: 10/2013

NJ-GeoWeb HUD Review Profile



Searches

Address Search

Municipality

Parcels With Substantially Damaged Structures

Parcels in 9 Affected Counties

Parcels by Block/Lot



Details of "Parcels in 9 Affected Counties - HUD Review"

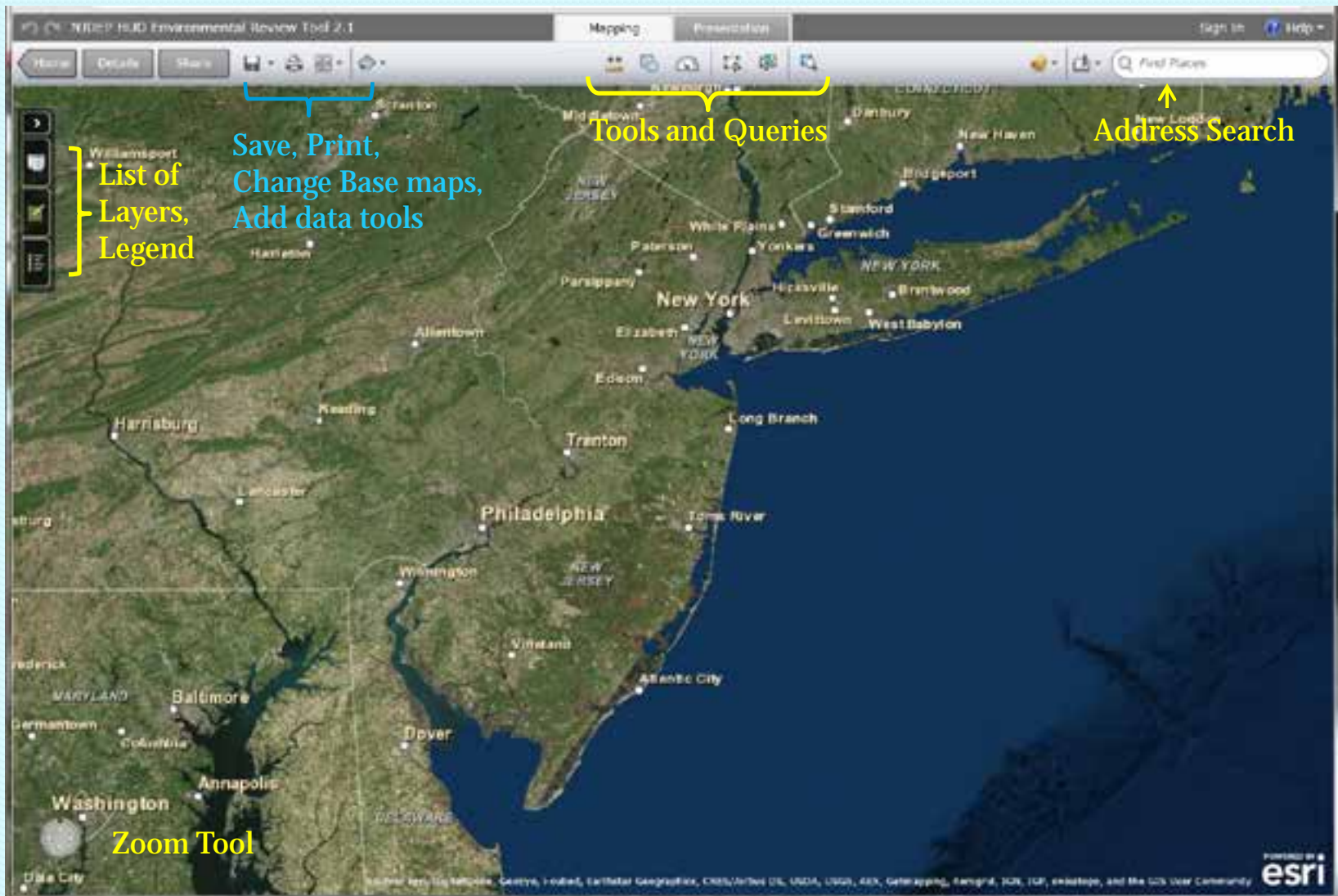
Attribute	Value
Parcel Pin	6121_NJK_IP
Municipality Code	6121
Block	626
Lot	89
Quadrant Code	
Owner	GREENMAN, MOEL
Street	6 SHADYSIDE AVE
ZIP Code	07716
Land Value	70000
Improvement Value	40800
Net Value	114000
Historic Property Exemption Zone	Yes
EPA Project Number	61-0748-2
FEMA Post Sandy 'A' Flood Zone	Yes
FEMA Post Sandy 'V' Flood Zone	No
FEMA DFIRM 'A' Flood Zone	Yes
FEMA DFIRM 'V' Flood Zone	No
FEMA Q1 'A' Flood Zone	No
FEMA Q1 'V' Flood Zone	No
FEMA NIP Participating Municipality	Yes

Click a layer for more functions

Active Layer: Substantially Damaged Structures (Parcels)

HUD_Review

- Substantially Damaged Structures (Parcels)
- Parcels in 9 Affected Counties - HUD Review
- Review Data Layers**
 - Historic Property Exemption Zone (Above Ground Only)
 - FEMA Post Sandy Flood Zones
 - FEMA DFIRM Flood Zones
 - FEMA Q1 Flood Zones
 - New NIP Participating Municipality
 - FEMA DFIRM Floodways
 - Wetlands
 - Hackensack River/Waterways Boundary
 - CAPRA Zone
 - Upland Watershed Development Zone
 - Upper Wetlands Boundary Buffer (100 ft)
 - Threatened and Endangered Animals
 - Hazardous Sites of Concern
 - Hazardous Sites Buffer Zone (300 ft)
 - Lateral/Normal Air Station Accident Potential Zone
- Additional Reference Layers**
 - LAR Census Tracts
 - Flood Areas
 - Upper Wetlands Boundary
 - ALEAC Sites
 - Groundwater Contamination Areas (CKE)
 - Groundwater Contamination Areas (CEA)
 - Historic Districts
 - Historic Sites
 - Single-Entity (University Impacted Counties)
 - Storm Surge (Water Depth (ft.) (Flood)
- Base Layers**
 - Municipalities
 - Place Names
 - Pinpoint Data (Block and Lot)
 - Roads (V) (Centerline)
 - Water Roads (above 1:200000 scale)
 - Major Roads (1:300000 to 1:500 scale)
 - ZIP Codes
 - Counties
 - Mid-Atlantic States
 - 2012 Imagery (Inland)



Custom Queries

The screenshot displays the NIDEP HUD Environmental Review Tool interface. The main window is titled "NIDEP HUD Environmental Review Tool" and has tabs for "Mapping" and "Presentation". A "Queries" panel on the left lists three custom queries: "Municipality Search", "Parcel Search - Using PAMS Pin ID", and "Parcel Search - Using MunCode+Block...". A tooltip explains that users can execute a query, create a new query, and organize the map's queries.

Three dialog boxes are shown, each corresponding to a query in the list:

- Municipality Search:** A dialog with two input fields: "Enter County (All Upper Case)" with the value "OCEAN" and "Enter Municipality Name (All Upper Case)" with the value "BRICK". It includes "OK" and "Cancel" buttons.
- Parcel Search - Using PAMS Pin ID:** A dialog with one input field: "Enter PAMS Pin ID" with the value "1352_958_6". It includes "OK" and "Cancel" buttons.
- Parcel Search - Using MunCode+Block...:** A dialog with three input fields: "Enter Municipality Code" with the value "1352", "Enter Block Number" with the value "958", and "Enter Lot Number" with the value "6". It includes "OK" and "Cancel" buttons.

Red arrows indicate the flow from the query list to the respective dialog boxes.

WDEP HUD Environmental Review Tool 2.1

Mapping Presentation

Home Details Share

Find Places

Queries

- Municipality Search
- Parcel Search - Using PAMS Pin ID
- Parcel Search - Using ManCode+Block...

Parcel Search - Using ManCode+Block...

Enter Municipality Code: 1502

Enter Block Number: 25

Enter Lot Number:

OK Cancel

Query Results

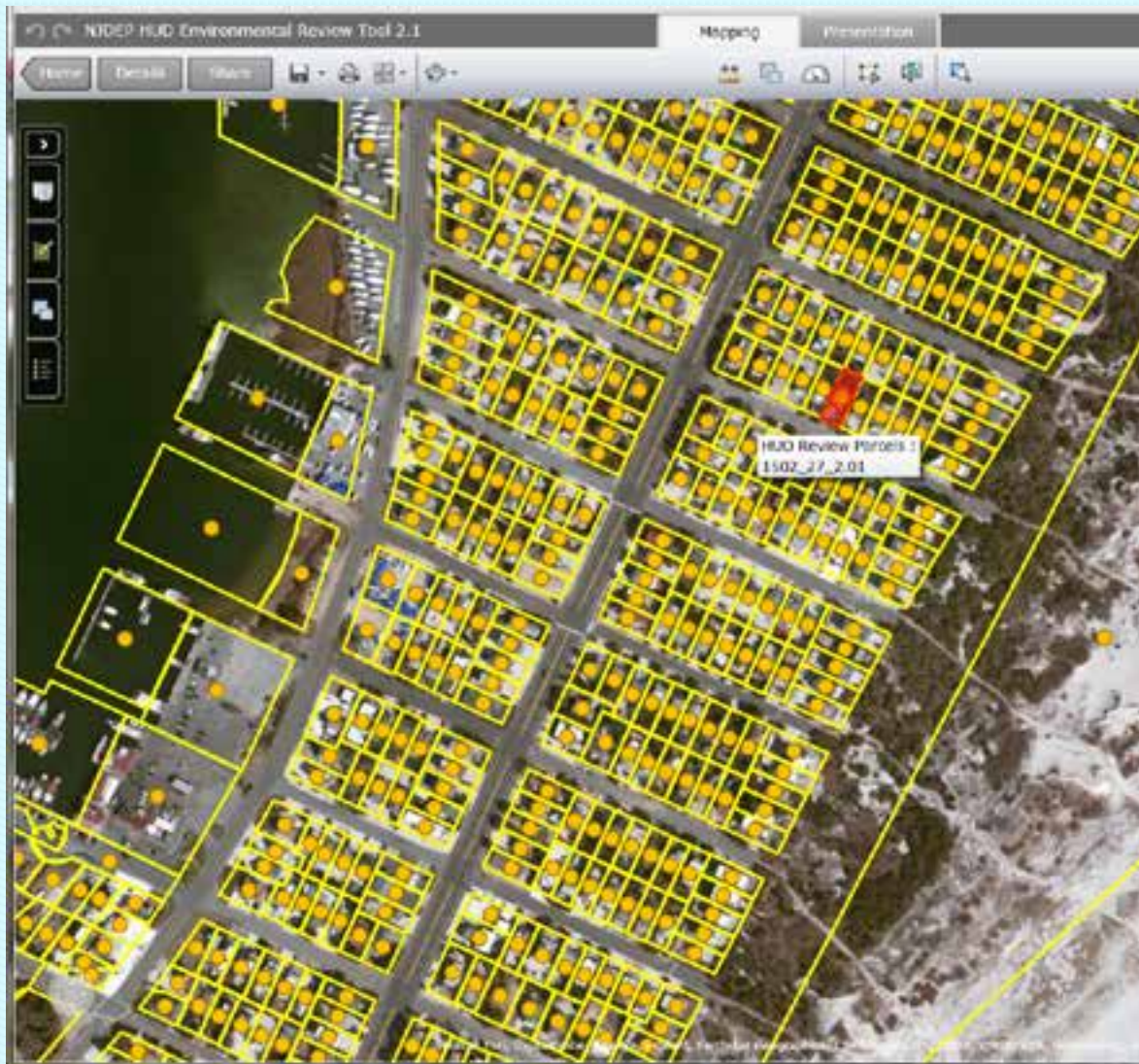
Parcel Search - Using ManCode+Block+Lot

26 features

1502_25_16	PAMS_PIN
1502_25_3	PAMS_PIN
1502_25_9	PAMS_PIN
1502_25_10	PAMS_PIN
1502_25_20	PAMS_PIN
1502_25_24	PAMS_PIN
1502_25_18	PAMS_PIN
1502_25_7	PAMS_PIN
1502_25_2	PAMS_PIN
1502_25_13	PAMS_PIN
1502_25_11	PAMS_PIN
1502_25_1	PAMS_PIN
1502_25_25	PAMS_PIN
1502_25_14	PAMS_PIN

Zoom To Zoom All Next Previous

esri



HUD Review Parcel - Centroids :
1502_25_12

PARC PIN ID:	1502_25_12
Municipality ID:	1502
Trk ID:	25
LD:	12
Quarter Code:	
Address:	10 E 34 ST
Owner:	ALTM, WALTER & ELIZABETH
Land Value:	596,000
Improvement Value:	243,500
Ass. Value:	743,500
Historic Property:	Yes
HUD Project Number:	13-0384-1
HUD Project Date:	1/26/2013
FEMA Flood Sandy V Flood Zone:	Yes
FEMA Flood Sandy V Flood Zone:	No
FEMA DISM V Flood Zone:	Yes
FEMA DISM V Flood Zone:	No
FEMA CD V Flood Zone:	Yes
FEMA CD V Flood Zone:	No
FEMA AFD Participating Municipality:	Yes
WHR Designated Business:	No
Highways Map Shows:	N/A
ROSP Happed Wetlands:	No
Historical Wetlands:	No
CAPRA Zone:	Yes
Upper Wetland Boundary Buffer:	No
Upper Wetland Development Zone:	No
Wetland and Contiguous Aesthetics Wetland 500 Buffer Zone:	No
Wetland Buffer to State System Potential Zone:	No
State Listed Endangered Species:	Yes
Federal Listed Endangered Species:	Yes
Parcel Control Date DATED (Days):	6.32



Review Process

6. Endangered Species Act

(16 USC 1531 et seq., 50 CFR Part 402)

Based on desktop review, could the proposed activity affect piping plovers?

- No. Explain finding and attach map. (Analysis complete)

The DEP screening map tool depicts areas where work may affect piping plovers. Initial findings of no potential for impact should be based on the mapping.

Work sites within areas where effects could occur require review by an NJDEP Endangered and Non-game Species Program (ENSP) biologist.

- Yes. Based on examination by an ENSP biologist of additional information regarding the site and current piping plover nesting activity and habitat conditions, it has been determined that (check only one of the following):

- Piping plovers would not be affected by the any eligible activity on the previously developed portions of the site. Explain finding and attach supporting documentation. (Analysis complete)

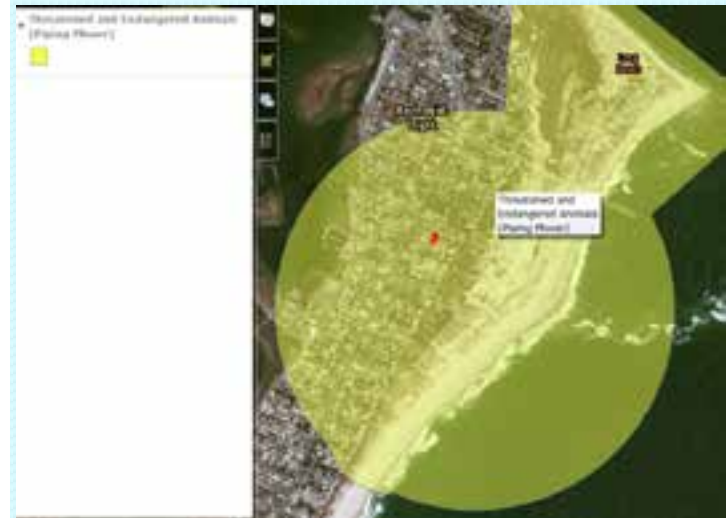
The supporting documentation will normally be the report from the ENSP biologist that reviewed the site.

- Piping plovers may be affected by the proposed activity. Consultation with USFWS is required.

Consultation with USFWS resulted in a determination that (check only one of the following):

- The proposed activity including appropriate measures to avoid adverse impacts, would not adversely affect piping plovers. Explain how this conclusion was reached. Describe required mitigation measures. Attach supporting documentation. Activity is in compliance. (Analysis complete)
- The proposed activity would adversely affect the piping plover. Explain how this conclusion was reached. Attach supporting documentation. Activity is not in compliance. (Analysis complete)

Comments:



AGO Map Benefits

- Multiple contractors using same map
- Custom queries
- Simpler process to update structure changes
- Faster internet presence with “Share Everyone” check box
- Mobile device friendly
- Use published feature services



Questions ?