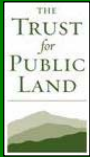


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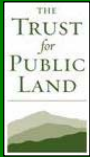
Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
Protect Water Quality and Supply					
	Protect Undisturbed Upland Permeable Soils	20%	The intent of this criterion is to identify undisturbed, highly permeable soils that are part of a functioning natural system. Unaltered natural areas (Forests and Wetlands) were selected from landcover data. Soil permeability within these areas was assessed based on soil characteristics data. Only areas with soils in hydrologic groups A and B (sandy, free and moderately draining soils) were considered. These areas were further refined based on degree of runoff. Areas exhibiting the least amount of runoff were ranked highest for protection.	Soil Characteristics - Monmouth - 2002 Soil Characteristics - Ocean - 2002 Landcover - 2002	NRCS NRCS NJ DEP
	Protect Headwaters	3%	Headwater streams were identified by selecting 1st order streams. Where available, refined data from Pinelands Commission was used. Headwater streams were buffered by 300 feet	1st Order Streams - 1998	CRSSA Pinelands
	Protect Wetlands and Wetland Buffers	11%	Wetland areas were extracted from 2002 Landcover dataset. All wetlands were buffered by 300 feet.	Landcover - 2002	NJ DEP
	Protect Vegetated Riparian Corridors	20%	Vegetated Riparian corridors delineation was based on CRSSA analysis for hydrologically-connected riparian zones. Riparian zones were defined as the intersection of four soils and hydrological components: A. Flood-prone areas as defined by: 1. NJDEP/USGS documented and undocumented flood-prone areas; 2. FEMA Q3 100-year floodplain; B. Riparian Soils as defined by the NRCS SSURGO county soil surveys: 1. Hydric soils; 2. Soils with seasonal depth to high water table of 18" or less; C. Wetlands as defined by NJDEP 1995/97 landcover updated with the CRSSA 2000/1999 development update; D. 300 foot buffer of all water features. Vegetated areas were extracted from this dataset using 2002 landcover data.	hydrologically-connected riparian zone	CRSSA
	Protect Recharge Areas	3%	This criterion is based on watershed-level recharge data assembled by CRSSA. Ground-water recharge was estimated using the NJGS methodology from NJ Geological Survey Report GSR-32 "A Method for Evaluation of Ground-Water-Recharge Areas in New Jersey". Land-use/land-cover, soil and municipality-based climatic data were combined and used to produce an estimate of ground-water recharge in inches/year. Areas with recharge rates of greater than 9in/yr were ranked highest for protection. Moderate rank was assigned to areas with recharge rates of 7-8 and 1-6 in/yr.	Ground Water Recharge - 2004	CRSSA



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Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
	Protect Natural Areas in Wellhead Protection Areas	20%	Wellhead protection areas are conceptually similar to buffer areas. Each wellhead protection area is subdivided into three tiers representing different levels of protection. The tiers are based on an estimated time of travel (2-yr, 5-yr, and 12-yr) from a hypothetical contaminant release at the land surface to the entrainment of the contaminant in the water withdrawn by the well. The 2-year time of travel tier area is the smallest (and conceptually least protective) and the 12-year tier area is the largest (and conceptually most protective). Areas with 2-yr containment travel time estimates were ranked as highest priority for protection, with moderate priority assigned to 5 and 12 year zones. These tiers were further refined to delineate only natural landcover in these protection areas.	Ocean County Wellhead Protection Areas - 2007 Monmouth County Wellhead Protection Areas - 2007 Landcover - 2002	NJ DEP NJ DEP NJ DEP
	Protect Marsh Migration Zones	3%	This criterion is based on the 2007 study by Rutgers CRSSA to assess "Vulnerability of New Jersey's Coastal Habitats to Sea Level Rise". Data shows buffer areas within 500 meters up-gradient of existing tidal marshes and to elevations of 3 meters or less that could potentially serve as retreat zones as sea levels rise. In addition to natural retreat zones, data also includes limited retreat zones (currently partially constrained by development), since these are areas in which marshes can still migrate into but may be partially cut off.	Marsh Retreat Zones - 2007	CRSSA
	Metedeconk Watershed above Water Supply Intake	20%	Shows all areas that currently drain into the Metedeconk Water Supply Intake. Areas 300 feet from streams flowing into the intake are designated high priority, 300-2500 feet = the next highest priority and 2500 - 5200 feet = moderate priority	Water Intake Location - 2008 NJ Streams - 1998	Rick Lathrop Street Map - ESRI
			<p><i>Weighting Rationale: Relative weights for the above criteria do not necessarily reflect importance of the resource, but rather the accuracy and comprehensiveness of the underlying datasets. For example, data used for Protect Vegetated Riparian Corridors was based on an in-depth Rutgers University Center for Remote Sensing and Spatial Analysis (CRSSA) analysis for hydrologically-connected riparian zones. This data includes a 300 ft buffer along all water features, flood-prone areas, flood plain, hydric soils, and wetlands. Therefore, the data used for this criterion insures that wetlands, headwaters, recharge zones, marsh zones are all given highest relative value of 20%, even though the weightings for separate line item criteria may not reflect this. However, keeping these criteria as separate line items in the model allows us to provide a detailed profile of resources on any property.</i></p>		

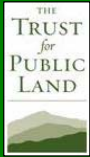


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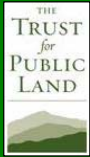
Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
Improve Water Quality					
	Rehabilitate Degraded Surface Water	50%	<p>This data represents the results of the 2006 Water Quality Monitoring and Assessment Report (Integrated List). This contains NJ waterbodies and the status for various water uses , according to NJ Surface Water Quality Standards.</p> <p>This criterion takes into consideration standards for drinking water, aquatic life, recreation use, and fish/shellfish habitat. The model identifies areas for rehabilitation that were designated as "not attaining NJ Surface Water Quality Standards". Areas with multiple non-attainment ratings with respect to the uses listed above were assigned highest priority for rehabilitation.</p>	Integrated List - 2006	NJ DEP
	Restore Riparian Areas	50%	<p>Section 303(d) of the Clean Water Act (CWA) requires states to develop a list of waters not meeting water quality standards or which have impaired uses. Listed waters must be prioritized, and a management strategy or total maximum daily load (TMDL) must subsequently be developed for all listed waters.</p> <p>This analysis identifies riparian zones (see definition in Protect Riparian Corridors above) that contain any portion of a 300 ft buffer along 303(d) designated streams and waterbodies. Non natural landcover in these areas were given highest priority for restoration potential. Natural landcover in these areas were assign moderate priority.</p>	EPA 303 (d) hydrologically-connected riparian zone	EPA CRSSA
<p><i>Weighting Rationale:</i> These criteria were considered of equal importance for targeting restoration efforts related to water quality and quantity.</p>					



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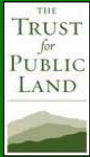
Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
Protect Native Habitat					
	Protect Native Plant Communities	10%	<p>This analysis considers plant life across upland, wetland, and aquatic species.</p> <p>For the purposes of this study, "Native" is defined as plant cover other than phragmites (data not currently available for a more detailed assessment).</p> <p>Submerged aquatic vegetation (SAV) areas are identified via 2003 study by Rutgers CRSSA study. The purpose of this study was to map the areal extent and density of submerged aquatic vegetation within the Barnegat Bay and Little Egg Harbor, New Jersey as part of ongoing monitoring for the Barnegat Bay National Estuary Program. SAV is a key indicator of the health of the Barnegat Bay estuary, and is under constant stress from a number of sources. These stresses cause changes in seagrass bed characteristics which in turn make frequent monitoring of this habitat type necessary.</p> <p>Areas that have Natural cover as well as areas with Submerged Aquatic vegetation of 80 - 100% were assigned highest priority for habitat protection. Areas with Submerged Aquatic vegetation of 40 - 80% were assign next highest priority. Areas with Submerged Aquatic vegetation of 10 - 40% were assigned moderate priority for protection.</p>	<p>Landcover - 2002</p> <p>Sub Aquatic Vegetation - 2003</p>	<p>NJ DEP</p> <p>CRSSA</p>
	Protect Forested Areas	2%	This model identifies all areas designated as forested in 2002 landcover data.	Landcover - 2002	NJ DEP
	Protect Threatened and Endangered Species	10%	<p>Data for this criterion comes from the Landscape Project created by the NJ Division of Fish and Wildlife. The goal of the project was to identify and protect habitats critical to New Jersey's endangered and threatened species within healthy, functioning ecosystems. The Landscape Project data layers were derived from land use/land cover data produced by the Rutgers University Center for Remote Sensing and Spatial Analysis (CRSSA). Habitat patches of grassland, forest, wetland forest, emergent wetlands and beach dune were identified within this land cover data set. The presence of wildlife was used as an indicator of a habitat's value, creating five rankings based on a species conservation status. Those rankings are: 5--federally endangered and threatened, 4--state endangered, 3--state threatened, 2--special concern and finally 1--suitable habitat without a recent sighting. The Natural Heritage Program's Biological Conservation Database (BCD) GIS coverage supplied the species data.</p> <p>This criterion maps areas ranked as 5--Endangered or Federally Listed species and/or 4--State Endangered species., 3 = Habitat connector</p>	<p>High Priority Wildlife Habitat</p> <p>Connectors between Habitats</p>	<p>CRSSA</p> <p>NJCF</p>



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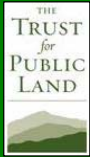
Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
	Protect Unprotected Areas within Significant Public Land	2%	This criterion identifies private and/or unprotected inholdings within Forsythe National Wildlife Refuge, Forked River Mountain Preserve, Greenwood Forest WMA, Double Trouble State Park, Colliers Mills WMA, Turkey Swamp Park, and Stafford Forge WMA.	Brigantine Division, EB Forsythe Range Boundary Barnegat Division, EB Forsythe Range Boundary State Protected Land All Protected Land Generalized Park Boundaries	USFWS USFWS NJ DEP NJ DEP TPL
	Identify Habitats of Native Species of Management Concern	2%	Data for this criterion comes from the Landscape Project created by the NJ Division of Fish and Wildlife and from the Barnegat Bay Estuary Program's Colonial Nesting Birds dataset. Areas designated as "Areas of Special Concern" in the Landscape Project are combined with colonizing bird habitat.	F&W BB Estuary Program (colonial nesting birds) NJ DEP Landscape Habitat Data	CRSSA NJ DEP
	Protect Large Tracts of Unfragmented Natural Habitat	25%	Identifies large contiguous natural area patches, of at least 200 acres in size, that are unfragmented by paved roadways. Habitat types within natural areas include wetland, water, forest and beach. Highest priority was assigned unfragmented patches that encompass multiple habitat types.	New Jersey Roads Network Landcover - 2002 Ocean County Waterbodies	NJ DOT NJ DEP NJ DEP
	Areas Adjacent to Protected Lands	4%	This criterion identifies as highest priority, all properties containing natural habitat (wetlands, water, forest, or beaches) that are immediately adjacent to protected lands (see definition below). Moderate priority is assigned to natural habitat within a 300 ft buffer of protected lands. Protected Lands include (Data Provider in parentheses): <u>Newly Areas identified</u> (Coordinating Committee - Waterford and Deer Lake and Manahawkin Baptist Church Century Sites; Green Acres site id'd by Steve Azert USFWS, <u>Easements</u> (Ocean County) <u>NLTF - Natural Lands Trust</u> - (Ocean County) <u>QC Parks</u> (Ocean County) - State-, Township-, and County-owned parks. <u>New State</u> (NJ DEP) - Areas owned by NJ DEP, parks, forests, historic sites, natural areas and wildlife management areas. <u>Green Acres Program</u> (NJDEP)- Dedicated Open Space layer for Cross Acceptance, includes state owned properties, as well as federal and utility owned properties, and for properties owned by counties, municipalities, and non-profit organizations. <u>Forsythe Range</u> (NJDEP) <u>Military Land</u> <u>Non-profit land</u> - (Provided by NJCF, Chris Jage) The Nature Conservancy, NJ Conservation Foundation, Pinelands Development Credit Areas.	Protected Lands Ocean and Monmouth County Parcels Landcover - 2002	Ocean County and NJ DEP, NJCF Ocean and Monmouth County NJ DEP



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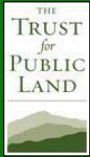
Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
	C1 and Outstanding Natural Resource Streams	10%	Category 1 and Outstanding Natural Resource streams are designated by NJDEP for protection from measurable changes in water quality characteristics based on their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or as exceptional fisheries resources. These streams were buffered by 300 ft.	C1 and Outstanding Natural Resource Waters	CRSSA
	Protect Marsh Migration Zones	10%	This criterion is based on the 2007 study by Rutgers CRSSA to assess "Vulnerability of New Jersey's Coastal Habitats to Sea Level Rise". Data shows buffer areas within 500 meters up-gradient of existing tidal marshes and to elevations of 3 meters or less that could potentially serve as retreat zones as sea levels rise. In addition to natural retreat zones, data also includes limited retreat zones (currently partially constrained by development), since these are areas in which marshes can still migrate into but may be partially cut off.	Marsh Retreat Zones	CRSSA
	Unaltered Shorelines	3%	This criterion identifies properties with no bulkheads adjacent to shoreline. Only Ocean County parcel database is needed as bulkhead data does not extend beyond Ocean County Boundary.	Environmentally Sensitive Shorelines Bulkhead Locations Ocean County Parcels	CRSSA CRSSA Ocean County
	Ecological Integrity Assessment	2%	The approach used in this criterion is based on the Landscape Integrity model methodology used in the Pinelands Ecological Integrity Assessment. The Pinelands study included analysis of aquatic integrity, landscape integrity, and wetlands drainage unit integrity assessment (tiered from aquatic integrity). The landscape integrity approach was readily extendable to the whole watershed, using available data. The model assesses the % natural habitat within a 1000 meter radius for every location in the watershed. Areas with high % of natural habitat are assigned highest priority for protection.	Landcover - 2002	NJ DEP



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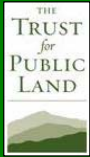
Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
	Beach and Coastal Dunes Vulnerable to Adjacent Land Use	10%	<p>Sand beaches and vegetated dunes provide an important buffer between coastal waters and human development. However, adjacent development may compromise some of the natural functions of the beach (e.g., its utility as wildlife habitat, e.g., Burger (1986)) and inhibit future movement or migration of these features.</p> <p>This criterion combines two studies performed by Rutgers CRSSA. The first study was a buildout analysis which depicts predicted land use at buildout based on current trend conditions.</p> <p>The second study mapped the proximity of developed land uses (residential/ commercial/ industrial development and altered/transitional land uses) to all beach/dune areas to provide an index of present disturbance, as well as future limitations, to beach and dune habitats. Distances are classified in 50 meter classes to a maximum distance of 500 meters.</p> <p>Areas where Beach and Coastal Dune overlapped the CRSSA current trends buildout analysis are considered highest priority for protection. In addition, all Coastal Beach areas as shown by CRSSA data that are within 200 feet of current development were also assigned highest priority for protection. Beach and dune areas within 400 ft of current development were assign next highest priority. Those within 550 ft were assigned moderate priority.</p>	<p>Buildout Analysis - 2001</p> <p>Beach and Dune Habitat Disturbance - 2007</p>	<p>CRSSA</p> <p>CRSSA</p>
	Protect Watersheds with Minimal Altered Lands	10%	<p>This criterion maps subwatersheds that have been minimally altered due to development and agriculture. Areas that have less than 10% altered land are assigned priority for protection, with highest priority assigned to subwatersheds with less than 5% disturbance.</p>	Watershed Boundary	NJ DEP
		<p><i>Weighting Rationale: Relative weights for these criteria do not necessarily reflect importance of the resource, but rather the comprehensiveness of the underlying datasets and modeling methodology. Protection of Large Tracts of Unfragmented Natural Habitat was considered to be highest priority, because it encompasses all natural habitat types, and identifies remaining large unfragmented sites. Those criterion weighted at 10% reflect habitat resources that should receive additional attention even if the resource is present on smaller land areas.</i></p>			



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Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
Restore Habitat					
	Undeveloped Shoreline Adjacent to Bulkheading	40%	For this criterion, bulkheaded shoreline were buffered by 300 feet. Areas within this buffer offer opportunities for potential restoration. All Areas within the buffer received high priority.	Bulkheads Landcover - 2002	CRSSA NJ DEP
	Non-vegetated riparian zones and transitional uplands	50%	This analysis identifies riparian zones (see definition in Protect Riparian Corridors above) that include modified but restorable landcover (cultivated/agricultural, transitional, mining, and other altered land types). 3/31/2008 - steering committee requested uplands also be considered, so upland areas that are designated as transitional or barren (e.g. gravel/mining sites specifically) are included. Model revised 3/31.	Landcover in Riparian Zones	CRSSA
	Phragmites areas	10%	Areas with phragmite vegetation were assigned priority for restoration.	Phragmite Dominated Landcover	NJ DEP
		<p><i><u>Weighting Rationale:</u> Relative weights chosen for the Restore Habitat criteria assign highest priority to degraded areas that offer best potential for restoration of habitat that is native to the watershed.</i></p> <p><i>It is known that the presence or invasion of Phragmites is a very unfortunate and real symptom resulting from land disturbance. The Barnegat/Little Egg Harbor system has undergone extensive disturbance of natural productive wetlands that were once very important to the functionality of the tidal shoreline. These areas previously contained Spartina and the more productive vegetation associated with a tidal marshland but the bulkheading and filling of tidal areas with non-native soils and/or filling with dredge spoils from man made channels or lagoons presented prime conditions for Phragmites invasion. Unfortunately, the methods to restore these areas to their natural state are costly, especially if they entail removal of bulkheads and introduction of the tidal water to these areas which will result in the degradation of the phragmites and its eventual replacement by higher value wetland habitat.</i></p>			

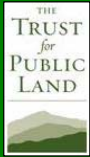


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Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
Improve Recreation Access					1
	Boating Access	10%	<p>This analysis seeks to identify new opportunities for boat ramp access. The model uses the following methodology:</p> <ul style="list-style-type: none"> - Identifies current gaps in boat ramp access by identifying areas within 1/8 mi of the bay shoreline that do not currently have a boat ramp within a 1 mile radius. - Suitable locations must have good road access, and provide a minimum of 2 acres for parking. - Suitable locations must also be in any area that provides adequate water depth for power boating. - Removes from consideration, all areas sensitive to power boating disturbance - state endangered or federal listed sites, and wetlands <p>Model revised 4/6/2008 with new boat ramp data from Mike Danko, NJ MSC.</p>	Bathymetry Bay Shoreline NJ Roads Sub Aquatic Vegetation Sensitive Habitat Landcover - 2002 Existing Boat Ramps	CRSSA NJ DEP NJ DOT CRSSA NJ DEP NJ DEP CRSSA NJ MSC
	Low Intensity Walkable Access	30%	<p>This analysis seeks to identify new areas for low intensity walkable access to shoreline and natural areas. The model uses the following methodology:</p> <ul style="list-style-type: none"> - Identifies areas with natural landcover along shorelines (artificial lakes, dredged lagoon, natural lakes, streams and canals, and tidal waters greater than 2 acres in size), that are also within walking distance (1/4 mi) of urban areas. - Removes from consideration, all areas sensitive to human disturbance (state endangered or federally listed sites) 	Landcover - 2002 Sensitive Habitat Ocean County Waterbodies	NJ DEP NJ DEP NJ DEP
	Beach Access	40%	<p>This analysis seeks to identify new opportunities for beach access (for non-motorized beach recreation and/or fishing). The model uses the following methodology:</p> <ul style="list-style-type: none"> - Identifies beach landcover types. - Suitable locations must have good road access, and provide a minimum of 2 acres for parking. - Removes from consideration, all areas sensitive to human disturbance - state endangered or federal listed sites, and wetlands 	Sensitive Beaches Landcover	CRSSA NJ DEP
	Habitat in Highly Developed Areas	20%	<p>This criterion identifies small pockets of natural lands and habitat cover within otherwise populated areas, particularly along riparian areas. Pockets of urban habitat were assigned highest priority within riparian zones, and moderate priority elsewhere.</p>	Landcover - 2002 hydrologically-connected riparian zone 2000 Census - urban areas	NJ DEP CRSSA ESRI
<p><i>Weighting Rationale: Areas that provided recreation access to a more general public audience were weighted higher.</i></p>					



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Goal	Criteria	Criteria Weights	Methodology	Data	Data Source
Protect Scenic Quality					
	Habitat Areas Visible from Roads and Waterways	50%	This criterion identifies habitat areas (forest, wetlands/marsh, beaches, water) that are visible from roads, or waterways. The model identifies all habitat areas that lie within 1/2 mile of a non-local road or stream. Habitat areas that are closest to viewing areas (within 1/8 mi) are ranked highest.	Landcover Roads Coastline River Corridors	NJ DEP NJDOT CRSSA ESRI
	State designated scenic roads	50%	Designated NJ Scenic Byways include Delaware River Scenic Byway, Millstone Valley Byway, Palisades Interstate Parkway, S. Pinelands Natural Heritage Trail, Upper Freehold Historic Farmland Byway. Of these, only a portion of the Pinelands Natural Heritage Trail is in the study area. Areas within a 1/2 mi corridor along this scenic byway are shown, with areas closest to the road (within 1/8 mi) ranked highest.	Scenic Byways	NJDOT
<i>Weighting Rationale: These criterion were considered of equal importance for protection of scenic quality.</i>					