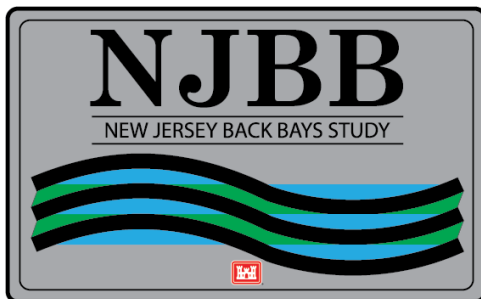

**ENVIRONMENTAL APPENDIX
COASTAL ZONE MANAGEMENT
FEDERAL CONSISTENCY EVALUATION**

**NEW JERSEY BACK BAYS
COASTAL STORM RISK MANAGEMENT
FEASIBILITY STUDY
PHILADELPHIA, PENNSYLVANIA**

APPENDIX F.7

August 2021



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1.0 INTRODUCTION

The proposed Tentatively Selected Plan (TSP) and other measures identified in the New Jersey Back Bays (NJBB) Feasibility Study require compliance with the Federal Coastal Zone Management Act (CZMA), 16 U.S.C. 1451, et seq. The CZMA requires each federal agency activity performed within or outside the coastal zone (including development projects) that affects land or water use, or natural resources of the coastal zone to be carried out in a manner which is consistent to the maximum extent practicable, i.e. fully consistent, with the enforceable policies of approved state management programs unless full consistency is prohibited by existing law applicable to the federal agency.

To implement the CZMA and to establish procedures for compliance with its federal consistency provisions, the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), promulgated regulations which are contained in 15 C.F.R. Part 930. As per 15 CFR 930.37, a federal agency may use its NEPA documents as a vehicle for its consistency determination.

In New Jersey, the CZMA Federal Consistency program is administered by the New Jersey Department of Environmental Protection – Division of Land Use Regulation (NJDEP-DLUR). The TSP includes a number of structural and nonstructural measures and Natural and Nature Based Features (NNBFs) that would have significant effects in New Jersey’s coastal zone. Therefore, a detailed review and evaluation of these effects with the applicable coastal management policies will be conducted with the TSP and other study phases to determine the applicability of these policies, and their effects. This evaluation will be reviewed by the NJDEP-DLUR for a Federal Consistency Determination.

Currently, the NJBB Study has completed the TSP Milestone meeting phase of the USACE Specific, Measurable, Attainable, Risk Informed, Timely (SMART) Civil Works planning process, where a plan will be recommended by the USACE vertical chain of command. At this stage of the planning, the major components of the TSP have been identified and evaluated at a lower level of analysis. The complexity of the analysis will increase upon concurrent public review with comments and responses from the public, agencies, and other stakeholders. These analyses will inform the next milestone in the feasibility study at the Agency Decision Milestone (ADM), which will identify the “preferred plan” to be presented in the Final Feasibility Report/NEPA document.

On December 17, 2019, the U.S. Army Corps of Engineers (USACE), Philadelphia District published a Notice of Intent (NOI) in the Federal Register (Volume 84, Number 242, 68910) declaring its intent to prepare an EIS to determine the feasibility of implementing the Coastal Texas Study. Because of the uncertainty and complexity of a number of the potential solutions to the problems, the Study employs a tiered NEPA compliance approach, in accordance with the Council on Environmental Quality’s (CEQ’s) Regulations for Implementing the Procedural

Provisions of the National Environmental Policy Act (40 CFR 1500—1508, specifically 1502.20).

Under this structure, rather than preparing a single definitive EIS as the basis for approving the entire project, the USACE will conduct two or more rounds – or “tiers” – of environmental review. For projects as large and complex as the Study, this approach has been found to better support disclosure of potential environmental impacts for the entire project at the initial phase. Subsequent NEPA documents are then able to present more thorough assessments of impacts and mitigation need as the proposed solutions are refined and more detailed information becomes available in future phases of the project. This tiered approach also provides for a timely response to issues

that arise from specific, proposed actions and supports forward progress toward completion of the overall study.

A Tier One assessment analyzes the project on a broad scale, while taking into account the full range of potential effects to both the human and natural environments from potentially implementing proposed solutions. The purpose of the Tier One EIS is to present the information considered to a preferred alternative, describe the comprehensive list of measures, and identify data gaps and future plans to supplement the data needed to better understand the direct, indirect, and cumulative effects of the proposed solutions.

Once refinements and additional information is gathered, USACE will shift to a Tier Two assessment, which involves preparation of one or more additional NEPA documents (either an EIS or Environmental Assessment) that build off the original EIS to examine individual components of the Recommended Plan in greater detail. Whether an EIS or EA is developed will be dependent on the significance of impacts anticipated from the action. In either situation, Tier Two assessments will comply with CEQ Regulations, including providing for additional public review periods and resource agency coordination. The Tier Two document would disclose site specific impacts to the proposed solution and identify the avoidance, minimization, and compensatory mitigation efforts to lessen adverse effects.

Federal consistency review pursuant to the CZMA is being conducted in accordance with this tiered approach commensurate with the level of detail in design and analysis at each stage. If appropriate, actionable items will be identified at each stage and evaluated for their compliance with New Jersey Coastal Management Policies. At this stage of review (Draft Tier 1 EIS), no actionable measures have been identified by USACE; therefore, this Federal Consistency Review serves to identify applicable policies and coastal resources that are potentially affected by the TSP features presented.

2.0 STUDY AREA

The study area includes the bays and river mouths located landward of the barrier islands and Atlantic Ocean-facing coastal areas in the State of New Jersey. The study area covers more than 950 square miles, and 3,500 linear miles of shoreline from Long Branch at the northern study area boundary to Cape May Point at the southern boundary.

The NJBB study area is divided into 5 planning regions as described below: Coastal Lakes, Shark River, North, Central, and South.

2.1.1 Coastal Lakes Region

This region includes two discontinuous segments separated by the Shark River Region, which is discussed in the following paragraph. The Coastal Lakes region is almost entirely urbanized and includes all or portions of fifteen municipalities. In the Coastal Lakes region, four coastal lakes are in Ocean County and ten coastal lakes are in Monmouth County (an additional two coastal lakes in Monmouth County are in the Shark River Region discussed below). None of the lakes is presently connected to the Atlantic Ocean via a tidal inlet; however, 19th Century mapping shows that the lakes at the time were in fact small tidal estuaries, with each inlet subsequently closed by natural or human actions. Most of the lakes have some form of water level management that allows high lake levels to be reduced by discharge to the ocean.

2.1.2 Shark River Region

The Shark River Region includes the Shark River estuary and all or portions of seven highly urbanized municipalities in Monmouth County. Sylvan and Silver Lakes are coastal lakes that are included in the Shark River Region. Under ordinary tidal conditions, this is an isolated hydraulic reach; there is no tidal connection between the Shark River estuary and the Manasquan Inlet estuary to the south.

2.1.3 North Region

The north region of the Study Area extends from Manasquan Inlet and the Manasquan River Estuary south to Little Egg Harbor Inlet and the Mullica River/Great Bay estuary. This is the largest region established for the New Jersey Back Bays analyses. It covers 536 square miles and includes all or portions of 45 municipalities in Ocean, Burlington, and Atlantic Counties. There are only three inlets – Manasquan, Barnegat, and Little Egg – along a 45-mile long segment of the NJ coast. These three inlets are the only connections between the Atlantic Ocean and the large shallow back bays that include Barnegat Bay, Manahawkin Bay, Little Egg Harbor, and Great Bay.

The shorelines on the east side of the back bays, along the barrier spit extending from Manasquan Inlet to Barnegat Inlet and along Long Beach Island, are fully developed. The two exceptions to this generalization include the nine mile-long reach occupied by Island Beach State Park and the three mile-long Holgate Spit at the southwest end of Long Beach Island. In contrast to the eastern shoreline of the back bays, the western shoreline on the mainland of New Jersey is much more heterogeneous. This area is characterized by medium density single family home developments

surrounded by back bay wetlands. There are numerous “finger canal” communities, many of which were developed in the period following World War II by bulk heading, dredging, and filling in what were previously tidal wetlands. In between the finger canal communities are more extensive reaches of back bay shoreline with little or no development. These areas typically consist of intertidal marsh/wetlands.

2.1.4 Central Region

The Central Region extends from Little Egg Inlet south to Corson Inlet, with an area of 312 square miles and all or portions of 21 municipalities in Atlantic and Cape May Counties. The ocean shoreline length of this region is about 27 miles and includes five tidal inlets: Little Egg, Brigantine, Absecon, Great Egg, and Corson. There are relatively shorter distances between inlets in this region compared to those of the North Region.

As in the North Region, the back-bay shorelines of the barrier islands are essentially fully developed with medium density residential and business infrastructure. However, the western (mainland) shorelines of the Central Region are significantly less densely developed than is the case in the North Region.

2.1.5 South Region

The South Region extends from Corson Inlet south and west around Cape May Point to the west end of the Cape May Canal, with an area of 146 square miles. All or portions of 16 municipalities are included in the region, all of which are part of Cape May County. There are five inlets that connect this region to the Atlantic Ocean and Delaware Bay. They include Corson, Townsends, Hereford, and Cape May Inlets and the western entrance to the Cape May Canal on Delaware Bay. The South Region is similar to the Central region in that the most extensive and dense development is along the west (back bay) side of the barrier islands, with relatively less dense development on the mainland side of the back bays.

2.2 Preferred Alternative (TSP) and Alternatives

2.2.1 No Action Alternative

The forecast of the future without-project (FWOP) condition reflects the conditions expected during the period of analysis. The future without-project condition provides the basis from which alternative plans are formulated and impacts are assessed. Since impact assessment is the basis for plan evaluation, comparison and selection, clear definition and full documentation of the without-project condition are essential. Gathering information about historic and existing conditions requires an inventory. Gathering information about potential future conditions requires forecasts, which should be made for selected years over the period of analysis to indicate how changes in economic and other conditions are likely to have an impact on problems and opportunities. Information gathering and forecasts will most likely continue throughout the planning process. The most likely future without project condition is considered to be if no NJBB action is taken, and is characterized by CSRMs projects and features, and socio-economic, environmental, and cultural conditions. This condition is considered as the baseline from which future measures will be evaluated with regard to reducing coastal storm risk and promoting

resilience. The Future-Without Project Condition serves as the baseline for evaluating the anticipated performance of alternatives. It documents the need for Federal action to address the water resources problem.

A base year of 2030 has been identified as the year when USACE projects associated with the NJBB CSRM Feasibility Study will be implemented or constructed. Several trends have been identified for the NJBB Region which are projected to continue into the future and will likely effect the future without-project condition for this study. It is anticipated that the study area will continue to experience damages from coastal storms, and that the damages may increase as a result of more intense storm events. These coastal storm events will likely continue to effect areas of low coastal elevations within the study area with pronounced localized effects in some areas.

In the future without project condition, it is anticipated that sea level is increasing throughout the study area that shorelines are changing in response to sea level change, and historic erosion patterns will continue and accelerate. It is anticipated that there will continue to be significant economic assets within the NJBB region, and that population and development will continue to increase. Based on a desktop inventory of structures compiled for the HEC-FDA model, the New Jersey Back Bays study area experiences a total of \$1,571,616,000 in FWOP Average Annual Damages (AAD) over a 50-year period of analysis based on the intermediate rate of relative sea level change (RSLC).

The FWOP condition no-action alternative would see no additional federal involvement in storm damage reduction as outlined within this study. Current projects and programs that the USACE conducts in conjunction with other Federal and non-Federal entities would continue and would be constructed by 2030.

The FWOP condition does consider those projects that have been completed (existing), are under construction, or have been authorized for construction and are anticipated to be constructed by 2030. Any proposed projects, which are not yet authorized for construction, are not considered part of the FWOP conditions for analysis.

2.2.2 Action Area

The action area is defined as all areas that may be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. It encompasses the geographic extent of environmental changes (i.e., the physical, chemical and biotic effects) that will result directly and indirectly from the action and is a subset of the NJBB Study Area.

For the NJBB Study, the action area is all areas directly and indirect affected by the tentatively selected plan (TSP), presented **Error! Reference source not found.** The TSP includes the following project components:

- Three inlet closures or storm surge barriers (SSB)
 - Manasquan Inlet
 - Barnegat Inlet
 - Great Egg Harbor Inlet
- Two bay closures

- Absecon Blvd
- South Ocean City
- Non-structural measures
 - 18,800 structures eligible for elevation and floodproofing

Additionally, the action area considers the effects of the following options, which have not yet been eliminated.

- Non-structural measures only (elevation and floodproofing for 23,152 structures) in the North Region (Alternative 3A; see Figure 2).
- Non-structural measures only alternative (elevation and floodproofing for 10,895 structures) in the Central Region (Alternative 4A; see Figure 3).
- Non-structural measures for (elevation and floodproofing for 1,189 structures) and perimeter plan alternative in the Central Region (Alternative 4D1; see Figure 3).
- Non-structural measures for (elevation and floodproofing for 2,340 structures) and perimeter plan alternative in the Central Region (Alternative 4D2; see Figure 3).
- Non-structural (656 structures) and perimeter plan alternative in the South Region (Alternative 5D2; see Figure 4).

Note that non-structural measures consist of elevating or floodproofing already existing structures in previously developed areas. Therefore, the action area would primarily be defined by the direct and indirect effects of the storm surge barriers, bay closures, and perimeter plans assessed in this BA. Detailed alignments of the inlet closures, bay closures, and perimeter plans are presented in Appendix A.

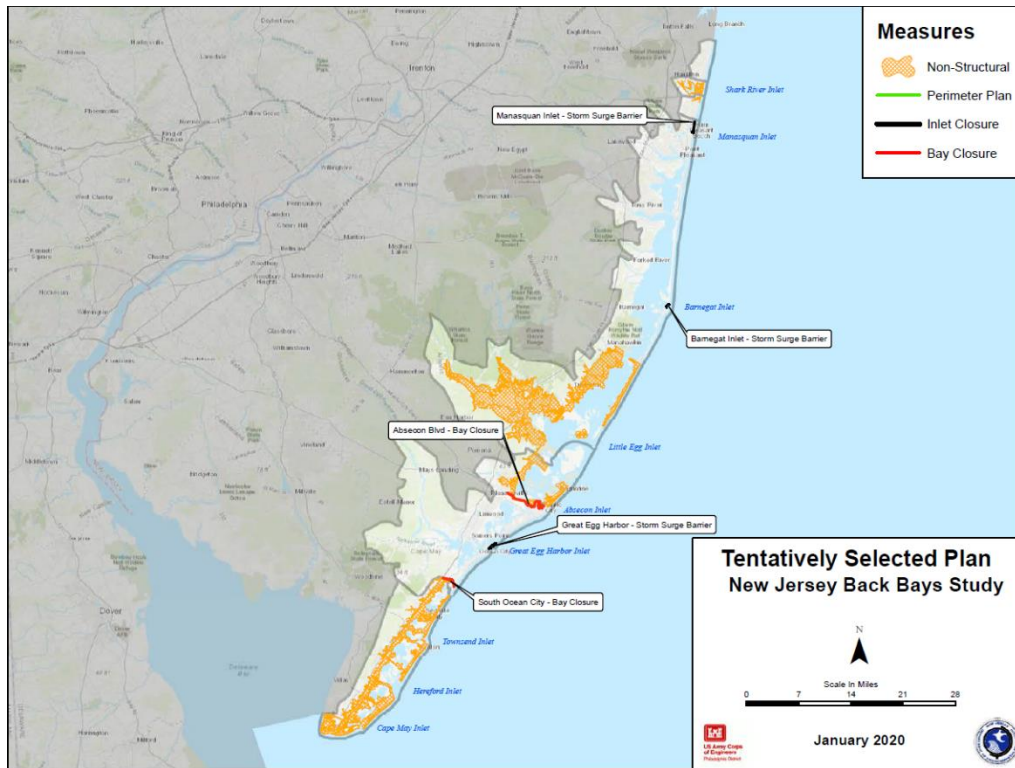


Figure 1. The TSP for the NJBB Study.

Table 1. Final Array of Alternatives

REGION	ALT	NONSTRUCTURAL Building Raising for structures with first floor w/in 20-yr floodplain	PERIMETER Floodwalls, Levees and Miter Gates	STORM SURGE BARRIER Inlet Navigable Sector Gates, Auxiliary Lift Gates, Impermeable Barriers, Levees	BAY CLOSURE Navigable Sector Gates, Auxiliary Lift Gates, Miter Gates, Sluice Gates, Impermeable Barriers, Levees	Natural and Nature-Based Features (NNBF) Note: The measures presented here are proof of concept measures (see Appendix xx) that have not been modeled for CSRM flood reduction and economic benefits. Further evaluation of these conceptual measures will be conducted in subsequent planning phases.
SHARK RIVER	2A* ▲	Portions of Belmar, Bradley Beach, Neptune City & Shark River Hills				<ul style="list-style-type: none"> Island Expansion in Shark River Coastal Lakes Terracing for habitat and to increase flood storage capacity
NORTH (Manasquan Inlet to Brigantine Inlet)	3A†	Point Pleasant, all communities on LBI, western shore of Barnegat Bay, Mystic Island, and along lower				<ul style="list-style-type: none"> Horizontal (ecotone) Levee at Tuckerton Peninsula along Great Bay Boulevard Living Breakwaters on southwest side of Tuckerton Peninsula

Table 1. Final Array of Alternatives

REGION	ALT	NONSTRUCTURAL	PERIMETER	STORM SURGE BARRIER	BAY CLOSURE	Natural and Nature-Based Features (NNBF)
		Building Raising for structures with first floor w/in 20-yr floodplain	Floodwalls, Levees and Miter Gates	Inlet Navigable Sector Gates, Auxiliary Lift Gates, Impermeable Barriers, Levees	Navigable Sector Gates, Auxiliary Lift Gates, Miter Gates, Sluice Gates, Impermeable Barriers, Levees	Note: The measures presented here are proof of concept measures (see Appendix xx) that have not been modeled for CSR flood reduction and economic benefits. Further evaluation of these conceptual measures will be conducted in subsequent planning phases.
		Mullica River Basin				<ul style="list-style-type: none"> Marsh Augmentation along Tuckerton Peninsula Marsh Island Augmentation and Marsh Island Creation Along Tuckerton Peninsula Beach Haven Surge Filter – island and wetland creation/expansion northeast of Tuckerton Peninsula and Great Bay Blvd. Barnegat Bay – reforestation of maritime forests and shrublands in upland locations, Barnegat Bay augmenting existing marshes by mosquito ditch filling and thin-layer placement Barnegat Bay – mudflat expansion Barnegat Bay - SAV bed expansion through “shallowing” and the filling-in of dredge holes.
	3D	All communities on LBI, western shore of Barnegat Bay, Mystic Island, and along lower Mullica River Basin	Manasquan Inlet/ Point Pleasant Area			
	3E(2)* ▲	All communities on southern LBI (Cedar Bonnet Island and south), western shore of Barnegat Bay at Beach Haven West and south, Mystic Island, and along lower Mullica River Basin		1. Manasquan Inlet 2. Barnegat Inlet		
	3E(3)	Cedar Bonnet Island, western shore of Barnegat Bay at Beach Haven West and south, Mystic Island, and along lower Mullica River Basin	Along western side of S. LBI from Ship Bottom to Holgate	1. Manasquan Inlet 2. Barnegat Inlet		
CENTRAL (Brigantine Inlet to Corson Inlet)	4A †	Brigantine, Absecon, Pleasantville, West A.C., A.C., Ventnor, Margate, Longport, Northfield, Linwood, Estell Manor, Mays Landing, Somers Point, Marmora, Ocean City, Palerme				<ul style="list-style-type: none"> Horizontal or ecotone levee(s) Island Creation/Expansion – Great Bay Dune Enhancements Wetland Creation or Restoration Great Bay, Reeds Bay, Absecon Bay, Lakes Bay, Scull Bay, Great Egg Harbor
	4D(1) ▲	Brigantine, Absecon, Pleasantville, West A.C., Northfield, Linwood, Estell Manor, Mays	Along South Absecon Inlet and western side of A.C., Ventnor			

Table 1. Final Array of Alternatives

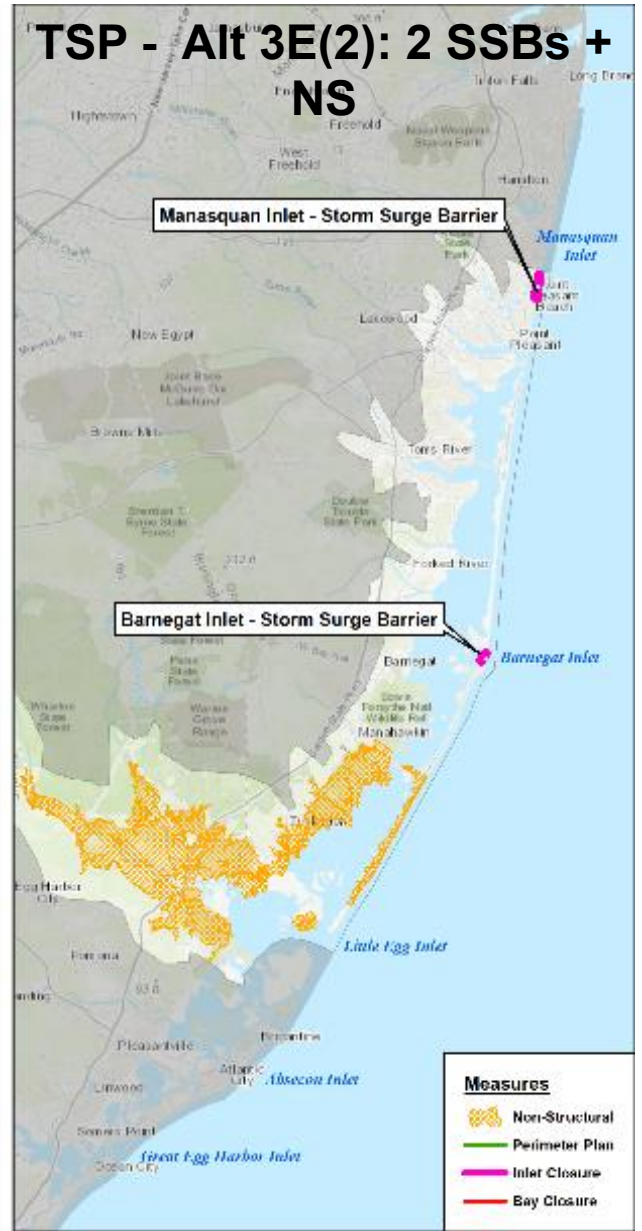
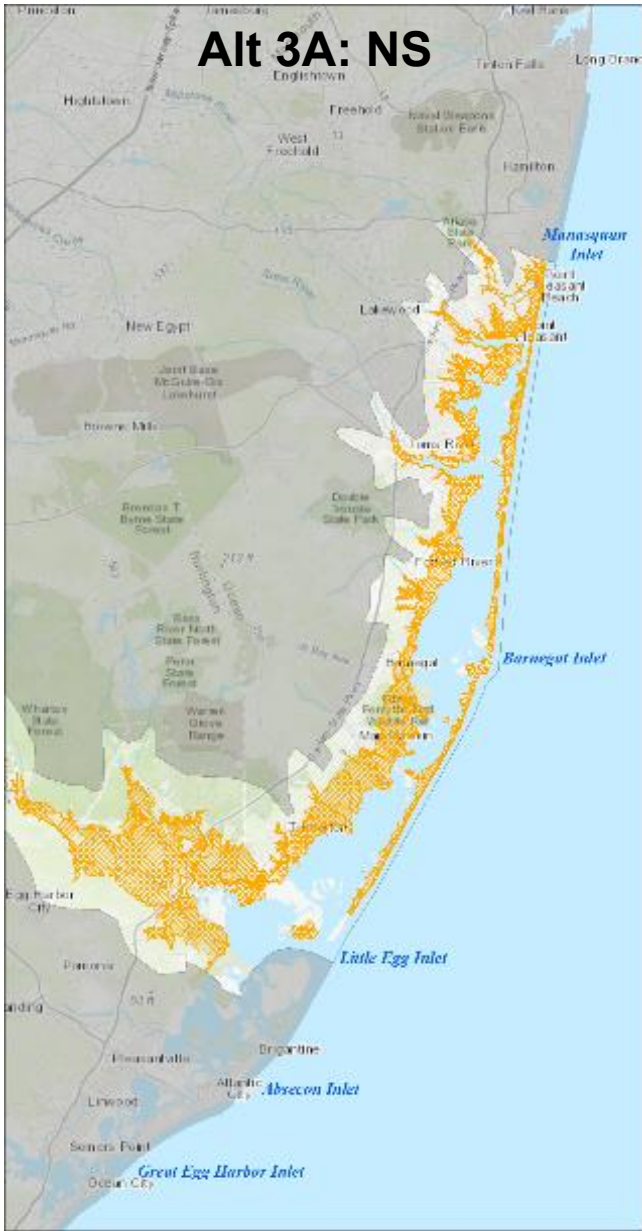
REGION	ALT	NONSTRUCTURAL	PERIMETER	STORM SURGE BARRIER	BAY CLOSURE	Natural and Nature-Based Features (NNBF)
		Building Raising for structures with first floor w/in 20-yr floodplain	Floodwalls, Levees and Miter Gates	Inlet Navigable Sector Gates, Auxiliary Lift Gates, Impermeable Barriers, Levees	Navigable Sector Gates, Auxiliary Lift Gates, Miter Gates, Sluice Gates, Impermeable Barriers, Levees	Note: The measures presented here are proof of concept measures (see Appendix xx) that have not been modeled for CSRM flood reduction and economic benefits. Further evaluation of these conceptual measures will be conducted in subsequent planning phases.
		Landing, Somers Point, Marmora, Palermo	City, Margate City, Longport, & all Ocean City			
	4D(2) †	Absecon, Pleasantville, West A.C., Northfield, Linwood, Estell Manor, Mays Landing, Somers Point, Marmora, Palermo	Along Absecon Inlet and western side of Brigantine, A.C., Ventnor, Margate, Longport, & Ocean City			
	4E(2)	Absecon, Pleasantville, S. Ocean City, Marmora, & Palermo		1. Absecon Inlet 2. Great Egg Harbor Inlet		
	4E(3)	Absecon, Pleasantville, Marmora, & Palermo	Western side of S. Ocean City	1. Absecon Inlet 2. Great Egg Harbor Inlet		
	4E(4)	Absecon & Pleasantville		1. Absecon Inlet 2. Great Egg Harbor Inlet	1. Southern Ocean City (52 nd St.)	
	4G(6)	Brigantine, Absecon, Pleasantville, West A.C., Marmora, S. Ocean City, Palermo,		1. Great Egg Harbor Inlet	1. Absecon Blvd.	
	4G(7)	Brigantine, Absecon, Pleasantville, West A.C., Marmora	Western side of S. Ocean City	1. Great Egg Harbor Inlet	1. Absecon Blvd.	

Table 1. Final Array of Alternatives

REGION	ALTERNATIVE	NONSTRUCTURAL	PERIMETER	STORM SURGE BARRIER	BAY CLOSURE	Natural and Nature-Based Features (NNBF)
		Building Raising for structures with first floor w/in 20-yr floodplain	Floodwalls, Levees and Miter Gates	Inlet Navigable Sector Gates, Auxiliary Lift Gates, Impermeable Barriers, Levees	Navigable Sector Gates, Auxiliary Lift Gates, Miter Gates, Sluice Gates, Impermeable Barriers, Levees	Note: The measures presented here are proof of concept measures (see Appendix xx) that have not been modeled for CSRM flood reduction and economic benefits. Further evaluation of these conceptual measures will be conducted in subsequent planning phases.
	4G(8)*	Brigantine, Absecon, Pleasantville, West A.C.,		1. Great Egg Harbor Inlet	1. Absecon Blvd. 2. Southern Ocean City (52 nd St.)	
	4G(10)	Absecon, Pleasantville, West A.C., Marmora, S. Ocean City, Palermo	Western side of Brigantine	1. Great Egg Harbor Inlet	1. Absecon Blvd.	
	4G(11)	Absecon, Pleasantville, West A.C., Marmora, Palermo	Western side of Brigantine and S. Ocean City	1. Great Egg Harbor Inlet	1. Absecon Blvd.	
	4G(12)	Brigantine, Absecon, Pleasantville, West A.C.,	Western side of Brigantine	1. Great Egg Harbor Inlet	1. Absecon Blvd. 2. Southern Ocean City (52 nd St.)	
SOUTH (Corson Inlet to Cape May Inlet)	5A*▲	All Atlantic Coast and bayside communities from Ludlam Island (Upper Twp.) south to Cape May and W. Cape May				<ul style="list-style-type: none"> No defined NNBF strategies identified at this time
	5D(1)	All Atlantic Coast and bayside communities from Ludlam Island (Upper Twp.) south to Cape May and W. Cape May except for SIC, all WW, and Cape May	Western side of Sea Isle City, all Wildwoods, and southern shore along Cape May Harbor in Cape May			

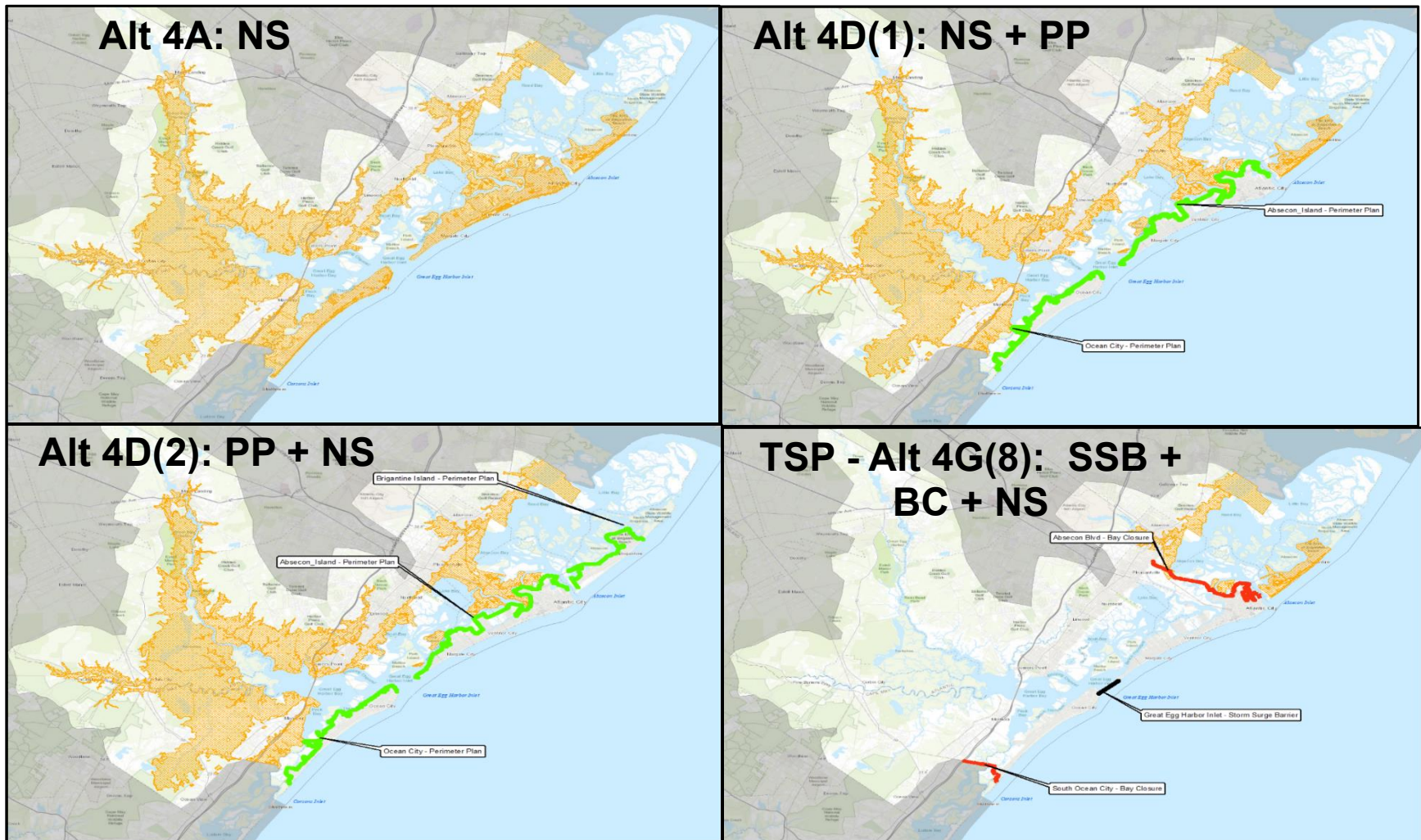
Table 1. Final Array of Alternatives

REGION	ALTERNATIVE	NONSTRUCTURAL	PERIMETER	STORM SURGE BARRIER	BAY CLOSURE	Natural and Nature-Based Features (NNBF)
	5D(2) [†]	Building Raising for structures with first floor w/in 20-yr floodplain All bayside communities from Ludlam Island (Upper Twp.) south to Cape May and W. Cape May; Strathmere and N. Cape May Inlet along Atlantic Coast.	Floodwalls, Levees and Miter Gates Western side of Sea Isle City, Seven Mile Island, all Wildwoods, and southern shore along Cape May Harbor in Cape May, and West Cape May	Inlet Navigable Sector Gates, Auxiliary Lift Gates, Impermeable Barriers, Levees	Navigable Sector Gates, Auxiliary Lift Gates, Miter Gates, Sluice Gates, Impermeable Barriers, Levees	Note: The measures presented here are proof of concept measures (see Appendix xx) that have not been modeled for CSRM flood reduction and economic benefits. Further evaluation of these conceptual measures will be conducted in subsequent planning phases.
<p>*Tentatively Selected Plan (TSP)</p> <p>▲ Apparent National Economic (NED) Plan</p> <p>[†]Further Economic Analysis Warranted – Alternative or components of the alternative could be included later upon further evaluation</p> <p>Strikethrough = Alternative eliminated from consideration subsequent to Interim Report</p>						



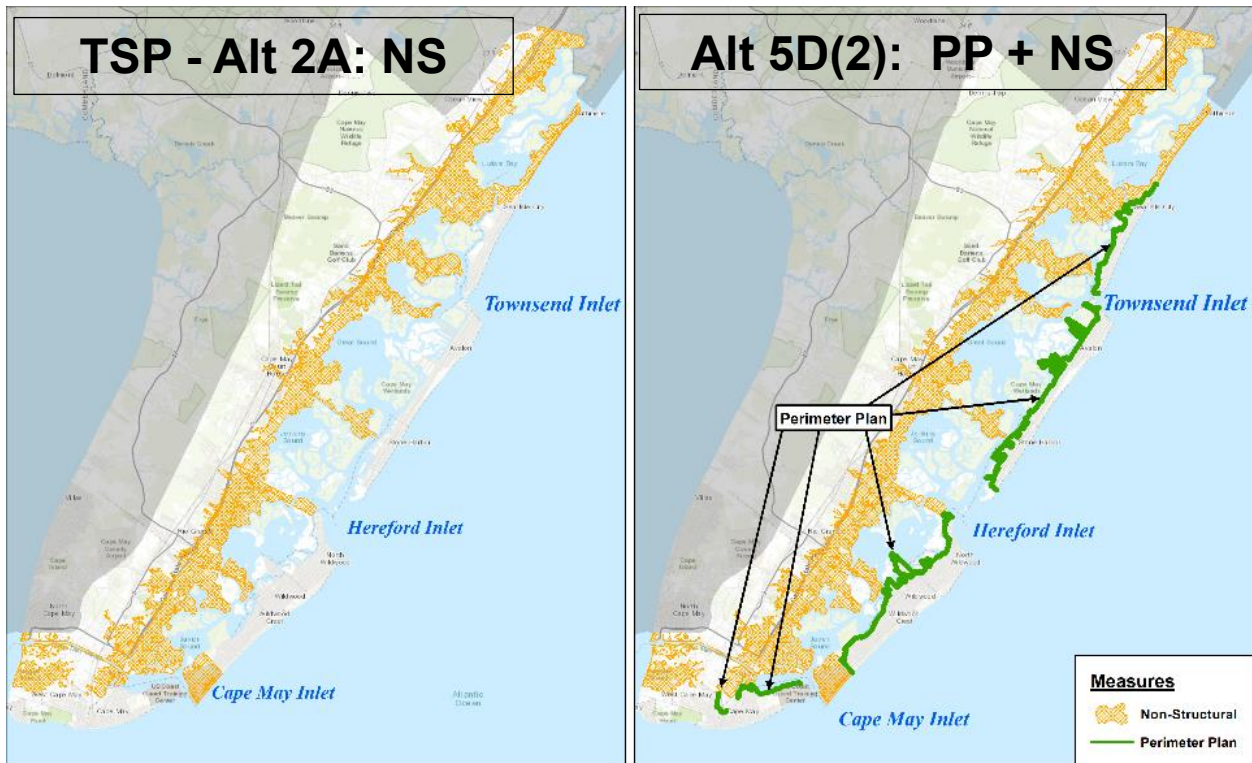
Notes: TSP = Tentatively Selected Plan; Alt = Alternative, NS = Nonstructural; SSB = Storm Surge Barrier

Figure 2. Comparison of the Non-Structural Alternative and the TSP in the North Region.



Notes: TSP = Tentatively Selected Plan; Alt = Alternative, NS = Nonstructural; SSB = Storm Surge Barrier, PP = Perimeter Plan

Figure 3. Comparison of the Non-Structural and Perimeter Plan Alternatives and the TSP in the Central Region.



Notes: TSP = Tentatively Selected Plan; Alt = Alternative, NS = Nonstructural; PP = Perimeter Plan

Figure 4. Comparison of the TSP and the Perimeter Plan and Nonstructural Alternative in the South Region

3.0 PROJECT DESCRIPTION

3.1 Storm Surge Barriers and Bay Closures

Three storm surge barriers at inlets (Manasquan Inlet, Barnegat Inlet, Great Egg Harbor Inlet) and two interior bay closure barriers across the bay (Absecon Blvd and Southern Ocean City) are included in the TSP. The selected storm surge barriers reduce storm surge from propagating into the bays from the ocean during storm events lowering flood elevations. The storm surge barriers across the bay (Bay Closures) reduce storm surge from propagating into Central Region from adjacent inlets (Absecon Inlet, Little Egg Inlet, and Corson's Inlet) that would remain open and unaltered in the TSP. Storm surge barriers span the inlet opening with a combination of static impermeable barriers and dynamic gates that are only closed during storm events. Each storm surge barrier includes a navigable gate (sector gate) to provide a navigable opening with unlimited vertical clearance and a series of auxiliary flow gates, vertical lift gates, to maintain tidal flow during non-storm conditions. An example of storm surge barrier at the Seabrook Flood Complex in New Orleans, LA which is constructed with a sector gate and vertical lift gates is shown in **Error! Reference source not found.** Detailed engineering drawings, layouts and cross-sections, for the storm surge barriers are included in Appendix B. Storm surge barrier gate types and alignments are considered tentative and may change in future phases of the study with more detailed engineer analyses and designs.

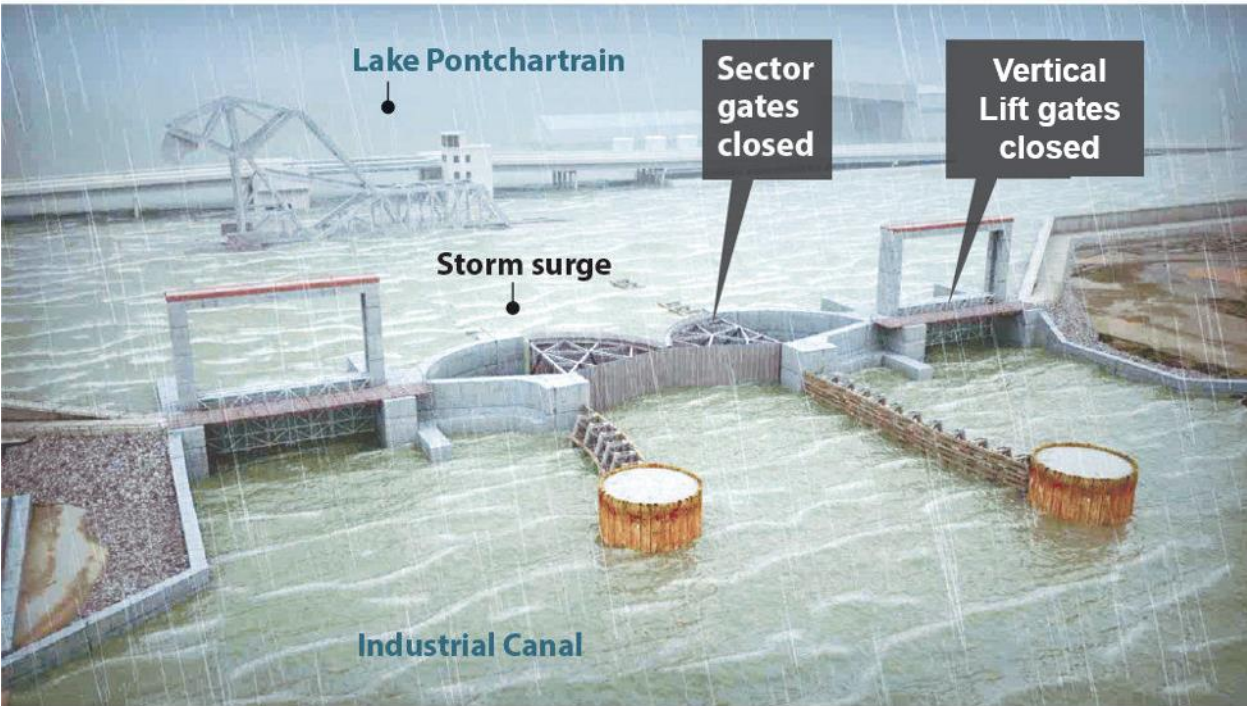
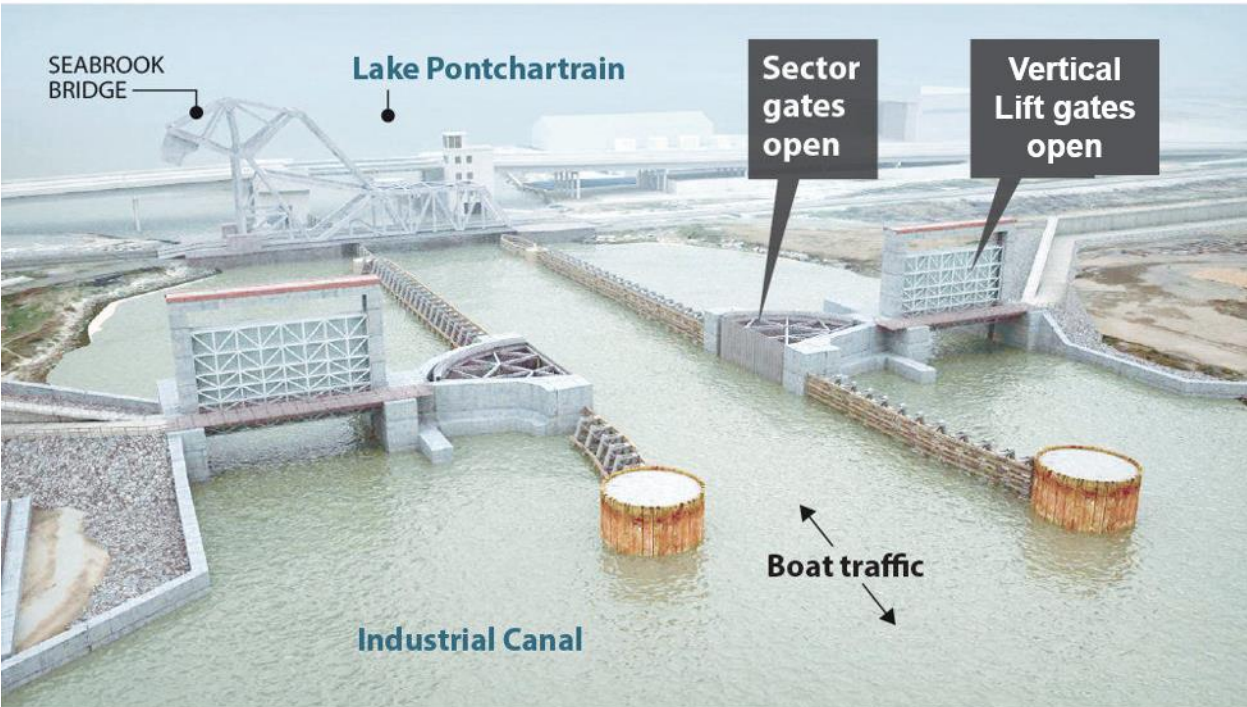
Navigable sector gates span the full width of the federal navigation channel with a 10-foot buffer on either side with opening spans ranging from 120 feet at the Bay Closures to 340 feet at Manasquan Inlet. Auxiliary flow gates have an opening span of 150 feet and are located along the storm surge barrier in water depths that are deemed constructible and practical. In shallow water, where vertical lift gates are impractical, shallow water gates (SWG) consisting of 24-foot x 8-foot box culverts with sluice gates are used. Bottom sill elevations for the navigable and auxiliary flow gates are designed at or near the existing bed elevations to promote tidal flow and are well below the federally authorized depths at the federal navigation channels.

Impermeable barriers are open water structures that flank the navigable and auxiliary flow gates to tie the barrier into high ground or existing CSR features (i.e. dunes or seawalls). Site specific impermeable barrier types have not been selected at this stage of the study but will be further investigated as the study continues. Several of the storm surge barriers, particularly the bay closures, include levees, floodwalls, and seawalls along roads, shorelines, and low-lying areas to tie into high ground or existing CSR features (i.e. dunes or seawalls). The crest elevation of the storm surge barriers is between 17 and 20 feet NAVD88. A summary of the storm surge barrier components is provided in Table 2.

Table 2. TSP – Storm Surge Barrier Components

Storm Surge Barrier	Navigable Gate	Auxiliary Flow Gates	Impermeable Barrier	Perimeter Barrier
Manasquan Inlet Inlet Closure	1 Sector Gate Length = 340 FT Crest Elev = 20 FT Sill Elev = -18.25 FT	None	None	Levee = 7,280 FT Seawall = 2,366 FT
Barnegat Inlet Inlet Closure	1 Sector Gate Length = 320 FT Crest Elev = 17 FT Sill Elev = -25 FT	15 Vertical Lift Gates Length = 150 FT each Crest Elev = 17 FT Sill Elev = -5 to -11 FT 18 Shallow Water Gates Length = 24 FT each Crest Elev = 17 FT Sill Elev = -4 FT	Length = 798 FT Area = 18,365 SF	Floodwall = 897 FT Seawall = 795 FT 1 Road Closure Gate
Great Egg Inlet Inlet Closure	1 Sector Gate Length = 320 FT Crest Elev = 19 FT Sill Elev = -35 FT	19 Vertical Lift Gates Length = 150 FT each Crest Elev = 19 FT Sill Elev = -5 to -18 FT	Length = 863 FT Area = 20,716 SF	Levee = 974 FT Seawall = 1,275 FT
Absecon Blvd. Bay Closure	1 Sector Gate Length = 120 FT Crest Elev = 13 FT Sill Elev = -20 FT	4 Shallow Water Gates Length = 24 FT each Crest Elev = 13 FT Sill Elev = -2 FT	Length = 869 FT Area = 14,772 SF	Levee = 27,524 FT Floodwall = 28,890 FT 4 Road Closure Gates 5 Mitre Gates
Southern Ocean City Bay Closure	1 Sector Gate Length = 120 FT Crest Elev = 13 FT Sill Elev = -10 FT	None	None	Levee = 9,467 FT Floodwall = 4,124 FT 1 Mitre Gate 1 Sluice Gate

HOW IT WORKS:



Illustrations courtesy of Army Corps of Engineers NOLA.com | The Times-Picayune

Figure 5. Example Storm Surge Barrier at Seabrook Flood Complex in New Orleans,

3.1.1 Pre-construction

Prior to construction investigations may include, wetland delineation, a subsurface geotechnical investigation, and HTRW sampling. These investigations are being developed.

3.1.2 Construction

In-water construction activities for the construction of storm surge barriers and bay closures include installation and removal of temporary cofferdams, temporary excavations, fill and rock placement, concrete work, and pile driving. On land construction activities include clearing, grading, excavations, backfilling, movement of construction equipment, concrete work, pile driving, and soil stockpiles.

3.1.3 Operation and Maintenance

The purpose of Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) is to sustain the constructed project. The most significant OMRR&R is associated with the Storm Surge Barriers. At this point of the study, it is estimated that storm surge barriers and bay closures would be closed for a 5-yr and higher storm surge event, with an average of one closure operation every five years. In the next phase of the study the storm surge barrier operations plan and closure criteria will be reevaluated. OMRR&R for storm surge barriers typically include monthly startup of backup generators/systems, annual closure of surge barrier gates pre-hurricane season, dive inspections, gate adjustments/greasing, gate rehab and gate replacement.

3.2 Nonstructural Measures

The TSP includes Nonstructural solutions, elevating structures and floodproofing, in areas where the storm surge barriers will not significantly reduce flood elevations. These areas are concentrated in the Shark River region Ocean and Atlantic Counties (between Route 72 and Absecon Blvd.) and Cape May County. A total of 18,800 structures located within the 5% AEP floodplain (20-year return period) in these areas are targeted for nonstructural solutions under the TSP; this includes 135 structures in the Shark River Region; 8,869 structures in the North Region; 1,255 structures in the Central Region; and 8,579 structures in the South region.

In addition, to the TSP, two completely nonstructural options are still under consideration.

- Non-structural measures only (elevation and floodproofing for 23,152 structures) in the North Region (Alternative 3A; see Figure 2).
- Non-structural measures only alternative (elevation and floodproofing for 10,895 structures) in the Central Region (Alternative 4A; see Figure 3).

Additionally, the number of structures under consideration for nonstructural measure changes with the perimeter plan options considered.

3.2.1 Pre-construction

Prior to construction detailed investigation of the eligibility of individual structures for non-structural measures would be conducted.

3.2.2 Construction

Nonstructural measures involve a significant construction effort whether it be from building retrofits such as elevation (including raising a structure on fill or foundation elements such as solid perimeter walls, pier, posts, columns, or pilings) or buyout/relocations that are likely to involve demolition, grading, and soil stabilization/revegetation. The majority of the construction would occur within the footprint of the existing structure and would most likely be in upland urbanized settings.

3.2.3 Operations and Maintenance

There is no operations and maintenance associated with non-structural solutions.

3.3 Perimeter Plans

The perimeter plan options that are still being considered in the Central and South regions include floodwalls and levees that would be constructed on the western side of the barrier islands along residential bayfronts and would tie into existing dunes at the northern and southern ends of the barrier islands. Figure 6, Figure 7, and Figure 8 show typical sections which have been used in the perimeter plan design to date.

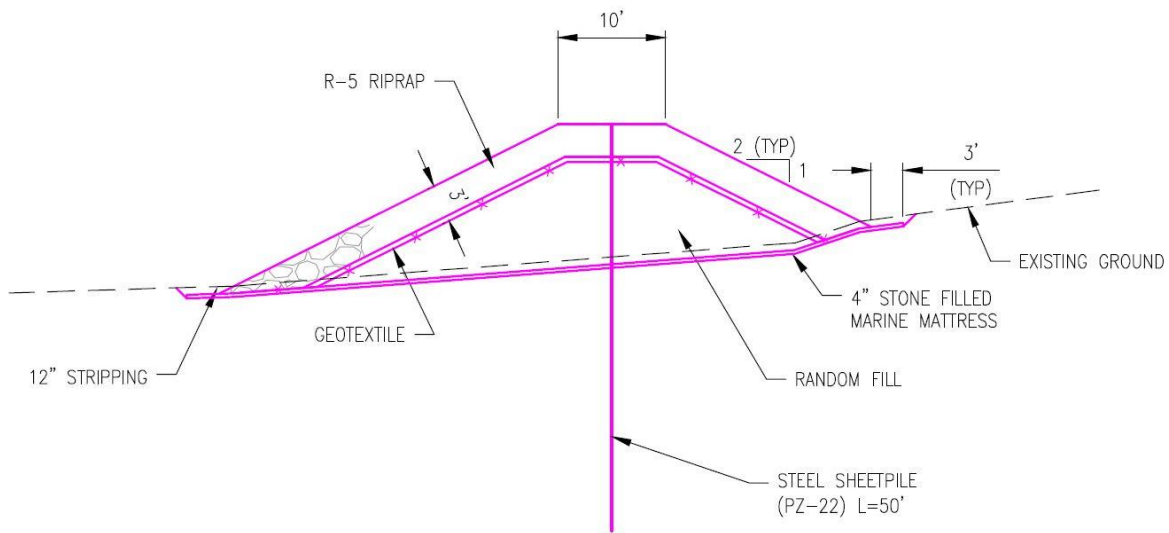
Options. The following are the perimeter plan options still under consideration. The number of structures under consideration for nonstructural measures is noted for each perimeter plan option.

- Non-structural measures for (elevation and floodproofing for 1,189 structures) and perimeter plan alternative in the Central Region (Alternative 4D1; see Figure 3).
- Non-structural measures for (elevation and floodproofing for 2,340 structures) and perimeter plan alternative in the Central Region (Alternative 4D2; see Figure 3).
- Non-structural (656 structures) and perimeter plan alternative in the South Region (Alternative 5D2; see Figure 4).

The location, length, and construction duration for the perimeter plans for these options are presented in Table 3.

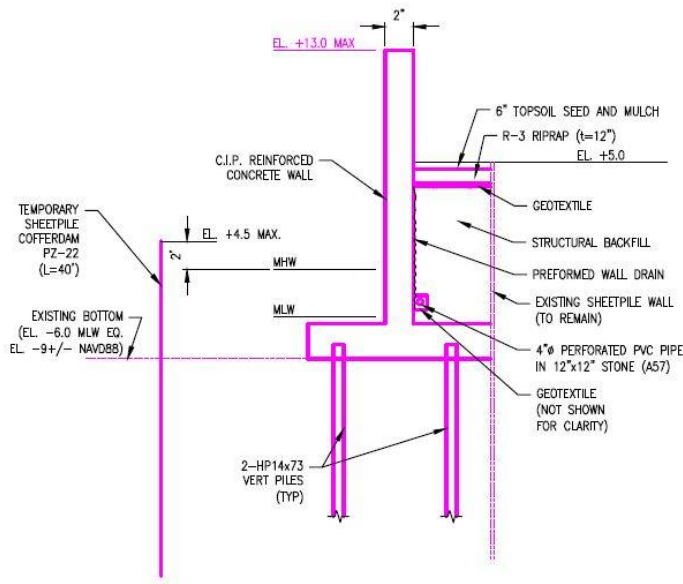
Table 3. Location, Length, and Construction Duration for Perimeter Plan Options

ALTERNATIVE	LOCATION	BARRIER LENGTH (LF)	CONSTRUCTION DURATION (MONTHS)
4D1	Ocean City	78,732	89
	Absecon Is.	111,111	126
4D2	Ocean City	78,732	89
	Absecon Is.	111,111	126
	Brigantine	48,699	55
5D2	Cape May City	15,825	18
	Wildwood Is.	54,171	62
	West Wildwood	11,726	13
	Sea Isle City	35,167	40
	West Cape May	4,480	5



TYPICAL SECTION – LEVEE – TYPE A
NTS

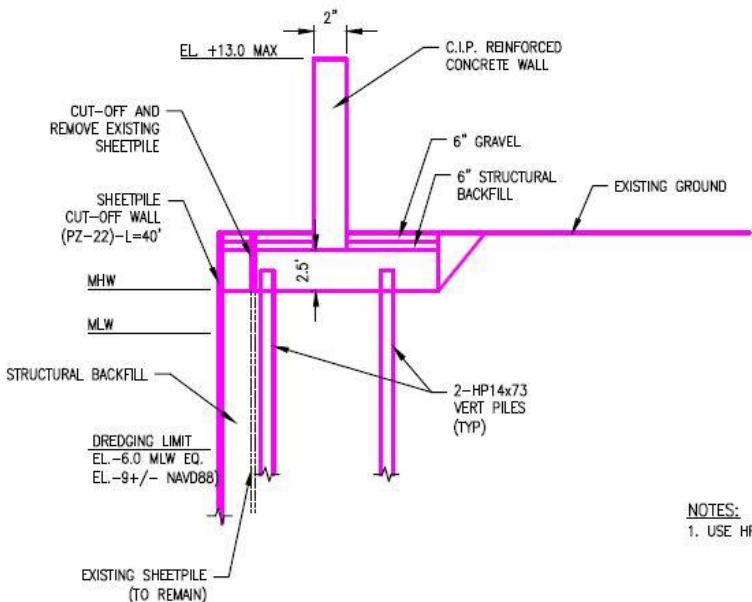
Figure 6. Typical Section – Levee – Type A



NOTES:
1. USE HP14x73 PILES 50' LONG @ 10' C-C.

TYPICAL SECTION - CONCRETE CANTILEVER WALL ON PILES -TYPE B
NTS

Figure 7. Typical Section - Concrete Cantilever Wall on Piles - Type B



NOTES:
1. USE HP14x73 PILES 50' LONG @ 10' C-C.

TYPICAL SECTION - CONCRETE CANTILEVER WALL ON PILES - TYPE C
NTS

Figure 8. Typical Section - Concrete Cantilever Wall - Type C

3.3.1 Pre-construction

Prior to construction investigations may include, wetland delineation, a subsurface geotechnical investigation, and HTRW sampling. These investigations are being developed.

3.3.2 Construction

In-water construction activities for the construction of levee and floodwalls include installation and removal of temporary cofferdams, temporary excavations, fill and rock placement, concrete work, and pile driving. On land construction activities include clearing, grading, excavations, backfilling, movement of construction equipment, concrete work, pile driving, and soil stockpiles.

3.3.3 Operation and Maintenance

As part of the perimeter plan, miter gates will be installed and operated across smaller channels that require navigable access. These gates would remain open during normal conditions and would be closed during significant storm events. Regular maintenance is performed on the gates to keep the system running as designed.

3.4 Natural and Nature Based Features (NNBF)

An initial suite of NNBF opportunities for integration into the TSP are identified in this section for each of the NJBB Regions. NNBF opportunities are demonstrated in maps outlining location specific concepts. The features shown on the map are drawn to locate the general area an NNBF might be considered and are not representative of a specific design. Because these features are highly conceptual at this time, they would require subsequent rigorous site identification and planning, construction methods, impact assessments, and implementation schedules/plans. Because these features would require significant amounts of fill material, consideration would first be given to beneficial use of dredging sources and potential sources within existing dredged material confined disposal facilities (CDFs). These considerations will continue throughout the Feasibility Study Phase and into the Engineering and Design Phase as part of the Tier 2 EIS. A complete discussion of the entire range of NNBF strategies considered can be found in the Natural and Nature-Based Features Appendix G inclusive of key design concepts which are documented in Parts II and III of that Appendix.

3.4.1 Shark River and Coastal Lakes Region

Within the Coastal Lakes Region, due to the highly variable conditions of the various lakes, very few generalizable NNBF responses are possible within this region (Figure xx). The reduction of flood risk is something that must be considered on a lake-by-lake basis. However, the opportunity of terracing or lining lakes with vegetation that could serve as stormwater filters, habitat, and increased recreational amenities is one overall strategy that may be applicable. Other possibilities include the creation of islands within the river itself in order to reduce storm effects to the surrounding coastlines.



Figure 9. NNBFs within the Shark River/Coastal Lakes Region

3.4.2 North Region

As the largest region of the study, and a collection of somewhat similar conditions throughout the region, the North Region provides the opportunity to study a series of strategies that could be repeatedly deployed at large scale, calibrated to specific conditions. For this report, Barnegat Bay is used as an example for this approach, demonstrating the range of NNBF strategies that could be used at a bay-wide scale to address some of the more ubiquitous conditions there (Figure 101). Since the Holgate cross-bay barrier and the Little Egg-Brigantine Storm Surge Barrier are not included in the TSP, importance is placed on the performance of the Tuckerton Peninsula/Great Bay Boulevard wetland complex and the system of sedge islands to the northeast of the peninsula. Two possible NNBFs are included in this area, including possibilities for the Tuckerton Peninsula and the modifications of the sedge islands to enhance their performance as a surge filter.

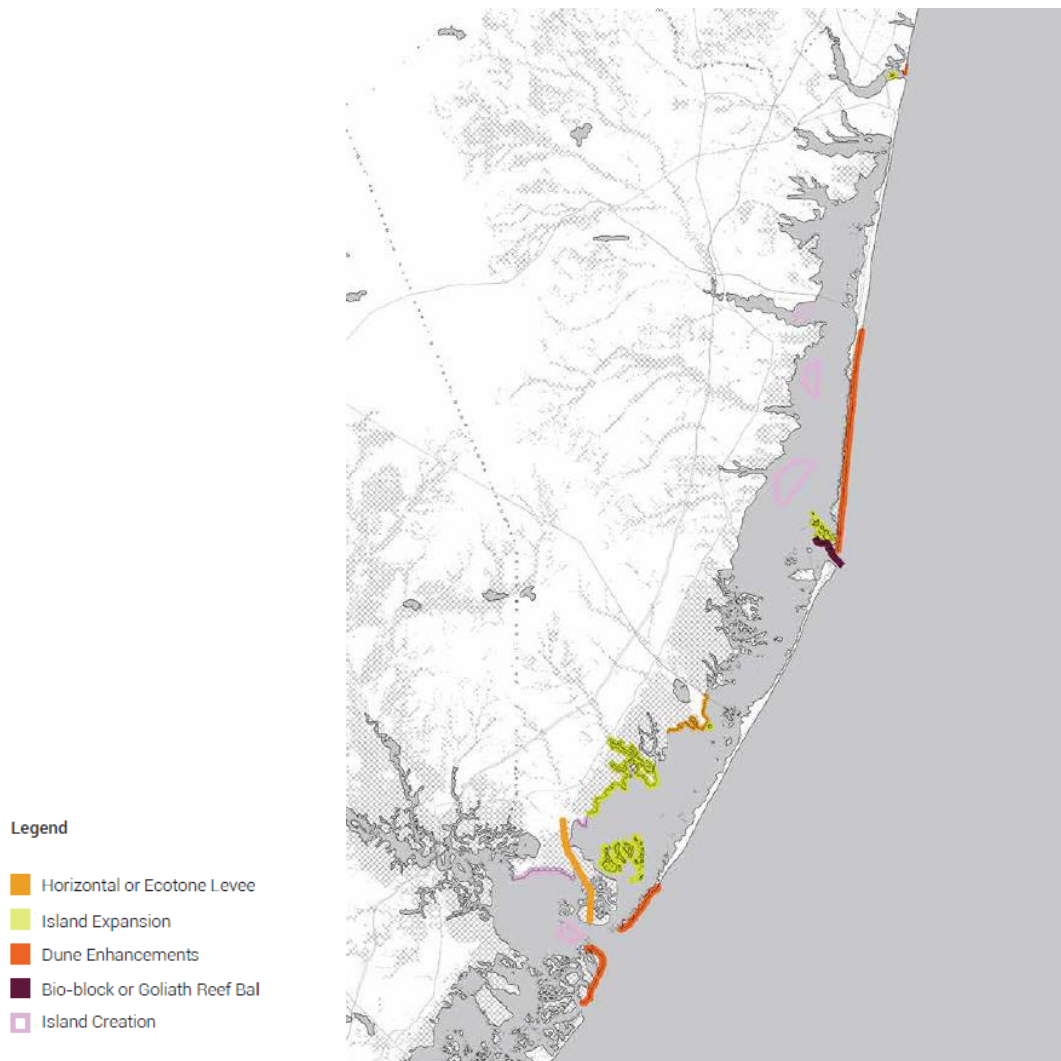


Figure 10. NNBFs within the North Region

3.4.3 Central Region

One of the significant challenges of the Central Region is the flooding of urban areas from the bay during periods of high water. In addition to the aforementioned SSB and bay closures, there is likely to be some consideration of flood wall or levee construction to protect urban populations on the barrier islands (Figure 102). Horizontal levee opportunities exist in Ocean City. Many previously wetland creation and bayfloor shallowing opportunities exist in this region particularly in and around Reed’s Bay given inclusion of the Absecon cross-bay barrier in the TSP.

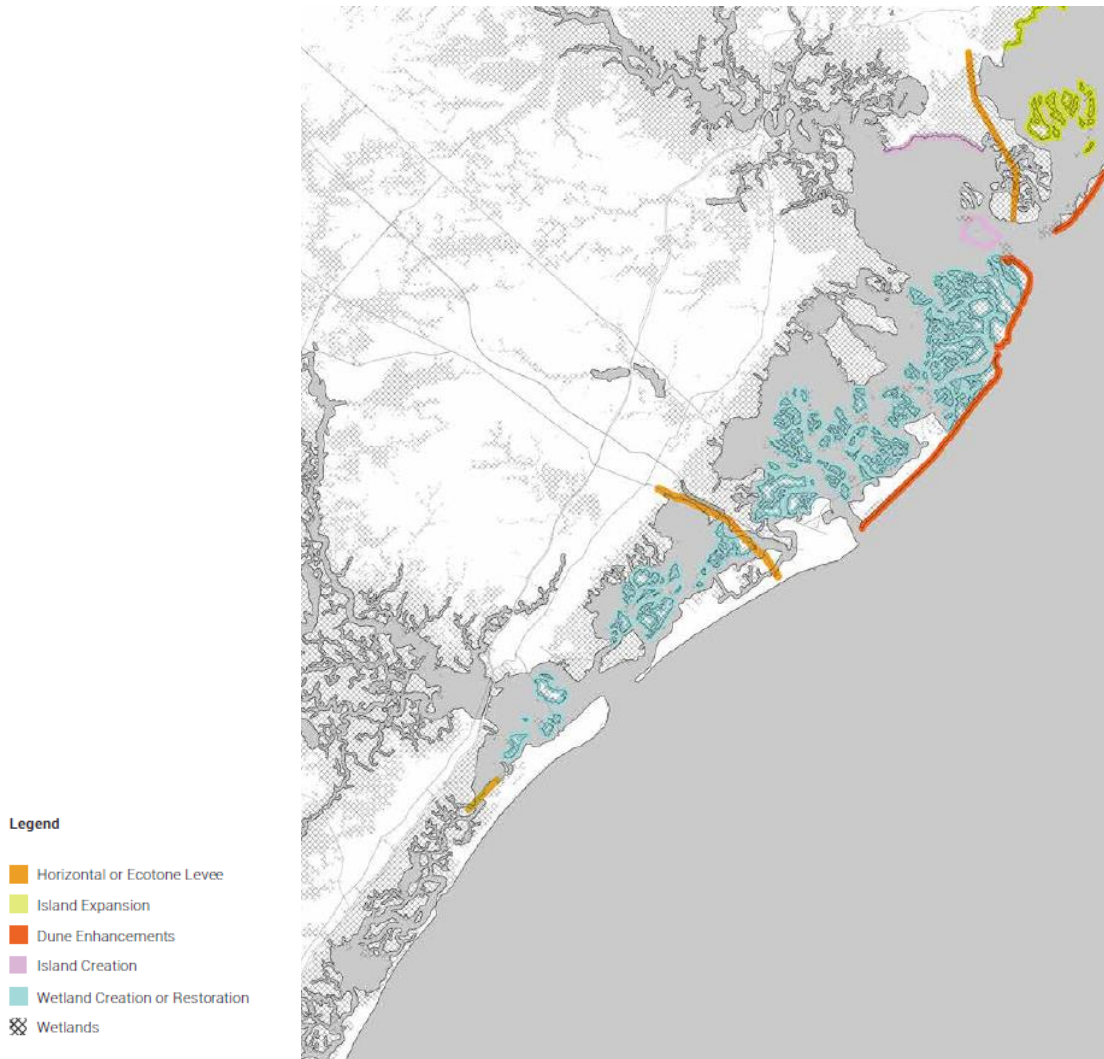


Figure 11. NNBFs within the Central Region

3.4.4 South Region

Due to the infeasibility of structural CSRSM measures in the TSP in the South Region, this region will likely require significant investments to enhance wetlands to complement nonstructural strategies in order to provide enhanced storm protection (Figure 103). NNBFs similar to those described for Ocean City above or the wetland enhancement projects described elsewhere in this section may be applicable to the South Region. Dune enhancement and beach nourishment is also possible in this region as a method of protecting barrier island communities. An additional opportunity is the Seven Mile Island Innovation Lab which is a collaborative project between the USACE, the Wetlands Institute, and the State of New Jersey. It is developing innovative methods of sediment management that have significant potential to contribute to CSRSM.



Figure 12. NNBFs within the South Region

3.4.5 Pre-construction

Prior to construction investigations may include, wetland delineation, a subsurface geotechnical investigation, and HTRW sampling. These investigations are being developed.

3.4.6 Construction

In-water construction activities for the construction of NNBF include installation and removal of temporary cofferdams, temporary excavations, dredging and filling and rock placement, and wetland/upland vegetation planting. On land construction activities include clearing, grading, excavations, backfilling, movement of construction equipment, and temporary roads.

3.4.7 Operation and Maintenance

As part of the perimeter plan, miter gates will be installed and operated across smaller channels that require navigable access. These gates would remain open during normal conditions and would be closed during significant storm events. Regular maintenance is performed on the gates to keep the system running as designed.

4.0 APPLICABILITY REVIEW

As discussed previously, the NJBB Feasibility is conducting a tiered approach to NEPA with regards to level of detail available, information on resources and effects upon, and phase of the actions under consideration. Based on this, USACE has not identified any actionable items that warrant a full Federal consistency review. However, it is possible that compliance with some policies in accordance with N.J.A.C. 7:7 Coastal Zone Rules could be achieved prior to issuance of the Final Tier 1 EIS as more information, plan formulation, and higher design levels become available. Therefore, at this time, this review only serves to identify applicable policies under N.J.A.C. 7:7 Coastal Zone Rules. As the feasibility study progresses, actionable items/measures will be identified, a full compliance/Federal consistency review will be submitted. Remaining items that are not actionable, will be evaluated at the Tier 2 Level during the Engineering and Design Phase. Table 4. provides a review of applicable policies. Because some policies refer to State permits, they were assigned a “NA”, which indicates that a feature affects area in coastal policy/permit but is not required for a Federal project. But, design and implementation of features/components would be conducted in a manner consistent with permit/policy. Items identified with an “X” are applicable policies, and items with a “PE” are items with potential coastal effects, but there is currently insufficient information to determine applicability at this time.

Table 4. New Jersey Federal Consistency Review of N.J.A.C. 7:7 Coastal Zone Rules (Amended Feb. 20, 2020)

PROJECT NAME: New Jersey Back Bays Coastal Storm Risk Management Feasibility Study LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ	Non-Structural (All Regions)	TSP Structural Features					Natural-Nature Based Features (All Regions)	DISCUSSION
		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
Policy								
SUBCHAPTER 1. GENERAL PROVISIONS								
7:7-1.1 Purpose								
7:7-1.2 Scope								
7:7-1.3 Review, revision, and expiration								
7:7-1.4 Standards for evaluating permit applications								
7:7-1.5 Definitions								
7:7-1.6 Forms, checklists, information; Department address and website								
7:7-1.7 Liberal construction								
7:7-1.8 Severability								
SUBCHAPTER 2. APPLICABILITY AND ACTIVITIES FOR WHICH A PERMIT IS REQUIRED								
7:7-2.1 When a permit is required		NA	NA	NA	NA	NA	NA	The proposed action as a Federal project is not subject to a CAFRA permit, but the action will be conducted in a manner consistent with CAFRA requirements.
7:7-2.2 CAFRA								
7:7-2.3 Coastal wetlands		NA	NA	NA	NA	NA	NA	
7:7-2.4 Waterfront development								
7:7-2.5 Obtaining an applicability determination								
SUBCHAPTER 3. GENERAL PROVISIONS FOR PERMITS-BY-RULE, GENERAL PERMITS-BY CERTIFICATION, AND GENERAL PERMITS								
7:7-3.1 Purpose and scope								
7:7-3.2 Standards for issuance, by rulemaking, of permits-by-rule, general permits-by-certification, and general permits								
7:7-3.3 Use of a permit-by-rule, or an authorization pursuant to a general permit-by-certification or a general permit to conduct regulated activities								
7:7-3.4 Use of more than one permit on a single site								
7:7-3.5 Duration of an authorization under a general permit-by-certification								

Table 4. New Jersey Federal Consistency Review of N.J.A.C. 7:7 Coastal Zone Rules (Amended Feb. 20, 2020)

PROJECT NAME: New Jersey Back Bays Coastal Storm Risk Management Feasibility Study LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ	Non-Structural (All Regions)	TSP Structural Features					Natural-Nature Based Features (All Regions)	DISCUSSION
		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
7:7-3.6 Duration of an authorization under a general permit for which an application was declared complete for review prior to July 6, 2015								
7:7-3.7 Duration of an authorization under a general permit for which an application is deemed complete for review on or after July 6, 2015								
7:7-3.8 Conditions applicable to a permit-by-rule, or to an authorization pursuant to a general permit by certification or a general permit								
SUBCHAPTER 4. PERMITS-BY-RULE								
7:7-4.1 Permit-by-rule 1 - expansion of a single-family home or duplex								
7:7-4.2 Permit-by-rule 2 - development of a single-family home or duplex and/or accessory development on a bulkheaded lagoon lot								
7:7-4.3 Permit-by-rule 3 - placement of public safety or beach/dune ordinance signs on beaches or dunes and placement of signs on beaches or dunes at public parks								
7:7-4.4 Permit-by-rule 4 - construction of nonresidential docks, piers, boat ramps, and decks located landward of mean high water line								
7:7-4.5 Permit-by-rule 5 - construction of portion of a recreational dock or pier located landward of mean high-water line								
7:7-4.6 Permit-by-rule 6 - reconstruction of a residential or commercial development within the same footprint								
7:7-4.7 Permit-by-rule 7 – expansion or relocation (with or without expansion) landward or parallel to the mean high-water line of the footprint of a residential or commercial development								
7:7-4.8 Permit-by-rule 8 - construction of a utility line attached to a bridge or culvert								
7:7-4.9 Permit-by-rule 9 - previous filling of tidelands associated with an existing single-family home or duplex								
7:7-4.10 Permit-by-rule 10 - construction of portion of boat ramp located landward of the mean high-water line at a residential development								
7:7-4.11 Permit-by-rule 11 - construction and/or installation of a boat wash wastewater system at a marina, boatyard, or boat sales facility								
7:7-4.12 Permit-by-rule 12 - construction of one to three wind turbines less than 200 feet in height having a cumulative rotor swept area no greater than 2,000 square feet								

Table 4. New Jersey Federal Consistency Review of N.J.A.C. 7:7 Coastal Zone Rules (Amended Feb. 20, 2020)

PROJECT NAME: New Jersey Back Bays Coastal Storm Risk Management Feasibility Study LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ	Non-Structural (All Regions)	TSP Structural Features					Natural-Nature Based Features (All Regions)	DISCUSSION
		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
7:7-4.13 Permit-by-rule 13 - installation of solar panels on a maintained lawn or landscaped area at a single-family home or duplex lot								
7:7-4.14 Permit-by-rule 14 – reconfiguration of any legally existing dock, wharf, or pier at a legally existing marina								
7:7-4.15 Permit-by-rule 15 - placement of sand fencing to create or sustain a dune								
7:7-4.16 Permit-by-rule 16 - placement of land-based upwellers and raceways for aquaculture activities								
7:7-4.17 Permit-by-rule 17 - placement of predator screens and oyster spat attraction devices within a shellfish lease area								
7:7-4.18 Permit-by-rule 18 - placement of shellfish cages within a shellfish lease area								
7:7-4.19 Permit-by-rule 19 - construction and/or installation of a pumpout facility and/or pumpout support facilities								
7:7-4.20 Permit-by-rule 20 – implementation of a sediment sampling plan for sampling in a water area as part of a dredging or dredged material management activity or as part of a remedial investigation of a contaminated site							NA	
7:7-4.21 Permit-by-rule 21 – application of herbicide within coastal wetlands to control invasive plant species		NA	NA	NA	NA	NA		Compensatory mitigation associated with TSP may require herbicide applications in coastal wetlands but are not subject to permit by rule 21. Actions would be conducted consistent with permit by rule 21.
7:7-4.22 Permit-by-rule 22 - construction of a swimming pool, spa, or hot tub and associated decking on a bulkheaded lot without wetlands								
7:7-4.23 Permit-by-rule 23 – installation of an at-grade dune walkover at a residential, commercial, or public development other than a single-family home or duplex								
SUBCHAPTER 5. GENERAL PERMITS-BY-CERTIFICATION								
7:7-5.1 General permit-by-certification 10 – reconstruction of a legally existing functioning bulkhead in-place or upland of a legally existing functioning bulkhead								
7:7-5.2 General permit-by-certification 15 – construction of piers, docks, including jet ski ramps, pilings, and boatlifts in man-made lagoons								
7:7-5.3 General permit-by-certification 1A – installation of an elevated timber dune walkover at a residential, commercial, or public development other than a single-family home or duplex								

Table 4. New Jersey Federal Consistency Review of N.J.A.C. 7:7 Coastal Zone Rules (Amended Feb. 20, 2020)

PROJECT NAME: New Jersey Back Bays Coastal Storm Risk Management Feasibility Study LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ	Non-Structural (All Regions)	TSP Structural Features					Natural-Nature Based Features (All Regions)	DISCUSSION
		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
SUBCHAPTER 6. GENERAL PERMITS								
7:7-6.1 General permit 1 - amusement pier expansion								
7:7-6.2 General permit 2 – activities on a beach and dune		NA	NA	NA		NA	NA	The proposed action would affect a beach and dune area. Federal action is not subject to a GP-2, but is consistent with GP-2 requirements.
7:7-6.3 General permit 3 - voluntary reconstruction of certain residential or commercial development	NA							Actions may involve building raising or other non-structural measures, but are not not subject to GP-3, but would be conducted consistently with GP-3.
7:7-6.4 General permit 4 - development of one or two single-family homes or duplexes								
7:7-6.5 General permit 5 - expansion, or reconstruction (with or without expansion), of a single-family home or duplex	NA							Actions may involve building raising or other non-structural measures, but are not not subject to GP-5, but would be conducted consistently with GP-5.
7:7-6.6 General permit 6 - construction of a bulkhead and placement of associated fill on a man-made lagoon								
7:7-6.7 General permit 7 - construction of a revetment at a single-family home or duplex lot								
7:7-6.8 General permit 8 - construction of gabions at a single family/duplex lot								
7:7-6.9 General permit 9 - construction of support facilities at legally existing and operating marinas								
7:7-6.10 General permit 10 –reconstruction of a legally existing functioning bulkhead					NA	NA		Construction of perimeter seawalls may utilize existing bulkheads or construct new bulkheads. The proposed actions are not subject to GP-10, but would be conducted consistently with GP-10.
7:7-6.11 General permit 11 – investigation, cleanup, removal, or remediation of hazardous substances								
7:7-6.12 General permit 12 – landfall of utilities								
7:7-6.13 General permit 13 – construction of recreational facilities at public parks								
7:7-6.14 General permit 14 – bulkhead construction and placement of associated fill at a single-family home or duplex lot					NA	NA		Construction of perimeter seawalls may utilize existing bulkheads or construct new bulkheads. The proposed actions are not subject to GP-14, but would be conducted consistently with GP-14.
7:7-6.15 General permit 15 – construction of piers, docks, including jet ski ramps, pilings, and boatlifts in man-made lagoons								

Table 4. New Jersey Federal Consistency Review of N.J.A.C. 7:7 Coastal Zone Rules (Amended Feb. 20, 2020)

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		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
7:7-6.16 General permit 16 - minor maintenance dredging in man-made lagoons								
7:7-6.17 General permit 17 – stabilization of eroded shorelines		NA	NA	NA	NA	NA	NA	Structural or NNBF features may require stabilization as preventative measures or as future maintenance/adapative management for constructed structures. The proposed actions are not subject to GP-17, but would be conducted consistently with GP-17.
7:7-6.18 General permit 18 – avian nesting structures								
7:7-6.19 General permit 19 – modification of existing electrical substations								
7:7-6.20 General permit 20 –legalization of the filling of tidelands		NA	NA	NA	NA	NA	NA	All structural and NNBF features will have components that will result in the placement of fill in tidelands. The proposed actions are not subject to GP-20, but would be conducted consistently with GP-20.
7:7-6.21 General permit 21 –construction of telecommunication towers								
7:7-6.22 General permit 22 –construction of certain structures related to the tourism industry at hotels and motels, commercial developments, and multi-family residential developments over 75 units								
7:7-6.23 General permit 23 –geotechnical survey borings	NA	NA	NA	NA	NA	NA	NA	Exploratory geotechnical borings would be required during design phase of project. The proposed action is not subject to a GP-23, but is consistent with GP-23 requirements.
7:7-6.24 General permit 24 - habitat creation, restoration, enhancement, and living shoreline activities							NA	NNBF Features for the purpose of CSRMs are not subject to GP-24, but would be conducted consistently with GP-24
7:7-6.25 General permit 25 – construction of one to three wind turbines less than 200 feet in height and having a cumulative rotor swept area no greater than 4,000 square feet								
7:7-6.26 General permit 26 – construction of wind turbines less than 250 feet in height and having a cumulative rotor swept area no greater than 20,000 square feet								
7:7-6.27 General permit 27 –dredging of sand from a man-made lagoon deposited as a result of a storm event for which the Governor declared a State of Emergency								
7:7-6.28 General permit 28 – dredging of material from a waterway at a residential or commercial which the Governor declared a State of Emergency development deposited as a result of the failure of a bulkhead as a consequence of a storm event for								

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		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
7:7-6.29 General permit 29 –dredging and management of material from a marina deposited as a result of a storm event for which the Governor declared a State of Emergency								
7:7-6.30 General permit 30 – commercial shellfish aquaculture activities								
7:7-6.31 General permit 31 – placement of shell within shellfish lease areas								
7:7-6.32 General permit 32 – application of herbicide within coastal wetlands to control invasive plant species		NA	NA	NA	NA	NA	NA	Compensatory mitigation associated with TSP may require herbicide applications in coastal wetlands, but are not subject to GP-32. Actions would be conducted consistent with GP-32.
SUBCHAPTER 7. LONG BRANCH REDEVELOPMENT ZONE PERMIT								
7:7-7.1 Applicability; permit conditions								
7:7-7.2 Notification to the Department regarding developments requiring planning board approval								
7:7-7.3 Notification to the Department regarding developments not requiring planning board approval								
7:7-7.4 Publication of notice of Department’s decision that Long Branch Redevelopment Zone Permit is or is not applicable to development								
7:7-7.5 Requests for adjudicatory hearings								
SUBCHAPTER 8. INDIVIDUAL PERMITS								
7:7-8.1 Requirement to obtain an individual permit								
7:7-8.2 Duration of an individual permit								
7:7-8.3 Conditions applicable to an individual permit								
SUBCHAPTER 9. SPECIAL AREAS								
7:7-9.1 Purpose and scope								
7:7-9.2 Shellfish habitat		X	X	X	X	X	X	Structural measures and NNBF would have either direct or indirect effects on historically mapped shellfish habitat. Adverse effects would be subject to compensatory mitigation.
7:7-9.3 Surf clam areas		X	X	X				SSBs are located at inlet areas that could have either direct or indirect effects on surf clam areas. Adverse effects would be subject to compensatory mitigation.
7:7-9.4 Prime fishing areas								

Table 4. New Jersey Federal Consistency Review of N.J.A.C. 7:7 Coastal Zone Rules (Amended Feb. 20, 2020)

PROJECT NAME: New Jersey Back Bays Coastal Storm Risk Management Feasibility Study LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ	Non-Structural (All Regions)	TSP Structural Features					Natural-Nature Based Features (All Regions)	DISCUSSION
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7:7-9.5 Finfish migratory pathways		X	X	X	X	X	X	SSBs could have adverse effects on migratory fish pathways by reducing the cross sections of the affected inlets by 22% to 46% during open conditions. BC's would have a lesser effect as they would be located along existing embankments and waterway crossings would have either sector gates or miter gates. Gate closures could have significant effects on migratory fish pathways depending on the timing of closure and seasonal migrations. Potential effects from NNBF are dependent on siting of features and temporary construction effects.
7:7-9.6 Submerged vegetation habitat			X		X			Structures could have direct impacts on historically mapped SAV beds. Adverse effects would be subject to compensatory mitigation.
7:7-9.7 Navigation channels		X	X	X	X	X		All structural measures cross through Federal navigation channels and smaller channels. Navigation would be maintained through the use of sector gates or miter gates, except for times of closure.
7:7-9.8 Canals								
7:7-9.9 Inlets								
7:7-9.10 Marina moorings								
7:7-9.11 Ports								
7:7-9.12 Submerged infrastructure routes		PE	PE	PE	PE	PE	PE	All measures would be investigated for existing submerged infrastructure routes during the Engineering and Design Phase and avoided accordingly.
7:7-9.13 Shipwreck and artificial reef habitats		PE	PE	PE	PE	PE	PE	
7:7-9.14 Wet borrow pits								
7:7-9.15 Intertidal and subtidal shallows		X	X	X	X	X	X	The proposed actions would directly and/or indirectly adversely affect intertidal and subtidal shallows. NNBFs may have beneficial effects on these habitats. Adverse effects addressed through compensatory mitigation.
7:7-9.16 Dunes		X	X	X		X	X	The proposed actions will require excavations of existing dunes and construction of either floodwalls, impermeable barriers, or levee-type structures.
7:7-9.17 Overwash areas		X	X	X		X	PE	Structural features that have components on or near overwash areas.
7:7-9.18 Coastal high hazard areas	X	X	X	X	X	X	X	All features contain components within VE zones. Project is within a VE zone for the purpose of Coastal Storm Risk Management.

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7:7-9.19 Erosion hazard areas	PE	X	X	X	X	X	X	Project is consistent with shore protection activities which meet the appropriate coastal engineering rule, N.J.A.C. 7:7-15.11
7:7-9.20 Barrier island corridor	X	X	X	X	X	X		All non-structural and structural features contain components within or adjacent to barrier island corridors.
7:7-9.21 Bay islands							X	NNBF features would affect bay islands through creation of surge filters that either create new islands, restore eroded islands, or expand existing islands for the purpose of CSRMs.
7:7-9.22 Beaches		X	X	X			PE	Features affect beaches, but are considered acceptable under #5. Shore protection structures which meet the use conditions of N.J.A.C. 7:7-15.11(g);
7:7-9.23 Filled water's edge	X	X	X	X	X	X	PE	Non-structural and structural features have components that either would be constructed along, cross through, or are adjacent to a filled water's edge. These components are water dependent as they function as CSRMs measures.
7:7-9.24 Existing lagoon edges	X				X			Non-structural and structural features have components that either would be constructed along, cross through, or are adjacent to a existing lagoon edges.
7:7-9.25 Flood hazard areas	X	X	X	X	X	X	X	Project is for the purpose of CSRMs and all features contain components within flood hazard areas. Implementation would have beneficial effects on flood hazard areas.
7:7-9.26 Riparian zones								
7:7-9.27 Wetlands		X	X	X	X	X	X	All of the structural features would have components that would directly or indirectly have adverse effects on wetlands defined in 7:7-9.27(a)1-4. Compensatory mitigation is being developed for these impacts.
7:7-9.28 Wetlands buffers	X	X	X	X	X	X	X	All activities are likely to be within wetlands buffers locations since they are water-dependent
7:7-9.29 Coastal bluffs								
7:7-9.30 Intermittent stream corridors								
7:7-9.31 Farmland conservation areas								
7:7-9.32 Steep slopes								
7:7-9.33 Dry borrow pits								

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7:7-9.34 Historic and archaeological resources	PE	PE	PE	PE	PE	PE	PE	Historic and archaeological features are potentially affected by all non-structural and structural TSP features. Subsequent site-specific investigations will be conducted in accordance with a pending Programmatic Agreement w/NJSHPO.
7:7-9.35 Specimen trees								
7:7-9.36 Endangered or threatened wildlife or plant species habitats		X	X	X	X	X	X	The affected areas are within the range of several Federally and State listed species. A discussion of Federal/State T&E species is provided in the DEIS and Appendix F.3
7:7-9.37 Critical wildlife habitat			X	X	X	X	PE	Barnegat Inlet and Great Egg Harbor Inlet beaches contain important beach nesting bird habitats. Salt marshes affected by SSBs and BCs directly or indirectly are important habitats for eastern black rails.
7:7-9.38 Public open space		X	X	X	X	X	PE	Affected area is a public beach. Construction activities may temporarily impede public access during construction. The seawall is consistent with the existing seawall.
7:7-9.39 Special hazard areas								
7:7-9.40 Excluded Federal lands								
7:7-9.41 Special urban areas								
7:7-9.42 Pinelands National Reserve and Pinelands Protection Area	X		X				PE	A portion of the Barnegat Inlet SSB occurs within the Pinelands National Reserve. Non-structural measures also occur within the reserve. NNBF could potentially occur within the reserve.
7:7-9.43 Meadowlands District								
7:7-9.44 Wild and scenic river corridors				X			PE	A SSB at GEHI could result in small changes in tidal amplitude resulting in indirect effects on tidal wetland systems along the Great Egg Harbor River. Additionally, changes in inlet cross section may have effects on migratory fish transiting upstream, which requires additional investigations.
7:7-9.45 Geodetic control reference marks	PE	PE	PE	PE	PE	PE	PE	Geodetic control reference marks could be present within affected areas. These monuments will be located and avoided to the maximum extent practicable.
7:7-9.46 Hudson River waterfront area								

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7:7-9.47 Atlantic City					X			The Absecon Blvd. Bay Closure would provide significant CSRM benefits to Atlantic City. Views and water access would become inhibited in the harbor areas from a continuous floodwall along the southern side of Absecon Inlet extending along the waterfronts of Clam Creek, Gardner's Basin, Snug Harbor, Delta Basin, State Marina, Clam Thorofare to Huron Avenue and Absecon Avenue. Measures to minimize these effects will be considered during the Engineering and Design Phase/Tier 2 EIS.
7:7-9.48 Lands and waters subject to public trust rights		X	X	X	X	X		All TSP Structural Features contain components such as seawalls, levees, and impermeable barriers that may inhibit easy access to waterways. Changes to public access to waterways will be investigated during the Engineering and Design Phase Tier 2 EIS to determine the degree of the impact that these structures would have and determine mitigative design measures to insure that public access is maintained to the maximum extent practicable.
7:7-9.49 Dredged material management areas		X	X	X	X	X	X	Dredged material management areas may be required as disposal facilities for dredged materials generated during construction or maintenance of structures. Sources of fill material from existing dredged material management areas for construction of structures and/or NNBF will be considered, if found to be suitable for such purposes.
SUBCHAPTER 10. STANDARDS FOR BEACH AND DUNE ACTIVITIES								
7:7-10.1 Purpose and scope								
7:7-10.2 Standards applicable to routine beach maintenance								
7:7-10.3 Standards applicable to emergency post-storm beach restoration								
7:7-10.4 Standards applicable to dune creation and maintenance		X	X	X		X	PE	The existing dunes would be impacted during construction through either structures crossing through the dune lines and/or creation of levee-dune like structures in place of an existing dune.
7:7-10.5 Standards applicable to the construction of boardwalks								

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SUBCHAPTER 11. STANDARDS FOR CONDUCTING AND REPORTING THE RESULTS OF AN ENDANGERED OR THREATENED WILDLIFE OR PLANT SPECIES HABITAT IMPACT ASSESSMENT AND/OR ENDANGERED OR THREATENED WILDLIFE SPECIES HABITAT EVALUATION								The affected area is within the range of several Federally and State listed threatened and endangered species. Surveys and monitoring would be conducted in accordance with consultation with U.S. Fish and Wildlife Service and coordination with NJ DEP Division of Fish and Wildlife and/or Office of Natural Lands Management.
7:7-11.1 Purpose and scope								
7:7-11.2 Standards for conducting endangered or threatened wildlife or plant species habitat impact assessment	PE	X	X	X	X	X	PE	The affected area is within the range of several Federally and State listed threatened and endangered species. Surveys and monitoring would be conducted in accordance with consultation with U.S. Fish and Wildlife Service and coordination with NJ DEP Division of Fish and Wildlife and/or Office of Natural Lands Management.
7:7-11.3 Standards for conducting endangered or threatened wildlife species habitat evaluation	PE	X	X	X	X	X	PE	
7:7-11.4 Standards for reporting the results of impact assessments and habitat evaluations	PE	X	X	X	X	X	PE	
SUBCHAPTER 12. GENERAL WATER AREAS								
7:7-12.1 Purpose and scope								
7:7-12.2 Shellfish aquaculture								
7:7-12.3 Boat ramps								
7:7-12.4 Docks and piers for cargo and commercial fisheries					X			Floodwalls along harbor areas could have adverse effects on dock and pier utilization requiring measures to minimize these effects, which would be investigated in subsequent phases.
7:7-12.5 Recreational docks and piers					X			Floodwalls along harbor areas could have adverse effects on dock and pier utilization requiring measures to minimize these effects, which would be investigated in subsequent phases.
7:7-12.6 Maintenance dredging		X	X	X	X	X	X	All TSP structures have components that pass through or encroach on navigation channels. These channels may require maintenance dredging in and around the structures. NNBF components would receive beneficial use of dredge materials from navigation channel maintenance dredging.
7:7-12.7 New dredging		PE	PE	PE	PE	PE	PE	New dredging could be required along subaqueous structural alignments for foundational purposes. The extent and quantity of new dredging at this time is unknown. NNBFs may require new dredging in a borrow area for fill materials.
7:7-12.8 Environmental dredging								

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LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
	Non-Structural (All Regions)							
7:7-12.9 Dredged material disposal		PE	PE	PE	PE	PE	X	New dredging could be required along subaqueous structural alignments for foundational purposes. The extent and quantity of new dredging at this time is unknown. Dredged material disposal would first be considered as a beneficial use application for NNBFs or other purposes. NNBFs may require new dredging in a borrow area for fill materials.
7:7-12.10 Solid waste or sludge dumping								
7:7-12.11 Filling		X	X	X	X	X	X	Filling would be required to raise bottom elevations for all TSP structural features in waters and wetlands within and adjacent to these structures. NNBFs would require filling to raise bottom elevations of waters and wetlands to provide CSRSM benefits.
7:7-12.12 Mooring								
7:7-12.13 Sand and gravel mining		PE	PE	PE	PE	PE	PE	Construction of the TSP structural and NNBF alternatives are assumed to require sand and gravel materials for fill and other construction purposes. The identification of sources for these materials will be conducted during the Engineering and Design Phase. Consideration will first be for beneficial use of dredged material through either mining these materials from an existing dredged material confined disposal facility (CDF) or from a maintenance dredging action. Other sources would include existing commercial sand and gravel facilities.
7:7-12.14 Bridges					X			The Absecon Blvd. Bay Closure alignments requires several bridge crossings where either sector or miter gates would be added.
7:7-12.15 Submerged pipelines		PE	PE	PE	PE	PE	PE	Structural or NNBF components could potentially affect existing submerged pipelines within their alignments. Submerged pipelines would be located during the Engineering Design Phase and considerations of avoidance and/or relocation would be given if effects are likely.
7:7-12.16 Overhead transmission lines		PE	PE	PE	PE	PE	PE	Structural or NNBF components could potentially affect existing overhead transmission lines within their alignments. Overhead transmission lines would be located during the Engineering Design Phase and considerations of avoidance and/or relocation would be given if effects are likely.

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7:7-12.17 Dams and impoundments		X	X	X	X	X		Storm surge barriers and bay closures would temporarily function as dams or impoundments at times of closure preventing tidal exchange (ingress/egress) of flows during closures, which could last for a few hours to more than one day depending on the severity of the storm that would trigger the closure(s).
7:7-12.18 Outfalls and intakes								
7:7-12.19 Realignment of water areas								
7:7-12.20 Vertical wake or wave attenuation structures								
7:7-12.21 Submerged cables								
7:7-12.22 Artificial reefs							PE	NNBF Features could be in the form of artificial reefs that would function as wave attenuators.
7:7-12.23 Living shorelines							PE	Living shorelines would be considered as part of NNBF strategies to protect shorelines and CSRMs structures as a complementary CSRMs strategy.
7:7-12.24 Miscellaneous uses								
SUBCHAPTER 13. REQUIREMENTS FOR IMPERVIOUS COVER AND VEGETATIVE COVER FOR GENERAL LAND AREAS AND CERTAIN SPECIAL AREAS								
7:7-13.1 Purpose and scope								
7:7-13.2 Definitions								
7:7-13.3 Impervious cover requirements that apply to sites in the upland waterfront development and CAFRA areas								
7:7-13.4 Vegetative cover requirements that apply to sites in the upland waterfront development and CAFRA areas								
7:7-13.5 Determining if a site is forested or unforested								
7:7-13.6 Upland waterfront development area regions and growth ratings								
7:7-13.7 Determining the environmental sensitivity of a site in the upland waterfront development area								
7:7-13.8 Determining the development potential of a site in the upland waterfront development area								
7:7-13.9 Determining the development potential for a residential or minor commercial development site in the upland waterfront development area								

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7:7-13.10 Determining the development potential for a major commercial or industrial development site in the upland waterfront development area								
7:7-13.11 Determining the development potential for a campground development site in the upland waterfront development area								
7:7-13.12 Determining the development intensity of a site in the upland waterfront development area								
7:7-13.13 Impervious cover limits for a site in the upland waterfront development area								
7:7-13.14 Vegetative cover percentages for a site in the upland waterfront development area								
7:7-13.15 Coastal Planning Areas in the CAFRA area								
7:7-13.16 Boundaries for Coastal Planning Areas, CAFRA centers, CAFRA cores, and CAFRA nodes; non-mainland coastal centers								
7:7-13.17 Impervious cover limits for a site in the CAFRA area								
7:7-13.18 Vegetative cover percentages for a site in the CAFRA area								
7:7-13.19 Mainland coastal centers								
SUBCHAPTER 14. GENERAL LOCATION RULES								
7:7-14.1 Rule on location of linear development								
7:7-14.2 Basic location rule								
7:7-14.3 Secondary impacts		X	X	X	X	X		Because SSBs would significantly alter inlet cross sections and flow patterns, secondary/indirect impacts are likely. Additional physical and biological modeling would be conducted in subsequent phases in Tier 2 EIS to better quantify these effects and to appropriately mitigate (ie. avoid, minimize, compensate) for these effects. BCs would also have similar, but smaller indirect effects since they utilize existing embankments that already pose as cross bay structures inhibiting flows across existing marshes.
SUBCHAPTER 15. USE RULES								
7:7-15.1 Purpose and scope								
7:7-15.2 Housing								
7:7-15.3 Resort/recreational								
7:7-15.4 Energy facility								

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7:7-15.5 Transportation								
7:7-15.6 Public facility								
7:7-15.7 Industry								
7:7-15.8 Mining								
7:7-15.9 Port								
7:7-15.10 Commercial facility								
7:7-15.11 Coastal engineering	X	X	X	X	X	X	X	The proposed action will provide Coastal Storm Risk Management for the communities within the New Jersey Back Bays systems by incorporating hybrid non-structural, structural and natural and nature based features into the plan.
7:7-15.12 Dredged material placement on land								
7:7-15.13 National defense facilities								
7:7-15.14 High-rise structures								
SUBCHAPTER 16. RESOURCE RULES								
7:7-16.1 Purpose and Scope								
7:7-16.2 Marine fish and fisheries		X	X	X	X	X	X	Structural features such as SSBs and BCs have the potential to significantly affect marine fish and fisheries by creating constrictions at inlets and interior bays. Additionally, hydrodynamic changes such as velocity increases at the gate locations of SSBs have the potential to impact fish movements in and out of the estuaries. Additional investigations are required to determine the full extent of these potential effects. Along with additional studies/investigations, measures to avoid/minimize will be considered as design details are further developed along with compensatory mitigation plans for unavoidable effects. NNBFs may have potential benefits for fisheries such as creation/restoration of intertidal habitats and living shorelines.

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	Non-Structural (All Regions)							
7:7-16.3 Water quality		X	X	X	X	X	X	In-water construction of structural features and NNBFs has the potential to generate turbidity, which would require the implementation of BMPs to minimize this effect. AdH modeling at this time does not indicate significant indirect effects on water quality from SSBs and BCs in an open condition. Physical changes such as increased velocity and small reductions in tidal prism, tidal amplitude, and small changes in the mean salinity are expected.
7:7-16.4 Surface water use								
7:7-16.5 Groundwater use								
7:7-16.6 Stormwater management		PE	PE	PE	PE	PE		
7:7-16.7 Vegetation	X	X	X	X	X	X	X	Areas that require the re-establishment of vegetation after construction activities area completed would utilize native coastal vegetation wherever appropriate.
7:7-16.8 Air quality	X	X	X	X	X	X	X	All construction activities will result in temporary and localized decreases in air quality through emissions associated with diesel powered equipment. At this time, a detailed accounting of emissions is not available. As more design details become better developed, emissions estimates will be completed that account for likely construction equipment/engines and implementation schedules to determine the duration of the emissions. These factors are unknown at this time to determine whether State Implementation thresholds for non-attainment constituents would be exceeded triggering General Conformity. This would be completed in subsequent phases/Tiers when the Engineering and Design phase begins.
7:7-16.9 Public access		X	X	X	X	X	PE	All TSP Structural Features contain components such as seawalls, levees, and impermeable barriers that may inhibit easy access to waterways. Changes to public access to waterways will be investigated during the Engineering and Design Phase Tier 2 EIS to determine the degree of the impact that these structures would have and determine mitigative design measures to insure that public access is maintained to the maximum extent practicable.

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7:7-16.10 Scenic resources and design	X	X	X	X	X	X	X	Elements such as non-structural building elevations and structural seawalls/levees, storm surge barriers could have potential significant effects on scenic resources. Measures to minimize these effects by containing design elements that enhance physical or visual public access to the waterfront will be considered during the design phase. NNBFs would maintain or enhance visual/scenic resources by being compatible with the natural landscape.
7:7-16.11 Buffers and compatibility of uses								
7:7-16.12 Traffic			X		X			The SSB at Barnegat Inlet and Absecon Blvd. Bay closure include road closures at several locations. These locations would remain open to traffic until a road closure is triggered by a storm event or a test/maintenance of the road closure system. These road closures would be coordinated with local officials to insure alternate routes and public notifications are available.
7:7-16.13 Subsurface sewage disposal systems								
7:7-16.14 Solid and hazardous waste								
SUBCHAPTER 17. MITIGATION								
7:7-17.1 Definitions								
7:7-17.2 General mitigation requirements		X	X	X	X	X		At this stage, preliminary estimates have determined that a significant amount of project impacts would require compensatory mitigation for unavoidable direct and indirect impacts of the various structures in the TSP. These estimates will become better refined as design elements become more detailed in addition to site investigations such as wetland delineations and other subtidal and intertidal habitats are assessed. With these refinements, brings more opportunity to avoid and minimize effects prior to estimating compensatory mitigation. These estimates are preliminary and will be refined during subsequent phases including higher Tiers in the NEPA process. NNBFs at this time are assumed to not require compensatory mitigation.
7:7-17.3 Timing of mitigation		X	X	X	X	X		The timing and implementation of the proposed CSRMM measures are not available at this time. It is assumed that compensatory mitigation required per feature being implemented would be constructed concurrently with the impact of that feature.

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		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
7:7-17.4 Amount of mitigation required		X	X	X	X	X		USACE policy requires that mitigation amounts be estimated based on habitat models that assess the baseline values of the impacted resources by quantitative and qualitative means. Compensatory mitigation is then derived by replacing the quantitative and qualitative attributes with a similar degree of compensation. It is recognized that not all functions and values of a mitigation habitat are attained initially and that there may need to be adjustments to the quantity of compensation to reach the same level of output of the original impact. Preliminary estimates of direct impacts are provided in the DEIS and based on either the New England Salt Marsh Model or by estimating value of intertidal/subtidal habitats based on shellfish or SAV resources. This will be refined once the NY Bight Ecological Model is available to enable a holistic ecosystem approach across a number of habitats and tidal regimes.
7:7-17.5 Property suitable for mitigation		X	X	X	X	X		USACE will coordinate mitigation site screening as part of an interagency process to determine the appropriateness of sites to consider. Priority will be first given to public properties such as in wildlife refuges/management areas where restoration needs are already established. Upland areas of high ecological value will be screened out. Private lands will only be considered if they meet siting criteria and are cost-effective.
7:7-17.6 Conceptual review of a mitigation area		X	X	X	X	X		Because of the size, scope, and complexity of the measures being contemplated for the NJBB CSRSM feasibility Study TSP, the review for mitigation will be iterative. At this time, a need for compensatory has been established. However, specific quantities, types, and locations of mitigation remain to be identified. These estimates will be refined in subsequent phases with interagency input and review in each phase.
7:7-17.7 Basic requirements for mitigation proposals		X	X	X	X	X		The basic requirements for mitigation proposal(s) would be fulfilled as part of the final mitigation plan.
7:7-17.8 Department review and approval of a mitigation proposal		NA	NA	NA	NA	NA		NJDEP will be part of the interagency team with review capabilities for the mitigation proposal; however, since this is a Federal project, it is not subject to permitting in accordance with NJAC 7:7-17.8. However, the mitigation proposal will be equivalent to any permit application/approval.
7:7-17.9 Requirements for shellfish habitat mitigation								

Table 4. New Jersey Federal Consistency Review of N.J.A.C. 7:7 Coastal Zone Rules (Amended Feb. 20, 2020)

PROJECT NAME: New Jersey Back Bays Coastal Storm Risk Management Feasibility Study LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ	Non-Structural (All Regions)	TSP Structural Features					Natural-Nature Based Features (All Regions)	DISCUSSION
		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
7:7-17.10 Requirements for submerged vegetation habitat mitigation			X		PE		The Barnegat Inlet SSB passes through a historically mapped area of SAV's . More current maps do not show SAV's at this location. However, in accordance with policy, SAV compensatory mitigation would be conducted for the direct impact to the bottom at that location. Additionally, updated SAV surveys would be conducted along feature alignments within subtidal areas to determine presence/absence of SAVs. The Absecon Boulevard BC occurs in the vicinity of historically mapped SAVs. Surveys and delineations will be conducted to determine if there is any encroachment on historically or currently occurring beds.	
7:7-17.11 Requirements for intertidal and subtidal shallows and tidal water mitigation		X	X	X	X	X	Direct and indirect effects on intertidal and subtidal shallows are likely from the TSP features. Consideration of in-kind mitigation of these habitats in the vicinity of the impact areas will be given first. The development of appropriate compensatory mitigation will be completed as part of an interagency process.	
7:7-17.12 Requirements for riparian zone mitigation								
7:7-17.13 Requirements for wetlands mitigation		X	X	X	X	X	Compensatory mitigation estimates for direct and indirect impacts are currently being developed. For direct impacts and for current planning purposes in the Tier 1 DEIS, wetland mitigation estimates were determined based on a desktop analysis of TSP features and GIS mapping (NJDEP Wetlands Map Layer for 2012). A habitat model (New England Salt Marsh Model) was applied to determine values and mitigation outputs (see Appendix F4). However, a holistic model is currently in development (New York Bight Ecological Model) to assess direct and indirect effects over a range of marine, estuarine and tidal freshwater habitats that are within the affected environment. Once this model is certified and applied to NJBB TSP measures, compensatory mitigation estimates will be developed across a number of affected habitats reflecting their functions and values. As part of the mitigation, a monitoring and adaptive management plan will be developed and coordinated with the interagency team.	

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PROJECT NAME: New Jersey Back Bays Coastal Storm Risk Management Feasibility Study		TSP Structural Features					Natural-Nature Based Features (All Regions)	DISCUSSION
LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ		SSB Manasquan Inlet (North)	SSB Barnegat Inlet (North)	SSB Great Egg Harbor Inlet (Central)	BC Absecon Boulevard (Central)	BC Southern Ocean City (Central)		
Non-Structural (All Regions)								
7:7-17.14 Wetlands mitigation hierarchy		X	X	X	X	X	The mitigation hierarchy provides a good framework for selecting they types of mitigation and the siting of mitigation areas. This policy will be utilized to the maximum extent practicable for the mitigation strategy.	
7:7-17.15 Requirements for credit purchase from an approved mitigation bank		X	X	X	X	X	At this time, there are limited opportunities to utilize an approved mitigation bank. However, priority will be given to considering this form of mitigation if it becomes available in the general location of the impacted area(s).	
7:7-17.16 Requirements for in-lieu fee payment								
7:7-17.17 Financial assurance for mitigation projects; general provisions		NA	NA	NA	NA	NA	Financial assurance is not required for Federal projects.	
7:7-17.18 Financial assurance; fully funded trust fund requirements		NA	NA	NA	NA	NA		
7:7-17.19 Financial assurance; line of credit requirements		NA	NA	NA	NA	NA		
7:7-17.20 Financial assurance; letter of credit requirements		NA	NA	NA	NA	NA		
7:7-17.21 Financial assurance; surety bond requirements		NA	NA	NA	NA	NA		
7:7-17.22 Mitigation banks								
7:7-17.23 Application for a mitigation bank								
SUBCHAPTER 18. CONSERVATION RESTRICTIONS								
7:7-18.1 Conservation restriction form and recording requirements		X	X	X	X	X	In accordance with USACE policy, the non-Federal sponsor (the State of New Jersey) is required to provide Lands, Easements, Real Estate, Rights of Way, and Disposal areas for the project. Mitigation sites are a project component and would be provided by the state (unless on existing Federal land); therefore, compliance of this policy would be acheived through the non-Federal sponsor of the project.	
7:7-18.2 Additional requirements applicable to a conservation restriction for mitigation areas		X	X	X	X	X		
7:7-18.3 Reservation of rights								
SUBCHAPTER 19. RELAXATION OF PROCEDURES; RECONSIDERATION OF APPLICATION OF RULES								
7:7-19.1 Relaxation of procedures in this chapter								
7:7-19.2 Reconsideration of the application of a rule(s) in this chapter								
SUBCHAPTER 20. PROVISIONAL PERMITS								
7:7-20.1 Provisional permits								
SUBCHAPTER 21. EMERGENCY AUTHORIZATIONS								
7:7-21.1 Standard for issuance of an emergency authorization								
7:7-21.2 Procedure to request an emergency authorization								

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PROJECT NAME: New Jersey Back Bays Coastal Storm Risk Management Feasibility Study LOCATION: Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, NJ	Non-Structural (All Regions)	TSP Structural Features					Natural-Nature Based Features (All Regions)	DISCUSSION
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7:7-21.3 Issuance of emergency authorization; conditions								
SUBCHAPTER 22. PRE-APPLICATION CONFERENCES								
7:7-22.1 Purpose and scope								
7:7-22.2 Request for a pre-application conference; scheduling; information required								
SUBCHAPTER 23. APPLICATION REQUIREMENTS								
7:7-23.1 Purpose and scope								
7:7-23.2 General application requirements								
7:7-23.3 Additional application requirements for an authorization under a general permit-by certification								
7:7-23.4 Additional application requirements for an authorization under a general permit or for an individual permit								
7:7-23.5 Compliance statement requirement for an application for authorization under a general permit								
7:7-23.6 Additional requirements specific to an application for an individual permit								
SUBCHAPTER 24. REQUIREMENTS FOR AN APPLICANT TO PROVIDE PUBLIC NOTICE OF AN APPLICATION								
7:7-24.1 Purpose and scope								
7:7-24.2 Timing of public notice of an application								
7:7-24.3 Contents and recipients of public notice of an application								
7:7-24.4 Additional requirements for public notice of an application for a CAFRA individual permit								
7:7-24.5 Content and format of newspaper notice								
7:7-24.6 Documenting public notice of an application; documenting public notice of public comment period or public hearing on CAFRA individual permit application								
SUBCHAPTER 25. APPLICATION FEES								
7:7-25.1 Application fees								
7:7-25.2 Adjustment of application fees								
SUBCHAPTER 26. APPLICATION REVIEW								
7:7-26.1 General application review provisions								

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7:7-26.2 Applications for all coastal general permit authorizations and applications for waterfront development and coastal wetlands individual permits – completeness review								
7:7-26.3 CAFRA individual permit application – initial completeness review								
7:7-26.5 CAFRA individual permit application – public hearing								
7:7-26.6 Department decision on an application that is complete for review								
7:7-26.7 Cancellation of an application								
7:7-26.8 Withdrawal of an application								
7:7-26.9 Re-submittal of an application after denial, cancellation, or withdrawal								
7:7-26.10 Fee refund or credit when an application is returned, withdrawn, or cancelled								
SUBCHAPTER 27. PERMIT CONDITIONS; MODIFICATION, TRANSFER, SUSPENSION, AND TERMINATION OF AUTHORIZATIONS AND PERMITS								
7:7-27.1 Purpose and scope								
7:7-27.2 Conditions that apply to all coastal permits								
7:7-27.3 Extension of an authorization under a general permit or of a waterfront development individual permit for activities waterward of the mean high water line								
7:7-27.4 Transfer of an emergency authorization, an authorization under a general permit or an individual permit								
7:7-27.5 Modification of an authorization under a general permit or an individual permit								
7:7-27.6 Application for a modification								
7:7-27.7 Suspension of an authorization under a general permit, an individual permit, or an emergency authorization								
7:7-27.8 Termination of an authorization under a general permit, an individual permit, or an emergency authorization								
SUBCHAPTER 28. REQUESTS FOR ADJUDICATORY HEARINGS								
7:7-28.1 Procedure to request an adjudicatory hearing; decision on the request								
7:7-28.2 Procedure to request dispute resolution								
7:7-28.3 Effect of request for hearing on operation of permit or authorization								

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7:7-28.4 Notice of certain settlement discussions on a coastal permit decision; notice of settlement agreement								
SUBCHAPTER 29. ENFORCEMENT								
7:7-29.1 General provisions								
7:7-29.2 Issuance of an administrative order								
7:7-29.3 Assessment, settlement, and payment of a civil administrative penalty								
7:7-29.4 Procedures to request and conduct an adjudicatory hearing to contest an administrative order and/or a notice of civil administrative penalty assessment								
7:7-29.5 Civil administrative penalties for failure to obtain a permit prior to conducting regulated activities								
7:7-29.6 Civil administrative penalties for violations other than failure to obtain a permit prior to conducting regulated activities								
7:7-29.7 Civil penalties								
7:7-29.8 Civil actions								
7:7-29.9 Criminal action								
7:7-29.10 Grace period applicability; procedures								
X-Feature has applicability and/or an effect on coastal resource policy								
PE -Feature has potential applicability or potential effect on coastal resource policy pending additional investigations								
NA-Feature affects area in coastal policy/permit, but is not required for a Federal project. Design and implementation of features/components would be conducted in a manner consistent with permit/policy.								