Mitigating Risk by Planning For Sea Level Rise

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Sea Level Rise

According to the NOAA National Ocean Service:

- Sea levels rising at an increased rate
- Sea levels began to climb in the 20th century
- Major causes are thermal expansion of the oceans and the loss of land-based ice
- Steadily rising at a rate of 0.04 to 0.1 inches per year since 1900
- Data indicates a rise of approximately 0.12 inches annually since 1992
- Significantly larger rate than the last several thousand years
Sea Level Rise

[Graph showing the trend of sea level rise over time, with the y-axis labeled as 'Sea-level deviation (millimeters)' and the x-axis labeled as 'Year'.]
Delaware Bay Shorelines Projects

- Evaluate Coastal Mitigation Alternatives along Delaware Bay shoreline
- Face sea level rise, flooding and coastal erosion
Delaware Bay Shorelines Project

- Model Coastal Flood and Erosion Hazards
- Comprehensive Property Inventory
- Evaluating potential impacts from flooding and erosion
- Economic and tax revenue impacts
- LiDAR to collect roadway centerlines, digital images, and FFE for 1,600 structures
Delaware Bay Shorelines Project

- Utilize data to develop a strategic vision that reduces community vulnerability and minimizes future economic and natural resource impacts
NYC Airports Project

- Comprehensive assessment of climate change impacts on four NYC-area Airports
  - John F. Kennedy
  - LaGuardia
  - Newark
  - Teterboro
NYC Airports Project

- Existing conditions flood risk analysis
- Critical infrastructure inventory
- Evaluation of risk through 2050
- Airport shutdown probabilities
- Climate Adaptation Alternatives
Coast Smart Communities Project

- Calculate and map anticipated sea levels at 10, 30, and 100 year intervals for the coastal areas of the Country
- Vulnerable populations and critical facilities to also be mapped
- Area Mitigation Plans, including strategies, will be developed
Sea Level Rise Considerations

- Sea Level Rise Analysis
- Mapping
- Risk Assessment
- Economic Analysis
- Mitigation Strategy Development
- Mitigation Strategy Implementation

Climate and Coastal Hazard Risk Analysis
Questions

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