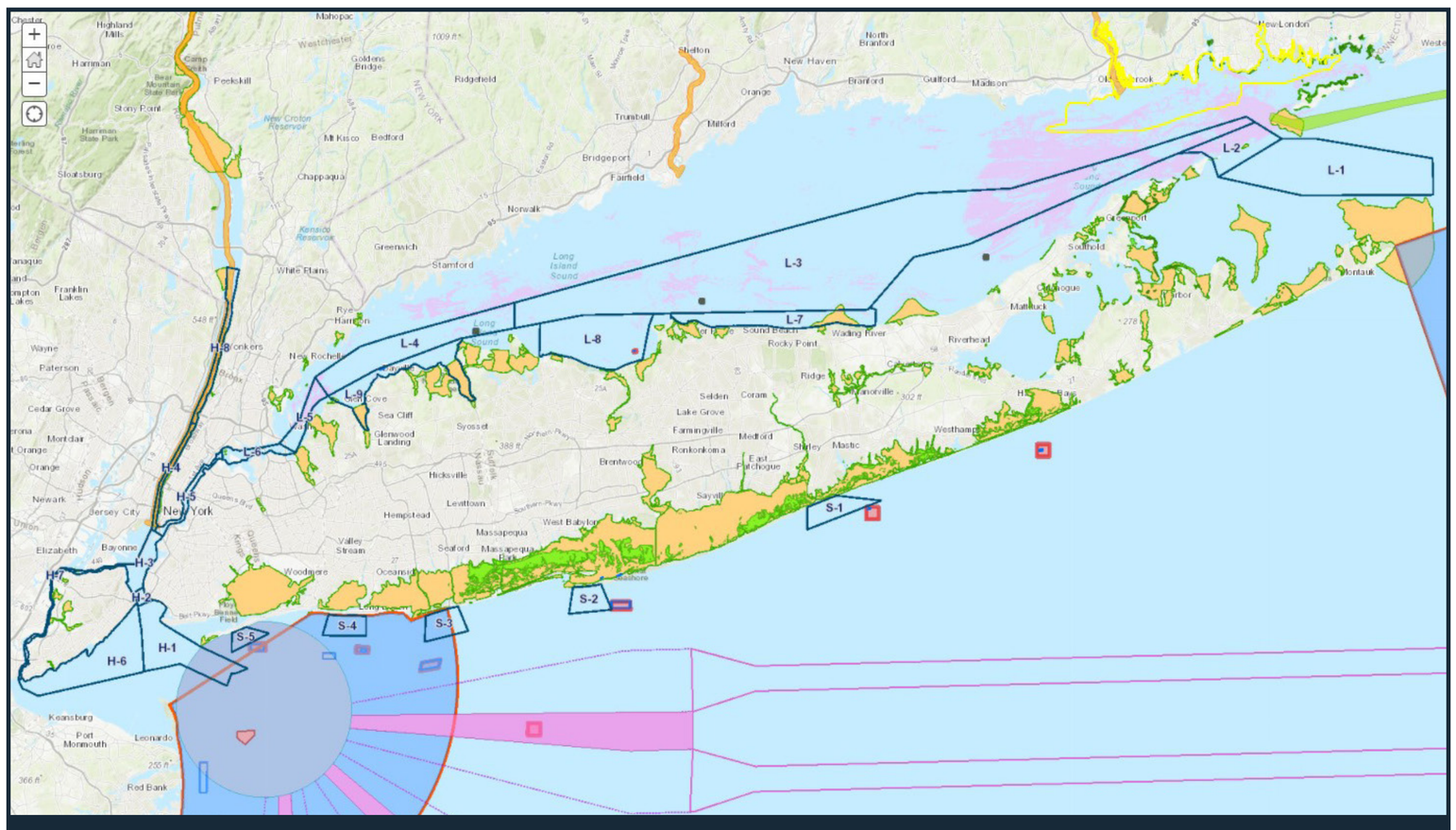
# Offshore Wind Cable Corridor Constraints Assessment

*for New York State Energy Research and Development Authority*

## *Fostering innovative solutions to complex issues*

WSP and VHB are supporting the New York State Energy Research and Development Authority (NYSERDA) in their goal to develop an understanding of what constrains OSW cables and how to address constraints in order to achieve 9 GW of OSW by 2035. WSP is evaluating and ranking onshore and offshore resource constraints, identifying minimization and mitigation strategies, and integrating stakeholder input to help identify options to maximize benefits of renewable OSW energy and avoid, minimize, and mitigate conflicts and impacts. The Assessment seeks to advance the coordination and planning efforts by building on existing work, previous studies, and work in progress, including NYSERDA's Power Grid Study, Offshore Wind Master Plan, and Port Uses and Navigational Assessment. This Assessment will also coordinate the analysis and evaluation of potential corridors to support future decision-making and policy development to achieve New York State's goals and mandates and allow for commercial innovation. VHB is supporting the ongoing and earnest collaboration with New York State agencies, including the Department of Environmental Conservation (NYSDEC), Department of State (NYDOS), Department of Transportation (NYDOT), Office of General Services, Department of Public Service (NYDPS), and interested stakeholders.




The ArcGIS Online (AGO) Tool is a repository and visual representation of publicly available geographic data sets to help understand constraints affecting placement of cables in New York Waters. The AGO Tool was first used to identify areas that should be avoided.

| | |
|---|---|
| **Constraint** | Aquatic biological resources and sensitive habitats |
| **Characteristics Affecting Feasibility** | Designated critical habitat, seasonal management areas (SMAs) (i.e., whales), artificial reefs, cold water corals, shellfish beds, Natural Heritage Communities, submerged aquatic vegetation (SAV),designated threatened and endangered species habitat, Significant Coastal Fish and Wildlife Habitat (SCFWH) |
| **GIS Layers by Constraint Applied in Model** | Artificial reefs and Extensions, NY Statewide Seagrass, North Atlantic Right Whale SMA, Significant Coastal Fish and Wildlife Habitats (SCFWH) -NY (NYDCR ver2), NOAA Critical Coastal Habitat, Natural Heritage Communities 2018 |
| **Qualitative/ Quantitative Criteria** | **Low:** Sensitive habitats and listed species are not mapped or known to be within the vicinity. No artificial reefs and no SCFWH. SAV not present.<br>**Medium:** Isolated areas of sensitive habitats and/or listed species are mapped. Small areas of mapped SAV.<br>**High:** Presence of multiple sensitive habitats, including artificial reefs, cold water corals, SCFWH, and/or listed species. Extensive mapped SAV. |
| **GIS Layers by Constraint Applied in Model** | Artificial reefs and Extensions<br>NY Statewide Seagrass<br>North Atlantic Right Whale SMA<br>Significant Coastal Fish and Wildlife Habitats (SCFWH) -NY (NYDCR ver2)<br>NOAA Critical Coastal Habitat<br>Natural Heritage Communities 2018 |

Example factors for evaluating and ranking constraints to cable installation.

| Area/Region | Long Island Sound Approach Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Zone | L-1 | L-2 | L-3 | L-4 | L-5 | L-6 | L-7 | L-8 | L-9 |
| Name | Block Island Sound | Harbor Hill Moraine | Eastern and Central LIS | Western LIS | Westernmost LIS | East River | Wildwood to Port Jefferson | Smithtown | Oyster Bay to Hemp. Harbor |
| Marine Geology and Hydrology | | | | | | | | | |
| Aquatic Biological Resources | | | | | | | | | |
| Sediment Contamination/ UXOs | | | | | | | | | |
| Recreational and Commercial Fishing | | | | | | | | | |
| Vessel Traffic | | | | | | | | | |
| Navigation Areas | | | | | | | | | |
| Other Recreation | | | | | | | | | |
| Borrow Areas and Ocean Disposal Sites | | | | | | | | | |
| Marine Archaeology and Cultural Resources | | | | | | | | | |
| Linear Utilities | | | | | | | | | |
| Tunnels and Bridges | | | | | | | | | |
| Waterfront Development | | | | | | | | | |

The Matrix Modeling Tool was used to process available GIS data in the study area, supplemented by technical expertise, to rank zones as high, medium, and low relevant to the potential for cable siting to be highly constrained or successfully developed, permitted, and constructed. These constraints reflect criteria most likely to impact cable siting.

| | |
|---|---|
| | Low |
| | Med |
| | High |

### Defining Agency Priorities

- Resources most likely to affect feasibility of siting cables
- Collaboration with State Agencies on cable constraints ranking

### Minimization and Mitigation Strategies

- Analyze existing permits and approvals
- Consider cable technology and Installation techniques
- Identify options to address cable placement

### Potential Future Public Policy

- Summarize findings from technical, spatial, regulatory, and stakeholder considerations that minimize conflicts and impacts to achieve 9 GW of OSW
- Constraints Assessment Report