

The Submerged Lands Conservation Database:

A Framework for the Spatial Representation of Submerged Lands Leasing, Licensing, and Ownership

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NOAA Coastal Services Center
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

Project Background

- **Partnership between NOAA Coastal Services Center and The Nature Conservancy**
- **Two main components:**
 - **Development of national-level framework**
 - **Pilot studies in MA and OR**



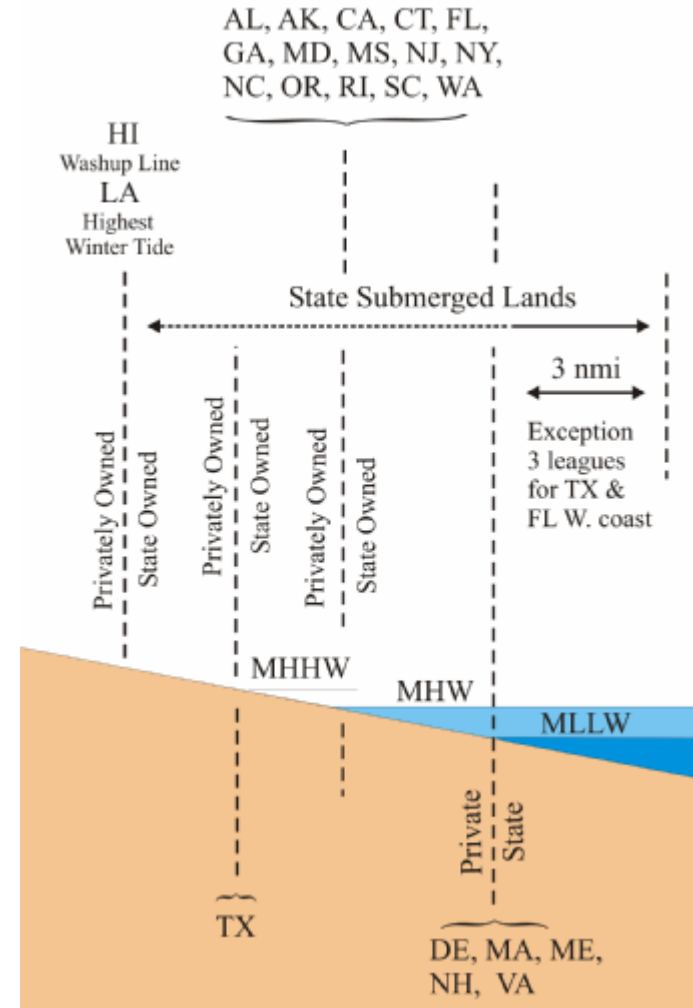
Project Goals

- **Develop maps & spatially-explicit information on the leasing and ownership of state lands and waters.**
- **Identify overlapping, potentially conflicting and multiple agency jurisdictions for the leasing and ownership of these lands and waters.**
- **Hold meetings to explore implications of maps & findings for a submerged lands policy that includes conservation.**
- **Make information and findings available to relevant management agencies and partners interested in the sustainable, ecosystem-based management of state marine resources.**



Challenges

- Process is complex, time consuming, and resource intensive
- Information access, availability varies from state-to-state
- “Submerged Lands” defined by a variety of boundaries



Mapping Template

- **Process and product-based**
- **Modeled after WADNR process**
- **Developed to serve two functions:**
 - **“Project roadmap”**
 - **Assessment tool**

DRAFT Marine Land Ownership & Leasing Spatial Database Template
NOAA Coastal Services Center | The Nature Conservancy – Global Marine Initiative

Marine Land Ownership & Leasing Spatial Database Template

Version 7.0

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Mapping Template

Step	Process	Products	Estimated LOE
1	Project Planning	<ul style="list-style-type: none">• Project Goal• Project Proposal	<ul style="list-style-type: none">• 1%• 1%
2	Information Assessment	<ul style="list-style-type: none">• Documents Which Reveal State Submerged Lands Leasing, Licensing and Ownership• Data Capture Plan	<ul style="list-style-type: none">• 10%• 2%
3	Data Identification and Retrieval	<ul style="list-style-type: none">• Existing Spatial Data Inventory• Spatial Data Which Delineates Submerged Lands Leasing, Licensing, and Ownership	<ul style="list-style-type: none">• 5%• 5%
4	Database Development	<ul style="list-style-type: none">• Data Model• Organizational Framework	<ul style="list-style-type: none">• 10%• 5%
5	Spatial Data Development	<ul style="list-style-type: none">• Spatial Data Which Delineates Submerged Lands Leasing, Licensing, and Ownership	<ul style="list-style-type: none">• 50%
6	Data Documentation and QA/QC	<ul style="list-style-type: none">• FGDC-compliant metadata• Documented QA/QC procedures and reports on positional, attribute accuracy	<ul style="list-style-type: none">• 5%• 2%
7	Data Access	<ul style="list-style-type: none">• Data access plan	<ul style="list-style-type: none">• 4%
TOTAL			100%

Process Highlights

Project Planning

- **Goal will depend in large part on how the information in the spatial database will ultimately be used and who the audience for the information will be**
- **Proposal should state the goal, the level of effort, and the level of accuracy needed for the project**
- **This is a good time for partnerships!**



Process Highlights

Information Assessment

- **Numerous conditions for marine lands ownership exist and will guide information search**
- **The following considerations should be made:**
 - **The temporal nature of the information**
 - **The complete lineage of the information**
 - **The state's historical and current interpretation and application of the Public Trust Doctrine**
 - **Do marine land classifications exist?**



Process Highlights

Data Identification and Retrieval

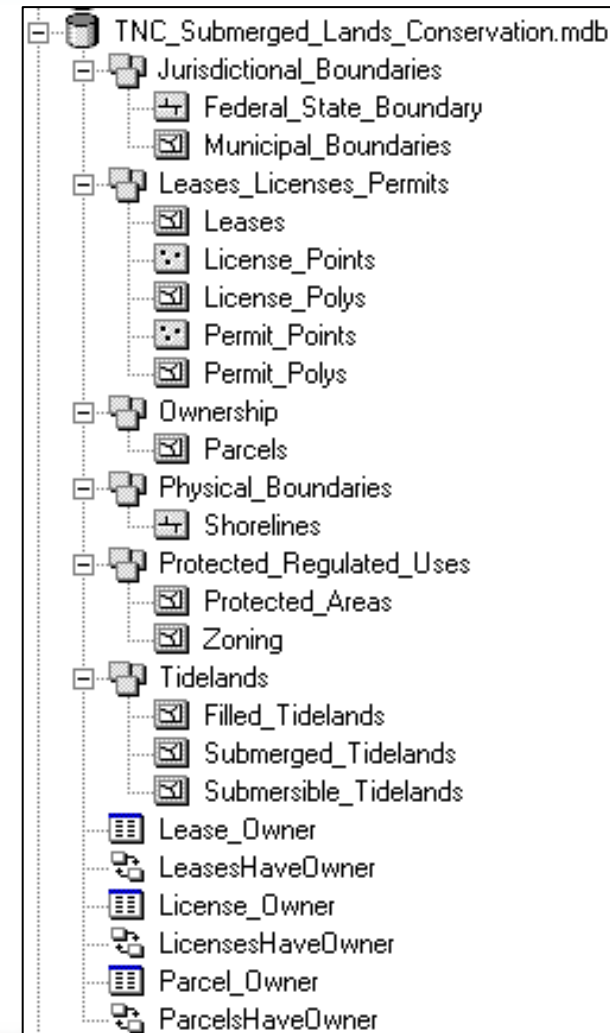
- **Does spatial data depicting submerged lands leasing, licensing, and ownership exist? If so:**
 - **Who owns the data?**
 - **What is the condition of the data?**
 - **What is the currentness of the data?**
 - **Is the data in a digital format?**
 - **Is there a cost or restriction associated with the data?**



Process Highlights

Database Development

- **An accompanying draft data model has been created:**
 - **Based on ArcGIS/ArcSDE**
 - **Whenever possible attribute schemas from existing data models (cadastral, ArcGIS parcel) are used**
 - **To be used as a starting point**



Process Highlights

Spatial Data Development

- Often, the data you need will not exist and must be created through a variety of methods
- Process will be based on:
 - format and accuracy of the original data
 - available resources
 - the desired accuracy of the new spatial database information
- A licensed surveyor should be consulted at this stage



Process Highlights

Data Documentation and QA/QC

- All data developed should have accompanying FGDC-compliant metadata
- A thorough QA/QC plan should be developed and implemented to ensure spatial data is accurate and complete
- This would also be a good time to think about maintenance and upkeep



Process Highlights

Data Access

- **How will you provide access to your data?**
 - Existing portal?
 - Custom in-house solution?
- **Can you provide access to all collected and developed datasets?**
 - Are there fees, restrictions?
- **What will end-users require to access data?**
 - Technological constraints?

Template as an Assessment Tool

		Massachusetts			Oregon		
Step	Products	Expected	Completed	Remaining	Expected	Completed	Remaining
1	<ul style="list-style-type: none"> Project Goal Project Proposal 	<ul style="list-style-type: none"> 1% 1% 	<ul style="list-style-type: none"> 1% 1% 	<ul style="list-style-type: none"> 0% 0% 	<ul style="list-style-type: none"> 1% 1% 	<ul style="list-style-type: none"> 1% 1% 	<ul style="list-style-type: none"> 0% 0%
2	<ul style="list-style-type: none"> Documents Which Reveal State Submerged Lands Leasing, Licensing and Ownership Data Capture Plan 	<ul style="list-style-type: none"> 10% 2% 	<ul style="list-style-type: none"> 8% 2% 	<ul style="list-style-type: none"> 2% 0% 	<ul style="list-style-type: none"> 10% 2% 	<ul style="list-style-type: none"> 5% 0% 	<ul style="list-style-type: none"> 5% 2%
3	<ul style="list-style-type: none"> Existing Spatial Data Inventory Spatial Data Which Delineates Submerged Lands Leasing, Licensing, and Ownership 	<ul style="list-style-type: none"> 5% 5% 	<ul style="list-style-type: none"> 4% 3% 	<ul style="list-style-type: none"> 1% 2% 	<ul style="list-style-type: none"> 15% 15% 	<ul style="list-style-type: none"> 5% 4% 	<ul style="list-style-type: none"> 10% 11%
4	<ul style="list-style-type: none"> Data Model Organizational Framework 	<ul style="list-style-type: none"> 10% 5% 	<ul style="list-style-type: none"> 8% 0% 	<ul style="list-style-type: none"> 2% 5% 	<ul style="list-style-type: none"> 10% 5% 	<ul style="list-style-type: none"> 5% 0% 	<ul style="list-style-type: none"> 5% 5%
5	<ul style="list-style-type: none"> Spatial Data Which Delineates Submerged Lands Leasing, Licensing, and Ownership 	<ul style="list-style-type: none"> 50% 	<ul style="list-style-type: none"> 0% 	<ul style="list-style-type: none"> 30% 	<ul style="list-style-type: none"> 40% 	<ul style="list-style-type: none"> 2% 	<ul style="list-style-type: none"> 38%
6	<ul style="list-style-type: none"> FGDC-compliant metadata Documented QA/QC procedures and reports on positional, attribute accuracy 	<ul style="list-style-type: none"> 5% 2% 	<ul style="list-style-type: none"> 0% 0% 	<ul style="list-style-type: none"> 10% 2% 	<ul style="list-style-type: none"> 5% 2% 	<ul style="list-style-type: none"> 0% 0% 	<ul style="list-style-type: none"> 10% 2%
7	<ul style="list-style-type: none"> Data access plan 	<ul style="list-style-type: none"> 4% 	<ul style="list-style-type: none"> 0% 	<ul style="list-style-type: none"> 5% 	<ul style="list-style-type: none"> 4% 	<ul style="list-style-type: none"> 0% 	<ul style="list-style-type: none"> 5%
TOTAL		100%	27%	73%	100%	23%	77%



Next Steps

- **Assess how well template process held up in pilot studies – adjust when necessary**
- **Present to MA and OR**
- **Explore feasibility of working with other coastal states**



For More Information

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