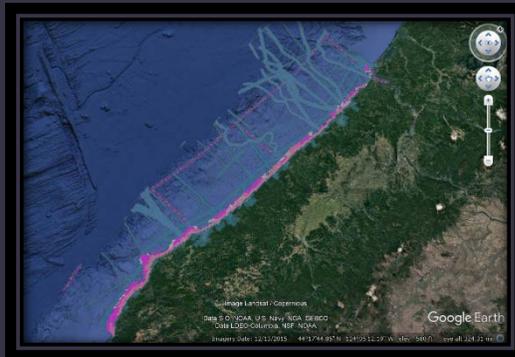


TERRITORIAL SEA PLAN

PART 5: MARINE RENEWABLE ENERGY

OPAC MEETING, SEPTEMBER 20TH 2018

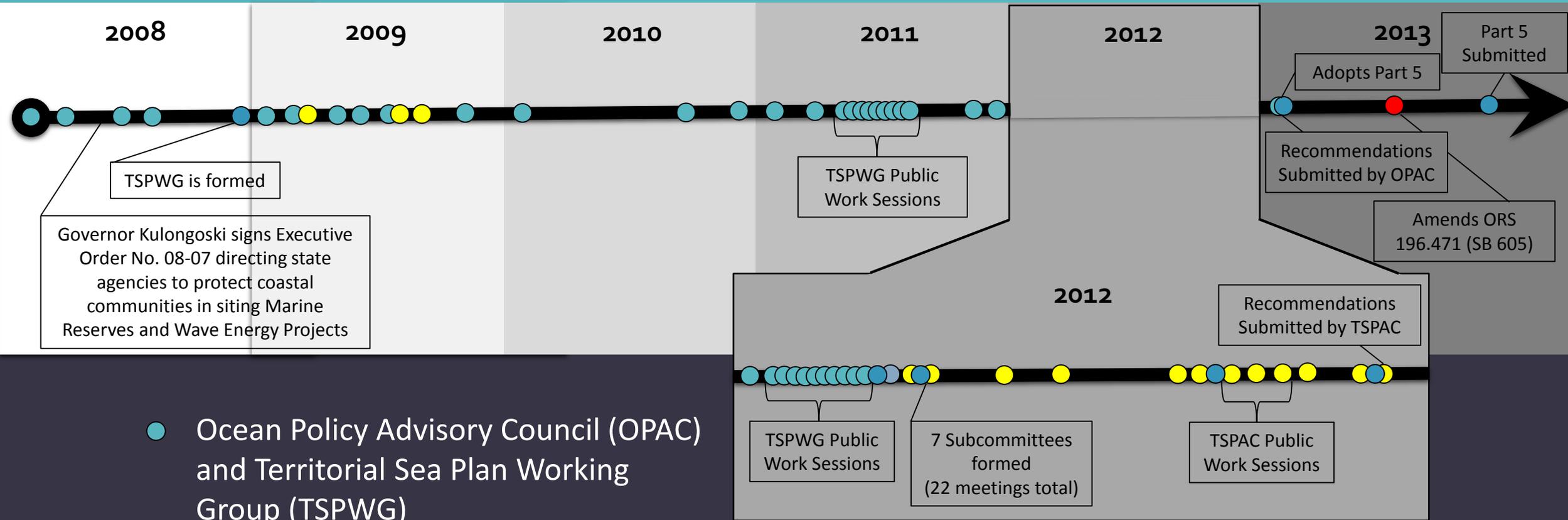
Andy Lanier, Marine Affairs Coordinator, OCMP-DLCD



PANEL DISCUSSION FORMAT

- This session will present the background and various perspectives of Part Five of the Territorial Sea Plan, which established state policy on the development of Marine Renewable Energy.
- Speakers:
 - Andy (Overview of TSP Part 5, DLCDC Staff Recommendation)
 - David Allen (Amendment Process)
 - David Fox (Development of Review Standards)
 - Jason Bush (Marine Renewable Industry Perspective)
 - Dan Hellin (OSU PacWave)

PART 5 AMENDMENT TIMELINE 2008-2013



- Ocean Policy Advisory Council (OPAC) and Territorial Sea Plan Working Group (TSPWG)
- Land Conservation and Development Commission (LCDC)
- The Territorial Sea Plan Advisory Committee (TSPAC)
- The Oregon State Legislature

TSP PART FIVE CONTENT

A. Renewable Energy Facilities Development

1. Background
2. Policies

B. Implementation Requirements

1. Siting: areas designated for renewable energy facilities development.
 - a. In State Waters:
 - b. In Federal Waters:
2. State Agency Review Process
3. JART Project Review Process and Coordination
4. Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards
 - a. Sufficiency of Inventory and Evaluation
 - b. Purpose of the Resource and Use Inventory and Effects Evaluation
 - c. Use of Available Environmental Information
 - d. Inventory Content
 - e. Written Evaluation.
 - f. Pilot and Phased Development Projects
 - g. Special Resources and Uses Review Standards

C. Application Requirements

1. Pre-Application
2. Financial Capacity
3. Application Fee

D. Operational Plan Development

1. Phased Development Plan
2. Facility Development Plan
3. Project Operation Plan
 - c. Monitoring Plan:
 - d. Adaptive Management Plan
4. Decommissioning Plan:
5. Financial Assurance Plan:
6. Agreements:

E. Northwest National Marine Renewable Energy Center

1. The Mobile Ocean Test Berth Site
2. Regulating Agency Authorizations for MOTB Site Use

F. Plan Review

Appendices A (Definitions and Terms), B (Map Designations), C (Enforceable Policies)

TERRITORIAL SEA PLAN PART FIVE (AS OF MARCH, 2018)

PART FIVE CHAPTER

PLAN MAP & AREA DESIGNATIONS

RESOURCES & USES INVENTORY

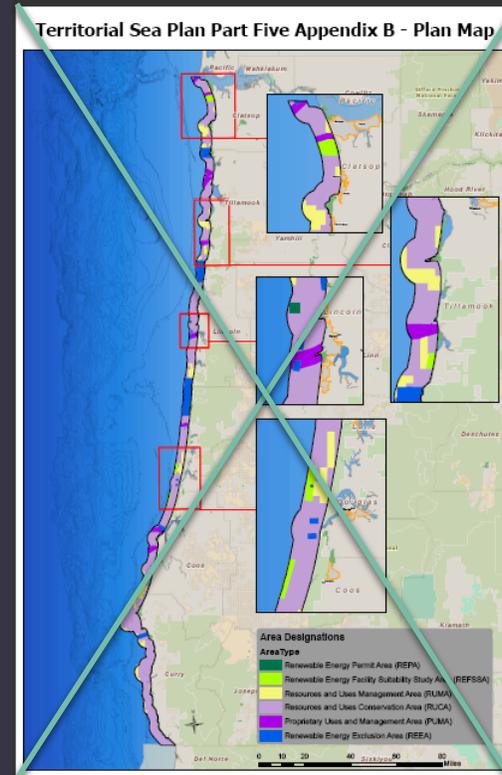
1 Oregon Territorial Sea Plan
2
3 PART FIVE:
4 Use of the Territorial Sea for the Development of
5 Renewable Energy Facilities or Other Related
6 Structures, Equipment or Facilities
7
8 PART FIVE of the Oregon Territorial Sea Plan¹ describes the process for making
9 decisions concerning the development of renewable energy facilities (e.g. wind, wave,
10 current, thermal, etc.) in the state territorial sea, and specifies the areas where such
11 development may be sited. The requirements of Part Five are intended to protect areas
12 important to renewable marine resources (i.e. living marine organisms), ecosystem
13 integrity, marine habitat and areas important to fisheries from the potential adverse
14 effects of renewable energy facility siting, development, operation, and decommissioning
15 and to identify the appropriate locations for that development which minimize the
16 potential adverse impacts to existing ocean resource users and coastal communities.
17
18 Oregon's renewable energy portfolio list² ocean energy as a renewable energy source with
19 potential to reduce dependence on fossil fuels.³ Renewable ocean energy facilities
20 development may present opportunities to apply technologies that rely on wind, wave,
21 wind-current or thermal energy, ~~which may potentially reduce the environmental~~
22 ~~impact of fossil fuels. Oregon prefers to develop renewable energy through a~~
23 ~~precautionary approach that supports the use of pilot projects and phased development in~~
24 ~~the initial stages of commercial development, if developed in a responsible and~~

¹ See Part One, section C for the Oregon Territorial Sea and Territorial Sea Plan description.
² It is the goal of Oregon to develop permanently sustainable energy resources and the policy of the state to
manage the development and use of these resources. OES 499.010(2) provides in part:
"It is the goal of Oregon to promote the efficient use of energy resources and to develop permanently
sustainable energy resources. The end-use for comprehensive state leadership in energy production,
distribution and utilization. It is, therefore, the policy of Oregon:
"(a) That development and use of a diverse array of permanently sustainable energy resources be
encouraged utilizing to the highest degree possible the private sector of our free enterprise system.

"(g) That state government shall provide a source of impartial and objective information in order that this
energy policy may be enhanced."

V.11413 (SS edit)
**OREGON TERRITORIAL SEA PLAN Part Five: Use of the Territorial Sea for the
Development of Renewable Energy Facilities or Other Related Structures, Equipment or
Facilities**
Page 1 of 39

MRE Policy
Review Process (JART)
Inventory and Effects evaluation
process
Review Standards
Plan Review
Decommissioning Requirements



Territorial Sea Planning for Renewable Energy Siting Amendment Process Timeline

2008

2009

2010

2011

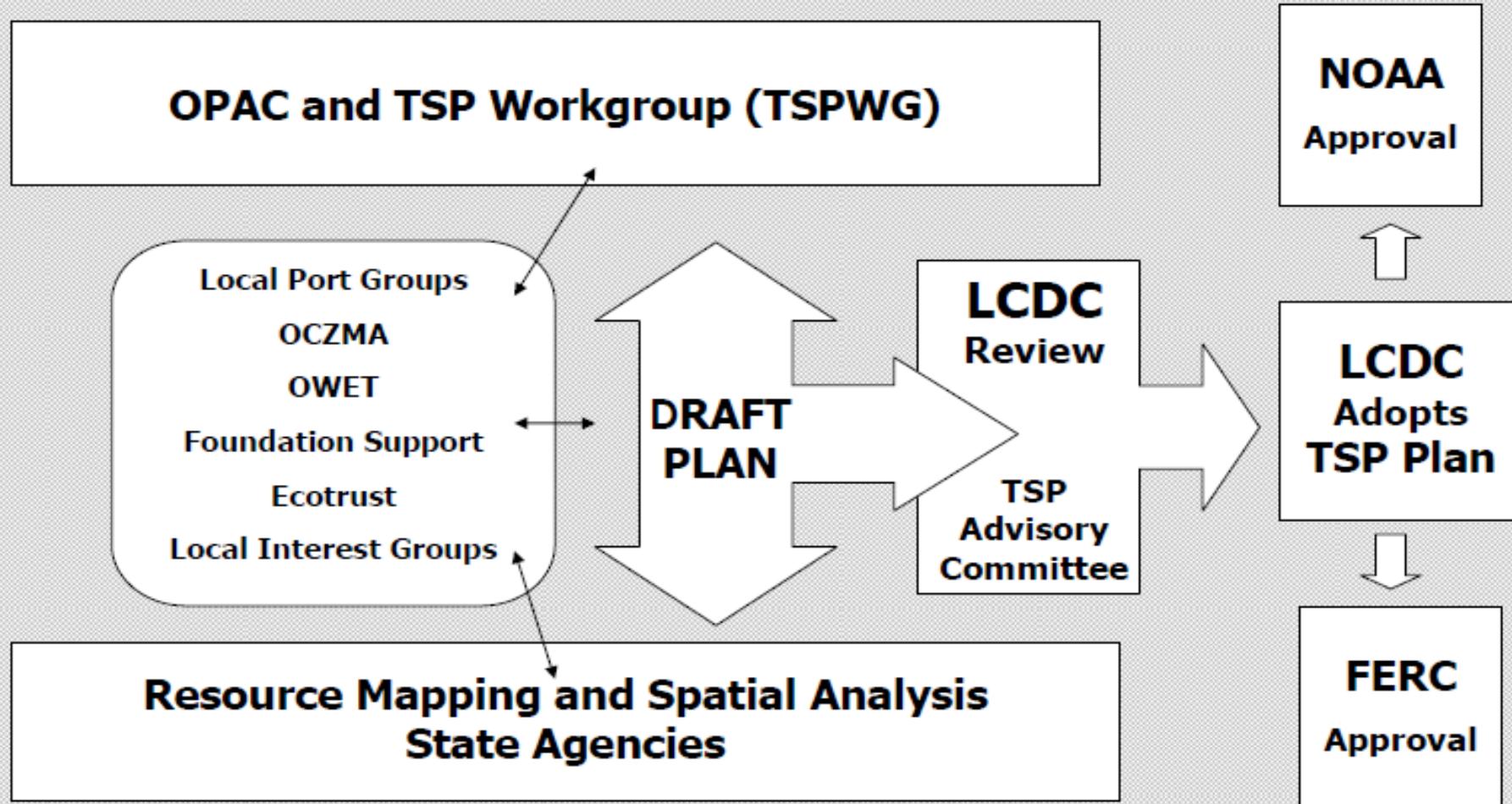
2012



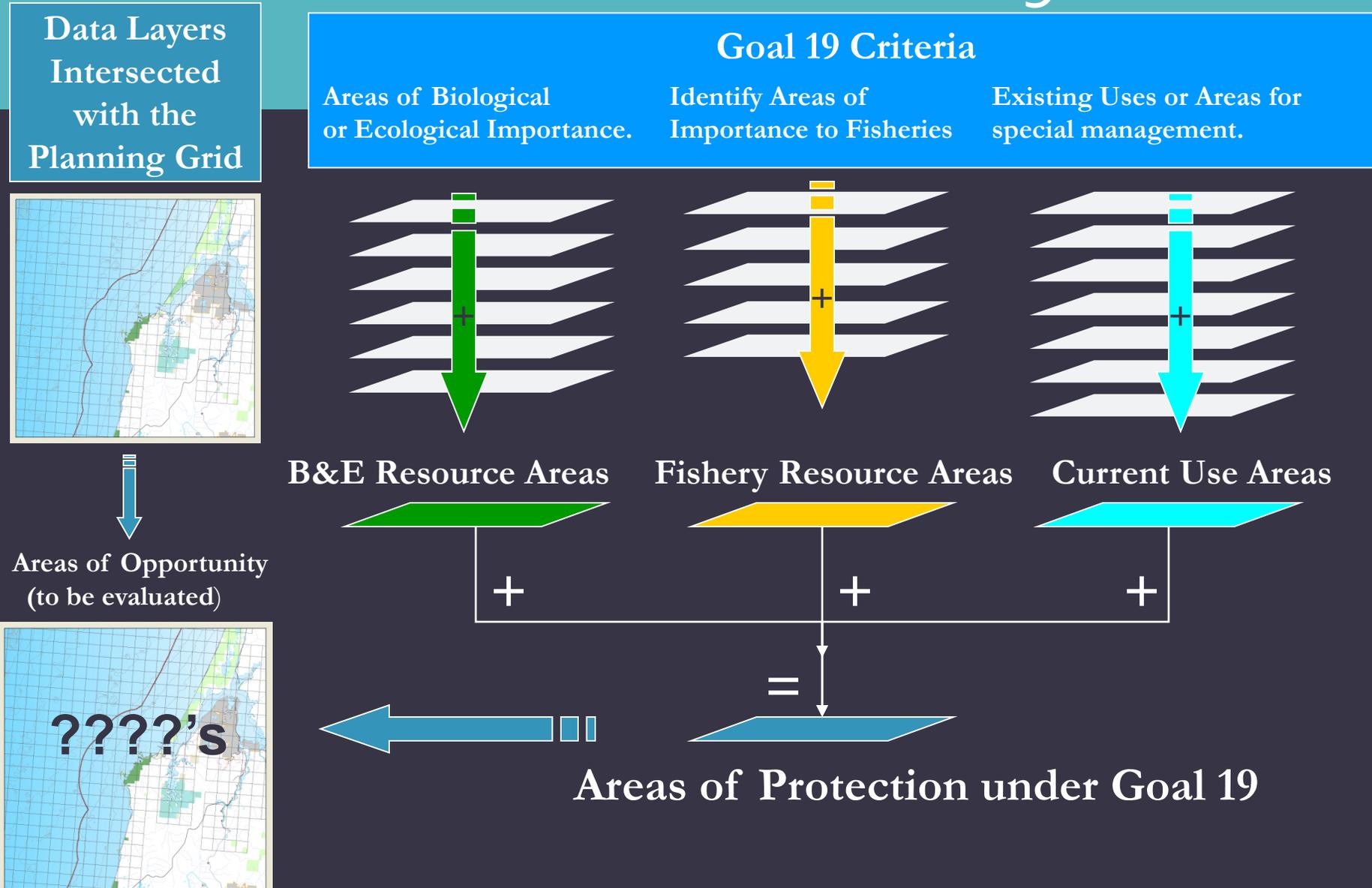
Phase 1 – Part 5 TSP

Part 5 Adopted

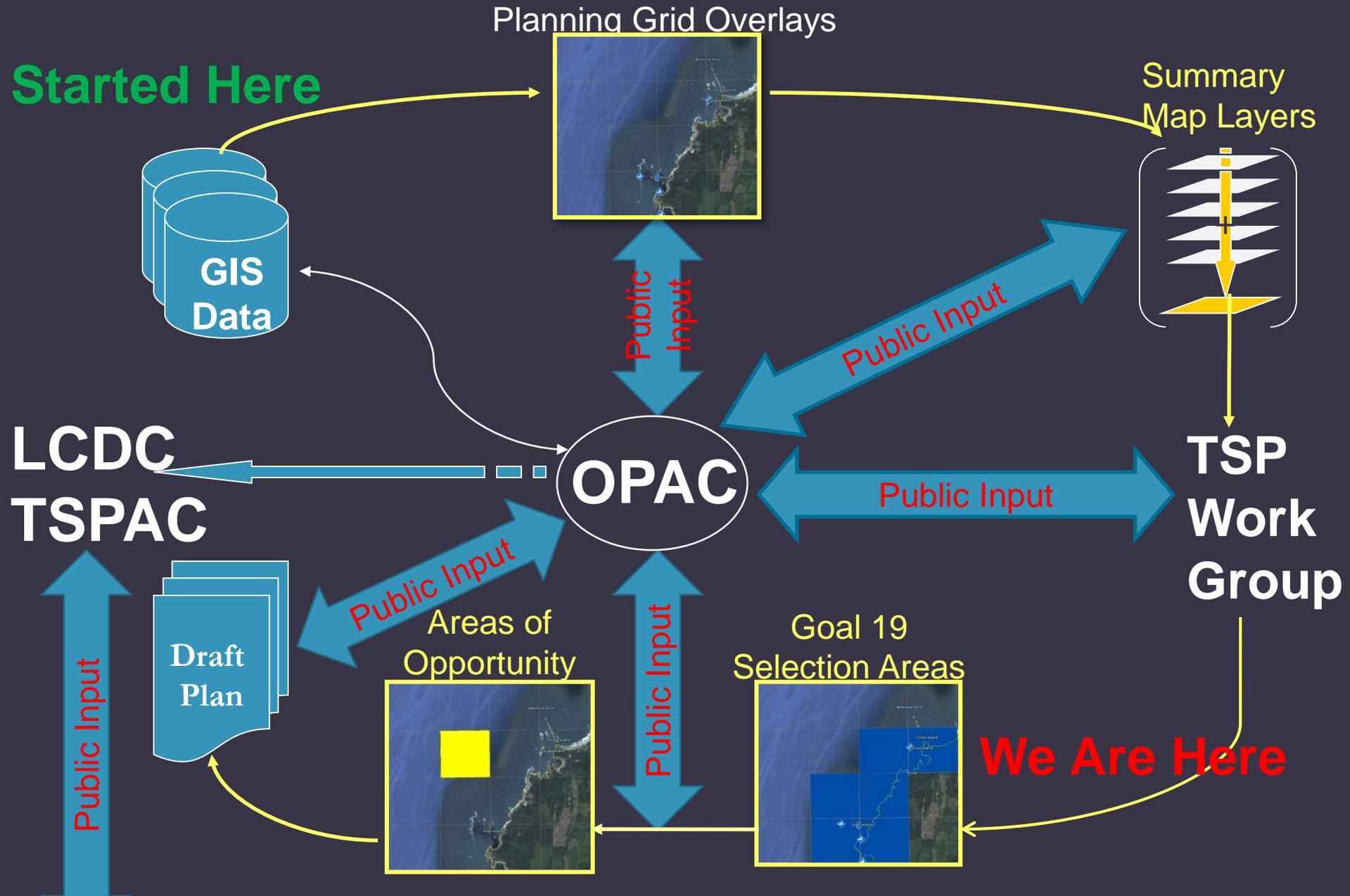
Phase 2 – Spatial Mapping



OVERVIEW: GEOSPATIAL ANALYSIS TO DERIVE AREAS PROTECTED BY GOAL 19



SPATIAL PLANNING FEEDBACK LOOP



PART FIVE PLAN MAP AREAS

Renewable Energy Exclusion Area (REEA)	Proprietary Use and Management Area (PUMA)	Resources and Uses Conservation Area (RUCA)	Resources and Uses Management Area (RUMA)	Renewable Energy Facility Suitability Study Area (REFSSA)	Renewable Energy Permit Area (REPA)
Special Management Areas designated by statute and OAR	Areas with authorized uses and special management designations under Goal 19	Areas with important, sensitive, or unique Goal 19 Resources and Uses	Areas with important or significant Goal 19 Resources and Uses	Areas of least conflict with Goal 19 Resources and Uses	Areas of existing MREC permits
MRE applications will not be accepted within these areas	MRE applications will not be accepted unless legally permissible, comply with the authorized use and area standards, and agreed to by the authorized users.	MRE applications must demonstrate no reasonably foreseeable adverse effects on inventoried marine resources and uses.*	MRE applications must demonstrate no significant adverse effects on inventoried marine resources and uses.	MRE applications must comply with TSP Part Five Sections B and C , general standards, and the applicable regulatory and proprietary requirements of state and federal agencies.*	Delineated sites with existing authorization for the development of MRE testing, research or facilities.

Visual Resource Area Overlay

Marine Recreation Area Overlay

Higher Permit Review Standards Lower

Screening standards applied to all areas

Already permitted.

TSP Review Standards Matrix

	General Fisheries Standards	Visual Resource Impact Standards	Recreation Resource Impact Standards	No Significant Adverse Effects	No Reasonably Foreseeable Adverse Effects	Presumptive Exclusion
REEA	n/a	n/a	n/a	n/a	n/a	n/a
PUMA						
RUCA						*ISU
RUMA						
REFFSA				ecological		
REPA	n/a	n/a	n/a	n/a	n/a	n/a

RENEWABLE ENERGY EXCLUSION AREA (REEA)

Objective: To protect permitted uses and special management areas under Goal 19 Ocean Resources.

- ⦿ No development of marine renewable energy will be permitted in these areas.
- ⦿ OPT Reedsport and NNMREC
- 130 mi² ~ 10%

Resource Inventory Layers Included:

- State Designated Marine Managed Areas including Marine Reserves and Protected Areas
- Dredge Material Disposal Sites

PROPRIETARY USE AND MANAGEMENT AREA (PUMA)

Areas with authorized uses and special management designations under Goal 19 Ocean Resources.

• MRE applications will not be accepted unless the use is legally permissible, complies with the authorized use of the area, and has been agreed to by the authorized users.

• 68 mi² ~ 5%

Resource Inventory Layers Included:

- Commercial Shipping Lanes (Deep & Shallow draft)
- Coastal Discharge Outfalls
- Coastal National Wildlife Refuges
- OR Islands National Wildlife Refuges
- Research Cables and Infrastructure
- Undersea Telecommunication Cables
- Ocean Outfalls
- Pilotage Areas

RESOURCE AND USE CONSERVATION AREA (RUCA)

Areas of important, significant, or unique (ISU) ecological resources, significant economical importance to commercial fishing sectors, recreational fishing, or individual ports, and ocean recreation hotspots.

- ◎ MRE applications must demonstrate that the project will have no reasonably foreseeable adverse effects on inventoried marine resources and uses as determined by the standards for protecting those resources and uses.

◎ 900 mi² ~ 72%

Resource Inventory Layers Included:

- Areas of Greatest Importance to Fisheries
- Ocean Recreation Hotspots
- Kelp Beds
- Subtidal Rocky Reef
- Rock Shores Habitat
- Pinniped Haulout
- Steller Sea Lion Critical Habitat
- Nesting Seabird Colonies
- Snowy Plover Critical Habitat
- Level I Marxan (core hotspots)

RESOURCE AND USE MANAGEMENT AREA (RUMA)

Areas with important or significant ecological resources, economically important to commercial fishing sectors, recreational fishing, or individual ports.

◎ MRE application must demonstrate no significant adverse effects on inventoried marine resources and uses as determined by the standards for protecting those resources and uses.

◎ 137 mi² ~ 11%

Resource Inventory Layers Included:

- Oceanographic Research Inventory
- Crabber Tugboat Agreement lanes
- Ocean Recreation
- Gray Whale Foraging Area
- Marbled Murrelet Foraging
- Level II Marxan (core hotspots)
- Areas of Great Importance to Fisheries

RESOURCE AND USE DEVELOPMENT AREA (REFSSA)

Area with lowest potential adverse effects with ecological resources and activities relating to commercial fishing sectors, recreational fishing, or individual ports.

- ⦿ A proposal for MRE development must comply with TSP Part Five Sections B and C, and the applicable regulatory and proprietary requirements of state and federal agencies.
- ⦿ Would not automatically exclude other uses
- ⦿ 22 mi² ~ 2%

Resource Inventory
Layers Included:

- Navigational Aides
- Inactive Dredge
Material Disposal
Sites

RENEWABLE ENERGY PERMIT AREA (REPA)

Areas are delineated sites for which there is an existing authorization for the development of MRE testing, research or facilities.

⦿ Applications for MRE development within a REPA must comply with the terms and conditions required by the regulating agency authorization for the site.

⦿ 2 mi² ~ 0%

Resource Inventory Layers
Included:

- OPT permitted site
- NNMREC permit site

MARINE RECREATION AREA OVERLAY

Standard applicable to the entire Territorial Sea

- A. Ocean renewable energy may not have a significant adverse effect on significant known recreational uses.
- B. A significant adverse effect occurs when:
 - I. Access is denied or unreasonably impeded.
 - II. The project creates reasonably foreseeable health or safety impacts.
 - III. The project would have reasonably foreseeable significant impacts on the natural environment that the recreational community depends on.
- C. Significant recreational use occurs where there is a:
 - I. Community of historical users;
 - II. High intensity of use, or
 - III. Uniqueness or a special quality associated with the recreational use relative to the state or region.

VISUAL RESOURCE OVERLAY

Visual Resource Management has 2 distinct phases:

- **Planning phase:** A baseline of visual quality is used to model viewshed quality, and that is applied to the standards for visual resource impacts. The visual resource management framework covers the full extent of the Territorial Sea.
- **Regulatory phase:** project applicant will be required to conduct an evaluation of potential impacts to visual resources, or a Visual Impact Analysis (VIA).



PART FIVE PLAN MAP AREAS

Renewable Energy Exclusion Area (REEA)	Proprietary Use and Management Area (PUMA)	Resources and Uses Conservation Area (RUCA)	Resources and Uses Management Area (RUMA)	Renewable Energy Facility Suitability Study Area (REFSSA)	Renewable Energy Permit Area (REPA)
Special Management Areas designated by statute and OAR	Areas with authorized uses and special management designations under Goal 19	Areas with important, sensitive, or unique Goal 19 Resources and Uses	Areas with important or significant Goal 19 Resources and Uses	Areas of least conflict with Goal 19 Resources and Uses	Areas of existing MREC permits
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Visual Resource Area Overlay

Marine Recreation Area Overlay

Higher Permit Review Standards Lower

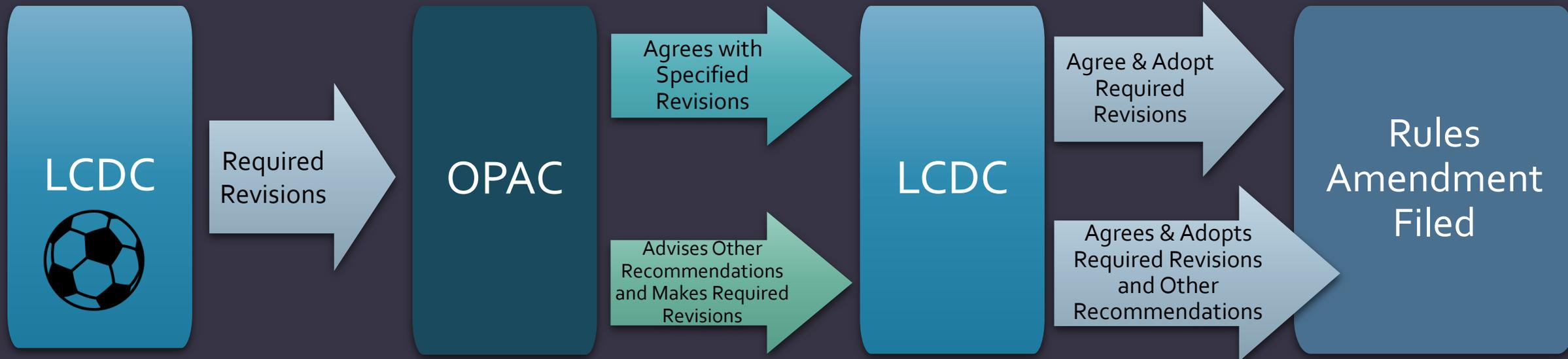
Screening standards applied to all areas

Already permitted.

POTENTIAL PATHWAYS FOR PART 5 AMENDMENT

- Alternative 1: The commission could leave the 2009 version of Part 5 in place for the foreseeable future.
- Alternative 2: The commission could adopt the original 2013 OPAC recommendations, provided that the commission could make the required statutory and goal findings.
- Alternative 3: The commission could return the adopted 2013 Part 5 to OPAC as its specification of needed revisions, or
- Alternative 4: The commission could modify the adopted 2013 Part 5 and send those to OPAC as its specification of needed revisions.

LCDC & OPAC TERRITORIAL SEA PLAN AMENDMENT PROCESS



DLCD STAFF RECOMMENDATIONS

- **DLCD staff recommends the implementation of alternative 4**, as it will allow the commission the flexibility to factor in circumstantial changes that have occurred since 2013.
- **REFSSA Recommended changes:**
 - The department is recommending moving forward with two REFSSA sites, which were part of the adopted 2013 version of Part Five: Camp Rilea and Lakeside (Attachment J). The two sites were the top site selection recommendations from TSPAC and OPAC, respectively.
 - This alternative incorporates an update to the OPT Reedsport REFSSA site that was made in 2014, in removing the OPT Reedsport test and array buildout sites. This action is consistent with the condition in the LCDC Order (attachment C) upon submission of the plan, and was based upon the recognition that the proposed REFSSA site was located completely within an area characterized as high value fishing grounds at the local and state level.
 - Additionally, the department is recommending that the Nestucca site be withdrawn from the 2013 plan framework, as there has not been and is not expected to be industry interest in developing marine renewable energy in that region of the coast (personal communication with Oregon Industry Rep, 2018). The Pacific City/Nestucca site also did not receive support from OPAC (was selected 5th out of 8 options by TSPAC) when the site was considered in 2013.

DLCD STAFF RECOMMENDATIONS

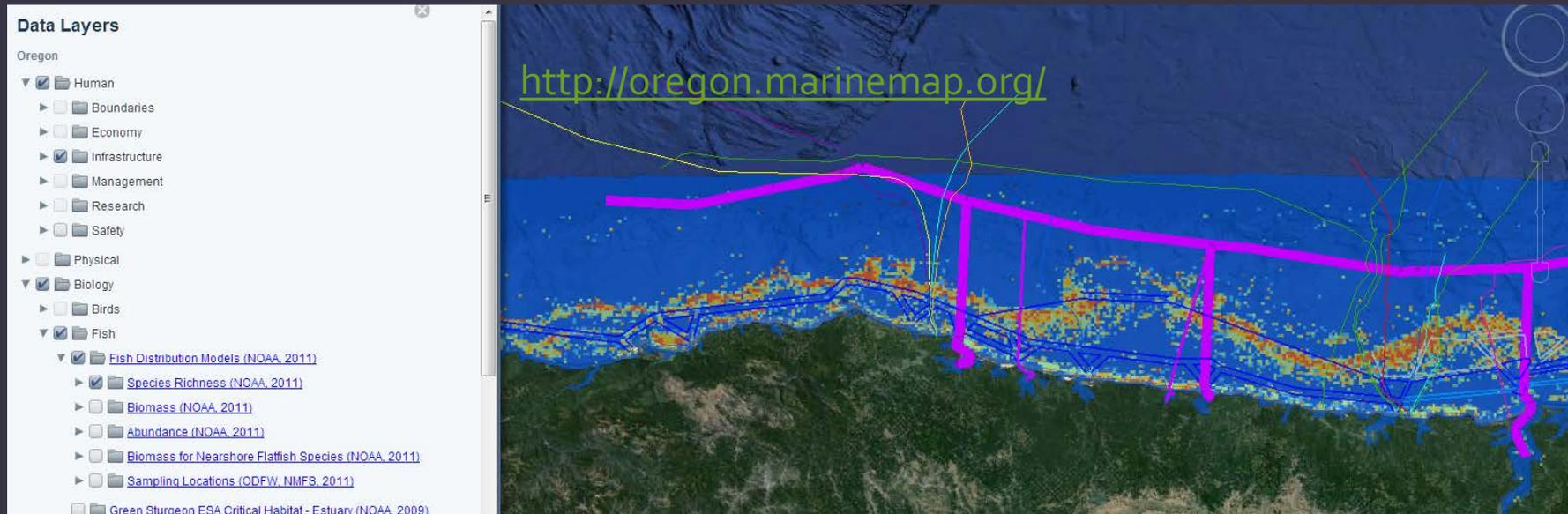
- **Plan Framework Recommended changes:**
- OPAC and the department received recent public comment about the Proprietary Use and Management Areas (PUMA), regarding the undersea fiber-optic telecommunications industry related concerns with Part Five language that allows use of those areas for development of marine renewable energy.
- The 2013 OPAC recommendation had a condition associated with use of PUMA's, which provided a review clause for marine renewable energy development proposals allowing existing lease holders the right to approve proposed actions. Based upon Department of Justice recommendations, that language was not included in the 2013 amended version of Part Five.
- The department suggests moving both undersea fiber-optic telecommunications cables and research cables (along with their associated maintenance buffers) to the Renewable Energy Exclusion Areas (REEA's) to avoid the possibility of conflicting use proposals in an area of ocean.

DLCD STAFF RECOMMENDATIONS

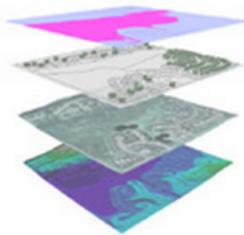
Part 5 Chapter Text Amendments

- All proposed text amendments are provided in the Blackline copy of Part 5.
- Formatting indicates whether amendments were proposed in 2013, or 2018.
- Minimal Changes are being made to the 2013 amendments, and reflect the Departments desire to match the text amendment recommendations from the OPAC recommendations, including:
 - Maximum area buildout percentage was changed from 3% to 2%(p.25)
 - Cables were removed from PUMA language (p. 25), and inserted into REEA map designation (Appendix B , p. 37)
 - Northwest National Marine Renewable Energy Center is now called the Pacific Marine Energy Center and the name was changed to reflect that reality (p. 30-31)

ACCESSING THE RESOURCE INVENTORY INFORMATION



Marine Geospatial Data



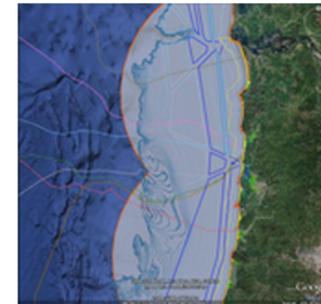
As part of the OCMP's support work for the various public processes on-going in the Oregon territorial sea, the following list of data sets has been assembled from a variety of public, academic and other research sources.

At the moment, the majority of the data available below is available in GIS shapefile format. We are working to also make many data sets available as KML, so that they are visible in Google Earth. To browse data in a Google Earth interface please visit the [Oregon MarineMap project](http://oregonmarinemap.org).

How to Use MarineMap

The Oregon MarineMap project is available as a stand-alone website at: <http://oregon.marinemap.org>.

Several help videos have been produced to assist users to become familiar with the MarineMap tools and provide background and information about the program capabilities.



[Read More: How To Use MarineMap](#)

OREGON COASTAL ATLAS DATA CATALOG

The screenshot shows the Oregon Coastal Atlas Data Catalog website. At the top, there is a navigation bar with 'Home', 'Tools', 'Learn', and 'Search »'. Below this is a secondary navigation bar with 'Atlas Catalog (new)', 'Regional Archives', and 'Federal Archives'. The main content area features a search bar and a description of the catalog's standards compliance and search capabilities. A sidebar on the left lists 'Organizations' and 'Types'. The main content area displays a list of catalog items, including 'Territorial Sea Plan Part V Plan Map Index, DLCD, 2013' and 'Lithology Map for the Oregon Territorial Sea, OSU ATSM, 2008'. Each item includes a description, a 'Thumbnail' button, and a 'View in Google Earth' button.

Oregon Coastal Atlas

Home | Tools | Learn | Search »

Atlas Catalog (new) | Regional Archives | Federal Archives

Search » Atlas Catalog (new)

The Coastal Atlas archives are also available as a standards compliant catalog which can be useful to users of software that can take advantage of OGC Catalog Services for the Web (CSW). Simple searching of the Atlas archive GIS datasets that are documented and downloadable is enabled, as well as links to web services and KML when available.

Regular users do not require login, however owners of catalog records may log in here to perform maintenance.

User name: Sign in English Help

Home List Map

Sort by [dropdown] | 0 Selected | Other actions [dropdown]

Organizations

- EcoTrust (18)
- Oregon Coastal Management Program, Department of Land Conservation and Development (5)
- Dept. Of Land Conservation and Development (5)
- Oregon Coastal Management Program (3)
- Oregon Dept of Land Conservation and Development (2)
- Dept of Land Conservation and Development (1)
- Oregon Fishermens Cable Committee (1)
- + Show more

Types

- Dataset (39)

Scale denominators

- 100000 (8)
- 25000 (2)
- 24000 (15)
- 2000 (8)
- 100 (2)

Territorial Sea Plan Part V Plan Map Index, DLCD, 2013 ★★★★★

This map is the spatial representation of the Oregon Territorial Sea Plan and includes "renewable energy facility site suitability areas", "proprietary use and management areas", "resources and uses conservation areas", "resources and uses management areas", "renewable energy exclusion areas", and "renewable energy permit areas"..

MARINE SPATIAL PLANNING, OCEANS, OREGON, PLANNINGCADASTRE, TERRITORIAL SEA PLAN, WAVE ENERGY, PLANNINGCADASTRE

View in Google Earth Add to map Download Web link

Dept of Land Conservation and Development

Lithology Map for the Oregon Territorial Sea, OSU ATSM, 2008 ★★★★★

Thumbnail

Polygon Map of Oregon Territorial Sea Lithology (Surface Sediments). This product was generated by Mel Agapito, of Oregon State University during her MS Thesis work in 2008.

SEAFLOOR, HABITAT, BENTHIC, GEOPHYSICAL, MARINE, ESSENTIAL FISH HABITAT (EFH), OREGON, TERRITORIAL SEA, NEARSHORE, SEAFLOOR, GEOGRAPHIC INFORMATION SYSTEM