

Brief Workshop Agenda

- DAY ONE
 - TSP, RI, Goals presentations
 - Datasets
 - Breakout sessions by topic area, addressing data set issues
 - Marxan introduction
- DAY TWO
 - Breakout sessions by topic area, addressing Marxan issues
 - Wrap-up, next steps

Data segment

- Introduction
- Description of data sets
- Breakout session (over lunch)
- Groups report back

Data Sets - Introduction

- Goal 19 identifies resources to protect
- NEDA/Workshop topic areas:
 - Birds & Mammals
 - Ecosystem/Ocean
 - Fish
- Goal of mapping:
 - Identify priority ecological protection areas
 - With wave energy in mind
 - Classify each square mile of TS



Mapping process

- Identify resources needing Goal 19 protection
- Gather existing data sets
- Consult with scientists about display/use
- Create maps/surfaces
- Further analysis (modeling, Marxan, etc.)

Goal 19 protection

1) Goal 19 provisions such as:

- Areas of high abundance,
- Areas of high diversity,
- Unique areas,
- Areas important to survival of particular life history stage,
- Threatened or endangered status

2) Sensitivity of the resource to potential impacts from ocean energy development



Scope of data

- Classification of all square miles of the TS requires special data sets
- Prioritized acquiring data sets with the following characteristics:
 - Comprehensive sampling of the territorial sea
 - Species that are prominent in or important to nearshore ecology
 - Data available within timeline of TSP
 - Need any point data represented spatially in a surface format

Data not included

- Studies of localized areas
 - e.g. Orford reef study
- Studies that only had data outside of the TS
- Data that are not yet represented spatially
- Data not yet collected
 - No new data were collected specifically for the Atlas

Goals for workshop participants

- Existing/In-hand data for **1st phase**:
 - General feedback on our approach and data
 - Topic area feedback (your area of expertise)
- Data we might include in **future phases**:
 - Existing data
 - Plan to collect new data
- Multiple ways to provide feedback:
 - Note taking
 - Feedback forms (use multiple, if needed)
 - Posters

Ecosystem/Ocean

- Seafloor habitat
- Bathymetry
- Shoreline habitat
- Benthic biogenic habitat
- Kelp
- Invertebrates
- Oceanographic data



Fish

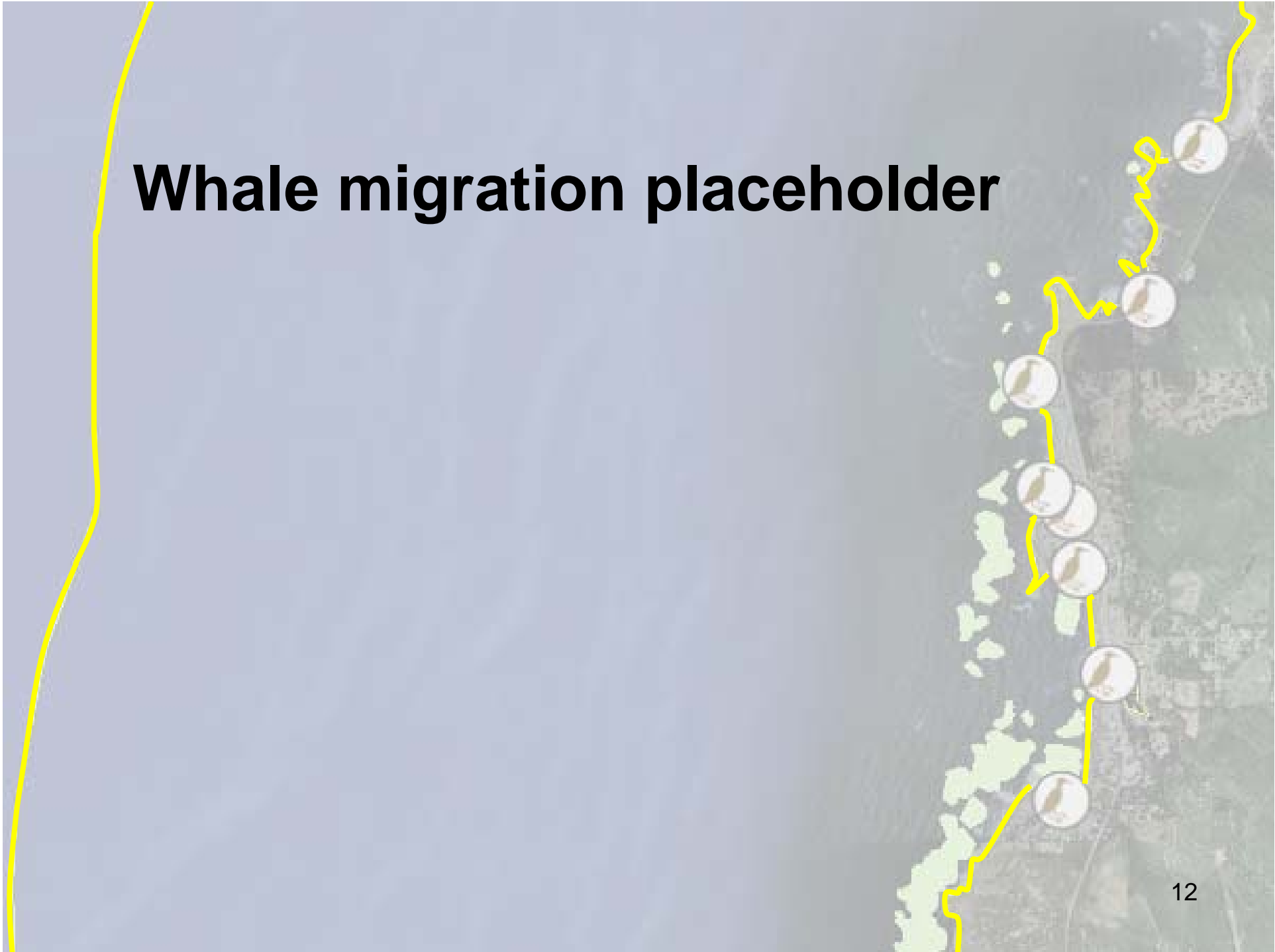
- Fish predictive models (fishery independent data - NOAA)
- Fish predictive models (fishery dependent data - TNC)
- HSP maps for juvenile groundfish
- Green sturgeon critical habitat
- Gaps and other data

Birds and Mammals

- Seabird nesting colonies
- Seabird predictive modeling (PRBO)
- CCR nearshore seabird data
- Pinniped haulouts
- Cetacean predictive models (NMFS)
- Harbor porpoise data
- Gray whale data
- ESA critical habitat



Whale migration placeholder



Breakout Groups

- Feedback forms outline group goals:
 - Data use
 - Data limitations
 - Data analysis approach
 - Data gaps
- Groups
- Group leaders
 - Report back

Group 1: Birds & Mammals

- Staff:

- Andy Lanier
- Jenna Borberg
- Mike Donnellan

- Participants:

- Jaime Jahncke
- Roy Lowe
- Shawn Stephenson
- Craig Strong
- Rob Suryan

Group 2: Ecosystem/Ocean

- Staff:

- Arlene Merems
- Heather Reiff
- Caren Braby

- Participants:

- Jack Barth
- Francis Chan
- Stacy Galleher
- Scott Groth
- Sarah Henkel
- Alix Laferriere
- Bill Peterson
- Chris Romsos
- Steve Rumrill
- Dick VanderSchaaf

Group 3: Fish

- Staff:

- Aaron Jones
- Anna Pakenham
- Dave Fox

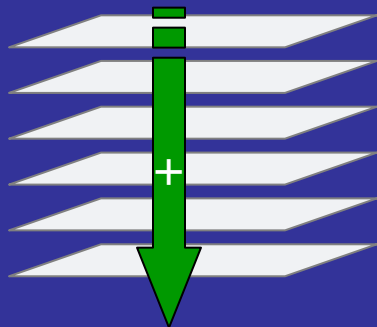
- Participants:

- Stephen Brandt
- Patty Burke
- Bob Hannah
- Scott Heppell
- Selena Heppell
- Mark Hixon
- Doug Markle
- Charlie Menza
- Curt Whitmire



Defining Ecological Areas for Goal 19 Protection

Derive Areas of Biological or Ecological Importance



B&E Areas of Exclusion



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Areas of Protection under Goal 19

1. Gather existing information to understand the characteristics and distribution of natural resources in the ocean
2. Make decisions on which resource or portion of a resource should receive Goal 19 protection in an ocean energy context
3. Map the information to determine areas subject to Goal 19 protection vs. areas more appropriate for ocean energy development

Step 1: Gather existing information on natural resources

Ocean natural resources = species, biological communities and habitats

Natural resource information must be:

- Available in the timeframe of the TSP process
- Relevant to Goal 19 ecological protection provisions
- Cover a significant portion of the Territorial Sea

Step 2: Make decisions on which resources should receive Goal 19 protection

Depends on:

1) Goal 19 provisions such as:

- Areas of high abundance,
- Areas of high diversity,
- Unique areas,
- Areas important to survival of particular life history stage,
- Threatened or endangered status

2) Sensitivity of the resource to potential impacts from ocean energy development



Step 3: Map Data Layers

yellow = draft PUC generated

white = not yet available

Category	Data Set
Habitat	<ul style="list-style-type: none"> • Seafloor habitat v. 3.5 (draft PUC on rocky habitat) • Seafloor habitat v. 4.0 • Habitat survey areas • Other seafloor habitat data • Rocky intertidal shoreline (draft PUC on rocky intertidal shoreline)
Kelp	<ul style="list-style-type: none"> • Composite of 1990's kelp surveys (draft PUC on kelp beds) • 2010 kelp survey (south coast only) • Kelp survey areas
Fish	<ul style="list-style-type: none"> • NMFS triennial and annual trawl surveys • ODFW flatfish trawl survey • Rocky reef fish foraging buffer areas around rocky and kelp habitats • Fishery logbook data
Seabirds	<ul style="list-style-type: none"> • Seabird nesting colonies (draft PUC on colonies plus 2000' area surrounding colonies) • Snowy plover critical habitat (draft PUC on critical habitat) • West Coast seabird surveys (PRBO surveys) • Oregon nearshore seabird surveys (marbled murrelet surveys)
Pinnipeds	<ul style="list-style-type: none"> • Pinniped haulout sites (draft PUC on haulout sites and 300 m area surrounding haulout sites) • Steller Sea lion critical habitat (draft PUC on critical habitat)
Others	Chlorophyll concentration, upwelling areas, Columbia River plume, green sturgeon critical habitat, whale distribution, other layers