



Environmental Sciences Pacific Region Overview

**OCS Scientific Committee Meeting
May 14, 2013**

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Chief, Environmental Sciences Section**



**Preparing for Wind and Wave
Renewable Energy**



**Supporting and Monitoring
Conventional Energy**

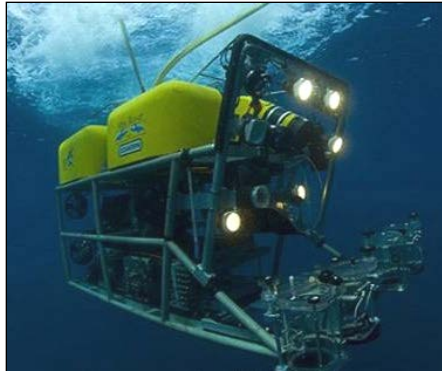


Regional Developments in Conventional and Renewable Energy

- **Conventional Energy** - Industry continues to expand production from existing platforms
- **Renewable Energy** - Four preliminary renewable energy lease applications
 - Pacific Marine Energy Center (PMEC) research lease off Newport, Oregon to test wave energy conversion devices
 - One commercial lease for wind energy conversion off Coos Bay, Oregon
 - Two commercial leases for wind energy conversion off Oahu, Hawaii



Perspective on Pacific Region Studies



- 1973 – 2014
- 306 Studies completed at nearly \$ 141.5 M
- 20 Ongoing studies FY 2012 ~ \$ 12.6 M
- 6 New starts for FY 2013 ~ \$ 3.4 M
2 deferred to FY 2014
- 10 Studies proposed for FY 2014 ~ \$ 4.7 M



Analysis of Study Type

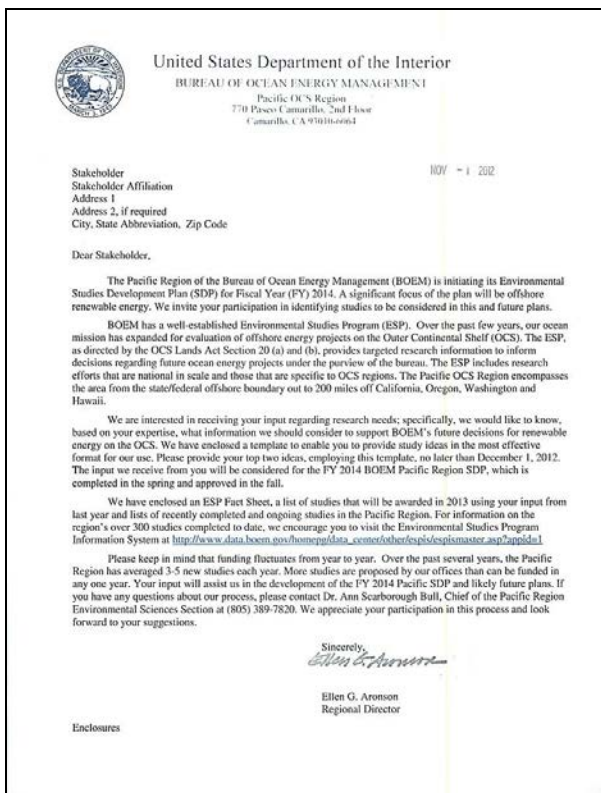
Ongoing + FY 2013 New Starts + Proposed FY 2014 Studies

- Competitive 22 %
- University partnerships 39 %
- NOAA partnerships 17 %
- USGS partnerships 19 %
- In-house 3 %



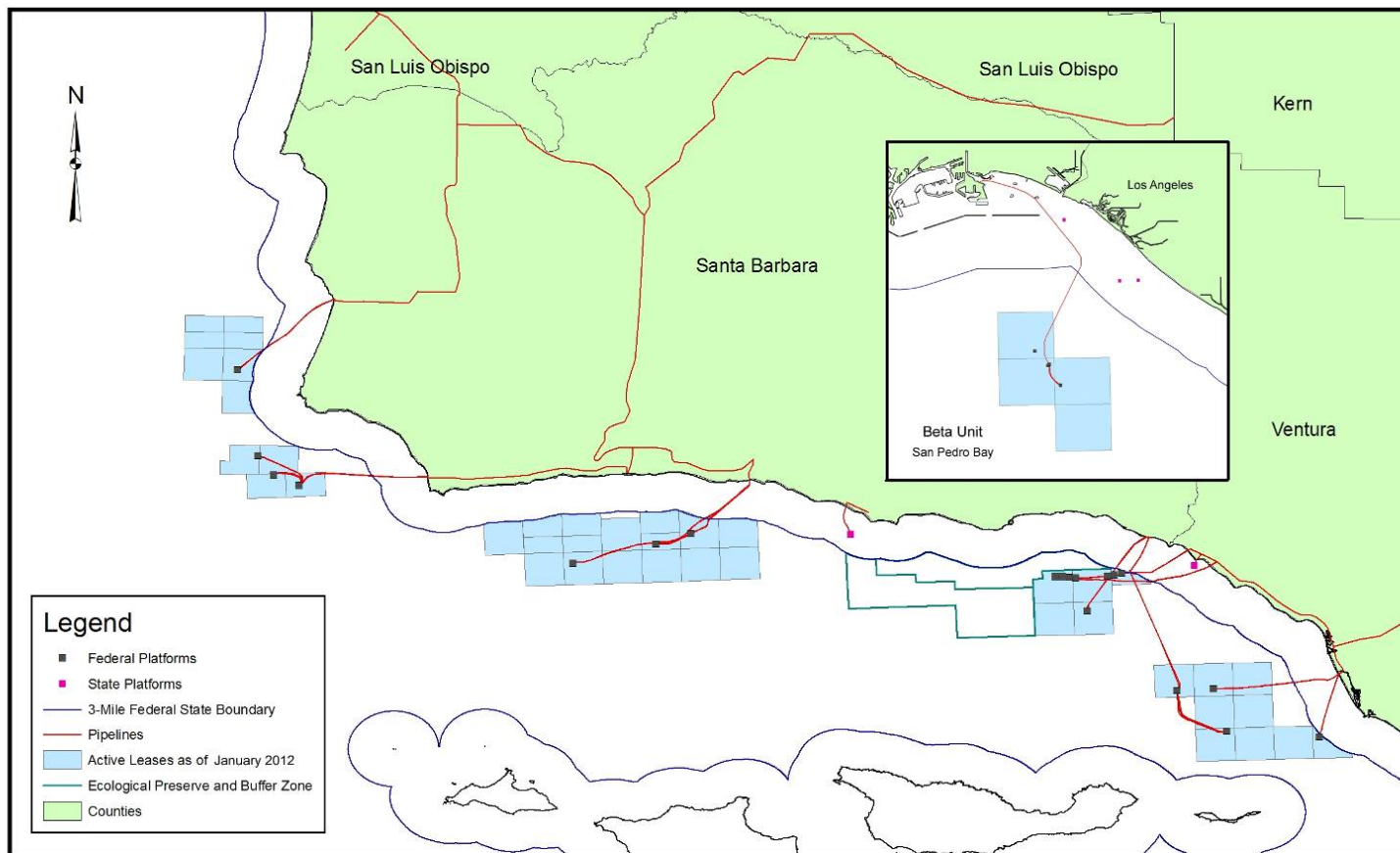
Pacific Region FY 2014 Study Outreach Efforts

- Reached out to over 30 external stakeholders for the FY 2014 Pacific Region's SDP



- Some of the ideas for the Pacific studies came from stakeholders
- Many of the proposals could result in partnerships





Pacific OCS Region Leases and Facilities





- 43 producing federal leases
- 23 platforms in federal waters
- Last oil and gas lease sale 1984





➤ **Research the role of platforms in the southern California marine ecosystem**

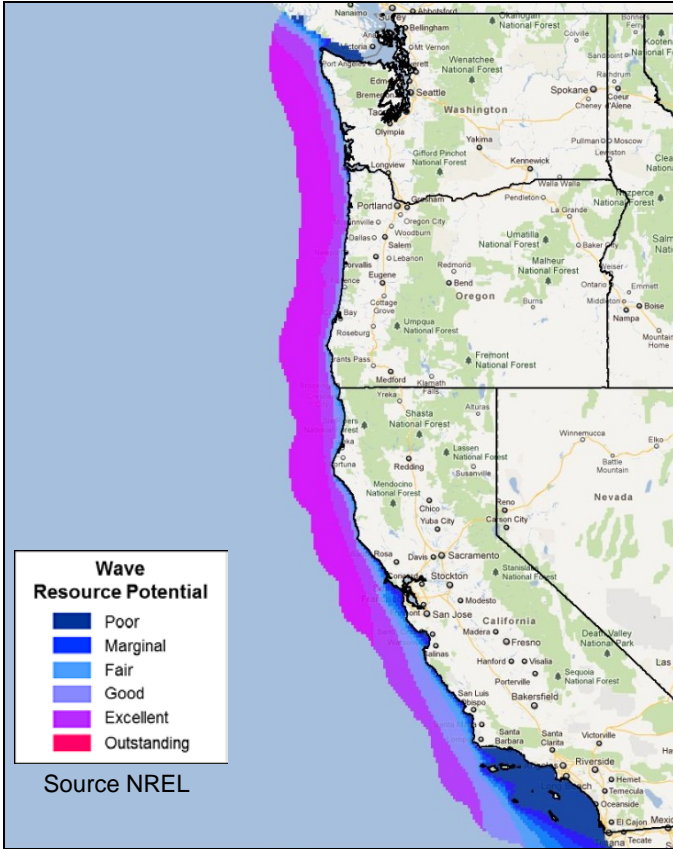
➤ **Study oil and gas operations within a regional context**

How do we update the Pacific oceanographic oil spill modeling capability for the OCS platforms?

Should we resample biodiversity surveys at MARINE sites to complete the decadal assessment?

➤ **Investigate potential impacts from removal or reefing of conventional energy structures**



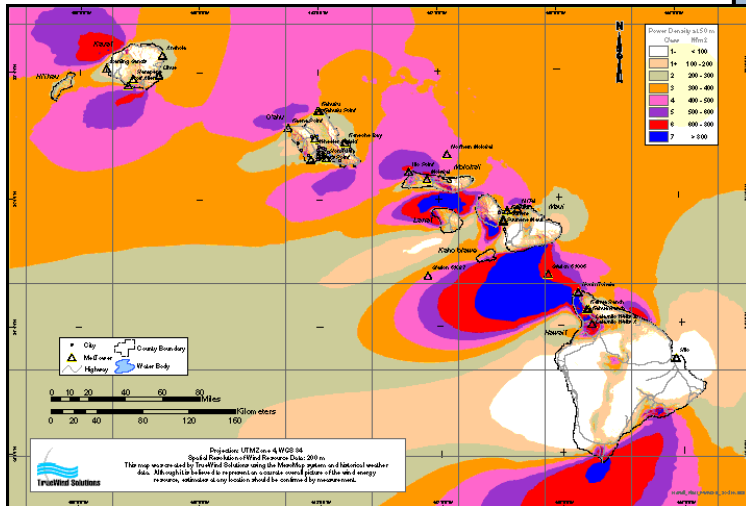


Wave Energy Conversion
BOEM OCS Renewable Energy Task Forces



Wind Energy Conversion

BOEM OCS Renewable Energy Task Forces





➤ **Expand our area of study for potential siting of projects to encompass the Pacific coast and Hawaii**

What are the year-round and diel patterns in habitat-use of seabirds off Oregon?

➤ **Complete foundational studies for renewable energy**

Will fishery-targeted crab species cross energized power cables to be harvested?

What short, directed studies can help us understand and develop mitigations for the impacts of offshore renewable energy?





➤ **Develop our approach, where appropriate, to include studies applicable to conventional and renewable energy**

Can we synthesize existing data and predictively model marine bird spatial distributions for the entire Pacific OCS?

What paleolandforms exist off the Pacific west coast and what is their essential fish habitat value?

When should the Pacific Region host an Information Transfer Meeting?

Will the DOI southern California long-term dataset allow for the prediction and detection of ocean acidification and climate change?

How should we collect and archive invertebrates from MARINE sites for deposition in the Smithsonian Institution?



Discipline	Title	Rank
PO	Expansion of West Coast Oceanographic Modeling Capability	1
IN (HE/SE)	Potential Impacts of Submarine Power Cables on Crab Harvest	2
MM	Data Synthesis and High-resolution Predictive Modeling of Marine Bird Spatial Distributions on the Pacific OCS	3
IN (HE/SE)	Archaeological and Biological Assessment of Submerged Landforms off the Pacific Coast	4
IM	West Coast Information Transfer Meeting	5
FE	Predicting and Detecting the Effects of Climate Change and Ocean Acidification Using Long-term Ecological Data	6
FE	Understanding and Mitigating the Effects of Marine Renewable Energy Technologies on the Coastal and Marine Environment in the Pacific OCS Region	7
HE	Collecting and Archiving Invertebrates from MARINE Sites for Deposition in the Smithsonian Institution with Local Replicate	8
HE	Year-round and Diel Patterns in Habitat-use of Seabirds off Oregon	9
HE	Strategic Resampling of Biodiversity Surveys at MARINE Sites: Completion of the Decadal Assessment	10

FE = Fates & Effects

HE = Habitat & Ecology

IM = Information Management

IN = Interdisciplinary

MM = Marine Mammals & Protected Species

PO = Physical Oceanography

SE = Social & Economic Sciences



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