OPAC Meeting Materials
August 19, 2008

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Oregon Ocean Policy Advisory Council
Draft Meeting Agenda*
Monday, August 18, 2008, 10 am – 4:30 pm – Territorial Sea Plan Working Group
Tuesday, August 19, 2008, 8:30 am – 4:30 pm – Regular Meeting
City Dance Hall, 107 Sixth Street, Garibaldi, Oregon

*Please note that this agenda is an attempt to give notice of the intended sequence of events at the meeting. Time or topics may change up to the last minute, but the Chair will try to make sure that public comment opportunities are related to discussion of major issues or decisions as indicated below.

Monday – Working Groups
City Dance Hall, Garibaldi

10:00 am Territorial Sea Plan Working Group will meet from 10 am to 4:30 pm to discuss development of recommended revisions to the Oregon Territorial Sea Plan. A detailed agenda will be posted on the OPAC website, www.oregon.gov/LCD/OPAC.

Monday Evening – OPAC Social

6:00 pm TBD

Tuesday – Regular OPAC Meeting
City Dance Hall, Garibaldi

8:30 am Welcome and Introductions – *Scott McMullen* (OPAC Chair), *Council Members*

8:35 am Review and Approval of Minutes of *last* OPAC Meeting (10 minutes) - *Scott McMullen* (OPAC Chair), *Council Members*
Scott will **review** the minutes and ask for amendments and council **adoption**, as amended.

8:45 am Marine Reserves Policy Guidance Document (75 minutes) – *Frank Warrens* (MRWG Chair)
Frank will lead a continuation of the **discussion** and final **approval** of the final draft of the Marine Reserves Guidance Document.

10:00 am Break (15 minutes)

10:15 am Public Comment (30 minutes) – *Scott McMullen* (OPAC Chair)
Members of the public who wish to provide comments to OPAC on the *Oregon Marine Reserves Policy Recommendations* document are asked to sign in on a comment sheet prior to the public comment period. **Available time will be divided among those signed up to speak. Members of the public with lengthy or detailed comments are advised to submit them in written form, as time limits will be strictly observed.**

10:45 am Marine Reserves Policy Guidance Document (75 minutes) – *Frank Warrens* (MRWG Chair)
Continued: Frank will lead a continuation of the **discussion** and final **approval** of the final draft of the Marine Reserves Guidance Document.

12:00 pm Working Lunch (45 minutes) – *Jay Charland* (OPAC Staff)
Jay will **present** information on the proper completion of state travel reimbursement forms to OPAC members.

There are several dining options available to the public a short walk from the City Dance Hall.

12:45 pm Public Comment (30 minutes) – *Scott McMullen* (OPAC Chair)
Members of the public who wish to provide comments to OPAC on topics other than the *Oregon Marine Reserves Policy Recommendations* document are asked to sign in on a comment sheet prior to the public comment period. **The available time will be divided among those signed up to speak. Members of the public with written comments are advised to submit them in written form, as time limits will be strictly observed.**

1:15 pm Report from the Science and Technical Advisory Committee (30 minutes) – *Jeff Feldner* (STAC Member)
Jeff will **report** on a STAC meeting held on August 6, 2008 in Corvallis. Topics may include: an update on the Size and Spacing Workshop Report; plans for an Economic Analysis Workshop; plans for a Social and Human Impacts Workshop; a recent grant to The Nature Conservancy from the National Fish and Wildlife Foundation; a proposed STAC meeting during the month of September.

1:45 pm Update on Proposal Process (15 minutes) – *Dave Fox* (ODFW) and *Cristen Don* (ODFW)
Dave and Cristen will **present** an update on the site proposal process and the plan for agency review of the proposals. OPAC will also be asked to **approve** the participation of STAC in the agency review process.

2:00 pm Break (15 minutes)

2:15 pm Territorial Sea Plan Working Group (75 minutes) – *David Allen* (TSPWG Co-Chair) and *Paul Klarin* (TSPWG Co-Chair)
David and Paul will **report** on the TSPWG meeting held on Monday, August 18.

3:30 pm Future Meetings (15 minutes) – *Scott McMullen* (OPAC Chair) and *Jay Charland* (OPAC Staff)
Scott will lead a discussion of future OPAC meetings for the remainder of 2008. The following dates are **proposed** for future OPAC meetings in 2008:

OPAC and MRWG. October 8.
OPAC. Thursday and Friday, October 23 and 24, in Florence.
OPAC. Monday, November 17 in Lincoln City.

3:45 pm Other Issues Raised by Members; Announcements of Coming Events (15 minutes) – *Scott McMullen* (OPAC Chair)

4:00 pm Adjourn

Contact Information: Jay Charland — 503 373-0050 x 253 jay.charland@state.or.us

Oregon Ocean Policy Advisory Council
DRAFT Meeting Summary
June 30, 2008
Department of State Lands Building
Salem, Oregon

Issues Decided/Positions Taken

- The summary of the May 2008 Ocean Policy Advisory Council (OPAC) meeting was approved as distributed.
- OPAC agreed by consensus to **Ed Bowles**' (Office of the Governor) request that the term "coastal community and ocean users" would include elected officials associated with the coast (i.e., cities, counties, tribes, state legislators, and ports)
- **Terry Thompson** (OPAC member) requested a presentation to OPAC on marine mammal issues. **Ed Bowles** (Office of the Governor) agreed to help get an expert from ODFW (Robin Brown) to an OPAC meeting in the near future. OPAC agreed to the proposal by consensus.
- On a motion by **Jim Good** (OPAC Member), the Council approved the Title "Oregon Marine Reserves Policy Recommendations" (OMRPR) for the document outlining OPAC's position on marine reserves. The motion was adopted by a vote of 7-6. Time index 2:25:40.
- OPAC agreed by consensus to additions to the Introduction section of the OMRPR clarifying the status of the document as a guide for the marine reserves process. Time index 3:41:20.
- OPAC agreed by consensus to change the word *our* to *its* on line 16, page 1, Overall Purpose of Oregon's Marine Reserve System section.
- OPAC reached consensus except one on text for the Overall Purpose of Oregon's Marine Reserve System section. Time index 4:00:00.
- OPAC agreed by consensus to present the words *social* and *economic* in bold type in the Marine Reserve Goal section, indicating they are defined in the appendix. Time index 4:01:20.
- OPAC agreed by consensus to the text of the Marine Reserve Goal section as amended. Time index 4:03:06.
- OPAC agreed by consensus to delete the word *planning* from the Marine Reserve Objectives, Principles, and Guidelines section. Time index 4:04:00.
- OPAC agreed by consensus to remove the term *biogeographic region* from the Marine Reserve Objectives, Principles and Guidelines section, Item 1. Time index 4:04:10.
- OPAC agreed by vote on the existing language in the Marine Reserve Objectives, Principles and Guidelines section, Item 2. Time index 4:12:10. Time index for the vote 4:16:30. Approved 9-3.
- OPAC agreed by consensus to new language in the Marine Reserve Objectives, Principles and Guidelines section, Item 3. Time index 4:17:10.

- OPAC agreed by consensus except one (considered equivalent to a vote) to changes made to the text of Item 5 of the Marine Reserve Objectives, Principles and Guidelines section during the discussion. Time index 4:18:25.
- OPAC retained by consensus the text as proposed by the Marine Reserves Working Group (MRWG) for Marine Reserves Planning Principles and Guidelines, Item 4. Time index 4:40:00.
- OPAC agreed by vote of 8-4 to delete Item 1 of Preliminary Marine Reserve Implementation Principles and Guidelines. At the same time, the phrase "ecosystem-based approach" in Overall Purpose of Oregon's Marine Reserve System is changed to bold type face and included in the definitions section. Time index 4:51:15.
- OPAC agreed by consensus to **Jim Good's** (OPAC Member) proposed language in Marine Reserve Planning Principles and Guidelines, Item 6 (size and spacing). Time index 5:06:43.

Action Items

- None

Presentations

- *West Coast Governor's Agreement* Jessica Hamilton of the Governor's Natural Resources Office gave a status report on the West Coast Governor's Agreement and answered OPAC questions.
- *Marine Reserve Enforcement* Lt. Jeff Samuels, Oregon State Police, gave a presentation on the OSP view of issues regarding enforcement of marine reserves in state waters.
- *Marine Reserve Community Meetings* Cristen Don (ODF&W) and Jeff Feldner (Or. Sea Grant) gave a report on the series of community meetings presented to the public on the MR site proposal process.

Next Meetings

Marine Reserves Working Group: TBD
Territorial Sea Plan Working Group: TBD
OPAC: August 2008. Date, time, and location TBD

Attendance

Members Present (voting): **David Allen** (Public at Large); **Jim Bergeron** (Ports, Marine Transportation, Navigation); **Paul Engelmeyer** (Statewide Conservation or Environmental Organization); **Jim Good** (Public at Large); **John Griffith** (South Coastal County Commissioner); **Robin Hartmann** (Coastal Conservation or Environmental Organization); **Robert Kentta** (Oregon Coastal Indian Tribes); **Scott McMullen** (North Coast Commercial Fisheries); **Brad Pettinger** (South Coast Commercial Fisheries); **Jim Pex** (South Coast Charter, Sport or Recreational Fisheries); **Fred Sickler** (Coastal Non-Fishing Recreation); **Terry Thompson** (North Coastal County Commissioner); **Frank Warrens** (North Coast Charter, Sport or Recreational Fisheries). [13]

Members Present (*ex officio)*: **Jon Allan** (Dept of Geology and Mineral Industries); **Dale Blanton** (Department of Land Conservation & Development); **Ed Bowles** (Governor's Office); **Jeff Feldner** (Oregon Sea Grant); **David Fox** (Oregon Department of Fish & Wildlife(ODFW)); **Onno Husing** (Oregon Coastal Zone Management Association); **Jim Myron** (OPRD); **Greg Pettit** (Department of Environmental Quality). [8]

Members Absent: **Jack Brown** (Coastal City Official); **Dalton Hobbs** (Dept of Agriculture); **Louise Solliday** (Department of State Lands); **Cathy Tortorici** (NOAA Fisheries). [4]

Staff: **Jay Charland** (Department of Land Conservation & Development, OPAC Principal Staff); **Laurel Hillmann** (Department of Parks & Recreation); **Steve Shipsey** (Department of Justice, OPAC Counsel).

Public Comment speakers (with affiliation if provided): **Gus Gates** (Our Ocean)**; Peg Reagan** (Conservation Leaders Network)**; Dean Ferguson; Commissioner Lucie LaBonte** (Curry County)**; John Holloway** (Recreational Fishing Alliance/Oregon Anglers)**; Peter Huhtala** (Pacific Marine Conservation Coalition (PMCC))**; Ben Enticknap** (Our Ocean)**; Robin Kaup** (KOF)**; Catherine Koehn; Lynn Porta; Alice Cascorbi; Jim McIntyre; Charlie Plybon** (Surfrider Foundation)**.**

Others in Attendance: **Hugh Link** (Oregon Dungeness Crab Commission); **Megan MacKay** (PMCC); **Susan Allan** (Our Ocean); **Greg Harlow** (Northwest Steelheaders); **Fran Recht** (Pacific States Marine Fisheries Commission, (PSMFC); **Cristen Don** (ODFW); **Paul Hanneman** (Pacific City Doryman's Association); **Christine Lastovica** (Partnership for Interdisciplinary Studies of Coastal Oceans (Pisco))**.**

Distributed Materials

Draft Meeting Agenda. 2 pages.

Draft Meeting Summary, OPAC. March 28, 2008. 4 pages.

Draft Oregon Marine Reserve Policy Guidance (June 20, 2008). 8 pages.

Issues for which complete (all but one in all cases) consensus was not reached at the 6/20/08 OPAC MRWG meeting. 3 pages.

Oregon State Police Fish and Wildlife Division. Recommendations to OPAC – Marine Reserve Areas. June 30, 2008. 1 page.

Memo to OPAC from David Allen and Paul Klarin regarding Rulemaking Advisory Group. June 30, 2008. 2 pages.

Video Index

Item	Time Index
Call to Order, Welcome & Introductions	0:01:00
Review and Approval of Minutes	0:03:45
West Coast Governors' Agreement	0:06:45
Marine Reserve Enforcement Issues	0:21:45
Territorial Sea Plan Working Group	0:57:55
Marine Reserves Community Meetings	1:17:30
Marine Reserves Guidance Document, session 1	2:13:15
Public Comment	2:29:55
Marine Reserves Guidance Document, session 2	3:39:00
Meeting adjorned	5:40:55

For a copy of the video record of this meeting, please contact Jay Charland at (503) 373-0050 x253 or at jay.charland@state.or.us.

OREGON MARINE RESERVE POLICY RECOMMENDATIONS

A REPORT TO THE GOVERNOR, STATE AGENCIES AND LOCAL GOVERNMENTS FROM OPAC

INTRODUCTION

This document was prepared by the Oregon Ocean Policy Advisory Council (OPAC). OPAC approved this document on *Month, Day, 2008*. This document is a policy recommendation only and should not be construed as formal state policy. It is simply a guide for the marine reserves process.

MARINE RESERVE DEFINITION

A **marine reserve*** is an area within **Oregon's Territorial Sea** or adjacent **rocky intertidal** area that is protected from all extractive activities, including the removal or **disturbance** of living and non-living marine resources, except as necessary for monitoring or research to evaluate reserve condition, effectiveness, or impact of stressors.

OVERALL PURPOSE OF OREGON'S MARINE RESERVE SYSTEM

The State of Oregon is considering the establishment of a **system** of fewer than ten marine reserves along its coast as part of an overall strategy in a continuing effort to move towards managing its marine waters and submerged lands using an **ecosystem-based approach**. The overall purpose of marine reserves is to provide an additional tool to help **protect**, sustain, or restore the **nearshore** marine ecosystem, its **habitats**, and **species** for the values they represent to present and future generations. Such action complements the collective efforts of Oregon, Washington, and California to manage the California Current in an ecosystem-based manner as expressed in the West Coast Governors' Agreement on Ocean Health (Gregoire, Kulongoski, and Schwarzenegger, 2007).

MARINE RESERVE GOAL

Protect and sustain a system of fewer than ten marine reserves in Oregon's Territorial Sea to **conserve** marine habitats and **biodiversity**; provide a **framework** for scientific research and effectiveness monitoring; and avoid significant adverse **social and economic impacts** on ocean **users** and coastal communities.

A system is a collection of individual sites that are representative of marine habitats and that are **ecologically significant** when taken as a whole.

MARINE RESERVE OBJECTIVES, PRINCIPLES AND GUIDELINES

The following **objectives** apply to the entire marine reserve process. The following principles and guidelines are designed to guide the proposal, selection, implementation and management of marine reserves. The objectives, principles and guidelines are not prioritized.

* Words that are in the definitions section (pages 4-8) are **bolded** the first time they appear in the text.

Draft Oregon Marine Reserve Policy Recommendations
Last revised based on changes made at the OPAC meeting on 6/30/2008

Marine Reserve Objectives

1. Protect areas within Oregon's Territorial Sea that are important to the natural diversity and abundance of marine organisms[1], including areas of high biodiversity[2] and special natural features[3].
2. Protect key types of marine habitat[4] in multiple locations along the coast to enhance **resilience** of nearshore ecosystems to natural and human-caused effects.
3. Site fewer than ten marine reserves and design the system in ways that are compatible with the needs of ocean users and coastal communities. These marine reserves, individually or collectively, are to be large enough to allow scientific evaluation of ecological effects, but small enough to avoid significant adverse social and economic impacts on ocean users and coastal communities.
4. Use the marine reserves as **reference areas** for conducting ongoing research and monitoring of reserve condition, effectiveness, and the effects of natural and human-induced stressors. Use the research and monitoring information in support of nearshore resource management and **adaptive management** of marine reserves.
5. Although marine reserves are intended to provide lasting protection, individual sites may, through adaptive management and public process, later be altered, moved, or removed from the system, based on monitoring and reevaluation at least every five years.

Marine Reserve Planning Principles and Guidelines

1. The public, including ocean users, coastal communities and other stakeholders, will be involved in the proposal, selection, regulation, monitoring, compliance and enforcement of marine reserves.
2. Outreach and public engagement will be an ongoing part of the marine reserves planning and implementation process. Available scientific and other information will be made available to the public through outreach and websites.
3. Science and **local knowledge** will be used in the planning process for marine reserves. Such information will also be used to monitor and adaptively manage them into the future.
4. The planning process will encourage coordinated and collaborative marine reserve proposals from communities of place or interest. Communities of place may include coastal counties, cities, and ports; communities of interest may include fishing organizations, fishery/gear groups, governmental and inter-governmental organizations, and non-governmental organizations. Priority consideration will be given to proposals developed by groups comprised of coastal community members, ocean users and other interested parties.
5. The design and siting of marine reserves will take into account the existing regulatory regimes (e.g., fisheries management, **ocean shore** management, watershed management, land use planning, and water quality regulations) along with existing and emerging uses such as buried cables, ocean outfalls, wave energy, and proximity to ports.
6. Size and spacing guidelines developed by the Science and Technical Advisory Committee (STAC) will be used to help understand potential ecological benefits of marine reserve site proposals, rather than dictate minimums or maximums needed. The potential for adverse social and economic impacts will also be a key factor on the size and spacing of reserves recommended by OPAC for further evaluation.

Preliminary[5] Marine Reserve Implementation Principles and Guidelines

1. Marine reserves as a system and each individual marine reserve will have a plan that includes clearly defined objectives, monitoring protocols, compliance and enforcement provisions,

effective management measures, and a commitment of long-term funding necessary to achieve its goals.

2. Marine reserves will be adequately enforced.
3. Marine reserves will be adequately monitored and evaluated in support of adaptive management. Cooperative and collaborative research will be encouraged as well as utilization of fishing vessels as research platforms. These activities will be compatible with the goal of conserving marine habitats and biodiversity.
4. Education and economic development opportunities that are compatible with the goal of conserving marine habitats and biodiversity will be encouraged.
5. Marine reserves are not intended to prevent marine transit, safe harbor, and beach access.
6. Significant adverse social and economic impacts of marine reserves on ocean users and coastal communities will be avoided and positive social and economic effects will be sought.

Start working from this point at the August meeting

7. Adequate baseline data will be collected at each site prior to excluding extractive activities (except for pilot reserves). The types and adequacy of baseline data, and the timing and methods of data collection will be driven by the research and monitoring objectives and sampling designs employed at each site.

NOTES

[1] This includes areas essential to marine organism life histories and behaviors. Examples include areas important for marine species reproduction, including nurseries, spawning areas, egg production sources, recruit aggregation areas, larval dispersal routes, and adult as well as juvenile movement between depths.

[2] Habitat types based on depth and bottom structure may serve as surrogates for organism community types.

[3] Examples of special natural features may include geological formations (such as canyons or pinnacles), seafloor vents, dominant oceanographic fronts, major river plumes, ocean current eddies or jets.

[4] An individual reserve can contain more than one habitat type. See definitions section.

Key Types of Marine Habitat for Marine Reserves	
Rocky intertidal	
Soft bottom subtidal	0-25 m (13.67 fathoms or 82 feet)
	greater than 25 meters depth
Hard bottom subtidal	Low **topographical** relief (0-25 m)
	High topographical relief (0-25 m)
	Low topographical relief (over 25 m depth)
	High topographical relief (over 25 m depth)
	Canopy-forming kelp (0-25 m)

Note: Rocky intertidal is between the extreme high tide line (EHTL) and extreme low tide line (ELTL). For the rest of the habitats, "0" represents the territorial sea coastal baseline of Mean Lower Low Water (MLLW).

[5] These implementation guidelines and principles are very preliminary during this planning stage. Actual implementation guidelines and principles will evolve as the process gets closer to implementation.

Draft Oregon Marine Reserve Policy Recommendations
Last revised based on changes made at the OPAC meeting on 6/30/2008

DEFINITIONS

Adaptive Management: a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs (BC Forest Service, 2006).

Canopy forming kelp: a sub-set (or ecotype) of hard bottom (rocky) subtidal habitat. Canopy forming kelp grows on many of Oregon's shallow rocky reefs, typically in waters between 5 and 25 meters (ODFW, 2006). Generally, this term is used to refer to canopy forming kelp species such as *Nereocystis* and *Macrocystis*.

Coastal Biodiversity: at its simplest, a term meaning the diversity of life forms and communities that occur in the coastal zone, including nearshore ocean waters. Diversity is a concept that means "variety or multiformity, a condition of being different in character and quality (Patrick, 1983, in Ray, 1988, in OPAC, 1994)." There is no single way to define, measure, or evaluate diversity of life; rather there are at least four interrelated ways:

- *species diversity*, which refers to the variety and abundance of species in an ecosystem;
- *ecological diversity*, which refers to the variety of types of biological communities found on earth;
- *genetic diversity*, which refers to the genetic variation that occurs among members of the same species; and
- *functional diversity*, which refers to the variety of biological processes or functions characteristic of a particular ecosystem. This may be the most important way of referring to biodiversity in a coastal management sense (OPAC, 1994).

The United Nations Convention on Biological Diversity defines biological diversity (aka biodiversity) as "the variability among living organisms from all sources, including, 'inter alia', terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems (UN, 1992)."

Conserve: to manage in a manner which avoids wasteful or destructive uses and provides for future availability (Oregon Statewide Planning Goals and OPAC 1994).

Disturbance: extraction of living organisms and non-living materials, or human induced changes to the environment that cause mortality of organisms.

Examples of disturbances may include:

- Dredging
- Dumping/Disposal
- Harvest of marine organisms
- Energy development
- Pipeline/conduit/cable placement
- Pollution discharge, point-source and non-point pollution
- Mining

Allowed activities will be established with the management plan for each site or through rulemaking.

Ecologically significant: contributing to biodiversity, resilience of the system and its populations and ecological communities.

Ecosystem: an ecosystem is a dynamic complex of plant, animal, and microorganism communities and the nonliving environment interacting as a functional unit. Humans are an

integral part of ecosystems. Ecosystems vary enormously in size; a temporary pond in a tree hollow and an ocean basin can both be ecosystems (Millennium Assessment, 2005).

Ecosystem-Based Approach: ecosystem-based management is an integrated approach to management that considers the entire ecosystem, including humans. The goal of ecosystem-based management is to maintain an ecosystem in a healthy, productive and resilient condition so that it can provide the services humans want and need. Ecosystem-based management differs from approaches that focus on a single species, sector, activity or concern; it considers the cumulative impacts of different sectors. Specifically, ecosystem-based management:

- emphasizes the protection of ecosystem structure, functioning, and key processes;
- is place-based in focusing on a specific ecosystem and the range of activities affecting it;
- explicitly accounts for the interconnectedness within systems, recognizing the importance of interactions between many target species or key services and other non-target species;
- acknowledges interconnectedness among systems, such as between air, land and sea; and
- integrates ecological, social, economic, and institutional perspectives, recognizing their strong interdependences (McLeod et. al., 2005).

Evaluation Criteria: the guidelines and/or rules that enable judgments, choices, or decisions to be made about how well individual marine reserve proposals address the goal and objectives about how such proposals might be fit together to form a recommended system of marine reserves.

Framework: a broad overview or outline composed of ideas or principles that are used to plan or decide something, within which details can be added in the future (e.g., a strategic framework for policy setting the context for individual programs and projects).

Goal: a clear, concise statement of the intended result or outcome toward which effort is directed; it is what you hope to accomplish or achieve over time. Goals are made operational through more specific objectives or tasks.

Habitat: the environment in which an organism, species, or community lives. Just as humans live in houses, within neighborhoods, within a town or geographic area, within a certain region, and so on, marine organisms live in habitats which may be referred to at different scales (OPAC, 1994).

Hard Bottom Subtidal: see rocky subtidal

Key Types of Marine Habitat:

- Rocky intertidal
- Soft bottom subtidal
  - 0-25 meters
  - greater than 25 meters depth
- Hard bottom subtidal
  - Low topographical relief (0-25 m)
  - High topographical relief (0-25 m)
  - Low topographical relief (over 25 m depth)
  - High topographical relief (over 25 m depth)
  - Canopy forming kelp (0-25 m)

Rocky intertidal is between the extreme high tide line (EHTL) and extreme low tide line (ELTL). For the rest of the habitats, "0" represents the territorial sea coastal baseline of

Mean Lower Low Water (MLLW). See the individual habitat types for definitions. 25 meters=13.67 fathoms or 82 feet.

Local Knowledge:

- *Traditional ecological knowledge* is the knowledge of a localized place that is passed down through time through social and cultural practices (Wedell, 2005).
- *Local fisheries knowledge* is a particular type of local knowledge acquired through experiences and observations made during fishing and related activities. It may include knowledge of: local distribution of fishes and habitats, unique underwater structures, geological features, ecological interactions, local fishing businesses, social dynamics of fishing, fishing communities' territories of use, local economics and networks of regional economies of which communities are a part, and local fishing culture (adapted from Hall-Arber et. al., 2002).
- *Local fisheries knowledge*: "Knowledge about commercial, subsistence, and recreational marine fishing/harvest, including the marine environment and species; fishing culture and society; fishing technology and practices; and business and economic aspects of fishing (NMFS, 2004)."
- *Local ecological knowledge:* local knowledge acquired through experiences and observations collected through activities such as bird watching, beach walking, tidepooling, charter boat fishing, whale watching, diving, surfing, and kayaking.

Marine Environment: those areas of coastal and ocean waters, the Great Lakes and their connecting waters, and submerged lands thereunder, over which the United States exercises jurisdiction, consistent with international law (Executive Order 13158, May 26, 2000).

Marine Protected Area (MPA): any area of the marine environment that has been reserved by Federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein (Executive Order 13158, May 26, 2000).

Marine Reserve: an area within Oregon's Territorial Sea or adjacent rocky intertidal area that is protected from all extractive activities, including the removal or disturbance of living and non-living marine resources, except as necessary for monitoring or research to evaluate reserve condition, effectiveness, or impact of stressors.

Nearshore: the area from the coastal high tide line offshore to the 30-fathom (180 feet or 55 meter) depth contour. However, this does not always stay within the state boundary of 3 miles. For the purposes of the planning process, marine reserves will be within the boundaries of Oregon's Territorial Sea as well as some rocky intertidal areas.

Objective: an action statement designed to help move toward the goal.

Ocean Shore Recreation Area: "Ocean shore" means the land lying between extreme low tide of the Pacific Ocean and the statutory vegetation line as described by ORS 390.770 or the line of established upland shore vegetation, whichever is farther inland. "Ocean shore" does not include an estuary as defined in ORS 196.800. "State recreation area" means a land or water area, or combination thereof, under the jurisdiction of the State Parks and Recreation Department used by the public for recreational purposes.

Oregon Territorial Sea: the waters and seabed between the coastal baseline of Mean Lower Low Water seaward to the three nautical mile (3.45 statute miles) limit of state jurisdiction (OPAC, 1994; Christie and Hildreth, 1999; ORS 196.405). The inner boundary that separates the territorial sea from internal waters is called the "baseline" and baselines are drawn across river mouths, along outer points of complex coastlines and offshore islands (Frohnmayer, 1986; Christie and Hildreth, 1999; Kalo et. al., 1999).

Draft Oregon Marine Reserve Policy Recommendations
Last revised based on changes made at the OPAC meeting on 6/30/2008

Protect: save or shield from loss, destruction, or injury or for future intended use (Oregon Statewide Planning Goals and OPAC, 1994).
Reference area: an area that provides a baseline to compare with non-reserve areas, specifically to evaluate changes in habitat, species abundance, and species composition due to natural changes, fishing and other human effects.
Replicate: any one reserve in which a particular habitat type is represented
Resilience: the amount of natural or manmade disturbance an ecosystem can absorb while retaining the same function, structure, and feedbacks (Walker and Salt, 2006). The concept of resilience also applies to the social and economic function of coastal communities.
Rocky Intertidal: hard substrates that fall between the extreme low tide and extreme high tide along the coastline that are alternately exposed and covered by tides (Fox et. al., 1994, ODFW, 2007). Oregon's coastline has approximately 82 linear miles (21%) of rocky intertidal habitat (ODFW, 2006).
Rocky Subtidal: (aka hard subtidal) habitat includes all hard substrate areas of the ocean bottom that are never exposed at low tides. They often are referred to as reefs, rocky reefs, rocky banks, pinnacles or hard bottom. Rocky subtidal habitats can exist anywhere in the subtidal region from just beyond the limit of the area exposed by tides (intertidal) out to the westward boundary of the Territorial Sea. Some rocky subtidal areas are extensions of rocky shoreline features such as headlands, cliffs or rocky intertidal, while others exist as isolated regions of rock surrounded by sandy substrate habitat. Some of these habitat areas are contained entirely within the Territorial Sea, while others extend westward into deeper water habitat. Rocky reefs may have relatively low topography barely raised above the surrounding seafloor, or may rise from the seafloor many meters, often with exposed rocks, seastacks or small islands (ODFW, 2006).
Socioeconomic (social and economic) impact: Scope and content to be determined.
Soft Bottom Subtidal: soft bottom subtidal habitat is defined as extending from the lowest reaches of the intertidal west to the outer extent of the Territorial Sea. Subtidal soft bottom habitats are diverse, as a result of distinct organism assemblages that are influenced by differences in substrate type (sand vs. mud), organic content and bottom depth. The Oregon coast primarily is an exposed, high energy environment, so most soft bottom subtidal areas are sandy. Mud can be a more pronounced bottom type in areas receiving less energy from water movement (e.g., isolated and sheltered embayments) and in deeper waters toward the outer edge of the Territorial Sea (ODFW, 2006).
Species: a population or collection of populations of closely related and similar organisms capable of interbreeding freely with one another but not with members of other species under natural conditions (OPAC, 1994).
System: a collection of individual sites that are representative of marine habitats and that are ecologically significant when taken as a whole.
Topographical relief: The three-dimensional complexity of the seafloor. In general, soft-bottom (mud and sand) seafloors have the least topographical relief, followed increasingly by pebbles, cobbles, boulders, rock ridges, and rock pinnacles. At larger spatial scales, submarine canyons and seamounts have high topographical relief.
User: an individual, group or entity that makes use of the territorial sea and adjacent rocky shoreline, whether it is for traditional, recreational, educational, commercial or other purposes.

REFERENCES CITED

British Columbia Forest Service. 2006. Definitions of Adaptive Management. Retrieved 10/11/07 from http://www.for.gov.bc.ca/hfp/amhome/amdefs.htm.

Christie, D.R. and R.G. Hildreth. 1999. Coastal and Ocean Management Law in a Nutshell. 2nd Edition (Nutshell Series). St. Paul, MN: West Group. 397 pp.

Fox, D., Merems, A., Miller, B., Long, M., McCrae, J., and J. Mohler. 1994. Oregon Rocky Shores Natural Resource Inventory. Oregon Department of Fish and Wildlife. 168 pp.

Frohnmayer, Dave, 1986. Opinions of the Attorney General of the State of Oregon, No. 8182; Vol.45. Oregon Department of Justice, Salem, Oregon.

Gregoire, C, Kulongoski, T. and A. Schwarzenegger. 2007. West Coast Governor's Agreement on Ocean Health. Retrieved 6/26/2008 from http://westcoastoceans.gov/docs/WCOceanAgreementp6.pdf

Hall-Arber, M., Dyer, C., Poggie, J., McNally, J., and R. Gagne. 2002. New England Fishing Communities. Cambridge, MA: MIT Sea Grant College Program. 417 pp.

Kalo, J.J., Hildreth, R.G., Rieser, A., D.R. Christie, and J.J. Jacobson. 1999. Coastal and Ocean Law: Cases and Materials. American Casebook Series. St. Paul, MN: West Group. 748 pp.

McLeod, K. L., Lubchenco, J., Palumbi, S.R., and A. A. Rosenberg. 2005. Scientific Consensus Statement on Marine Ecosystem-Based Management. Signed by 221 academic scientists and policy experts with relevant expertise and published by the Communication Partnership for Science and the Sea. Retrieved 8/15/07 from http://compassonline.org/?q=EBM.

Millennium Ecosystem Assessment. 2005. Ecosystems and human well-being: current state and trends: findings of the Condition and Trends Working Group. Edited by Rashid Hassan, Robert Scholes, Neville Ash. Retrieved 8/15/07 from http://www.maweb.org/en/Condition.aspx.

National Marine Fisheries Service (NMFS). 2004. Local Fisheries Knowledge Project: Definitions of ethnoecological research terms. Retrieved 10/17/2007 from http://www.st.nmfs.noaa.gov/lfkproject/02_c.definitions.htm

Ocean Policy Advisory Council (OPAC). 1994. State of Oregon Territorial Sea Plan. Retrieved 08/13/07 from http://www.oregon.gov/LCD/OCMP/Ocean_TSP.shtml.

Oregon Department of Fish and Wildlife. 2006. Oregon Nearshore Strategy. Oregon Department of Fish and Wildlife, Newport, Oregon. Retrieved 8/13/07 from http://www.dfw.state.or.us/MRP/nearshore/document.asp.

Oregon Department of Fish and Wildlife. 2007. Oregon Sport Fishing Regulations. Retrieved 11/16/2007 from http://www.dfw.state.or.us/resources/fishing/regulations_2007.pdf

United Nations. 1992. Convention on Biological Diversity. Rio de Janeiro. Retrieved 08/14/07 from http://www.cbd.int/convention/articles.shtml?a=cbd-02.

Walker, B.H. and D.A. Salt. 2006. Resilience Thinking: Sustaining Ecosystems and People in a Changing World. Washington DC: Island Press. 192 pages.

Wedell, V. 2005. Capturing Local Knowledge for Cooperative Fisheries Management Using a Participatory Geographic Information System (GIS) Approach in Port Orford, Oregon. Unpublished Master's Thesis. Marine Resource Management Program, College of Oceanic and Atmospheric Sciences, Oregon State University.

Complete consensus was not reached at the 6/20/2008 MRWG meeting for these items and they were not resolved at the 6/30/2008 OPAC meeting due to time constraints

Page 3, line 14-17: **Implementation Principles and Guidelines**
Jim B. wanted to insert language about baseline data. Language was provided by ODFW. Resolution was not reached on the language for this principle/guideline.

Page 3: **Notes**
John G. would like to delete all notes

Page 4, lines 5-28: **Definitions**
John would like to delete the definitions for: Canopy forming kelp, coastal biodiversity and conserve

Page 4, lines 29-40: **Definitions**
- John would like to add to the definition for disturbance: "...or human actions that cause an animal to react (per Marine Mammal Protection Act).
- Add a bullet to that same definition that reads, "Motoring or paddling through a designated area."

Page 4, lines 41-44 through Page 5, lines 1-2 and 22-24: **Definitions**
John would like to delete the definitions for: Ecologically significant, Ecosystem and Framework.

Page 6, line 20-22, line 31-34: **Definitions**
- John would like to delete the definitions for: Marine Environment
- John would like to change the language in the definition for "nearshore" to read: the area from the coastal high tide line offshore to the 30-fathom (180 feet or 55 meter) depth contour. For the purposes of the planning process, marine reserves will be within the boundaries of Oregon's Territorial Sea as well as some rocky intertidal areas." This removes the language about part of the nearshore not necessarily following the 3 mile Territorial Sea boundary.

Page 7, line 1-9: **Definitions**
John would like to delete the definitions for: Protect, Replicate, and Resilience

Page 7, lines 43-45: **Definitions**
John would like alter the definition for "user" to read: an individual, group or entity that makes use of the territorial sea for traditional, recreational, educational, or commercial purposes.

August 14, 2008

Memo To: Ocean Policy Advisory Council

From: Jay L. Rasmussen, Chair, Scientific and Technical Advisory Committee

Subject: Committee Update

The Science and Technical Committee is pleased to provide this memo to the Ocean Policy Advisory Council at the Council's meeting in Garibaldi, Oregon, on August 19, 2008.

August 2008 Committee Meeting

Responding quickly to a rather unique opportunity to have nearly every STAC member together with ODFW staff, the Committee met on August 6, 2008, at Oregon State University, for slightly less than two hours, beginning at 2:00 pm. The Committee was particularly interested in better understanding the revised process and timetable for marine reserves planning. Dave Fox and Cristen Don of the Oregon Department of Fish and Wildlife reviewed the changes in process, timetable, and expectations with the Committee. Ed Bowles of the Department joined in our meeting.

The Committee particularly focused on questions related to the course review process following submitted proposals, with a September 30 deadline for submission to the Department and the subsequent finer review. Since the review by the Department and other agencies may benefit from scientific and technical expertise, a variety of scenarios were discussed on how that review may happen, what needs may be experienced, and any potential STAC roles in that process.

Committee members agreed to a subsequent meeting, tentatively scheduled for September 4, 2008, on the OSU campus in Corvallis, that may focus on potential roles for the Committee. In anticipation that the agency review may have a variety of questions spanning a significant set of expertise, the Committee chair will reprise the Committee's list of experts we have provided OPAC previously. That list will be reviewed and revised by the Committee members.

In addition, Committee members expressed a wish to check with the Ocean Policy Advisory Council as to whether the Committee's continued involvement in the marine reserves process -- in whatever form is found appropriate -- remains the desire of the Council. A response from the Council Chair would be appreciated.

The Committee was provided an update by Dick Vandershhaef regarding The Nature Conservancy's recent grant to assist in marine reserves science and information.

Committee Updates:

Size and spacing workshop. A report to the Council may be available for distribution at the August 19 Council meeting. Assembling the report and verifying the various sections with the participants has been a significant effort. The Committee wishes to recognize member Selina Heppell and student Heather Reiff for this work. Thanks to Selina, Jack Barth, and Craig Young for their leadership of and participation in the workshop.

Economics workshop. The Committee is going forward with a Technical Workshop on Economic Data and Analysis of Marine Reserves in late September or early October under the leadership of member Susan Hanna, with assistance from member David Sampson. Letters inviting participation have been sent and Oregon Sea Grant is working with invitees on choosing the best date. The workshop will be Corvallis or Newport. An initial agenda is attached.

Human dimensions workshop. The Committee chair is discussing with various scholars the potential for a workshop this late fall on the human dimensions of marine reserves. The Committee will discuss this at its September meeting.

DRAFT AGENDA

Ocean Policy Advisory Council Scientific and Technical Advisory Committee

Technical Workshop on Economic Data and Analysis of Marine Reserves

Date TBD [Oct 7-8; Oct 20-21]

Library Seminar Room

Hatfield Marine Science Center Newport, OR

Workshop Objective: To assess the status of economic data and analysis with regard to siting and management of marine reserves in Oregon waters and to reach a series of findings and conclusions regarding the availability and adequacy of data.

Reporting Objective: To produce a report for STAC adoption and subsequent submission to OPAC. The report will identify economic questions relevant to: the size, siting and management of marine reserves, describe appropriate economic methodology, assess the existence and adequacy of economic data and identify economic data gaps.

Workshop format: Workshop will be open to the public, but discussions will be limited to invited participants. Public comment periods will be held at the end of each morning and afternoon session.

Day 1

9:00 – 9:30	Welcome and introductions
	Review of workshop format and ground rules
	Review and approval of agenda
9:30 – 10:30	Economic questions relevant to marine reserves
	Presentation: OPAC objectives (10 minutes)
	OPAC member
	Discussion
10:30 –10:45	Break

10:45 –11:45	Economic analytical methods relevant to OPACs marine reserve objectives
	Discussion
11:45 –12:00	Public comment
12:00 –1:00	Lunch provided
1:00 – 2:00	Economic analyses of marine reserves: Lessons learned from California
	Presentation: MLPA Science Advisory Panel (30 minutes)
	Discussion
2:00 – 3:30	Presentations: Models and Software
	[15 minutes presentation/15 minute discussion]
	2:00 – 2:30 Ocean Tools – Ecotrust
	2:30 – 3:00 Update on State GIS Activities
	3:00 – 3:30 TBD
	[Proposals for other solicitations to be solicited]
3:30 - 3:45	Break
3:45 – 4:45	Economic data requirements
	Discussion
4:45 – 5:00	Public comment
5:00	Adjourn for the day
	Dinner on your own

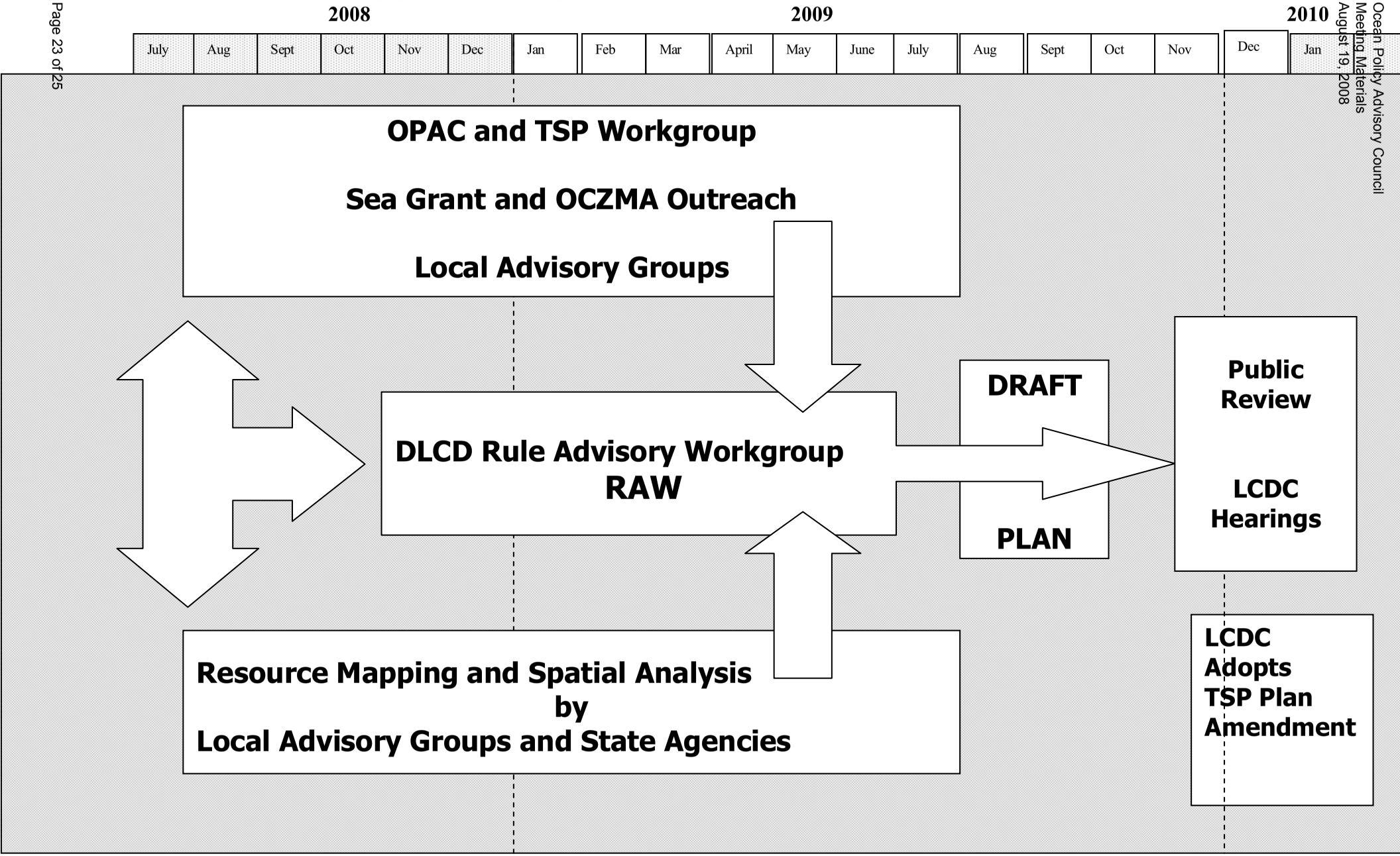
DAY 2

8:30 – 9:00	Discussion: Review of Day 1 and modification of Day 2 agenda
9:00 – 10:30	Inventory of existing economic data
	Market goods and services
	Non-market goods and services

	Discussion
10:30- 10:45	Break
10:45 – 11:30	Identification of data gaps
	Cost of bridging the gaps
	Discussion
11:45 – 12:30	Workshop findings and recommendations
	Discussion
12:30 – 1:00	Public comment
1:00	Adjourn
	Lunch provided

DLCD Wave Energy Planning

Schematic Timeline 2.0



October 2008

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		Sep 30 **Proposals Due**	1	2	3	4
5	6 **Proposals on Web**	7	8	9	10	11
12	13	14	15	16 **State Agencies Coordination Meeting**	17	18
19	20	21	22	23 **OPAC** State Agencies Present Analysis	24 **OPAC** Discuss Analysis	25
26	27	28	29	30	31	

State Agencies:
Review & Analysis of Proposals

November 2008

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17 **OPAC** **Final Decision on Recommended Sites**	18	19	20	21	22
23	24	25	26	27	28	29
30	Dec 1 **Due** **Recommendation to Governor**					