



OregonWaveEnergy
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Wave Energy Development in Oregon

Licensing & Permitting Requirements

Prepared by Pacific Energy Ventures on behalf of the Oregon Wave Energy Trust

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The Oregon Wave Energy Trust – with members from fishing and environmental groups, industry and government – is a nonprofit public-private partnership funded by the *Oregon Innovation Council* in 2007. Its mission is to serve as a connector for all stakeholders involved in wave energy project development – from early stage community engagement to final deployment and energy generation – positioning Oregon as the North America leader in this nascent industry and delivering its full economic and environmental potential for the state. OWET’s goal is to have ocean wave energy producing 2 megawatts of power – the equivalent of about 800 homes – by 2010 and 500 megawatts of power by 2025. www.oregonwave.org



Pacific Energy Ventures is a consulting and business development firm specializing in strategic marketing, project management, governmental affairs, and policy in the renewable energy sector. With extensive experience in all aspects of project management, our firm has the advantage of a multi-dimensional perspective on the industry. Pacific Energy Ventures provides unique insights into the challenges of balancing environmental and socioeconomic concerns with emerging business objectives. We excel at navigating through complex markets and identifying sound opportunities in a rapidly evolving business climate. www.peventuresllc.com

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List of Abbreviations & Acronyms

ACHP	Advisory Council on Historic Preservation
AEAU	Alternative Energy and Alternative Use Program
ALP	Alterative Licensing Process
APE	Area of Potential Effect
BA	Biological Assessment
BO	Biological Opinion
ACOE	Army Corps of Engineers
CFR	Code of Federal Regulations
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DEIS	Draft Environmental Impact Statement
DEQ	Oregon Dept. of Environmental Quality
DLA	Draft License Application
DLCD	Dept. of Land Conservation and Development
DOGAMI	Department of Geology and Mineral Industries
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPAct 2005	Energy Policy Act of 2005
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
HPMP	Historic Properties Management Plan
IHA	Incidental Harassment Authorization
ILP	Integrated Licensing Process
ITS	Incidental Take Statement
LOA	Letter of Agreement
MMPA	Marine Mammal Protection Act
MMS	Minerals Management Service
MOA	Memorandum of Agreement
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPS	National Park Service
OAR	Oregon Administrative Rules
OCMP	Oregon Coastal Management Program

ODFW	Oregon Dept. of Fish and Wildlife
ODOJ	Oregon Dept. of Justice
OPRD	Oregon Parks and Recreation Dept.
OR DEQ	Oregon Dept. of Environmental Quality
OR DLC	Oregon Dept. of Land Conservation and Development
OR DSL	Oregon Department of State Lands
ORS	Oregon Revised Statutes
OWRD	Oregon Water Resources Dept.
PA	Programmatic Agreement
PAD	Preliminary Application Doc
PATON	Private Aids To Navigation
PFMC	Pacific Fisheries Management Council
PPA	Preliminary Permit Application
SHPO	State Historic Preservation Office
THPO	Tribal Historic Preservation Office
TLP	Traditional Licensing Process
USACE	United States Army Corp of Engineers
USCG	United States Coast Guard
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service

Commonly Used Terms

Authorization: permit, license, or other form of permission

Action Agency: the agency performing the federal action. Action Agencies may structure their respective application processes in different ways. For example, FERC usually requires applicants to prepare EA/ EIS documents in support of its NEPA decision process as part of the permit application.

Federal Action: any action carried out, authorized, or funded by a federal agency

Lead Agency: the state or federal agency responsible for leading the review of an application for a certain authorization, and for issuing a decision on the authorization.

Participating Agencies: those agencies likely to participate in the authorization review process.

Relevant State and Federal Agencies: may include, but are not limited to ACOE, USFWS, NOAA, NMFS, BLM, BIA, EPA, NPS, USFS, FEMA, ACHP, MMS, DSL, DEQ, DLC, ODFW, OPRD, SHPO, THPO, WRD, and ODOJ.

Introduction

This is an informational document provided by the Oregon Wave Energy Trust (OWET) for the purposes of developing a broad understanding of the current regulatory framework among stakeholders, regulators, and developers in the wave energy industry. To that end, this document provides a high-level summary of federal and state authorizations that may be applicable to wave energy projects.¹ It is intended as an informational tool to support stakeholders in navigating the regulatory framework by identifying the most relevant state and federal regulatory requirements, explaining the authorization processes, and identifying the lead and participating agencies for each authorization.² This document is organized into four main sections, as follows:

- i. *State Permits, Licenses & Authorizations*- Oregon state permitting and licensing requirements
- ii. *Federal Permits, Licenses & Authorizations*- Federal permitting and licensing requirements
- iii. *Action Agency Requirements for Federal Permits & Licenses*- Additional authorizations required in order for federal action agencies to issue a permit or license.
- iv. *Regulatory Roadmaps*- Each roadmap represents a different scale project as follows:
 - a. **Roadmap A** Licensing & Permitting Process for Non-Grid Connected, Pilot Project
 - b. **Roadmap B** Licensing & Permitting Process for Grid Connected, Commercial Project (using FERC TLP for hydroelectric license)
 - c. **Roadmap C** Licensing & Permitting Process for Grid Connected, Pilot Project (using FERC Pilot process for hydroelectric license)

The Regulatory Roadmaps are process schematics that provide a general description of the regulatory processes involved in siting wave energy projects within Oregon's *Territorial Sea*. Although the default process for a FERC license is the Integrated Licensing Process (ILP), Roadmap A depicts the Traditional Licensing Process (TLP) and the use of a Settlement Agreement (SA). This approach is depicted because it allows for a high level of stakeholder and agency involvement in project planning; specifically, the use of a SA provides an opportunity for all parties to collaboratively discuss and address the potential effects of a proposed project so that effective studying and monitoring, mitigation, and adaptive management are used to account for these issues.

Consultation-both formal and informal-with federal, state and local agencies and stakeholders is a critical component of the licensing and permitting processes. Consultation generally involves analysis of a proposed project to determine any potential effects, and developing effective studying and monitoring, mitigation, and adaptive management measures necessary to prevent, minimize and/or mitigate project effects. Consultation should start as early as possible to ensure that the environmental documentation- the draft Environmental Assessment (EA) or Environmental Impact Statement (EIS)- contains sufficient information to support all the necessary permits and authorizations. ***All relevant federal and state agencies should be notified of FERC and ACOE filing actions and comment periods, and are likely to be involved in pre- and post-filing consultations. These agencies may include, but are not limited to: USCG, NMFS, USFWS, EPA, USFS, BLM, NPS, BIA, ACHP, DLCD, ODFW, DSL, DEQ, WRD, OPRD, ODOJ.***

¹ This document includes those authorizations that would most likely be required for the majority of projects; as such, every possible approval for specific projects is not within the scope of this document. Further, local permit requirements, land use approvals, etc. are not within the scope of this document; as such, they are not included.

² For the purposes of this document, the "lead" agency is the agency responsible for authorizing the proposed action (e.g., FERC issuing a license or ACOE issuing a permit), and "participating agencies" (e.g., NOAA, FWS) are those agencies likely to participate in the authorization review process.

Notice

Draft versions of this document were reviewed by various state and federal agency officials in Oregon, and the content has been revised to reflect the reviewers' feedback as accurately as possible. The feedback and recommendations provided by those who reviewed this document is greatly appreciated. While every effort has been made to see that this document is accurate, readers should reference official statutes, rules and regulations to verify accuracy. Readers should also be aware that changes in statutes, rules or regulations may have gone into effect since the date of publication. This book does not attempt to offer legal advice and readers should consult their own attorney.

State Permits & Licenses

Summary Table

Authorization	Primary Legal Authority	Lead Agency	Participating Agencies	Anticipated Process Time
State Hydroelectric License	ORS 543, Hydroelectric Projects	WRD	ODFW, DLCD, OPRD	At least 8 months
Ocean Energy Facility Lease	OAR 141-140	DSL	ODFW, ODOJ	6 months
Temporary Use Permit				
Removal-Fill Permit	ORS 196.795-990	DSL	ODFW	90-120 days
Ocean Shore Alteration Permit	ORS 390, OAR 736-020	OPRD	All affected federal, state & local agencies ³	At least 60, up to 105 days
Coastal Zone Consistency Certification	§307 CZMA, Ocean Resources Management Act	OR DLCD	ODFW, DSL, DEQ, WRD, OPRD	45-90 days, or up to six months
§401 Water Quality Certification	§401 Clean Water Act	OR DEQ	WRD, ODFW	1 yr ⁴

³ Depending on size/scope of project, may include ACOE, DSL, DOGAMI, DLCD, SHPO, Tribal officials, & local/county agencies.

⁴ State agencies are often unable to make a certification decision within the one year review period. This is explained in detail within the CWA 401 section of this chapter.

State Hydroelectric License

Issued by the Oregon Water Resources Department (WRD), it authorizes the licensee to acquire and hold the right to the use of waters within the state, including waters over which the state has concurrent jurisdiction, and to construct, operate and maintain dams, reservoirs, power houses, conduits, transmission lines, and all other works and structures necessary or convenient for the use of the waters in the generation and utilization of electricity.

- A license may be issued to any qualified person for a period not exceeding 50 years.
- If the project is subject to regulation by the Federal Energy Regulatory Commission (FERC), the term shall be concurrent with and expire upon expiration of the federal license for the project.
- Any person who proposes to operate a hydroelectric project in Oregon shall apply for a state preliminary permit. Additionally, any person who applies to FERC for a preliminary permit to operate a hydroelectric project shall, at the same time, apply for a state preliminary permit.

Primary Legal Authority

- *ORS 543, Hydroelectric Projects*: Sets minimum standards for development of hydroelectric power and public interest considerations in the state; establishes a high level of protection for Oregon's natural resources.
 - No activity may result in a net loss of wild game fish, recreational opportunities, or natural resources. The Commission may consider and allow mitigation.
 - *ORS 543.255* requires determination of cumulative impacts of proposed hydroelectric projects and a consolidated review of projects, which will be used to support the department's decision to approve or deny an application.
 - *543.014 Exemption for Wave Energy Projects*: A wave energy project is exempt from regulation under this chapter, except as provided in ORS 543.050 (3), 543.055 and 543.060 if:
 - i. The project generates electricity from wave energy;
 - ii. The project is located within Oregon's Territorial Sea;
 - iii. The nominal electric generating capacity, as defined in ORS 469.300, of the project does not exceed five megawatts; and
 - iv. A license under the Federal Power Act is not required to construct or operate the project.
- The Water Resources Commission shall use the rules under *OAR 690-051* to process applications for permits to appropriate water for hydroelectric projects, preliminary permits and hydroelectric licenses under ORS Chapters 537 and 543.

http://arcweb.sos.state.or.us/rules/OARS_600/OAR_690/690_051.html

Lead Agency: Water Resources Department www.wrd.state.or.us/

Participating Agencies: Oregon Department of Fish and Wildlife (ODFW), Department of Land Conservation and Development (DLCD), Oregon Parks and Recreation Department (OPRD)

Process Time: At least eight months⁵.

⁵ After receiving an application, OWRD has 15 days to make a completeness determination. If determined complete, then OWRD has 30 days to determine that the proposed use is not prohibited, assign a priority date, and complete an initial review determination. The OWRD then sends this to the applicant, and the applicant has 14 days to stop the process and get a refund. After the 14 days, the clock officially starts, and OWRD has a maximum of 180 days to get to a final order. This includes public notice of the initial review determination, completion of agency review, issuance of a proposed final order, protest period, and issuance of a final order. If there is a protest, OWRD will hold a contested case and the process will take another 180 days (if simple) to 270 days (if complex) to get to a final order following the contested case. See ORS ch 537.

Ocean Energy Facility Lease

A written authorization issued by the Department of State Lands (DSL) to a person to use a specific area of state-owned submerged and submersible land for one or more ocean energy conversion devices comprising a commercial operation. The term of an ocean energy facility license shall be the same as the term of the license or similar authorization granted by FERC that authorizes the project to operate as a commercial operation.

- Before submitting an application, applicants must meet with DSL staff, affected ocean users, and other government agencies having jurisdiction in the Territorial Sea to discuss possible use conflicts, impacts on habitat, and other issues related to the proposed project.
- When submitting an application, the applicant shall include an analysis of, and any relevant supporting documents or studies that demonstrate how the use requested for authorization comply with the requirements of Statewide Planning Goal 19, the Oregon Ocean Resources Management Plan, and the Territorial Sea Plan.
- Once submitted, DSL will circulate the application to various local, state and federal agencies, other interested stakeholders including, but not limited to tribal governments, port districts, business and community organizations, fisher, recreationist and conservation groups, and the holders of Department-issued authorizations within or immediately adjacent to the requested area for review and comment.

Primary Legal Authority

- *Rules Governing the Placement of Ocean Energy Conversion Devices On, In or Over State-Owned Land Within the Territorial* http://www.oregon.gov/DSL/LW/docs/final_wave_energy_rules_07.pdf
- *Oregon Administrative Rules 141-140*: Governs the placement of ocean energy monitoring equipment, ocean energy conversion devices, and all associated equipment.
http://arcweb.sos.state.or.us/rules/OARS_100/OAR_141/141_140.html

Lead Agency: Department of State Lands <http://www.oregon.gov/DSL/index.shtml>

Participating Agencies: Oregon Department of Justice (ODOJ), Oregon Department of Fish and Wildlife (ODFW)

Process Time: Application must be submitted at least 180 calendar days prior to installation of equipment or devices.

Temporary Use Permit

A written authorization, issued by DSL, to use a specific area of state-owned submerged and submersible land for placement of ocean energy monitoring equipment or energy conversion devices for a research or demonstration project. The term of a temporary use permit shall be the same as the term of the Preliminary Permit or similar authorization granted by FERC for the demonstration project.⁶ The holder of a temporary use permit shall be given a first right to apply for an ocean energy facility lease for the area specified in the temporary use authorization. If such first right to apply is not exercised within 30 calendar days of the expiration date of the temporary use authorization, the first right to apply shall expire.ⁱⁱ

Primary Legal Authority: *Oregon Administrative Rules 141-140*: Governs the placement of ocean energy monitoring equipment, ocean energy conversion devices, and all associated equipment.

http://arcweb.sos.state.or.us/rules/OARS_100/OAR_141/141_140.html

Lead Agency: Department of State Lands

Participating Agencies: ORDJ, ODFW, State Historic Preservation Office (SHPO)

Process Time: Application must be submitted at least 180 calendar days prior to installation of equipment or devices.

Removal-Fill Permit

Also issued by DSL, this authorization allows short-term use, usually less than one (1) year, of a specific area of publically owned submerged and/or submersible land for a specific use under specific terms and conditions.

- Required for the placement of the anchoring structures and cables associated with any ocean energy project (ORS 196.805).
- Projects that require a DSL Removal-Fill Permit and a federal permit from the USACE may use a joint permit application form.

Primary Legal Authority: *Oregon Removal-Fill Law (ORS 196.795-990)*: Requires people who plan to remove, alter or fill materials in state waters to obtain a permit from DSL; applicable to cables and anchoring devices that would rest or be buried on the ocean floor. (Applies to the Removal-Fill Permit.)

http://arcweb.sos.state.or.us/rules/OARS_100/OAR_141/141_085.html

Lead Agency: Department of State Lands

Participating Agencies: ODFW

Process Time: 90-120 days from receipt of complete application.

⁶ Except for educational/research institutions conducting a research project.

Ocean Shore Alteration Permit

A permit for a structure, appurtenance or other addition, modification or alteration, including habitat restoration, constructed, placed or made on the ocean shore; a permit for a pipeline, cable line, or conduit placed on or under the ocean shore; or a permit for the removal of products from the ocean shore. Generally, this permit is issued by the Oregon Parks and Recreation Department (OPRD). However, if another agency is authorizing a transmission line (or other alteration) that will cross the ocean shore, then that agency will act as the lead for the Ocean Shore Alteration Permit and the OPRD should be included as a participating agency on the authorization decision.

Primary Legal Authority

- [ORS 390](#): Gives OPRD authority to regulate ocean shore alterations that may be needed for the onshore component of a wave energy facility, including the construction of shoreline protective structures, dune grading and other sand alterations, and the routing of pipelines and cables beneath the ocean shore.
- [Oregon Administrative Rule 736-020](#): Implements the statutory mandates in *ORS 390* to protect and preserve the scenic and recreational values and public rights in the ocean shore, permit certain types of development according to standards of review and grant emergency permits where property is in imminent peril of destruction by the Pacific Ocean or natural forces.

Lead Agency: Oregon Parks and Recreation Department

Participating Agencies: All affected federal, state and local government agencies (depending on the location, size and scope of the project). Including, but not limited to: USACE, DSL, DOGAMI, DLCD, ODFW, SHPO, Indian Tribes and local Counties and Cities.

Process Time: At least sixty days, but up to 105 days if a public hearing is required⁷.

⁷ The Department must act on a permit application within 60 days of receipt unless a hearing is held, in which case it must act within 45 days after the hearing [ORS 390.650(4)]. The applicant may appeal the Department's decision to the Director within 30 days, who must schedule a hearing within 30 days, and who then must issue a final decision within 45 days after the hearing [ORS 390.659(1)-(3)].

Coastal Zone Consistency Certification

§307 of the Coastal Zone Management Act (CZMA) requires that any federal action occurring in or outside of Oregon's coastal zone must be consistent with the OCMP, as well as the enforceable policies or programs that have been incorporated into the OCMP (e.g., land use planning statutes, TSP, the Removal-Fill Law, water quality standards, the Oregon Beach Bill). The CZMA recognizes the importance of energy facilities and includes language to ensure states have a rational process for siting these facilities in their coastal zones, which considers the national interest in energy production as well as the national interest in protecting coastal resources. If a proposed project is located within a state's coastal zone or would affect a resource within a state's coastal zone, then the applicant must certify that the project is consistent with the state's coastal zone management policies.

In Oregon, DLCD is designated the primary agency for coordination of ocean resources planning activities and the State Coastal Management Agency for purposes of carrying out and responding to the Coastal Zone Management Act. The lead state agency often coordinates with other state resource agencies in determining consistency with the enforceable policies of the state. Oregon state law establishes the interagency coordination process and the decision implementation framework that applies to the siting and regulation of wave energy facilities in the Territorial Sea (ORS 196.425).

A Coastal Zone Certification requires both a summary of the effects of the project on coastal uses and resources and a set of findings demonstrating that the proposed activity will be consistent with state enforceable policies. The certification process generally consists of four main phases.

- i. Applicant prepares consistency certification along with necessary data and information⁸;
- ii. DLCD performs an application completeness review;
- iii. DLCD conducts the consistency review;
- iv. DLCD issues a concurrence or an objection⁹.

As an alternative to a simple decision of concurrence, a state may issue a conditional concurrence. If the conditions of the concurrence are acceptable to the federal authorizing agency, they will be incorporated into the federal permit or license. For example, FERC applicants must provide a description of those conditions and assess the conditions in the appropriate section of the EA/EIS that is prepared and submitted with the license application. If those conditions are not acceptable to the federal agency, a conditional concurrence has the same effect as an objection. When a state issues an objection, the federal license or permit cannot be issued. A project applicant may file an appeal with the Secretary of Commerce showing grounds for overriding the state's objection.

Primary Legal Authority:

Coastal Zone Management Act, 16 U.S.C. 1451, et seq. <http://coastalmanagement.noaa.gov/consistency/welcome.html>
Ocean Resources Management Act (ORS 196.405-515) <http://www.oregon.gov/LCD/docs/goals/goal19.pdf>

Lead Agency: OR Department of Land Conservation & Development

Participating Agencies: ODFW, DSL, DEQ, WRD, OPRD. Relevant federal agencies may also assist in the review.¹⁰

Process Time: Reviews generally take 45-90 days, but can take up to six months¹¹

⁸ All "necessary data and information" includes copies of all federal, state, and local license and permits applications.

⁹ If DLCD fails to furnish the required notification within six months after receipt of its copy of the applicant's certification, the state's concurrence with the certification will be presumed.

¹⁰ In the case of a CZMA dispute, NOAA's Office of Ocean and Coastal Resource Management (OCRM) would provide mediation.

¹¹ Reviews will not commence until all applications for other federal, state and local permits have been submitted and are actively being processed. Also, the applicant's consistency certification should include all relevant environmental and biological documents; therefore, the review process generally does not begin until NEPA and ESA documents (DEIS, BA) are available.

§ 401 Water Quality Certification

The purpose of §401 of the Clean Water Act (CWA) is for states to use this process to ensure that no federal license or permit authorizes an activity that would violate the state water quality standards or become a future source of pollution. Applicants for a federal authorization (e.g., FERC license, ACOE §10 Permit) to construct or operate a facility that may result in discharge to navigable waters of the U.S. must provide the federal agency a certification from the state that the activity is consistent with applicable provisions of the CWA and with other water quality requirements set forth by the state¹². Applicants for a FERC license must file evidence of a request for water quality certification with FERC within 60 days after the Commission issues its Notice of Ready for Environmental Analysis.

A CWA §401 Certification is a written determination, issued by the Oregon Department of Environmental Quality (DEQ) that an activity subject to § 401 of the Clean Water Act (CWA) complies with applicable provisions of the CWA and with other water quality requirements set forth by the State of Oregon. Applications for certification must be filed with the Department of Environmental Quality (DEQ), except for applications filed with the ACOE pursuant to OAR 340-048-0032. DEQ coordinates its application review with the Water Resources Department, but issues the certification independently for all hydroelectric projects licensed by FERC. DEQ assesses a broad range of impacts, including pollution, temperature, turbidity, and flow to determine if a proposed activity will have negative impacts on water quality.

Public notice takes place when DEQ is ready to issue or deny the certification. If DEQ grants water quality certification, it is in effect saying that the proposed activity will comply with state water quality standards. Additionally, a DEQ may “conditionally grant” certification by placing limitations or conditions on the certification to ensure compliance with the water quality requirements.

DLCD may deny certification if the applicant does not demonstrate that the project will comply with applicable provisions of the CWA and with other water quality requirements set forth by the state. If certification is denied, the federal licensing or permitting agency is prohibited from issuing a permit or license.

States may also waive water quality certification, either affirmatively or involuntarily. If the state fails to act on a certification request within one year after receipt of a complete certification request, then it forfeits its authority to grant or deny certification.

Primary Legal Authority:

Clean Water Act §401: <http://www.epa.gov/watertrain/cwa/>

OAR 340-048: http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_048.html

Lead Agency: Department of Environmental Quality (DEQ): <http://www.oregon.gov/DEQ/>

Participating Agencies: WRD, ODFW

Process Time: Upon receipt of a complete application, DEQ has up to one year to make a decision.¹³

¹² Depending on the scope and size of the project, each separate facility component, such as advanced water power energy conversion devices, anchoring systems, and transmission cables, may require a separate certification.

¹³ However, rather than risk a rejection, applicants may withdraw and resubmit an application at DEQ’s request to allow the agency another year to review.

Federal Permits & Licenses

Summary Table

Authorization	Primary Legal Authority	Lead Agency	Participating Agencies	Anticipated Process Time
Preliminary Permit	Federal Power Act, EPAct 2005	FERC	Relevant federal and state agencies	At least 60 days
Federal Hydroelectric License				3+ years
ACOE §404 Permit	Clean Water Act	ACOE	EPA, USFWS, NMFS	60-120 days, more if need EIS ¹⁴
ACOE § 10 Permit	Rivers & Harbors Act	ACOE	USFWS, NMFS	60-120 days, more if need EIS ¹⁴
Private Aids to Navigation Permit	Coast Guard Regulations	USCG	ACOE, state resource agencies	Average 3 months
Coastal Zone Consistency Certification ¹⁵	§307 CZMA, Ocean Resources Management Act	OR DLCD	ODFW, DSL, DEQ, WRD, OPRD	45-90 days, or up to six months
§401 Water Quality Certification ¹⁵	§401 Clean Water Act	OR DEQ	WRD, ODFW	1 yr ¹⁶

¹⁴ ESA Consultation can take 135 days, which may affect the process time for the ACOE Section 10 and 404 Permits.

¹⁵ Certain federal statutes provide for federal laws and policies to be implemented by designated state agencies. In Oregon, the Department of Land Conservation and development is responsible for reviewing an applicant's Federal Hydroelectric License application for consistency with enforceable policies of the State (see page 12 for an explanation of OR CZM procedures). Similarly, the Department of Environmental Quality is responsible for verifying compliance with the Section 401 of the Clean Water Act (see page 13 for an explanation of OR WQC procedures).

¹⁶ State agencies are often unable to make a certification decision within the one year review period. This is explained in detail within the CWA 401 section of this chapter.

FERC Preliminary Permit

Before seeking a license from the Federal Energy Regulatory Commission (FERC), a project proponent has the option of first applying for a preliminary permit. A preliminary permit, issued for up to three years, maintains priority to apply for a license on that site while the permit holder determines the project's feasibility, consults with stakeholders, performs baseline studies and prepares to apply for a license.¹⁷ A preliminary permit does not authorize construction or operation of a facility. Once the preliminary permit has been granted, permit holders must submit reports containing specific information, including a schedule of activities and target dates, and periodic reports on the status of its studies. <http://www.ferc.gov/industries/hydropower/gen-info/licensing/pre-permits.asp>

Formal consultation is not required when applying for a Preliminary Permit. However, anyone may submit comments or a motion to intervene in accordance with the requirements of Rules of Practice and Procedure.¹⁸ The Commission will consider all comments filed in making its decision whether or not to issue a preliminary permit, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments or motions to intervene should be received within 60 days from the issuance date of the notice of the preliminary permit application, unless otherwise specified in notice.

Primary Legal Authority: § 4(f) of the FPA authorizes FERC to issue preliminary permits for the purpose of enabling prospective applicants for a hydropower license to secure the data and prepare the materials that must accompany an application for a hydrokinetic license. Additional responsibilities given to FERC under the EPAct of 2005 stipulate that FERC regulate the transmission and wholesale sales of electricity in interstate commerce; monitor and investigate energy markets; and oversee environmental matters related to hydroelectric projects and major electricity policy initiatives

Lead Agency: Federal Energy Regulatory Commission <http://www.ferc.gov>

Participating Agencies: Relevant federal and state agencies

Process Time: At least 60 days.

¹⁷It is not necessary to obtain a preliminary permit in order to apply for or receive a license. A preliminary permit holder is not required to file a license, and a developer may study a project without holding a preliminary permit. However, holding a preliminary permit does give a developer preference over any competitors who file applications for projects at the same site during the preliminary permit term.

¹⁸ 18 CFR § 385.210 , 211 and 214

Federal Hydroelectric License

Pursuant to the Federal Power Act (FPA), advanced water power projects must be licensed by FERC. A Federal Hydroelectric License, which may be issued for a term of up to 50-years¹⁹, gives the licensee authority to construct and operate a hydroelectric project. FERC has three primary licensing processes: Integrated Licensing Process (ILP), the default, Traditional Licensing Process (TLP), and Alternative Licensing Process (ALP).²⁰ Consultation periods and procedures will vary depending on the type of process used and the size and scope of the project. Each of the licensing processes will entail a substantial level of consultation. For an explanation of the differences between these processes, please refer to FERC's "Licensing Handbook." http://www.ferc.gov/industries/hydropower/gen-info/handbooks/licensing_handbook.pdf

Project proponents interested in a short-term license to test new technologies may request to use the *Hydrokinetic Pilot Project Licensing Process*. Criteria for pilot projects generally include the following: 1) small; 2) short-term; 3) not located in sensitive areas; 4) removable and able to be shut down on short notice; and 5) able to be decommissioned with site restoration at end of license term. Pilot projects are generally intended for testing technology devices and studying sites. The purpose of the expedited licensing process for pilot projects is to provide an opportunity to prove the emerging technology devices, determine appropriate sites, and gather information on environmental and other effects of the devices. For additional information, see FERC's *Hydrokinetic Pilot Project Criteria and Draft Application Checklist*. http://www.ferc.gov/industries/hydropower/indus-act/hydrokinetics/pdf/pilot_project.pdf

FERC's extensive licensing system provides the framework through which many other local, state, tribal, and federal approvals may be obtained. Additionally, the FPA requires license applicants to obtain lands or other rights needed to construct, operate, and maintain the hydroelectric project, and applicants must provide evidence of compliance with state and local requirements before implementing an action authorized by a FERC license.

Primary Legal Authority: *Federal Power Act (Title 18 CFR), Energy Policy Act of 2005 (EPAAct 2005)*²¹

Lead Agency: FERC <http://www.ferc.gov>

Participating Agencies: Relevant federal and state agencies.

Process Time: Varies depending on project size and location, as well as the type of licensing process. Once a license application is deemed complete, it generally takes approximately one to two years for issuance of an original license. The licensing process may take less time if an applicant uses a *Settlement Agreement*.²² Under the ILP, pre-filing consultation and studies are generally conducted over two to three years, and a license is issued once the application is deemed complete. For a pilot project, a license may be issued within six to twelve months from the filing of a complete application. <http://www.ferc.gov/whats-new/comm-meet/092106/H-1.p>

¹⁹ A standard license can be issued for a shorter period of time as well, which may be appropriate for projects that do not meet pilot criteria but would still benefit from phased build out (e.g., projects located near ecologically sensitive areas).

²⁰ A license applicant must request FERC to approve the use of the TLP or ALP.

²¹ Additional responsibilities given to FERC under EPAAct 2005 stipulate that FERC regulate the transmission and wholesale sales of electricity in interstate commerce; monitor and investigate energy markets; and oversee environmental matters related to hydroelectric projects and major electricity policy initiatives.

²² A Settlement Agreement (SA) allows for a high level of stakeholder and agency involvement in project planning; specifically, the use of a SA provides an opportunity for all parties to collaboratively discuss and address the potential effects of a proposed project so that effective studying and monitoring, mitigation, and adaptive management are used to account for these issues.

404 Permit

Enacted to conserve and restore the quality of the nation's waterways, §404 of the Clean Water Act (CWA) requires authorization for dredge and fill activities for activities in waters of the U.S., including certain wetlands. The 404 permit program is administered jointly by EPA and the U.S. Army Corps of Engineers (ACOE). The ACOE handles the actual issuance of permits, and it determines whether a particular area of land is a wetland or water of the U.S. The ACOE also has primary responsibility for ensuring compliance with permit conditions, although EPA plays a role in compliance and enforcement.²³

The ACOE can authorize dredge and fill activities with a standard individual permit, a letter-of-permission, a nationwide permit, or a regional permit. Based on the level of impacts associated with a proposed project, the ACOE will make a determination on what type of permit review and authorization is appropriate. Authorizations expire within 2-5 years from the date of issuance; however, they may be renewed if the ACOE is notified at least one month prior to expiration.²⁴ Depending on the scope of the project and construction methods, certain activities associated with advanced water power renewable energy projects (e.g., transmission cables) may require a §404 permit.

In its application review, the ACOE will consult with federal and state agencies, to evaluate potential impacts, such as effects on fish and wildlife, water quality, navigation, historic, cultural, scenic and recreational values, and economics. The inter-agency consultation process also involves review and negotiations to identify conservation measures that can help protect and mitigate potential effects. Before issuing a decision on a Standard Individual Permit, the ACOE will provide a 15 to 30 day public notice period. Also, the ACOE must provide notice of and opportunity for public hearings before issuing a permit.

If a project could affect a threatened or endangered species or its critical habitat, then the ACOE must consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) before issuing an authorization. Additionally, the project applicant may be required to submit a Biological Evaluation²⁵.

Primary Legal Authority

§ 404 of the Clean Water Act <http://www.usace.army.mil/cw/cecwo/reg/sec404.htm>

Lead Agency: U.S. Army Corps of Engineers (ACOE) <http://www.usace.army.mil/>

Participating Agencies: Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS)

Process Time: Usually 60 to 120 days, but if an Environmental Impact Statement (EIS) is required the process time will increase.¹⁴

²³ For example, EPA can object to Corps issuance of a 404 permit if serious disagreements arise.

²⁴ The permit renewal process will take into account whether significant changes have occurred to the project area or facility.

²⁵ A Biological Evaluation includes a description of the species in the area, the impact the proposed project may have on the species, and measure to be taken to minimize impact to the species and their habitat.

§ 10 Permit

In order to prohibit the obstruction or alteration of navigable waters, any structures or activities (e.g., anchoring cables, aids to navigation) occurring in or affecting the navigable waters of the U.S., including the Territorial Seas and the Outer Continental Shelf²⁶, are subject to authorization by the ACOE. The ACOE can authorize activities by a standard individual permit, letter-of-permission, nationwide permit, or regional permit.

Based on the level of impacts associated with a proposed project, the ACOE will make a determination on what type of permit is needed. For example, Aids to Navigation may be authorized by a nationwide permit if they are approved by and installed in accordance with requirements of the U.S. Coast Guard. (33 CFR 330.5(a)(1)). However, if the ACOE can exercise its authority through mandatory FPA §4(e) conditions to the license, it is possible that structures and activities that are part of a project authorized by a FERC license may not require a § 10 Permit.²⁷

If a project may affect threatened or endangered species (or their designated critical habitat), then the ACOE must consult with NMFS and FWS before making a permit decision; additionally, permit applicants will be required to submit a Biological Evaluation describing the species in the area, the impact the project may have on the species or its critical habitat, and measures that can be taken to minimize impacts. Before issuing a decision on a Standard Individual Permit, the ACOE will provide a 15 to 30 day public notice period. Also, the ACOE must provide notice of and opportunity for public hearings before issuing a permit.

Primary Legal Authority

§ 10 of the Rivers and Harbors Act: Prohibits the obstruction or alteration of navigable waters of the U.S., unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War.
www.usace.army.mil/cw/cecwo/reg/rhsec10.htm

33 CFR 322, Permits for Structures or Work in or Affecting Navigable Waters of the United States- Describes the special policies, practices and procedures to be followed by the ACOE in review of applications for a § 10 Permit.

*Fish & Wildlife Coordination Act*²⁸: Provides authority for the USFWS to review and comment on the effects of fish and wildlife of activities proposed to be undertaken or permitted by the ACOE.

Lead Agency: U.S. Army Corps of Engineers (ACOE) <http://www.usace.army.mil/>

Participating Agencies: US Fish & Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), State Historic Preservation Office (SHPO)

Process Time: Usually 60 to 120 days, but if an EIS is required the process time will increase.¹⁴

²⁶ Areas that are leased from the MMS may or may not require a Section 10 Permit. An evaluation of the impact of the proposed activity and/or structures will determine whether or not a permit is required. 33 CFR 322.5(f)

²⁷ Since “Section 4(e) of the Federal Power Act provides for approval of plans for hydroelectric power projects”, this approval by FERC “normally will obviate the need for a Department of Army permit under section 10 of the 1899 River and Harbor Act.” 33 CFR §221(f)(1).

²⁸ 16 U.S.C. 661-667e; 48 Stat.401

Private Aids to Navigation Permit

Because advanced water power technology devices are located in the marine environment, these projects will need to comply with U.S. navigation standards. Before deploying any structure, the owner/operator must apply for U.S. Coast Guard (USCG) authorization to properly mark the structure, and navigation aids require prior ACOE permit approval for the work being done. Navigation aids for marine renewable energy projects will be installed and maintained by the project owner/operator (not by the USCG), which classifies the markings as *Private Aids to Navigation (PATON)*.

In order to establish PATON markings in waters regulated by the federal government, it is mandatory to obtain either a permit or letter of no objection. The approved markings are required to remain in place until the structure is removed, or otherwise directed by the Coast Guard District Commander.

<http://www.uscg.mil/d13/dpw/docs/PATONGuide12Jul06.pdf>

Primary Legal Authority: *Navigation & Navigable Waters, 33 CFR, Parts 62, 64, 66:* Defines the U.S. Aids to Navigation System (Part 62), explains the required Marking of Structures (Part 64), and authorizes the USCG to regulate Private Aids to Navigation (PATON).

Lead Agency: United States Coast Guard <http://www.uscg.mil/>

Participating Agencies: ACOE, state agencies

Process Time: Average is three months, but this can vary depending on the project.

Action Agency Requirements for Federal Permits & Licenses

Summary Table

Authorization	Primary Legal Authority	Lead Agency	Participating Agencies	Anticipated Process Time
NEPA Documentation (EA/EIS)	National Environmental Policy Act	FERC <i>for grid connected</i> , ACOE <i>for non-grid connected</i>	Relevant federal, state and local agencies	2-6 months EA, 1yr EIS ²⁹
§7 ESA Consultation ³⁰	Endangered Species Act	NMFS, USFWS	FERC, ACOE, USCG, NMFS	135+ days ³¹
Marine Mammal Consultation	Marine Mammal Protection Act	NMFS & USFWS	None specified	120 days or 6-24 months ³²
Essential Fish Habitat Consultation	Magnuson-Stevens Act	NMFS	Regional Fisheries Management Council	30-60 days ³³
Fish and Wildlife License Conditions	Fish and Wildlife Coordination Act	USFWS, NMFS	State resource agencies	Varies
Migratory Bird Consultation	Migratory Bird Treaty Act	USFWS	FERC, ACOE, state resource agencies	Varies
§106 NHPA Consultation	National Historic Preservation Act	SHPO/THPO	ACHP, FERC, ACOE	At least 30 days for each stage of consultation ³⁴

²⁹ Process time is per NEPA document; multiple NEPA documents may be required.

³⁰ One coordinated review may occur, but multiple ESA consultations could be required.

³¹ Process time is per consultation; multiple consultations may be required.

³² Process time will vary depending on complexity and the NEPA documentation required.

³³ Process time may vary if the review is concurrent with an ESA Biological Opinion.

³⁴ NHPA Consultation stages: 1) Concurrence on APE; 2) No adverse effect to cultural resources; and/or 3) Concurrence on mitigation measures.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) was enacted to ensure that federal agencies evaluate the potential environmental impacts of a proposed action and reasonable alternatives to those actions *before* authorizing the action. NEPA provides a framework to identify and assess environmental effects and reasonable alternatives to the proposed actions. The federal action agency, which is the agency issuing the license, lease or permit, is expected to utilize alternatives and/or mitigation to avoid or minimize impacts so that the purpose and need for the proposed action is accomplished in a manner that does not result in significant environmental effects.

The federal action agency documents the NEPA process by first determining that either 1) the proposed action is categorically excluded from detailed environmental review, or 2) the proposed activity requires a detailed environmental review and documentation containing information about the proposed project, alternatives considered, and likely environmental effects. If a categorical exclusion does not apply, then the federal agency prepares either an Environmental Assessment³⁵ (EA) or an Environmental Impact Statement (EIS). Whether an EA or an EIS is prepared depends on the quantity and complexity of the issues identified during the scoping period.

If substantial issues are not identified in the scoping period, agency staff will prepare an EA indicating that project is not likely to have significant effects, along with a Finding of No Significant Impact (FONSI). If substantial issues are identified, the agency will prepare an EIS³⁶. In some cases, the action agency may tier its NEPA document off a prior EIS or a programmatic EIS. Additionally, the federal NEPA process may be coordinated with state environmental review processes conducted for state permitting and leasing determinations.

Stakeholder consultation usually involves government agencies and the public. Government agencies participate as either the action agency or a cooperating agency. The federal action agency is responsible for executing the NEPA process and for documenting its evaluation. Any federal, state, tribal or local agency having expertise with respect to a particular environmental issue or jurisdiction by law may participate in the NEPA process as a cooperating agency. Cooperating agencies assist the action agency by participating in the scoping process, developing information and preparing environmental analyses on issues with which the cooperating agency has special expertise. However, cooperating agencies are precluded from intervening in the proceeding.³⁷

Members of the public (individuals or organizations) and agencies that are not cooperators can participate in the NEPA process by consulting during study development and data interpretation, providing comments on the licensing application, participating in scoping of issues, filing of recommendations and conditions, and reviewing and commenting on the draft EA or EIS. The action agency must take into consideration all comments received from the public and other parties on the NEPA documents during the comment period.

Primary Legal Authority: *National Environmental Policy Act, 40 CFR Parts 1500-1508*

<http://www.epa.gov/Compliance/nepa/index.html>

Lead Agency: If a proposed project is grid connected FERC is the lead; if not, ACOE is the lead.

Participating Agencies: Relevant federal and state agencies

Process Time: The regulations for implementing NEPA do not set a strict time frame for the process as a whole; instead, federal agencies are expected to set time limits appropriate to the individual steps in the NEPA process. It usually takes two to six months for an EA and a year or more for an EIS.

³⁵ FERC may prepare a single EA, or a draft and a final EA depending on the scope of the issues.

³⁶ When appropriate, a project applicant may use mitigation measures to reduce project impacts below the significance level, obviating the need for the agency to prepare and EIS.

³⁷ Intervening to become a party to the proceeding is a required step to establishing legal standing. Interveners can still provide substantial review and recommendations for NEPA analyses, which the action agency can address at its discretion.

Endangered Species Act §7 Consultation

The Endangered Species Act (ESA) is a federal statute designed to protect and conserve endangered and threatened fish, marine mammals, turtles, wildlife, and plant species and their habitats. The ESA is administered together by the “Services.” NMFS administers consultations that pertain to marine and anadromous species, and FWS administers consultations that pertain to terrestrial and freshwater species. Pursuant to § 7(a)(2) of the ESA, federal action agencies are obligated to consult with the appropriate Service whenever the proposed action may affect a listed species. The purpose of this consultation is to assist the federal agency in ensuring that the proposed action and its related activities do not jeopardize any threatened or endangered species and/or their critical habitats.³⁸

License and permit applicants are encouraged to document and implement a due diligence process that includes impact avoidance, minimization, enhancement, monitoring, and adaptive management to address unforeseen impacts to endangered and threatened species and their critical habitats. FERC applicants are required to include a discussion of the status or results of informal or formal consultation in their license application. Generally, an applicant will prepare a draft biological assessment³⁹ (BA) under the supervision of the action agency⁴⁰ and in cooperation with the Service. Once complete, the applicant will submit the BA to the action agency (e.g., FERC, ACOE) for its adoption and submission to the Service. Under the FERC licensing process, FERC’s NEPA documentation includes an ESA section that serves as the final BA to the Service. Any additional consultation after this is FERC’s responsibility.

If the action agency determines from the BA that the proposed action is not likely to have adverse impacts *and* the Service concurs with this determination, then the consultation process is complete. However, if the Service does not concur with such determination, or if the action agency determines that the proposed action is likely to adversely impact an ESA-listed species or its critical habitat, then the action agency must initiate formal consultation. To initiate formal consultation, a written request must be submitted to the Service.⁴¹

During formal consultation, the Service develops a “jeopardy analysis” and uses this analysis to make informed decisions about the action’s effects. If the Service’s analysis concludes that the proposed project is not likely to jeopardize the species and/or its critical habitat, then the Service will issue a “no jeopardy” biological opinion (BO), along with an Incidental Take Statement (ITS) detailing the amount and extent of expected incidental take, and terms and conditions that the applicant and the action agency must take to minimize impacts. If the Service’s analysis concludes that the proposed project is likely to jeopardize the species and/or adversely impact its critical habitat, then the Service will issue a “jeopardy” BO, including any “reasonable and prudent alternatives” (“RPAs”) to the action that would prevent adverse impacts.⁴² Issuance of the BO concludes formal consultation.

Primary Legal Authority: § 7 of the Endangered Species Act <http://www.epa.gov/lawsregs/laws/esa.html>

Lead Agency: NMFS and/or USFWS

Participating Agencies: FERC, MMS, ACOE, USCG, USFS, NPS

Process Time: 135 days, with extensions that can allow the process to last a year or more⁴³

³⁸ 50 CFR 402.11 provides for “early consultation,” which is designed to reduce the likelihood of conflicts between listed species or critical habitat and proposed actions and occurs prior to the filing of an application for a Federal permit or license. Although early consultation is conducted between the Service and the Federal agency, the prospective applicant should be involved throughout the consultation process.

³⁹ The BA must be completed within 180 days after its initiation. 50 CFR 402.12(i).

⁴⁰ For a FERC license issued under the ILP, if the applicant is the Commission’s non-federal designee for informal consultation under the ESA, a draft BA is required [18 CFR, section 5.18(b)(3)(ii)].

⁴¹ The letter should describe: the action to be taken, the specific area, species or critical habitat that may be affected by the action, the manner in which the species or habitat may be affected, analysis of cumulative impacts, relevant reports (EA, EIS, BA), and other relevant information. Requirements for initiation of formal consultation are found in 50 CFR 402.14(c).

⁴² If no RPA can be developed, the action cannot move forward. However, the applicant or the action agency may apply to the ESA Committee for an exemption from the results of the ESA § 7 Consultation.

⁴³ Details on duration and extension of formal consultation may be found in 50 CFR 402.14(e).

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) makes it illegal “take” any marine mammal without prior authorization from NMFS. “Take” is defined as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill any marine mammal.⁴⁴ Authorizations may be granted to conduct scientific research, such as conducting surveys of abundance to determine habitat use during preliminary baseline studies, or for incidental taking by disturbance or injury during construction, installation, and operation of a new wave energy facility.⁴⁵ Additionally, for marine mammals listed under the ESA, an MMPA authorization must be issued in order for an Incidental Take Statement to be valid.

The MMPA includes two authorization processes: an *Incidental Harassment Authorization (IHA)* and a *Letter of Authorization (LOA)*. Each of these authorizations provides for the incidental, but not intentional, take of small numbers of marine mammals while engaging in a specified activity (other than commercial fishing), provided that NMFS finds that the take will have a negligible impact on the species.

The issuance of MMPA permits and authorizations is a public process that may involve notice and comment rulemaking and is subject to NEPA. As such, NMFS will perform a NEPA review when issuing an authorization for marine mammal take. If NMFS believes the lead federal agency’s NEPA document sufficiently analyzes marine mammal issues, then it may decide that a Categorical Exclusion is appropriate and simply adopt the federal agency’s NEPA document. Otherwise, NMFS will prepare its own NEPA document for the issuance of the MMPA permit.

An *Incidental Harassment Authorization (IHA)* authorizes harassment to marine mammals from short-term activities as long as impacts on the species or stock are negligible. An IHA is only valid for up to one year, but it may be renewed prior to expiring. An IHA is generally issued if the proposed activities do not hold potential for serious injury or mortality, or if the potential for serious injury or mortality can be negated through mitigation. Monitoring and reporting is required to comply with an IHA. <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>

A *Letter of Authorization (LOA)*, valid for up to five years, is generally issued if the potential for serious injury and/or mortalities exists and there are no mitigating measurements that could be taken to prevent this form of take from occurring. An LOA authorizes the harassment, injury or mortality of a marine mammal as long as impacts on the species’ annual rates of recruitment or survival are negligible.

The applicant initiates the LOA process by submitting an application for small take authorization. The appropriate Service must publish notice of the proposed regulation and its findings in the Federal Register, in newspapers, through appropriate electronic media, and in the coastal areas that may be affected by the activity. The public will have up to 30 days to submit comments on the proposal.

The Service will then prescribe regulations setting forth permissible take methods to ensure the least practicable adverse impacts on the species or stock and its habitat, the availability of the species or stock for subsistence uses, and appropriate monitoring and reporting. Once the regulations are promulgated, the Service may issue an LOA to the project proponent based on a determination that the level of take will be consistent with the findings made for the total take allowable under the regulations. The Service will publish notice of the LOA in the Federal Register within 30 days of its issuance.

Primary Legal Authority

Marine Mammal Protection Act, § 101(a)(5) (A-D) http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa_regs_216.pdf

Lead Agency: NMFS <http://www.nmfs.noaa.gov/>

Participating Agencies: none specified

Process Time: 120 days for an IHA, 6-8 months for an LOA

⁴⁴ “Harassment is defined as any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or to disrupt a marine mammal’s behavior patterns (i.e., migration, breathing, nursing, breeding, feeding, or sheltering).

⁴⁵ Information about scientific research permits application and issuance may be found at 50 CFR 216, sub-part D.

Essential Fish Habitat Consultation

One of the primary purposes of the Magnuson-Stevens Fishery and Conservation Act (MSA) is to promote the protection of essential fish habitat (EFH). EFH can consist of both the water column and the underlying surface (e.g. seafloor) of a particular area. Certain properties of the water column such as temperature, nutrients, or salinity are essential to various species. Areas designated as EFH are essential to the long-term survival and health of managed fisheries, and include those habitats that support the different life stages of each managed species.⁴⁶ EFH encompasses those habitats necessary to ensure healthy fisheries now and in the future. §305(b)(2) of the MSA mandates that federal agencies consult with the Secretary of Commerce on all actions, proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH.

Federal agencies (e.g., FERC, ACOE) must consult with NMFS with respect to any Essential Fish Habitat (EFH) that may be affected by the proposed project that the federal agency is authorizing. NMFS strongly encourages federal agencies to streamline the consultation process by consolidating, where appropriate, environmental review procedures required by other statutes such as NEPA, ESA, Fish and Wildlife Coordination Act, Clean Water Act, and Federal Power Act.⁴⁷ <http://www.nmfs.noaa.gov/habitat/habitatprotection/pdf/efh/EFH%20Consultation%20Guidance%20v1-1.pdf>

Once consultation is complete NMFS will provide *Conservation Recommendations* to the project proponent. If NMFS finds that the proposed project would adversely impact any EFH, then it will recommend measures to be taken (by the federal agency or the project proponent) to mitigate, reduce, or eliminate impacts the EFH. Federal agencies are required to submit a description of the intended conservation measures, as well as their reasons for not implementing any of NMFS' recommendations (if applicable). EFH Consultation Guidance is available at: <http://www.nmfs.noaa.gov/habitat/habitatprotection/pdf/efh/EFH%20Consultation%20Guidance%20v1-1.pdf>

An applicant for a FERC license is required to document any EFH that may be affected by a proposed project in the EA or EIS that accompanies the FERC license application. Additionally, if EFH consultation does occur the EA or EIS will also include the following:

- i. Description of any EFH that may be affected
- ii. Summary of the consultation process
- iii. *Conservation Recommendations* provided by NMFS (or the applicable fishery management council)
- iv. Conclusions with respect to adoption of the recommended conservation measures

Primary Legal Authority

Magnuson-Stevens Fishery Conservation and Management Act (MSA): Provides for the conservation and management of fisheries. Amendments to the MSA in 1996 mandate that federal agencies consult with the Secretary of Commerce when proposed actions may adversely impact an EFH of a species managed by a federal fishery management plan.

Magnuson-Stevens Fishery Conservation & Management Reauthorization Act⁴⁸ (MSRA): Requires NMFS to integrate NEPA and the fisheries management process for environmental review. NMFS will work with the Regional Councils and the Council on Environmental Quality to revise environmental review procedures for compliance with NEPA.

Lead Agency: NMFS

Participating Agencies: Pacific Fisheries Management Council (PFMC)

Process Time: 30 days for an Abbreviated Consultation, 60 days for an Expanded Consultation or other timeframes relevant to an existing review process.

⁴⁶ A single species may use many different habitats throughout its life to support breeding, spawning, nursery, feeding, and protection functions.

⁴⁷ For example, if an ESA biological opinion (BO) is required for the proposed project, NMFS will often include its EFH recommendations in the BO.

⁴⁸ MSA §306 note: Gives authority to the states of Washington, Oregon, and California to manage the Dungeness Crab Fishery. 16 U.S.C. 1856 note.

Fish & Wildlife Coordination Act

The FWCA requires all federal action agencies to consult with and give strong consideration to the views of the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and state wildlife agencies regarding the fish and wildlife impacts of projects that propose to alter a body of water. Federal agencies must consult with relevant state and federal natural resource agencies to insure that the construction, maintenance, and operation of a facility is in accordance with the FWCA so as to prevent the loss or damage to fish or wildlife resources.

Further, pursuant to § 10(j) of the FPA, when issuing a hydroelectric license, FERC must include measures to protect fish and wildlife resources and to mitigate damages to those resources that may be affected by a project. These measures are based on recommendations from the NMFS, FWS, and state fish and wildlife agencies.⁴⁹ A FERC license application must include a summary of the recommendations, a discussion of how the applicant addressed the recommendations, and an explanation of how the application complies with § 10(j).

Primary Legal Authority: *Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.)*
<http://www.fws.gov/laws/lawsdigest/fwcoord.html>

Lead Agency: USFWS and/or NMFS

Participating Agencies: relevant federal and state resource agencies

Process Time: None specified. FERC typically incorporates this consultation into its licensing process.

Migratory Bird Treaty Act

Migratory birds in North America are an international resource, with numerous species breeding throughout the United States and Canada. In the fall of each year, these birds migrate south to winter in the USA, Mexico, and Central and South America. The original Migratory Bird Treaty Act of 1918 (MBTA) implemented the 1916 Convention between the U.S. and Great Britain (for Canada) for the protection of migratory birds. Later amendments to the Migratory Bird Treaty Act implemented treaties between the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia.

It is important to address potential migratory bird impacts at the early stages of project planning as the potential impacts may be fairly complex. For example, corridors needed for transmission lines could fragment habitats and create flight hazards to migratory birds, and maintaining those corridors with herbicides may cause adverse effects to plants and wildlife.

FWS encourages applicants to document and implement a due diligence process that account for migratory bird impacts, including impact avoidance, minimization, enhancement, monitoring, and adaptive management commitments to address unforeseen impacts to migratory birds. <http://www.fws.gov/migratorybird>

Primary Legal Authority: *Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712)*

Lead Agency: USFWS

Participating Agencies: federal action agency (FERC, ACOE), state wildlife agencies

Process Time: No formal timeline exists, but project proponents are urged to begin consultation as early as possible.

⁴⁹ Pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.)

National Historic Preservation Act §106 Consultation

The National Historic Preservation Act (NHPA) requires federal action agencies, which are those federal agencies that issue licenses, leases and/or permits, to identify and assess the effects of its actions or actions it authorizes on historic resources. The NHPA also requires federal action agencies (e.g., FERC, ACOE) to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on the proposed action. Federal action agencies must consult with appropriate state and local officials, including State Historic Preservation Office (SHPO), Tribal Historic Preservation Office (THPO), Indian tribes, and members of the public to consider their views and concerns about historic preservation issues when making final project decisions. The SHPO or THPO will act as the lead agency in the consultation process. There are three stages of formal consultation with defined time frames; however, FERC includes NHPA analysis in its NEPA documentation, so the timeframes of the consultation stages are not necessarily formally followed. The federal action agency will seek concurrence from the SHPO or the ACHP at each stage.⁵⁰

Initiation of Consultation (60 days)- First, the action agency initiates a 30 day consultation period with other relevant agencies to identify the Area of Potential Effect (APE) and to determine if any historic resources exist within the APE that are listed or eligible for listing in the National Register.⁵¹ Concurrence on project APE is then sought from SHPO, Tribal governments, and other agencies involved. If it is determined that no historic properties are present or that present properties will not be affected, then the action agency notifies SHPO. If SHPO does not object within 30 days, then § 106 consultation concludes.

Assessment of Adverse Effects (60 days)- If the action agency concedes that the action will affect historic properties (or those eligible for listing), then the action agency consults with SHPO and Indian tribes to assess what effect the project would have on the historic properties. Concurrence on determination of effects is sought from SHPO and tribes, who have 30 days to respond to the finding. If there is no response to a determination of effects, then the § 106 consultation concludes. If the SHPO or a Tribe objects and the action agency cannot resolve the objection, then the action agency forwards the objection to the ACHP, which can provide its opinion.

Resolution of Adverse Effects (60 days)- If the action agency concedes that the project will have adverse effects, then the action agency must consult with SHPO and tribes on mitigation measures to protect or mitigate the effects on the historic properties. If the parties agree, they can incorporate those measures into a Memorandum of Agreement (MOA)⁵² between the action federal agency and SHPO. If the effects of the project on historic properties cannot be fully assessed before the action agency approves the project, consultation may result in a Programmatic Agreement (PA) between the SHPO and the action agency (e.g., FERC).

In situations where FERC is the federal action agency for a proposed project, FERC typically incorporates the PA (or MOA) into the project license, which defines the APE and requires the licensee to develop and implement a Historic Properties Management Plan⁵³ (HPMP) to resolve all identified adverse effects, as well as any other necessary mitigation measures. If the action agency and SHPO are unable to agree on how to resolve adverse effects, then the ACHP will make recommendations.

Primary Legal Authority: § 106 National Historic Preservation Act (NHPA) <http://www.achp.gov/aboutachp.html#106>

Lead Agency: SHPO, THPO

Participating Agencies: Tribal authorities, USFS, ACHP www.achp.gov

Process Time: No formal timeline exists for the consultation process, but project proponents are urged to begin consultation as early as possible to allow for adequate time. At least 30 days are necessary for each stage of consultation. In general, the process takes approximately 12 months for a MOA and approximately 24 months for a PA.

⁵⁰ The action agency must consider objection or opinion of participating agencies, but may still proceed based on its finding.

⁵¹ If information on historic resources in the APE is not available, the federal agency requires the licensee to determine (usually through surveys) what eligible properties exist within the APE.

⁵² Others may be invited to join the MOA, but if they fail to do so then the MOA stands.

⁵³ The HPMP is often completed before a FERC license is issued, by may be developed post-licensing.



Overview of Regulatory Roadmaps

The following “Regulatory Roadmaps” are process schematics that provide a general description of the regulatory processes involved in siting wave energy projects within Oregon’s *Territorial Sea*. Although the default process for a FERC license is the ILP, Roadmap A depicts the TLP and the use of a Settlement Agreement (SA). This approach is depicted because it allows for a high level of stakeholder and agency involvement in project planning; specifically, the use of a SA provides an opportunity for all parties to collaboratively discuss and address the potential effects of a proposed project so that effective studying and monitoring, mitigation, and adaptive management are used to account for these issues.

Each roadmap represents a different scale project as follows:

- **Roadmap A** Licensing & Permitting Process for Non-Grid Connected, Pilot Project (COE as lead)
- **Roadmap B** Licensing & Permitting Process for Grid Connected, Commercial Project (using FERC TLP for hydroelectric license)
- **Roadmap C** Licensing & Permitting Process for Grid Connected, Pilot Project (using FERC Pilot process for hydroelectric license)

Roadmap Key:

Application

Federal Permits & Authorizations

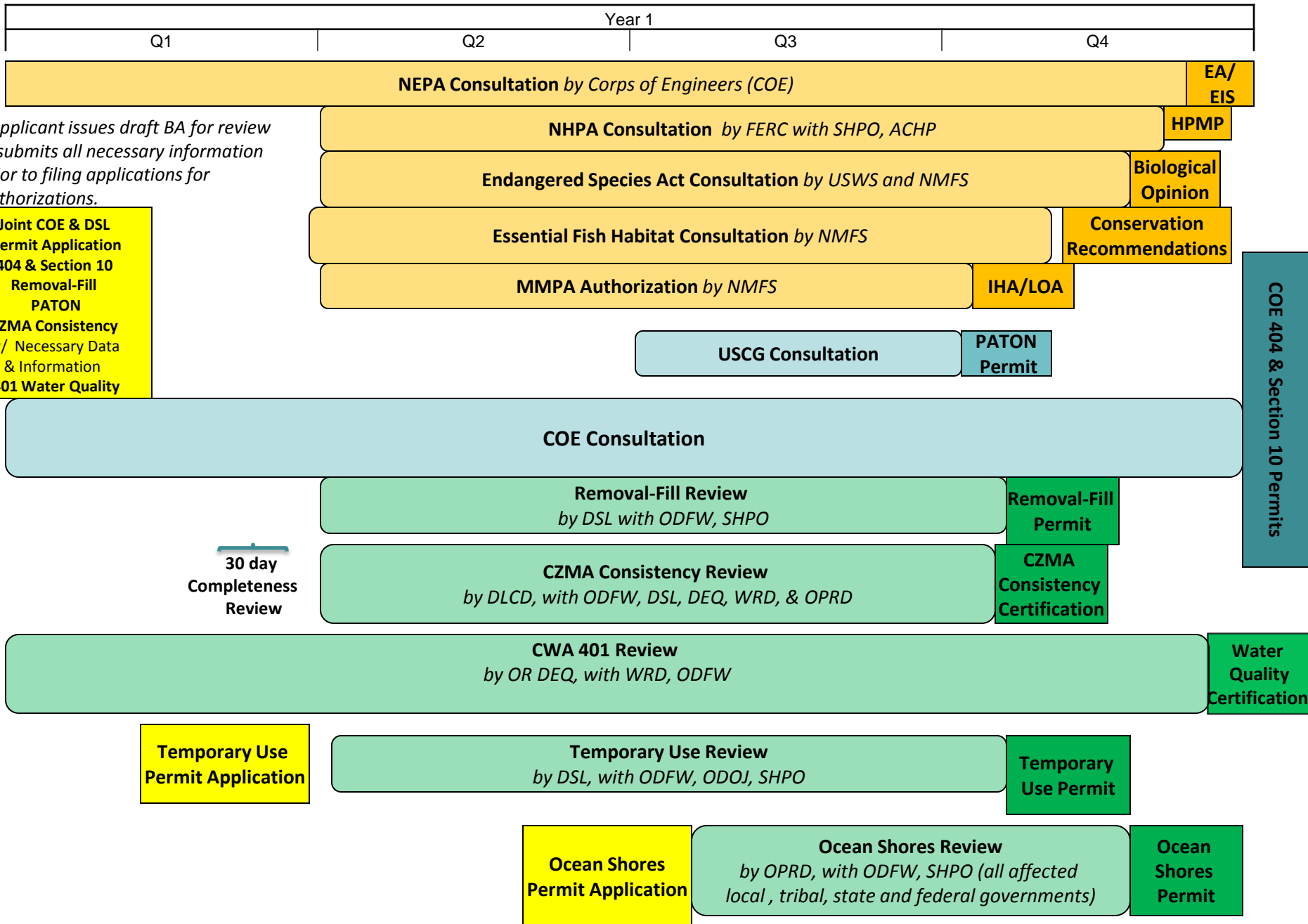
Action Agency Requirements

State Authorizations

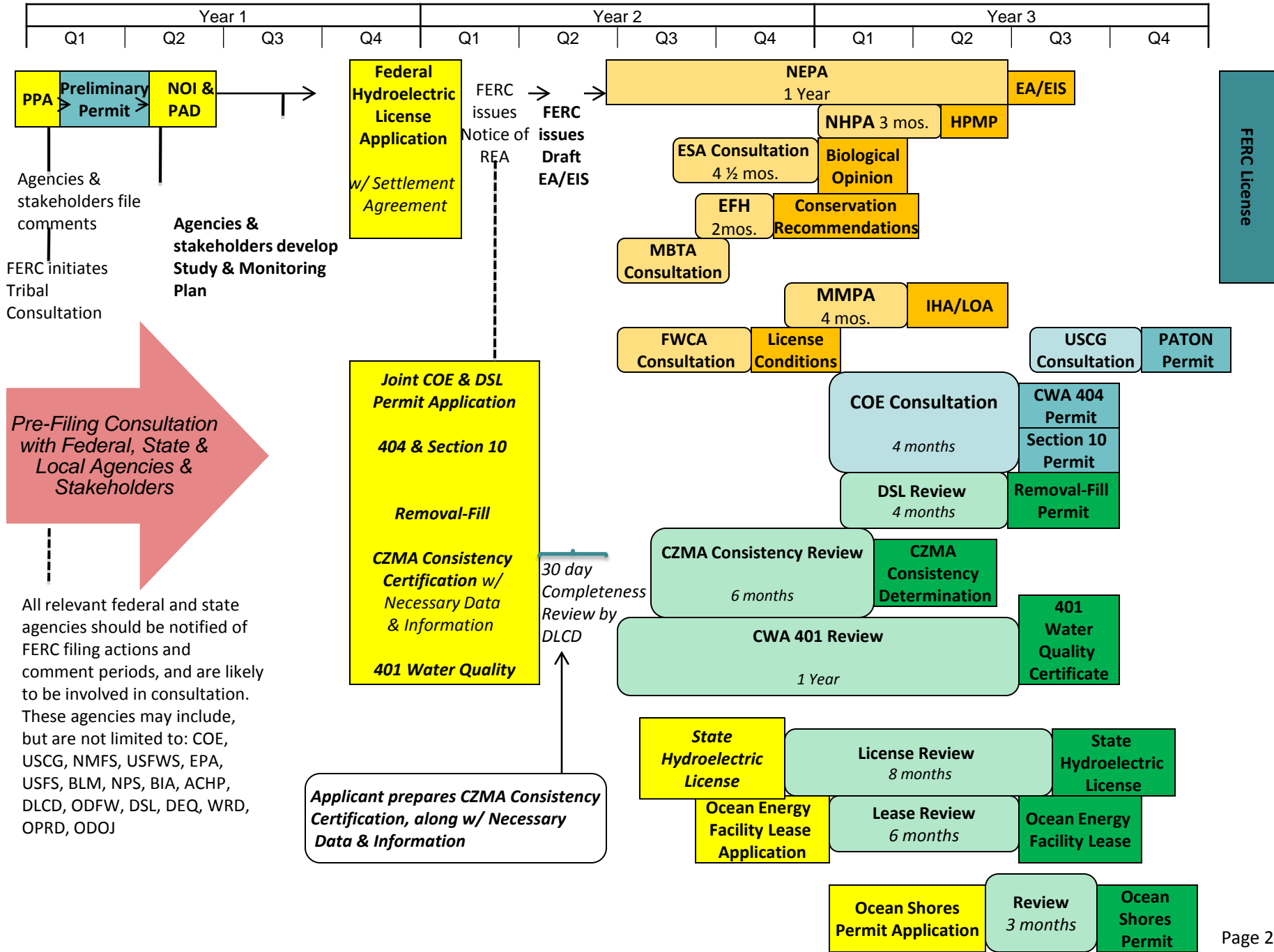
Consultation- both formal and informal- with federal, state and local agencies and stakeholders is a critical component of the licensing and permitting processes. Consultation generally involves analysis of a proposed project to determine any potential effects, and developing effective studying and monitoring, mitigation, and adaptive management measures necessary to prevent, minimize and/or mitigate project effects. Consultation should start as early as possible to ensure that the draft EA/EIS contains sufficient information to support all the necessary permits and authorizations. **All relevant federal and state agencies should be notified of FERC and COE filing actions and comment periods, and are likely to be involved in pre- and post-filing consultations. These agencies may include, but are not limited to: COE, USCG, NMFS, USFWS, EPA, USFS, BLM, NPS, BIA, ACHP, DLCD, ODFW, DSL, DEQ, WRD, OPRD, ODOJ .**

NOTE: *Process times shown are approximate; actual times will vary. If another type of FERC licensing process (i.e., the ILP or ALP) is used then the sequence of events and timeframes will vary from those outlined in this document. Also, if a Conditioned License is issued, then some of the required authorizations (e.g., Water Quality Certification, CZM Consistency) may not be completed until after the conditioned FERC license is issued. Although the Preliminary Permit is shown in Roadmaps B and C, it is not required for submission of a FERC license application. Additionally, projects that are sited partially or wholly on the Outer Continental Shelf will require authorization from the Mineral Management Service.*

Roadmap A: Non-Grid Connected Pilot Project



Roadmap B: Commercial Project (FERC TLP Using Settlement Agreement)



Roadmap C: Grid-Connected, Pilot-Scale Project (FERC Pilot Process)

