

MHK Environmental Toolkit for Permitting and Licensing

Project Overview

The goal of this effort is to increase regulators' understanding of Marine and Hydrokinetic (MHK) projects and their potential environmental effects to reduce the amount of time to permit and decrease costs to develop MHK projects. A Toolkit will be developed that compiles and distills existing spatial, regulatory, and scientific data and complements other DOE efforts such as the Portal and Repository for Information on Marine Renewable Energy (PRIMRE). The current state of science on key topics associated with MHK permitting, (e.g., marine mammals, collision, etc.) starting from the 2016

Annex IV State of the Science report, will be synthesized in the Toolkit with live links to existing resources. The Toolkit will be developed collaboratively with regulators to ensure usefulness in the permitting and licensing process. The project team will host two rounds of 6 workshops in California, Oregon, Alaska, Washington D.C., Massachusetts, and Florida to gather feedback from regulators for the development of the Toolkit and provide the latest scientific information from subject matter experts on environmental topics associated with MHK permitting.

Project Objectives

1. Distill scientific knowledge from a team of world-class experts into an Assessment Framework and Status Reports — revealing the most current understanding of risk and methods for environmental studies (collision, fish and fisheries, marine habitat, EMF, etc.) mitigation and monitoring.
2. Develop an easily accessible online MHK Environmental Permitting Toolkit, integrating relevant regulatory, scientific, and spatial MHK data that, through its usage, results in reduced permitting times and costs.
3. Conduct in-person meetings and webinars with relevant regulators from federal and state agencies to share and gather input on the Toolkit, and to share experts' understanding of potential impacts and the state of science for MHK projects. This review of the Toolkit with regulators will ensure that the Toolkit provides the necessary scientific information in a usable format to decrease the time and resources required to complete MHK permitting documents and environmental assessments.
4. Pilot the Toolkit and lessons learned through a specific project permitting process or processes.

Toolkit and Stakeholder Use



Other Stakeholders
Provide Feedback



Facilitators
Convene Workshops



Regulators
Review Reports



Curators
Update Data



Scientists
Update Data & Methods

Tools in Toolkit, housed in Portal

Data Catalog & Mapper Spatial information for proposed development area	Engagement and Communication Between regulators, SMEs, stakeholders, and developers
Searchable Documents Relevant to projects, precedent and mitigation	Guidelines and Flow charts For permitting



Reports



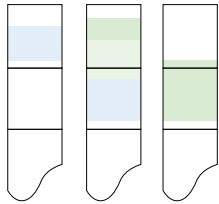
Developers
Use Toolkit

Information Flow of Documents and Data Through the Toolkit

DOCUMENTS

Sources

Tethys, FERC eLibrary, ...



Digest
←→
Search

Document Library

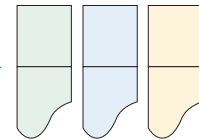
Tags

Receptors, Stressors,
Technology, Place
(with page numbers, status, etc.)

Marine Mammals	Collision	Tidal
Fish	EMF	Wave
Habitats	Noise	Riverine

Status Reports

Summary guidance documents
on latest Receptor / Stressor /
Technology: Precedents,
Mitigations, Monitoring

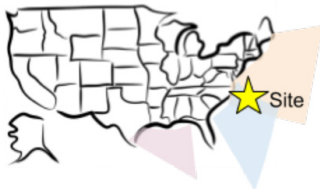


Status Reports

DATA

Spatial

MarineCadastre, regulatory, ...



Tabular

Sensitivities, regulations, ...

RECEPTOR	SENSITIVITY	
	COLLISION	NOISE
Species A	1	2
Species B	3	0
Habitat A	1	NA

Analysis Modules

Community-vetted functions using
open-source code to extract data
by site & device configuration,
analyze based on available
data, and summarize out

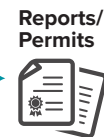
Digest
←→
Search

Energy	Protected Areas	Marine Mammals
Shipping	Siting App	Fish
Military	...	

Data Catalog

Site Report

Customized report with
best available data,
science and guidance
on best practices



Reports/Permits



Assessment Framework

Documents are uploaded and tagged (down to relevant page numbers) for later searching in the Document Library. Experts will create Status Reports accumulating best practices and state of knowledge across combinations of receptors, stressors and technologies. The information within the Status Reports are then fed into the appropriate portions of an environmental Assessment Framework report based on user-centered site and technology specifications with the Siting App, which is composed of topical modules that synthesize spatial and tabular information. For example, spatial distributions will be combined with tables on species sensitivities to produce risk maps. Furthermore, site-specific environmental analyses for the permitting regulatory steps (studies needed, mitigation/monitoring and adaptive management plans) will be incorporated through the Assessment Framework.

Contact Us

If you have any questions, please contact:

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