

Environmental Planning and Management for OTEC Pilot Projects



***Peter W. Havens
Charles Morgan
Donald A. MacDonald***

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Background

- 1980 OTEC Act
 - Commercial OTEC technology is encouraged
 - Commercial OTEC must be licensed
 - NOAA administers licensing
 - Demonstration OTEC is excluded from licensing
 - DOE designates project as a demonstration
- 1981 NOAA regulations promulgated
- 1996 NOAA regulations canceled
- Recently there has been a renewed interest in OTEC
 - Federal funding availability
 - NOAA rulemaking in progress
 - NOAA OTEC workshops conducted

Renewable Energy is Ripe for Preparation



Environmental Issues

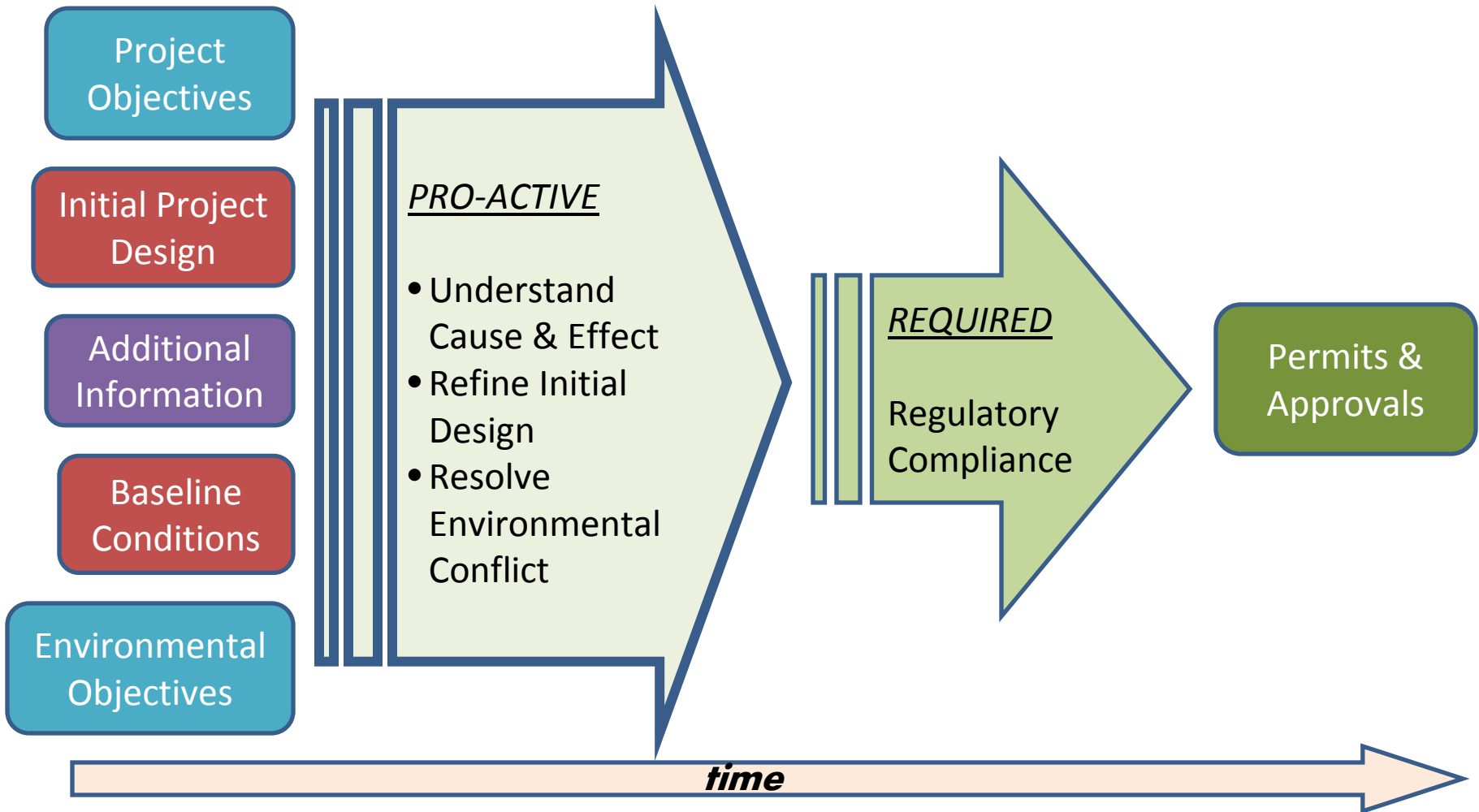
Resource	Project Activity/ Component That is the Source of Impact			
	Construction & Decommissioning	Platform Presence (e.g. shade, noise, lighting)	Water Intakes (entrainment & impingement)	Water Discharges (secondary entrainment & contamination)
Plankton & Micronekton	○	○	●	●
Nekton	○	●	●	●
Marine mammals	○	●	●	●
Sea turtles	○	●	●	○
Birds	○	●	○	○
Benthos	●	●	○	○

● = probably important ○ = less important

The degree of impact is uncertain



Environmental Planning



To Manage Uncertainty - Facilitate the Critical Path



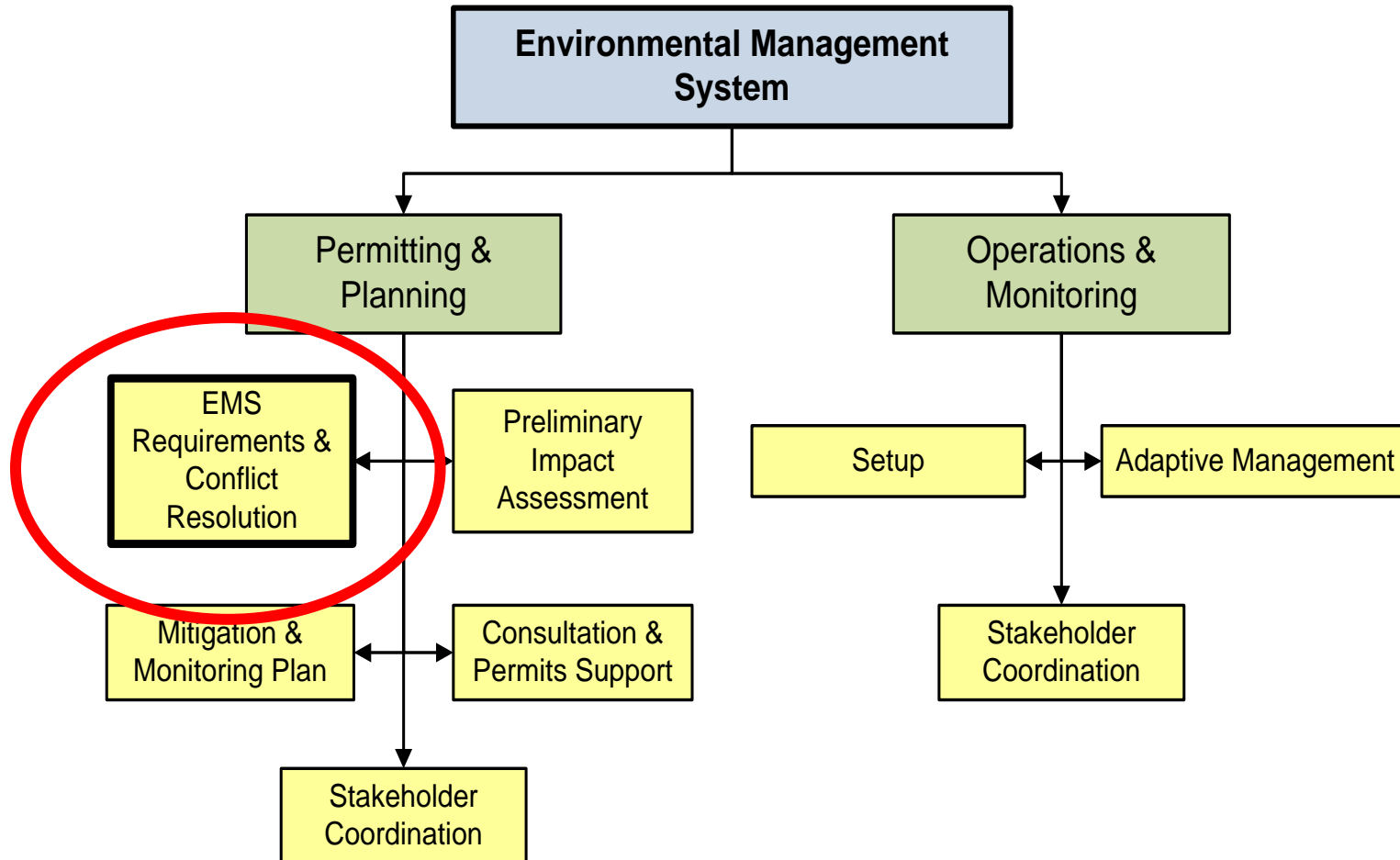
Environmental Integration Concepts

- Integrate environmental experts as equal partners
- Embrace the objective of sustainable development
- Encourage progressive environmental impact management
 - Build environmental impact management into the technology development process instead of treating the need to comply with environmental regulatory standards as something separate and apart
 - Incorporate relevant environmental goals into the design process at a time when environmental issues can be balanced against financial and technological realities

Integrating Environmental Improves Value



OTEC Pilot EMS Structure



Structure Maintains Continuity

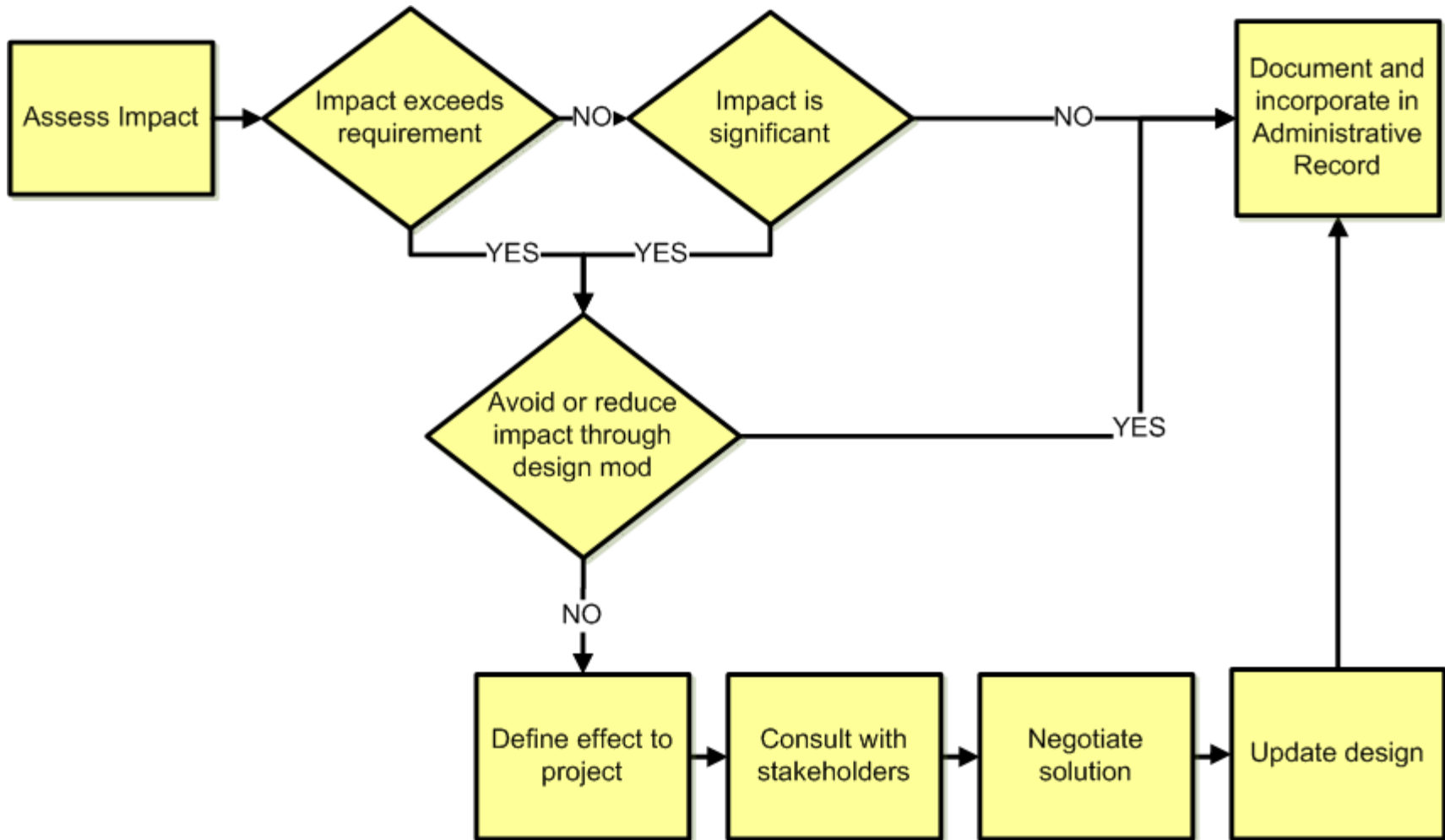


EMS System Requirements

- **Determinate and pre-set:**
 - Standards and thresholds (absolute and quantitative)
 - Criteria (advisory)
- **Indeterminate and project-specific:**
 - Environmental impact significance
 - Project needs and purposes

Identify and Define Requirements Early

Execute



Address All Impacts & Maintain an Administrative Record



OTEC Pilot Success

Progressive Environmental Impact Management

- * Integrated
- * Deliberative
- * Uninterrupted and connected
- * Relevant and applicable
- * Effective and efficient

“It’s all about information management.”



Contacts

Peter W. Havens, CEP
Sound & Sea Technology, Inc.
3507 Shelby Road
Lynwood, WA 98087

Charles Morgan, PhD
Planning Solutions, Inc.
210 Ward Avenue, Suite 330
Honolulu, HI 96814

Donald A. MacDonald
National Ocean Service
National Oceanic and Atmospheric Administration
7600 Sand Point Way NE, Bldg 3, Rm 1003
Seattle, WA 98115

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