

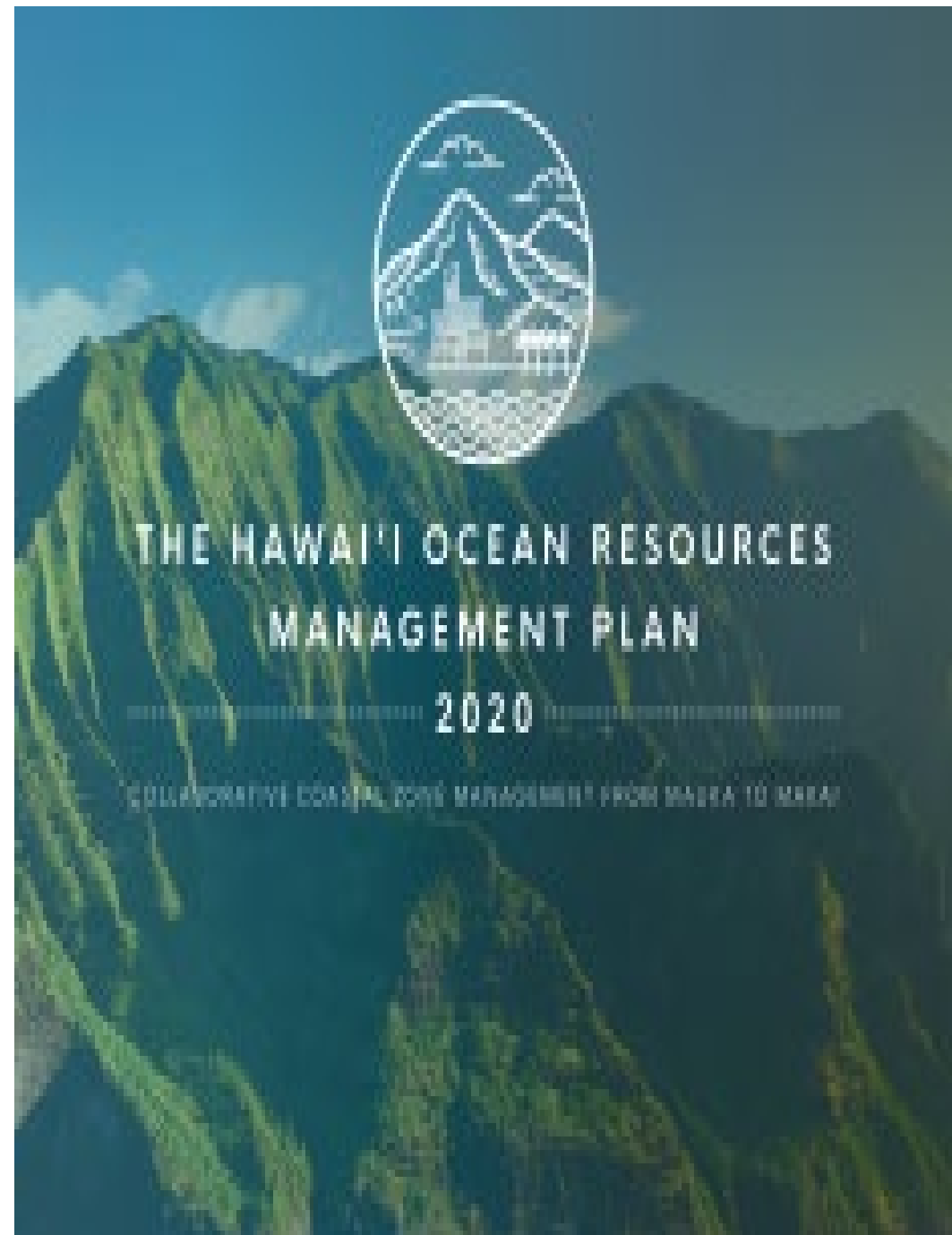
Muliwai P.I.G.

April 10, 2023

Present: Bob Nishimoto,
Donna Brown, Taryn Dizon
Excused: Phil Fernandez

Invited Expert: Kim Peyton, PhD

Staff: Yuki Terada, Lisa Webster



Ocean Recreation Management Plan 2020

FOUR GUIDING PERSPECTIVES

1. CONNECT LAND AND SEA

- Incorporate the interconnectedness of island ecosystems into decision-making.
- DLNR is a '*Mauka-Makai*' State agency

2. PRESERVE OUR OCEAN HERITAGE

- Promote respect towards native Hawaiian traditional ecological knowledge.
- Fishing is a customary right, consult native fishing practitioners

3. PROMOTE COLLABORATION AND STEWARDSHIP

- Create and sustain a diverse network of stakeholders

4. ADAPT TO CHANGING CONDITIONS

- Mitigate the projected impacts of global climate change to rising sea levels
- *Loko ia*' as surrogate coastal nursery habitat, consult with *Loko ia*' practitioners

Scope of Muliwai P.I.G

Identify key points and information to include in an outreach resource to be developed with CZM staff with a focus on;

1. the *mauka-muliwai-makai* connection and the importance of caring for all three of the fish habitat zones, especially *muliwai* (estuaries).
2. In addition, develop recommendations to CZM on how to **complement the *Holomua* outreach and engagement process.**

Purpose

Develop outreach materials to;

1. Bring awareness to and elevate the importance of estuaries as critical habitat,
2. Cradle (nursery) of many coastal marine fish species,
3. Emphasize the *mauka-muliwai-makai* connectivity,
4. Introduce '*Muliwai*' into the lexicon.

Audience

- State and county agencies,
- Decision makers,
- Fishermen,
- Conservationists,
- Property owners along waterways,
- Students
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Contents

- *Define **estuary** and categorize **types** in Hawai'i
- *Identify new survey tool – **eDNA** – tells us which fish species are present
- ***Risks** to estuaries:
 - water diversion, stream maintenance, infill development
- ***Benefits** of healthy estuaries include:
 - improved *limu* health, healthier fish stocks, better coastal water quality, improved groundwater health, provides a buffer and increased resilience to climate change and coastal hazards
- *Contribution of fresh water to coastal ***limu* productivity**
- * **Overlapping jurisdictions**, no one has responsibility for estuary areas

Outreach Material Design and Dissemination

- *Multiple outreach handouts with different topics
- *Folding brochure that can be unfolded with poster on back
- *Community events where DAR is present
- *Social media

Take-home Message

Na Muliwai ...the *maika'i* place

