

An aerial photograph of a coral reef system. A long, straight stone breakwater extends from the bottom left towards the center of the frame. To the left of the breakwater is a shallow lagoon with a greenish-brown seabed. To the right is the deep blue open ocean. White waves are breaking against the outer edge of the reef and the breakwater. The title text is overlaid on the top half of the image.

Compensatory Mitigation and In-Lieu Fee Sponsorship: Conservation Opportunity

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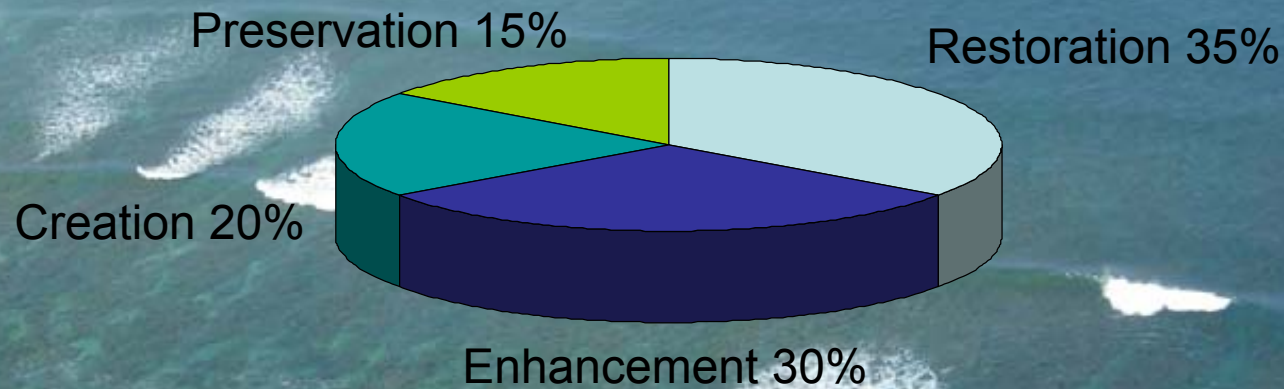
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Compensatory Mitigation

- Basis for “no net loss” of wetlands (coral reefs)
- Clean Water Act 404 requires permit to discharge dredged or fill material into waters of U.S.
- Impacts must be:
 - Avoided
 - Minimized
 - **Compensatory mitigation** required for unavoidable impacts

Compensatory Mitigation Methods



Lost
functions/services at
impact site
+ uncertainty
+ temporal loss

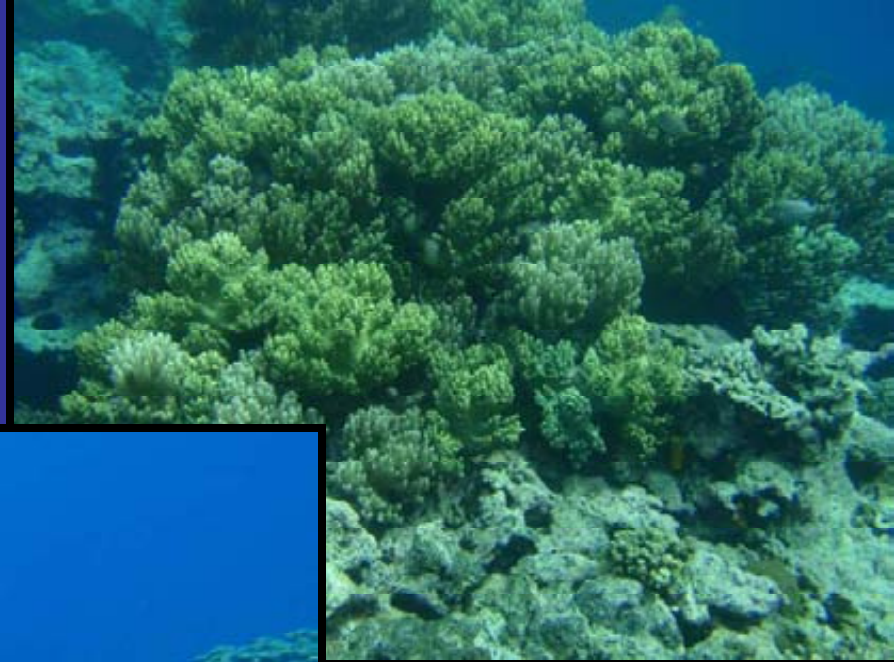
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Gained
functions/services at
mitigation site

KILO WHARF, APRA HARBOR



Kilo Wharf impacts to coral reefs:
4.5 acres direct
17 acres indirect



A scenic view of a coastal landscape. In the foreground, a person wearing a white shirt and a cap stands amidst tall green grass and shrubs. The middle ground shows rolling hills with patches of green vegetation and exposed brown soil, indicating erosion control efforts. In the background, a blue body of water (the ocean) meets a cloudy sky. The overall scene is a mix of natural beauty and environmental restoration work.

MITIGATION

Coral Reef
Restoration via
Erosion control –
Reforestation of
500 acres in
Cetti Bay

An aerial photograph of a coral reef system. A long, straight stone breakwater extends from the bottom left towards the center of the frame. To the right of the breakwater, the water is a deep blue. To the left, the water is a lighter, greenish-blue, indicating a shallow reef flat. Several white, sandy patches are visible on the reef flat, likely remnants of coral or sandbars. The overall scene is a coastal environment with a man-made structure interacting with a natural reef system.

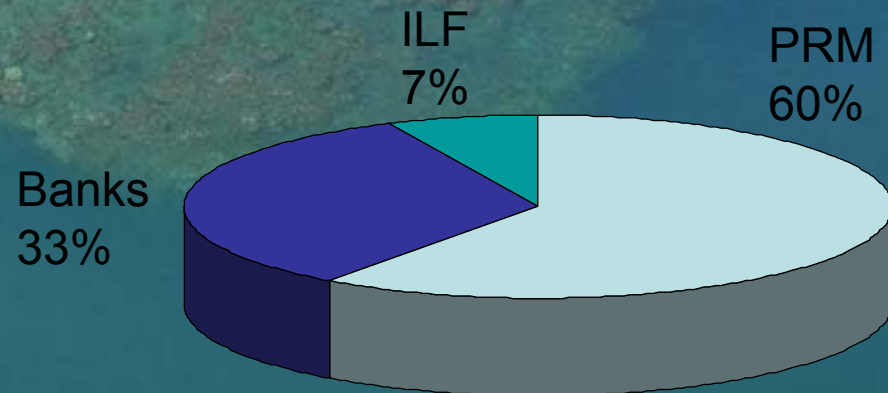
Q: Is Compensatory Mitigation
Successful?

A: Too often not

- 2001 National Research Council Report
- 2005 FWS-EPA report on coral mitigation
- 2008 COE-EPA Mitigation Rule

Who provides mitigation?

- Permittee –Responsible mitigation (PRM)
- Third Party Mitigation
 - Mitigation Bank
 - In-lieu Fee (ILF)



Third Party Mitigation

Mitigation Banks:

- Initiated before impacts
- Credits given after project is successful
- Sponsored by entrepreneurs
- >450 banks

In-Lieu Fee Programs:

- Initiated after impacts
- Sponsored by Gov't & Non-profits
- >50 programs

Mitigation Preference

- Credits from mitigation bank
- Credits from in-lieu fee program
- PRM using watershed approach
- PRM on-site
- PRM off-site



In Lieu Fee Sponsorship: 4 steps

- Prospectus
- Compensation Planning Framework
- Instrument
- Mitigation Plan



ILF Prospectus

Overview of ILF program and basis for public comment

- Objectives of ILF
- Service area
- Land ownership and long term management strategy
- Qualifications of sponsor
- Compensation planning framework
- ILF program account

Compensation Planning Framework

Strategy to select and implement aquatic resource restoration/enhancement/preservation projects

- Delineation of service area
- Threats to aquatic resources
- Analysis of current & historic resource conditions
- Prioritization strategy
- Long term protection & management strategy

ILF Instrument

Authorization to provide credits to be used as mitigation for ACOE permits

- Compensation Planning Framework
- Method for determining advance credits, future credits, and credit fees
- Financial program & account

Mitigation Plans

1. Project objectives
2. Site selection factors
3. Site protection
4. Baseline info @ impact & mitigation site
5. Credit methodology
6. Work plan
7. Maintenance plan
8. Performance standards
9. Monitoring requirements
10. Long term management plan
11. Adaptive mgmt Plan
12. Financial assurances

Apra Harbor Guam

Commercial
Port

Sasa Bay
Preserve

CVN

Inner
Apra
Harbor

