Restoration of Coastal Habitats
An Evaluation of NOAA's Current and Potential Role

Ecosystem Sciences & Management Working Group

NOAA Restoration Review Aims

To understand;

- Where and how restoration is supported within NOAA;
- The restoration benefits that are assessed;
- How NOAA uses its role in guiding restoration efforts, directly and indirectly.

NOAA Restoration Review Methods

- Formal questionnaire to NOAA restoration programs (developed with NOAA staff input)
- Formal discussions with NOAA senior and field staff
- Supplemented the information with our own research
- National level databases were investigated wherever possible
- We do not consider this review all inclusive

NOAA Restoration Review
Key Questions for Direct Projects

The following questions were posed to NOAA staff

a. What direct (appropriated) NOAA $ are spent on restoration activities within your program?

b. What criteria do you use for project selection (e.g., in RFPs) including those for ecological goals and socio-economic goals (e.g., ecosystem services, functions, and benefits)?

c. What criteria do you use for evaluating project performance (e.g., in RFPs) including those for ecological goals and socio-economic goals?

d. How would we access project performance monitoring information?

NOAA Restoration Review
Key Questions for InDirect Projects

The following questions were posed to NOAA staff

a. Please characterize amounts ($) of major (> $1m), “external” (partnership; non-appropriated) restoration activities in which NOAA plays a central role in allocation of funds (e.g., member of small group of advisors).

b. Please provide a general description of the criteria for selection and program/project performance

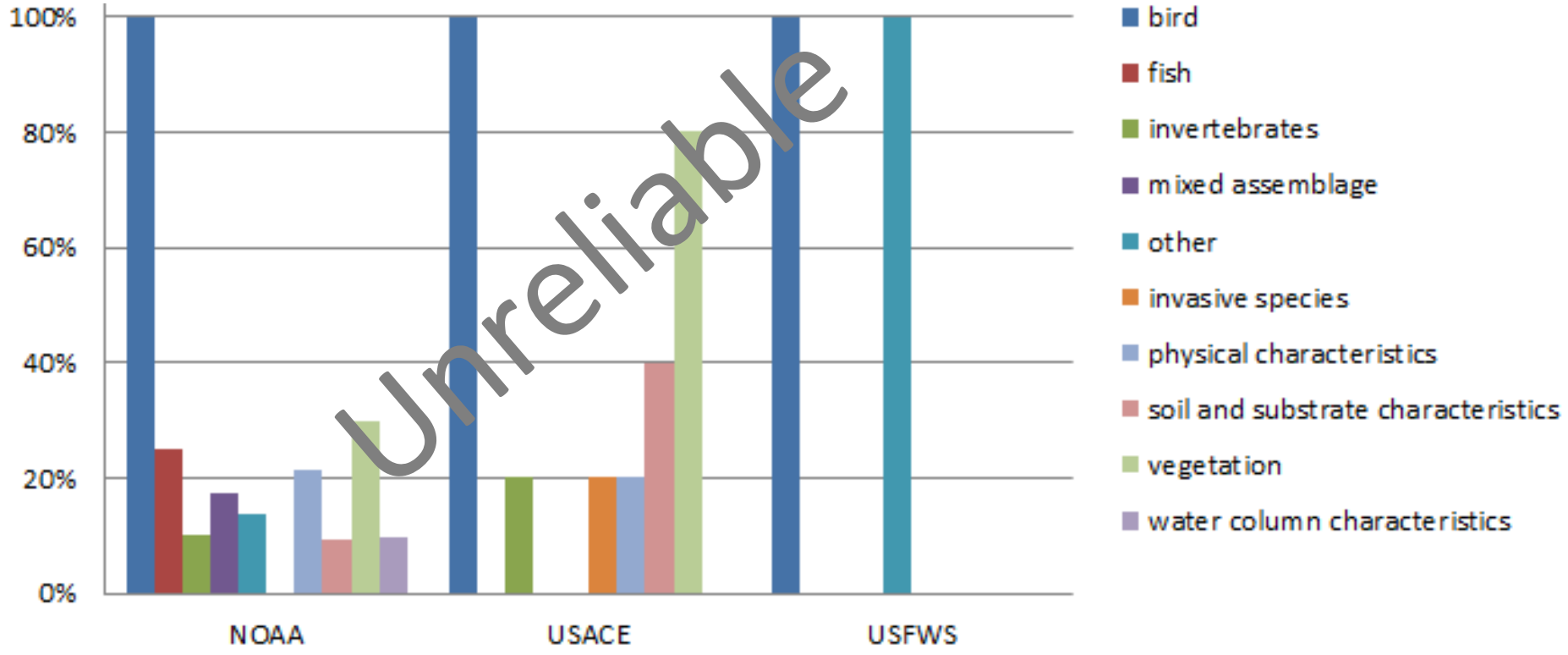
Responding Programs

- Community-Based Restoration Program
- Community-based Marine Debris Removal Program
- Great Lakes Restoration Initiative – Habitat Restoration Focus
- Pacific Coastal Salmon Recovery Fund (PCSRF)
- Open Rivers Initiative*
- National Sea Grant College Program (SeaGrant)

NOAA Direct Projects
Findings

- Many of NOAAs RFPs and funding criteria focus on multiple benefits (i.e., ecosystem services), but it appears that there is little focus on measuring these benefits
- NOAA does focus on measuring fisheries benefits
- At the scale of most restoration projects, the benefits to fisheries productivity are likely to be low and difficult to measure
- NOAAs projects are likely to deliver many additional benefits – e.g., job creation, shoreline access, recreation, hazard mitigation at the current scale - and many projects are chosen for these benefits

What is Measured in Restoration Projects: NERI Database



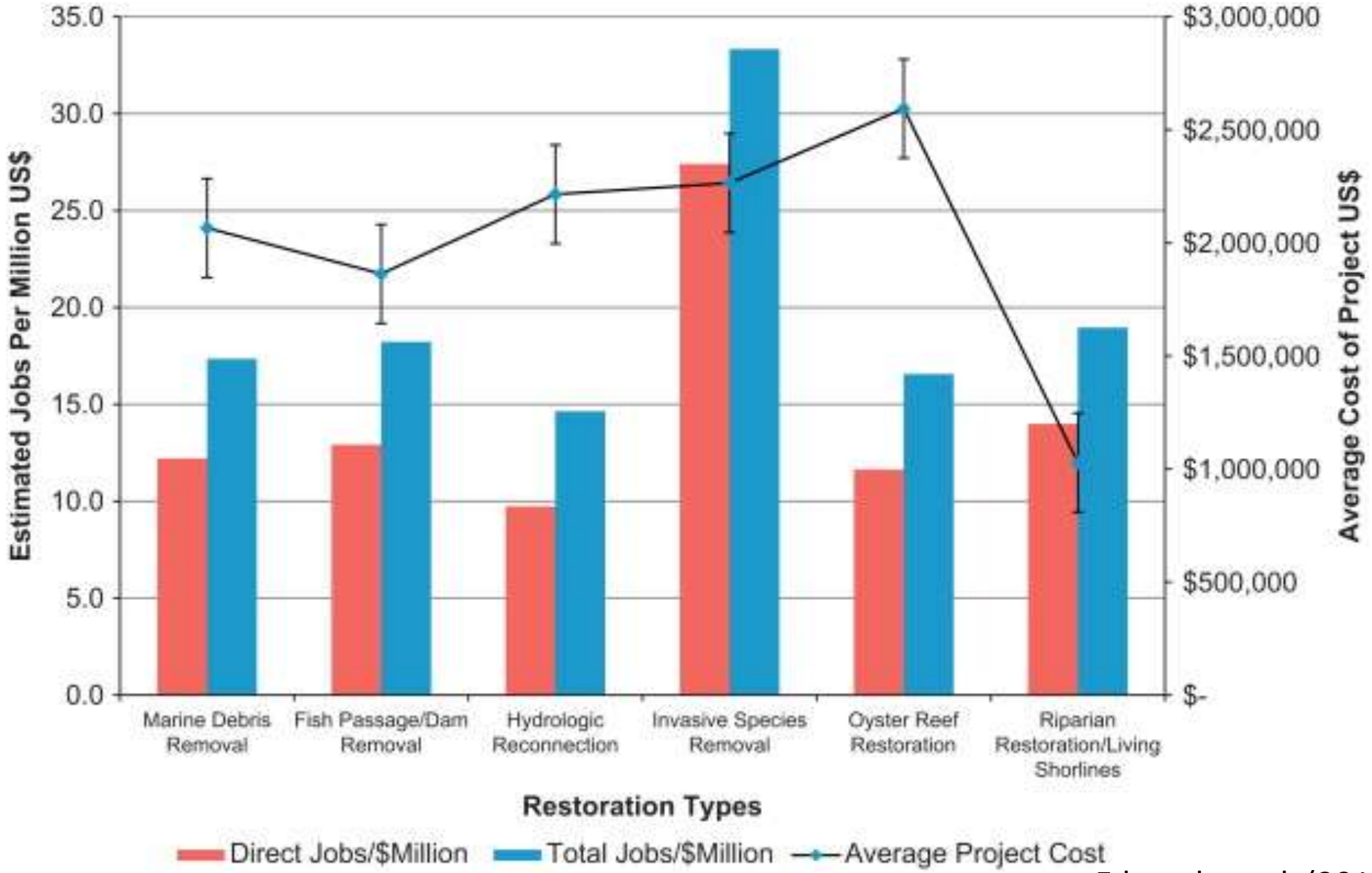
What is Measured in Restoration Projects: NOAA ARRA Projects

Fish	Coral & shellfish	Additional species	Physical processes	Water quality	Coastal defense	Jobs	Recreational benefits	Other benefits
80%	24%	72%	78%	60%	36%	100%	12%	18%

What is the Size of NOAA Restoration Projects? ARRA & Recent CRP projects

Per project	Non Recovery Act projects (2010-2013)	Recovery Act projects
Average acres restored	47	346
Average stream miles opened	11	28
Average NOAA contribution	$89,123	$1,939,796
Max NOAA contribution	$3,137,550	$12,796,006

NOAA Restoration & Jobs



Edwards et al. (2013)

NOAA Direct Projects
Recommendations

1. NOAA should track and make available information regarding its existing measures in the Restoration Atlas or the NERI database ensuring consistency and accuracy in the data.
2. NOAA should more clearly recognize that its restoration mandates extend well beyond fisheries
3. NOAA should undertake a Return on Investment analysis on a small subsample of projects that cover multiple objectives
4. NOAA should scale its restoration projects to more clearly fit the desired objectives.
5. There should be center(s) of excellence in restoration at NOAA that focus on fisheries and non-fisheries benefits
6. NOAA restoration efforts should more clearly measure additional benefits beyond fisheries
7. More of the NERI & NOAA Restoration Atlas' data should be made public

NOAA InDirect Projects
Findings

- NOAA is a key advisor for hundreds of millions of dollars of habitat restoration investments by other federal and state agencies
- NOAA has an opportunity to guide these investments towards good projects and specific restoration benefits
- NOAA does not appear to clearly account for their largest opportunities to guide restoration funding
- NOAA may not greatly factor its role as a key advisor on restoration in its strategic priorities

Direct Appropriations for NOAA Restoration efforts

	NOAA Organization	Appropriations FY08-FY12 (millions)
Estuary Restoration Program	NOS/Response and Restoration	$8.0
	NMFS/Habitat Conservation	$0.5
Community-based Restoration Program	NMFS/Habitat Conservation	$83.5
Chesapeake Bay Oyster Restoration	NMFS/Habitat Conservation	$5.2
Open Rivers Initiative	NMFS/Habitat Conservation	$15.6
Great Lakes Habitat Restoration Program	NMFS/Habitat Conservation	$3.0
Pacific Coastal Salmon Recovery Fund	NMFS/NW Regional Office - Protected Species	$371.8
American Reinvestment & Recovery Act		$167

Other Restoration Investments - non-appropriated Funding (millions)		
	NOAA Organization	Appropriations FY08-FY12 (millions)
Great Lakes Restoration Initiative (Habitat Restoration)	OAR/Great Lakes Environmental Research Lab & NMFS/Office of Habitat Conservation	$21.4
Coastal Wetlands Planning Protection and Restoration Act Program	NMFS/Office of Habitat Conservation	$280*
Damage Assessment, Remediation and Restoration Program	NOS/Office of Response and Restoration & NMFS/Office of Habitat Conservation	$160**

*CWPRRA - $145M directly out of a total of about $425 M across agencies on the Task Force

**DARPA -- 160M active in past 5 years, sit on 75 other panels.

RESTORE Act- TBD

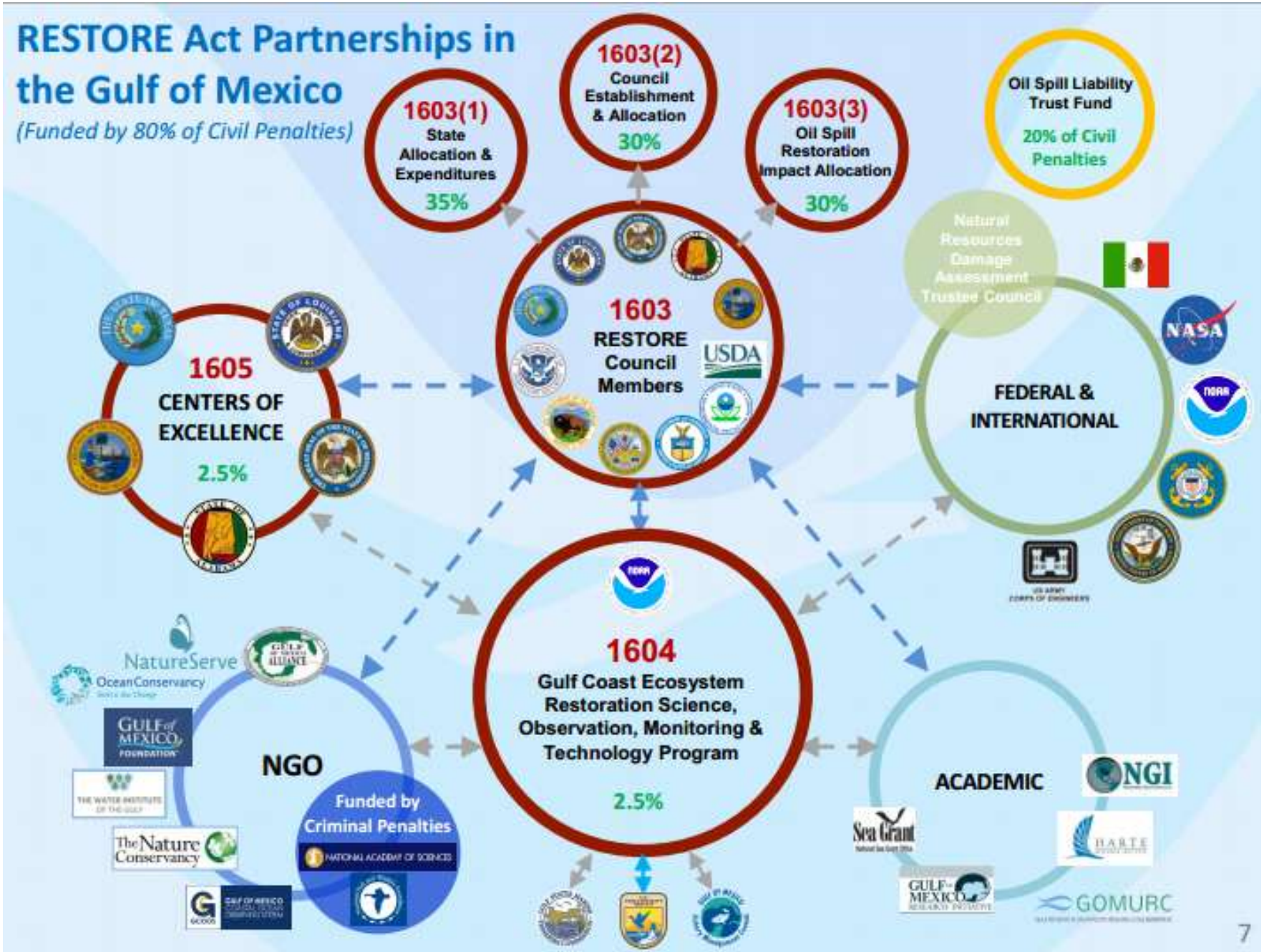
NRDA settlements > $1M over the last 5 years, in which NOAA plays a central role in allocation of funds. NOAA is involved in ~75 additional NRDA Trustee Councils in the post-settlement phase and over 200 in the pre-settlement phase.

Authority Settled	Case Name	Year Settled	Restoration Value
OPA	M/V Casitas	2009	$2.8M
OPA	Athos I	2010	$27.4M
OPA	Bouchard/Buzzards Bay	2009	$6.07M
OPA	Cosco Busan	2011	$32.4M
CERCLA	Palmerton	2009	$18.6M
CERCLA	Occidental, Commencement Bay	2009	$17.9M
CERCLA	Castro Cove	2010	$2.65M
CERCLA	Kalamazoo, (Lyondell)	2010	$2.45M
CERCLA	Boeing (Duwamish)	2010	$40.0M
CERCLA	Commencement Bay (Foss Waterway)	2011	$7.8M
CERCLA	GM Bankruptcy (Massena, NY)	2011	$3.0M

= 160.6M

RESTORE Act Partnerships in the Gulf of Mexico

(Funded by 80% of Civil Penalties)



NOAA InDirect Projects
Recommendations

8. NOAA's strategic plan and implementation plans need to have a greater focus leveraging the restoration funds of others to achieve multiple benefits
9. NOAA should formally recognize that its expertise in restoration can provide value-added to coastal habitats by advising & directing non-appropriated money
10. NOAA should highlight the role it plays in working with its agency partners on projects, showing the separate skill sets that its staff and those of other agencies bring to the table to ensure complex restoration projects succeed.

Thanks