PUBLIC MEETING and HEARING for the Proposed Designation of an Ocean Dredged Material Disposal Site Offshore of Guam

August 20, 2009

Westin Resort Hotel Guam

Meeting Format

6 – 6:45 pm: Overview of the Draft EIS
Informational Presentation by EPA

6:45 – 7 pm: Break

7 – 8 pm: Public Hearing
Make comments on the Draft EIS

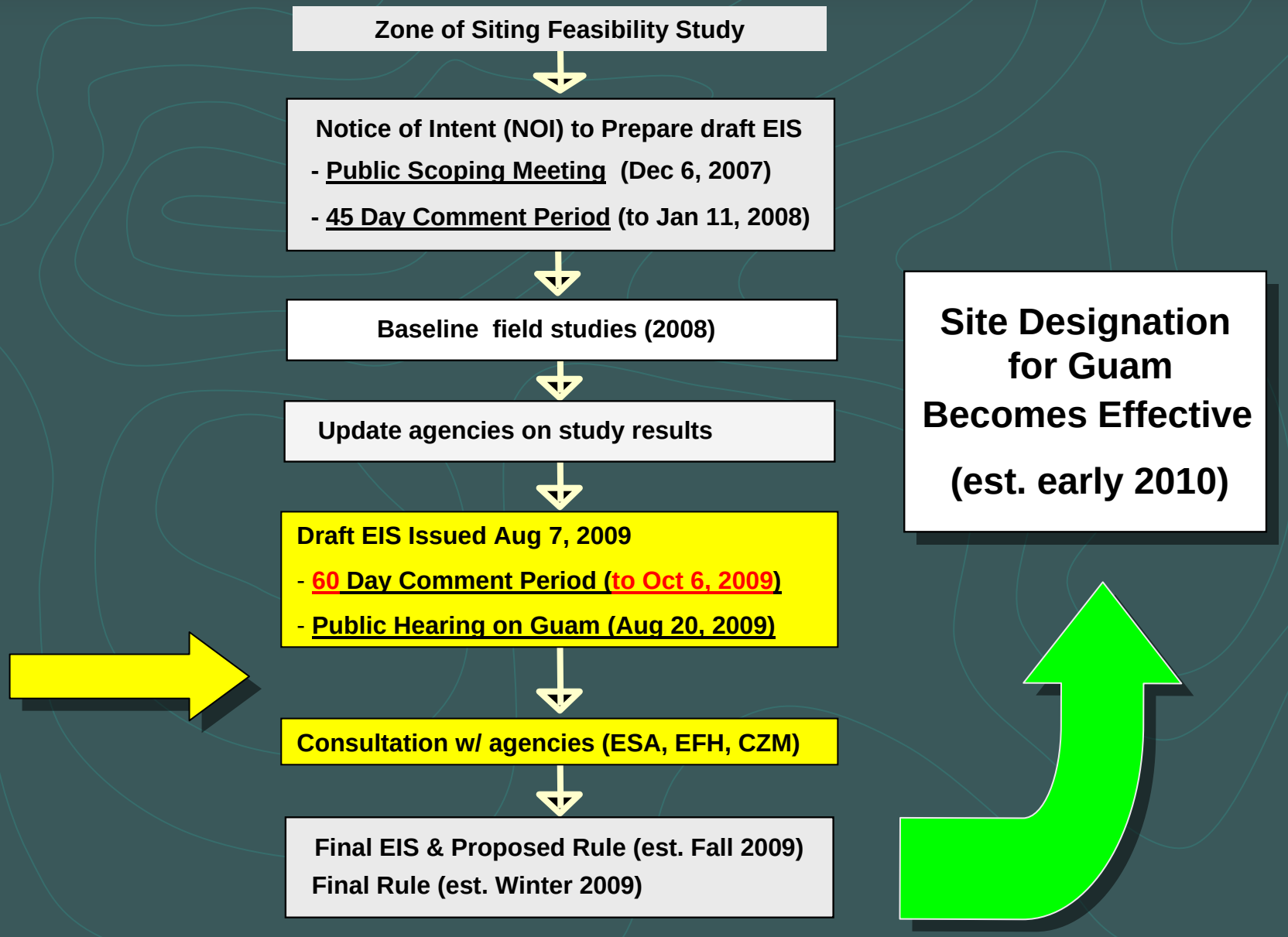
What is this Meeting About?

- ✓ Guam has no ocean disposal option for managing clean (non-toxic) dredged material
- ✓ EPA proposes to designate an ocean disposal site for clean dredged material offshore of Guam
- ✓ EPA designates ocean disposal sites via an Environmental Impact Statement (EIS) process
- ✓ The DRAFT EIS has now been released
- ✓ EPA wants your comments on this draft EIS

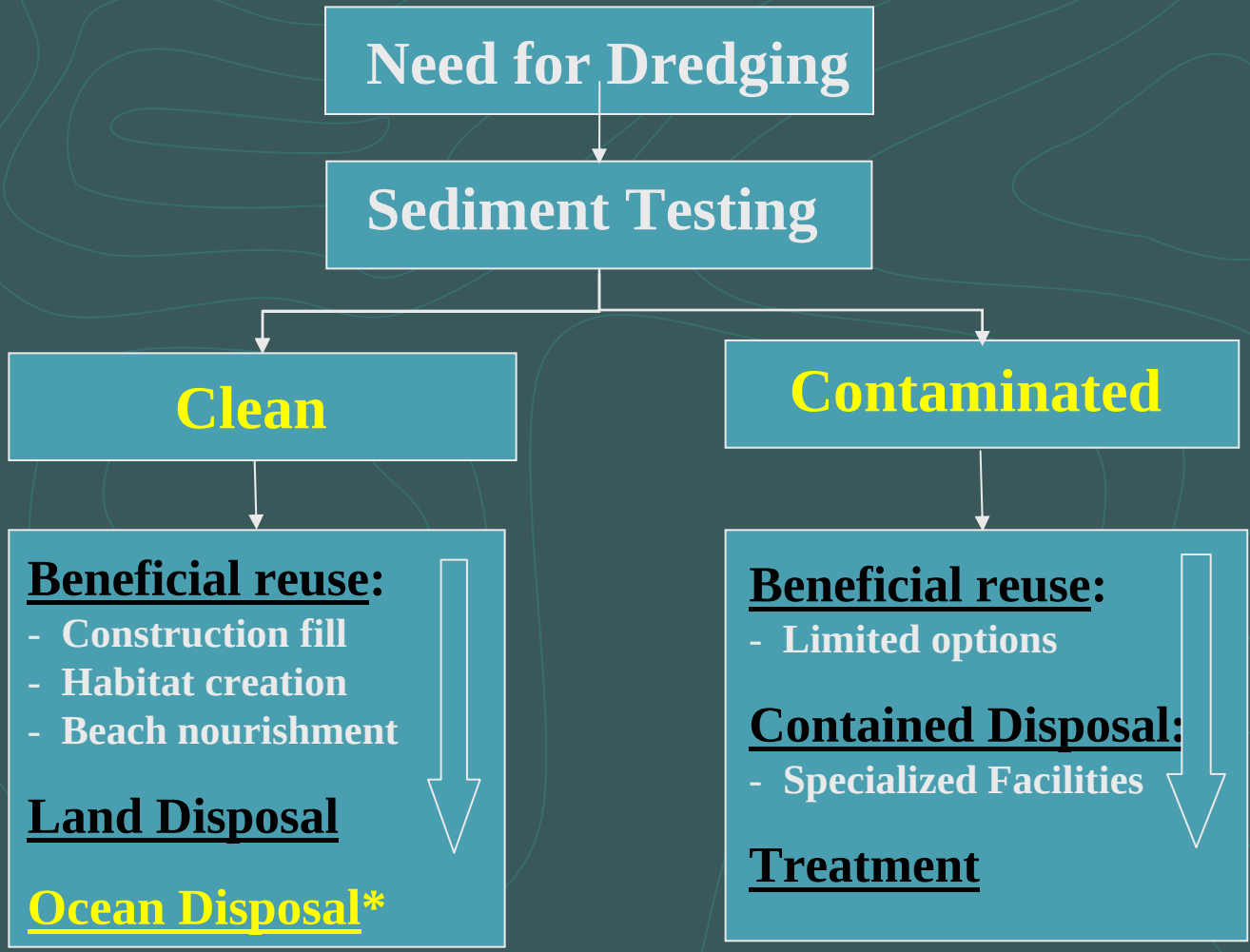
What Is The Process?

- ✓ Screen alternative locations with available information
- ✓ Address data gaps with field studies
- ✓ Draft EIS evaluates alternatives, including No Action
- ✓ Public and agencies comment on the Draft EIS
- ✓ Finalize EIS based on comments, and issue Proposed Rule (with location and site use requirements)
- ✓ Public and agencies comment on Proposed Rule
- ✓ Issue Final Rule designating ocean disposal site

Where Are We In The Process?

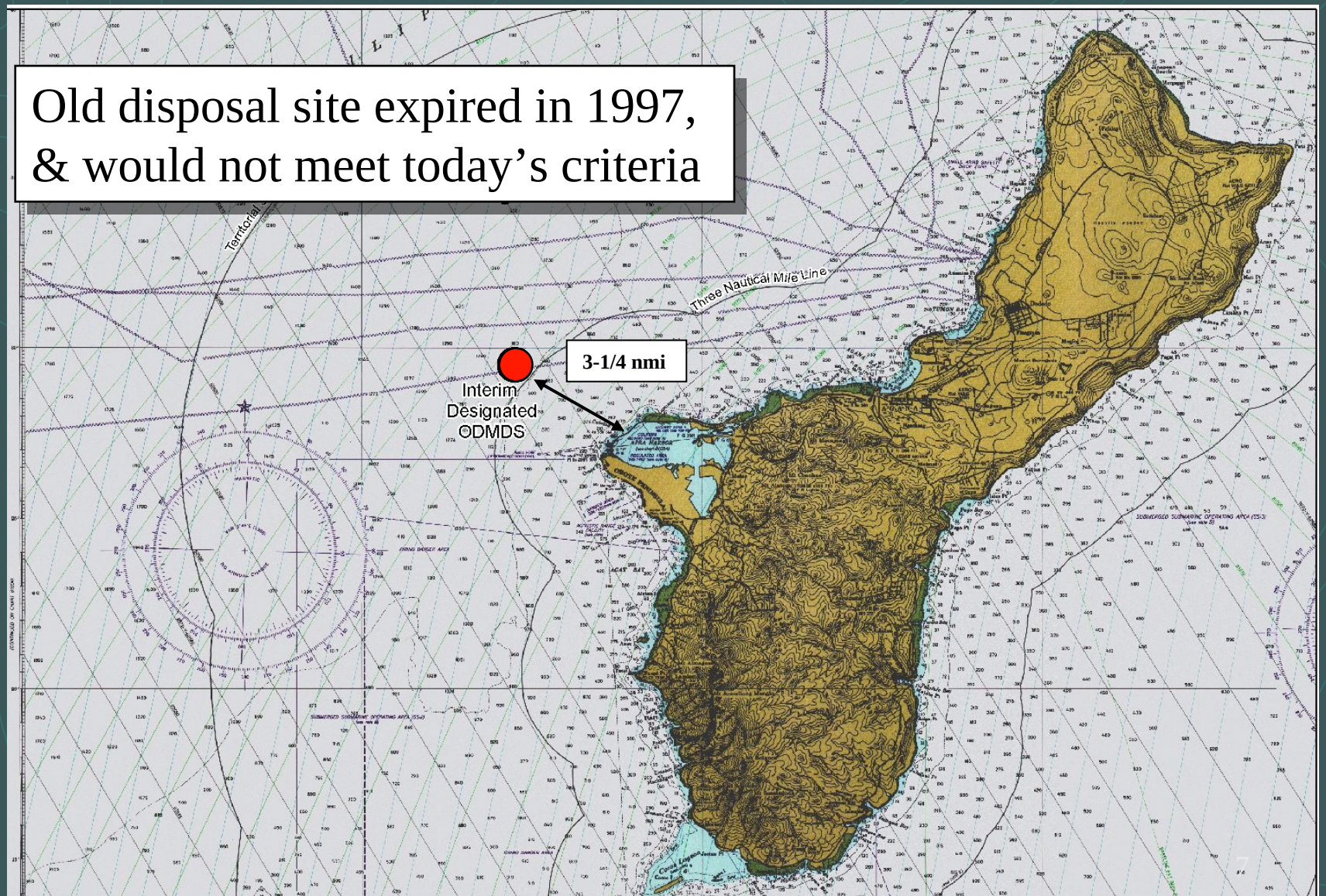


How Is Dredged Material Managed?



*** Currently Guam has no ocean disposal option**

Why Doesn't Guam Have An Ocean Disposal Site?



What Are EPA's Criteria For Ocean Disposal Sites?

EPA will only designate a site that:

- ✓ **Avoids interference** with fishing areas, navigation lanes, and other uses of the ocean
- ✓ **Avoids significant adverse effects** to beaches, shorelines, important habitats, etc.
- ✓ **Is located to minimize coastal zone impacts**
- ✓ **Uses pre-existing sites where feasible**, to minimize cumulative effects

How Did EPA Identify Possible Ocean Disposal Sites For Guam?

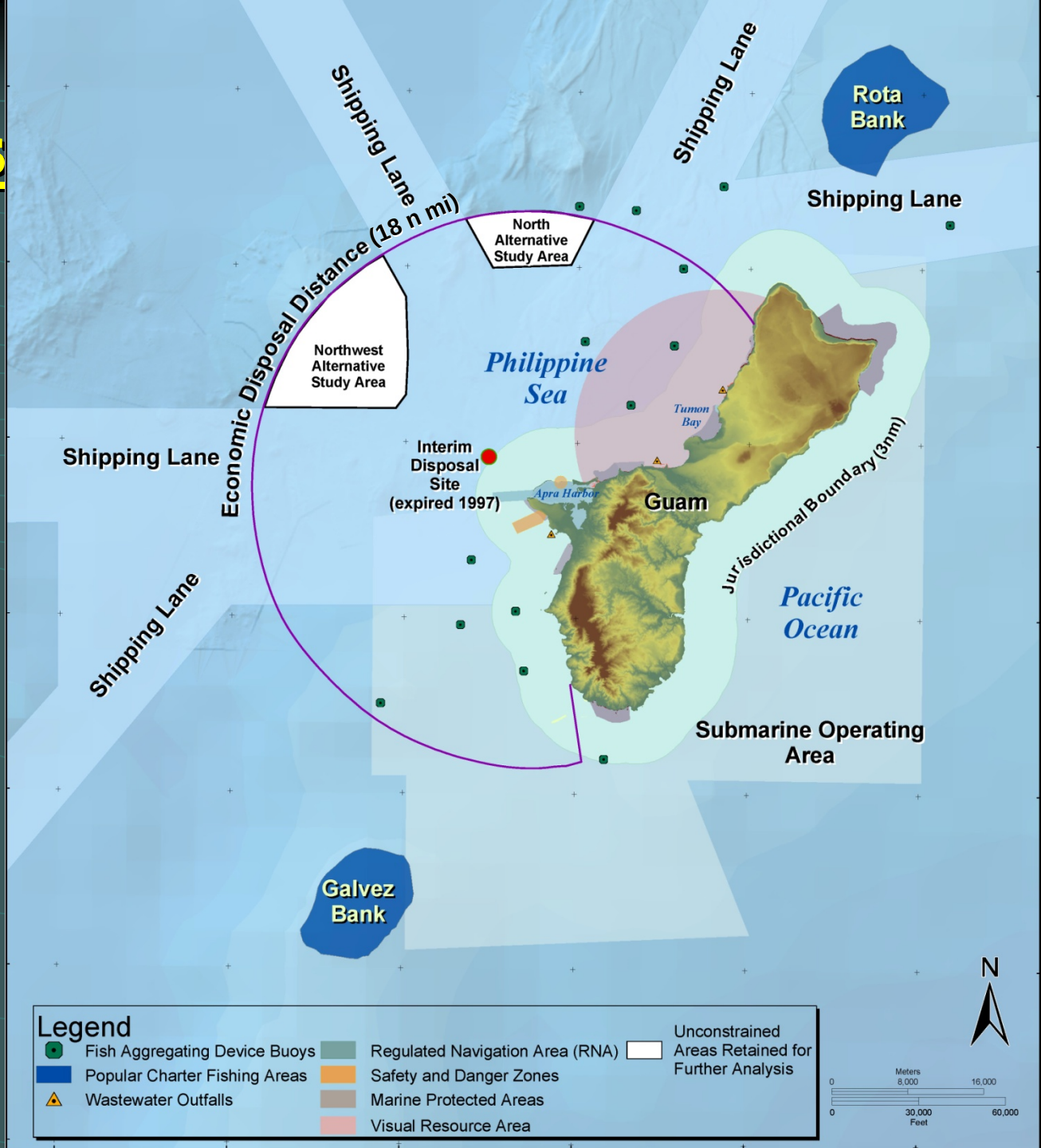
First, a Zone of Siting Feasibility (ZSF) process looked at existing information and:

- ✓ Identified a feasible travel distance
- ✓ Identified areas to avoid such as:
  - Fishing areas
  - Parks, sanctuaries, refuges, monuments, etc.
  - Important habitats (e.g., coral reefs)
  - Shipping lanes
  - Military operating areas

ZSF Conclusions

Two feasible study areas identified

Each area was the focus of intensive field studies



Purpose of Field Studies

After the ZSF Study identified known areas to avoid in the region:

- ✓ Site specific field studies compared the two study areas and looked for any unknown or sensitive resources:
  - Unexpected seafloor geology?
  - Unusual water properties or ocean currents?
  - Unusual sediment properties?
  - Unexpected biological communities?

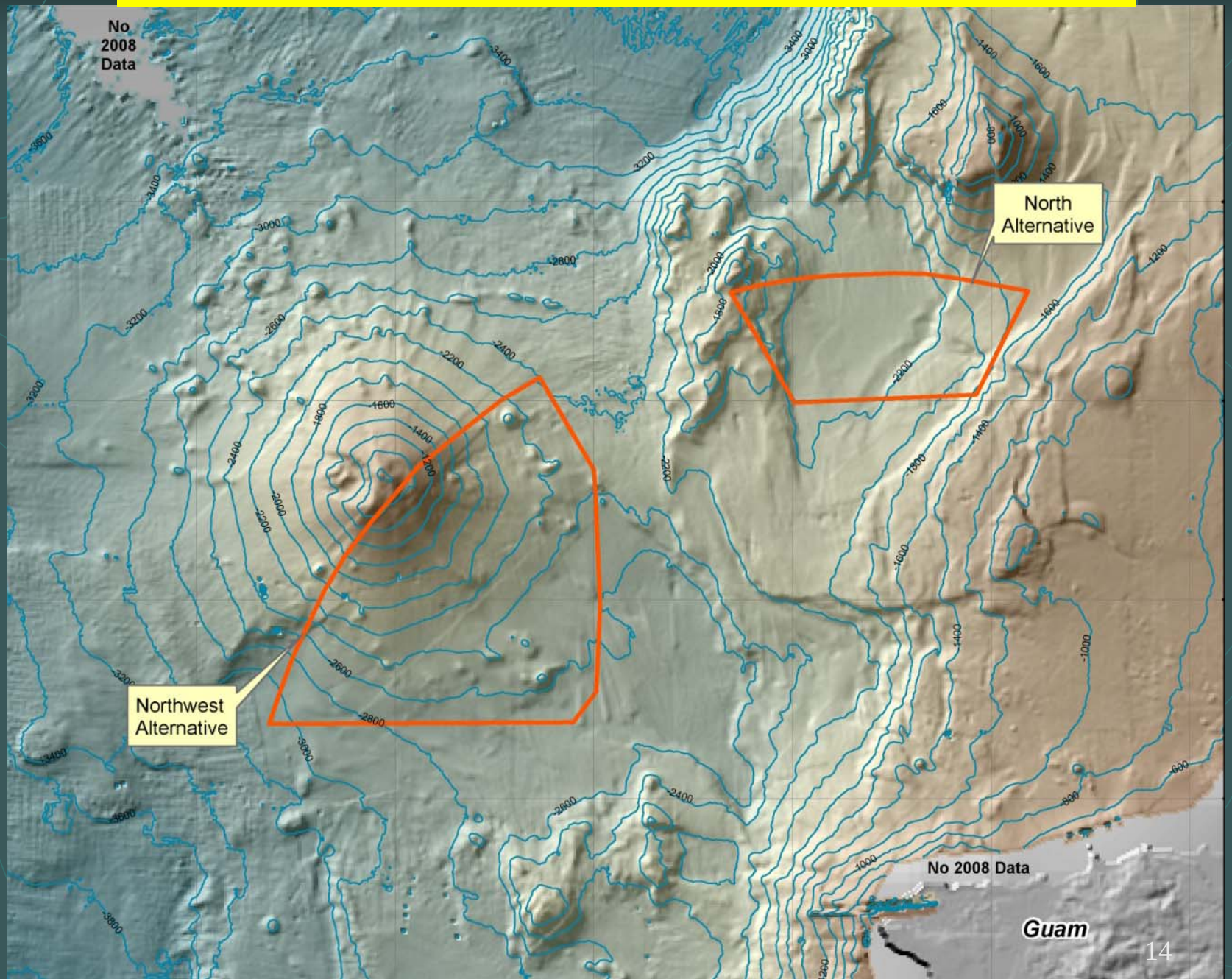
Field Studies Conducted in 2008

- ✓**High-Resolution Seafloor Mapping**
- ✓**Water Column Studies**
  - Ocean current speed and direction at multiple depths (used in computer model)
  - Physical and chemical properties
- ✓**Sediment Studies**
  - Physical and chemical properties
- ✓**Biology Studies**
  - Bottom-dwelling organisms surveys
  - Fish trawls, fish traps and photo surveys

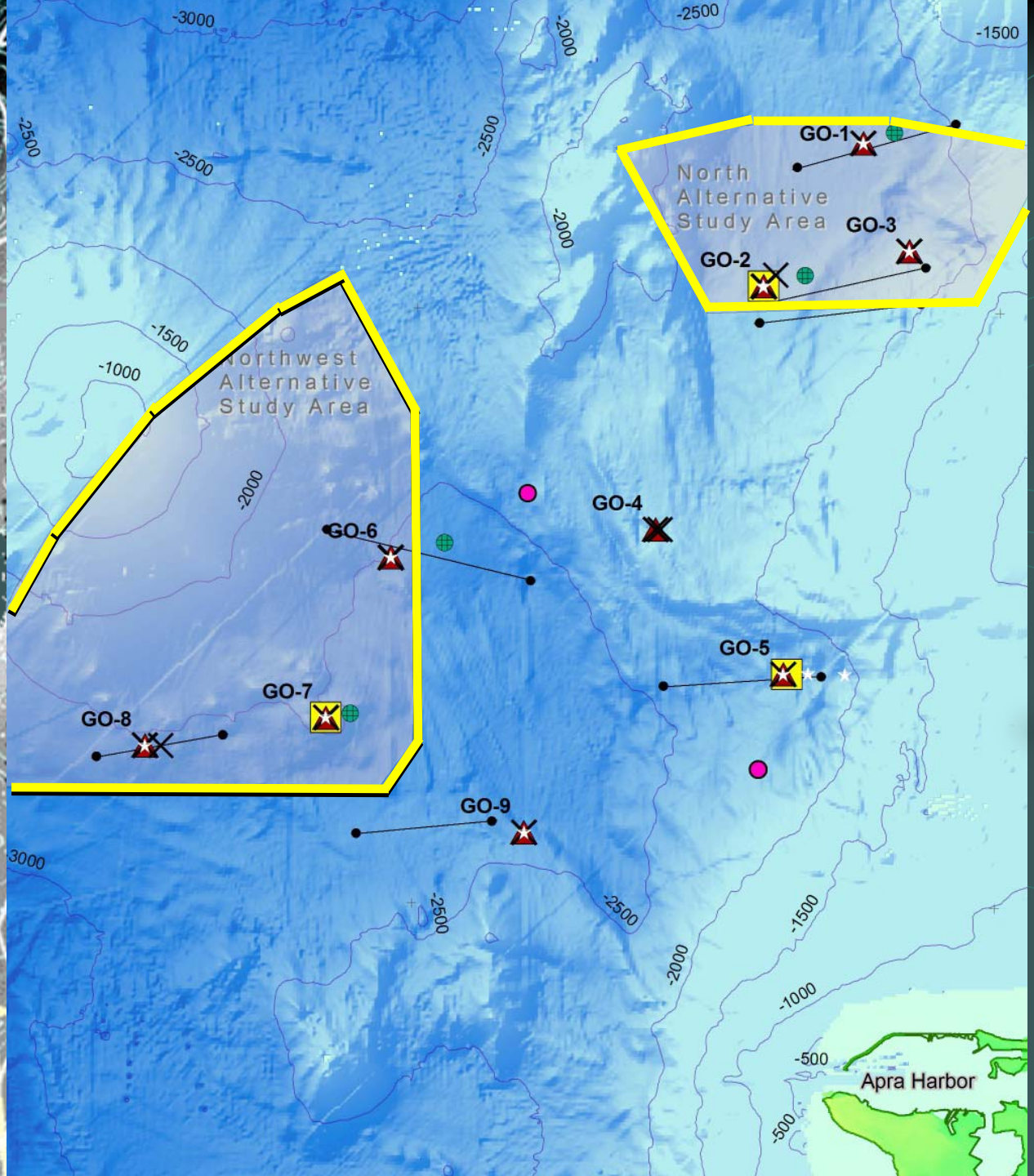
R/V Melville
San Diego, California

Scripps Institution of Oceanography

High Resolution Seafloor Map

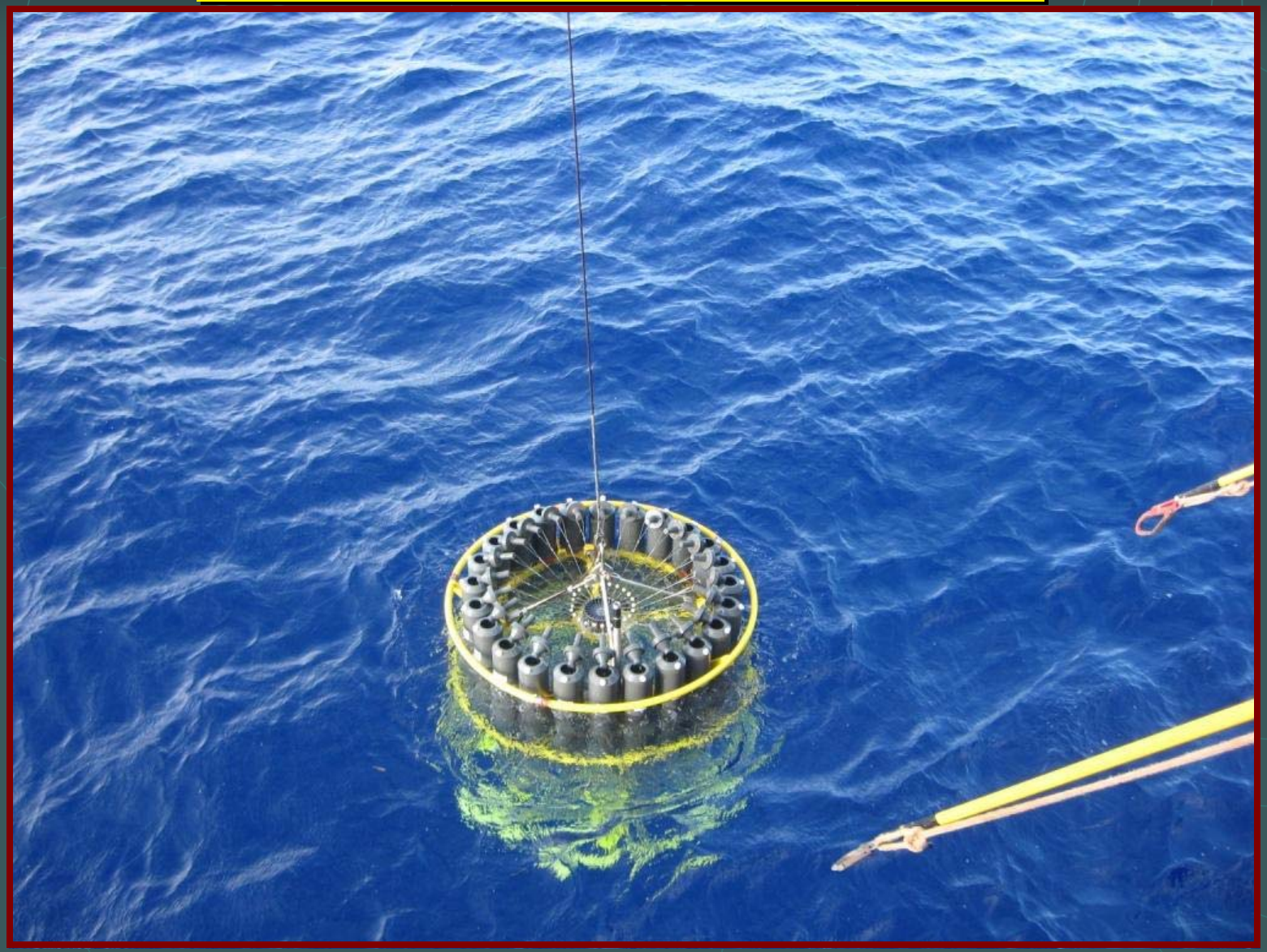


Field Studies

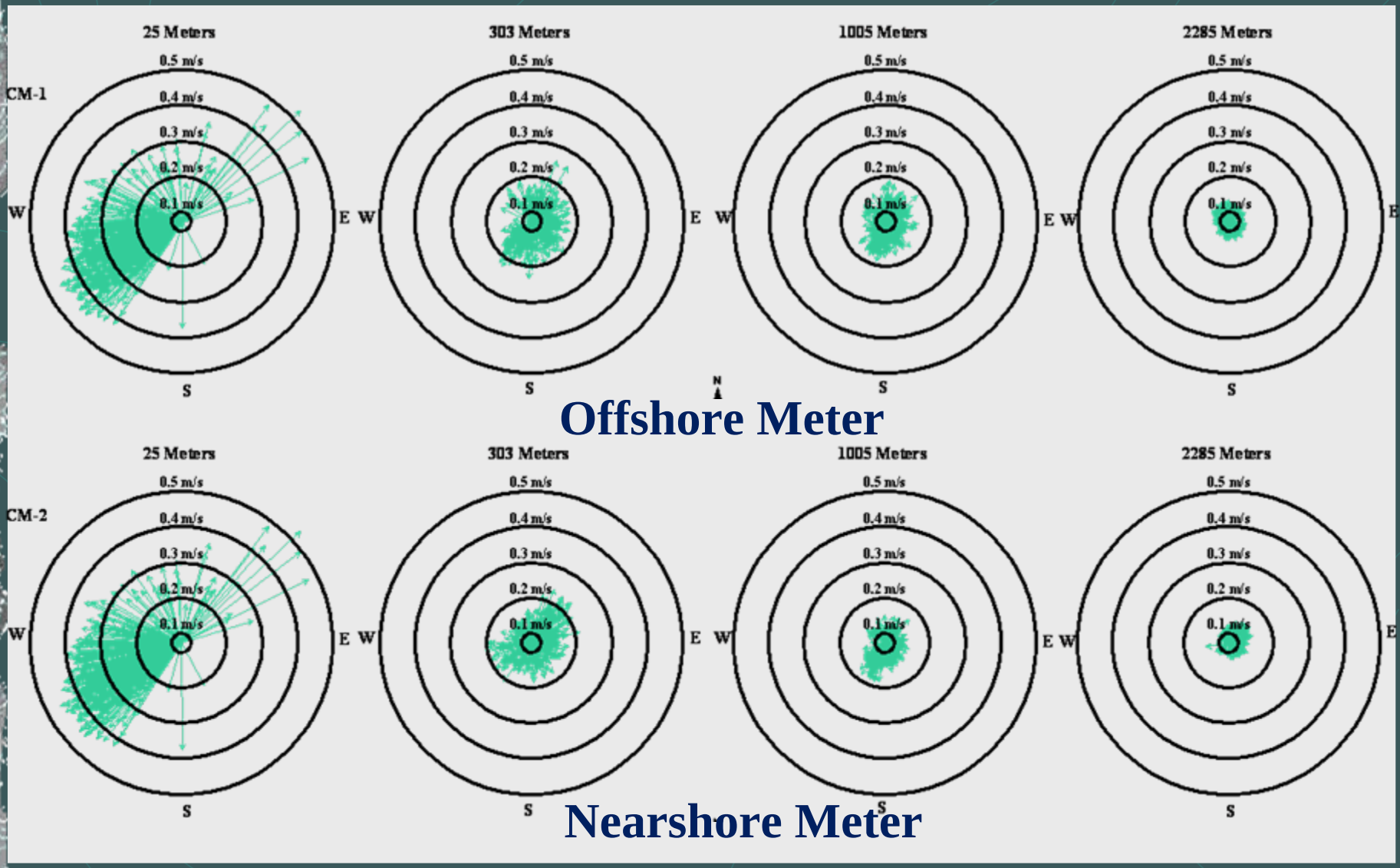


- Water samples
- Current meters
- Sediment samples
- Bottom trawls
- Fish traps

Water Column Studies



Regional Currents



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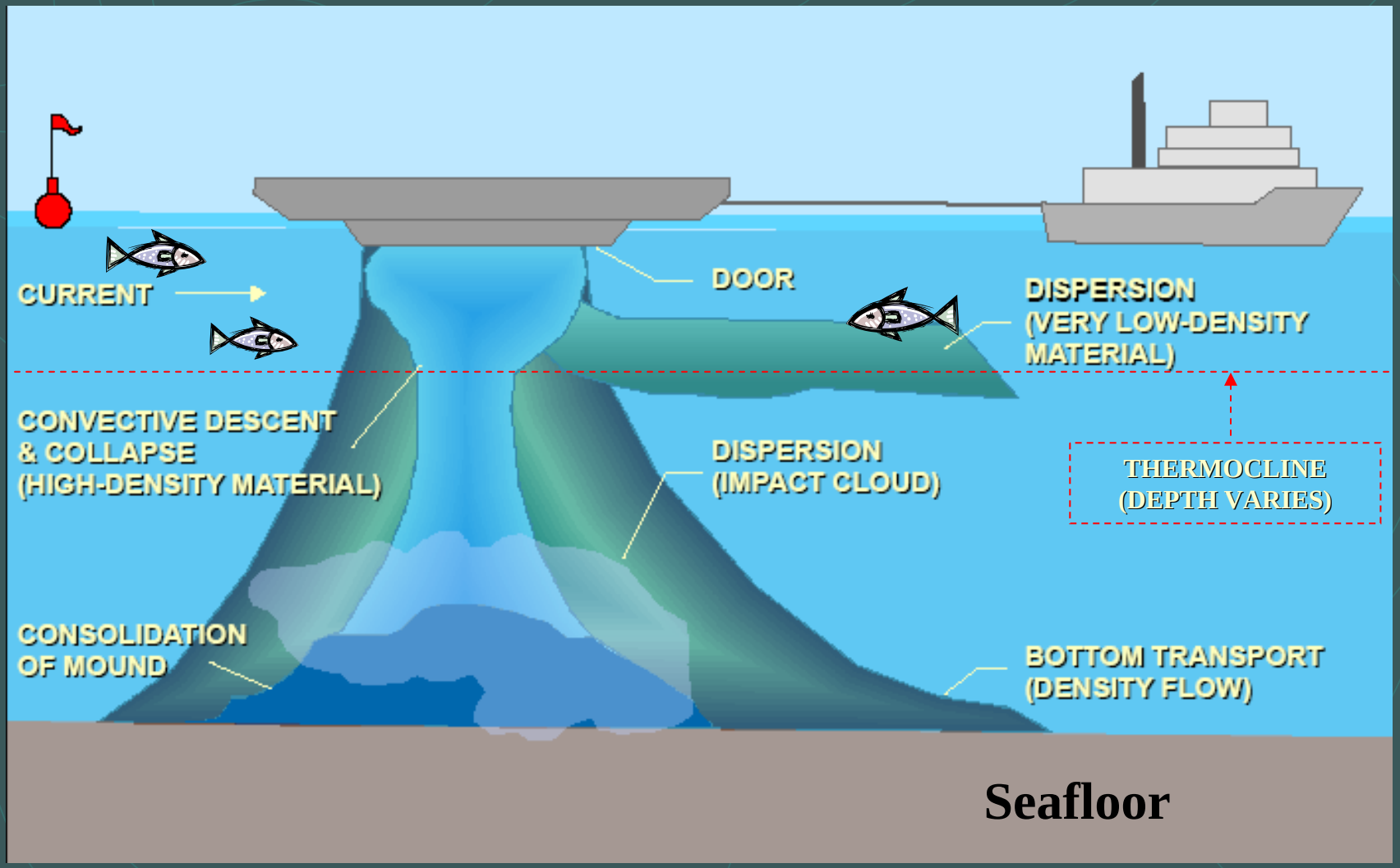
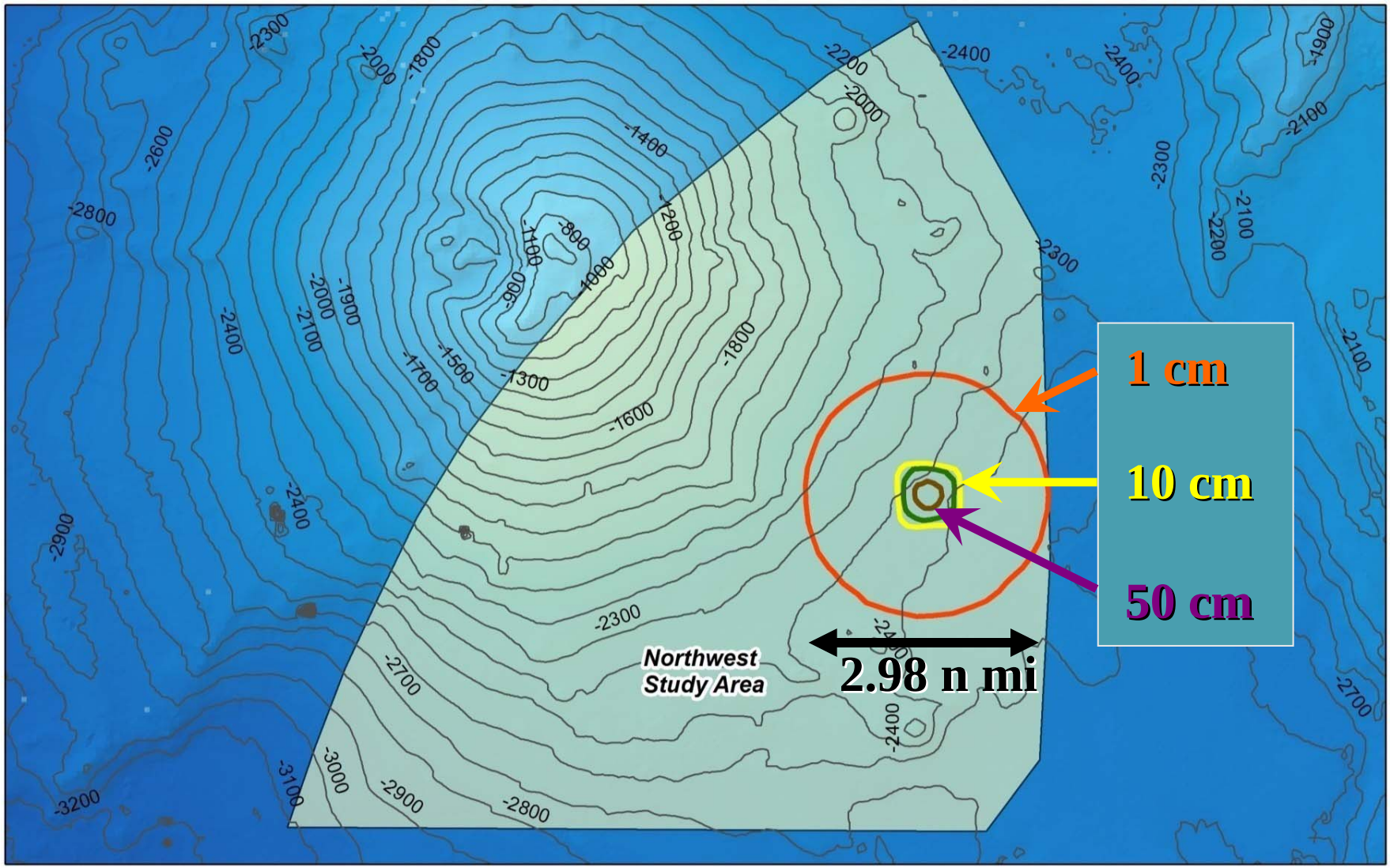
Dredged Material Movement Through the Water Column



(Graphic not to scale)

Modeled Deposition on the Seafloor

Maximum-volume scenario of 1 million cy disposed over 1 year



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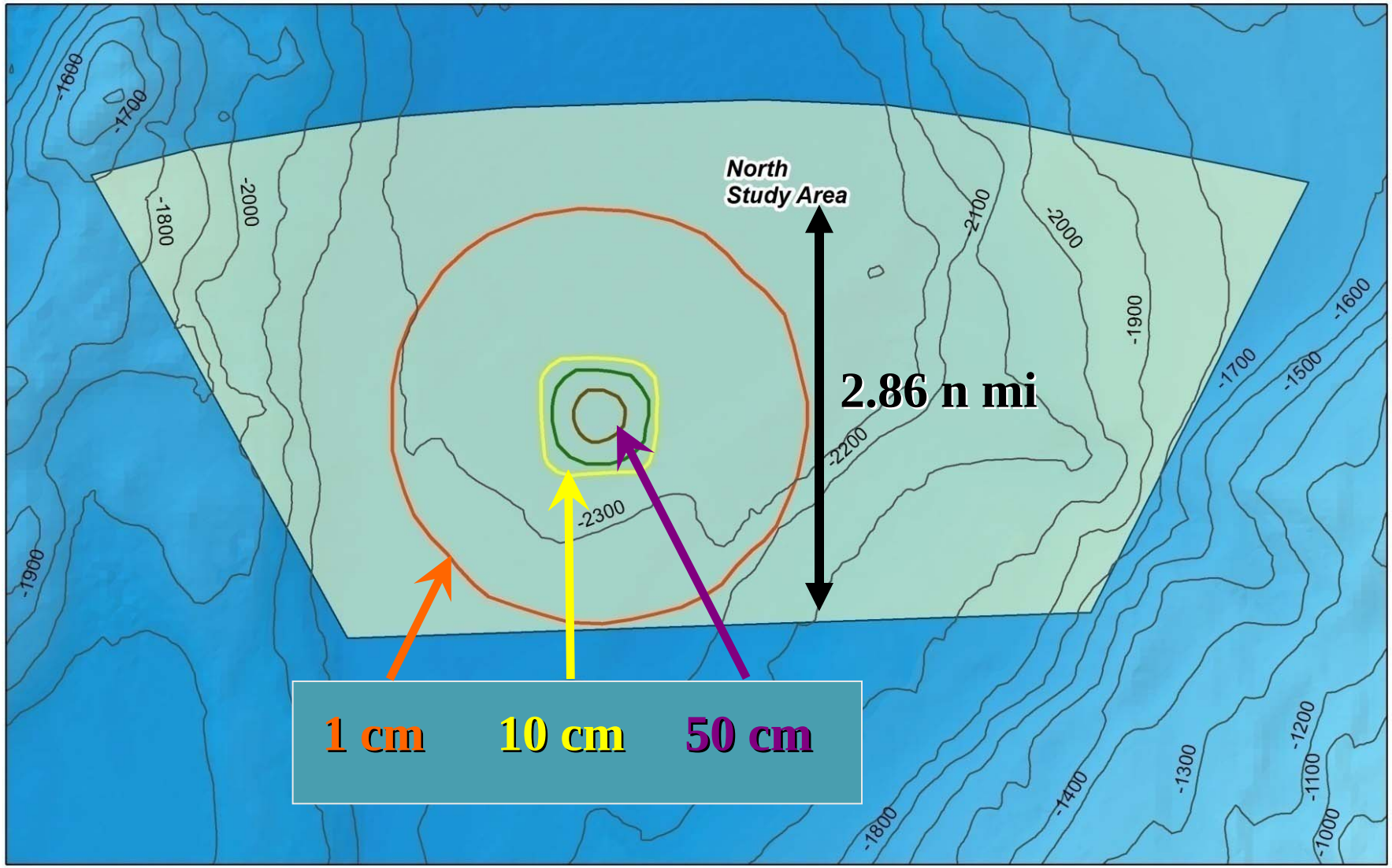
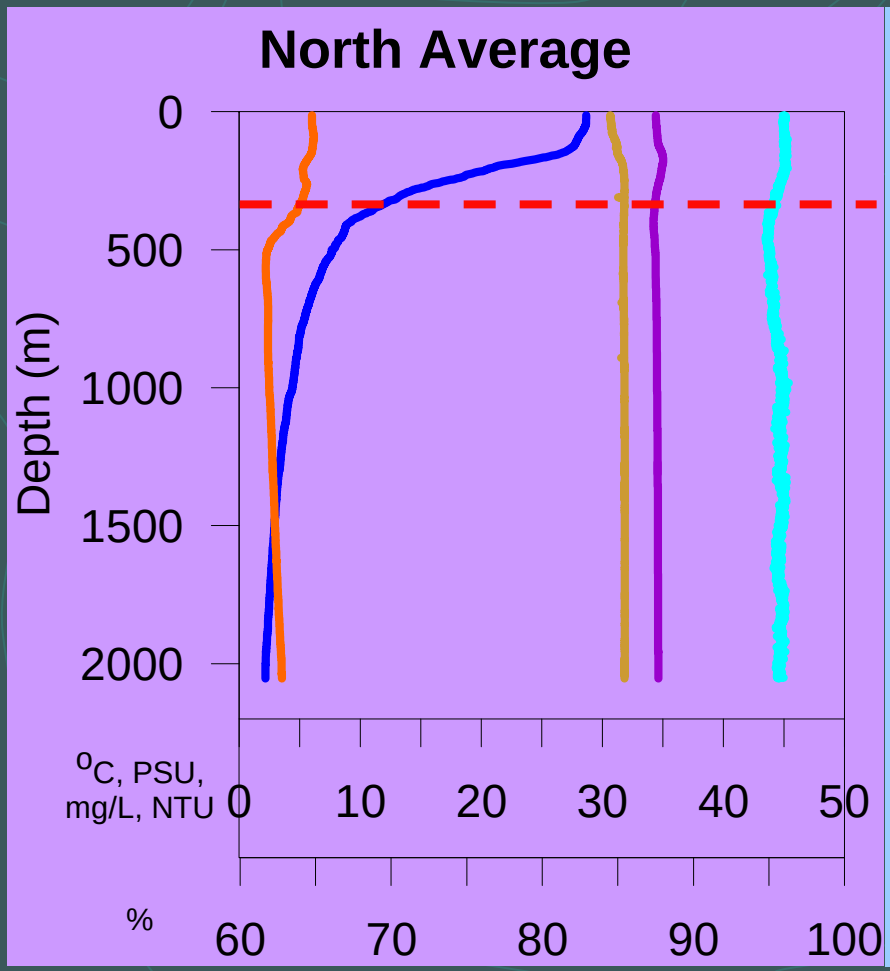
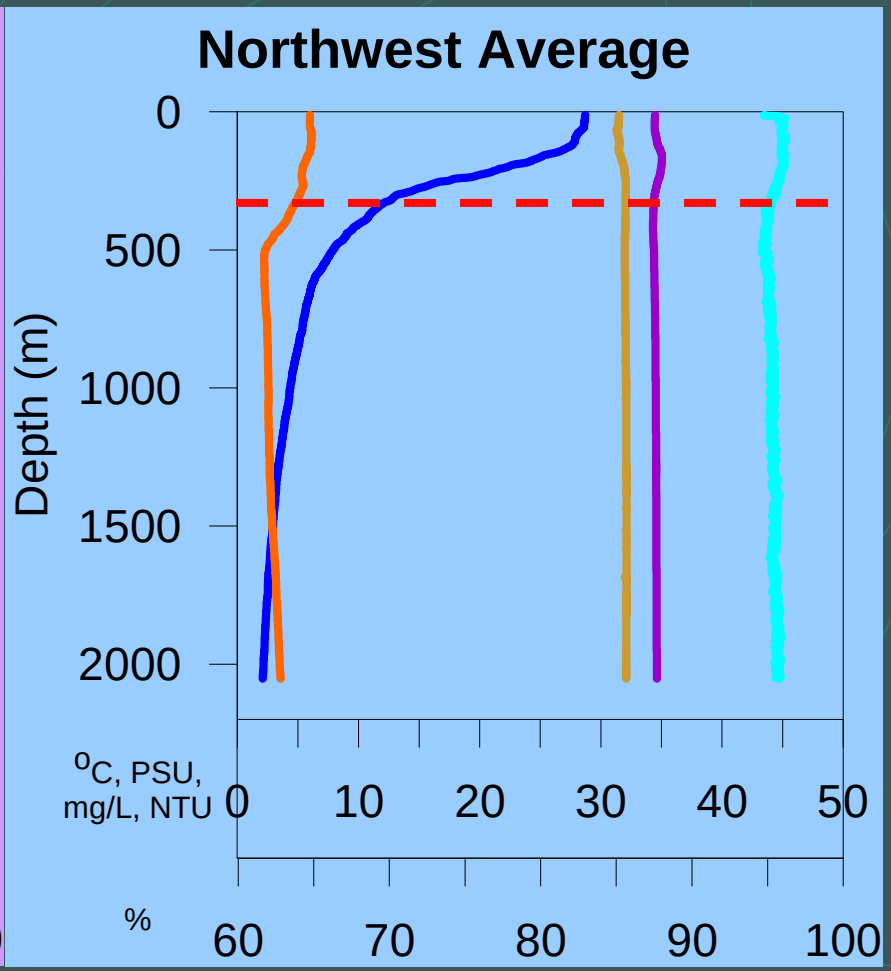
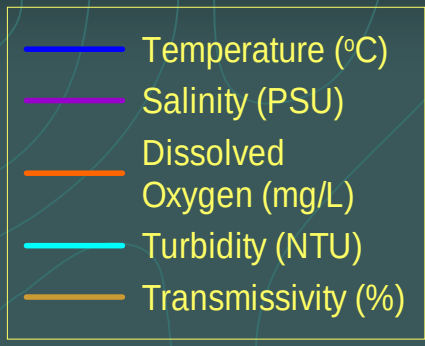


Water Column Properties

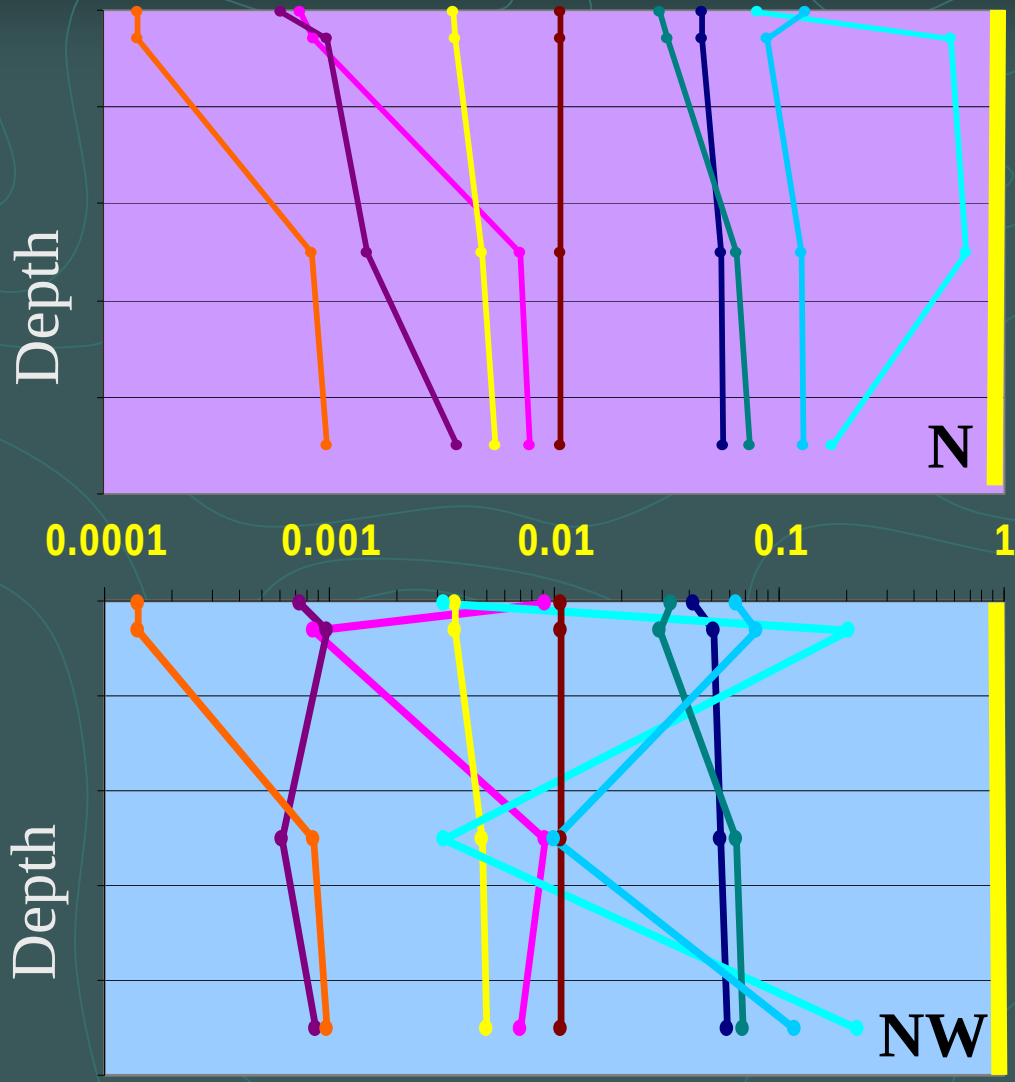
- All stations were similar
- Conditions are typical for tropical latitudes
- Well-defined thermocline between 150 and 400 m







Water Column Chemistry



- Trace metals and PAHs all at typical background levels
- Chlorinated pesticides, PCBs were not detected

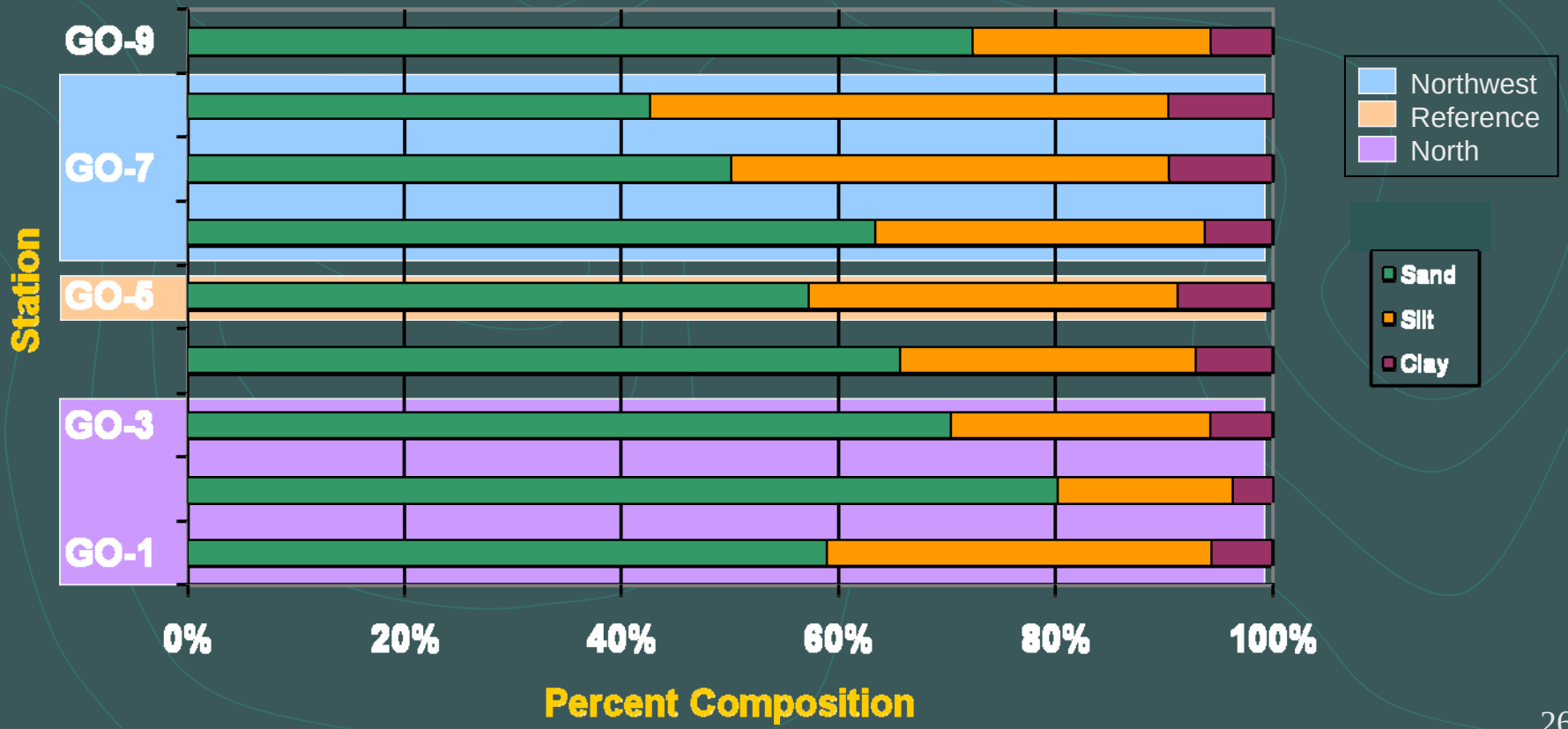
Sediment Studies

Sediment Sampling


GUAM ODMDS
Station 8
GRAB 7
04/12/08
0934

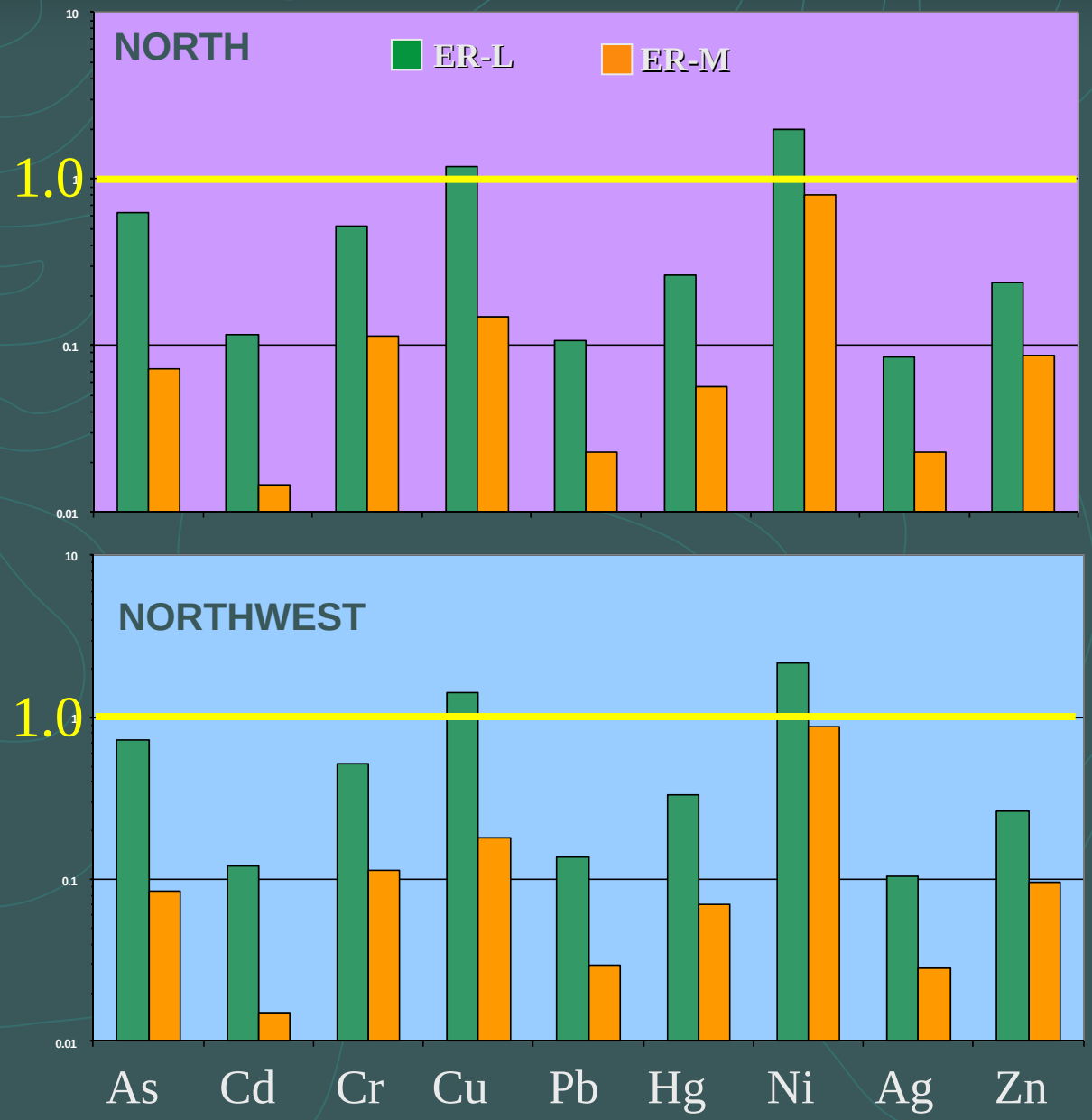
Sediment Grain Size

- All sites were similar with predominantly silty sand, and no gravel at surface
- No hard-bottom habitat found



Sediment Chemistry

- Sediment chemistry in both areas was similar
- Trace metals, PAHs, dioxin/furan and radioactivity were at typical background levels
- PCBs, chlorinated pesticides and organotins were not detected



Biological Studies

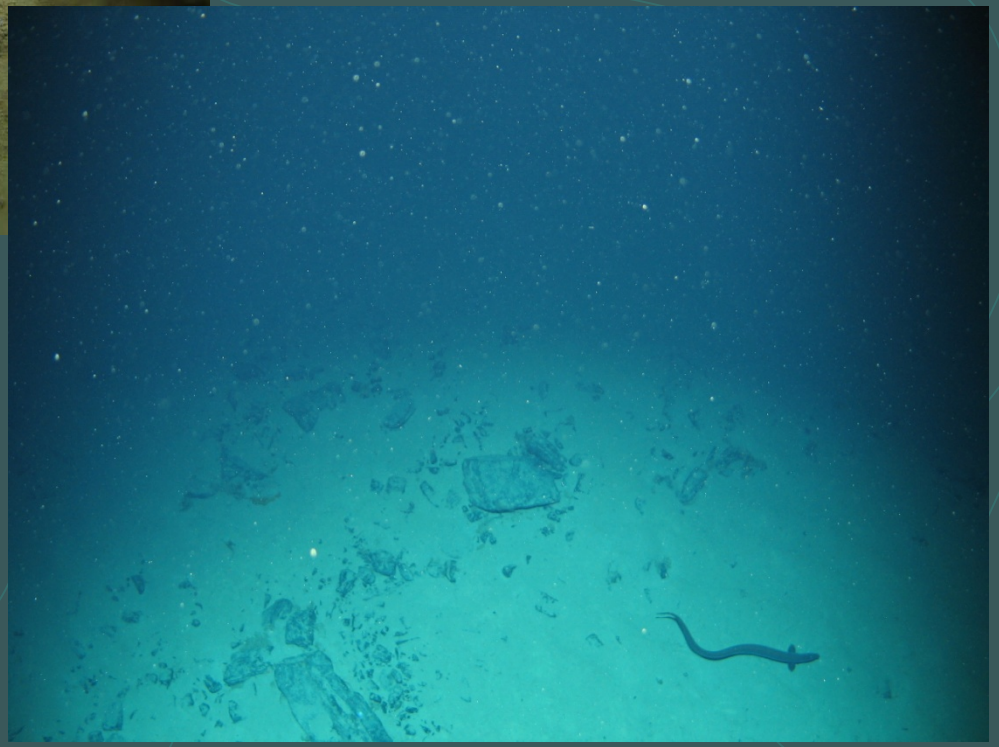
Benthic Invertebrate Communities

- Communities were similar in both study areas
- Communities were typical for deep sea silty sand environments

Mean Species Density, Richness, and Diversity

Parameter	NORTH			NORTHWEST			OTHER		
	GO1	GO2	GO3	GO6	GO7	GO8	GO4	GO5	GO9
Density (number/m^2)	20	17	11	18	18	9	11	30	12
Species Richness (# of species)	9	7	6	8	8	5	7	32	7
Shannon-Wiener diversity	2.06	1.85	1.72	2.02	1.86	1.58	1.49	2.08	1.85
% Polychaetes	78	45	54	62	50	62	40	66	79
% Crustaceans	5	2	27	14	21	12	7	18	6
% Molluscs	2	5	7	0	0	0	0	4	0
% Echinoderms	0	0	0	0	0	0	0	0	0
% Misc. Phyla	15	48	12	23	30	25	53	12	16

Fish Trawls, Traps and Photo Surveys



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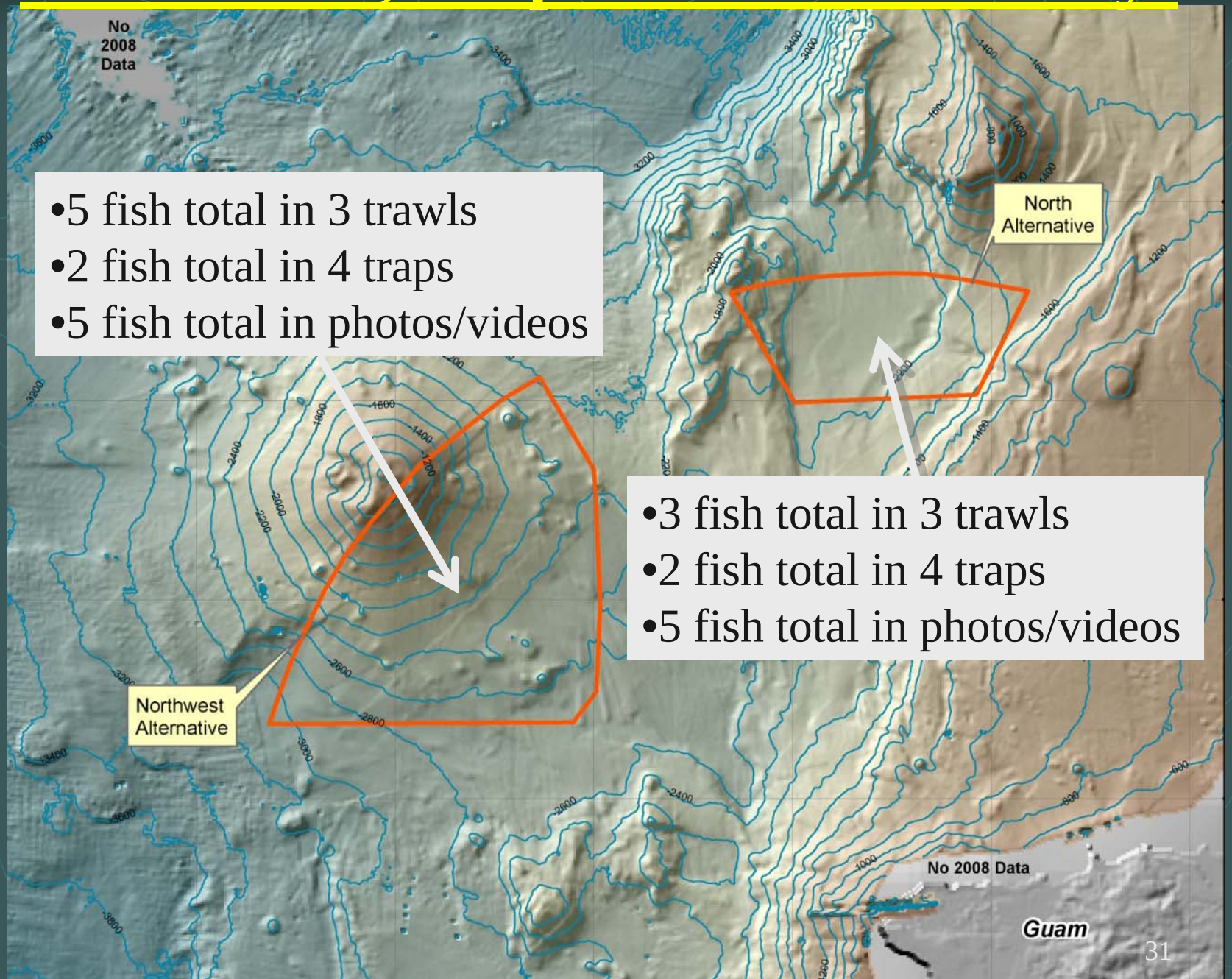

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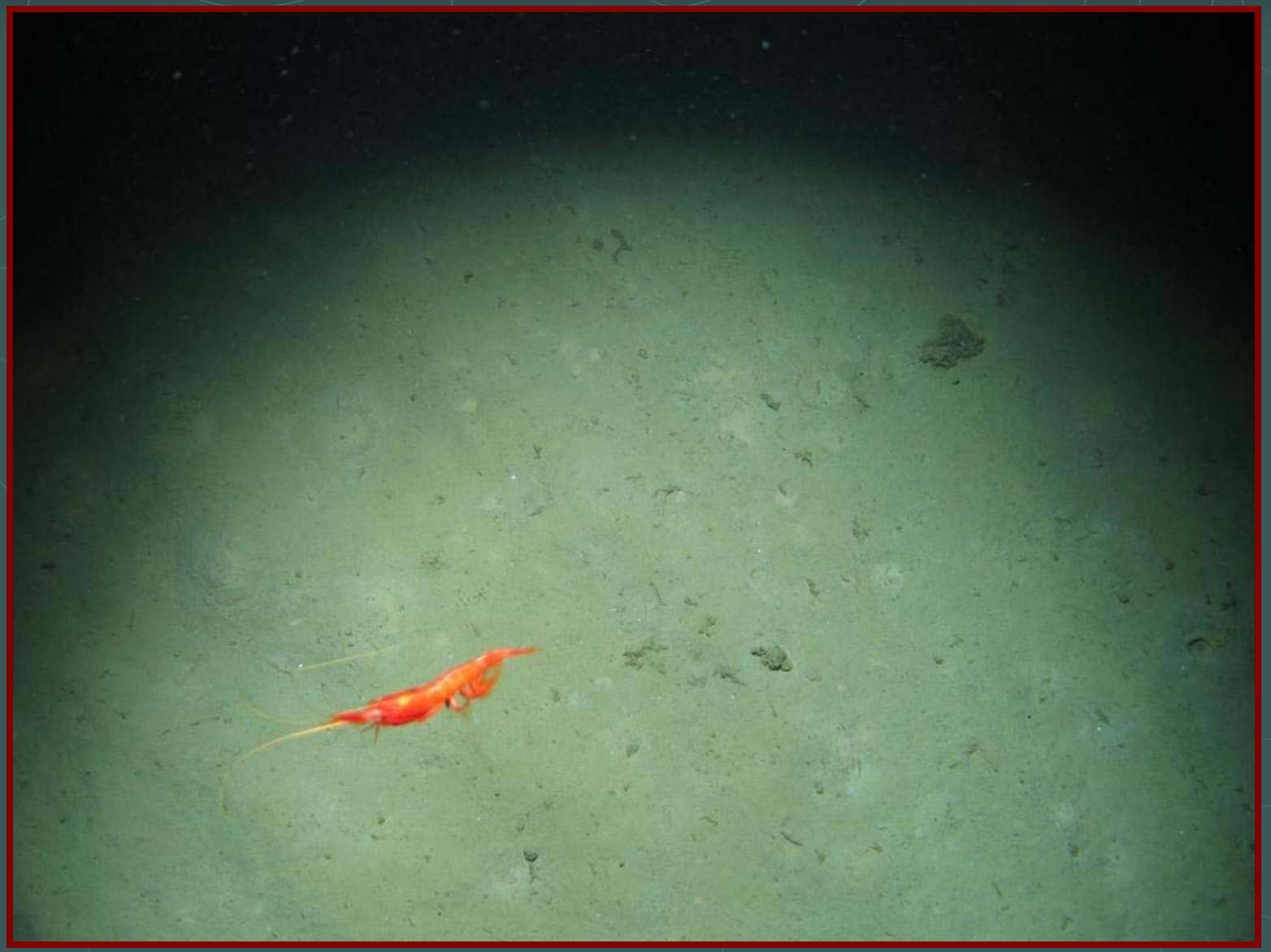


Fish Trawls, Traps and Photo Surveys

Field Study Conclusions

✓**Based on the seafloor mapping, water column, sediment and biological studies:**

- No unexpected features detected by high-resolution seafloor mapping in either study area
- Generally uniform water properties in both study areas; natural background conditions
- Generally uniform sediment properties in both study areas; natural background conditions
- No unique benthic communities or fish assemblages; very few fish found

EIS Evaluation Process

Based on the field study results and other existing information the EIS evaluated disposal in the two study areas for:

Physical Factors	Climate & Air Quality	Regional Geology
	Physical Oceanography	Sediment Properties
	Water Column Properties	Marina Trench Monument
	Water Column Chemistry	
Biological Factors	Plankton Communities	Marine Mammals
	Invertebrate Communities	Special Status Species
	Fish Communities	Marine Protected Areas
	Marine Birds	
Socioeconomic Factors	Commercial Fishing	Oil and Gas
	Recreational Uses	Archaeological Resources
	Commercial Shipping	Public Health and Welfare
	Military Uses	Economics (cost)

Findings: No significant impacts for any factor

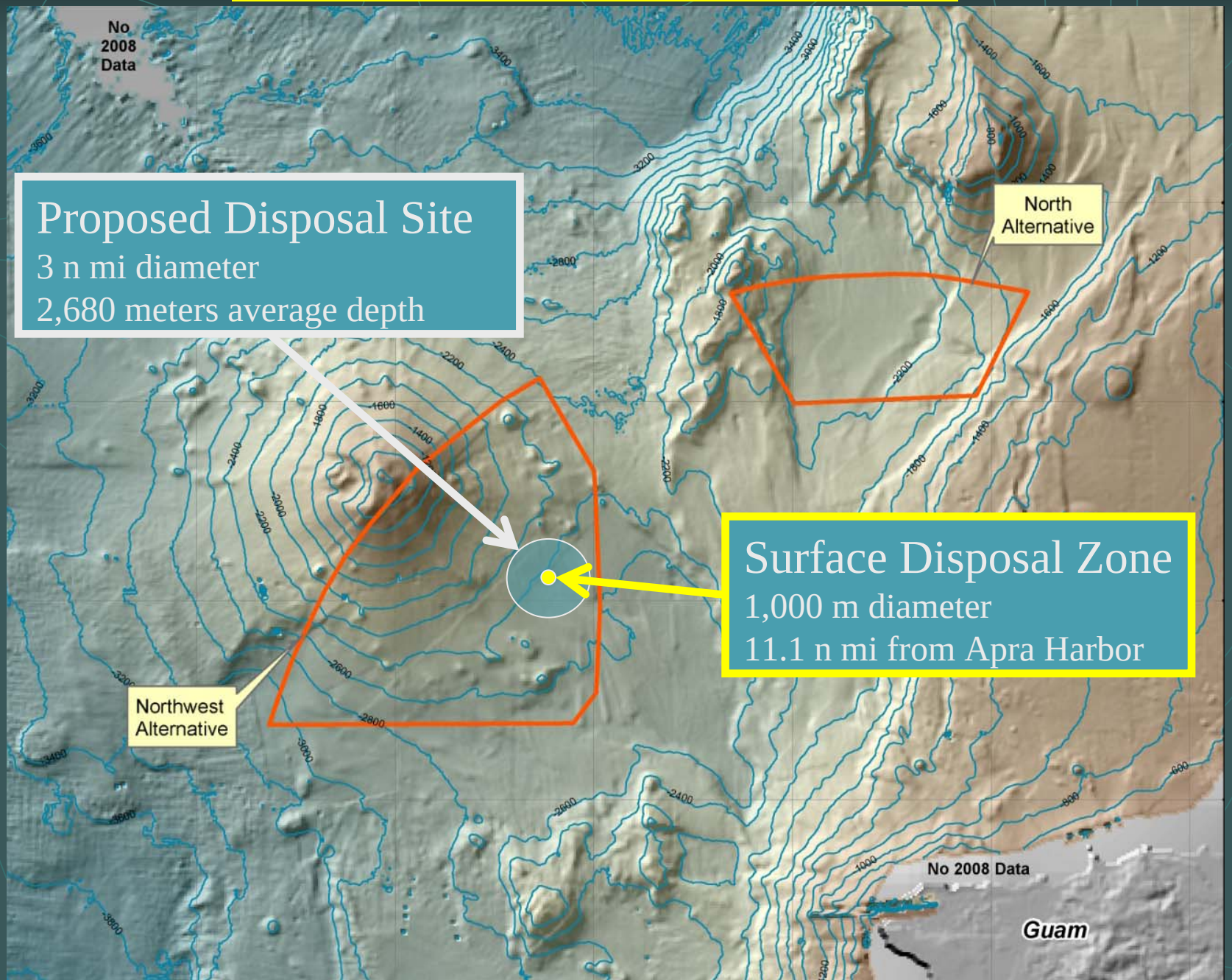
Draft EIS Conclusions

Both study areas were very similar, with only the following minor differences:

	Impacts	
Factor/Resource	**North**	**Northwest**
Economics (Transport Distance)	13.7 n mi = Greater barge transport distance/expense	11.1 n mi = Less expense
Fishing (FADs)	Less than significant, but site and barge transport route closer to FADs	Further from FADs
Air Quality	Less than significant, but longer distance would generate more exhaust emissions	Less emissions
Aesthetics	Less than significant, but barge transport route more visible from coast	Less visible

EIS Preferred Alternative: Northwest Site

Preferred Alternative



What's Next?

- ✓ Collect public comments on draft EIS
- ✓ Complete agency consultations
- ✓ Respond to public & agency comments
- ✓ Prepare final EIS & proposed rule
- ✓ Collect comments on proposed rule
- ✓ Issue final rule

For More Information

http://www.epa.gov/region09/water/dredging/guam-eis.html

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Proposed Guam Ocean Disposal Site EIS

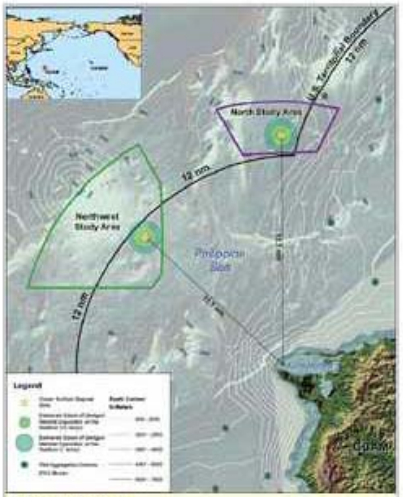
Guam currently has no ocean disposal site for dredged material. Consequently, maintenance and new-construction dredging projects have had to manage all their material on land or in near-shore fills. Appropriate on-land or near-shore disposal and reuse sites are limited in their capacity to appropriately manage dredged material. Therefore EPA is now proposing to designate a new ocean disposal site for clean (non-toxic) dredged material offshore of Guam.

Intensive field studies have been conducted to help identify locations where disposal of clean dredged material would not have any significant impact to the marine environment, or to other human uses of the ocean. The results of those studies are reflected in EPA's draft Environmental Impact Statement for Designation of an Ocean Dredged Material Disposal Site Offshore of Guam. The draft EIS is now available, along with key supporting documents. They can be downloaded below.

EPA is accepting public comment on the draft EIS for 60 days.

For further information and/or to submit comments, contact:

Allan Ota (ota.allan@epa.gov)
U.S. Environmental Protection Agency, Region 9
Dredging & Sediment Management Team (WTR-8)
75 Hawthorne Street
San Francisco, CA 94105
Phone: (415) 972-3475
Fax: (415) 947-3537



Larger Image

Draft EIS

- Cover Title Abstract (PDF) (12 pp, 278K)
- Executive Summary (PDF) (14 pp, 688K)
- Chapter 1 (PDF) (12 pp, 562K)
- Chapter 2.0 - 2.2 (PDF) (7 pp, 480K)

How To Comment

- ✓ Comment at tonight's hearing (verbally, or on a comment sheet) - or -
- ✓ E-mail comments to:
  ota.allan@epa.gov - or -
- ✓ Mail written comments to:
  Allan Ota, USEPA Region 9 (WTR-8)
  75 Hawthorne Street
  San Francisco, CA 94105
- ✓ Comments accepted through October 6, 2009

THANK YOU!

Questions & Break,

Before Public Comment Period/Hearing

WELCOME!

PUBLIC HEARING
for the
Proposed Designation
of an
Ocean Dredged Material Disposal Site Offshore of Guam

August 20, 2009

Weston Resort Hotel, Guam

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HEARING RULES

Receiving Your Comments

- ✓ This is your opportunity to comment officially on this Draft EIS
- ✓ Verbal comments are being recorded to ensure we capture them accurately
- ✓ Responses to both verbal and written comments will be addressed in the Final EIS
- ✓ To ensure everyone has an opportunity to comment, the hearing officer may limit verbal comments to 3 minutes