Public Presentation

Proposed Plan for
Parcel E-2
Hunters Point Naval Shipyard

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BRAC Program Management Office
September 20, 2011

Purpose of Tonight's Meeting

1. Provide an overview of the Proposed Plan for Parcel E-2
2. Accept public comments on the Proposed Plan

Meeting Agenda

6:00 – 6:20 p.m.	**Meet the Navy / Review Display Boards**
6:20 – 6:25 p.m.	**Welcome / Introductions / Agenda Review**
6:25 – 6:30 p.m.	**Meeting Ground Rules**
6:30 – 7:00 p.m.	**Presentation on Parcel E-2 Proposed Plan**
7:00 – 7:10 p.m.	**Break**
7:10 – 7:25 p.m.	**Answer Clarifying Questions on the Presentation**
7:25 – 7:30 p.m.	**Review the Public Comment Process**
7:30 – TBD	**Receive Public Comments**
	(Public comments will be received until all community members have had an opportunity to speak)

Ground Rules

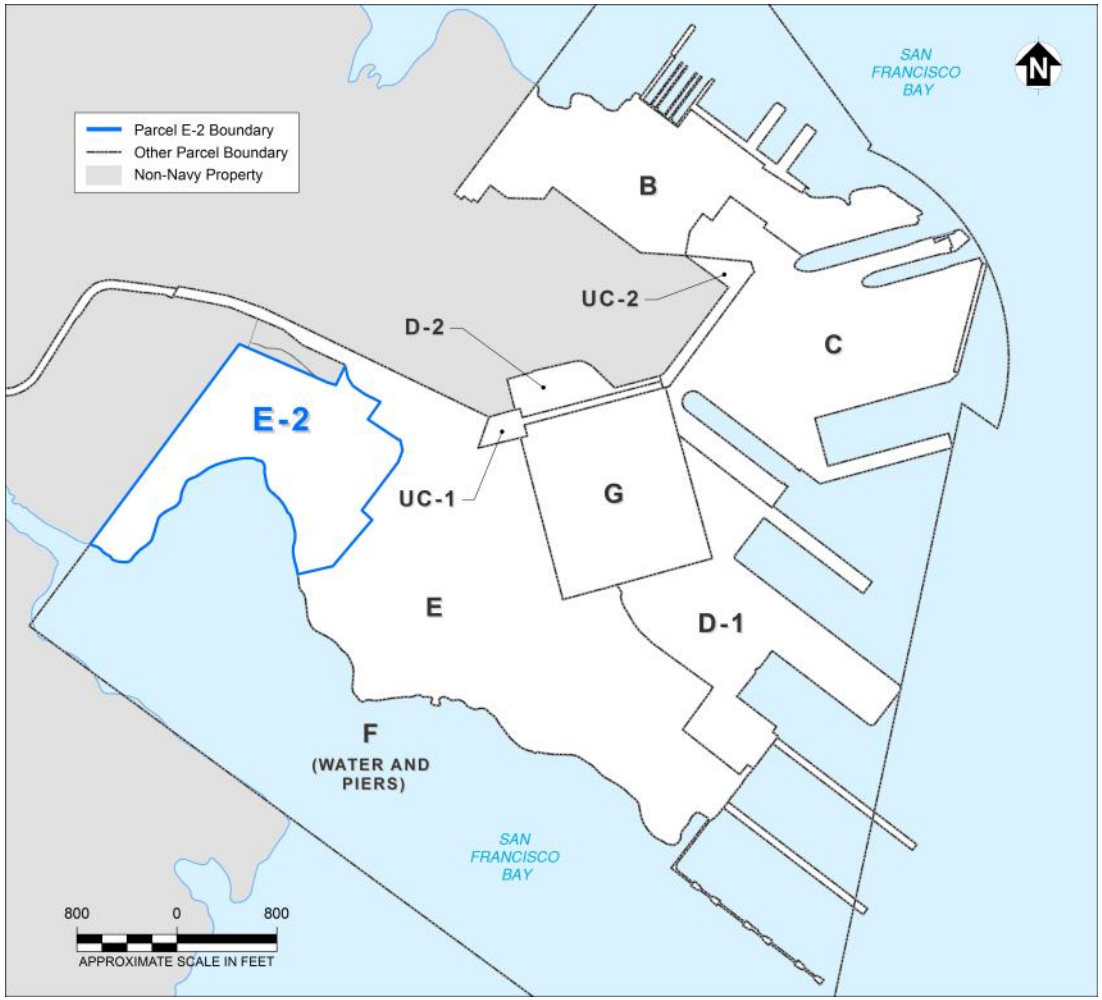
1. Respect other participants.
2. Please hold questions and comments until the end of the presentation.
3. Speak one at a time.
4. There will be time for everyone to make comments (either spoken or in writing).
5. There will be 3 minutes for each speaker.
6. Speakers will be allowed to continue after others are given an opportunity to speak.
7. Please review the handouts.

What are we going to talk about?

1. General information and the overall cleanup process
2. What do we know about Parcel E-2 and the landfill?
3. What are the site risks?
4. Early cleanup actions
5. Summary and evaluation of remedial alternatives
6. Preferred alternative
7. Next steps and additional information

Location of Parcel E-2

Parcel E-2 is located in the southwest part of HPNS and includes about 48 acres of shoreline and lowland coastal area.



History of Parcel E-2

Parcel E-2 was created between the early 1940's and late 1960's by filling along the edges of the bay with various materials, including:

- Soil
- Crushed bedrock
- Dredged sediments
- Construction debris, trash, and industrial waste

The next series of slides show the fill history at Parcel E-2 from 1946 to 1974.

1946 Aerial Photograph

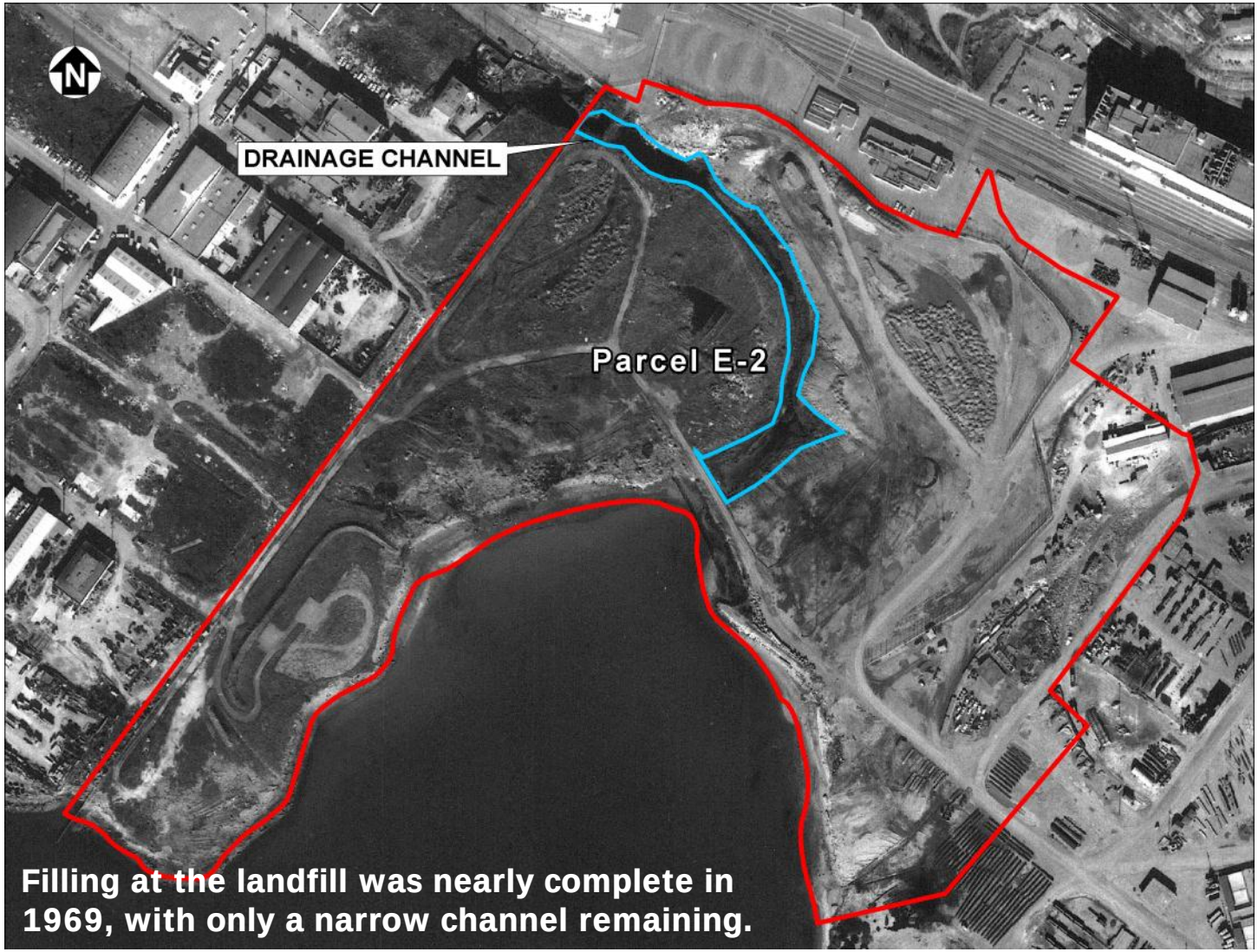
Note that the only filled area consists of what is now called the East Adjacent Area. This area was filled during the base expansion in the early 1940s.

1955 Aerial Photograph

Filling began from the west (non-Navy property).

1965 Aerial Photograph

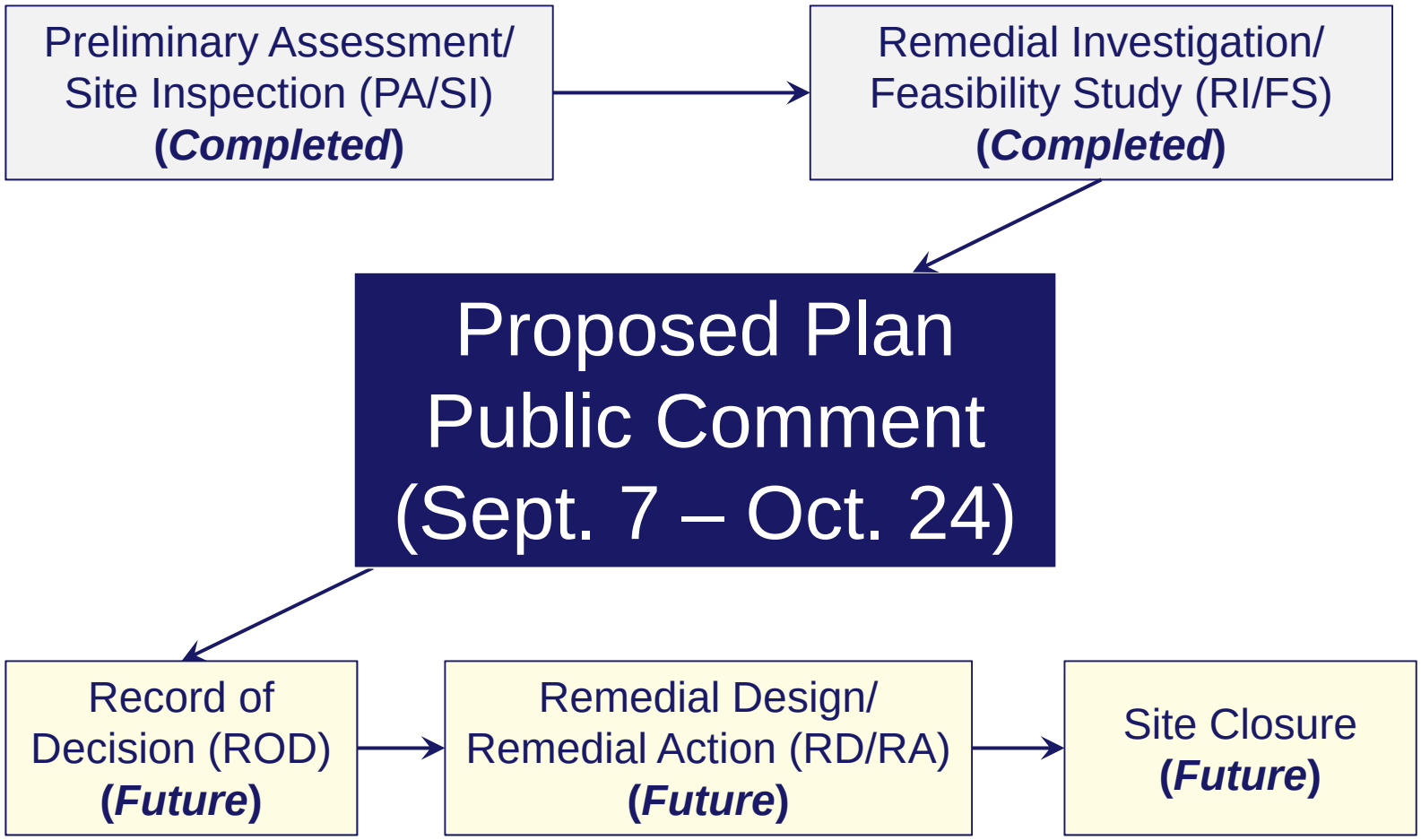
1969 Aerial Photograph



1974 Aerial Photograph

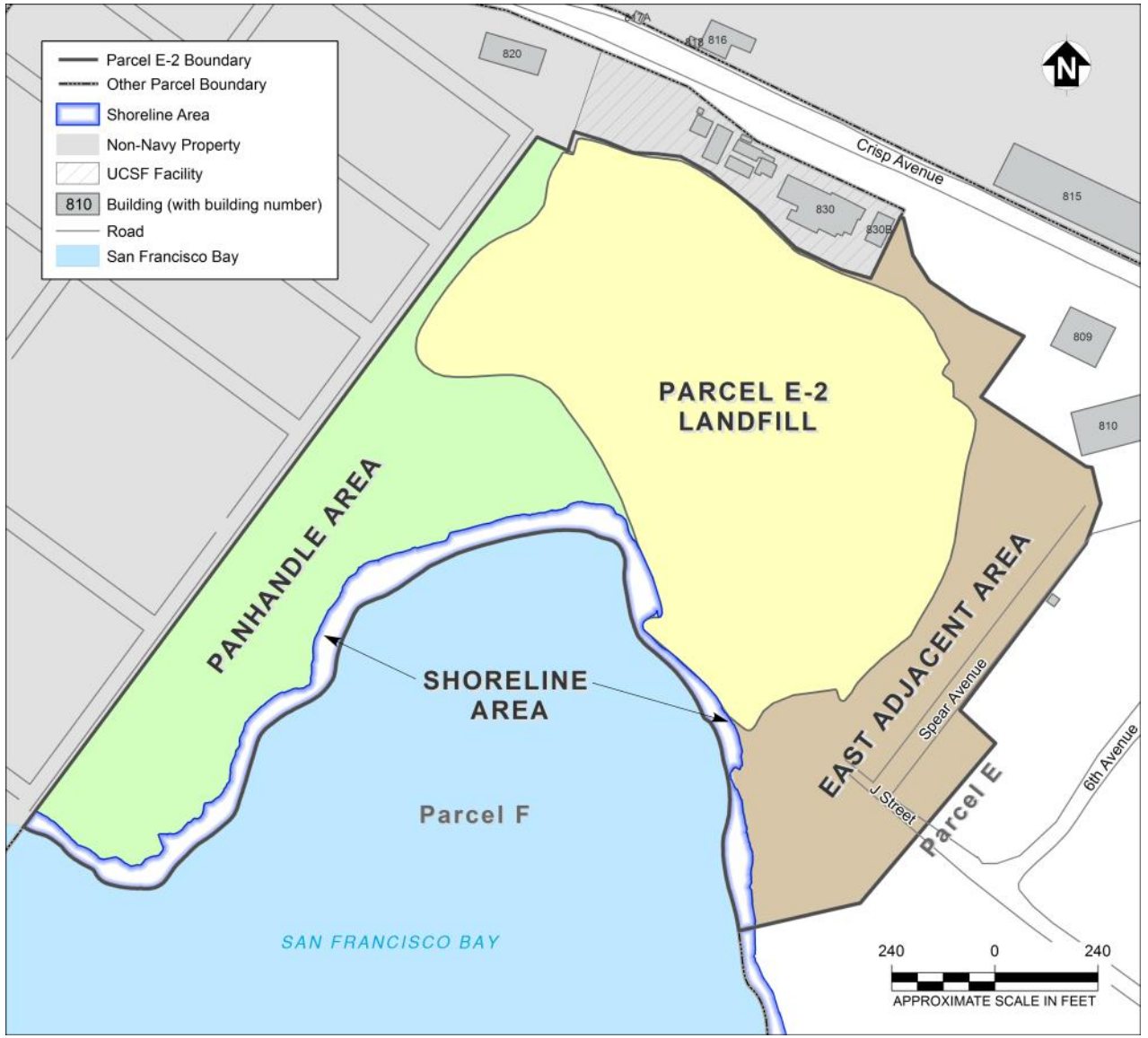
In 1974, the landfill was covered with soil (between 2 and 5 feet thick).

The Cleanup Process



What do we know about Parcel E-2?

Parcel E-2 Study Areas



Previous Investigations at Parcel E-2

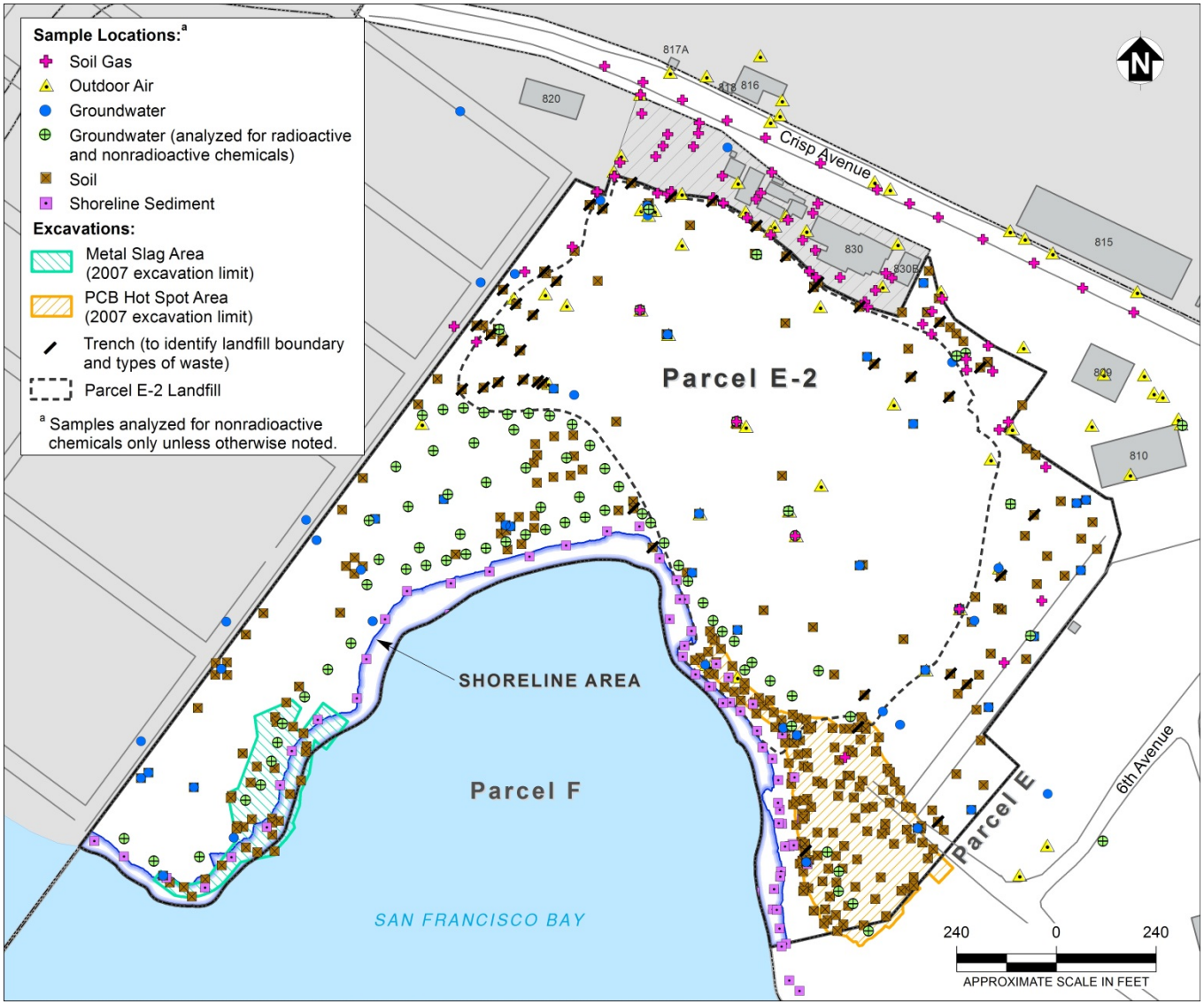
The Navy performed environmental investigations from 1988 through 2008:

- 124 soil borings
- 40 investigation trenches
- 103 groundwater monitoring wells
- 32 soil gas monitoring probes

Environmental samples were collected from these borings, trenches, groundwater monitoring wells, and soil gas monitoring probes:

- 1,113 soil samples
- 754 groundwater samples
- 1,220 radiological soil and groundwater samples
- Over 3,000 soil gas samples
- Over 1,700 outdoor air samples

Previous Investigations at Parcel E-2 (continued)



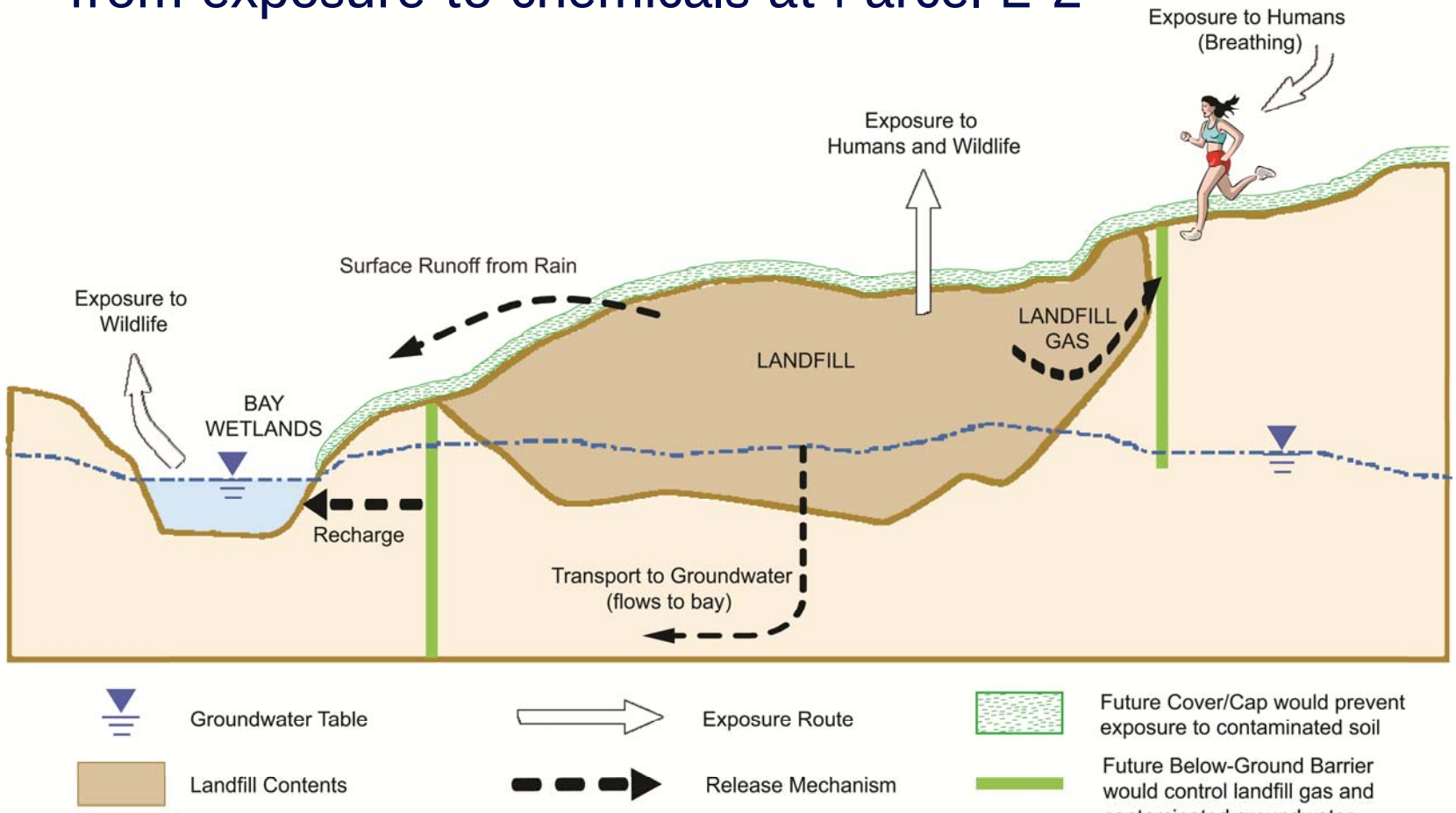
What do we know about the Landfill?

The Parcel E-2 Landfill was created by filling with a variety of shipyard wastes:

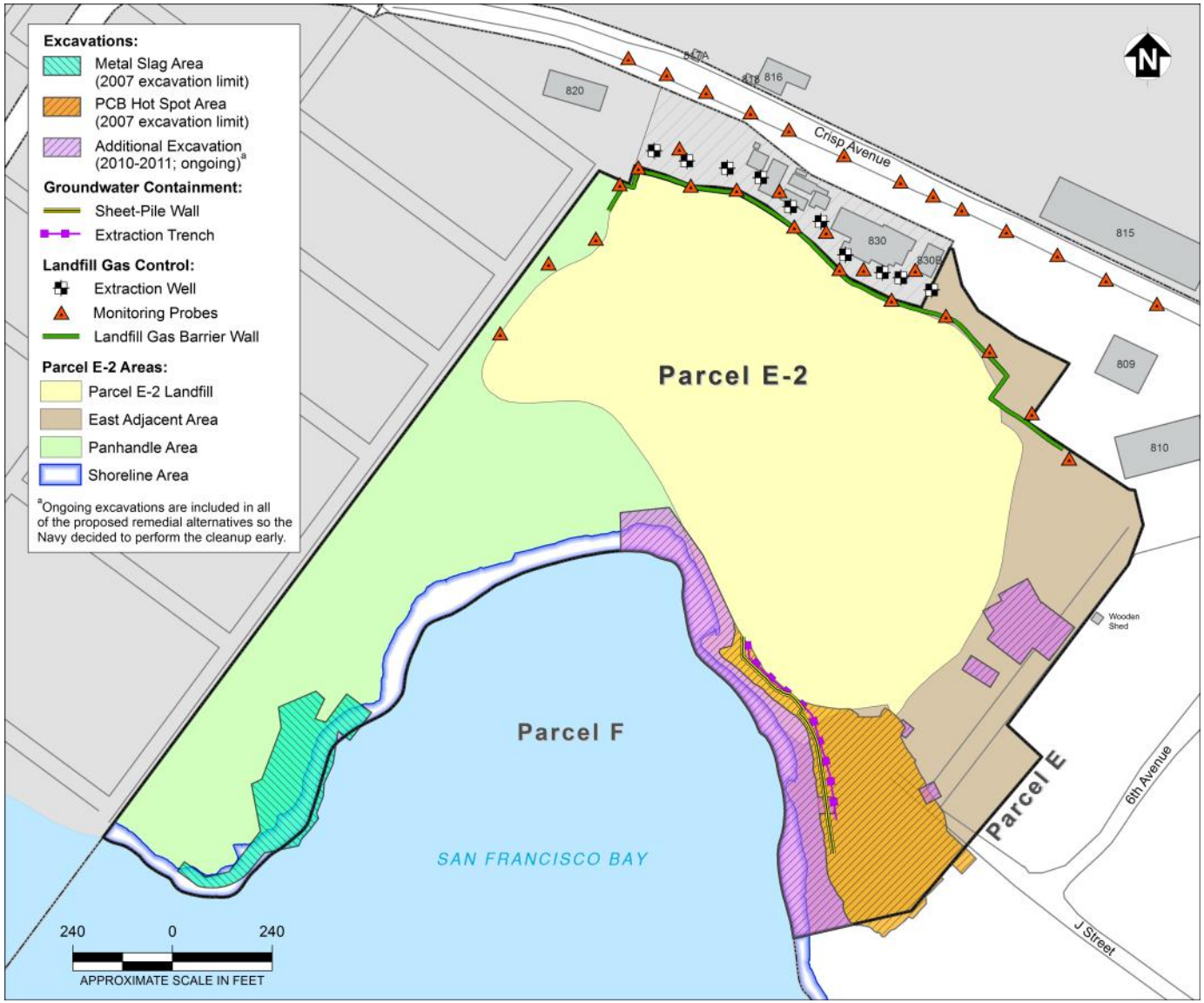
- Construction debris - Wood, steel, concrete, and soil
- Municipal-type trash - Paper, plastic, glass, and metal
- Industrial waste - Sandblast waste, low level radioactive material, paint sludge, solvents, and waste oils with polychlorinated biphenyls (PCBs)

What are the site risks?

- Navy evaluated potential risks to people and wildlife from exposure to chemicals at Parcel E-2



Early Cleanup Actions



PCB Hot Spot Area – Before (looking northwest)

PCB Hot Spot Area – After (looking northwest)

Summary of Remedial Alternatives

1. No Action

2. Remove and Dispose of Solid Waste, Soil, and Sediment

3. Contain Solid Waste, Soil, and Sediment with some removal and disposal of hot spot areas

4. Contain Solid Waste, Soil, Sediment, and Groundwater with expanded removal and disposal of hot spot areas (and lined freshwater wetlands)

5. Contain Solid Waste, Soil, Sediment, and Groundwater with expanded removal and disposal of hot spot areas (and unlined freshwater wetlands)

Comparison Criteria for Alternatives

1. **Overall Protection of Human Health and the Environment**
   How the risks are eliminated, reduced, or controlled through treatment, engineering, or institutional controls.

2. **Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)**
   Federal and state environmental statutes met or grounds for waiver provided.

3. **Long-term Effectiveness**
   Maintain reliable protection of human health and the environment over time, once cleanup goals are met.

4. **Reduction of Toxicity, Mobility, or Volume (TMV) through Treatment**
   Ability of a remedy to reduce the toxicity, mobility, and volume of the hazardous contaminants present at the site.

5. **Short-term Effectiveness**
   Protection of human health and the environment during construction and implementation period.

6. **Implementability**
   Technical and administrative feasibility of a remedy, including the availability of materials and services needed to carry it out.

7. **Cost**
   Estimated capital, operation, and maintenance costs of each alternative.

8. **State Acceptance**
   State concurs with, opposes, or has no comment on the preferred alternative.

9. **Community Acceptance**
   Community concerns addressed; community preferences considered

Comparison of Alternatives (continued)

Table 8. Comparative Analysis of Alternatives for Parcel E-2

Remedial Alternative	Overall Protection of Human Health and Environment	Compliance with ARARs	Long-Term Effectiveness and Permanence	Reduction of Toxicity, Mobility, or Volume via Treatment	Short-Term Effectiveness	Implement-ability	Approximate Cost ($M)
1: No Action	No	NA					0
2: Excavate and Dispose of Solid Waste, Soil, and Sediment (including monitoring, ICs, and unlined freshwater wetlands)	Yes	Yes					351.5
3: Contain Solid Waste, Soil, and Sediment with Hotspot Removal (including monitoring, ICs, and lined freshwater wetlands)	Yes	Yes					78.4
4: Contain Solid Waste, Soil, Sediment, and Groundwater with Hotspot Removal (including monitoring, ICs, and lined freshwater wetlands)	Yes	Yes					86.6
5: Contain Solid Waste, Soil, Sediment, and Groundwater with Hotspot Removal (including monitoring, ICs, and unlined freshwater wetlands)	**Yes**	**Yes**					**86.7**

Notes:

Text in **blue** indicates preferred alternative.

Symbol:

Fill symbol by quarters from open (not acceptable) to full (excellent).

Preferred Alternative

Alternative 5 – Contain Solid Waste, Soil, Sediment, and Groundwater with expanded excavation and disposal of hot spot areas (and unlined freshwater wetlands)

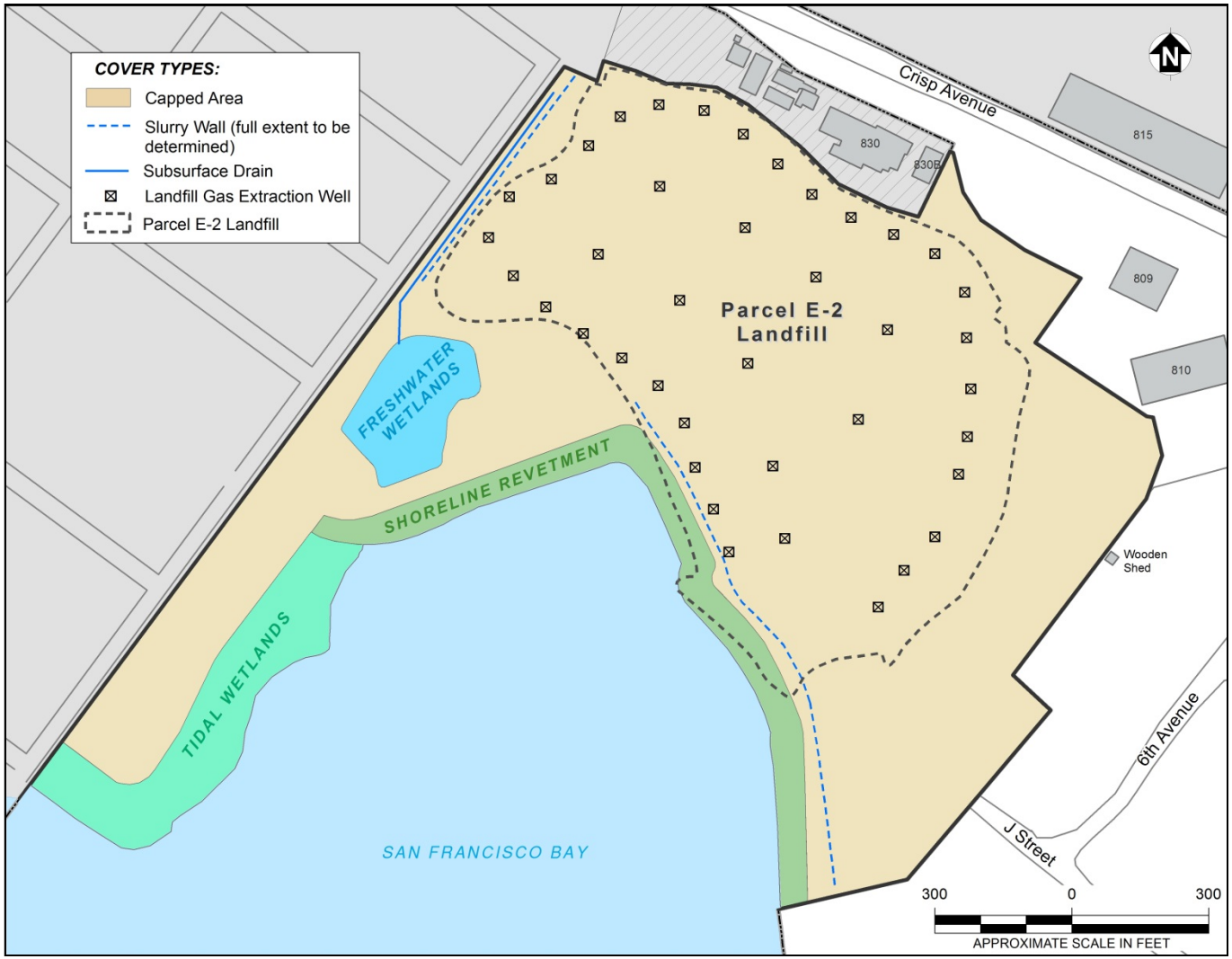
- Excavate and dispose of hot spot areas
- Excavate and dispose of radioactive material near ground surface
- Install protective liner and soil cover over remaining contamination
- Install below-ground barriers (slurry walls) to limit groundwater flow

Preferred Alternative (continued)

Alternative 5 also includes additional actions to protect humans and wildlife:

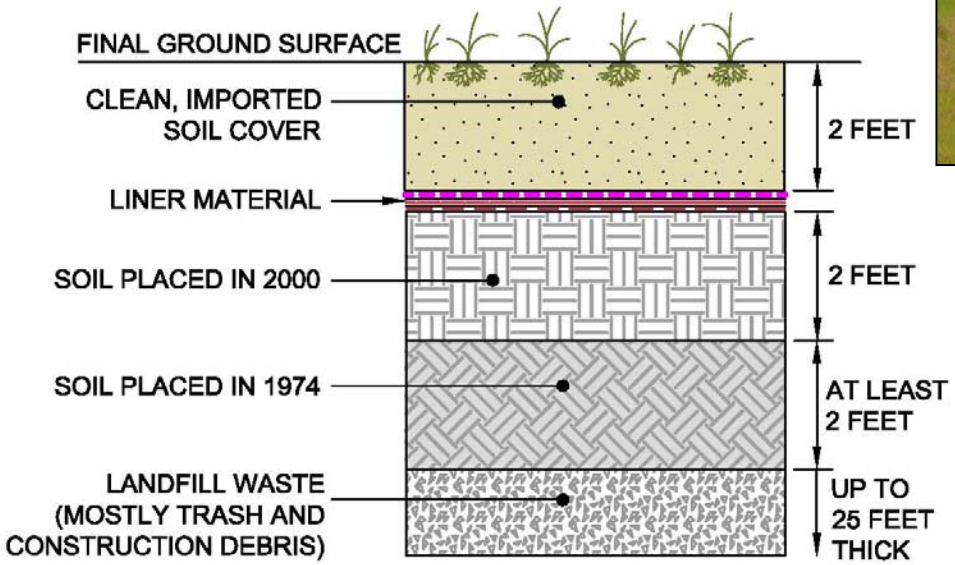
- Remove and treat landfill gas
- Build a shoreline revetment
- Build new wetlands (tidal and freshwater, no liners)
- Monitor and maintain the different parts of the preferred alternative (soil cover, wetlands, landfill gas removal/treatment system, etc.)
- Use institutional controls to restrict specific land uses and activities

Preferred Alternative (continued)



Preferred Alternative (continued)

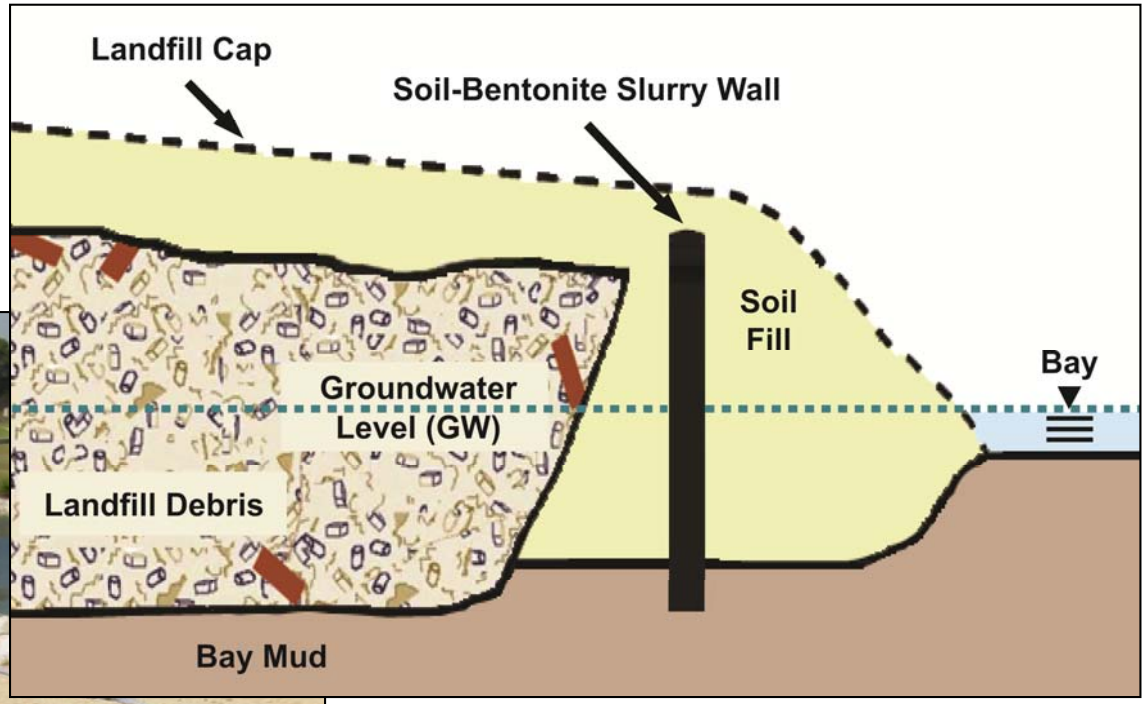
Existing Landfill Cap (surface of future cap will look similar)



Schematic of Future Landfill Cap

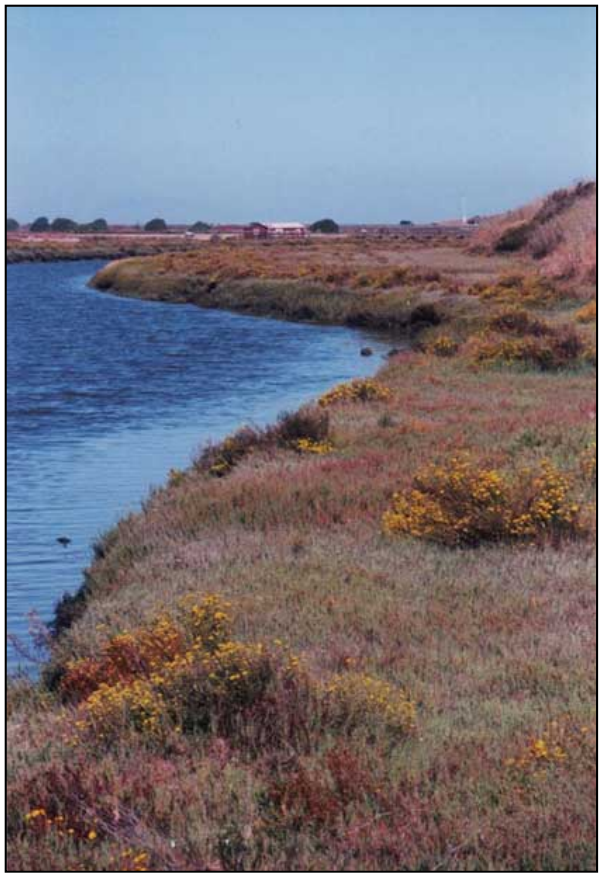
Preferred Alternative (continued)

Cross-Section of Slurry Wall Between Landfill and Bay



Typical Bentonite Slurry Trench Prior to Backfill with Soil-Bentonite Mixture

Preferred Alternative (continued)



Tidal Wetlands

Shoreline Revetment

Why is this the Preferred Alternative?

Protects people and wildlife from being exposed to contamination that may pose an unacceptable risk

- Removes and disposes of hot spot areas
- Removes and disposes of radioactive material near the ground surface
- Installs soil cover and landfill gas/groundwater controls to prevent contact with remaining contamination
- Includes long-term monitoring and maintenance

Why is this the Preferred Alternative? (continued)

The landfill can be safely contained because the Navy's investigations show that:

- Construction debris, trash, and industrial waste are similar to other landfills around the Bay
- Low-level radioactive waste consists mostly of glow-in-the-dark dials that can be safely managed in place
- Groundwater does not pose a major risk to humans or wildlife (for example, radioactive chemicals were not found at levels that could impact people and wildlife)

Why is this the Preferred Alternative? (continued)

- The preferred alternative:
  - Will protect people and wildlife
  - Is consistent with EPA national policy for large landfills
  - Is similar to other landfill closures around the Bay

- The preferred alternative was rated higher than Alternative 2 because it:
  - Presents fewer short-term risks
  - Would reduce long-term risks sooner
  - Is easier to carry out
  - Would cost much less

Preferred Alternative (continued)

If Alternative 5 is selected, the Navy will design and build the final remedy to:

- Control potential liquefaction following an earthquake
- Treat landfill gas with the most appropriate technology
- Protect against flooding from a potential rise in sea level
- Provide pedestrian access

Next Steps

- Proposed Plan - public comments due October 24, 2011
- Record of Decision (ROD) document
  - Draft ROD will include responses to public comments
  - ROD will identify the final remedy for Parcel E-2
- Design and build the final remedy for Parcel E-2 (Remedial Design/Remedial Action)

How to Provide Comments Tonight

- Submit a written comment tonight, or speak your comment during the formal comment period which follows this presentation

How to Provide Comments After Tonight

- **After this meeting -- mail, e-mail, or fax comments to:**

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- **Provide comments no later than October 24, 2011**

Project Contacts

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Additional Information

- Information Repositories contain the proposed plan and the supporting project documents:

  San Francisco Main Library
  100 Larkin Street, Government Information Center, 5th Floor
  San Francisco, CA 94102 (415) 557-4500

  Hunters Point Naval Shipyard Office Trailer
  690 Hudson Street
  San Francisco, CA 94124

- The Proposed Plan can also be found at: **www.bracpmo.navy.mil**