



**Naval Facilities Engineering Systems Command Southwest  
Base Realignment and Closure  
Program Management Office West  
San Diego, California**

**FINAL  
Restoration Advisory Board  
Meeting Minutes, Meeting Number 210**

Former Naval Station Treasure Island  
San Francisco, California

August 9, 2022

**Approved for public release: distribution is unlimited**



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August 9, 2022

DCN: TRBW-0202-4856-0105

Prepared for:



**Department of the Navy  
Naval Facilities Engineering Systems Command Southwest  
BRAC PMO West  
33000 Nixie Way, Building 50  
San Diego, California 92147**

Prepared by:



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**FINAL  
MEETING MINUTES  
RESTORATION ADVISORY BOARD  
FORMER NAVAL STATION TREASURE ISLAND  
9 August 2022  
Meeting Number 210  
Virtual Meeting Number 10**

Community Restoration Advisory Board (RAB) Members in attendance:

Alice Pilram, Nathan Brennan, Dale Smith, John Gee

Department of the Navy (Navy) and Regulatory Agency RAB Members in attendance:

Tahirih Linz, Navy Base Realignment and Closure (BRAC) Environmental Coordinator  
Celina Hernandez, San Francisco Bay Regional Water Quality Control Board (Water Board)

Peyton Ward, Department of Toxic Substances Control (DTSC)

Other Navy, Regulatory Staff, and Consultant Representatives in attendance:

Dave Clark, Navy Lead Remedial Project Manager

Nick Alvaro, Navy

Dennis Parker, Navy

Erica Spinelli, Navy

Marsha Maloof, Maloof & Associates, meeting facilitator

Bob Beck, Treasure Island Development Authority (TIDA)

Christine Niccoli, Court Reporter

Simon Cardinale, Engineering/Remediation Resources Group, Inc. (ERRG)

Dennis Kelly, ERRG

Megan Kranz, Trevet-Bay West Joint Venture (Trevet-Bay West)

Maddison Laeber, Trevet-Bay West

Public Guests in attendance:

Carol Harvey, journalist

James Pepper, Blogger

Steve Stallone, journalist

## Welcome Remarks and Agenda Review

Marsha Maloof (facilitator) opened the August 2022 RAB meeting for Former Naval Station (NAVSTA) Treasure Island (TI), held virtually because of COVID-19 restrictions. Introductions were initiated and the agenda was reviewed (Attachment A).

## New Business—Site 12 Conceptual Site Model Update

Simon Cardinale (ERRG) introduced the Site 12 Conceptual Site Model (CSM) Update presentation (Attachment B).

Mr. Cardinale explained that the CSM is a summary that represents conditions at a site, assisting cleanup project teams in visualizing and understanding available information when planning investigations and cleanup remedies. The CSM is a living document that is updated and changed over time. A combination of written and graphical work products is used to portray both known and hypothetical site information. Results from work since 2014, the last update to the CSM, are being incorporated into the Site 12 CSM, which will be used in the remedy selection process.

Site 12 is on the northwest end of TI and is currently included in the Navy's environmental restoration program. A variety of waste disposal activities were conducted from the 1940s through the early 1960s at this former World War II naval ammunition storage facility. It was later developed as the 1100 series housing area in 1965, the 1200 series in 1972, the 1300 series in 1974, and both portions of the 1400 series in 1988.

Site 12 includes solid waste disposal areas (SWDA), which can include domestic and sanitary waste, as well as industrial waste from Navy operations. Additionally, chemical contamination and low-level radiological objects, such as aircraft carrier deck markers, and munitions items, which are believed to have been disposed of between 1945 and 1947, may also be found in SWDAs.

Using historical and administrative record documents, a chronology of waste disposal at TI was developed. Construction of TI began in 1936 for the Golden Gate International Exposition in 1939 and 1940. Most of the area of Site 12 was used at the time as a parking lot. TI was originally intended to be used as a municipal airport for the City of San Francisco. Following the attack on Pearl Harbor, the Navy took over TI on April 17, 1942, and constructed ammunition bunkers at the current Site 12 area. Also in 1942, the Navy began waste disposal near the end of the southernmost runway, at what is now called Westside SWDA.

By 1944, a large portion of the northernmost runway was removed, and part of the current Site 12 area was in use as storage. Disposal activities continued at the northern end of the remaining southernmost runway. An ammunition facility was formally established in late 1944, which entailed the construction of large bunkers and the installation of a security fence.

Operation Magic Carpet began following Japan's surrender in September 1945 and continued into 1946. This operation involved the return of 8 million service members over the course of one year. TI became a major disembarkation point, averaging 4,000 people per day. Among munitions that have been located, a small number are of Japanese origin. This suggests that service members brought home Japanese items as souvenirs which were confiscated and disposed of.

Aerial photography from 1946 shows a deep pit excavated in the Westside SWDA and it was surrounded by soil piles. Roads, fencing, and buildings limited where the disposal could occur. The ammunition facility was officially decommissioned on June 1, 1946. The former bunkers were then converted to general storage. A burn pit was established between two bunkers at Bayside SWDA by early 1947 and possible soil disturbance occurred at North Point SWDA. Waste disposal activities continued at Westside SWDA.



A munitions response site (MRS) is an area where munitions may have been disposed of and MRS sites require munitions-related safety precautions for soil excavation. So far, 414 munitions items, all compatible with the World War II era, have been located, primarily at Westside SWDA. No explosives were identified in 90% of items and most were found deeper than six feet. This CSM update expands the MRS area beyond where items were found to include the entire footprint where disposal occurred between 1945 and 1947.

Disposal at the burn pit continued into the early 1950s and little to no other activity was evident at Westside SWDA. Topographical maps from the early 1960s show mounds flanking the runway, indicating that disposal activities occurred in the late 1950s. New disposal also occurred at North Point SWDA, where an incinerator built in 1952 was active. In the early 1960s, soil staining began appearing further inland, in what is now identified as the Central Rubbish Area. Pre-housing development documents from 1965 describe trenching associated with the burial of “sanitary waste” in the footprint of this soil-stained area.

Before housing construction work began, a geotechnical investigation was conducted. Reports from the investigation documented the presence of rubbish disposal at Site 12, coinciding with the locations of the SWDAs and the Central Rubbish Area. Findings from soil borings and trenching during the investigation reported buried loose rubbish, which would create stability issues for housing foundations. The rubbish was excavated and mixed with soil, then put back in place and compacted. The excavation was then filled to grade with rubbish-free soil.

In 2014, the Central Rubbish Area was investigated to characterize the rubbish in the area. Rubbish including a film reel, a deodorant can, and some bottles were located four to six feet deep in the soil.

Dave Clark (Navy) explained that the CSM update is currently in draft form, and he hopes to have the document finalized before the end of the year. The document supports the conclusion that TI, and specifically Site 12, remains safe for residents, visitors, and current workers.

A fact sheet is being prepared on the topic of the CSM for distribution to Site 12 residents and those on the mailing list, and it will also be posted on the website. The CSM will also be part of the Feasibility Study Addendum 2, which will address the radiological concerns across the entire footprint of Site 12 and non-radiological concerns in the SWDAs. The proposed plan, which includes an opportunity for a public meeting and comments, will follow the feasibility study.

Mr. Clark opened the floor for questions and comments.

Dale Smith (RAB member) asked about discrepancies in the description of the bulge in the northern shoreline. She notes that in one location, it is described as having unknown origins and elsewhere is ascribed to the addition of concrete to the area from demolition of prior structures. Ms. Smith also noted that the terms debris, trash, and rubbish were used interchangeably throughout the report. Ms. Smith requested that a figure like Figure 128 in the CSM Report, which shows Westside, be made for North Point and Bayside.

Dale Smith (RAB member) asked how recent small arms munitions discharge was handled. Mr. Cardinale said that 50-caliber is the cutoff to qualify as a material potentially presenting an explosive hazard. Ms. Smith asked what was done with expended small arms debris recently. Mr. Cardinale said that he does not know as there was a shift to off-site disposal following the 1965 Solid Waste Disposal Act. Mr. Cardinale stated that no munitions training with live items took place after WWII.

Ms. Smith asked what it means to ventilate munitions and explosives of concern (MEC). Mr. Clark said that term is used when a MEC item is opened via donor charges to render it safe to handle.

Ms. Smith asked why the slope of the sea wall varies so much from the original sketches shared with the RAB. Mr. Cardinale said that construction of sea walls varies depending on location and the slope is not always vertical.

James Pepper (resident) advised the Navy to research the history of chemical weapons and materials related to the U.S.S. Pandemonium.

Carol Harvey (journalist) asked if there is any truth to the rumor that units on Site 12 will be torn down years before new units are built so that the land can be rented to the Port of Oakland to make room for the Oakland A's. Tahirih Linz (Navy) said that the planned land use is recreational and TIDA oversees the redevelopment. Bob Beck (TIDA) said that he has had no contact with the Port of Oakland. The redevelopment plans for Site 12 are unchanged. Most of the land will be open space and a small southeastern portion will be used for residential housing.

## **New Business—BRAC Cleanup Team (BCT) Update**

Peyton Ward (DTSC) said she visited NAVSTA TI on June 22, 2022, to oversee final phase IV non time-critical removal action fieldwork at Westside SWDA. While on site, she also observed dust monitoring, the fencing condition around Westside SWDA, and stormwater management practices.

Ms. Ward said she attended the monthly BCT meetings, as well as the per- and polyfluoroalkyl substances (PFAS) and Site 12 technical working group meetings.

Ms. Ward stated that the multi-site PFAS site investigation work plan was finalized on June 20, 2022 and is available for public access on the DTSC EnviroStor website. Following finalization of the work plan, fieldwork took place from late-June through July 19, 2022. Preliminary results from the investigation are anticipated to be received in September 2022.

Ms. Ward stated that she received the draft Site 12 CSM from the Navy on June 3, 2022 and provided her comments last week. Navy responses to comments are expected in mid-September. Comments were provided on the 1400 series site investigation report in February, but the report was put on hold until the regulatory agencies received the Site 12 CSM because the two documents are closely linked. She received responses to comments on the 1400 series document in June and is currently working on resolving the comments.

Ms. Ward received Navy responses to comments on the Site 12 Non-SWDA Interim Chemical Remedial Action Completion Report on July 8, 2022. She will provide any subsequent comments by the end of the month. The draft Site 24 Record of Decision Explanation of Significant Differences was received on June 3, 2022, and comments were provided on August 9, 2022. She also received the 2021 Basewide Monitoring Program Annual Report on July 15, 2022 and is reviewing the document.

Celina Hernandez (Water Board) stated that she attended the BCT meetings, and the PFAS and Site 12 working group meetings.

Ms. Hernandez visited TI on June 14 and 28, 2022, to visit Areas of Interest 1 and 4. On July 5, 2022, she visited Area of Interest 54 to observe sampling in the bay.

Ms. Hernandez submitted comments on the CSM to the Navy on August 2, 2022. A second set of comments on the draft final Site 12 non-SWDA Interim Chemical Remedial Action Completion Report were provided to the Navy on July 28, 2022. She began review of the 2021 Basewide Monitoring Program Annual Report and will provide comments to the Navy by September 13, 2022.

Ms. Hernandez received an extension until August 31, 2022, for providing her comments to the Navy on the draft Site 24 Record of Decision Explanation of Significant Differences.

## **Old Business—Community Comments**

Ms. Harvey asked where and what the seawall is that Ms. Smith had inquired about. Ms. Linz said that it consists of the big rocks that go around the edge of the island.

Ms. Harvey asked what was meant by “sanitary waste” in the presentation. Mr. Cardinale said that sanitary waste was the term used in the geotechnical investigations from the 1960s. It refers to household or office waste and was used to distinguish the waste from radiological or toxic waste.

Ms. Harvey asked what will be built on Site 24. Bob Beck (TIDA) said that Site 24 will primarily be used as an open space sport and recreation area. The northern edge of the Eastside neighborhood may overlap with the southern edge of Site 24.

Mr. Pepper stated that he has contacted the Organization for the Prohibition of Chemical Weapons (OPCW), which enforces the Chemical Weapons Convention treaty. The deadline for the convention is the end of 2023, while cleanup at TI will continue through 2025. He said that the OPCW will contact the Secretary of State and ask Congress to extend the deadline so that the Department of Defense and the US Environmental Protection Agency would oversee cleanup.

## **Old Business—RAB Meeting Minutes Approval Meeting No. 208 and 209**

Tahirih Linz (Navy) asked for comments on the February 2022 RAB meeting minutes.

Ms. Smith asked what was meant by “Old Westside Drive” on page 2 in the second paragraph from bottom. Mr. Clark said that he referred to it as Old Westside Drive in his

presentation to differentiate between the actual Westside Drive and the part of it that is no longer a part of the road. He suggested adding “(remaining portion of Westside Drive not within the solid waste disposal area)” after “Old Westside Drive.”

In page 3, paragraph 2, Ms. Smith said that “PFAS has also been included in the Site 6 monitoring program since it was brought to the Navy’s attention” should be changed to say, “since it became a chemical of concern.”

In page 5, paragraph 2, Ms. Smith said that “for” should be removed from the sentence “Ms. Harvey referenced the arsenic plume removed from Westside Drive and Gateview Avenue in 2016 and asked for how long the plume expanded before its removal.”

Nathan Brennan (RAB member) moved that the minutes be accepted as amended. John Gee (RAB member) seconded the motion. The February 2022 meeting minutes were approved.

Ms. Linz asked for comments on the May 2022 RAB meeting minutes.

In page 2, paragraph 3, Ms. Smith said that “with” should be removed from “Mr. Clark explained that Phase I of the Site 12 Westside SWDA Drive project began with in 2007.”

Ms. Smith asked where the railhead mentioned on page 3 is located. Mr. Clark said that it is in Alameda. Ms. Linz suggested adding “(Alameda)” after “They then drive to the railhead” to clarify the railhead location.

Alice Pilram (RAB co-chair) moved that the minutes be accepted as amended. Mr. Gee seconded the motion. The May 2022 meeting minutes were approved.

## **Action Items from May 2022 RAB Meeting**

Ms. Linz will consider sending Ms. Harvey a hard copy of future final meeting minutes. Ms. Linz said that she will include the last six final RAB meeting minutes in Ms. Harvey’s next RAB meeting packet.

## **RAB Discussion Items, Co-Chair Announcements, and Future Agenda Items**

Ms. Linz stated that RAB meetings are on the second Tuesday of meeting months, which falls on election night in November. She asked whether the RAB would prefer to meet on November 1 or 15 instead. Ms. Pilram requested that the meeting be held on November 1. There were no objections. Ms. Linz said that the next RAB meeting will be held on November 1, 2022, and the presentation will be a 2022 Look Back/2023 Look Ahead.

## **Adjournment**

The meeting adjourned at 8:49 p.m.

## 9 August 2022 RAB Meeting Handouts [attached when minutes are finalized]

- Attachment A: NAVSTA TI RAB Meeting No. 210 Agenda
- Attachment B: Site 12 Conceptual Site Model Update

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## **Attachment A. NAVSTA TI RAB Meeting No. 210 Agenda**

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## **ENVIRONMENTAL RESTORATION ADVISORY BOARD MEETING AGENDA**

FORMER NAVAL STATION TREASURE ISLAND

Tuesday, 9 August 2022

**Join by computer** Download the Microsoft Teams App to your desktop, phone, or tablet and use Meeting Link:

**<https://tinyurl.com/TI-RAB-AUG-2022>**

**Join by telephone** Toll Free: 1-833-258-6146, Enter the meeting ID: 361 848 911#

### **MEETING NO. 210**

#### **I. WELCOME REMARKS AND AGENDA REVIEW**

**7:00 – 7:05 Welcome, Introductions**

Marsha Maloof, Meeting Facilitator

**7:05 – 7:10 Meeting Guidelines and Agenda Review**

Marsha Maloof, Meeting Facilitator

Alice Pilram, Community Co-Chair

#### **II. NEW BUSINESS**

**7:10 – 8:00 Site 12 Conceptual Site Model Update**

Simon Cardinale, Innovex-ERRG Joint Venture

Q&A: RAB

Q&A: Community

**8:00 – 8:15 BRAC Cleanup Team Update**

Peyton Ward, Department of Toxic Substances Control

Celina Hernandez, Regional Water Board

**8:15 – 8:25 Break**

#### **III. OLD BUSINESS**

**8:25 – 8:40 Community Comments**

Marsha Maloof, Meeting Facilitator

Q&A: RAB

Q&A: Community

**8:40 – 8:45 RAB Meeting Minutes Approval Meeting No. 208 and 209**

Tahirih Linz, Navy Co-Chair

**8:45 – 8:50 Action Items from May 2022 RAB Meeting**

Tahirih Linz, Navy Co-Chair

**8:50 – 8:55 Co-Chair Announcements and Future Agenda Items**

Alice Pilram, Community Co-Chair and Tahirih Linz, Navy Co-Chair

**9:00 Adjourn**

***The Next RAB Meeting will be held 8 November 2022 at 7:00 P.M.***

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## **Attachment B. Site 12 Conceptual Site Model Update Presentation**

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# IR Site 12 Conceptual Site Model Update Restoration Advisory Board Presentation

Naval Station Treasure Island  
San Francisco, California



Innovex-ERRG Joint Venture

7/14/2022

## Topics to be Covered



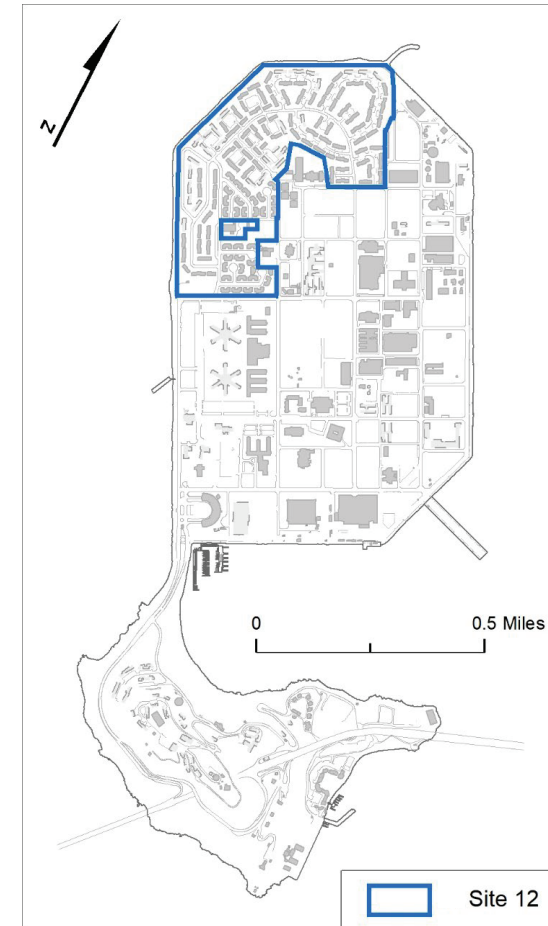
- Purpose of the Conceptual Site Model (CSM)
- Site 12 Housing Area
- Site 12 Solid Waste Disposal Areas (SWDAs)
- Waste Disposal Chronology
- Munitions Disposal Footprint
- Pre-Housing Construction Work
- Central Rubbish Area
- How does the CSM Update refine our understanding?
- Next Steps



## Purpose of Conceptual Site Model



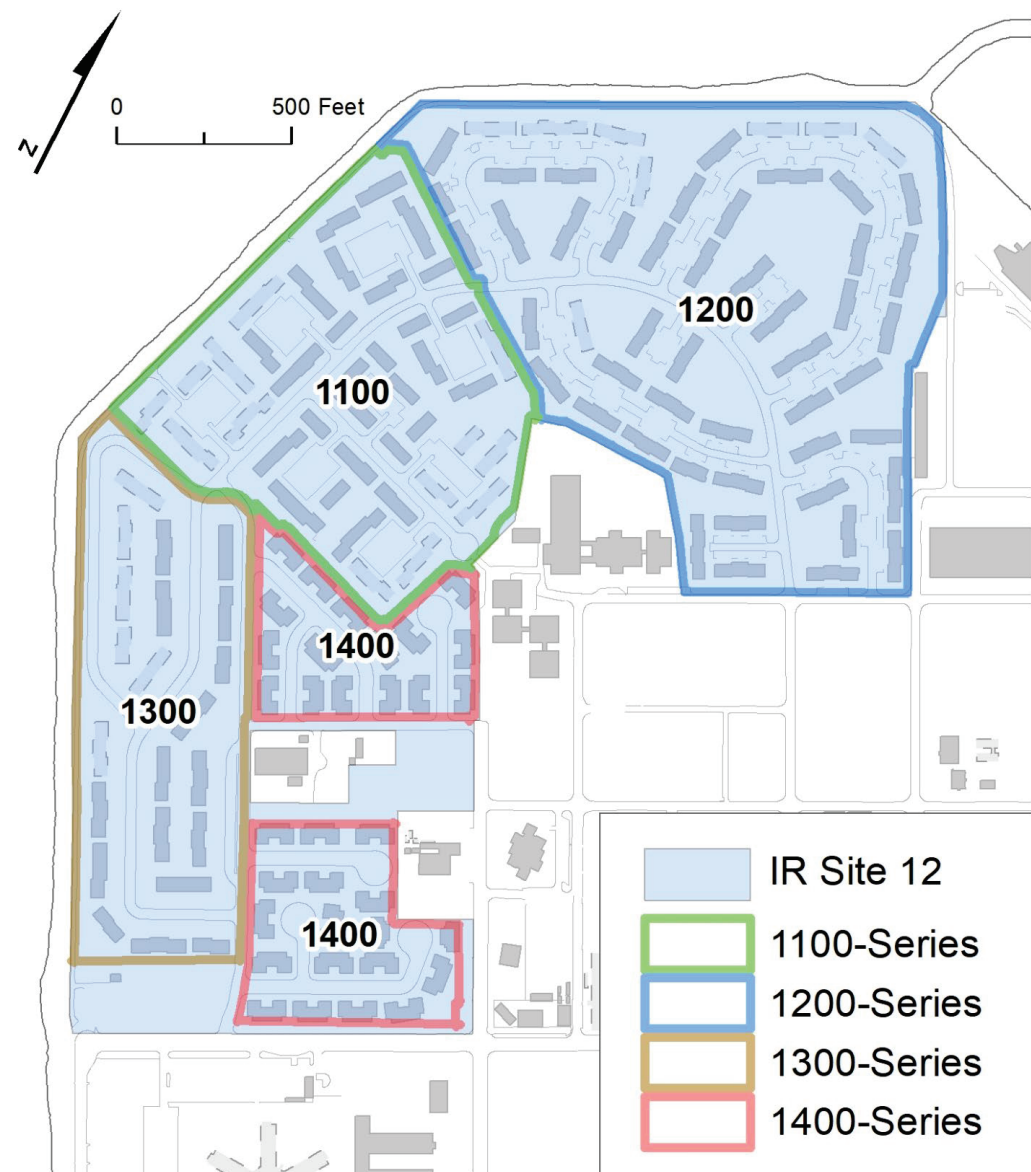
- The CSM is an iterative, 'living representation' of a site that summarizes and helps cleanup project teams visualize and understand available information for planning investigations and cleanup remedies.
- The CSM uses a combination of written and graphical work products to portray both known and hypothesized site information.
- The CSM assists cleanup project teams and decision makers throughout the life cycle stages of investigation and cleanup.
- A detailed, up-to-date, and accurate CSM supports decisions related to characterization, assessing risk, remedy selection, and site reuse.





## Site 12-Housing Area

- Site 12 is an environmental site at the northwest end of Treasure Island
  - Cleanup activities follow the CERCLA process with California regulatory agency oversight
- Former naval ammunition storage facility during WWII and waste disposal areas from 1940s to early 1960s
- Later developed as Navy housing:
  - 1100-series (1965)
  - 1200-series (1972)
  - 1300-series (1974-75)
  - 1400-series (1988)





## Site 12 SWDAs (2012)

### Solid Waste Disposal Areas (SWDAs) at TI can contain:

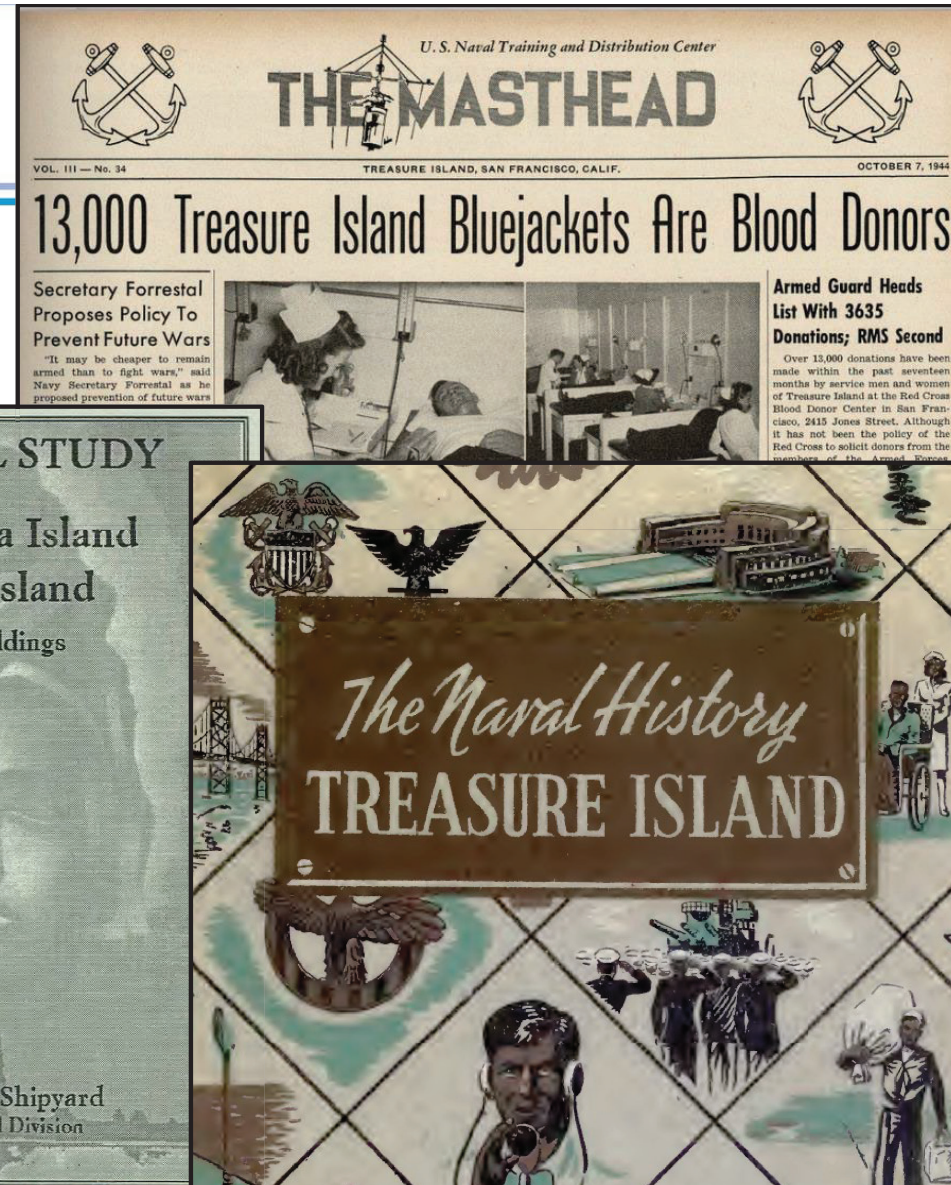
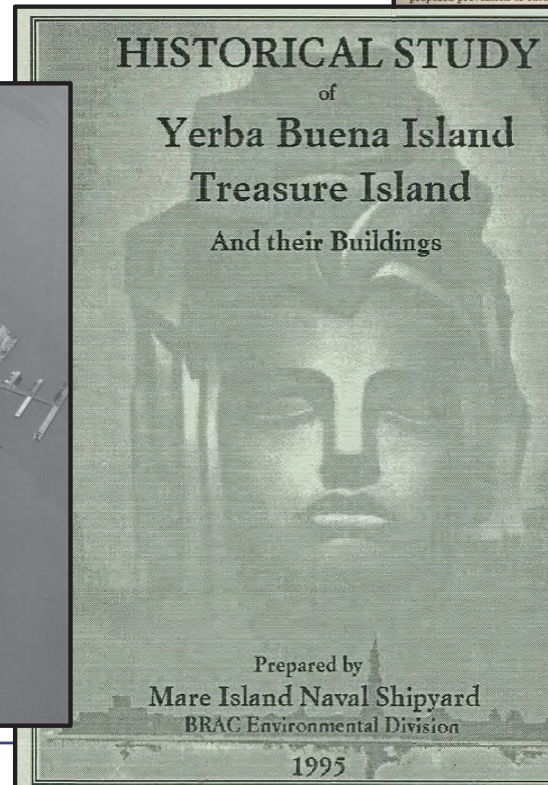
- Domestic/Sanitary waste and/or industrial waste from Navy operations
- Chemical contamination
- Low-level radiological objects (LLROs), e.g. aircraft carrier deck markers
- Munitions items (1945-1947)





## Waste Disposal Chronology Development

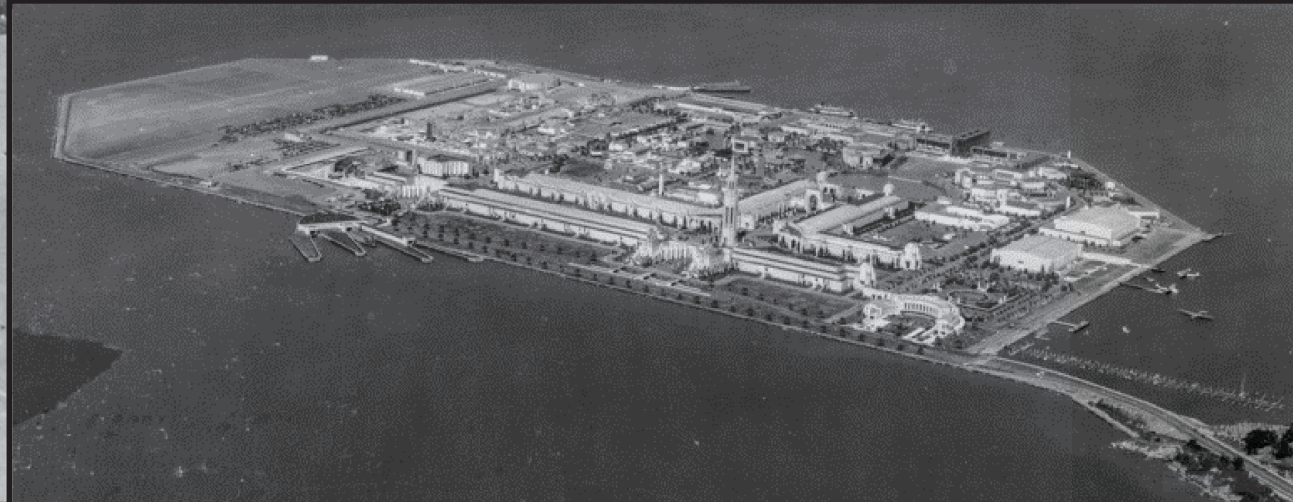
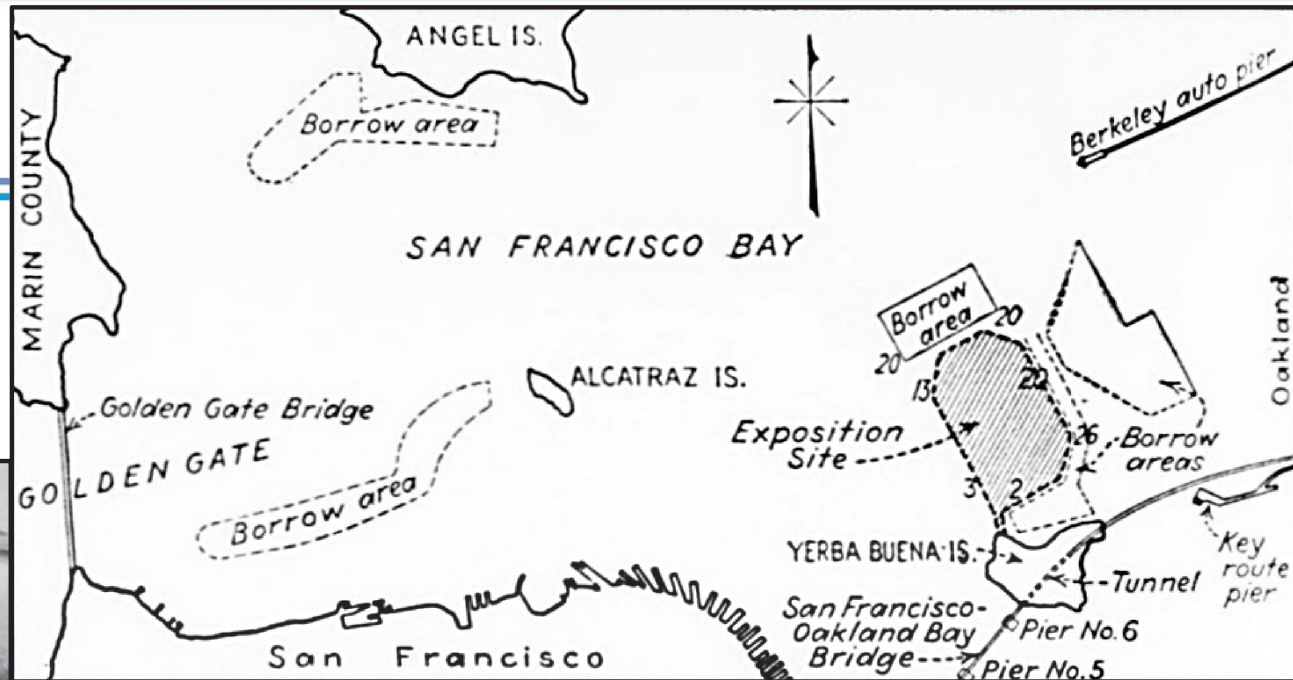
- Reviewed historical and admin record documents to build a chronology of Site 12 waste disposal





## Chronology: 1936-1940

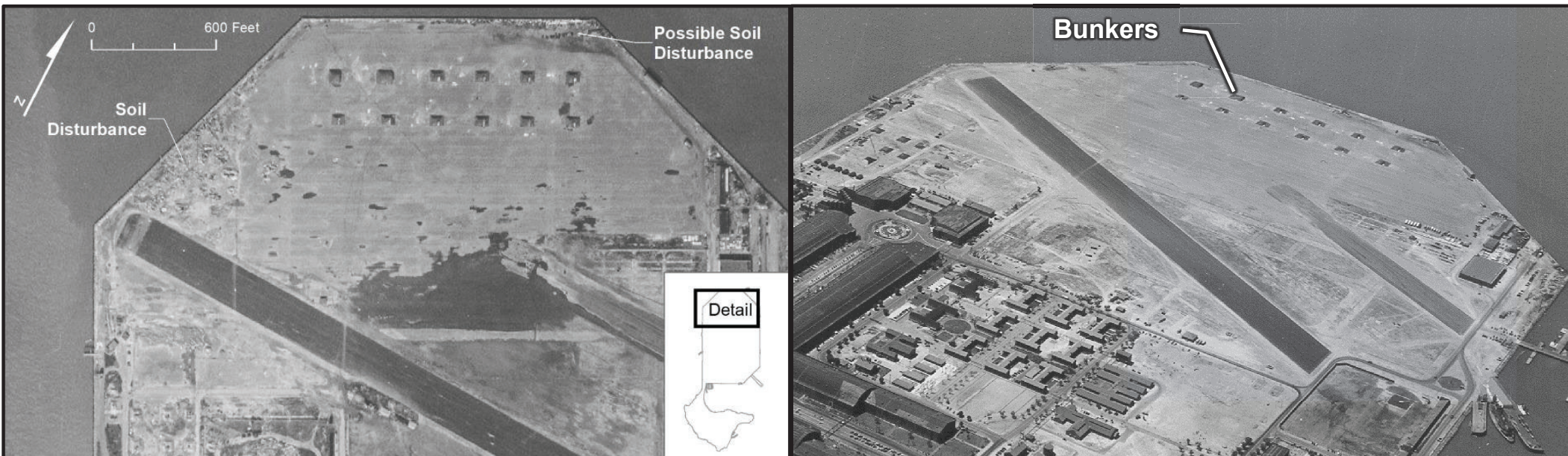
- Treasure Island built for the Golden Gate International Exposition of 1939-1940
- Site 12 mostly used as a parking lot



## Chronology: 1941-1943



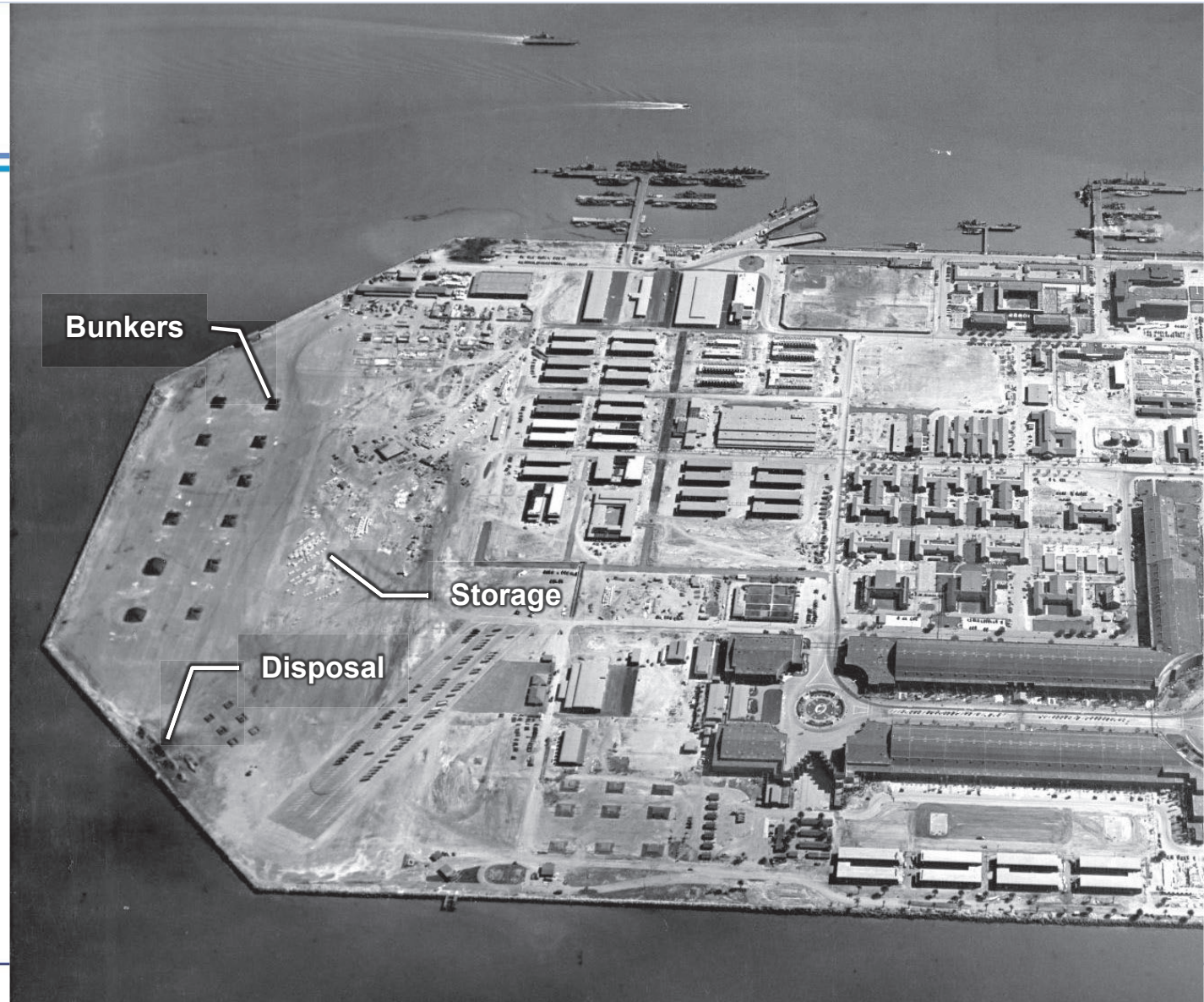
- Original plan: Develop TI as a municipal airport
- December 7, 1941: Attack on Pearl Harbor
- April 17, 1942: Navy takes ownership, constructs ammunition bunkers at Site 12
- 1942: Waste disposal begins near end of runway (now called Westside SWDA)





## Chronology: 1944

- Ammunition storage at center of Site 12
- Continued disposal at end of runway (Westside SWDA)



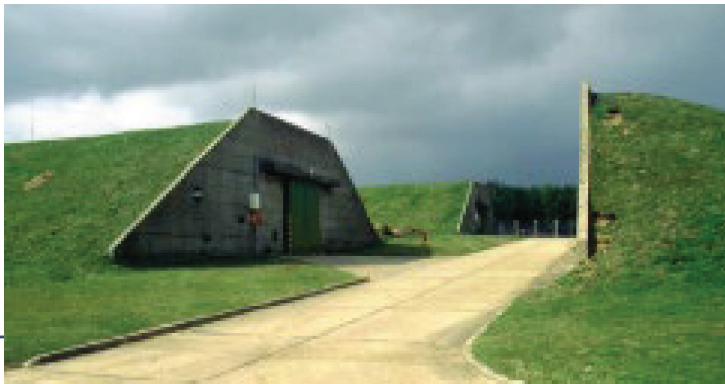


## Chronology: Late 1944-1945

- Ammunition Facility established

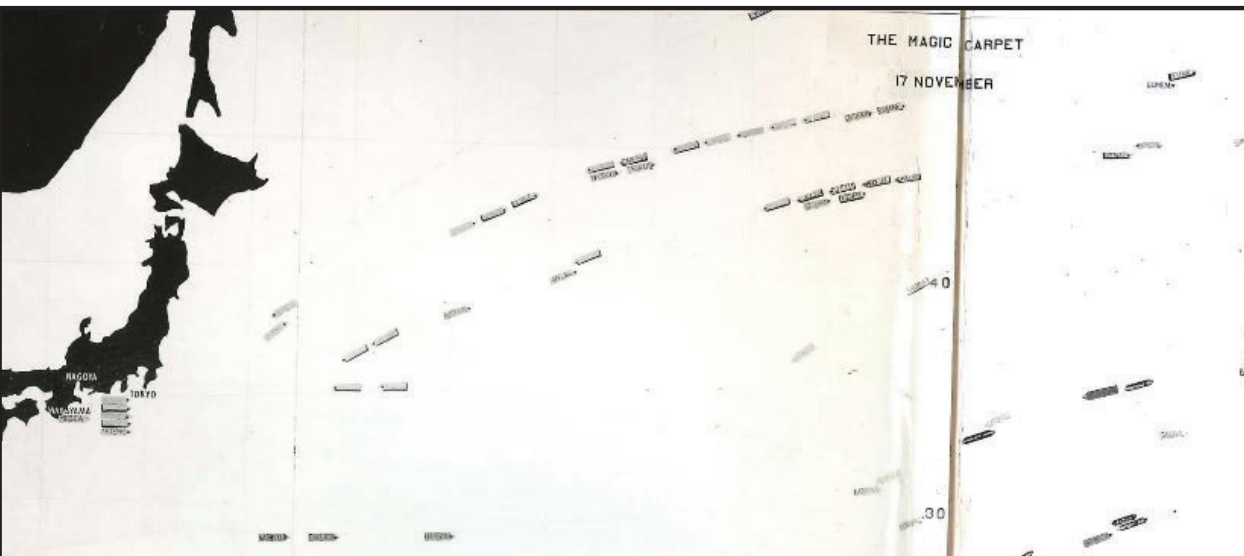
- Large bunkers constructed expanding ammunition storage area
- Enclosed by a security fence – no waste disposal in fenced area

- Waste disposal continues at Westside SWDA



## Chronology: September 1945

- Japan surrenders; *Operation Magic Carpet* begins
  - 8 million service members return over ~one year, average 22,000 per day
  - TI is a major disembarkation point, average 4,000 per day, max 12,000 in one day
- Start of munitions disposal; items of Japanese-origin





## Chronology: 1946

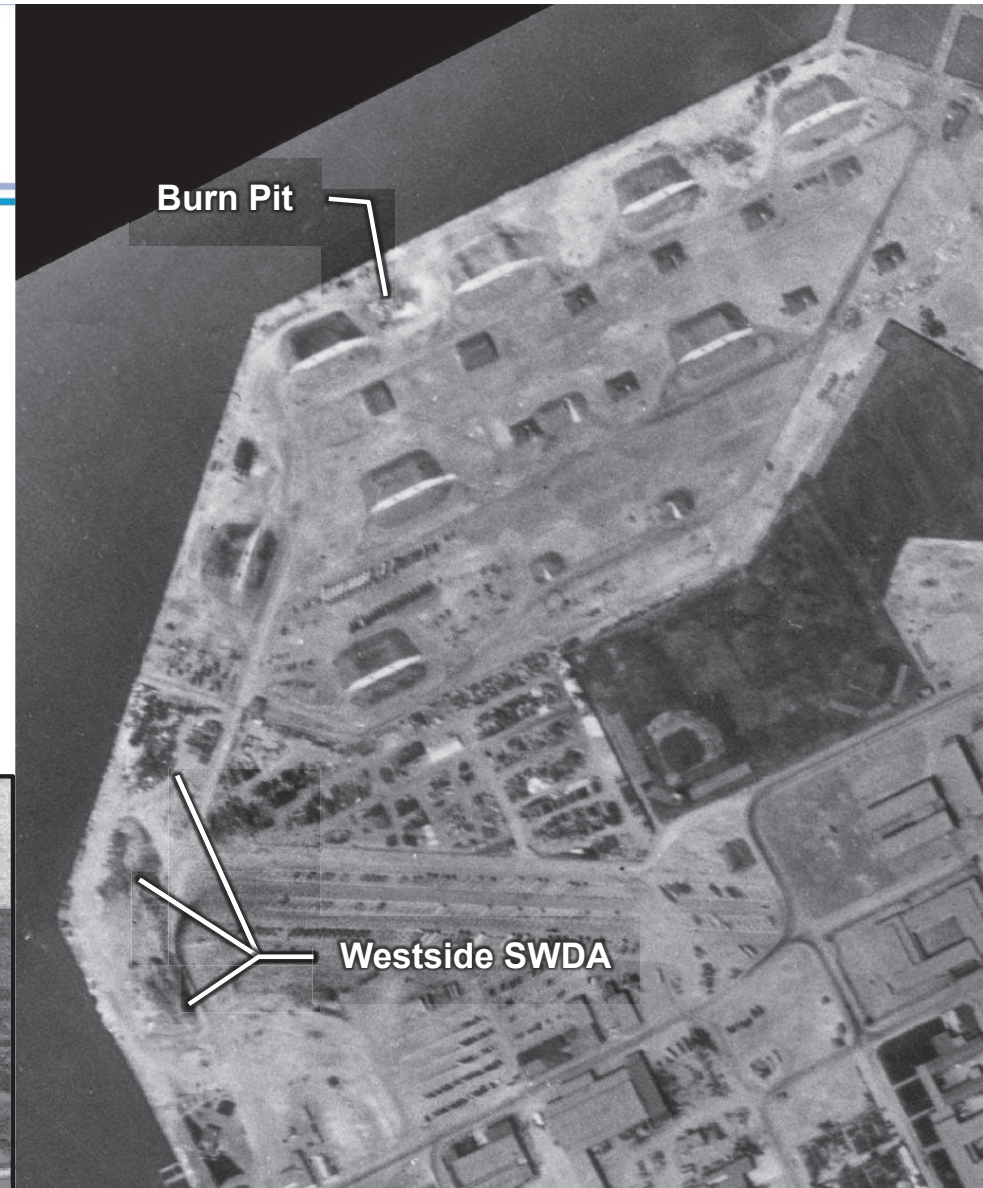
- *Operation Magic Carpet* continues
- Deep disposal pit and soil piles at Westside SWDA
- Ammunition Facility decommissioned June 1, 1946





## Chronology: 1947

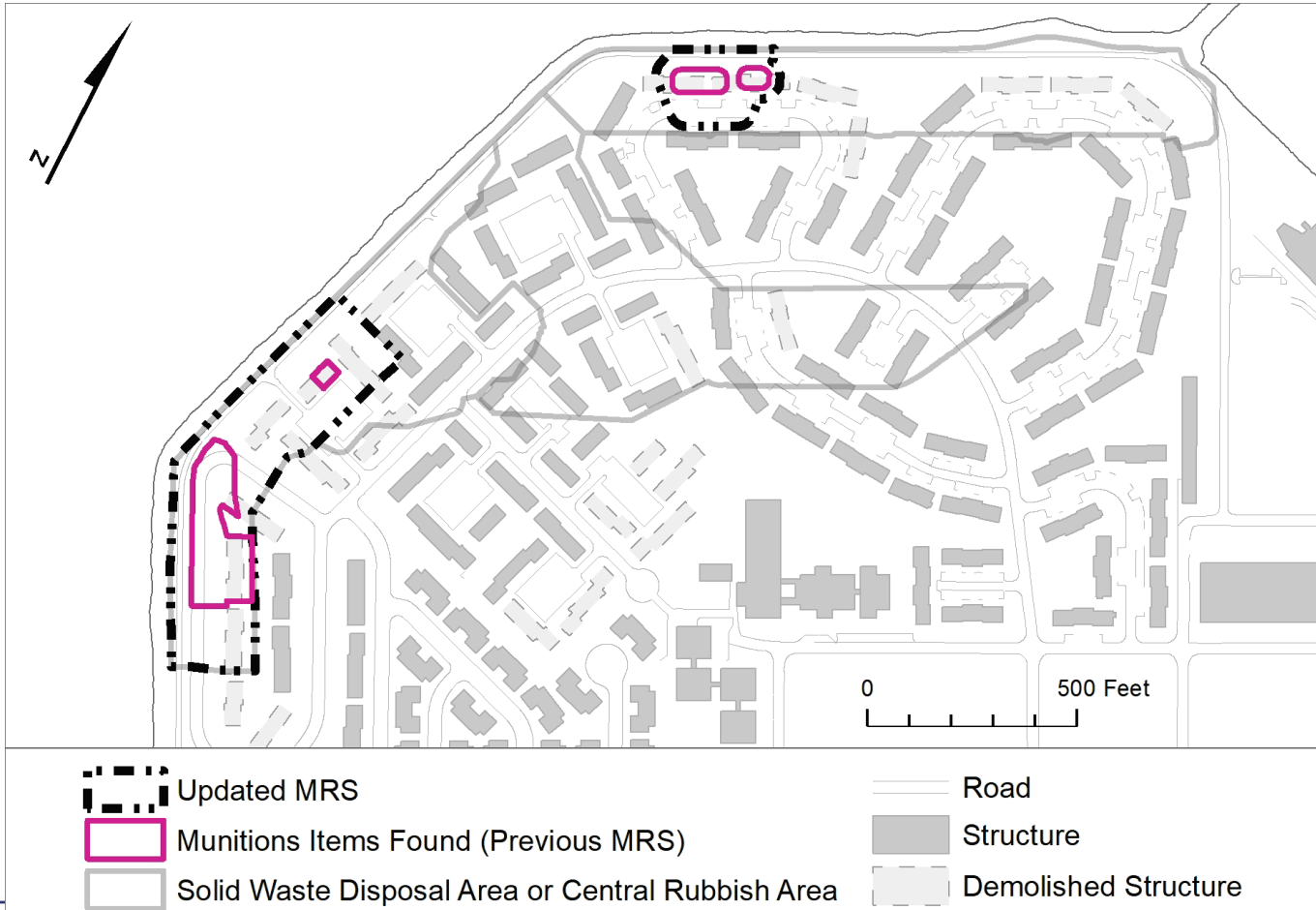
- Former bunkers converted to general storage:
  - Burn pit is established between two bunkers at Bayside SWDA
  - Possible soil disturbance at North Point SWDA
- Continued waste disposal activity at Westside SWDA



# Munitions Disposal Footprint



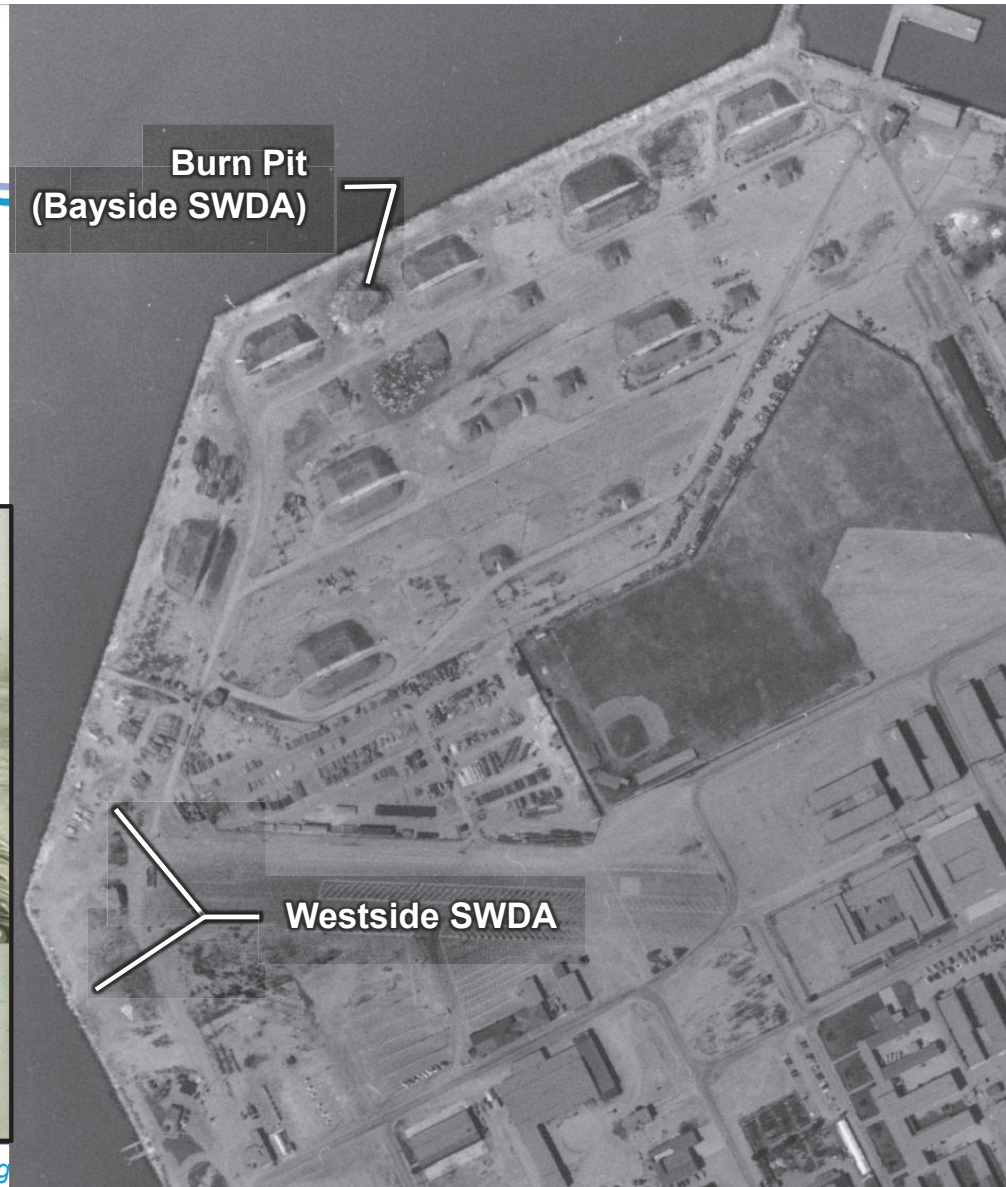
- **Munitions Response Site (MRS)**  
an area requiring munitions-related safety precautions for soil excavation
- Cleanup work found 414 munitions items compatible with WWII-era
  - No explosives in ~90% of items
  - Most items are empty cartridge casings associated with naval anti-aircraft guns
  - Finds are in areas of deep disposal; most finds were deeper than 6 feet.
- CSM Update recommended an expanded MRS to enclose disposal activity circa *Operation Magic Carpet* (1945-1947)





## Chronology: early 1950s

- Disposal at Bayside SWDA burn pit
- Little to no activity at Westside SWDA – pits and piles are absent





## Chronology: late 1950s

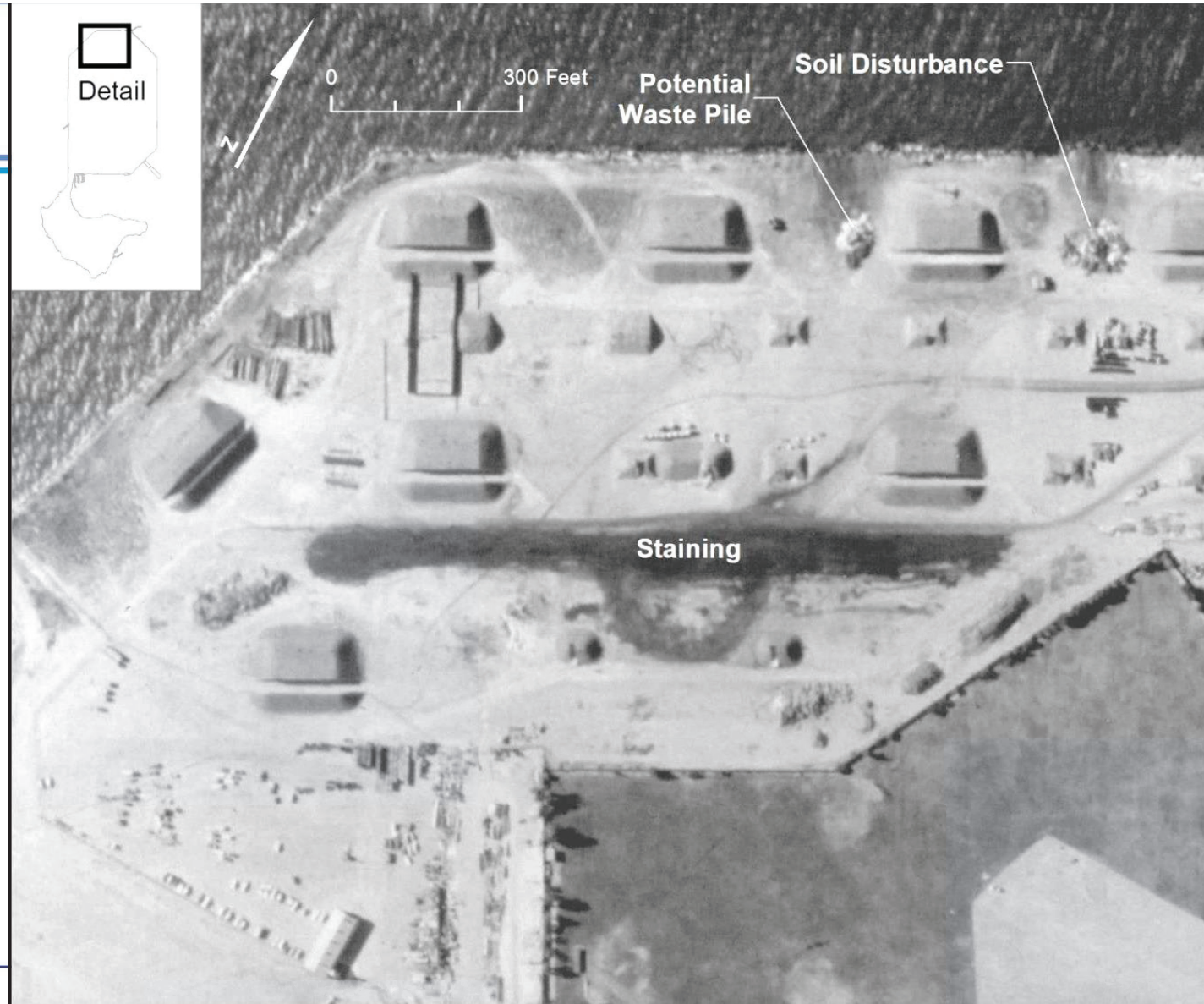
- Darkened soil around Northpoint SWDA incinerator (built 1952)
- Possible soil disturbance around Westside SWDA
  - known disposal at some point based on new mounds flanking runway by mid-1960s





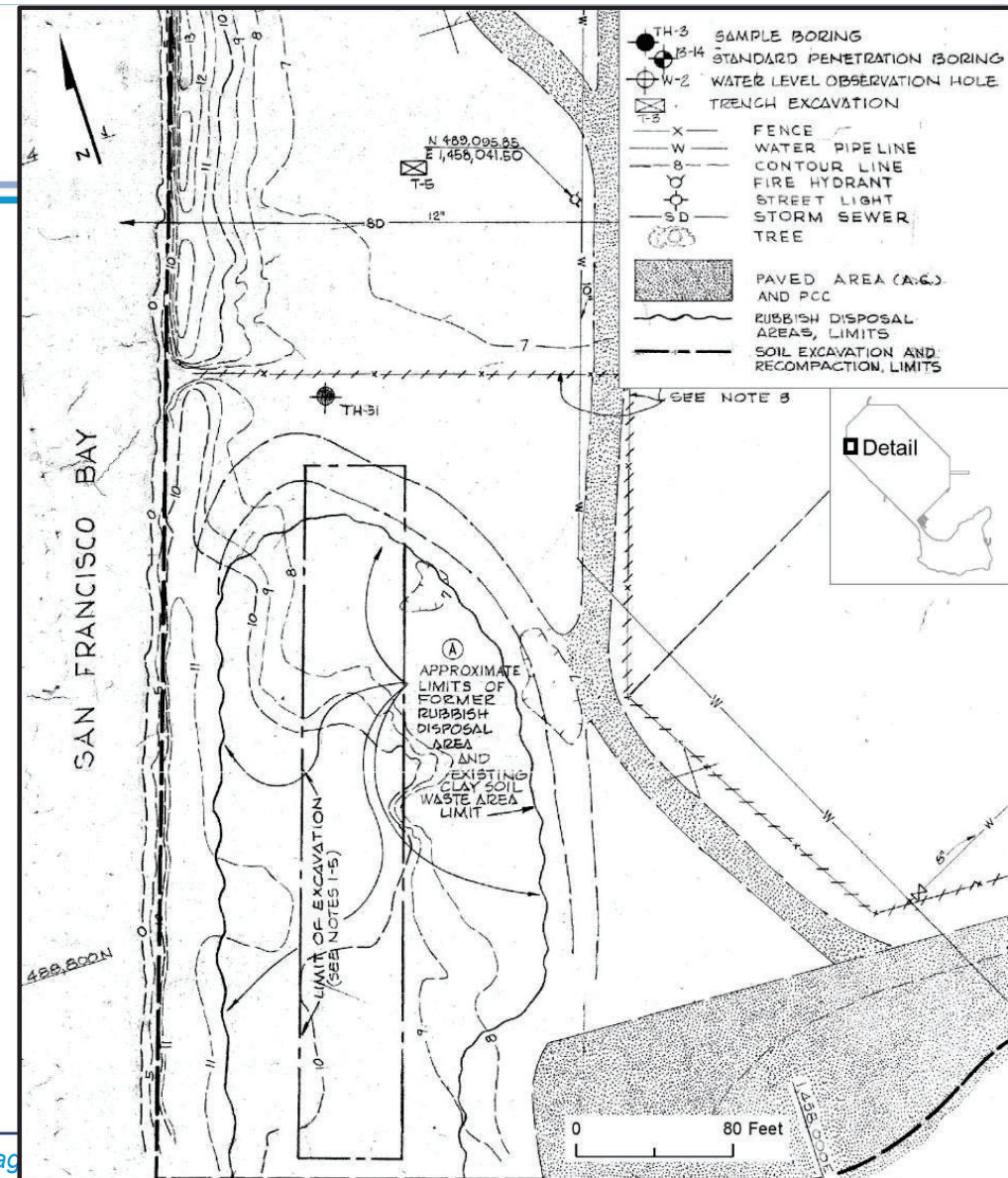
## Chronology: Early 1960s

- Soil staining appears further inland than previous disposal activity
- This area called the **Central Rubbish Area (CRA)**
- Pre-housing development (1965) documents describe past trenching and burial of “sanitary waste” in the CRA



## Pre-Housing Construction Work

- Reports document the presence of “rubbish” disposal at Site 12 coinciding with the SWDAs and the CRA
- Soil borings and trenches documented presence of buried, loose rubbish which would create a stability issue for housing foundations
- As-built maps indicate that rubbish was excavated, mixed with soil, replaced in the hole and compacted, then the excavation was filled to grade with more-or-less rubbish-free soil
- Reburied rubbish typically starts around 2 to 3 feet underground

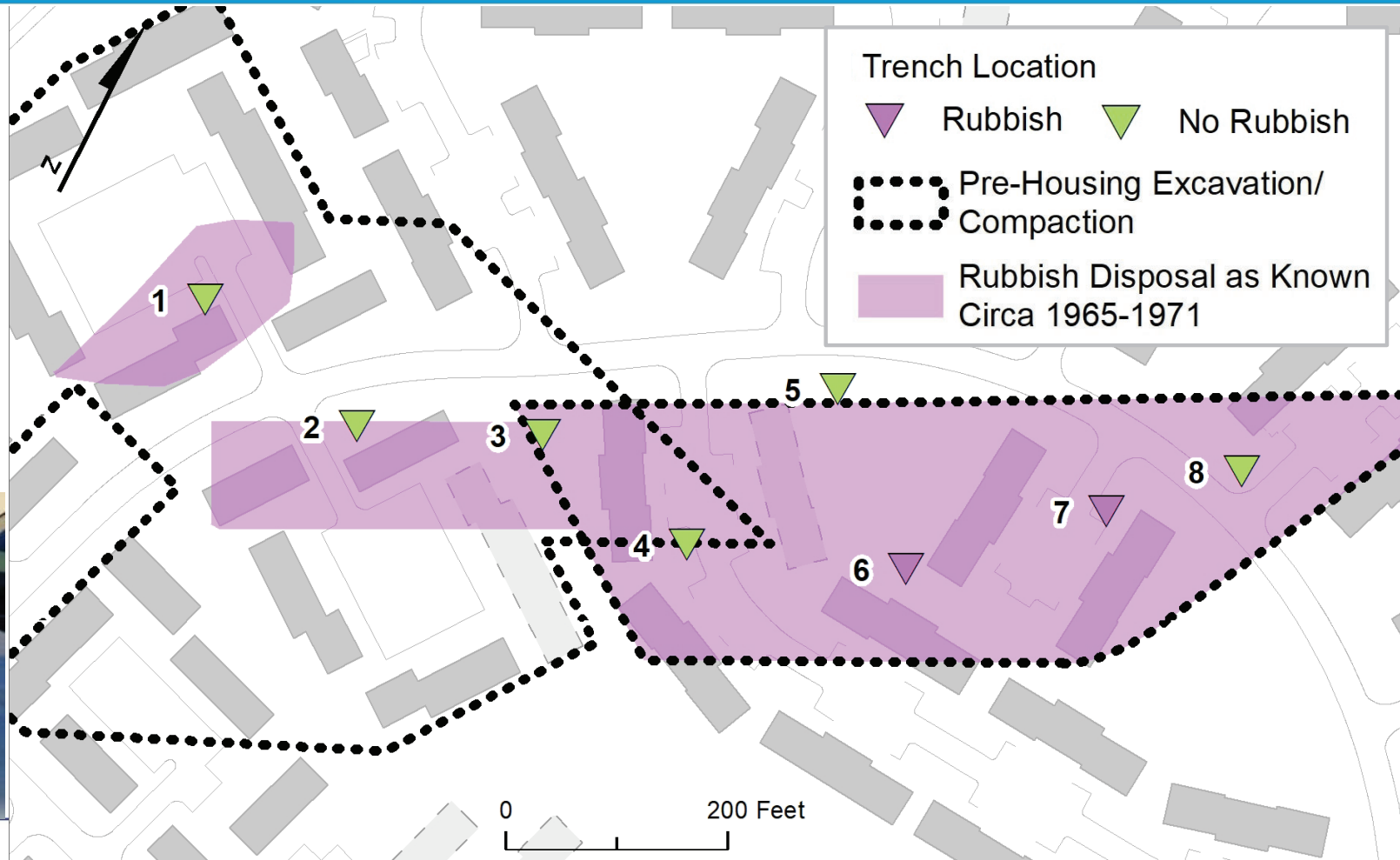




## Central Rubbish Area Investigation (2014)



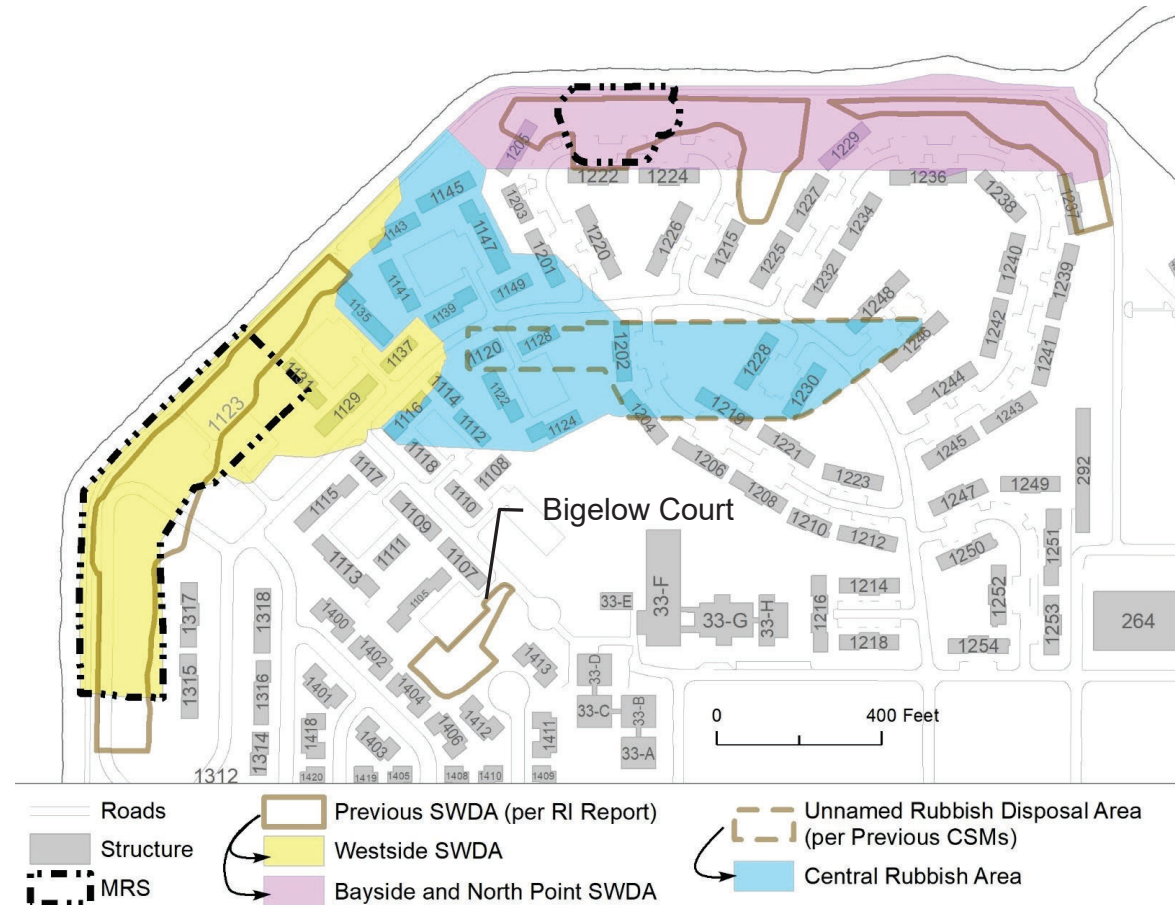
- Film reel, bottles, deodorant  
4-6 feet deep
- Earlier trenching in 2004 found metal cannisters around 4 feet deep



## How does the CSM Update refine our understanding?



- Better understanding of original disposal locations
- Northeast boundary of Westside SWDA expanded
- Bayside and Northpoint SWDAs combined
- Bigelow Ct not an original disposal area
- CRA is larger and can contain non-household waste
- More detailed understanding of earthwork prior to housing construction
- MRS expanded to include likely munitions disposal (disturbance 1945-1947; mostly > 6 feet deep)





## Next Steps



- CSM Update Report is in the review, comment, and resolution period
  - Our research did not uncover any information that would require new restrictions for the residents
  - Treasure Island remains a safe place to live, work, and play
- Additional findings and conclusions will be presented at future RAB meetings
  - Findings presented today are those most likely to be of interest to residents and larger community
- Fact Sheet in September
  - Covers similar content as this presentation
  - Mailed to all Site 12 residents (and mailing list) and posted to website with eblast alert
- Final CSM revisions will be incorporated into the Feasibility Study Addendum #2
  - Addresses radiological concerns throughout Site 12 and all environmental concerns within the disposal areas
  - This deeper understanding of the CSM will assist the Navy in developing a variety of cleanup alternatives in order to continue to ensure protectiveness of current and future users regardless of the types of reuse
- Following the FS, a Proposed Plan document and meeting presents, to the public, the remedy alternatives under consideration
  - Public meeting will present pros and cons for all remedies and allow for questions, comments, and input from the public on the preferred remedy alternative

# Questions?

