

# Proposed Plan for Site 28, West Side On-Off Ramps Naval Station Treasure Island

## INTRODUCTION

The U.S. Department of the Navy (Navy) is responsible for planning and implementing cleanup actions to remediate contamination which may have resulted from historical operations at Naval Station Treasure Island (NAVSTA TI) (Figure 1). Under the **Installation Restoration (IR) Program**, the Navy conducted environmental investigations at Site 28, which includes a portion of the West Side On-Off Ramps, at NAVSTA TI (see Figure 2 on page 2). The investigations were conducted in cooperation with the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC), the Cal/EPA Regional Water Quality Control Board (Regional Water Board), the U.S. Environmental Protection Agency (USEPA), and the Treasure Island Development Authority (TIDA).

In this Proposed Plan, the Navy proposes that no environmental cleanup action be taken at Site 28. This no-action plan is proposed because the **human health and ecological risk assessment** report evaluated during the **remedial investigation (RI)** concluded that the low chemical concentrations detected do not pose **unacceptable risks** to human health or the environment based on **exposure pathways** to potential **receptors** under current and future hypothetical land use scenarios. This Proposed Plan explains further why the Navy is proposing no action. This Proposed Plan meets the requirements of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**, and the California Health and Safety Code (HSC) Chapter 6.8.

“Glossary of Terms” is located at the end of this document to assist the reader in understanding terms used in this Proposed Plan. Specialized or technical terms are highlighted in bold the first time they appear and are defined in the Glossary.

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## INVITATION TO COMMENT

Public participation is a critical part of the CERCLA process. As such, the Navy encourages you to express your opinion of the presented no action alternative for Site 28 by providing written or oral comments on this Proposed Plan. You are invited to attend a public meeting scheduled on **May 12, 2010, at 6:30 p.m. at the Casa de la Vista, Building 271** on Treasure Island (TI) to discuss this Proposed Plan. You are encouraged to review the Final RI Report for more background and detailed technical information. The Final RI Report is available for public review at the San Francisco Public Library information repository and at the Treasure Island Building 1 information repository at the following addresses:

San Francisco Public Library  
100 Larkin Street (at Grove)  
San Francisco, CA 94102-4733

Treasure Island Information Repository  
410 Palm Avenue, Building 1, Room 161  
Treasure Island, San Francisco, CA 94130-1806

The Navy has established a 30-day public comment period, during which time interested and concerned neighbors, community members, and other interested parties may express their views and opinions on the conclusions and recommendations in this Proposed Plan. The 30-day public comment period will begin April 29, 2010 and end May 29, 2010.



Figure 1: Site Location Map

## THE CERCLA PROCESS



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### SITE BACKGROUND

TI is located in the central San Francisco Bay region, just north of the San Francisco-Oakland Bay Bridge (SFOBB), and within the City and County of San Francisco (the City). TI was built in 1936 and 1937 on the Yerba Buena Shoals, a sand spit extending from the northwest point of Yerba Buena Island (YBI) (Figure 1). It was used initially for the Golden Gate International Exposition in 1939. In 1941, TI was leased to the Navy, which operated the facility for various activities including the Naval Technical Training Center; waterfront facilities; troop and family housing; personnel support; a Navy brig; and a Navy and Marine Corps Museum until the closure of NAVSTA TI in 1997. The Navy gained title to TI in 1943. In 1993, the Defense Base Realignment and Closure (BRAC) commission recommended closure of NAVSTA TI; the facility was subsequently closed on September 30, 1997.

Site 28 (which includes a portion of the West Side On-Off Ramps to and from SFOBB), is located in the western portion of YBI and is bounded to the west and southwest by the Bay; to the east and southeast by Site 29, and to the north by vacant land (Figure 2). Other than the roads running through Site 28, most of the site is steeply sloped to the southwest, toward the Bay, and densely vegetated with trees and brush.



Figure 2: Site 28 – West Side On-Off Ramps

The Navy owned the property beneath the SFOBB until 2001, when the Federal Highway Administration transferred the bridge right-of-way from the Navy to the California Department of Transportation (Caltrans). The transfer did not include the West Side On-Off Ramps at Site 28, which remain Navy property. At Site 28, the soil beneath and surrounding the on- and off-ramps and the area beneath the main SFOBB structure is subject to contamination by lead and other metals as a result of vehicle emissions and bridge

painting and maintenance. As described below, RI activities were conducted by the Navy to evaluate this possibility. A boundary adjustment was made in 2005 so that all lands deeded to Caltrans in Sites 28 and 29 were included within Site 29. The West Side On-Off Ramps were not part of the boundary adjustment and remain part of Site 28 (Figure 2).

According to the Draft NAVSTA TI Reuse Plan dated 1996, Site 28 is designated for a future use as shoreline open space. Site 28 falls within lands that will be subject to the **Tidelands Trust**, which limits the potential uses of the land.

### SITE CHARACTERIZATION

This section summarizes the three investigational activities previously performed at Site 28: the Health and Safety Sampling Investigation, the RI, and the validation study.

The geologic setting of YBI, a natural island of approximately 147 acres, consists of four geologic units: (1) landslide debris, (2) artificial fill, (3) colluvium and eolian sands, and (4) Franciscan Assemblage. Based on site observations, sandy soil at Site 28 generally appears to be a mix of Franciscan-derived colluvium and small amounts of marine sand. Some mixing of the soil may have occurred as a result of natural landsliding or road and highway construction. Site 28 is partially underlain by shales and sandstones of the Franciscan Assemblage.

Soil samples were collected at Site 28 to a depth of 1.75 feet below ground surface (bgs). Based on information acquired from the adjacent Site 29, groundwater at this steeply sloped site is expected to occur at a depth greater than 10 feet bgs. The sheep ground surface at this site limits the amount of infiltration and recharge to groundwater following precipitation events. Moreover, the selected chemicals exceeding comparison criteria in soil (see discussion below) at the site have low solubilities and are relatively immobile under ambient conditions; therefore, they are not expected to pose an unacceptable risk to groundwater quality. Additionally, groundwater is not a current or potential future drinking-water source at Site 28; therefore, groundwater exposure pathways were not further evaluated at the site.

### Health and Safety Soil Sampling Investigation

In 1992, the Navy conducted a soil investigation of what is now Site 28. The 1992 investigation was conducted in connection with a desire to understand potential health and safety concerns for workers performing seismic improvements to the on- and off-ramps in areas possibly containing elevated concentrations of metals in airborne dust. Thirty-seven shallow soil samples were collected and submitted for laboratory analysis for lead and zinc. Lead and zinc were detected in all 37 of the soil samples collected from the area near the West Side On-Off Ramps, at levels indicating the presence of these metals above ambient concentrations; therefore, it was determined that an additional investigation was warranted.

It should be noted that the 1992 investigation was not designed to provide data of sufficient quality to support a **Hu-**

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**Human Health Risk Assessment (HHRA).** The data were presumably collected to support the worker health and safety program of the contractor working on the SFOBB at this time; paint debris and paint chip-impacted surface soil were likely sampled as part of that program. Moreover, the Navy has been unable to locate a copy of the original report to verify sample locations, collection methods, and analytical methods. These data were not appropriate for use in the HHRA for the following reasons:

- Laboratory and data validation reports, and specifics regarding data quality procedures for these samples are not known nor available
- Most likely, paint chip debris from under the bridge was selectively sampled for health and safety purposes rather than soil data normally used in risk assessments
- The location of the 1992 samples have since been paved for erosion control, thereby eliminating the potential exposure pathway
- The 1995 RI data were collected outside of the immediate footprint of the roadway in an area that is currently vegetated and is largely characterized by a very steep ground surface. These data were considered to more accurately represent site soil conditions across the property.

### Remedial Investigation

The primary objective of the RI conducted in 1995 was to assess the extent of metals contamination in the soil, and to determine whether soil was contaminated as a result of Navy activities associated with maintenance of the West Side On-Off Ramps. Twenty-three samples were collected from the seventeen sampling locations selected for shallow soil sampling, and the samples were submitted to an off-site laboratory for analysis of metals. PRC concluded that lead was the only metal consistently detected in the RI samples. Zinc was also detected consistently in samples collected during the Health and Safety Soil Sampling Investigation; however, as stated previously, the Navy has been unable to locate a copy of the original report to verify sample locations, collection methods, and analysis methods.

### Final Validation Study for Installation Restoration Sites 8, 11, 28, and 29

In 2001, the Navy conducted a study to validate the results of the **Screening Level Ecological Risk Assessment (SLERA)** performed in 1997 as part of the RI. Specifically, the validation study was conducted to confirm SLERA results for the American peregrine falcon. The results of the validation study indicated that **chemicals of potential ecological concern (COPEC)** at Sites 8, 11, 28, and 29 did not pose an unacceptable risk to the peregrine falcon.

### Tidelands Trust

TI was built by depositing dredge material on the tidelands and shoals to the north of YBI. The Tidelands Trust is overseen by the California State Lands Commission and administered by the State Legislature. The trust applies to TI, and it

imposes the following restrictions on the development of TI:

- Land uses are limited to Trust purposes. Residential and non-maritime uses are prohibited;
- Sale of Trust lands to private entities is prohibited; and
- Revenues generated from Trust uses must be expended for Trust purposes.

The TI Public Trust Act of 2004 proposed an exchange of lands under which, post-transfer, non-Trust lands on YBI would be brought into the Trust, and Trust lands on TI would be released from the Trust. This type of exchange is allowed under the Tidelands Trust. Upon inclusion in the Tidelands Trust, Site 28 in its entirety (Figure 3) will be limited to uses which may intermittently attract people to the waterfront, promote public recreation, protect habitat, or preserve open space; however, as previously stated, residential and non-maritime uses are prohibited by the Tidelands Trust. Moreover, access and use of Site 28 is expected to be limited, considering the hillside topography and proximity to the SFOBB. The ground surface across Site 28 is too steep to allow (residential/commercial) redevelopment activities. The steeply sloped ground surface also largely prohibits safe and practical access for a recreational user. Therefore, residential and commercial development and recreational use of Site 28 are considered highly unlikely and impractical.

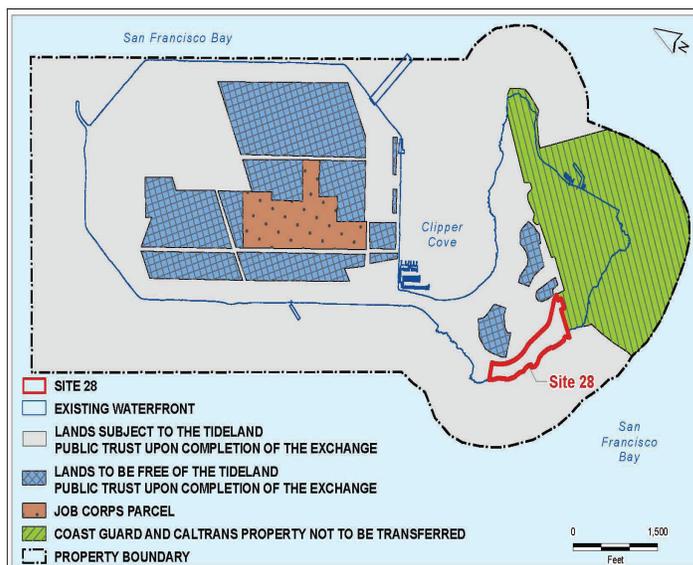


Figure 3: Boundaries of the Tidelands Trust

### SUMMARY OF SITE RISK ASSESSMENTS

The Navy conducted baseline **human health and ecological risk assessments** as part of the RI at Site 28. The risk assessments were completed using surface soil data collected for metals analysis in the 1995 RI. The HHRA calculated risks for lead, antimony, and thallium. The HHRA evaluated potential health risks to a hypothetical future commercial/industrial worker, construction worker, resident, and recreational visitor. The human-health risk calculations indicate that potential health risks associated with antimony and thallium are within the acceptable range. The results of the HHRA in-

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dicating that lead levels in soil may present unacceptable risks to hypothetical future residents, but potential risks from lead in soil to hypothetical future commercial/industrial receptors, future construction/maintenance workers, and potential future adult and child recreational visitors are below the threshold. Since current site usage is limited to intermittent construction/maintenance workers, and since the site does not lead itself to future redevelopment (either residential or commercial/industrial) and/or daily recreational activities, the observed levels of lead in soils at the site do not pose an unacceptable risk to human health. Similarly, the ecological risk assessment conducted as part of the RI concluded that Site 28 risks to ecological receptors, including the peregrine falcon, are below the threshold.

Based on the findings of the risk assessments and the planned future land use and restrictions as a result of the Tidelands Trust, the Navy, DTSC, USEPS, and Regional Water Board agree that no action is necessary at Site 28. More detailed summaries of the human health and ecological risk assessments follow.

### Human Health Risk Assessment

In performing the HHRA as part of the Site 28 RI, the Navy calculated both cancer risks and noncancer **hazard indices (HI)** for an array of current and hypothetical future exposure scenarios. The exposure scenarios included potential risks to construction workers (i.e., exposure under current land use), and these hypothetical receptors: commercial/industrial workers, future residents, and recreational site visitors. Although future development of the site for residential or industrial use is impractical and not planned, evaluation of these scenarios provides alternative risk estimates for unrestricted reuse of the site and supports risk management decisions for the site.

Risks were estimated for chemicals related to former Site 28 operations, referred to as “site-related risks.” For comparison purposes and to satisfy regulator requirements, “total risks” were also calculated for all chemicals present at the site, including chemicals below background levels.

**Chemicals of potential concern (COPC)** were identified using two methods: Method 1 satisfies the Navy and Federal Requirements, and Method 2 satisfies state requirements. Using Method 1, only one site-related COPC was identified: lead in soil. Using Method 2, site-related COPCs are lead, antimony, and thallium in soil.

Health impacts associated with lead were evaluated using DTSC’s LeadSpread model, wherein potential blood-lead levels in human receptors are estimated based in part on potential exposure to lead in site soils. The estimated blood-lead level is then compared to the blood-lead level of concern in order to determine the potential significance for health impacts associated with lead.

Since antimony and thallium are considered noncarcinogenic by the USEPA, potential health risks associated with these metals were estimated in the RI based on the calculation of the noncancer HI. The HI is a determination of a constituent’s

overall noncarcinogenic toxicity. The HHRA also included estimation of cancer risks for carcinogenic chemicals; however, these chemicals were not related to known activities at the site and hence cancer risks were only estimated as part of the “total risk” calculations.

The HHRA calculated cancer and/or noncancer health effects associated with each chemical and potential complete exposure pathway within the “site-related risks” and “total Risks” calculations. Cancer and noncancer effects were then summed across exposure pathways for each potential receptor. Lead was not included in this cumulative risk characterization because potential health effects from lead were evaluated using DTSC methodology that calculated blood-lead levels in potentially exposed populations.

The Navy characterized cancer risks associated with exposure to contaminants classified as carcinogens as an estimate of the probability (excess risk) that an individual will develop cancer over a 70-year lifetime as a direct result of exposure to those potential carcinogens. For example, a cancer risk of  $1 \times 10^{-6}$  indicates that an individual has a “one in one million” probability of developing cancer during a 70-year lifetime as a result of the assumed exposure conditions.

For known or suspected carcinogens (“total risk” calculation only), where cumulative carcinogenic risk to an individual is less than  $1 \times 10^{-6}$ , action generally is not warranted unless there are adverse environmental impacts. Conversely, carcinogenic risks in excess of  $1 \times 10^{-4}$  may warrant corrective action. Correspondingly, the risk range between  $1 \times 10^{-4}$  and  $1 \times 10^{-6}$  is often referred to as “**risk management range.**” A risk estimated within this risk management range may be considered minimal if justified based on site-specific conditions (OSWER Directive 9355.0-30). Based on the HHRA presented in the Site 28 RI, the “total risk” at Site 28 for all exposure scenarios was found to be within the risk management range, peaking at  $5 \times 10^{-6}$  (hypothetical residential exposure scenario). As previously indicated, the “site-related risks” did not yield a cancer risk due to the noncarcinogenic nature of antimony and thallium.

For noncarcinogenic chemicals, an HI value of 1.0 or less indicates that adverse noncancer human health effects are not expected to occur. However, a total HI exceeding 1.0 does not necessarily mean that adverse effects are “expected to occur” or are “significant.” If the total HI is greater than 1.0, a segregated analysis of the HI’s for each specific biological organ (or **target organ**) is then performed to determine whether the noncancer health risks of chemicals to different target organs are possible. Based on the HHRA presented in the Site 28 RI, the noncancer HI’s for the site-related chemicals were well below 1.0 for all exposure scenarios evaluated. Noncancer HI’s for the “total risk” calculations were below 1.0 for both hypothetical commercial/industrial and construction worker exposure scenarios, and equaled 1.0 for the hypothetical resident exposure scenario.

While lead is considered a class B-2 carcinogen (with suffi-

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cient evidence in animals and inadequate evidence in humans), its health effects are typically evaluated through estimation of blood-lead levels based on DTSC's LeadSpread computer-based model. These estimates are then compared to the blood-lead level of concern, which has been defined as 10 micrograms per deciliter of blood ( $\mu\text{g}/\text{dL}$ ). The HHRA presented in the Site 28 RI estimated potential blood-lead levels for human exposure at four exposure areas at Site 28. Estimated blood-lead levels were well below the blood-lead level of concern of 10  $\mu\text{g}/\text{dL}$  for hypothetical adult residents, hypothetical commercial/industrial workers, construction workers, and potential recreational visitors to the site. Estimated blood-lead levels exceeded 10  $\mu\text{g}/\text{dL}$  for hypothetical child residents, but were below  $\mu\text{g}/\text{dL}$  for child recreational visitors to the site. Commercial and residential development is not planned for Site 28.

As previously indicated, exposure to groundwater was not evaluated as part of the HHRA. Generally, groundwater at YBI is estimated to occur at 10 feet bgs and does not meet the minimum yield requirements for the beneficial use of groundwater as specified by the Regional Water Board, and is therefore not a potential drinking-water resource. Combined with the nonvolatile nature of the COPCs at Site 28, this precludes both indirect and direct contact with groundwater for receptors via drinking water or other municipal use.

Based on the HHRA results and the Tidelands Trust restrictions on future use of Site 28, potential health impacts to current and potential future site occupants are considered minimal.

### Ecological Risk Assessment

The **ecological risk assessment (ERA)** for Site 28 was finalized in 2001 with the completion of the validation study for Sites 8, 11, 28, and 29 at YBI. The ERA was completed in three phases. In the first phase of the ERA, the problem formulation was developed based on existing data, biotic surveys, and **fate and transport** analysis. This information helped form the basis for the ecological portion of the **conceptual site model** and helped focus additional work necessary to complete the SLERA under Phase II. Based on the information presented in the Phase I report, all IR sites at YBI were recommended for further evaluation in a SLERA.

In the second phase of the ERA, a SLERA was conducted for Sites 8, 11, 28, and 29 that focused on three representative species: the deer mouse (*Peromyscus maniculatus*), American kestrel (*Falco sparverius*), and American peregrine falcon (*Falco peregrinus anatum*). The deer mouse and American kestrel were selected to represent small mammals and raptors, respectively; the peregrine falcon was selected because it is a state-listed endangered species, and two pairs are known to nest on the SFOBB. Potential risks posed by ingestion of COPECs in prey and soil were assessed using a food-chain model (FCM) and an exposure-dose and -effect model.

The results of the FCM conducted in the Phase II ERA indicated potential risk to peregrine falcons under conservative

exposure and effects conditions at Sites 8, 11, 28, and 29. To further evaluate potential risk to the peregrine falcon, a validation study using site-collected bird tissue data was recommended. The FCM conducted in the Phase II ERA also indicated possible risk to small mammals from the concentrations of chemicals at the sites; however, based on the small total area of the sites, the disturbed nature of the sites, and continuing disturbance of the sites, the Navy and regulatory agencies agreed that further evaluation of small mammals was not necessary.

The final phase of the ERA and the validation study, was finalized in December 2001. The conclusion of the validation study was that Sites 8, 11, 28, and 29 posed minimal risk to peregrine falcons. Because the ERA for Site 28 was finalized prior to completion of the RI, the RI report did not re-evaluate the ecological risk, but provided a summary of the ERA conducted at Site 28. Per DTSC's request, this summary included recalculation of **exposure point concentrations (EPC)**, to include data collected since completion of the ERA. Recalculated EPCs were evaluated to ensure that the overall conclusions of the ERA had not changed. A comparison of the EPCs used in the Phase II ERA and validation study *versus* the EPCs calculated in 2005 as part of the RI was performed as part of the RI report. The results of the comparison show that, overall, EPCs have decreased. Therefore, the Site 28 RI Report recommended no further investigation or action for **ecological receptors** at Site 28.

### DESCRIPTION OF THE NO-ACTION PROPOSED PLAN

Under CERCLA, the no-action option is appropriate for sites when there is no current or potential threat to human health or the environment. The 2009 Final RI Report made the following conclusions and recommendations:

1. The site's steep, rocky slopes, and location make future development or recreational access unlikely, thus eliminating potential exposure using the industrial or residential development scenarios.
2. No cancer risks exist for site-related chemicals, and HI's are below 1.0 for the most conservative exposure scenario.
3. Blood-lead levels as modeled for adult residents are below the benchmark established by the DTSC; however, exceedances are found for child residents.
4. Blood-lead levels as modeled for hypothetical recreational receptors are well below the benchmark established by the DTSC.
5. Impending inclusion of this site in the Tidelands Trust would further limit any future development of this site.

Based on these conclusions, no action is recommended for Site 28.

### MULTI-AGENCY ENVIRONMENTAL TEAM SUPPORTIVE STATEMENT

The Base Realignment and Closure Cleanup Team (BCT) is

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composed of the Navy, USEPA, Cal/EPA DTSC, and the Regional Water Board. The primary goals of the BCT are to protect human health and the environment, coordinate environmental investigations, and expedite the environmental cleanup at NAVSTA TI. The BCT reviewed all major documents and activities associated with Site 28, including the RI Report. Based on these reviews and discussions on key documents, the BCT supports the Navy's recommendation for no action at Site 28.

### THE NEXT STEP FOR SITE 28

The 30-day public comment period will begin April 29, 2010 and end May 29, 2010. After the comment period has ended, the Navy will consider the comments received on this Proposed Plan before making a final decision for Site 28. The Navy's decision will be recorded as a **Record of Decision (ROD)**, which will include all of the public comments received on this Proposed Plan, as well as the Navy's responses to those comments. A public notice will be placed in the *San Francisco Examiner* announcing when the ROD is available to the public in the San Francisco Public Library information repository.

**INFORMATION REPOSITORIES**

**The Proposed Plan and other Site 28 related documents are available at:**

San Francisco Public Library  
100 Larkin Street (at Grove)  
San Francisco, CA 94102-4733  
(415) 557-4400

Treasure Island Information Repository  
410 Palm Avenue, Building 1, Room 161  
Treasure Island, San Francisco, CA 94130-1806  
(415) 743-4729

**OPPORTUNITIES FOR COMMUNITY INVOLVEMENT**

**Public Meeting: May 12, 2010, 6:30-7:30 p.m.**

**Location: Casa de la Vista, Building 271, Treasure Island**

You are invited to this community meeting to discuss the information presented in this Proposed Plan for Site 28. Navy representatives will provide visual displays and information on the environmental investigations conducted for Site 28. You will have an opportunity to ask questions and formally comment on the Navy's no action proposal for Site 28, as presented in this Proposed Plan.

**Public Comment Period Occurs from April 29, 2010 through May 29, 2010**

We encourage you to comment on this Proposed Plan during the 30-day public comment period. Comments may be submitted orally or in writing at the public meeting, or you may mail written comments postmarked no later than **May 29, 2010**, to:

Mr. James Sullivan  
BRAC Environmental Coordinator  
Navy BRAC Program Management Office West  
1455 Frazee Road, Suite 900  
San Diego, California 92108-4310

or via e-mail to ([james.b.sullivan2@navy.mil](mailto:james.b.sullivan2@navy.mil)) no later than **May 29, 2010**. Public comments received during this period, or in person at the public meeting on **May 12, 2010**, will be considered in the final decision-making process for Site 28.

### GLOSSARY OF TERMS

Specialized terms used in this Proposed Plan are defined below:

**Chemicals of Potential Ecological Concern (COPEC):** chemicals selected to help calculate site risks to the environment based on their toxicity, mobility, and concentration.

**Chemicals of Potential Concern (COPC):** chemicals selected to help calculate site risks to human health based on their toxicity, mobility, and concentration.

**Colluvium:** loose sediment.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):** the law which established 1) a program to identify hazardous waste sites and 2) procedures to clean up sites to be protective of human health and the environment.

**Conceptual Site Model:** to portray a site's characteristics such as geology and hydrogeology in order to understand how a site functions so it may be used to assist in decision making.

**Ecological Receptor:** any ecological organism which may be exposed to site contaminants.

**Ecological Risk Assessment (ERA):** an evaluation of the likelihood that plants or animals exposed to contaminants from a site would suffer harm.

**Exposure Pathway:** the way in which a chemical comes into contact with a living organism, such as touching, breathing, or ingesting.

**Exposure Point Concentration (EPC):** concentration of a chemical at the point at which the receptor is exposed to the chemical.

**Fate and Transport:** A description of how chemicals can migrate and change in concentration over time and distance along the path of travel.

**Hazard Index (HI):** a summation of the hazard quotients for all chemicals to which an individual is exposed. (The hazard quotient is the ratio of estimated site-specific exposure to a single chemical from a site over a specified period to the estimated daily exposure level, at which no adverse health effects are likely to occur. The value is used to evaluate the potential for noncancer health effects, such as organ damage, from chemical exposure.)

**Human Health Risk Assessment (HHRA):** an analysis of the potential negative human health effects caused by hazardous substances released from or present at a site.

**Installation Restoration (IR) Program:** a U.S. Department of Defense (DoD) program developed to identify, assess, characterize, and clean up or control contamination from past hazardous waste-disposal operations and hazardous materials spills at DoD facilities.

**Receptor:** any organism (human or ecological) which may be exposed to site contaminants.

**Record of Decision (ROD):** a document containing the final decision and agreement among the installation, State of California, and USEPA concerning selection of the remedial action(s) at a site. The ROD is based on information from the RI and public comments and concerns.

**Remedial Investigation (RI):** an investigation in which the types, amounts, and locations of contamination at a site are identified.

**Risk Management Range:** an established range used by risk managers to determine whether further action is needed to reduce risk to human health or the environment.

**Screening Level Ecological Risk Assessment (SLERA):** a preliminary ecological risk assessment tool used to evaluate the likelihood that some, more prevalent receptors exposed to a site's contaminants would suffer harm.

**Target Organ:** the biological organ(s) most adversely affected by exposure to a chemical substance.

**Tidelands Trust:** the public trust overseen by the California State Lands Commission and administered by the State Legislature, which imposes land use controls or restrictions upon the development of Treasure Island. Residential, industrial, and non-maritime uses are generally prohibited.

**Unacceptable Risk:** a quantification of potential harm to humans, animals, or plants from exposure to contaminants at elevated levels. An unacceptable risk means there is a potential for deleterious effects, and action may be warranted.



## Proposed Plan for Site 28, West Side On-Off Ramps

### MAILING COUPON

If you would like to be added to the Naval Station Treasure Island mailing list and receive copies of future newsletters and fact sheets, please fill out the coupon below and mail it to:

Mr. James Sullivan  
BRAC Environmental Coordinator  
Navy BRAC Program Management Office West  
1455 Frazee Road, Suite 900  
San Diego, CA 92108-4310

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