DRAFT

Litigation Area Sites 32 and 33

Tidal Area, Naval Weapons Station Seal Beach Detachment Concord

Concord, California **September 2008**

DEPARTMENT OF THE NAVY ANNOUNCES PROPOSED PLAN

U.S. Navy invites you to comment on the proposed cleanup plans for contaminated sediment at Sites 32 and 33, in the Litigation Area at Naval Weapons Station (NAVWPNSTA) Seal Beach, Detachment Concord, in Concord, California (see Figure 1). The ***U.S. Environmental Protection Agency (EPA), California EPA Department of Toxic Substances Control (DTSC), California Department of Fish and Game (DFG),*** and ***San Francisco Bay Regional Water Quality Control Board (Water Board)*** worked with the Navy in the evaluation of all of the alternatives and in the selection of the ***preferred remedial alternatives***. The Navy notes that the property on which Sites 32 and 33 are located is pending transfer to the Department of the Army pursuant to the Defense Base Closure and Realignment and Closure Act of 1990, as amended by the Defense Authorization Act of 2005. Transfer is anticipated to occur in October 2008. After transfer, the Army will assume responsibility for environmental cleanup at these sites.

The proposed cleanup is part of the Navy's ***Installation Restoration (IR)*** program. The purpose of the IR program is to locate and clean up hazardous waste at military installations. This Proposed Plan presents the Navy's preferred remedial (cleanup) alternatives for sediment at Sites 32 (Unit 7 Mosquito Abatement Ditches) and 33 (Units 10 and 11, Lost Slough). Specific remedial alternatives are identified for sediment at each site. The Navy proposes to clean up sediments at Sites 32 and 33 by:

- **Removing** sediment at Site 32 where concentrations of metals exceed the levels considered safe for ecological receptors.
- **Removing and replacing** sediment at Site 33 where concentrations of metals exceed the levels considered safe for ecological receptors.

This Proposed Plan summarizes the site history, environmental investigations, and the remedial alternatives evaluated in accordance with the ***Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)***, as amended by the ***Superfund Amendments and Reauthorization Act (SARA)***, and explains the basis for the preferred alternative. The Navy, EPA, Water Board, DTSC, and DFG participated in the evaluation. The Proposed Plan summarizes information that can be found in greater detail in the ***Supplemental Feasibility Study (SFS)*** for Litigation Areas Sites 32 and 33. The Navy will consider and respond to the public comments on this Proposed Plan during preparation of the ***Record of Decision (ROD)*** for Sites 32 and 33.

A "Glossary of Terms" is provided beginning on page 12. All words that appear in ***bold italic*** print when first mentioned in this Proposed Plan are defined in the glossary.

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Also, please provide language to clarify that the activities included in this Proposed Plan will be conducted by the Army.

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Removing and Replacing-should be "Excavating and Filling" or "Excavation and Filling of"

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THE CERCLA PROCESS

The Navy is issuing this Proposed Plan as part of its public participation responsibilities under Section (§) 117(a) of CERCLA and § 300.430(f)(2) of the ***National Oil and Hazardous Substances Pollution Contingency Plan (NCP)***. The environmental investigations and cleanup follow the steps shown in Figure 2. Steps 1 through 6 were completed for the Litigation Area in 2003 with the completion of the ***Five-Year Periodic Review Assessment Report (Five-Year Review)***. The Five-Year Review was based on post-remediation monitoring data and concluded that portions of the site were not protective of the environment. The Five-Year Review recommended a SFS for the areas of concern. Following the Five-Year Review, the areas of concern were assigned site numbers 32 (Unit 7 Mosquito Abatement Ditches) and 33 (Units 10 and 11, Lost Slough) (see Figure 3) and a SFS was prepared. Figure 2 illustrates the current status of Sites 32 and 33 in the CERCLA process.

This Proposed Plan summarizes the site history, environmental investigations, risk assessments, and remedial alternatives evaluation conducted at Sites 32 and 33, and describes the basis for the preferred alternatives. The Navy will consider public comments on this Proposed Plan during preparation of the ROD for Sites 32 and 33. A public comment period will be held from February 5 through March 12, 2009. Public comments can be submitted by mail, fax, or e-mail throughout the comment period. A public meeting will be held on February 11, 2009, at the Concord Police Department Headquarters from 7:00 to 9:00 p.m. Members of the public may also submit written and oral comments on this Proposed Plan at the public meeting.

In consultation with the regulatory agencies, the Navy may modify the preferred alternative or select another remedial option based on feedback from the community or on new information. Therefore, the community is strongly encouraged to review and comment on this Proposed Plan. A final decision on the remedy to be implemented will be documented in the ROD.

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SITE HISTORY

NAVWPNSTA Seal Beach Detachment Concord is in north-central Contra Costa County, approximately 30 miles northeast of San Francisco, California (see Figure 1). In the late 1960s and early 1970s, the Navy purchased several parcels of land to create a buffer zone around the Tidal Area. Eight of those parcels, which cover a total of 307 acres, were subsequently found to be contaminated with metals resulting primarily from waste disposal and historical spills from off-site neighboring chemical companies; some smaller on-site historical (non-Navy) sources were also located in several parcels. The Navy did not conduct any activities in these parcels that contributed contamination. The parcels are now referred to as the Litigation Area because the Navy was involved in extensive litigation with owners of adjacent properties to recover remediation costs for these contaminated sites.

The Litigation Area is composed of tidal marshes typical of those found along the margins of the Suisun Bay subregion of San Francisco Bay, and includes some of the surrounding upland grasslands and riparian areas. The Litigation Area wetlands support populations of sensitive species, such as the federally and state-listed endangered salt marsh harvest mouse (*Reithrodontomys raviventris*), state-listed threatened California black rail (*Laterallus jamaicensis coturniculus*), and rare plants such as soft bird's beak (*Cordylanthus mollis mollis*).

In 1988, the ***U.S. Army Corps of Engineers*** completed a ***remedial investigation (RI)*** and a ***feasibility study (FS)*** for the Litigation Area and recommended remediation focused on six metals (arsenic, copper, cadmium, lead, selenium, and zinc). The Navy completed four cleanup actions, referred to as remedial actions. Each of the four sites that was cleaned up is called a ***remedial action subsite (RASS)***. Only the most contaminated soils at each RASS were removed during the cleanup actions. Some contaminated soils were left in place in response to concerns associated with destruction of high quality wetland habitat at the site.

The RASSs were divided into 16 monitoring units for post-remediation monitoring, based on habitat and location. The Navy completed 5 years of post-remediation monitoring and prepared a Five-Year Review Report. The main purposes of the Five-Year Review were to evaluate the implementation and the effectiveness of the selected remedy and to assess whether any additional actions are necessary. The Five-Year Review included a ***baseline ecological risk assessment (BERA)*** and a screening level human health risk assessment.

The Five-Year Review concluded that the Navy had selected and implemented remedial actions in a manner consistent with the NCP. In addition, restoration of remediated areas generally met the criteria for success. The site is currently protective of human health based on its continued use as a buffer zone with limited access. The Five-Year Review concluded that the remedy was not fully protective of the environment in RASS 1, based on high levels of mercury in ditches and sloughs in Monitoring Units 7, 10, and 11 that may pose a risk to ecological receptors (see Figure 3 for Monitoring Unit locations). The Five- Year Review also identified some unacceptable risk for salt marsh harvest mice from arsenic at a small number of locations in Monitoring Unit 6, but did not recommend remediation of the marsh surface because destruction of sensitive wetland habitat would outweigh any reduction in risk that could be obtained.

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The Five-Year Review recommended a SFS that would evaluate alternatives to ensure protectiveness of the environment in Monitoring Units 7, 10, and 11 (Sites 32 and 33). Removal of sediment in the ditch and slough bottoms would result in removal of the highest contaminant concentrations and avoid impact to the marsh surface, which provides habitat for the salt marsh harvest mouse and the California black rail

This Proposed Plan pertains specifically to Sites 32 and 33. Contaminants identified in sediment at both Sites 32 and 33 included arsenic, cadmium, copper, mercury, lead, selenium, and zinc.

RISK ASSESSMENT SUMMARY

As part of the Five-Year Review, a screening-level human health risk assessment and a BERA were conducted to assess risk at each RASS in the Litigation Area. For these risk assessments, "risk" is defined as the likelihood or probability that a hazardous chemical, when released to the environment, will cause adverse effects on exposed humans or other biological receptors.

Human Health Risk Assessment

The Navy considered the different ways that humans might be exposed to chemicals, the possible concentrations of chemicals that could be encountered during exposure, and potential frequency and duration of exposure. The expected future use of the Litigation Area is to remain a buffer zone for military operations, with limited access to humans. The primary receptor in the screening-level human health risk assessment was a worker who would be expected to be present intermittently in the Litigation Area.

Risk calculations were based on conservative assumptions to protect human health. "Conservative" means the assumption will tend to overestimate risk. Human health risk is classified as cancer (from exposure to carcinogens) or noncancer (from exposure to noncarcinogens).

This risk assessment indicated that under current and likely future use scenarios, exposure to contaminants in surface soil, sediment, and water at the Litigation Area did not pose unacceptable risk to humans. However, it was recommended that risk be reevaluated if future use changes to a residential scenario.

Ecological Risk Assessment

An ecological risk assessment considers risks to ecological receptors, such as small mammals, birds, and marine life. The BERA conducted for the Litigation Area evaluated risk to plants, aquatic invertebrates and fish, and birds and mammals from exposure to chemicals in soil and sediment. The BERA indicated that:

- There is no unacceptable risk to plants, including special status species.
- Metals in sediment and surface water may pose unacceptable risk to populations of fish and aquatic invertebrates at selected locations in the main reach (Unit 10) and western arm (Unit 11) of Lost Slough (Site 33).

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- Metals in sediment and surface water may pose unacceptable risk to populations of California black rails and, to a lesser extent, the Suisun song sparrow (*Melospiza melodia*) along areas of the main reach (Unit 10) and western arm of Lost Slough (Unit 11) (Site 33), and the mosquito abatement ditches in Unit 7 (Site 32).

- Some unacceptable risk was indicated for salt marsh harvest mice from arsenic at a small number of locations in Unit 6 (see Figure 3 for the location of Unit 6). The BERA concluded that the negative impacts of remediation of the marsh surface in Unit 6 would outweigh any reduction in risk that could be obtained.

Based on the results of the BERA, the Navy determined that a SFS to evaluate cleanup alternatives for contaminated sediment was required at Sites 32 and 33. Cleanup of contaminated sediment in the ditches and slough would address the risk from contaminated surface water as well.

REMEDIAL ACTION OBJECTIVES AND REMEDIATION GOALS

In the SFS, potential cleanup alternatives were developed and evaluated. The first step in that process was developing the ***remedial action objectives (RAO)***. RAOs provide the foundation upon which remedial alternatives are developed. Site-specific objectives were established to identify and screen alternatives that protect human health and the environment. ***Remediation goals (RG)*** were developed to meet the RAO for each site. RGs are the highest concentrations that can be left in the sediment and still be protective of human health and the environment.

The SFS identified the following RAOs for Sites 32 and 33:

- Site 32: Reduce exposure of fish and aquatic invertebrates and birds to acceptable levels of arsenic, cadmium, copper, mercury, lead, selenium, and zinc in sediments originating from the mosquito abatement ditches at Site 32 (Unit 7 Mosquito Abatement Ditches).

- Site 33: Reduce exposure of fish and aquatic invertebrates and birds to acceptable levels of arsenic, cadmium, copper, mercury, lead, selenium, and zinc in sediment originating from the Slough Area at Site 33 (Units 10 and 11, Lost Slough).

Preliminary RGs were calculated separately for Sites 32 (Unit 7, Mosquito Abatement Ditches) and 33 (Lost Slough, Units 10 and 11) using food-chain model results for the Virginia rail (*Rallus limicola*), which was the most sensitive of the six ***assessment endpoints*** evaluated; mallard (*Anan platyrhynchos*), California black rail, Virginia rail, great blue heron (*Ardea Herodias*), Suisun song sparrow, and river otter (*Lutra canadensis*).

A GIS remediation model was developed to help establish the final RGs. Analytical results from the 1999 Year-5 long-term monitoring were input into the GIS remediation model to determine ***area-weighted averages*** for each site. Two sets of sediment RGs for Sites 32 and 33 were established: (1) area-weighted average RGs, which represent concentrations to be achieved for each site as a whole; and (2) do-not-exceed RGs, which represent concentrations not to be exceeded at any location within the site. RGs for the two sites differ because remediation

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areas are based on site-specific, long-term monitoring data. Tables 1 and 2 list the proposed RGs for sediment at Sites 32 and 33, respectively. Figure 4 shows the areas to be remediated within Sites 32 and 33; these are the areas where the RGs listed in Tables 1 and 2 were exceeded.

Table 1: Site 32 Sediment Remediation Goals

Chemical of Concern	Area Weighted Average Remediation Goal (mg/kg)	Discrete Do-Not-Exceed Remediation Goal (mg/kg)
Arsenic	689	1,380
Cadmium	12.2	124
Copper	111	200
Lead	95.0	553
Mercury	2.98	6.89
Selenium	12.0	24.18
Zinc	2,420	12,100

Note:
mg/kg Milligrams per kilogram

Table 2: Site 33 Sediment Remediation Goals

Chemical of Concern	Area Weighted Average Remediation Goal (mg/kg)	Discrete Do-Not-Exceed Remediation Goal (mg/kg)
Arsenic	603	1,200
Cadmium	10.7	120
Copper	96.7	150
Lead	95.0	484
Mercury	2.62	6.03
Selenium	16.1	28.3
Zinc	2,110	10,600

Note:
mg/kg Milligrams per kilogram

The SFS Report for Sites 32 and 33 evaluated and proposed remedial alternatives that are anticipated to achieve the remediation goals and fulfill the RAOs. RGs for sediment at Sites 32 and 33 will be finalized in the ROD.

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It should be noted that the areas to be remediated (or the risk footprint) are base on current sampling and GIS modeling results; and that these areas need refining via Remedial Design sediment sampling. This additional sampling may increase the area of sediment requiring remediation.

REMEDIAL ALTERNATIVES

Following the risk evaluation and establishment of remediation goals for each site, the Navy developed and analyzed a number of alternative methods to achieve site cleanup. To meet the RGs and reduce the risk from contaminated sediments at the two Litigation Area sites, four remedial alternatives were evaluated for Site 32, and five remedial alternatives were evaluated for Site 33. Tables 3 and 4 list the remedial alternatives evaluated for each site.

TABLE 3: REMEDIAL ALTERNATIVES EVALUATED FOR SITE 32

Remedial Alternative	Cost ($M)	Description of Remedial Alternative
MD-1	NA	No action
MD-2	1.3	Monitoring ~~of sediment annually~~
MD-3	6.1	Excavation of contaminated sediment
MD-4	2.5	***Physical barrier*** to contaminated sediment to prevent exposure and migration of contaminants

TABLE 4: REMEDIAL ALTERNATIVES EVALUATED FOR SITE 33

Remedial Alternative	Cost ($M)	Description of Remedial Alternative
LS-1	NA	No action
LS -2	2.0	Monitoring ~~of sediment annually~~
LS -3A	5.6	Excavation and filling of areas of contaminated sediment
LS -3B	5.7	Excavation of contaminated sediment
LS -4	3.3	Physical barrier to contaminated sediment to prevent exposure and migration of contaminants

EVALUATION OF REMEDIAL ALTERNATIVES

Criteria outlined in the NCP were used in the SFS to evaluate and select the preferred remedial alternatives for Sites 32 and 33. The remedial alternatives were compared using the applicable NCP criteria to identify the alternative that most effectively meets the RAOs for Sites 32 and 33. The evaluation criteria are shown on Figure 5. The eighth criterion, state acceptance, is documented in this Proposed Plan. The ninth criterion, community acceptance, will be evaluated after the public comment period on this Proposed Plan. For this reason, the Navy encourages the public to comment on this Proposed Plan. The “Detailed Analysis of Alternatives” can be found in the Final SFS Report, copies of which are located in the Administrative Record file and information repository (see page 12 for locations).

A ranking analysis of the remedial alternatives was conducted to compare the alternatives with respect to the first seven NCP criteria. To conduct the ranking analysis, a score from 1 to 5 was assigned to each alternative for each of the seven NCP criteria evaluated, with a score of 5 being best and 1 being least satisfactory. Numerical rankings were established in cooperation with the

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The scope of monitoring has not been agreed upon by the regulatory agencies, including the media to be sampled and the frequency. Therefore please remove "of sediment annually" from Tables 3 and 4.

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Each individual rating was on a scale from 1 to 5, with 5 being the highest rating. Individual ratings for each criterion were then summed up to give a total score or relative ranking. Since there were 7 criteria, the maximum total score would be 35.
Green font represents the preferred alternative.

The No Action alternative is required to be evaluated under CERCLA and is included only as a point of comparison. Under this option, nothing is done to clean up the contamination. This alternative does not meet ARARs, protect the environment, or provide long-term effectiveness and permanence.

The following is a summary of the remedial alternative evaluation for Sites 32 and 33 (no-action is not discussed because it is not protective):

SITE 32- UNIT 7 MOSQUITO ABATEMENT DITCHES

1. Overall Protection of Human Health and the Environment

Alternative MD-3 (Excavation) is ranked the highest. Damage to the ditch and marsh habitats during remediation would be offset by post-remedial restoration efforts (revegetation) in the marsh area. The ditch habitat and adjacent marsh habitat are expected to recover naturally within 10 years after implementation of the remedial alternative. This, in combination with the ecological benefit of chemical reduction, ranked Alternative MD-3 higher than the other alternatives. Alternative MD-4 (Physical Barrier) was ranked lower because of permanent loss of the ditch bed as habitat. Alternative MD-2 (Monitoring) was ranked the lowest because it would not reduce the risk to wildlife within the ditches in the short term, and insufficient data exist to evaluate the long-term viability.

2. Compliance with ARARs

Applicable or relevant and appropriate requirements (ARAR) are federal and state laws and regulations identified for each remedial alternative. Alternatives MD-2 through MD-4 will meet all potential ARARs. Compliance with ARARs does not affect the relative ranking of the alternatives.

3. Long-Term Effectiveness and Permanence

Alternative MD-3 (Excavation) would provide the highest protection against direct contact with and ingestion of contaminated sediment. Alternative MD-4 (Physical Barrier) would offer slightly less protection because of the inherent potential for wildlife to gain access to buried contaminated sediment over time. Alternative MD-2 (Monitoring) was ranked the lowest because it would not reduce the risk of direct contact or ingestion over time. Alternative MD-3 provides the greatest reliability. Alternative MD-4 ranked lower than Alternative MD-3 because of the potential for buried chemicals to be dislodged by natural forces that can undercut or otherwise compromise the barrier. Alternative MD-2 ranked the lowest because of uncertainty regarding the ability of natural processes to reduce ecological risk in the ditches.

4. Reduction of Toxicity, Mobility, or Volume through Treatment

Alternative MD-3 (Excavation) ranked the highest because removing contaminated sediment would reduce the volume of contaminants at Site 32. Alternative MD-4 (Physical Barrier) would

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reduce mobility; however, it would not reduce the volume of contaminated sediment at Site 32. Alternative MD-2 (Monitoring) ranked the lowest because it would not reduce toxicity, mobility, or volume of contaminated sediment.

5. Short-Term Effectiveness

"Short-term" is defined as the construction period except for environmental effects. For the purposes of the SFS, the Navy and regulatory agencies agreed that environmental effects are considered short term if the habitat impacted by construction recovers within 10 years. Alternative MD-2 (Monitoring) was ranked the highest for short-term environmental effects because it would cause minimal damage to the habitat and special-status species. Construction activities during Alternative MD-4 (Physical Barrier) would negatively affect the ditch more than Alternative MD-2; therefore, it was ranked lower than Alternative MD-2. Alternative MD-3 (Excavation) would affect both the ditch and marsh habitats. Negative biological effects during construction are expected to exceed those of Alternative MD-4. Therefore, Alternative MD-3 was ranked lower than Alternative MD-4.

6. Implementability

All of the alternatives (MD-2, MD-3, and MD-4) could be implemented. They were ranked by relative ease of implementation. MD-2 (Monitoring) ranked highest followed by MD-3 (Excavation), with MD-4 (Physical Barrier) ranking lowest.

7. Cost

The alternatives with the lowest cost were given the highest ranking (lower cost is considered better) and vice versa. Alternative MD-2 (Monitoring) would have the lowest cost ($1.3 million) and consequently was ranked the highest. Alternative MD-4 (Physical Barrier) was ranked lower because it would cost more ($2.5 million). Alternative MD-3 (Excavation) was ranked the lowest because it would cost the most ($6.1 million).

SITE 33 – LOST SLOUGH UNITS 10 AND 11

1. Overall Protection of Human Health and the Environment

Alternatives LS-3A (Excavation and Filling) and LS-3B (Excavation) were ranked the highest. Damage to the slough and marsh habitats during remediation would be offset by post-remediation restoration efforts in the marsh area. The adjacent marsh habitat affected by implementation of remedial alternatives is expected to recover naturally within 10 years. This, in combination with the ecological benefit of chemical reduction, resulted in Alternatives LS-3A and LS-3B ranking higher than the rest. Alternative LS-4 (Physical Barrier) was ranked lower because of the permanent loss of slough habitat. Alternative LS-2 (Monitoring) was ranked the lowest. It would not reduce the risk to wildlife within the slough in the long term. Alternative LS-4 was ranked higher than Alternative LS-2 because it would reduce ecological risk posed by contaminated sediment with minimal effect to the adjacent marsh habitat during construction; however, this alternative would also permanently destroy the slough habitat.

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2. Compliance with ARARs

Alternatives LS-2 through LS-4 would meet all potential ARARs. Compliance with ARARs does not affect the relative rating of the alternatives.

3. Long-Term Effectiveness and Permanence

Alternatives LS-3A (Excavation and Filling) and LS-3B (Excavation) would ~~provide the~~ highest protection against direct contact with and ingestion of ~~contaminated sediment~~. Alternative LS-4 (Physical Barrier) would offer slightly less protection ~~because~~ of the inherent potential for wildlife to gain access to buried ~~contaminated~~ sediment over time. ~~Alternative LS-2~~ (Monitoring) was ranked the ~~lowest because it may~~ not reduce the risk of direct contact or ingestion over time. ~~Alternative~~ LS-3A provides the greatest reliability. Although Alternative LS-4 ~~would be of a lower~~ potential for recontamination than Alternative LS-3B, it ~~would be~~ reliable. This is because of the potential for buried chemicals to be dislodged by natural forces that can undercut or otherwise compromise the barrier. Alternative LS-2 ranked the lowest because of uncertainty regarding the ability of natural processes to reduce ecological risk in the slough.

4. Reduction of Toxicity, Mobility, or Volume through Treatment

Alternatives LS-3A (Excavation and Filling) and LS-3B (Excavation) were ranked high because both would reduce the volume of contaminated sediment through removal from Site 33. However, since Alternative LS-3B would not backfill excavated areas, the potentially contaminated slough banks would be more likely to erode and recontaminate the slough bed. This alternative ranks a little lower than Alternative LS-3A. Alternative LS-4 (Physical Barrier) would reduce mobility; however, it would not reduce the volume of contaminated sediment at Site 33. Alternative LS-2 (Monitoring) ranked the lowest because it would not reduce toxicity, mobility, or volume of contaminated sediment.

5. Short-Term Effectiveness

Alternative LS-2 (Monitoring) was ranked the highest for short-term environmental effects because it would cause minimal damage to the habitat and special-status species. Construction activities under Alternatives LS-3A (Excavation and Filling) and LS-3B (Excavation) would affect the slough and adjacent marsh more than Alternative LS-2. Therefore, they both were ranked lower than Alternative LS-2. Alternative LS-4 (Physical Barrier) would not affect the adjacent marsh surface, but any environmental benefit in that regard would be offset by the permanent loss of the slough habitat. Therefore, Alternative LS-4 was ranked the same as Alternatives LS-3A and LS-3B.

6. Implementability

All of the alternatives (LS-2, LS-3A, LS-3B, and LS-4) could be implemented. They were rated by relative ease of implementation. LS-2 (Monitoring) ranked highest followed by LS-3A (Excavation and Filling) and LS-3B (Excavation). LS-4 (Physical Barrier) ranked lowest.

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7. Cost

The alternatives with the lowest cost were given the highest ranking (lower cost is considered better) and vice versa. Alternative LS-2 (Monitoring) would have the lowest cost ($2.0 million) and consequently ranked the highest. Alternative LS-4 (Physical Barrier) was ranked lower because it would cost more ($3.3 million). Alternatives LS-3A (Excavation and Filling) and LS-3B (Excavation) were ranked the lowest because they would cost the most ($5.6 and $5.7 million, respectively).

THE PREFERRED REMEDIAL ALTERNATIVES

Based on the comparative analysis of remedial alternatives, the Navy and regulatory agencies agree that the preferred alternative for Site 32 is excavation of contaminated sediment, and the preferred alternative for Site 33 is excavation and filling of areas of contaminated sediment. The preferred alternatives meet the statutory requirements of CERCLA for protection of human health and the environment.

Under the preferred alternatives, sediment would be excavated and removed off site. The Navy would conduct monitoring to ensure the remedies effectively reduce contaminant concentrations in sediment to acceptable levels and the alternatives proceed in accordance with guidelines to be established in the ROD for Sites 32 and 33.

Each preferred remedial alternative was selected for the reasons summarized below:

1) It would provide overall protection of the environment by removing contaminated sediment.

2) It meets federal and state ARARs.

3) Excavation provides the highest protection against direct contact and ingestion.

4) It would reduce the toxicity, mobility, and volume of contaminated sediment.

5) Damage to the marsh habitats during remediation would be offset by post-remedial revegetation restoration efforts in the marsh area.

6) Short-term environmental effects are expected to continue for less than 10 years, after which habitat would be enhanced.

MULTI-AGENCY ENVIRONMENTAL TEAM SUPPORTIVE STATEMENT

Pending the transfer of NAVWPNSTA Seal Beach Detachment Concord to the Army, the ***multi-agency environmental team*** comprises the Navy, EPA, DTSC, DFG and the Water Board. The primary goals of the team are to protect human health and the environment, coordinate environmental investigations, and expedite the environmental restoration of NAVWPNSTA Seal Beach Detachment Concord. The team has coordinated reviews and oversight of all major documents and investigation activities associated with Sites 32 and 33, including the SFS Report.

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It would helpful to identify the anticipated volume of sediment to be removed. Please include and estimate of the volume of sediment to removed.

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Date: 10/30/2008 4:32:13 PM

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Date: 10/30/2008 4:19:09 PM
As this property has been transferred to the Army, it would be useful to discuss the role of the Army as this Plan moves forward.

Based on these reviews and discussions of key documents, the regulatory agencies support the Navy's choice of preferred remedial alternatives.

Based on the information available at this time, the Navy, EPA, DTSC, and Water Board believe the preferred alternatives will be protective of the environment by reducing exposure of ecological receptors to contaminants to acceptable levels. The preferred remedial alternatives may be modified in response to public comments or new information.

COMMUNITY PARTICIPATION

The Navy and the multi-agency environmental team encourage the public to gain a more thorough understanding of Sites 32 and 33 and the CERCLA activities that have been conducted at NAVWPNSTA Seal Beach Detachment Concord by visiting the information repository, reviewing the Administrative Record file, attending public meetings, and getting on the mailing list to receive regular project information. Restoration Advisory Board meetings are held every other month and are open to the public.

The two ways for you to provide your comments on this Proposed Plan are summarized as follows:

1. **Public Comment Period.** During the public comment period, from February 5 through March 12, 2009, you may use the comment form included with this Proposed Plan to send written comments to Mr. Mike Staggs, Navy Remedial Project Manager, Naval Facilities Engineering Command Southwest, at 1220 Pacific Highway, San Diego, California 92132-5190. You may also submit comments electronically to Mr. Staggs at michael.staggs@navy.mil.

2. **Public Meeting.** You may provide written or oral comments during the public meeting February 11, 2009, that will be held in the Concord Police Department Headquarters. A stenographer will be at the meeting to record all public comments.

After the public comment period is over, the Navy will review and consider the comments before making a final decision on the remedial alternatives to be used at Sites 32 and 33. All site-related documents are available for review in the information repository and Administrative

PUBLIC COMMENT PERIOD

The 30-day public comment period for the Proposed Plan is February 5 through March 12, 2009.

Submit Comments

There are two ways to provide comments during this period:

- Offer oral or written comments during the public meeting
- Provide written comments by mail, email or fax (no later than March 12, 2009)

Public Meeting

The public meeting will be held on Wednesday, February 11, 2009, at Concord Police Department Headquarters, 1350 Galindo Street, Community Room, from 7:00 p.m. to 9:00 p.m. Navy representatives will provide visual displays and information on the environmental investigations and the remedial alternatives evaluated. You will have an opportunity to ask questions and formally comment on this Proposed Plan.

Or you can send Comments to:

Code OPDE.MS
1220 Pacific Hwy
Building: 131
San Diego, CA 92132-5190
Phone: (619) 532-4228
Fax: (619) 532-1195
michael.staggs@navy.mil

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GLOSSARY OF TERMS

Administrative Record: All documents that have a legal bearing and were used to make decisions on cleanup actions.

Area-Weighted Average: An area-weighted average takes into account the physical area that each sample location represents. The first step in deriving an area-weighted average is to divide the site into polygons based on the midpoint between sample locations. Next, the area of each polygon is calculated and multiplied by the associated sample concentration to derive an area-weighted concentration. The area-weighted concentrations are then summed together and divided by the total area of the site to obtain the area-weighted average.

Applicable *or* ~~relevant and appropriate requirements~~ (ARAR): Federal, state, and local regulations and standards determined to be legally applicable or relevant and appropriate to remedial actions at a CERCLA site.

Assessment ~~endpoint:~~ ~~An explicit expression of the environment that is to be protected.~~

Baseline Ecological Risk Assessment (BERA): Ecological risk assessment is a process for systematically evaluating the likelihood of adverse ecological effects as a result of exposure to one or more stressors.

California Department of Fish and Game (DFG): The DFG manages California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.

Cancer risk: ~~The probability that an individual will develop cancer from direct exposure to~~ chemicals classified as carcinogens. A carcinogen is a chemical that ~~causes cancer~~.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal law (also known as Superfund) that established a program to identify hazardous waste sites and procedures for evaluating sites to be protective of human health and the environment.

Department of Toxic Substances Control (DTSC): A part of the California Environmental Protection Agency, and California's lead environmental regulatory agency. Its mission is to protect public health and the environment from toxic substances.

Feasibility Study (FS): A study to identify, screen, and compare remedial alternatives for a site.

Five-Year Periodic Review Assessment (Five-Year Review): The NCP provides that remedial actions which result in any hazardous substances, pollutants, or contaminants remaining at the site be reviewed every five years to ensure protection of human health and the environment.

Installation Restoration (IR): The IR program provides guidance and funding for the investigation and remediation of hazardous waste sites caused by disposal activities at military installations.

Multi-Agency Environmental Team: The multi-agency environmental team comprises the Navy, EPA, DTSC, DFG and the Water Board.

National Oil and Hazardous Substances Contingency Plan (NCP): The regulatory basis for government responses to oil and hazardous substances spills, releases, and sites where these materials have been released.

Noncancer risk: The risk associated with exposure to chemicals considered noncarcinogens. Noncarcinogens are chemicals that cause effects other than cancer such as neurological,

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Please capitalize all terms in the glossary.

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Date: 10/30/2008 4:19:26 PM
Please provide less complicated definition for Assessment Endpoint.

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Subject: Highlight
Date: 10/30/2008 4:33:05 PM

developmental, reproductive, or pulmonary effects.

Physical Barrier: A 6-inch-thick barrier constructed of a proprietary clay-based material ~~(AquaBlok®).~~

Preferred Remedial Alternative: The remedial alternative selected by the Navy, in conjunction with the regulatory agencies, that best satisfies the RAOs based on the evaluation of remedial alternatives presented in the FS.

Remedial Action Subsite (RASS): The Litigation Area was grouped into four remedial action subsites in the 1988 Feasibility Study.

Record of Decision (ROD): A decision document that identifies the remedial alternative(s) chosen for implementation at a CERCLA site; the ROD is based on information from the RI Report and FS and on public comments and community concerns.

Remedial action objective (RAO): Describes what the site cleanup is expected to accomplish.

Remediation goal (RG): Chemical concentration limit that provides a quantitative means of identifying areas for potential remedial action, screening the types of appropriate technologies, and assessing a remedial action's potential to achieve the RAO.

Remedial Investigation (RI): The first of two major studies that must be completed before a decision can be made about how to clean up a site (FS is the second study). The RI is designed to evaluate the nature and extent of contamination and to estimate human health and ecological risks posed by chemicals of potential concern at a site.

Resource Conservation and Recovery Act (RCRA): Federal statute that establishes the framework for treatment, storage, transportation, and disposal of hazardous substances.

Risk management range: The range of cancer risks (from 10^{-4} to 10^{-6}, or an excess lifetime cancer risk of 1 in 10,000 to 1 in 1,000,000) defined by EPA when evaluating whether potential risk to human health is acceptable. Cancer risks within or exceeding this range may require further assessment to determine whether remedial action is warranted. Cancer risks below the risk management range generally do not require any further action.

Superfund Amendments and Reauthorization Act (Sara): The Superfund Amendments and Reauthorization Act of 1986 reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and technical requirements were added to the legislation, including additional enforcement authorities. Title III of SARA also authorized the Emergency Planning and Community Right-to-know Act.

Supplemental Feasibility Study (SFS): The SFS is a supplement to the 1988 FS conducted for the Litigation Area. The SFS addresses sediment contamination at Sites 32 and 33.

San Francisco Bay Regional Water Quality Control Board (Water Board): The California water quality authority, which is part of California Environmental Protection Agency. Its mission is to preserve, enhance, and restore California's water resources.

United States Environmental Protection Agency (EPA): The federal regulatory agency responsible for administration and enforcement of CERCLA (and other federal environmental regulations). EPA is the lead regulatory agency for NAVWPNSTA Seal Beach Detachment Concord.

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It is not necessary to identify a trademarked product. Please delete this reference.

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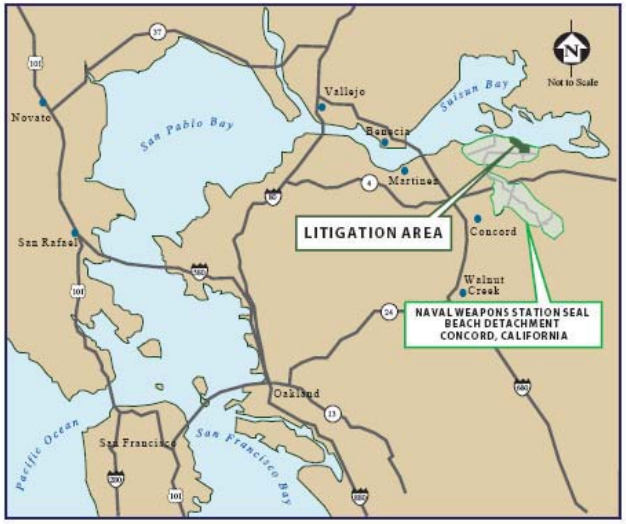
FIGURES

Figure 1 Location of NAVWPNSTA Seal Beach Det Concord and Site Location



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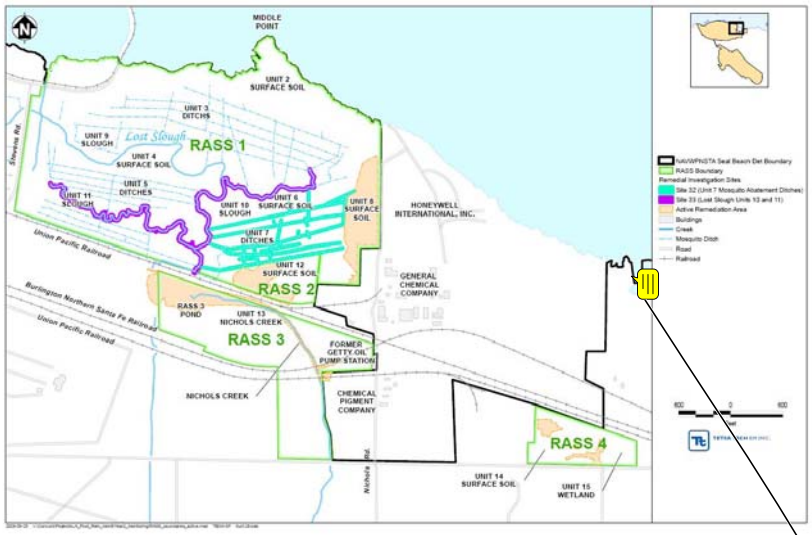
Please identify the property that has been transferred to the Army and include the off-shore islands.

Figure 3. Site 32 and 33 Remediation Areas



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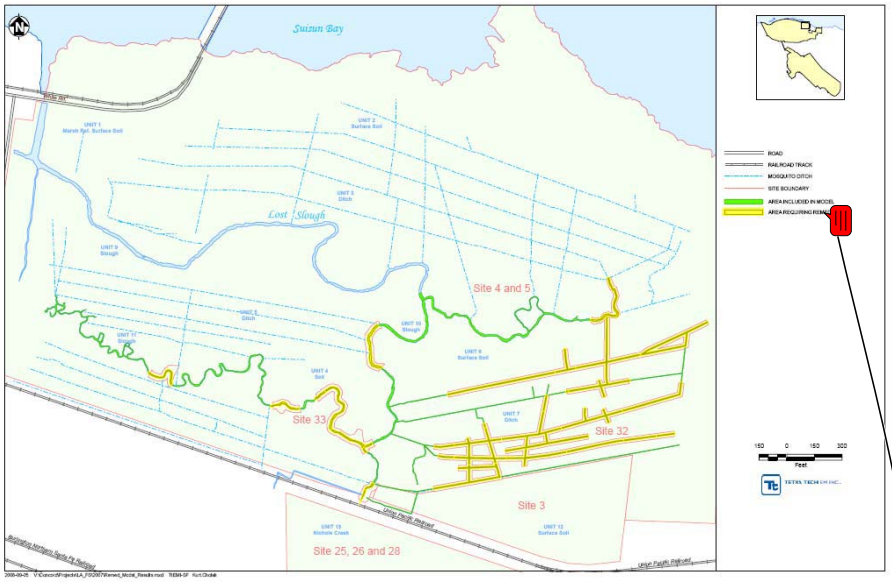
Please show IR Sites and remove Monitoring Units from the figure. Include for example IR Site 31 which is within the field of view of the map.

Figure 4. Sites 32 and 33 Areas to be Remediated



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It should be noted that area requiring remediation is the based on current data that will be further refined by Remediation Design sampling.