



United States Department of the Interior

NATIONAL PARK SERVICE

Pacific West Regional Office
1111 Jackson Street, Suite 700
Oakland, California 94607
(510) 817-1300

IN REPLY REFER TO:

L7617 (PGSO-PP)

MAR 1 2002

Memorandum

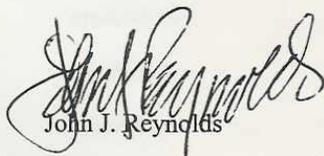
To: Chief, Administrative Services Division, National Park Service
ATTN: Federal Register Coordinator

From: Regional Director, Pacific West Region

Subject: Notice of Approved Record of Decision for Final Environmental Impact
Statement for Alcatraz Island Historic Preservation and Safety Construction,
Golden Gate National Recreation Area

Attached are the original and three copies of the subject Notice for publication in the *Federal Register*. Also attached is a DI-1 to cover charges for the Notice, a diskette of the file, and a cover memorandum to the Director, Office of Federal Register, certifying this diskette is a true copy--as well as a Briefing Sheet highlighting status since the last publication.

Timely notification of the projected date when the Notice will be published would be greatly appreciated. Our contact is Regional Environmental Coordinator Alan Schmierer, who can be reached at (510) 817-1441.



John J. Reynolds

Attachments:8

CC w/atch:
✓GOGA-Supt
WASO-EQ
PWR-C

NOTICE BRIEFING STATEMENT

Unit: Golden Gate National Recreation Area (GOGA)

Title: Notice of Approved Record of Decision (ROD), Alcatraz Island Historic Preservation and Safety Construction Program

Congressional Districts:

California:	8 th District	Nancy Pelosi
	U.S. Senate	Diane Feinstein
	U.S. Senate	Barbara Boxer

Alcatraz Island is one of Golden Gate National Recreation Area's most popular destinations, offering a close-up look at a historic and infamous federal prison long off-limits to the public. Visitors to the island in San Francisco Bay can explore the remnants of the prison, learn about the Native American occupation of 1969 - 1971, early military fortifications, and the West Coast's first (and oldest operating) lighthouse.

Project Description

The project is comprised of ten repair and construction projects on Alcatraz Island, designed to seismically upgrade and restore the historic structures on “the rock”. These structures are badly in need of repair in order to retain safe public access for visitors to Alcatraz and preserve the National Historic Landmark. The construction will take approximately 5 to 7 years and is consistent with the visitor use and operational characteristics of the Island as identified in the General Management Plan. The project includes repair of the dock, rehabilitation of the cellhouse, stabilization of the Water Tower, and the restoration of other prominent structures on Alcatraz.

Purpose of the Project

The purpose of the project is to protect public health and safety and to stabilize Alcatraz Island's National Historic Landmark structures against further deterioration. The need for the repairs was documented through a series of structural assessments recently completed for the majority of the buildings. The conclusions of these studies raised serious concern over both the potential loss of integrity of the historic structures comprising the National Historic Landmark and the safety of the more than 1.4 million people who visit the Island each year.

Process

Consistent with the requirements of the National Environmental Policy Act (NEPA) and Section 1506.6 of the Council on Environmental Quality's Regulations implementing NEPA, public comment was an integral part of the preparation of the plan, its goals and objectives, and the mitigation measures presented in the FEIS. A Notice of Intent (NOI) was published in the Federal Register on December 10, 1998 announcing the decision to prepare an EIS and solicit early input on the scope and range of issues to be analyzed. A public open house, Golden Gate National Recreation Area (GGNRA) Advisory Committee briefings, and site visits were held with representatives from environmental groups, historic preservation groups, and concerned individuals identified through initial scoping. The scoping comments received focused on concerns related to biological effects of the proposed construction activities, mitigation measures, and approaches for impact analysis.

The Draft Environmental Impact Statement (DEIS) for the Alcatraz Island Historic Preservation and Safety Program was released for public comment in March 2001, for a 60-day public review period that ended on June 11, 2001. The DEIS was mailed to interested parties, agencies, businesses, and organizations, and distributed to state agencies through the California State Clearinghouse. In addition, the DEIS was presented at two public meetings of the GGNRA Advisory Commission. The repair and construction work specific to the Cellhouse and Building 64, in the first phase of the Proposed Action, was also presented and has been approved by the NPS Development Advisory Board (DAB).

During the public review period for the DEIS, 15 responses were received including nine letters and verbal comments. The National Park Service reviewed and responded to substantive comments in the FEIS, which was release in October 2001. Comments and the agency's responses to those comments are in Appendix D of the FEIS. Additional analysis of issues of concern and new and/or more refined mitigation measures were developed and included in the FEIS in response to public review and comment.

A staff report on the FEIS, including a summary of the comments received and responses, was presented at a public meeting of the GGNRA Advisory Commission on July 24, 2001. The Commission passed a motion to accept the report. Following release of the FEIS, the NPS has not received any written public comments.

Issues

- Potential impacts to nesting non-listed waterbirds from construction activities. The FEIS includes mitigation measures to reduce potential impacts to waterbirds, including phasing of construction activities to avoid nesting season, installation of screens and barriers, and an Adaptive Management Plan to monitor construction and adapt mitigation.
- Support was expressed by historic preservation groups for the proposed action, noting that it would have a substantial, long-term, beneficial effect on cultural resources by providing for the stabilization and restoration of the Island's unique historic structures that contribute to the National Historic Landmark, protecting this resource from long-term impairment.
- Removal of hazardous materials and waste generated from project activities. The GGNRA provided detailed information in the FEIS concerning the sampling, identification, and removal of hazardous substances that may be encountered during construction.

Contacts: John Reynolds, Regional Director, Pacific West Region, (510) 817-1301
Brian O'Neill, Superintendent, Golden Gate National Recreation Area,
(415) 561-4720
Jonathan Gervais, NEPA Project Manager, Golden Gate National Recreation Area, (415)
561-4936

**UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE**

RECORD OF DECISION

Alcatraz Island Historic Preservation and Safety Construction Program and Final Environmental Impact Statement

GOLDEN GATE NATIONAL RECREATION AREA

INTRODUCTION

Pursuant to §102 (2)(C) of the National Environmental Policy Act of 1969, Public Law 91-190, as amended, and the regulations promulgated by the Council on Environmental Quality (40 CFR 1505.2), the Department of the Interior, National Park Service (NPS) has prepared the following Record of Decision on the *Alcatraz Island Historic Preservation and Safety Construction Program Final Environmental Impact Statement* (FEIS).

This document is a concise statement of the decisions that were made, the alternatives considered (including identification of the environmentally preferred alternative), the basis for the decision, and the mitigating measures developed in order to avoid or minimize environmental impacts. It also provides background information on the project and the public involvement process that was employed to develop and refine the proposed plan and alternatives.

DECISION

The NPS will implement the Proposed Action that includes ten repair and construction projects designed to protect public health and safety and stabilize Alcatraz Island's National Historic Landmark structures against further deterioration in a manner that protects and preserves the natural resources on the Island. The construction is scheduled to take approximately 5 to 7 years and will not change the visitor use or operational characteristics of the Island. The project includes repair of the dock that provides the only access to the Island for visitors and staff, rehabilitation of the cellhouse, stabilization of the Water Tower, and the restoration of other prominent structures on Alcatraz. Details of the Proposed Action are provided below in the Alternatives Considered section of this document.

BASIS FOR DECISION

This section provides the rationale for selecting the Proposed Action as the decision and the basis for the *Alcatraz Island Historic Preservation and Safety Construction Program*. In arriving at this decision, a detailed analysis of effects for the range of alternatives that would govern repair and construction activities on the Island was considered, including how each alternative responds to the purpose and need, improves existing conditions on the Island, and meets NPS management policies. Each alternative was evaluated for the degree that it protected park resources and values and their enjoyment by future generations and the potential for adverse impacts or impairment.

During the planning process, the NPS, working with the public, established goals and objectives that were used as a framework for evaluating alternate construction plans to rehabilitate and preserve structures and sites contributing to the Island's National Historic Landmark status. The goals and objectives were developed based on NPS Management Policies 2001, the 1980 GGNRA General Management Plan and 1993

Alcatraz Development Concept Plan, public input, current knowledge about the Island, and an understanding of Alcatraz Island's national park values. The project objectives are presented in the Purpose and Need (Section 1.2) of the FEIS, and are as follows:

- Protect the safety and health of visitors and employees on the Island;
- Stabilize and preserve the Island's National Historic Landmark structures;
- Protect and preserve the Island's important biological resources during the implementation of needed repairs;
- Identify repair strategies that are economically feasible to implement, and;
- Assure proposed and approved actions will not impair park resources and values.

The basis of the decision to adopt the "Proposed Action" is its ability to successfully fulfill the goals and objectives of the project. The Proposed Action provides the most desirable combination of fulfilling the National Park mission: preserving the Island's resources for the enjoyment of future generations. The Reduced Project Alternative did not meet the criteria set forth because it lacked adequate protection for the historic resources located on Alcatraz.

The Proposed Action will preserve and enhance Alcatraz Island's cultural, natural, and recreational values and minimize environmental impacts. It includes:

- Protecting visitors and staff from potential health and safety risks associated with the deteriorating condition of buildings and structures;
- Preserving historic buildings and structures which contribute to the National Historic Landmark;
- Preserving and enhancing appropriate public uses including the continued access to historic structures on the Island which would be lost without the proposed rehabilitation and stabilization efforts;
- Mitigation measures to avoid or minimize environmental impacts associated with construction activity on natural resources including nesting waterbirds, cultural resources, and recreation and visitor use.
- NPS interpretation of the Historic Preservation and Safety Construction Program through interpretive programs, signing, and exhibits;
- Incorporating principles of sustainability in design, construction and operation of the site.

PROJECT BACKGROUND AND PUBLIC INVOLVEMENT

Project Purpose

Public Law 92-589 established the Golden Gate National Recreation Area in order to “. . . preserve for public use and enjoyment . . . outstanding natural, historic, scenic, and recreation values, and in order to provide for the maintenance of needed recreational open space necessary to urban environment and planning...” (16 usc 460bb). Alcatraz Island was originally included within the Golden Gate National Recreation Area because of its historic significance. Recognition of the significant historic value of Alcatraz was reinforced in 1986 when the Island was designated a National Historic Landmark on the National Register of Historic Places.

When the National Park Service assumed the responsibility for the management of Alcatraz in 1972, the Island and its buildings were in need of substantial repair and stabilization. Although the NPS has attempted to maintain and stabilize these important historic resources comprising the National Historic Landmark, a significant lack of available funding has substantially constrained these efforts. Since the park’s inception, the integrity of the historic structures has continued to deteriorate, creating public health and safety concerns and requiring that large areas of the Island remain closed to the visiting public. The benign neglect of the historic resource coupled with the limited access has resulted in the Island’s evolution into a major waterbird-nesting site.

In 1993, the National Park Service developed the Alcatraz Development Concept Plan (DCP) as an amendment to the 1980 General Management Plan. The DCP establishes the framework for future actions on Alcatraz that are consistent with the NPS mission, federal law, and responsibilities to provide public access, while preserving natural and cultural resources. As such, the DCP recognized the need to implement repair and stabilization projects in order to protect historic resources, and provide for visitor safety. The Environmental Assessment/Finding of No Significant Impact (EA/FONSI) for the DCP evaluated the effects of construction and rehabilitation actions and identified protective measures such as limiting work activities during the waterbird breeding season to avoid or minimize potential adverse effects on the Island’s biological resources. Since approval of the DCP and EA/FONSI, several conditions have changed, including the environmental conditions on the Island and the level and extent of repair activities needed to meet basic human health and safety requirements as well as historic preservation needs.

Since 1993, a series of structural analyses have been conducted for the Island’s major structures. The studies raised serious concern over both the potential loss of integrity of the historic structures comprising the National Historic Landmark, and the safety of the more than one million people who visit the Island each year. These studies showed that a greater level of construction and repair than was previously assumed in the DCP would be needed to fulfill the NPS’s obligations for resource protection, including compliance with the National Historic Preservation Act.

The structural condition assessments, along with the availability of funding, prompted the NPS to identify a comprehensive program of historic stabilization and life safety repairs on Alcatraz. Each project in the Alcatraz Historic Preservation and Safety Construction Program has a high priority for public safety and historic structure stabilization.

Given the small size of the Island, presence of important cultural and natural resources, and the growing demand for visitation, the NPS is seeking a balanced approach to the preservation of multiple resource values and, as mandated by the Service’s Organic Act, to leave these resources and values unimpaired for future generations. The National Park Service must also comply with the requirement of the National Historic Preservation Act and thoroughly evaluate the effect of projects on historic properties. In keeping with these authorities, Section 1.2 of the FEIS states that the purpose of the program is to protect public health and safety and stabilize Alcatraz Island’s National Historic Landmark structures against further deterioration.

Public Involvement

Consistent with the requirements of the National Environmental Policy Act (NEPA) and Section 1506.6 of the Council on Environmental Quality's Regulations implementing NEPA, public comment was an integral part of the preparation of the plan, its goals and objectives, and the mitigation measures presented in the FEIS. A Notice of Intent (NOI) was published in the Federal Register on December 10, 1998 announcing the decision to prepare an EIS and solicit early input on the scope and range of issues to be analyzed. A public open house, Golden Gate National Recreation Area (GGNRA) Advisory Committee briefings, and site visits were held with representatives from environmental groups, historic preservation groups, and concerned individuals identified through initial scoping. The scoping comments received focused on concerns related to biological effects of the proposed construction activities, mitigation measures, and approaches for impact analysis.

The Draft Environmental Impact Statement (DEIS) for the Alcatraz Island Historic Preservation and Safety Program was released for public comment in March 2001, for a 60-day public review period that ended on June 11, 2001. The DEIS was mailed to interested parties, agencies, businesses, and organizations, and distributed to state agencies through the California State Clearinghouse. In addition, the DEIS was presented at two public meetings of the GGNRA Advisory Commission. The repair and construction work specific to the Cellhouse and Building 64, in the first phase of the Proposed Action, was also presented and has been approved by the NPS Development Advisory Board (DAB).

During the public review period for the DEIS, 15 responses were received including nine letters and verbal comments. The National Park Service reviewed and responded to substantive comments in the FEIS, which was release in October 2001. Comments and the agency's responses to those comments are in Appendix D of the FEIS. Additional analysis of issues of concern and new and/or more refined mitigation measures were developed and included in the FEIS in response to public review and comment.

A staff report on the FEIS, including a summary of the comments received and responses, was presented at a public meeting of the GGNRA Advisory Commission on July 24, 2001. The Commission passed a motion to accept the report. Following release of the FEIS, the NPS has not received any written public comments.

ALTERNATIVES CONSIDERED

A range of reasonable alternatives was developed to meet the purpose and need of the action, protecting public health and safety and stabilizing the Island's National Historic Landmark structures against further deterioration. Given this purpose and need, the NPS identified five objectives of the Alcatraz Historic Preservation and Safety Construction Program to evaluate and screen each alternative before it could be considered a reasonable alternative.

The FEIS fully examined three alternatives, a "No Action Alternative" and two action alternatives. The action alternatives analyzed in the FEIS were developed and refined through the two year public planning and environmental review process and include: the Proposed Action and the Reduced Project Alternative. Following are summaries of the three alternatives.

No Action Alternative (FEIS pp. 2-1 to 2-8)

Adopting this alternative would continue current management of Alcatraz Island. Under the No Action Alternative, the proposed construction activities identified in the Alcatraz Historic Preservation and Safety Construction Program would not be implemented. Minimal maintenance of the Island's cultural resources would occur, and current vegetation and wildlife management practices would continue. Threats to public

health and safety would increase, leading to the closure of affected areas on the Island, and eventually precluding public and management access to the Island.

Proposed Action (FEIS pp. 2-8 to 2-24)

The Proposed Action is a construction program designed to address serious public health and safety threats and stabilize important historic structures that contribute to the Island's National Historic Landmark status. The Proposed Action includes ten individual repair projects that would require, in total, approximately 5 to 7 years to complete. The repairs include replacement of badly deteriorated piles supporting the dock, the only visitor access point to the Island, seismic retrofit of the Cellhouse, and repair/stabilization of other historic structures, some dating from the Civil War era, to provide for public safety and historic preservation. The projects would be implemented in Phase One and a Subsequent Phase. Figure 2-1 provides the location of project sites on the Island, the staging areas, and potential barge sites for materials delivery. The following lists the projects included in the Proposed Action and Table 1 provides a description of repair and construction activities and an approximate duration of construction.

Phase One:

- Dock Repair;
- Building 64 (Balconies Repair);
- Cellhouse Stabilization and Seismic Upgrade; and
- Sallyport Structural Repair and Seismic Upgrade.

Subsequent Phase:

- Water Tower Stabilization;
- Slope Stabilization;
- New Industries (Laundry) Building Stabilization and Seismic Upgrade;
- Building 64 (Seismic Upgrade);
- Quartermaster Building Stabilization and Seismic Upgrade; and
- Fuel Line Remediation.

The National Park Service proposes to implement the needed repair and construction projects using an adaptive management approach that will employ field monitors to evaluate and, if required, improve the mitigation measures identified in Section 2.7 of the FEIS and appended to this Record of Decision (Appendix A). Using an adaptive management approach, the NPS will evaluate the monitoring data collected during implementation of Phase One to alter and improve (as needed) the approach to completing projects and protective measures implemented during remaining activities under Phase One and Subsequent Phase. Appendix B in this Record of Decision contains a description of the monitoring program.

The National Park Service has identified a variety of mitigation measures to avoid or minimize the effects of the proposed construction and repair activities. These measures, along with the adaptive management approach to implementing the Proposed Action, will allow the park to achieve the most effective balance of resource preservation, while providing safe public access to Alcatraz Island.

Figure 2-1. Location of Project Sites, General Staging Areas & Potential Barge (off-load) Sites

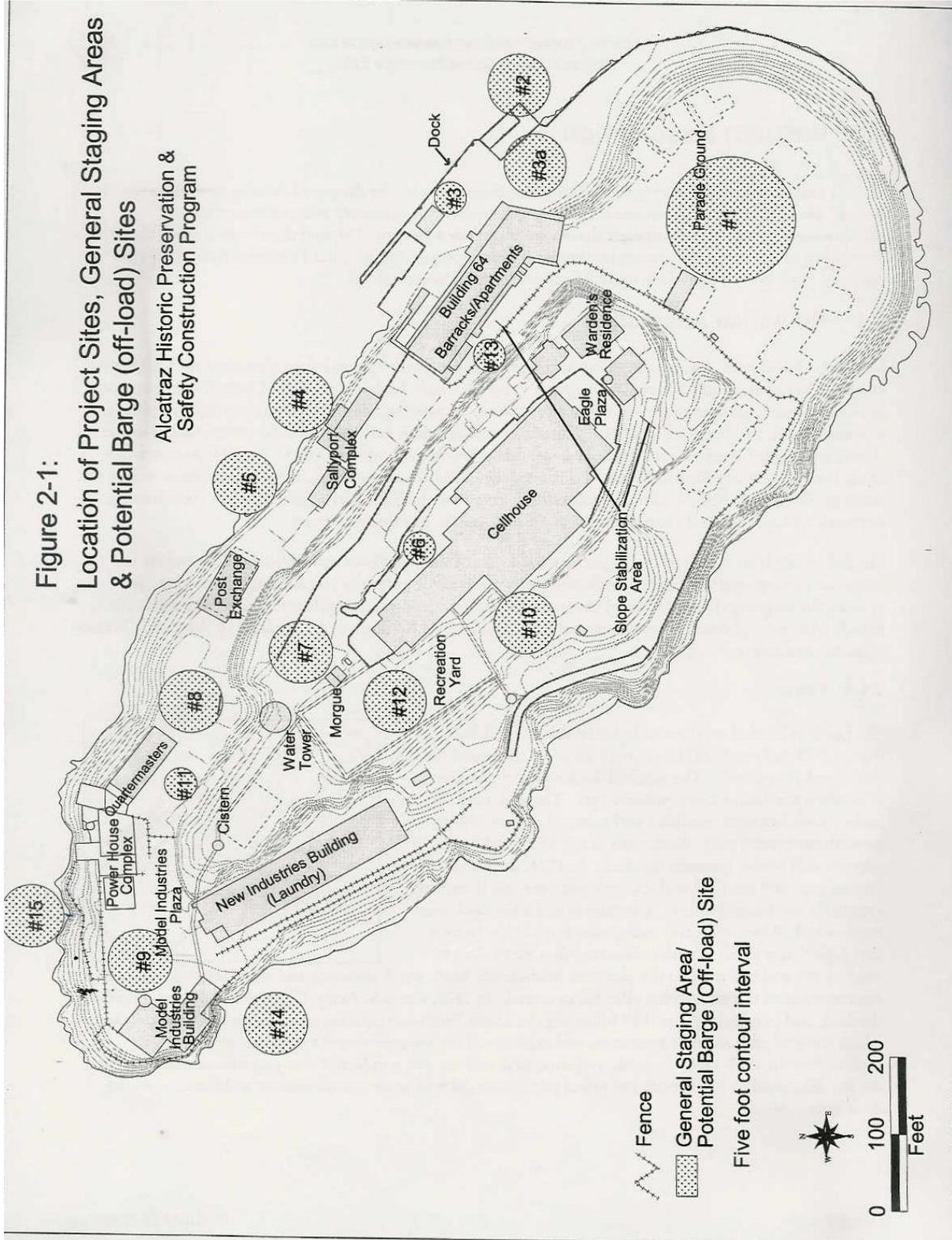


Table 1. Alcatraz Island Historic Preservation and Safety Construction Program¹

Project Name	Summary of Proposed Repairs	Primary Equipment Needs	Staging Areas	Approximate Duration of Project
PHASE ONE				
Dock Repair	Repair members (piles) under concrete dock and seismically retrofit structure with steel tie-back into bedrock. Piles would be replaced from the topside of the dock.	Crane Jack hammer Cement/small batch mixer Air compressors Drill Saw cutting (concrete) Generator	Staging at 2, 3, and 3a; materials/equipment delivery at dock.	Up to fifteen months
Building 64 (Balconies Repair)	Repair spalling concrete, restore steel (rust removal and treatment), as needed, replace guard rails, and paint.	Crane/Lift Concrete mixer Pump truck Scaffolding Pneumatic chippers Sand blasting Saws Air compressor Paint sprayer Generator	Staging at 2, 3, and 3a; materials/equipment delivery at dock.	Up to six months
Cell House Stabilization & Seismic Upgrade	Repair spalling concrete on exterior walls and replace/repair windows as needed. Seismically retrofit structure to meet minimum life safety requirements. Seismic (interior) work would include installation of new shearwalls, collectors, wall base repair and new footings.	Concrete mixer/batch plant Crane Forklift/trucks Jack hammers Welding equipment Scaffolding (outside) Pneumatic chipping hammers Generators Air compressor Sand blaster Paint sprayer	Areas 2, 3, 5, 14 and 15 as possible barge/equipment off-load sites; 1, 6, 7, 8, 10, 11, 12, and 13 for storage of materials and equipment.	Eighteen months

¹Projects are listed in basic order of priority/implementation, with the first three projects proposed for immediate implementation.

Project Name	Summary of Proposed Repairs	Primary Equipment Needs	Staging Areas	Approximate Duration of Project
Sally Port Structural Repair Seismic Upgrade	Tie end walls of chapel into bedrock and install plywood shear walls. Tie gun gallery floor to civil war era walls with angle iron. Install cross bracing in selected window openings. Remove wooden boathouse structure (from waterside/via barge).	Welding equipment Hammer drill Saws Generator Forklift Crane/Barge	Staging at 4 and potentially 2, 5, 14 or 15 for equipment/material delivery; 3, 3a, 8 and 11 for storage.	Six months
SUBSEQUENT PHASE				
Water Tower Stabilization	Replace damaged or missing steel members. Sand blast and paint tower.	Welding equipment Sandblasting equipment Painting equipment Crane Scaffolding	Staging at 7, 8, 9, or 11; materials/equipment delivery at 5, 14, or 15 and possibly 2.	Up to eight months although GGNRA will continue to look into possible ways to accomplish the project over two seasons or reduce the duration of the project to further decrease work during bird-nesting season
Slope Stabilization	Stabilize existing slope by installing steel ties into existing bedrock, and cover slope surface with shotcrete.	Shotcrete pump Cement mixer Generator Air compressor Large drills	Staging at 1 and possibly 13; materials/equipment delivery at 2 with possible use of 5 for transport to Parade Ground.	Up to eighteen months total (Phased over several years.)
New Industries (Laundry) Building Stabilization and Seismic Upgrade	Repair/replace exterior windows and spalling concrete, remove rock debris behind the building and stabilize slope, provide seismic upgrade.	Truck/forklift Concrete mixer Hammer drills Jack hammers Saws Concrete pump Scaffolding	Materials/equipment delivery at 5, 14 or 15. Staging/storage at 8, 9, and 11.	Six months
Building 64 (Seismic Upgrade)	Tie floor structures into the cliff/adjacent bedrock using steel beams and collector beams. Install shear walls, reinforce and strengthen interior walls and other seismic upgrades to meet minimum life safety requirements.	Crane Cement mixer Jack hammer Saws Hammer drill	Materials/equipment delivery at 2; storage/staging at 3, 3a, and 13. Possible staging at 1 during non-breeding season.	Up to eight months

Project Name	Summary of Proposed Repairs	Primary Equipment Needs	Staging Areas	Approximate Duration of Project
Quartermasters Stabilization and Seismic Upgrade	Install a shear wall and steel support to meet life safety requirements. Repair/replace exterior windows and doors, repair spalling concrete and paint exterior.	Truck/forklift Concrete mixer Hammer drills Saws Hammers Scaffolding Welding equipment	Materials/equipment at 5, 2, 14, or 15 (during non-breeding season only); staging at 8, 11, and 9 with 9 only used during non-breeding season.	Eight months
Fuel Line Remediation	Remove 6-inch and 4.5-inch inactive fuel lines.	Air compressors Fuel containment equipment Excavation equipment Generator Truck/forklift	Staging at 2, 3, 3a, 4, 5, 8, 10 and 12.	Up to eight months - with several phases (dependent on condition of existing fuel lines)

Reduced Project Alternative (FEIS pp. 2-24 to 2-25)

The Reduced Project Alternative includes repairs needed to protect human health and safety and stabilize cultural resources in areas of the Island that are currently open to visitors year-round. As a result, adverse historic and cultural resource impacts would be anticipated for several structures outside the currently open areas. Future impacts on visitor use and recreation may also occur.

In areas that are closed to visitors, only those repairs that can be accomplished during the five-month non-breeding season for waterbirds would be implemented. The repair and stabilization of the Water Tower, the New Industries Building (Laundry), and the Quartermaster Building on the north end of the Island, located in or near biologically sensitive areas would be minimal. Replacement of missing steel supports of the Water Tower would occur under this alternative for the protection of public health and safety because without rehabilitation, the structure will eventually fail. However, sand blasting and repainting to protect the water tower against future corrosion would not occur under this alternative because of cost and engineering problems with conducting this work in the rainy season. Repairs to the New Industries Building (Laundry) within a five-month waterbird non-breeding season would be limited to replacement and repair of exterior windows, partial repair of spalling concrete and steel, removal of rock fall material and installation of drainage at the quarry wall, and minor seismic upgrades. Repair of exterior windows and doors, and repair of spalling exterior concrete on the Quartermaster Building could be accomplished under this alternative. Because the time for construction activity is limited under this alternative, partial installation of steel trusses, new steel plates and new concrete foundation at the east wall could be accomplished. However, neither structure (Laundry Building and Quartermaster Building) would receive repairs necessary to make the buildings safe for long-term occupancy or visitation because limitations on the construction period present significant engineering and cost challenges.

Under the Reduced Project Alternative, repairs of the Dock, Building 64, Cellhouse, Sallyport, Slope, and the Fuel Line would be implemented as described under the Proposed Action (see Table 1). Each of these structures and facilities is located in or directly adjacent to areas that are currently heavily used by visitors on a year-round basis.

FINDINGS

The FEIS evaluated and disclosed the environmental effects of the actions summarized in this Record of Decision. The effects on park resources and values evaluated in the FEIS included the following:

Impacts on Biological Resources

Implementation of the proposed repair and construction activities will impact biological resources. Many of these effects would be minimized or avoided through mitigation as described in the FEIS and Appendix A of this document. The Proposed Action will have the greatest impacts on the eight species of breeding waterbirds that nest on the Island, with impacts varying by project location. The most substantial effects may include increased predation, potential reduction in the reproductive success of a particular species/subcolony, and in the most extreme cases the temporary or possibly long-term abandonment of individual subcolonies. No complete abandonment (i.e., an entire population of an individual species of birds nesting on Alcatraz) and no impairment of biological resources will occur as a result of the Proposed Action. The NPS will employ a variety of protective measures and use of adaptive management to ensure the intensity and duration of potential impacts is reduced wherever feasible. If through ongoing monitoring, it is determined that additional impacts (beyond those disclosed in the FEIS) occur, the NPS would take corrective actions to reduce the level of impact to at or below the level described in the FEIS or initiate supplemental NEPA analysis to address those impacts.

In addition to waterbirds, the Proposed Action will result in negligible impacts to Monarch butterflies and use of barging areas 14 and 15 may result in minor adverse effects on marine mammals. Pile replacement during dock repair may result in minor impacts to Pacific herring by disturbing spawning habitat. However, work is proposed outside the spawning season to reduce these effects. Construction activities may temporarily disturb small areas of habitat for songbirds, mallards, and the California Slender Salamander, and displace other animals, such as deer mice and banana slugs, to similar habitats elsewhere on the Island resulting in minor impacts to these species. The Proposed Action may disturb San Francisco Campion habitat, a federal species of special concern. Construction areas will be surveyed and plants will be flagged and avoided. However, if plants cannot be avoided, they would be transplanted to another suitable location on the Island as described in Appendix A. The potential for minor adverse effects to special status bats exists from noise and activity during construction at the Sallyport, Building 64, and Quartermaster building. Surveys for bat habitat will occur prior to construction and mitigation measures in Appendix A describe measures to reduce effects.

Impacts on Cultural Resources

The Proposed Action will correct adverse effects to historic structures contributing to the National Historic Landmark District by preventing structural failure due to deterioration or seismic activity and repairing spalling concrete and other hazards. The Proposed Action will have a substantial, long-term, beneficial effect on cultural resources by stabilizing historic structures and protecting the resource from potential impairment.

Impacts on Visitor Use

The construction activities will result in temporary visitor use impacts, including increased noise, visual intrusion, and closure of work areas during construction. Following implementation, the Proposed Action will result in long-term major beneficial effect on the recreational and visitor use values on Alcatraz. Repairing critical health and safety hazards will allow the Island to remain open for visitor use, interpretation, and enjoyment by future generations.

Impacts on Air Quality

The Island is located within San Francisco County, designated a federal nonattainment area for ozone and a state nonattainment area for ozone and particulate matter (PM₁₀). In general, the location of Alcatraz allows for excellent air circulation, with very high quality air moving into the area from the Pacific Ocean. Construction emissions associated with the Proposed Action will be reduced by mitigation, yet will have minor, short-term, adverse effect on air quality.

Impacts Associated with Hazardous Substances: Human Health, Safety, and the Environment

Because structures on the Island were constructed prior to the banning of commercial use of lead-based paint and asbestos production, Alcatraz Island structures are assumed to contain these hazardous substances until proven otherwise. The National Park Service will conduct surveys and collect samples to identify, characterize, and quantify the nature of the hazardous substances present in work areas and evaluate if these substances will be disturbed by construction activity. Risks to human health, safety, and the environment may result from the potential release of hazardous substances during construction activities. The impacts associated with the Proposed Action are expected to be short-term and negligible to minor with the implementation of mitigation measures, including removal of hazardous substances prior to the start of work. Construction activities and cleanup plans will conform to applicable federal and state laws and regulations governing hazardous substances control and removal.

Impairment of Park Resources and Values

In addition to determining the environmental consequences of the Proposed Action and other alternatives, NPS Policy (Management Policies 2001) requires an analysis of potential effects to determine whether or not the Proposed Action will impair park resources. Implementation of the Proposed Action will not produce major, adverse impacts on park resources or values whose conservation is:

- (1) Necessary to fulfill specific purposes identified in the establishing legislation of the park;
- (2) Key to the natural or cultural integrity of the park or opportunities for enjoyment in the park; or
- (3) Identified as a goal in the park's general management plan or other NPS planning documents.

Consequently, there will be no impairment of Alcatraz Island's resources or values.

MEASURES TO MINIMIZE HARM

During preparation of the Alcatraz Island Historic Preservation and Safety Construction Program, the NPS incorporated measures designed to minimize the adverse effects of construction activity associated with the Proposed Action. In response to public input on the DEIS, additional measures were developed and existing mitigation measures were refined to be more protective in the FEIS. Additional mitigation measures were incorporated into the FEIS as recommended by the public or other agencies, or were developed by the NPS in response to issues of concern. For example, based on comments from the Environmental Protection Agency, mitigation measures were added to reduce the adverse effects of hazardous substances that may be encountered during construction. In total, more than 70 mitigation measures have been identified and are included in the FEIS. The full text of the FEIS mitigation measures (Section 2.7) is hereby incorporated by reference and is appended in table format to this Record of Decision (Appendix A).

Consistent with, and expanding on the mitigation measures identified in Appendix A, the NPS is committed to implementing a program to monitor the success of mitigation measures in reducing the effects of construction activities. Employment of an Adaptive Management Plan will allow the NPS to gain experience and knowledge from the monitoring program, make adjustments to mitigation measures, and identify actions to reduce impacts. The full text of the FEIS monitoring program (FEIS Appendix B) is hereby incorporated by reference and is appended to this Record of Decision (Appendix B). The National Park Service is specifically committed to continuing communications with the local conservation groups such as the Golden Gate and Marin chapters of the Audubon Society and other interested parties to further exchange of information pertaining to the results of monitoring and the Adaptive Management Plan.

All practical means have been adopted to avoid or minimize environmental effects from the Proposed Action. As part of the mitigation, the NPS is committed to monitoring construction activities, improving identified mitigations, and scheduling construction to the greatest extent feasible to avoid impacts.

CHANGES TO THE FEIS

After receiving public comment on the DEIS, the NPS made changes to the text of the FEIS. Two types of changes were made: the first were editorial changes that served to correct punctuation, formatting, and phrasing to make the document easier to read; the second were changes to the substance of the text that reflected issues brought up by the public and agency review of the DEIS. The following describes the substantive changes made in the FEIS.

- A Hazardous Substances analysis was added to the document in response to comments from the Environmental Protection Agency (EPA). The potential for encountering asbestos, lead paint, and PCBs during the construction work was analyzed and mitigation measures were added to ensure that workers and the public are protected from exposure.

- The document was updated based on the results of the permitting process that occurred during the time period between the DEIS and the FEIS, including the addition of Appendix E (Dock Consultation Letters). An evaluation of the in-water dock repair activities by the National Marine Fisheries Service determined that the action would not likely adversely affect listed salmonids or designated critical habitat, and no long-term impacts to Essential Fish Habitat would be anticipated. NPS received authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, a consistency determination from the San Francisco Bay Conservation and Development Commission, and authorization from the Regional Water Quality Control Board.
- The text of the Mitigation Measures for the Pacific Herring (page 2-32 to 2-33) was changed in response to public comment. The acquisition of a U.S. Army Corp of Engineers (USACE) permit was removed as mitigation. It was thought the permit would contain specific measures to protect spawning Herring, however the permit did not and the acquisition of a permit does not constitute mitigation.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

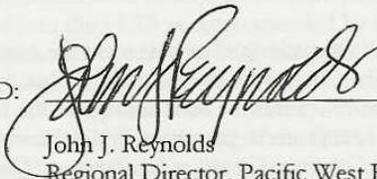
The environmentally preferred alternative is defined as the alternative(s) that best meet the criteria set out in Section 101 of the National Environmental Policy Act. The Council on Environmental Quality defines the environmentally preferred alternative as the alternative that "...causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources" (*Forty Most Asked Questions Concerning Council on Environmental Quality's (CEQ) National Environmental Policy Act Regulations*).

An evaluation of the alternatives suggests that arguments can be made for both the Proposed Action and the Reduced Project Alternative as the environmentally preferred alternative. The reduced project alternative protects the bird species from the construction impacts on three failing historic structures at the detriment of those structures. The Proposed Action, however, provides the greatest protection to arguably the most significant National Historic Landmark District in the GGNRA unit of the NPS. Therefore, the Proposed Action is identified as the environmentally preferred alternative. This meets an integral part of the environmentally preferred alternative guidelines that direct agencies to "preserve important historic, cultural, and natural aspects of our national heritage." It is not simply three historically significant structures that would be adversely effected, more importantly, the Landmark status of the Island, and integral component of our national heritage, would be lost. The Proposed Action also attains the widest range of beneficial uses of the environment, biological and historic preservation and visitor safety and enjoyment. Field monitoring and adaptive management, stringent breeding season and staging restrictions, rodent control, and habitat enhancement will lessen the potential impacts to breeding birds at the site and ensure modifications will be made should unforeseen impacts occur.

CONCLUSION

The above factors and consideration warrant implementing the final Alcatraz Island Historic Preservation and Safety Construction Program (identified as the Proposed Action in the DEIS and FEIS). The Proposed Action described in this Record of Decision provides the most effective method among the alternatives considered for rehabilitating and stabilizing structures on Alcatraz Island that contribute to the Island's National Historic Landmark Status while preserving natural resources and providing for public health and safety. The selection of the Proposed Action as reflected in the analysis contained in the environmental impact statement, would not result in the impairment of park resources and will allow the National Park Service to preserve park resources and provide for their enjoyment for future generations. The 30-day no action period ended November 26, 2001.

APPROVED: _____

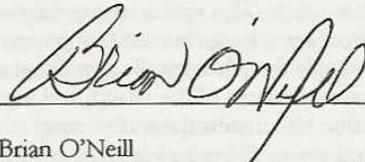


John J. Reynolds
Regional Director, Pacific West Region

DATE: _____

2-25-02

RECOMMENDED: _____



Brian O'Neill
Superintendent, Golden Gate National Recreation Area

DATE: _____

2-08-02

APPENDIX A

ALCATRAZ HISTORIC PRESERVATION AND SAFETY CONSTRUCTION PROGRAM

MITIGATION MEASURES

Mitigation Measures

The National Park Service will implement the following measures to reduce or avoid the adverse environmental effects of the Proposed Action. These measures will be implemented as part of the Proposed Action for each project. Measures will be regularly evaluated and monitored by the NPS to determine their effectiveness. If monitoring observes impacts at or exceeding those described in Chapter 4 of the FEIS, the mitigation measures can be adapted, modified, or expanded based on situations that arise, to reduce those impacts. Using an adaptive management approach, the NPS will evaluate the monitoring data collected during implementation of Phase One to alter and improve (as needed) the approach to completing projects and protective measures implemented during remaining activities under Phase One and Subsequent Phase.

The NPS will have the primary and full responsibility for coordinating the specific elements of each mitigation measure, including those that involve cooperation or approval of other agencies. The NPS would be responsible also for ensuring that each mitigation measure has been implemented as specified in the document.

Mitigation Measures Included as Part of the Proposed Action (taken from FEIS text pages 2-32 to 2-48)

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
BIOLOGICAL RESOURCES				
Pacific Herring	Dock Repair	<ol style="list-style-type: none"> 1. A monitor and possible work stoppage for spawning herring: or 2. Measures to protect spawning herring from entering the construction area, such as silt curtains. 3. A false bottom would be constructed beneath the deck to act a debris catch reducing the potential for materials entering the water. 	<p>An evaluation of the in-water dock repair activities by the National Marine Fisheries Service determined that the action would not likely adversely affect listed salmonids or designated critical habitat, and no long-term impacts to Essential Fish Habitat would be anticipated</p> <p>NPS received authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act</p> <p>NPS received a consistency determination from the San Francisco Bay Conservation and Development Commission</p> <p>NPS received authorization from the Regional Water Quality Control Board</p>	<p>Implemented by the National Park Service and contractor to ensure protection during herring spawning season.</p>

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
Marine Mammals	General	<p>1. Staging area #14 will only be used at tide heights greater than +2.5 feet msl to avoid disturbance to harbor seals hauled out on Little Alcatraz off the northwest end of Alcatraz Island.</p> <p>2. A monitoring program would be implemented to document use patterns at California sea lion haul-out below the north foghorn adjacent to the Model Industries Building. If it is determined that the north foghorn haul-out is used on a regular basis, the NPS would take appropriate measures to reduce the potential effects on marine mammals. The NPS may also choose to remove from use barge on- off-load area #15 under the Proposed Action.</p>		National Park Service
Waterbirds (General Measures)	Staging/Barge Off-Loading Area Use			
		1. Use of the staging/barge off-loading areas from February 15 through August 15 would be in compliance with the following measures (see Figure 2-1 for location):		National Park Service
		Area #1: No access February 15 through August 15. Only storage would be allowed until all young in the area have fledged.		Storage area limits would be defined and approved on-site by the National Park Service biologist prior to breeding season use.
		Area #2: No nighttime use (defined as a half-hour after sunset and a half-hour before sunrise). Crane use in this area would not be visible from the Parade Ground (i.e., crane height must be lower than the adjacent cliff; visual screens must be used; or other methods must be employed to avoid visual intrusion at the Parade Ground).		National Park Service
		Area #3: If nighttime use were necessary, lighting would be directed toward the work areas only and appropriately shielded.		Lighting placement would be reviewed and approved by a National Park Service biologist and maintenance staff during initial staging operations.
		Area #3a: No nighttime use. Gull exclusion measures to prevent gull nesting would be implemented in this area to reduce conflicts between staging activities and nesting, if necessary.		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
		Area #4: No nighttime use.		National Park Service
		Area #5: No nighttime use. Use from February 15 through August 15 would be monitored, and could be further restricted in subsequent years during a portion of the peak sensitivity periods for black-crowned night-herons and western gulls (approximately April through June) if deemed necessary based on monitoring. Gull exclusion measures to prevent gull nesting may also be implemented in this area to reduce barge off-loading and nesting conflicts, if necessary.		National Park Service
		Area #6: Prior to use, the site would be inspected by a National Park Service biologist. Up to three night-heron nests have occurred in this area in the past. If nests were found, protective screening would be installed.		National Park Service
		Area #7: No nighttime use. A temporary visual barrier would be required along the northeastern periphery of the site to prevent visual intrusion into the cistern area. The barrier would be reviewed and approved by a National Park Service biologist and would be installed prior to the start of the breeding season.		Staging area limits would be defined and approved on site by the National Park Service biologist prior to breeding season use.
		Area #8: If nighttime use were proposed, lighting would be directed toward the work area only and appropriately shielded.		Lighting placement would be reviewed and approved by a National Park Service biologist and maintenance staff during initial staging operations.
		Area #9: No access during breeding season, from February 15 until all young in the area have fledged, including the cliffs below the Model Industries and Laundry Buildings, potentially until September 15.		Storage area limits would be defined and approved on site by the National Park Service biologist prior to breeding season use.
		Area #10: No nighttime use. Access and construction work from February 15 through August 15 would be limited to those activities that would be accomplished behind screening materials (installed prior to the start of the breeding season).		Screening materials would be reviewed and approved by the National Park Service.
		Area #11: No nighttime use. Staging area limits and the need for gull exclusion measures to prevent gull nesting would be determined by the National Park Service biologist prior to initial staging operations.		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
		Area #12: No nighttime use. No crane use to transport materials into staging area #12 (Recreation Yard) would be allowed during breeding season. All equipment and materials must be contained within the walls of the yard and cannot be visible from outside ground level locations.		National Park Service
		Area #13: No visual intrusion into the Parade Ground. The southeastern boundary of the site would be delineated by a National Park Service biologist prior to arrival of materials. A temporary visual barrier would be required at the entrance to the Parade Ground to prevent visual intrusion onto the Parade Ground. Gull exclusion measures may also be required behind building 64 and on the adjacent slope to prevent gull nesting in the area.		The barrier would be reviewed and approved by the National Park Service biologist and would be installed prior to March 1.
		Area #14: No access from February 15 to approximately September 15.		National Park Service
		Area #15: No access from February 15 to approximately September 15.		National Park Service
		2. General Condition: Movement of equipment and materials to and from staging areas from February 15 through August 15 would be restricted to daylight hours to prevent moving lights (i.e., headlights) from disturbing sensitive areas. Nighttime construction would be allowed in interior spaces and some exterior spaces (in compliance with the mitigation measures throughout this section).		National Park Service
	Other General Measures	These measures would apply to all construction activities occurring during the waterbird breeding season (February 15 to August 15)		
		3. Transport of materials to the Island by helicopter would be prohibited during the waterbird-breeding season from February 15 until young have fledged (usually early September).		National Park Service
		4. Night lighting for construction activities (in authorized areas) would be reduced to the minimum amount necessary to complete work, and it would be shielded and directed downward.		The placement, intensity and direction of nighttime lighting would be reviewed and approved by a National Park Service wildlife biologist and maintenance staff during initial staging operations.

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
		5. All construction workers would be provided with information on the biological resources of the Island, and the required mitigation measures. In addition, all construction workers would be required to attend an orientation on the sensitivity of the Island's natural resources and the requirements and mitigations to be implemented for resource protection. Attendance will also be required at periodic natural resource briefings throughout the breeding season.		The required mitigation measures would be included in the construction contract documents and would be a binding requirement, and enforcement would be monitored by National Park Service staff through regular inspections by a qualified biologist and contract inspector.
		6. Prior to implementation of each construction project, restricted areas would be identified and mapped by National Park Service staff. These areas would be delineated with input from resource specialists, interpretive, and maintenance/project management staff to ensure resource protection as well as adequate access for construction and Island operations. The areas would be clearly marked with temporary fencing or other signage prior to the arrival of materials and equipment.		Enforcement of restricted areas (as a contractual requirement) will be done by the construction crew with monitoring by National Park Service staff
		<i>Habitat Enhancement</i>		
		7. Appropriate vegetation would be planted and established on the rubble piles on the southwestern side of the Parade Ground during Phase One to enhance and potentially expand black-crowned night-heron nesting habitat in an area more remote from construction activities associated with the Proposed Action.		National Park Service
Waterbirds (Project Specific Measures)				
	Dock Repair	1. Pile replacement along the southeast side of Building 64 would occur August 15 through February 15. Other pile replacement and seismic stabilization would be allowed year-round, in compliance with other general measures.		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
	Building 64 (Balconies repair)	2. Construction on the southeast side of building 64 would occur during the non-breeding season (August 15 through February 15), or in compliance with the following measures. Exterior work on the southeastern side of the building could be completed during the breeding provided that a temporary visual barrier (i.e., dense netting) be installed to enclose the scaffolding/work area prior to the start of the breeding season. Work along the eastern side of the building could be completed during the waterbird-breeding season.		The placement and type of barrier would be reviewed and approved by a National Park Service biologist.
		3. Netting or other exclusion devices would be installed prior to nesting to prevent western gulls from nesting on the balconies (i.e., within the immediate repair area) of the building.		National Park Service
	Cellhouse Stabilization and Seismic Upgrade	4. Exterior work on the western side of the building could be completed during the breeding season provided that a temporary visual barrier (i.e., dense netting) be installed to enclose the scaffolding/work area prior to the start of the breeding season (February 15 through August 15). All other exterior work could be implemented on a year-round basis, except as noted in the mitigation measures below. There will be no nighttime exterior work on the western side of the building and no exterior lighting during the breeding season.		The placement and type of barrier would be reviewed and approved by a National Park Service biologist.
		5. Nighttime work along the exterior southern wall (Eagle Plaza) during the breeding season would be subject to the night lighting/shielding requirements to prevent illuminating the Parade Ground, as described under “General Condition.”		National Park Service
		6. Any work requiring access to, or work on, the Cellhouse roof would be restricted during breeding season to portions of the roof where activities would not be visible to the cormorant colonies along the western cliffs of the island or as adequately screened from those areas.		The work area limits and method of delineating them would be reviewed and approved by the National Park Service biologist prior to work on the Cellhouse roof.
	Sallyport Structural Upgrade	7. Prior to the breeding season, netting or other exclusion devices would be installed on the northeast perimeter trail below the Sallyport to prevent western gulls from nesting within the construction area.		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
		8. No exterior nighttime construction during the breeding season (February 15 through August 15).		National Park Service
	Water Tower Stabilization	9. The Water Tower Stabilization project would be completed within the non-breeding season or phased to avoid the waterbird-breeding season to the greatest degree feasible. If, based on future structural evaluations of the tower, complete avoidance of construction during the breeding season is not feasible through phasing or by other means; then the following measures would be implemented to minimize impacts:		National Park Service
		<i>Minimizing Construction Disturbance</i>		
		10. Construction would be initiated in early August or later, and would conclude by mid-March (which provides the eight-month maximum window anticipated for this project).		National Park Service
		11. Only daytime construction would be allowed during the breeding season (early August through mid- to late-September and during February and March). Screening to minimize visual intrusion into the cistern area would be implemented.		Screening would be reviewed and approved by a National Park Service biologist prior to the start of the breeding season.
		12. Specialized resource sensitivity training would be required for construction crews (in addition to training described as a “General Condition.”) This training would educate construction workers on how to minimize human-induced gull disturbance.		Implementation of these measures would be a binding requirement for construction contractor(s) and would be enforced by National Park Service staff
		<i>Habitat Enhancement</i>		
		13. Appropriate plantings or other shelter provisions would be provided prior to the start of breeding season in the cistern and Model Industries Plaza area to enhance reproductive success of western gulls. Reproductive success is generally lower in these exposed locations than on other parts of the Island		National Park Service
		14. Pigeon guillemot artificial nest boxes would be provided along the western cliffs of the Island in areas more remote from the project area to provide additional protection from potential elevated levels of human-induced gull and raven predation.		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
		15. In the event that impacts are greater than those predicted in Chapter 4, other artificial habitat (nest platforms) or social attraction measures (decoys and taped calls) may be implemented for Brandt's and pelagic cormorants, and pigeon guillemots (social attraction) on an experimental basis in less disturbed areas along the western cliffs and more remote from the project area.		National Park Service
		<i>Enhanced Protection from Off-Island Disturbance</i>		
		16. The National Park Service has been increasing public outreach and education to reduce water-based disturbance. To supplement this effort and provide further protection during the Water Tower stabilization project, additional protection from water-based disturbances would be implemented. These measures could include use of buoys to establish a closed area, focused outreach programs with relevant user groups, and increased enforcement activities.		National Park Service
	Slope Stabilization	17. The project would be phased over multiple years to avoid construction-related impacts on breeding waterbirds. No construction would be allowed for this project from February 15 through August 15 (to be verified by a National Park Service biologist the year the construction is proposed).		National Park Service
	New Industries (Laundry) Building	18. Exterior repair work at the New Industries (Laundry) Building would be prohibited during the waterbird-breeding season (February 15 to August 15 or as determined by the National Park Service biologist). No nighttime exterior construction would be allowed at any time of the year.		National Park Service
		Interior Repairs:		
		19. No nighttime construction would be allowed at any time of year to protect nesting and roosting seabirds along the western cliffs of the Island.		National Park Service
		20. Access to the New Industries (Laundry) Building for interior repairs during the breeding season would be through the tunnel via the Power House Complex for the lower level, and via the northern entrance for the upper floor. A pickup truck, electric forklift (or forklift with a muffler), or other small vehicle would be used to transport materials to the entrance on the northern side. Transport of large equipment/materials to and from the New Industries (Laundry) Building would be completed <i>outside</i> the waterbird-breeding season. Access to the southern entrance, of the Laundry, would be prohibited. A temporary visual barrier would be required between the access route to the New Industries (Laundry) Building and the Model Industries Plaza to minimize direct and indirect disturbance to breeding birds.		The barrier would be reviewed and approved by the National Park Service biologist and would be installed prior to the start of the breeding season.

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
		<p>21. Prior to the waterbird breeding season, the exterior windows and doors on both floors of the northern, western and southern facing walls of the New Industries (Laundry) Building would either be repaired or replaced, or barriers would be provided to minimize noise and visual contact with breeding waterbirds on the cliffs below. If barriers are used (as an alternative to window repair/replacement), the design and placement shall be reviewed and approved by park resource specialists (biological and cultural). Complete visual barriers would only be needed in areas where construction or access is occurring that would be visible through the windows or doors (even if windows and doors are replaced). Biologists will require building access and ability to view through barriers for monitoring.</p>		National Park Service
		<p>22. Prior to the breeding season, temporary fencing would be installed to prevent access by construction crews to adjacent sensitive areas, including the Model Industries Plaza and the lower level outside of the New Industries (Laundry) Building. These areas would be delineated and restrictions enforced as described above under “General Condition.”</p>		National Park Service
		<p>23. Specialized resource sensitivity training would be required for construction crews (in addition to training described as a “General Condition”). This training would educate construction workers on how to minimize human-induced gull disturbance and the importance of minimizing visual contact with nesting birds in the western cliffs below the work site.</p>		Implementation of these measures would be a binding requirement for construction contractor(s) and would be enforced by National Park Service staff.
	<p>Building 64 Seismic Retrofit</p>	<p>24. Exterior construction work would be scheduled from August 15 through February 15 to the greatest degree feasible, and no exterior work along the southern wall would be allowed. If exterior construction activities along the western wall cannot be phased to avoid the breeding season, such work would be screened from the Parade Ground. A temporary physical barrier would be placed at the southern limits of the walkway connecting to the Parade Ground to clearly define the allowable construction area, and provide screening (for light and visual intrusion).</p>		The precise location of the barrier would be determined in consultation with the National Park Service maintenance/project management staff and resource specialists to ensure adequate access and resource protection.

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
		25. Prior to the breeding season, netting or other exclusion devices would be installed to prevent western gulls from nesting directly within the repair/construction area.		National Park Service
	Quartermaster Building	26. During the breeding season, exterior repair work would be allowed along the first floor of the western wall. Netting to preclude night-herons from nesting directly below the building could be installed prior to the start of the breeding season to allow exterior work along the southern wall during the breeding season. No other exterior work during the breeding season would be allowed. Nighttime construction at these locations would be allowed as described under “General” measures above. Interior repairs would be allowed year-round; however, prior to the waterbird breeding season exterior windows and openings would be repaired or replaced, or barriers would be provided to minimize noise, visual and light (if nighttime work is proposed) contact with breeding waterbirds in adjacent areas.		If netting were proposed, the location and placement would be reviewed and approved by a National Park Service biologist. If barriers were used, National Park Service resource specialists (biological and cultural) would review and approve the design and placement of these temporary features.
Rats	General	1. Bird-proof and tamper-proof rodent bait stations and traps would be maintained on barges and boats used for delivery of materials to the Island and at active staging areas to avoid transport of rats onto the Island. On-island traps would be designed and maintained in accordance with the National Park Service’s Integrated Pest Management practices in order to minimize impacts to non-target species, and to avoid secondary poisoning to gulls, ravens, raptors, herons and egrets that may feed on dead or dying rodents.		National Park Service and Contractor
		2. As part of the construction crew awareness program described under the general waterbird mitigation measures, construction crews would be advised to discard all garbage, food wastes, and recyclable materials into garbage and recycling receptacles. Trashcans would be placed at each project site and in some cases at staging areas during construction. Trashcans would be emptied daily. Designated eating areas and rodent-proof storage containers would be utilized to prevent spread of rats on the Island.		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
Special-Status Biological Resources				
Plant Species	Water Tower, Slope Stabilization, exterior work on the western wall of the Cellhouse project, and use of staging area #10	1. Prior to commencement of construction activities, a focused survey for San Francisco campion would be conducted by qualified National Park Service personnel during the blooming season (typically early April). If no campion were found during surveys, no further mitigation would be required.		National Park Service
		2. If campion is found and can be avoided, the National Park Service would provide protective fencing around the population. At no time would fencing be moved to allow access of construction equipment to the population. Fencing would remain in place until construction is complete. Where avoidance is possible, signage would also be placed on the protective fence that identified the area as “RESTRICTED, Do Not Enter, This is a Protected Area.”		National Park Service
		3. If avoidance were not possible, a qualified botanist would collect seeds (typically in May/June) from the population and establish plant material in an appropriate location on the Island. Seeds would be collected and plant material would be grown in the park’s native plant nurseries. Seedlings would be planted in areas that are approved by a National Park Service botanist.		National Park Service
Bats	Sallyport Structural Upgrade, Quartermaster Building Stabilization and Building 64 Seismic Retrofit projects	Beginning at least one year prior to construction activities, bat surveys would be conducted at appropriate times of the year to determine if bats are utilizing these locations as roost sites. If special-status bat species are found during surveys, protective measures would be defined based on the species present, intensity of use, type of roost, etc., and would be developed consistent with the preservation of historic structures. Depending on the species and type of roost, such measures may include provisions for the ongoing use of the building by bats or the installation of alternative or replacement habitat at other locations on the Island.	The National Park Service would develop and implement appropriate mitigation measures in consultation with California Department of Fish and Game and regional bat experts	National Park Service

Topic	Project	Mitigation	Permits/Compliance / Consultation	Responsible Party
Fish and Essential Fish Habitat	Dock Repair	An evaluation of the in-water dock repair activities determined that the action would not likely adversely affect listed salmonids or designated critical habitat, and no long-term impacts to Essential Fish Habitat would be anticipated. The replacement pilings will be pre-cast concrete and the installation methods are sensitive to the marine environment.	Informal consultation with the National Marine Fisheries Service concurred with the not likely to affect determination (see FEIS Appendix E).	National Park Service
Waters of the United States	Dock Repair	Measures developed include the construction of a false bottom beneath the deck to act a debris catch reducing the potential for materials entering the water. The replacement piles would be constructed using a small amount of forced grout through the center of the pre-cast pile minimizing the potential for grout to contact seawater. In addition, the contractor will have a diver in place to ensure that forced grout is not being released into the bay. These protective measures would be included as conditions of the contractor's contract.	Prior to construction for the Dock Repair project, the National Park Service obtained authorization from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.	The National Park Service/contractor would implement measures.

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
CULTURAL RESOURCES				
Programmatic Agreement	General	<p>In 1992, the National Park Service signed a Programmatic Agreement with the California State Historic Preservation Officer and the Advisory Council on Historic Preservation for operation and maintenance undertakings of the historic properties within Golden Gate National Recreation Area (NPS, 1992). Alcatraz Island is a part of the Golden Gate National Recreation Area and is included in this Programmatic Agreement. Rehabilitation of historic buildings or structures that is consistent with the Secretary of the Interior's Guidelines is covered by Stipulation D.II.i. (Rehabilitation of Historic Structures) in the Programmatic Agreement. Health and safety activities are covered by Stipulation D.II.j. in the Programmatic Agreement. Projects associated with the Proposed Action are covered by the Programmatic Agreement, with the exception of the Sallyport (as described in Chapter 4).</p>	<p>For the Sallyport stabilization, Section 106 (National Historic Preservation Act, amended) consultation will be initiated with the California State Historic Preservation Office and the Advisory Council on Historic Preservation outlined in the federal regulations 36 CFR Part 800. Sallyport stabilization may require removal of the Boathouse that was constructed during the period of significance, a Memorandum of Agreement among the agencies will be required to describe how the effects of the undertaking will be taken into account.</p>	National Park Service
The Secretary of the Interior's Guidelines	General	<p>The Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR part 68) provides guidance for the protection of cultural resources. The Proposed Action would be consistent with the Secretary's Standards, with the exception of the Sallyport project, which would undergo additional reuse and compliance (see below).</p>		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
Recordation to Historic American Buildings Survey (HABS) Standards	General	Prior to the demolition of the Boathouse at the Sallyport, the National Park Service would ensure that structure is recorded to Historic American Buildings Survey Standards. HABS recordation would provide information on the Boathouse using measured drawings, large format photographs, and written description and history prepared to archival standards.		National Park Service
Salvage of Historic Materials	Dock Repair, Sallyport Boathouse Demolition, Fuel Line Remediation	To minimize the loss of these historic materials, the National Park Service would determine if examples of the materials should be included in the Golden Gate National Recreation Area permanent museum collections, or reused for other on-island activities. Such activities may include interpretive exhibits on the Island displaying historic materials (i.e., “spider” piles), or potential reuse of the materials for another purpose (i.e., reuse of wood from the Boathouse) with interpretive signage.		National Park Service
Indian Occupation Graffiti Mitigation	General	1. At the 50 percent design phase, the National Park Service would conduct an inspection of the project area with the Golden Gate National Recreation Area Cultural Resource’s staff to identify all graffiti that would be impacted.		National Park Service
		2. The GGNRA Cultural Resource’s staff would contact the participants of the Indian Occupation to consult with them on the proposed project, the impacts to the graffiti, and treatment options.		National Park Service
		3. A treatment option would be determined, with avoidance being the preferred treatment. In situations that avoidance is not possible, other treatments would be determined in consultation with the participants of the occupation. Treatments may include protection of the graffiti during construction (i.e., covering, etc.), removal of the wall or surface on which the graffiti is painted and placing the GGNRA museum collections, restoration, and/or recordation		National Park Service
		4. At the 90 percent design phase, the National Park Service would conduct a final inspection of the project area with the GGNRA Cultural Resource’s staff to verify that graffiti has been identified and that a treatment option for impacted graffiti has been determined.		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
		5. The necessary contract stipulations would be provided in the construction contract to insure that the treatment option is followed.		National Park Service
		6. Training would be provided to the construction crew to explain to them the significance of the graffiti (and other cultural resources) and appropriate protection measures that must be followed during the construction activity.		National Park Service
		7. The National Park Service would monitor construction activities to insure that the treatment measures are being followed.		National Park Service
Archeology Testing, Monitoring and Protection	General	The National Park Service would identify areas on the Island that have historic archeological (Civil War– and Federal Penitentiary–era) resources that would be affected by individual projects, and would develop and implement an archeological testing, treatment and/or monitoring plan for these areas. The preferred treatment is to avoid the archeological resources. In situations where avoidance is not possible, a testing and monitoring plan would be developed that provides: 1) a qualified archeologist to prepare a testing plan according to National Park Service Regulations Cultural Resource Management Guidelines (DO-28); 2) a qualified archeologist on site during construction; and 3) procedures that provide for a work stoppage when archeological features are discovered and notification of the GGNRA archeologist. Training would be provided for the construction crew on the significance of archeological resources and correct procedures to follow when archeological resources are encountered. Monitoring would likely be required for the Quartermaster Building, Cellhouse, and Fuel Line Remediation projects.		National Park Service
Seismic Ties and Monitoring	General	A monitoring program, with contingency measures including thresholds that would require construction to stop, would be developed and implemented during the installation of rock bolts to protect adjacent and upper terrace structures from vibration and shaking		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
Slope Stabilization Mitigation	Slope Stabilization	1. To minimize the effect of applying gunite/shotcrete to the slope face, the National Park Service would require that the new surface resemble the natural rock color, if the material is adequate to withstand the weather conditions on Alcatraz. Provisions to allow for the re-introduction of plant materials would be considered during the design development phase of the project and implemented where feasible. If deemed feasible, the Secretary of the Interior's Standards for the Treatment of Cultural Landscapes would be used to provide guidelines for the specifications for planting.		National Park Service
		2. Installation of a permanent interpretive exhibit at the base of the slope explaining the need to stabilize the slope, how mitigation measures were used to protect the resource, etc., would be provided.		National Park Service
Cultural Landscape Preservation	General	The National Park Service would provide for protection, propagation, or replanting of plants that are part of the Island's cultural landscape. Invasive exotic vegetation would be removed. The <i>Landscape Stabilization and Maintenance Guidelines</i> (Eeley, 1998) would be used as a reference for identifying plants and specifying the appropriate treatment. Prior to implementation of the Sallyport Complex project or use of staging area #5, the Cultural Resources Division would be consulted to determine precise treatment and associated work plan.		National Park Service

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
RECREATION AND VISITOR USE				
Safety	General	The National Park Service would ensure that appropriate safety/buffer areas are clearly identified, and that protective barriers, overhangs, buffer areas and other measures are enforced and maintained by the construction contractors throughout the project. To the extent possible, public access to buildings/structures would be maintained during construction activities. However, some areas within the buildings may be temporarily closed to the public for safety reasons. These areas would be clearly defined.	Construction activities would comply with relevant public health and safety requirements, including those set forth by the Occupation Safety and Health Administration (OSHA).	National Park Service and Contractor
Interpretation	General	To minimize the adverse effect of construction activities on the visitor experience, the National Park Service would use the construction program as opportunity for education and interpretation. The interpretive program would include signage as well as ranger- or docent-provided information on the construction activities. Issues relating to the purpose and need for the project, the environmental considerations that went into its implementation (cultural and biological), and other National Park Service management considerations would be addressed in the program. An underlying theme of the program could be demonstration of the National Park Service mission at work. Additional detail (including the precise content and design of the program) would be developed in the future as individual projects are implemented.		National Park Service
NOISE CONTROLS				
	Exterior Construction	1. Construction vehicles or equipment fixed or mobile, will be equipped with properly operating and maintained mufflers and acoustical shields or shrouds, in accordance with manufacturers' recommendations.		Contractor
		2. Prior to commencing construction, acoustic barriers would be constructed wherever feasible along the perimeter of the activity site to shield occupied building(s), exterior public visitation areas and nesting birds within close proximity of the construction site from construction-generated noise. Wooden barriers (or treatments of equivalent effect) would be constructed at a height of approximately 8 feet for shielding ground-level activities and loaded vinyl curtains (or treatments of equivalent effect) would be draped to enclose elevated scaffolding.		Contractor

Topic	Project	Mitigation	Permits/Compliance / Consultation	Responsible Party
		3. To the degree feasible, stationary noise-generating construction equipment (e.g., generators, cranes, compressors, and mixers) would be centrally located within equipment staging areas at the greatest distance possible from occupied building(s), exterior public visitation areas, and nesting birds.		Contractor
	Interior Construction	4. To reduce interior noise levels within occupied buildings, major noise-generating construction activities (e.g., jackhammers) would be limited to non-visitation periods of the day, to the maximum extent possible. Major noise-generating construction activities conducted within the interior areas of Building 64 and the Cellhouse during daytime visitation hours would be surrounded to shield other occupied areas of the building.		National Park Service
		5. During public hours repairs to the exterior or interior areas of the Cellhouse and Building 64, interior noise levels would be monitored to ensure that individual noise exposure levels do not exceed unsafe levels (based on the exposure standards established by the Occupational Safety and Health Administration).		Contractor
AIR QUALITY				
	General	<p>To reduce construction-generated PM₁₀ emissions, construction contractors would be required to implement BAAQMD “Basic Measures” for construction activities. BAAQMD PM₁₀ requirements for testing and the requirement to ensure that PM₁₀ emissions are minimized to the extent feasible, will be part of the construction contracts. A few of the measures that would be implemented are as follows:</p> <ol style="list-style-type: none"> 1. Dust control measures would be in place during ground disturbance activities. 2. Paved access roads, parking areas and staging areas at construction sites would be swept daily as needed (i.e., if visible soil material is carried onto paved roadway). 		Contractor

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
HAZARDOUS SUBSTANCES MANAGEMENT				
Asbestos	General	In accordance with NPS policy, potential asbestos containing materials (ACM) would be sampled, identified, and removed from work areas prior to construction or repair. A survey will be conducted for the presence of ACM by an Asbestos Hazard Emergency Response Act (AHERA) certified inspector that will be employed to collect bulk and air samples, assess the condition of the potential ACM, and report the findings to the GGNRA. Areas with friable ACM will be posted and removal of any ACM will be accomplished in accordance with EPA and OSHA regulations.	National Park Service and contractors are responsible for compliance with applicable federal and state regulations regarding the removal and disposal of asbestos containing materials.	National Park Service and Contractor
	Slope Stabilization	Before work is undertaken potentially requiring the fracturing of serpentine rock, samples of the rock will be collected to analyze for naturally occurring asbestos. Visitors will be prevented from entering areas where rock is being removed and kept at a safe distance based on air sampling results. Off-site disposal of serpentine would comply with applicable regulations concerning asbestos-containing material		If a certified industrial hygienist determines it necessary, the contractor or National Park Service staff will implement measures to monitor, and control airborne asbestos from the rock during excavation.

Topic	Project	Mitigation	Permits/Compliance /Consultation	Responsible Party
Lead	Building 64, Cellhouse, Sallyport, Water Tower, New Industries Building, and Quarter-master Building	<p>Workers employed in the removal of lead will be required by to use safe lead removal methods established by federal and state agencies to protect themselves from exposure. Warning signs will be posted to mark the boundaries of lead-contaminated work areas. These signs would warn about lead hazard, prohibit eating, drinking, and smoking in the area, and specify any personal protective equipment required. OSHA worker safety requirements for lead (26 CFR 1926.62) would be followed during lead-based paint related construction activities.</p> <p>Handling hazardous lead-based paint wastes will be conducted in compliance with state and federal regulations regarding labeling and management. Disposal of lead-based paint wastes may consist of paint chips, lead contaminated dust or soil, and demolition debris. According to 40 CFR 261.24, a toxicity characterization leaching procedure test on waste or soil will be conducted to determine if the material is characterized as hazardous. An appropriately licensed contractor will transport hazardous and non-hazardous lead-based paint waste for disposal in a permitted hazardous or non-hazardous landfill, as appropriate based on the waste characterization.</p>	National Park Service and contractors are responsible for compliance with applicable federal and state regulations regarding the removal and disposal of lead-based paint, finishes, or soils.	National Park Service will prepare a written plan outlining procedures to protect park employees, contractor personnel, and park visitors from lead-based paint exposure to be carried out by the contractor.

APPENDIX B

ALCATRAZ HISTORIC PRESERVATION AND SAFETY CONSTRUCTION PROGRAM

MONITORING PROGRAM

Monitoring Program

The National Park Service is proposing to implement the Alcatraz Historic Preservation and Safety Construction Program (the proposed action) using an adaptive management approach. The proposed action is comprised of 10 separate construction/repair projects that are scheduled to be implemented over a period of approximately 5 to 7 years. The National Park Service would monitor the effectiveness of mitigation measures in reducing the effects of construction activities. Monitoring results from the initial projects (Phase One) would be used to adapt and improve the implementation of the later projects both in Phase One and the Subsequent Phase of the program.

Appendix A of this Record of Decision and Section 2.7 of the FEIS presents a complete list of the mitigation measures that would be implemented as part of the proposed action. Several of these measures include requirements for “monitoring” to ensure that measures are implemented and enforced (i.e., for natural resource protection). Through this monitoring, new or improved methods of protection would be identified and incorporated into the implementation of the next project(s). If monitoring observes impacts at or exceeding those described in the FEIS, the mitigation measures can be adapted, modified, or expanded based on situations that arise, to reduce those impacts. Disturbance monitoring protocols will be developed and implemented by a biologist that is on-site on a regular basis when construction work occurs during the breeding season (February 15 through August 15, or until breeding activity is complete). NPS Natural Resources staff will develop an Adaptive Management Plan to outline the process by which mitigation measures may be modified or augmented, and identify targeted action to reduce an impact. Through on-site monitoring, and communication with biologists conducting long-term waterbird monitoring on the Island, the project biologist will evaluate impacts related to construction activities and impacts resulting from non-construction related human activity or naturally occurring events. Based on the information collected through monitoring, the project biologist will have the ability to modify, enhance, or expand mitigation measures for both Phase I and subsequent projects to be implemented under the FEIS.

The Environmental Consequences section (Chapter 4) of the FEIS draws conclusions regarding the potential impact to waterbirds of each project following mitigation (Section 4.2.2.5). For most projects, the conclusion covered a range of potential impacts, for example, minor to moderate, or moderate to major. The impacts were evaluated during the EIS process and represent the best available knowledge concerning impact levels and thresholds. If monitoring indicates that impacts are approaching the upper threshold of the anticipated impacts, the Adaptive Management Program will modify, enhance, or expand the mitigation measures to reduce the impact. Adaptive management is designed to respond immediately to impacting construction activities with solutions based on the mitigation measures.

Based on early public comment, there is a particular concern for the effects of the proposed action on the Island’s colonial nesting waterbird colonies. As described in Section 4.2.1, there is currently a lack of scientific data relating to construction effects on breeding waterbirds. As a result, the biological impact analysis provided in the FEIS relied on combination of professional judgement, knowledge of the Island, existing scientific data, and past monitoring activities on Alcatraz to predict the impacts of the proposed action. Because of the lack of relevant scientific data, the National Park Service is proposing to implement a comprehensive monitoring program for waterbird impacts to verify the accuracy of the impact analysis and effectiveness of mitigation measures. Additional discussion of the purpose and intent of the program and its use by the National Park Service is provided below.

Waterbird Monitoring

The National Park Service has been monitoring the size of the breeding population and nesting success of colonial nesting birds on Alcatraz Island for more than 10 years. The National Park Service intends to continue this monitoring program and expand it to provide additional monitoring of the proposed construction activities analyzed in the FEIS. The following is an overview of the existing monitoring and reporting program, and conceptual information on the proposed construction monitoring. Additional detail, including monitoring protocols, for construction activities will be developed and refined in the future and will consider input received during public review of the DEIS.

Overview of Existing Program

The following is a species-by-species overview of the type of monitoring that is conducted on Alcatraz Island by the National Park Service. Annual reports documenting the results of these monitoring activities are prepared, and the National Park Service maintains and updates a geographic information system (GIS) database. Cormorant monitoring is conducted up to 4 days a week from a bird blind or from the interior of buildings, using binoculars and spotting scopes, resulting in minimal bird disturbance.

- Black-crowned Night-heron and egret monitoring has been conducted since 1990, on roughly a weekly basis from April through June. Night-heron monitoring is particularly disruptive since the birds nest concealed within shrubbery on the Island, and monitoring is conducted as quickly and quietly as possible. Night-heron/egret subcolonies isolated from western gulls are monitored through the month of June, while those adjacent to concentrations of western gulls are monitored until late May or early June.
- Western gulls are monitored up to 4 days a week during the breeding season. Nests in the most sensitive locations are monitored from a distance using binoculars and spotting scopes. Two Island-wide censuses are also conducted just prior to and at the time of peak chick-hatching to determine the total island population size. These surveys have been conducted annually since 1990, with some modifications to reduce monitoring impacts.
- In addition, off-shore boat surveys are conducted every two weeks during the breeding season. Nests not visible from the Island are observed from a distance, by trained observers using binoculars or photo-monitoring. Boat surveys create less disturbance than island-based surveys as observers are further away from nesting birds. Species monitored during these surveys include the seabirds nesting in the cliffs.

Proposed Construction Monitoring

The existing monitoring program would be expanded to include additional, focused disturbance monitoring associated with the proposed construction activities. The purpose of this monitoring would be to:

1. Reduce the potential adverse effects of construction projects on natural resources, particularly to nesting waterbirds
2. Measure and monitor the effect of construction disturbance;
3. Assess effectiveness of mitigation;
4. Build existing data on the cause and effect relationship of construction disturbance on breeding waterbirds on Alcatraz and help fill the existing void of scientific information on this subject; and

5. Use this information as the basis for adaptive management and implementation of future repair projects needed on the Island.

Examples of the type of monitoring and observations that would be made include:

- Behavioral observations of parental care, feeding, flushing, etc.
- Raven predation in relation to construction-induced disturbance
- Gull predation on Night-herons before, during and after construction
- Use of control area/population on Alcatraz, but outside of the construction disturbance area in order measure and compare the relative effect of construction disturbance.
- Effectiveness of construction worker training, use of barriers, and other mitigation measures in compliance with contract conditions and construction area and activity restrictions.

Monitoring activities would rely on the same basic protocols used for the existing program on Alcatraz, including access to sensitive areas and documentation. Efforts to minimize the potential disturbance of nesting waterbirds during monitoring would be implemented.

As described in Chapter 4 of the FEIS, Phase One of the proposed action [Dock Repair, Balconies Repair (Building 64), Cellhouse (Stabilization and Seismic), and Sallyport (Stabilization and Seismic projects)] is not anticipated to have a major adverse effect on breeding waterbirds. These initial projects are located in areas that are not particularly sensitive and/or where avoidance or minimization of impact would be possible through the implementation of the mitigation measures described in Chapter 2. The National Park Service has committed to implementing these mitigation measures, and would monitor their effectiveness through the program described in this Appendix.

This monitoring program would contribute to and enhance the body of information available for disturbance cause and effects on Alcatraz, and would be used by the National Park Service to manage and minimize potential effects associated with future projects on the Island. The effects of Phase One would be carefully documented and reviewed by National Park Service wildlife biologists. Based on this review, a summary of the conclusions and any recommendations for the refinement and/or development of new mitigation measures would be prepared. It is anticipated that the process used to review, approve and apply these recommendations would be the park's existing project review process (a bi-weekly formal review that includes representatives from divisions within the park, including natural resources, cultural resources, maintenance, interpretation, planning, law enforcement).

Alcatraz Island waterbird monitoring reports are available to the public upon request. Results are also summarized each year in the Investigator's Annual Report that will be posted on the web at <http://science.nature.nps.gov>. The project biologist will be required to prepare an annual report documenting construction monitoring related activities and results, including a summary of mitigation measures and adaptive management actions implemented, and recommendations for adaptive management measures for subsequent years and/or projects. This document will be provided to interested parties for review and comment on an annual basis.