FINAL
COMPLIANCE PLAN
GENERAL EXCEPTION
NORTHWEST AND WESTERN SANTA CATALINA ISLAND
AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE

Submitted to:
Santa Catalina Island Company
and
Catalina Island Conservancy

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TABLE OF CONTENTS

TABLE OF CONTENTS (Cont.)

TABLE OF CONTENTS (Cont.)

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

ASBS	area of special biological significance
ASBS 25 (Subarea I)	Northwest Santa Catalina Island ASBS, Subarea I
ASBS 26 (Subarea II)	Western Santa Catalina Island ASBS, Subarea II
Bight ’13	Southern California Bight 2013 Regional Monitoring Survey
BMP	best management practice
Conservancy	Catalina Island Conservancy
General Exception	Provisions adopted by the SWRCB as a General Exception (for certain listed dischargers) to rules prohibiting discharges to an ASBS (March 2012).
General Permit	Provisions adopted by the SWRCB under the General Industrial Storm Water Permit (April 1997)
LARWQCB	Los Angeles Regional Water Quality Control Board
LID	low-impact development
MS4	municipal separate storm sewer system
NPDES	National Pollutant Discharge Elimination System
PVC	polyvinyl chloride
RWQCB	(California) Regional Water Quality Control Board
SCB	Southern California Bight
SCCWRP	Southern California Coastal Water Research Project
SCICo/CIC	Santa Catalina Island Company/Catalina Island Conservancy
Special Protections	Certain prohibitions and special conditions imposed on dischargers that are granted a General Exception to the Ocean Plan by the SWRCB
SWMP	storm water management plan
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
USC	University of Southern California
USEPA	United States Environmental Protection Agency
Waterfront Plan	Two Harbors Waterfront and Marine Operations Plan (September 2012)
WMSC	Wrigley Marine Science Center

1.0 INTRODUCTION AND BACKGROUND

This final compliance plan applies to the Northwest Santa Catalina Island Area of Special Biological Significance (ASBS 25 [Subarea I]) and to the Western Santa Catalina Island ASBS (ASBS 26 [Subarea II]). Specifically, this plan describes the approach of the Santa Catalina Island Company (SCICo) and the Santa Catalina Island Conservancy (CIC or the Conservancy) to comply with the requirements of Resolution Number 2012-0012 of the State Water Resources Control Board (SWRCB), *Approving Exceptions to the California Ocean Plan for Selected Discharges into Areas of Special Biological Significance, Including Special Protections for Beneficial Uses, and Certifying a Program Environmental Impact Report* (2012a) (General Exception). It should be noted that SCICo and CIC are separate legal entities who have jointly submitted the required plans and required monitoring data in accordance with the SWRCB resolutions and regulations. Responsibility for physical repair, maintenance, improvement or removal of any outfall or land use associated with an outfall will vary depending on actual land ownership associated with that outfall.

The following sections describe the regulatory framework for this final ASBS compliance plan and companion documents relevant to the comprehensive ASBS monitoring requirements of the SWRCB and the Los Angeles Regional Water Quality Control Board (LARWQCB), as applicable.

1.1 ASBS Regulation

In California State water quality protection areas, waste discharges must be prohibited or limited by special conditions, in accordance with the Porter-Cologne Water Quality Control Act, *California Water Policies* §13000 et seq., and implementing regulations, including:

- *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) (SWRCB, 1972; the 2012 revision became effective on August 19, 2013). The Ocean Plan establishes water quality objectives (WQOs) that provide the basis of regulating point source and non-point source waste discharges into coastal waters. The Ocean Plan prohibits all discharges to an ASBS and requires discharge points to be located a sufficient distance from an ASBS to maintain natural water quality conditions. However, the SWQCB can issue permits that exempt certain discharges to an ASBS.
- *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) (SWRCB, 1971).

The SWRCB is authorized by the Ocean Plan to grant an exception to its provisions when the SWRCB determines that the exception will not compromise protection of ocean waters for beneficial uses and that the public interest will be served.

On October 18, 2004, the SWRCB notified SCICo (as well as a number of other parties) that the discharge of "waste" into an ASBS was prohibited unless an exception to the Ocean Plan's discharge prohibition was requested. On December 15, 2004, SCICo requested an exception for discharges into ASBS 25 Subarea I.

On August 18, 2005, the SWRCB acknowledged receipt of the request for an exception, and requested additional information, which included a description of marine life, natural background of the ASBS, historical data for runoff and ambient marine waters, specific sampling, and other information to show that granting the exception would serve the public interest. The SWRCB noted in this letter that "...it is our understanding that [SCICo] will be submitting this information and working to obtain coverage under the exception for the Santa Catalina Island Conservancy as well as for the Santa Catalina Island Company. A copy of this letter is being sent [to the Conservancy] in order to confirm this."

On May 31, 2006, technical information requested in the April 18, 2005 SWRCB letter was submitted to the SWRCB. On April 23, 2007, the SWRCB deemed the request application complete.

On March 20, 2012, the SWRCB adopted Resolution No. 2012-0012 (2012a), which approved a General Exception to the Ocean Plan and granting specific exceptions for applicants provided they comply with certain prohibitions and special conditions (Special Protections) in the resolution. Attachment A to the General Exception identified SCICo as an applicant for exception, and recognized that SCICo was also acting on behalf of the CIC. The ASBS areas associated with SCICo/CIC application were described as "Northwest Santa Catalina Island" (ASBS No. 25, Subarea I) and "Western Santa Catalina Island" (ASBS No. 26, Subarea II).

Attachment B to the General Exception identified the Special Protections, which are intended to ensure that storm water and nonpoint source discharges are controlled to:

- Protect ASBS beneficial uses, including marine aquatic life and habitat
- Maintain natural water quality in ASBS
- Maintain the natural hydrologic cycle and coastal ecology by allowing clean precipitation runoff into the ocean
- Preserve coastal slope stability and prevent anthropogenic erosion

The SWRCB further resolved that granting the requested exceptions is in the public interest because the various discharges are essential for:

- Flood control
- Slope stability and erosion prevention
- Maintenance of the natural hydrologic cycle between terrestrial and marine ecosystems
- Public health and safety
- Public recreation and coastal access
- Commercial and recreational fishing

- Navigation by marine vessels
- Essential military operations and national security

On May 30, 2012, the SWRCB provided notice of its adoption of the General Exception, and directed the various applicants for Exceptions to complete three main tasks:

1. ***Conduct core monitoring*** of storm water runoff and ambient seawater for receiving waters and reference sites, either with an individual monitoring program or as a participant in a regional integrated monitoring program. On July 31, 2012, SCICo notified the SWRCB that it had opted to participate in the Southern California Bight 2013 Regional Monitoring Survey (Bight '13). As required to be considered as a committed participant in this regional program, SCICo submitted a letter of intent that described proposed monitoring for ASBS No. 25, Subarea I, to satisfy the Bight '13 regional objectives. This letter of intent was sent to the SWRCB on December 7, 2012 and was also submitted "on behalf of the Santa Catalina Island Conservancy."

   The purpose of the core monitoring program is to gather meaningful chemical and toxicological data of the receiving water and from known discharges with the highest perceived risks. Bight '13 monitoring was to be conducted during the 2012-2013 rainy season; however, because of near record dry weather during the spring of 2013, samples were collected for only one of three planned monitoring events. Accordingly, the SWQCB extended the collection and testing period through the 2013-2014 rainy season, and monitoring is ongoing.

2. ***Develop a waterfront and marine operations management plan*** (Waterfront Plan) to address and implement management measures and practices to address pollutants associated with waterfront and marine activities. SCICo submitted a Waterfront Plan as required to the SWRCB and the LARWQCB, via email on September 20, 2012.

3. ***Submit a draft ASBS compliance plan*** to address compliance with the Special Protections. The Draft ASBS Compliance Plan must describe structural and nonstructural controls, provide a draft implementation schedule, and be submitted to the SWRCB by September 20, 2013.

This final ASBS compliance plan is provided to satisfy a requirement of the General Exception. Because of the inherent overlap of the above companion documents described in item 1 and 2 above, the secondary purpose of this compliance plan is to integrate and reference the companion documents to ensure comprehensive permit conformance over the life of the permit.

A General Exception applicant must include an ASBS compliance plan in its storm water management plans (SWMPs) and storm water pollution prevention plans (SWPPPs), per Attachment B 1.a.2 of the General Exception. A SWPPP (July 2012) has been previously submitted to the LARWQCB for review and comment.

This "stand-alone" final compliance plan includes the current SWPPP (as provided in Appendix B of this plan) and is designed to fully comply with the requirements of the General Exception.

The SWRCB General Permit requires that an SWMP include the following provisions:

- Identify major outfalls and pollutant loadings.
- Detect and eliminate all non-storm water discharges to the municipal separate storm sewer system (or MS4), except as specifically and legally exempted.
- Prevent and reduce pollutants in runoff from industrial, commercial, and residential areas by implementing best management practices (BMPs).
- Control storm water discharges from new development and redevelopment.
- Inspect industrial, commercial, and construction activities.
- Provide pertinent education and promote public reporting of pollution.
- Monitor discharges and impacts on receiving waters.

Similarly, the General Exception shares the same requirements for discharges to ASBS as the General Permit does for MS4s, and these permits are therefore complementary for the development of this compliance plan.

1.1.1 Areas of Special Biological Significance

In 1974, the SWRCB designated 34 regions along the coast of California as areas of special biological significance (ASBSs) under Resolution Number 74-28. The ASBSs are “areas designated… as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable” (SWRCB, 2012a). As a result, these ASBS were afforded Special Protections.

For Santa Catalina Island, the SWRCB designated four ASBS Subareas:

- *ASBS 25 (Subarea I), Northwest Santa Catalina Island (West End) (from Catalina Harbor to Isthmus Cove)*SCICo owns portions of this land and leases land to several organizations; CIC is the dominant owner of the interior and coast lines of ASBS 25 and also leases land to other organizations. The named dischargers are SCICo, the CIC, and the University of Southern California (USC) Wrigley Marine Science Center (WMSC).
- *ASBS 26 (Subarea II), Western Santa Catalina Island (from North End of Little Harbor to Ben Weston Point)*—This area is relatively undeveloped, except for a sandy beachfront campground at Little Harbor-Shark Harbor that is on CIC property.
- *ASBS 27 (Subarea III), Farnsworth Bank*—This area is a diver-accessible reef and so has no associated lands.
- *ASBS 28 (Subarea IV), Southeast Santa Catalina Island (from Binnacle Rock to Jew Fish Point)*—The Connolly-Pacific Company operates an adjacent active rock quarry and is the primary lessee and responsible party for SWRCB regulatory compliance.

This final compliance plan covers ASBS 25 (Subarea I) generally referred to as Northwest Santa Catalina Island (West End) and ASBS 26 (Western Santa Catalina Island).

1.2 Document Organization

1.2.1 General Contents

In general, this compliance plan:

- Addresses the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to ASBS 25 (Subarea I) and ASBS 26 (Subarea II) according to Section I.A.2 of the General Exception
- Includes the ASBS SWPPP, as required for non-point source discharges, according to Section I.B.2 of the General Exception (provided in Appendix B)
- Describes the strategy of SCICo and CIC to comply with the General Exception
- Will be updated according to Sections I.A.2.h and I.B.2.c of the General Exception

1.2.2 Specific Contents

Specifically, this compliance plan:

- Describes the measures by which non-authorized, non-storm water runoff has been eliminated, and how these measures will be maintained, monitored, and documented
- Includes minimum inspection frequencies for priority discharges
- Addresses storm water discharges and, in particular, describes how pollutant reductions in storm water runoff will be achieved by implementing BMPs
- Addresses erosion control and the reduction and/or prevention of anthropogenic sedimentation in the ASBSs
- Describes non-structural and structural BMPs (both currently employed and planned for the future), including an implementation schedule

1.2.3 General Exception Requirements

The General Exception's requirements for this compliance plan are addressed in sections of this report as noted below.

1.2.3.1 Section 1–Introduction

- Describes California discharge regulations, ASBS specific requirements, compliance actions, and the organization of this compliance plan
- Does not address any specific section of the General Exception

1.2.3.2 Section 2–Discharges to ASBS 25 (Subarea I) and ASBS 26 (Subarea II)

- Identifies potential discharges to Subareas I and II, and specifically addresses the prohibition against non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS
- Addresses the requirement that all non-authorized, non-storm water runoff be eliminated
- Identifies potential storm water runoff from the island's parks and recreation facilities
- Addresses Sections I.A.2.a and I.B.2.b of the General Exception

1.2.3.3 Section 3–Prioritization of Discharges:

- Identifies potential discharges, prioritizes them based on risk to water quality, and incorporates data from storm water runoff and ocean receiving water monitoring.
- Addresses Section I.A.2.a of the General Exception

1.2.3.4 Section 4–Erosion Potential and Control:

- Addresses erosion control and the prevention of anthropogenic sedimentation in ASBS 25 (Subarea I)
- Addresses Section I.A.2.e of the General Exception

1.2.3.5 Section 5–Implemented BMPs:

- Describes existing non-structural BMPs, including an education and outreach program
- Describes existing structural BMPs and the role of structural BMPs
- Addresses Sections I.A.2.b, I.A.2.c, I.A.2.f, and I.B.2.b of the General Exception

1.2.3.6 Section 6–Planned and Proposed BMPs:

- Describes planned and proposed non-structural and structural BMPs, and the role of BMPs in maintaining natural water quality
- Addresses Sections I.A.2.b, I.A.2.d, I.A.2.f, I.A.2.g, and I.B.2.b of the General Exception

1.2.3.7 Section 7–Discharge Requirements for Parks and Recreation Facilities:

- Identifies parks and recreation facilities with the ASBS areas
- Describes BMPs or management measures and practices to prevent pollutants from entering storm water runoff
- Addresses Section II of the General Exception

1.2.3.8 Section 8–Discharge Requirements for Waterfront and Marine Operation Facilities:

- Identifies waterfront and marine operation facilities that may result in waste entering storm water runoff
- Describes BMPs to prevent pollutants from entering storm water runoff
- Addresses Section III of the General Exception

1.2.3.9 Section 9–Compliance and Implementation Schedule:

- Provides the compliance schedule and the BMP implementation schedule, and mandates submitting a report if receiving water monitoring indicates that discharges are altering natural conditions
- Describes the procedures for revising this compliance plan to maintain compliance with the General Exception
- Addresses Sections I.A.2.g, I.A.2.h, I.A.3, I.B.2.c, and I.B.3 of the General Exception

1.2.3.10 Section 10–References:

- Presents documents referenced in the development of this compliance plan

2.0 DISCHARGES TO ASBS 25 (SUBAREA I) AND ASBS 26 (SUBAREA II)

2.1 Island Geography, Ownership, and Land Uses

Santa Catalina Island, located within Los Angeles (LA) County, is one of the four Southern Channel Islands. The island is approximately 22 miles long, 8 miles across at its widest, and 0.5 mile across at its narrowest; and it encompasses 75 square miles. The highest point on the island is Mount Orizaba, at 2,123 feet. The general topography of the island is composed of relatively steep canyons, each with relatively small-to medium-size watersheds.

The main population areas are the City of Avalon (the only incorporated area on the island), located on the eastern coastline, and Two Harbors (an unincorporated town), near the northern tip of the island. Santa Catalina Island is a recreational destination for hikers, bikers, boaters and campers. Tourism and quarrying are the Island's main industries (County of Los Angeles Public Library, 2013). A variety of businesses support the recreational activities and island's infrastructure.

In 1972 the Wrigley-Offield Families, the principal owners of the Santa Catalina Island Company created the Santa Catalina Island Conservancy and subsequently transferred 88 percent of the island to the Conservancy to be preserved, largely in its natural state in perpetuity. SCICo retained ownership of 11 percent of the island with several large landholdings: 1) at the eastern end of the island and in and around the City of Avalon; 2) in the isthmus area of Catalina and Two Harbors and along the channel-side shoreline from Empire Landing to Emerald Bay; and 3) a 600 acre holding around El Rancho Escondido.

On an acre-for-acre basis, CIC is the dominant landowner within ASBS 25 and 26, although this varies from watershed to watershed (See Figure 2-1). CIC has mapped 81 watersheds on Catalina Island. In their 2003 survey of potential discharges to ASBS 25, the Southern California Coastal Water Research Project (SCCWRP) mapped potential outfalls in 22 watersheds (Figure 2-1). These outfalls were broadly categorized as "discharges and "outlets." Discharge outfalls were defined as "an anthropogenic source or location of a discernable volume of water that flows or is released directly into or immediately adjacent to the marine environment." Discharges were further classified as wastewater point sources, municipal/industrial storm water point sources, small storm drain point sources, and nonpoint sources (SCCWRP 2003, p. 5). With the exception of CAT008 (part of the separate Wrigley Environmental Institute Exception), all discharges inventoried in ASBS 25 were small storm water drains or nonpoint sources. All of the inventoried "discharge" points were associated with Two Harbors and the West End camps and yacht clubs (Fourth of July, Cherry Valley, Little Geiger, Howland's, and Emerald Bay).

In addition to inventoried "discharges," the SCCWRP survey mapped "outlet" locations. An outlet is defined as "any naturally occurring water body that drains into or immediately adjacent to [the ASBS] and includes perennial streams, ephemeral streams, naturally occurring gullies in coastal bluffs and cliffs an naturally occurring springs and seeps in areas that are not associated with anthropogenic activities (SCCWRP 2003, p. 5-6). In ASBS 25, all of the inventoried outfalls from Parson's Landing to Catalina Harbor are natural gullies draining undeveloped watersheds.

In ASBS 26, all of the inventoried outfalls are natural gullies draining watersheds with 4 percent development or less except for three mapped discharge outfalls.

SCICo is the main landowner in the Two Harbors area and also owns portions of the land from Little Geiger Cove to Emerald Bay. USC and the Wrigley Marine Science Center are the other landowners within ASBS 25. Two Harbors is a major port of entry and a primary population and service community on the west end of the island. The primary land uses are residential and public uses, with acreage as follows:

- Residential–128 acres
- View Corridor/Public Uses–56 acres
- Campgrounds/Hostels–18 acres
- Lodge/Inn–13 acres
- Utilities/Services–11 acres
- Marine Commercial/Recreational Boating–6 acres
- Transportation Center–5 acres
- Commercial–3 acres

Some locations in the West End have been leased and are under the control of entities other than SCICo and CIC including the Western LA County Council and San Gabriel Council of the Boy Scouts of America, Catalina Island Camps, and several yacht clubs. In addition, SCICo also leases housing and other buildings to USC (employee housing), Los Angeles County (employee housing), and the Long Beach Unified School District in the Two Harbors area.

2.2 ASBSs on Santa Catalina Island

Santa Catalina Island has four designated ASBSs, as described in the following subsections.

2.2.1 Northwest Santa Catalina Island (West End)—ASBS 25 (Subarea I)

Subarea I (from Isthmus Cove on the north side to Catalina Harbor on the south side) is located west of the Two Harbors area, and is commonly referred to as the "West End." Subarea I is the largest of the four ASBSs around Santa Catalina Island, with 17 miles of shoreline. The seaward boundary of the ASBS is one mile offshore and the enclosed water surface is about 11,650 acres. The official ASBS land-side boundary ends at the mean high tide line. Key pollution threats are drainage from the village of Two Harbors and other areas with near shore developments including yacht clubs, youth camps, as well as multiple mooring fields along the channel side shoreline. In contrast to mainland areas in Southern California, ASBS 25 is largely undeveloped (Figure 2-1). With the exception of Two Harbors and Isthmus Cover watersheds, percent developed areas (roads, buildings, parking lots, lawns, etc.) is very low, less than 5 percent and often less than 1 percent. In fact, under the Section IV.B.2.a of the ASBS Special

Conditions, nearly all of the outfall locations inventoried in ASBS 25 could be considered to be "ocean reference areas" with minimal (<10 percent development) such that natural baseline monitoring samples could be collected from them. With the exception of a few natural gullies, all of the inventoried outfalls from Fisherman's Cove to Emerald Bay are classified as potential "discharges" although many of these are channels draining the canyons above the camps and yacht clubs. Inventoried outfalls can be categorized as follows:

Wrigley	8 outfalls (not addressed in this Plan)
SCICo	34 discharges (small storm drains and nonpoint source) 5 natural gullies
CIC	3 discharge (small storm drains) 11 natural gullies

2.2.2 Western Santa Catalina Island—ASBS 26 (Subarea II)

Subarea II has 4 miles of coastline, extending from the north end of Little Harbor to Ben Weston Point. The beaches in this area are used for camping, picnicking, boating, hiking, and surfing. Three of the largest watersheds on the island drain to ASBS 26 (Big Spring, Cottonwood, Middle/Bulrush Canyons). Although there are some ranching, residential, and agricultural land uses in upper Cottonwood and Middle Canyons, percent watershed development is very low ranging from 0 to 3.9 percent. Under Section IV.B.2.a of the ASBS Special Conditions, all of the outfall locations inventoried in ASBS 26 could be considered to be "ocean reference areas" with minimal (<10 percent development). All of the outfall locations are owned by CIC. There are eight mapped outfall locations: 3 discharge (nonpoint source, earthen) and 5 natural gully outlets. The 3 discharge outfalls are natural to semi-natural channels that terminate behind beach deposits and rarely discharge directly to the ocean.

2.2.3 Farnsworth Bank—ASBS 27 (Subarea III)

Subarea III is owned by the State of California as submerged lands and consists of 37 acres of marine habitat, so it has no direct land-based anthropogenic inputs and is excluded from formal monitoring under this compliance plan. This area is popular for such activities as scuba diving or fishing activities.

2.2.4 Southeast Santa Catalina Island (from Binnacle Rock to Jew fish Point—ASBS 28 (Subarea IV)

Subarea IV has 3 miles of coastline along the east end of the island. Two direct discharges and three natural streams drain to the ASBS. The major source of anthropogenic impacts is a large quarry. The surface topography in the quarry area has been altered such that storm water runoff, as well as aerial deposition, may occur. It is also possible that dredging may occur at the barge-loading site. The quarry is operated by the Connelly-Pacific Company, which is the

named applicant under the same General Exception (SWQCB 2012a). Therefore, this subarea is not included as part of this compliance plan and is mentioned for reference purposes only.

2.3 ASBS Areas Addressed under this Compliance Plan

2.3.1 Areas Within ASBS 25 (Subarea I)

Areas with a developed use (e.g. campground) and/or a mapped outfall classified as a "discharge" outfall are specifically addressed in this compliance plan. Watersheds with only mapped natural gullies, very low watershed development and no developed recreational facilities are not specifically addressed in this plan (Figure 2-1). This includes Sandy Beach, Starlight, Salt Cedar Glen, Iron Bound Bay West, Iron Bound Bay East, Ribbon Rocks, Tree Poppy Canyon, Cape Cortes West, and Cape Cortes East watersheds. Mooring Fields and Waterfront and Harbor Operations within ASBS 25 are addressed separately in the *Waterfront and Marina Operations Plan* previously submitted to SWRCB on September 20, 2012.

The following areas of ASBS 25 (Subarea I) are specifically covered in this compliance plan. Note: The designated risk levels were obtained from the SCCWRP survey (SCCWRP 2003) and depicted in Figure 2-1 based on latitude and longitude of this survey as detailed in the following subsections.

2.3.1.1 Two Harbors-Isthmus Cove

This area (owned and operated by SCICo) is one of the two primary landings into the West End of Catalina Island. It consists of two watersheds (Two Harbors, Isthmus Cove) with an area of 196 acres and developed land uses ranging from 5 to 27 percent. Facilities include a dock for mainland cross channel passenger ferries and other boats, 257 moorings, 64 string line locations, fueling facilities, a dinghy dock, a boat repair facility, a restaurant, a grocery store, residences, parks, a large campground, and parking areas. Sanitary wastewater is discharged to the wastewater treatment plant. There are 23 inventoried discharge outfalls: 13 small storm drain and 10 nonpoint source (earthen or asphalt). Of these 7 are considered medium risk and 16 low risk.

2.3.1.2 Fourth of July Cove

This area (owned by SCICo and leased to the Fourth of July Yacht Club) has 42 moorings, and is used for boating and hiking. It consists of one watershed (142 acres) with low percent watershed development (3.8 percent). The area around the cove is improved with a pier, yacht club facilities, restrooms, and a fresh water supply; sanitary wastewater is discharged into a local septic system. There is one mapped discharge outfall (nonpoint source, earthen) that is considered low risk.

2.3.1.3 Cherry Valley

Cherry Valley is owned by the Conservancy and the lower part of the watershed is leased to the San Gabriel Valley Council of the Boy Scouts of America (BSA) to operate a camp. The Cherry

Valley watershed is 308 acres with 3.4 percent watershed development, located primarily in the flat lower reaches of the catchment. It is used for camping, hiking, boating, and other outdoor activities. There are 103 moorings. This area has been improved with a pier, dining facilities, bathrooms, and fresh water supply. Sanitary wastewater from this area is discharged into a local septic system. There are two mapped discharge outfalls, one small storm drain and one nonpoint source earthen channel. Both are considered low risk.

2.3.1.4 Little Geiger Cove

This area is owned by the Conservancy and leased and operated by the Offshore Cruising Club. The Little Geiger watershed is 138 acres with low watershed development (2.5 percent). It is used for boating, hiking and diving. There are 3 to 15 anchorages and 1 mooring. The area is improved with a small shelter and barbeque area. The area has no restrooms and no fresh water supply. There is one mapped discharge outfall (nonpoint source, earthen channel) that is considered low risk.

2.3.1.5 Big Geiger Cove

This area is owned by SCICo and leased and operated by Blue Water Cruising Club. Big Geiger is a small catchment of 52 acres with low watershed development (2.7 percent). It is used for boating and hiking. There are approximately 10 to 35 anchorages. The area is improved with a picnic shelter, fresh water supply, and chemical toilet. There is one mapped outlet (natural gully) that is considered low risk.

2.3.1.6 Howland's Landing / Sullivan's Beach

This area is owned by SCICo and leased to a private camping company, Catalina Island Camping. The Howland's Landing watershed is large (1085 acres) with low overall watershed development (1.4 percent). The lower part of the watershed where the camp is located is owned by SCICo. The upper part of the watershed is owned by the Conservancy. It is used for recreational activities that include camping, boating, and hiking. There are 40 moorings, plus a string line for another 10 boats. This area has been improved with dining facilities, restrooms, and a fresh water supply; sanitary wastewater is discharged into a local septic system. There are two discharge outfalls (small storm drain and nonpoint source earthen) that are rated high and low risk, respectively.

2.3.1.7 Corsair Cove

This area (owned by SCICo and leased by the Corsair Yacht Club) has recreational uses that include boating, hiking, snorkeling, and diving. It is part of the Emerald Bay watershed (see below). The site is improved with yacht club facilities, restrooms, and a fresh water supply; sanitary wastewater is discharged into a local septic system. The single discharge outfall is included below with Emerald Bay.

2.3.1.8 Emerald Bay

This area (owned by SCICo and leased by the Western LA Council of Boy Scouts of America) is used for camping, boating, hiking, snorkeling, and diving. Emerald Bay watershed is large (746 acres) with low overall watershed development (4.7 percent). The lower third of the watershed is owned by SCICo and the upper two-thirds by the Conservancy. The majority of camp developments are in the lower watershed on SCICo owned land. The area has 101 moorings and is improved with a pier, organized camp facility, and fresh water supply; sanitary wastewater is discharged into a local septic system. There are three mapped discharge outfalls (two small storm drains, one nonpoint source earthen) and one outlet (natural gully). The small storm drains are considered medium-high risk and the other outfalls low risk.

2.3.1.9 Parson's Landing

This area is a primitive campsite (owned by CIC) used for recreational activities such as camping, boating and hiking. This area consists of two watersheds (Parson's Slump, Parson's) with a total area of 629 acres. Watershed development is very low (1.7 percent Parson's Slump, 0.9 percent Parson's). There is no freshwater source but several contained chemical toilets are provided and periodically pumped out. Under the terms of a limited liability partnership with CIC, SCICo handles reservations at Parson's Landing and oversees day-to-day campground operations. There are two, low risk outlets mapped (natural gullies) in the watershed. Neither of these gullies discharge through the beach area where camping occurs.

2.3.1.10 Other Watersheds

There are nine other ASBS watersheds with mapped natural gully outlets in ASBS 26: Sandy Beach, Starlight, Salt Cedar Glen, Iron Bound Bay West, Iron Bound Bay East, Ribbon Rocks, Tree Poppy Canyon, Cape Cortes West, and Cape Cortes East. Percent watershed development ranges from 0 to 1.7 percent. Total acreage of these watersheds is 2,593 acres.

2.3.2 Areas Within ASBS 26 (Subarea II)

The following areas of ASBS 26 (Subarea II) are covered in this compliance plan.

2.3.2.1 Little Harbor

This area is owned by the Conservancy and supports a primitive 23-space campsite. The Big Spring Watershed (1032 acres) is the primary watershed that drains through the Little Harbor Campground. It has very low watershed development of 0.8 percent. The campground has contained chemical toilets that are periodically pumped out and fresh water rinse showers that discharge to a local leach field. There are several small natural surface parking areas, access roads, hiking trails, a small horse corral, and a small camper trailer storage area. Under the terms of a limited liability partnership with CIC, SCICo handles reservations at Little Harbor and oversees day-to-day campground operations. There is one mapped discharge location (nonpoint source earthen) and two outlets (natural gullies) mapped. All were categorized as low risk.

2.3.2.2 Shark Harbor

This area (owned by the CIC) is a primitive campsite with 9 sites that is used for camping, boating, hiking, and, because of its higher swell exposure, surfing. Shark Harbor watershed is 1228 acres with low watershed development (3.9 percent). It has contained chemical toilets that are periodically pumped out, a fresh water rinse shower and a small natural surface parking area. Under the terms of a limited liability partnership with CIC, SCICo handles reservations at Little Harbor and oversees day-to-day campground operations. There is one mapped discharge (nonpoint source earthen) considered low risk.

2.3.2.3 Cottonwood Canyon

This area is owned by the Conservancy and is designated for day use only (no camping). There are no facilities except for a single-track hiking trail at this location. Cottonwood Canyon is a large watershed (3228 acres) with low watershed development (2.4 percent). There is one mapped discharge location (nonpoint source, earthen) of low risk. This location appears to be misclassified as it is a natural channel that terminates behind the beach.

2.3.2.4 Pensioner's Flats

This area is owned by the Conservancy and has no trails or recreational access. Pensioner's Flats watershed is a moderately large watershed (499 acres) with low watershed development (1.0 percent). There is one mapped outlet location (natural gully) of low risk.

2.3.2.5 Ben Weston Beach-Middle/Bulrush Canyon

This area (owned by the Conservancy) has a remote hike-in only beach campsite. Middle/Bulrush Canyons are very large (9,222 acres) with low watershed development (2.3 percent). This beach presently has no facilities although prior to a large flood in 1995 had a small parking area and access road. There are plans to redevelop a new access road and parking area in the future. There is one mapped outlet (natural gully) considered to be low risk.

2.3.2.6 Cowboy Canyon (Old Ben Weston)

This area is owned by the Conservancy and has no trails or camp facilities. There is one mapped outlet (natural gully).

2.4 Dry Weather Flows

Non-storm water discharges are prohibited under the General Exception; the only allowable discharges are those that are essential for emergency response purposes, structural stability, or slope stability, or those that occur naturally.

2.4.1 Drainage Descriptions

Except for areas around Two Harbors, the potential for dry weather flows are negligible or non-existent from the mapped outfalls associated with Channel Side camps and coves and natural gullies from Parson's Landing to Catalina Harbor.

The major areas associated with storm water directives are the USC WMSC and Two Harbors area including their respective waste water treatment plant areas. Drainage from the village of Two Harbors consists of small gullies and pipes for storm water runoff. A facilities and storm water discharge flow map is presented in Figure 2-2. Two Harbors also has mooring facilities (a mooring field and pier). Youth camps with structures for camping, picnicking, and recreational use are concentrated on the natural coves along the coastline in this area.

Adjacent to the Blue Cavern Cove are the intake line for the USC WMSC, and the leach field for the treated domestic wastewater from the WMSC. The seawater return from the WMSC flows through a polyvinyl chloride (PVC) pipe onto a rocky beach and into Big Fisherman Cove. This facility is regulated under a separate National Pollutant Discharge Elimination System (NPDES) Permit (R4-2008-0017) Exception to the Ocean Plan and that monitoring and reporting are not part of this compliance plan.

Many activities may result in dry weather urban runoff that can transport pollutants from impervious surfaces such as roadways and parking lots, and deposit them into the ASBS; these activities include boat and vehicle maintenance, fueling operations, fuel storage, vehicle and equipment parking, trash compacting, welding, and waste water treatment. Other potential pollutant sources are areas with outdoors industrial activities, outside storage areas, dust-generating activities, significant spills or leaks, non-storm water discharges, and soil erosion.

In ASBS 26 (Subarea II), recreational camping is the primary activity and dry weather flows are negligible to nonexistent. Except in areas upstream of Cottonwood Beach and Ben Weston Beach where there is a year-round ground-water fed base flow in portions of Cottonwood, Middle and Bulrush Canyon stream channels. Dry weather flows over or through the beach sand deposits are never observed (and wet weather flows are very infrequent except in the largest rain events).

2.4.2 Potential ASBS Pollutants

No constituents have been identified by the SWQCB as pollutants of concern (State of the CCAs Report, 2006) within either ASBS 25 (Subarea I) or ASBS 26 (Subarea II). Preliminary results from the Bight ’13 sampling effort indicate that oil and grease, ammonia, and phosphate may be pollutants of concern, however SCICo/CIC will refine additional monitoring and BMP selection and implementation based on the final Bight ’13 monitoring results due in December 2014.

However, given the light industrial activities in the Two Harbors area of ASBS 25 (Subarea I) and, based on the types of operations and activities in this area, potential pollutant sources are primarily the (low-quantity) usage and storage of the following chemicals:

- Petroleum hydrocarbons
- Machine oil and grease
- Solvents
- Paints
- Refuse debris
- Other industrial chemicals associated with boat and vehicle maintenance (such as lubricants, battery acid, antifreeze, and metals)

2.4.3 Best Management Practices (BMPs) for ASBS

In general, for each pollutant source, non-structural BMPs are considered first, then structural BMPs. BMPs to eliminate non-storm water discharges and reduce or control pollutant sources that drain into the ASBS are introduced here and discussed in detail in Section 6.

2.4.3.1 Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, and scheduling of activities that prevent pollutants from industrial activity from contacting both storm water discharges and authorized non-storm water discharges. Non-structural BMPs that were evaluated and have been implemented include good housekeeping, preventative maintenance, spill response, material handling and storage, employee training, waste handling/recycling procedures, recordkeeping, erosion control, inspections, and quality assurance.

2.4.3.2 Structural BMPs

Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Structural BMPs include overhead storage; control devices and secondary containment structures to prevent discharges from contacting potential pollutant sources; retention ponds that do not allow storm water to discharge from the facilities of potential pollutant sources; and pollutant treatment systems such as inlet controls, infiltration devices, oil/water separators, detention ponds, and vegetative swales. Installation of these structural BMPS addresses the prohibition of dry weather flows under the General Exception and reduces loading of pollutants through runoff capture and treatment.

2.5 Storm Water Discharges (Wet Weather Flows)

Storm water outfalls are point sources of storm water runoff into receiving water bodies, as discussed in Section 1. The location and density of these outfalls are general indicators of the

significance of storm-water-based sources in the drainage area. The degree of urbanization and imperviousness of a drainage area dictate the amount of storm water that is conveyed into receiving waters. Contributing land use activities include, but are not limited to, landscaping, pet waste, and vehicular activities.

The conditions in the General Exception are designed to protect beneficial uses, yet allow continuation of essential public services, including flood control, slope stability, erosion prevention, maintenance of the natural hydrologic cycle between terrestrial and marine ecosystems, public health and safety, public recreation and coastal access, commercial and recreational fishing, marine vessel navigation, and essential military operations (national security) (SWRCB, 2012b).

Under the General Exception, the only permitted point source discharges of storm water are those authorized by the General Exception or by an NPDES permit issued by the SWRCB or Regional Water Quality Control Board (RWQCB). In accordance with the General Exception, the only allowed discharges to ASBS are those from existing storm water outfalls, and the discharges must comply with all of the applicable terms, prohibitions, and special conditions set forth in the General Exception.

2.5.1 ASBS 25 (Subarea I) and ASBS 26 (Subarea II)

Because of the large areas of open space and limited urbanization in the ASBS 25 (Subarea I) and ASBS 26 (Subarea II), the watershed adsorbs most of its runoff from rainfall events. In the developed coves, there are typically one to several small storm drainages within hardscaped areas and larger hillside storm water drainages to protect roadways and residences from potential washout. During larger storm events (e.g., generally greater than 0.25 inches) and/or multiple storm events, hardscape in developed areas may generate localized surface sheet flow that enters the ASBS.

Storm water runoff from marine operations (such boat scraping, cleaning, fueling, and engine repair), automotive maintenance operations, and other impervious areas can also be pollutant sources and elevate pollutant concentrations during storm events. The typical pollutants in such urban storm water runoff are metals, suspended solids, hydrocarbons, excess nutrients, and bacteria.

Multiple BMPs have been instituted that address potential pollution in storm water runoff, including non-structural BMPs that have been evaluated as part of this plan and are currently implemented. These include good housekeeping, preventative maintenance, spill response, material handling and storage, employee training, waste handling and recycling procedures, recordkeeping, erosion control, inspections, and quality assurance. Structural BMPs that have been evaluated and implemented include overhead coverage, retention ponds, control devices, secondary containment, and treatment.

2.5.2 ASBS 25 (Subarea I) Storm Water Outfalls

Figure 2-1 shows the locations of the 61 storm water discharges in the ASBS 25 (Subarea I) discharge area. Efforts to control pollutant sources that drain into the ASBS during wet weather are discussed in detail in Section 6. In accordance with the General Exception, a map of the surface drainage of storm water is required. Figure 2-1 also shows the applicable watersheds and resultant general drainages, and includes ASBS 26 (Subarea II).

Because Two Harbors. Emerald Bay, and Howland's Landing are the most developed areas in these ASBSs and they are considered to pose the greatest potential for storm water impacts, detailed surface drainage and facilities maps are provided in Figures 2-2 through 2-4 for these areas.

Detailed descriptions of discharge characteristics of individual watersheds and coves are provided in Section 2.3.1.

2.5.3 ASBS 26 (Subarea II)

ASBS 26 (Subarea II) has several low-threat discharges from small earthen swales as depicted in Figure 2-1. These discharges were designated as "low threat" as part of the comprehensive discharge survey into State Water Quality Protected Areas (SCCWRP 2003). Detailed descriptions of discharge characteristics of individual watersheds and coves are provided in Section 2.3.2.

2.6 Parks and Recreation Facilities Discharges

2.6.1 Pollutant Sources and General Exception Requirements

Santa Catalina Island is a popular outdoor recreation destination, and its parks and recreation facilities are a potential source of pollutants in the drainage areas of both ASBS 25 (Subarea I) and ASBS 26 (Subarea II). Parking lots can be potential sources of heavy metals, oil, and sediment; pet and human waste that is improperly disposed of is a potential source of pathogenic bacteria and parasites; and other facilities (such as picnic areas, maintenance facilities, park personnel housing, portable toilets, roads, leach fields, and fuel tanks) can be sources of various pollutants. As a result, identifying parks and recreation facilities and their associated potential pollutant sources is important when considering measures to mitigate storm water pollutants.

The General Exception has specific additional requirements for parks and recreational facilities; which have several defined potential pollution sources, such as campgrounds. Potential pollutant source details and the management measures and practices implemented at each designated public campground to address storm water runoff are discussed in Section 7.

In addition, several of the developed coves have piers or boat-launching facilities, mooring fields, boat anchorages, and beachside boat storage areas; however, these areas are addressed separately (in the Waterfront Plan).

2.6.2 Designated Public Campgrounds in ASBS 25 (Subarea I)

There are two designated public campgrounds in the ASBS 25 (Subarea I).

2.6.2.1 Parson's Landing

The Parson's Landing Campground (owned by CIC) is a secluded beach camping site seven miles west of the village of Two Harbors. It has eight primitive campsites that accommodate up to six people each, and are primarily accessible only via a moderately difficult hike or kayak trip. There is an access road to the camp area and a small parking area that only can be used by staff with gate keys. There are no shade structures and no running water but portable chemical toilets are provided and periodically pumped out. All supplies must be packed in, and most trash hauled out although there are is a limited amount of trash storage available on site.

2.6.2.2 Two Harbors Campground

The Two Harbors Campground (owned by SCICo) is a large campground with tent cabins as well as primitive camping areas. It has 45 camping sites, fresh water showers, and chemical toilets. It is accessed via a short walk from the Two Harbors dock. It is located on a hillside above the harbor on the south side of the Isthmus.

2.6.3 Designated Public Campgrounds in ASBS 26 (Subarea II)

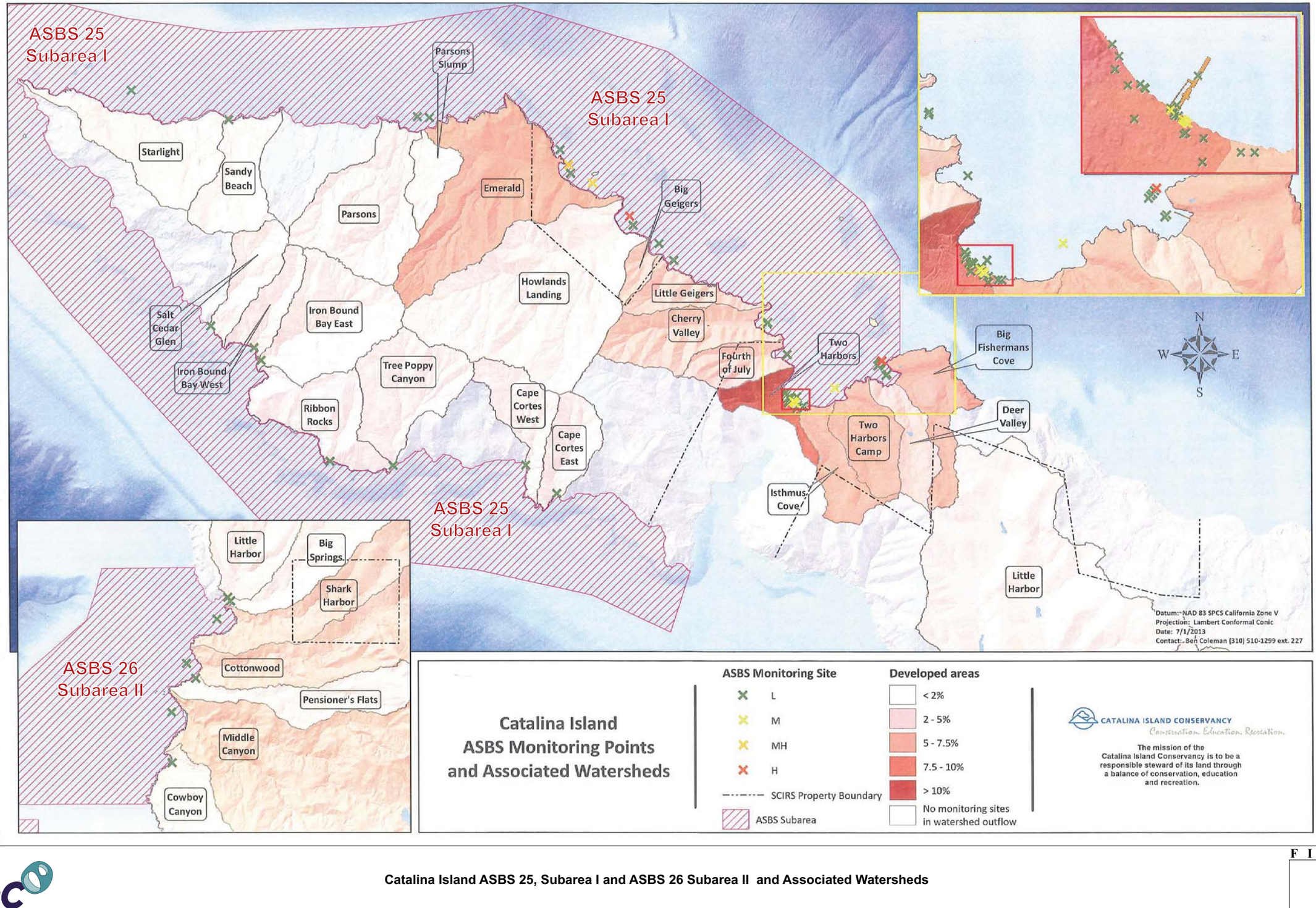
There are three designated public campgrounds in ASBS 26 (Subarea II):

Little Harbor (owned by the Conservancy) is a relatively secluded beach camping site about seven miles east of Two Harbors and 16 miles from the City of Avalon. It has 23 campsites.

Shark Harbor is a small cove immediately adjacent to Little Harbor, comprised of 8 to 10 primitive beach campsites.

Both Shark and Little Harbor are provided with chemical toilets, rinse stations, picnic tables, and potable water taps. Little Harbor camp sites also have shade structures. At both sites, an ephemeral stream channel emanates from the upstream areas of the watershed, terminates behind the beach sand deposits and there is direct flow to the ocean only during significant rain events.

The Ben Weston Beach campsite is a remote hike in only beach camp area. There are no facilities at this campsite and the beach is accessed by a moderate 1.5 mile hike or by boaters and kayakers. The drainage channel for Middle/Bulrush Canyon terminates behind the beach sand deposits and there is direct flow to the ocean only during significant rain events.



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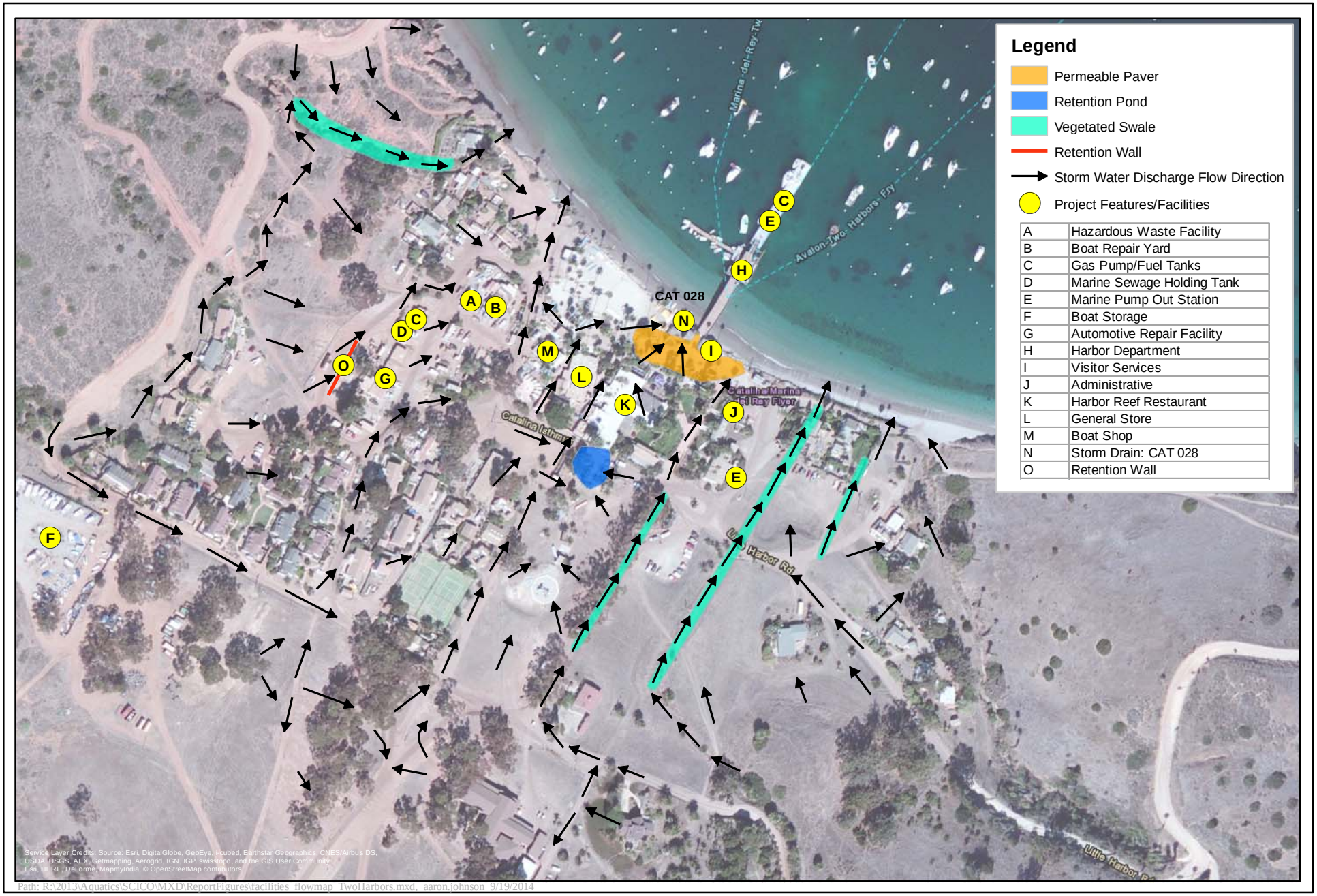
Catalina Island ASBS 25, Subarea I and ASBS 26 Subarea II and Associated Watersheds

FIGURE
2-1

Graphics/Aquatics/CatalinaIslandConservancy/ASBS_v1.ai



Path: R:\2013\Aquatics\SCICO\MXD\ReportFigures\facilities_flowmap_TwoHarbors.mxd, aaron.johnson 9/19/2014

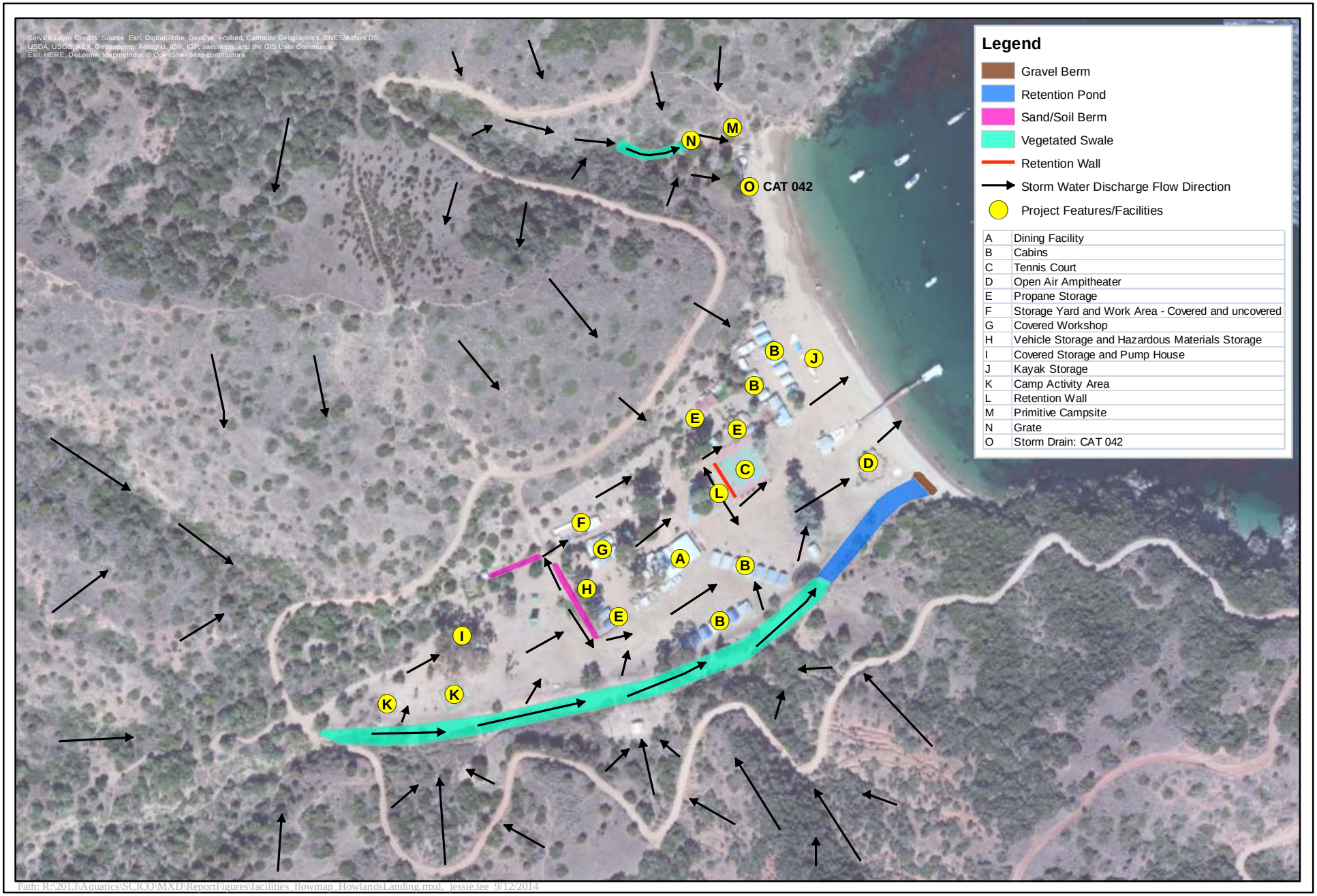
amec

Facilities and Storm Water Discharge Flow Map
Two Harbors

1 inch = 250 feet
0 125 250 Feet

N

FIGURE
2-2



Path: R:\2013\Aquatics\SCICO\MXD\ReportFigures\facilities_flowmap_HowlandsLanding.mxd, jessie.lee 9/12/2014

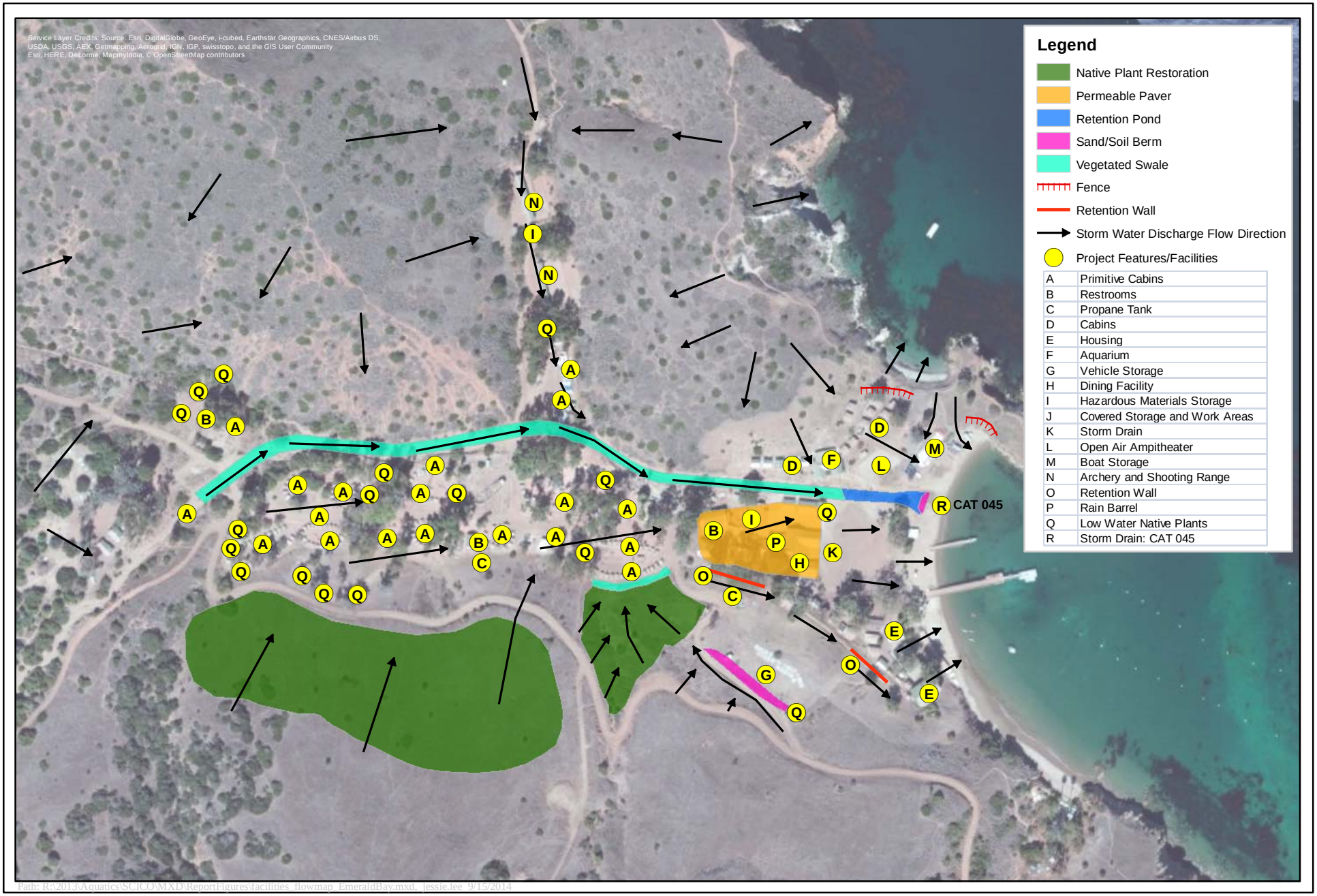
amec

Facilities and Storm Water Discharge Flow Map
Howland's Landing

1 inch = 300 feet
0 150 300 Feet

N

FIGURE
2-3



Path: R:\2013\Aquatics\SCICO\MXD\ReportFigures\facilities_flowmap_EmeraldBay.mxd, jessie.lee 9/15/2014

amec

Facilities and Storm Water Discharge Flow Map
Emerald Bay

1 inch = 300 feet
0 150 300 Feet

N

FIGURE
2-4

3.0 PRIORITY DISCHARGES to ASBS 25 (Subarea I)

The General Exception requires that this ASBS compliance plan include a map indicating the locations and priorities of discharges. High-priority discharges are those that pose the greatest threat to water quality and that have been identified as requiring the installation of structural BMPs. This section discusses only the priority discharges in ASBS 25 (Subarea I), because all discharge points in ASBS 26 (Subarea II) are ranked as low-threat (SCCWRP, 2003), are not considered priority discharges and so are not currently monitored for discharges to this Subarea.

3.1 Evaluation of Discharges within ASBS 25 (Subarea I)

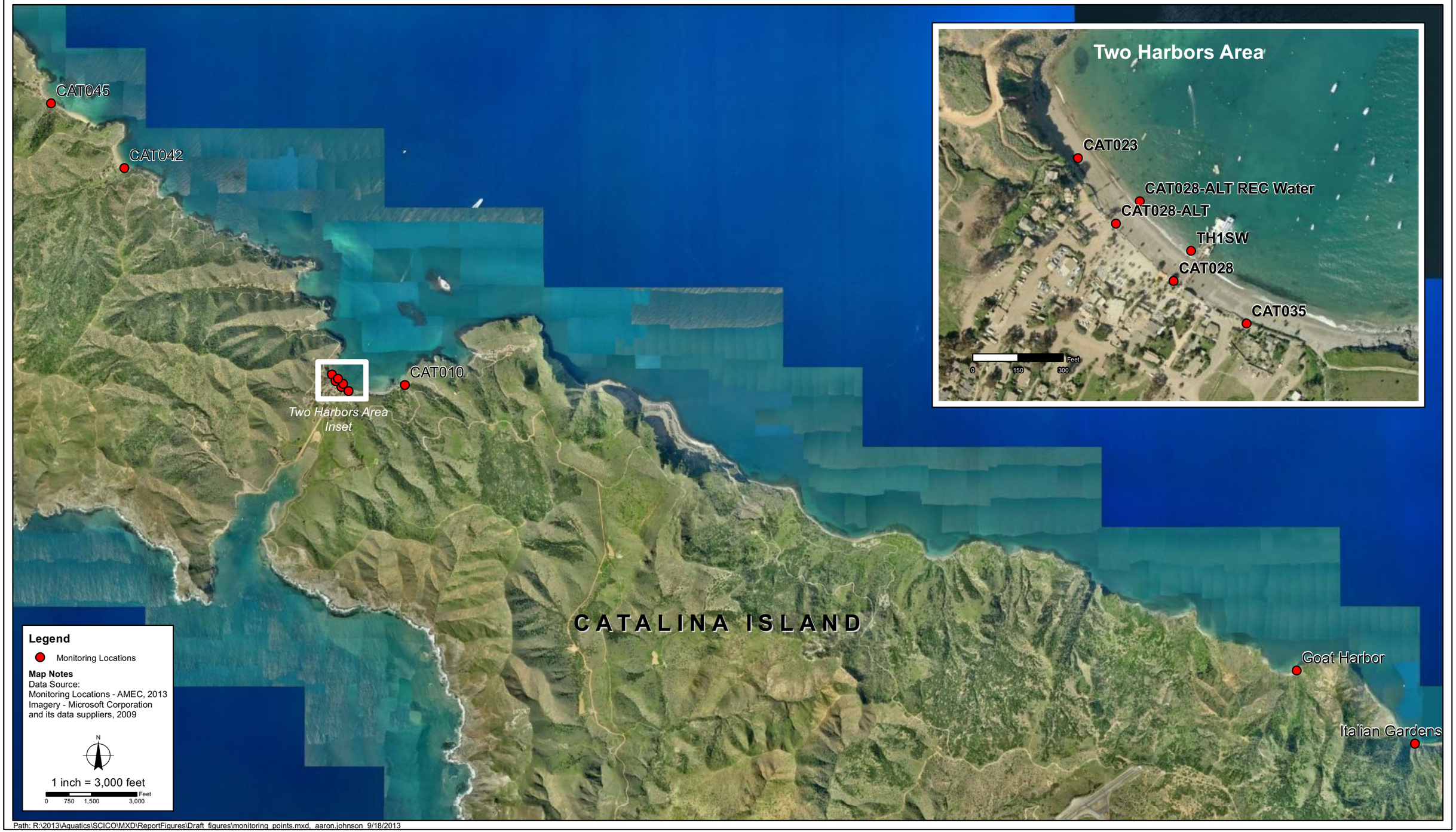
SWRCB staff developed the Program Final Environmental Impact Report (SWRCB, 2012b) to evaluate the potential environmental effects of the adoption and implementation of the proposed statewide General Exception to the Ocean Plan waste discharge prohibition. Appendix 5 of this environmental report includes the results of an assessment of discharges to ASBS conducted by the Southern California Coastal Water Research Project (SCCWRP, 2003) between March 2001 and February 2003; discharges were documented within 100 meters (m) of the high tide lines. Appendix 5 also includes water quality threat levels designated for the surveyed discharges.

The discharges within ASBS 25 (Subarea I) and ASBS 26 (Subarea II) were evaluated to determine the priority discharges, considering multiple factors:

- Appendix 5 of the Program Final Environmental Impact Report
- Size of outfall or discharge
- Available monitoring data
- Drainage area size and land use
- Practicality and safety of structural BMP placement and monitoring (e.g., limited bluff access)

The Appendix 5 survey points and corresponding threat levels are presented in Figure 2-1. Three outfalls are designated in the 2003 SCCWRP survey as high or medium high threats to water quality and so are potentially subject to additional management measures: CAT008, CAT042, and CAT045 (see Figure 3-1). CAT028 has a medium threat designation, but is centrally located in the relatively urbanized area of Two Harbors. A full description of these discharges is provided below.

- **CAT008** is a 1.5-m corrugated metal storm water discharge pipe that is regulated under an NPDES exception granted by the SWQCB to the WMSC, which is operated by USC, as well as the adjacent WMSC seawater return (CAT006). Because of this exception, this outfall is not the responsibility of SCICo/CIC and so is excluded from this compliance plan.



Path: R:\2013\Aquatics\SCICO\MXD\ReportFigures\Draft_figures\monitoring_points.mxd, aaron.johnson 9/18/2013

amec

Storm Water Drainage Prioritization Map

FIGURE

3-1

- **CAT028** is a classified as a medium threat level discharge. However, this outfall discharges runoff that is captured from the most urbanized areas of Two Harbors. Two Harbors is the most populated area on the Subarea 1, West End, and situated on the terminus of Isthmus Cove. On this basis, CAT028 is considered the most likely to contain anthropogenic constituents in storm water, with the least natural mixing in the receiving water and therefore considered the likely worst case discharge to ASBS 25.

- **CAT042** comprises two 0.5-m PVC storm water drains at Howland's Landing. Howland's Landing is situated on a relatively long and wide natural canyon flat that extends onto a broad beach which consists of sand to the northwest and gravel to the south east. There are three primary storm water discharge avenues during a significant rain event. These include the two west to east flowing drainages located along each side of the Howland Landing and the central sheet flow from the main camp that is directed toward the shoreline. The two channeled drainages mostly capture runoff from the undeveloped vegetated hillside above each side of the cove. The northerly discharge (CAT042) lies on a subleased area (Los Angeles Yacht Club) where the vegetated swale enters a concrete inlet box approximately 100 feet from shore. The inlet line bifurcates underground into two, 18" corrugated plastic pipes that daylight approximately 50 feet from the sandy shoreline. The CAT042 discharge has been characterized as a "High" threat level discharge from a rural watershed as part of the *Discharges into State Water Protected Areas* (SCCWRP 2003). The basis for the High threat designation is not known, but the designation is assumed to be based on outfall size classification where the two 18" pipes approximate a 36" outfall. The CAT042 drainage basin is relatively large and drains an undeveloped, highly vegetated hillside. The only developed area is the West End Road that traverses above the cove. Therefore, the likelihood that the water quality within the ASBS would be degraded due to this outfall is extremely low. Moreover, during the Bight '13 Regional Monitoring Program, the largest storm event measured approximately 0.87 inches of rain over a two day period (February 27-28, 2014, Howland's Landing rain gauge, direct measurement) that resulted in no direct discharge to the receiving water. Therefore no storm water discharge or adjacent receiving water samples have been collected from this location under the Bight '13 regional program.

- **CAT045** is comprised of an earthen gully, with several small drainage pipe inlets in the lower reaches. The Emerald Bay Boy Scout camp is comprised of similar facilities as Howland's Landing, but this leasehold has more hardscape areas and infrastructure including an experimental aquarium and covered shooting and archery ranges. The CAT045 discharge has been characterized as a "Medium High" threat level discharge from a rural watershed as part of the *Discharges into State Water Protected Areas* (SCCWRP 2003). The basis for the MH threat designation is not known. The main CAT045 earthen discharge channel captures runoff from the inland hillsides on the north and north west side of the main camp into a heavily vegetated earthen gully, or vegetated swale. The swale is bermed on both sides and discharges into a retention pond that is capped by a cobble stone berm inland of a gravel beach. The retention pond effectively captures all flow with the exception of very large and/or sustained rain events. Due to the coarse sandy gravel beach sediment and natural small cobble/gravel berm on

the beach, there is significant soil/sand settling and percolation of the runoff during the majority of observed rain events. Additionally, during the Bight '13 Regional Monitoring Program, the largest storm event measured approximately 0.87 inches of rain over a two day period (February 27-28, 2014, Howland's Landing rain gauge, direct measurement) that resulted in no direct discharge to the receiving water. Therefore no storm water discharge or adjacent receiving water samples have been collected from this location under the Bight '13 regional program.

As part of the Bight '13 regional monitoring program, on December 7, 2012, SCICo sent a letter to the SWRCB that outlined the proposed participation of SCICo and CIC in regional monitoring based on not only the threat level, but also other criteria used to determine the worst-case discharges that included (a) the largest outfall/discharge, (b) the greatest development in the watershed, and (c), the highest likely or known concentration of pollutants of concern.

Based on the above criteria, each discharge was ranked as core priority or ranked as secondary priority. The core-priority discharge locations were sampled and submitted for chemical and toxicity testing per the core discharge monitoring program requirements in the Special Protections (refer to Attachment B, Section IV.A) The secondary-priority discharges were in the same vicinity as core sampling stations with the same risk level, and therefore were visually monitored for flow only. Low-level threats were given the lowest priority and on this basis excluded from core monitoring, including discharges from the ASBS 26 (Subarea II).

Table 3-1 summarizes the ASBS 25 (Subarea I) Priority Discharges and six final core locations selected for water quality monitoring under the Bight '13 program.

3.2 Historic and Current Monitoring

Storm water runoff and receiving waters within ASBS 25 has been regularly monitored in order to:

- Provide a means for evaluating the environmental risks of storm water discharges by identifying types and amounts of pollutants present
- Determine the relative potential for storm water discharges to impact water quality
- Identify potential sources of pollutants
- Eliminate or control identified sources through management actions
- Assess the effectiveness of permit conditions and storm water prevention pollution plans

Monitoring through these programs is conducted to assess the effectiveness of measures implemented to protect the water quality and ASBS beneficial uses. Water quality monitoring includes:

- Special Protections discharge monitoring

- A bioaccumulation study (Bight '13)
- Sampling of receiving water (Bight '13)
- Mooring monitoring per General Exception

The majority of the above monitoring programs are ongoing or pending and the final results of these studies will be provided (in future reports and compliance deliverables) to the State Board. These results will also guide the future updates to this Final version as well as structural BMP planning.

Table 3-1.
ASBS 25 (Subarea I) Priority Discharges

Outfall	Longitude	Latitude	Threat Level	Diameter or Width of Material (meter)	Discharges onto	Owner	Current Bight '13 Regional Monitoring
CAT008	-118.48598	33.44657	H	1.5m/ corrugated metal	Fisherman's Cove beach; rock	USC–WMSC	NA
CAT010	-118.49247	33.44332	M	Varies, earthen	Two Harbors campground; sand	SCICo	Core
CAT023	-118.49932	33.44277	L	>1.0m/ concrete	Two Harbors; sand	SCICo	Core
CAT028	-118.49827	33.44178	M	~0.2m/ PVC	Two Harbors; sand	SCICo	Core
CAT031	-118.49805	33.44164	M	~0.2m/ PVC	Two Harbors; Sand	SCICo	Visual/ flow only
CAT032	-118.49802	33.44162	M	~0.2m/ PVC	Two Harbors; sand	SCICo	Visual/ flow only
CAT033	-118.498	33.44161	M	~0.2m/ PVC	Two Harbors; sand	SCICo	Visual/ flow only
CAT034	-118.49798	33.44159	M	~0.2m/ PVC	Two Harbors; sand	SCICo	Visual/ flow only
CAT035	-118.49795	33.44158	M	~0.2m/ PVC	Two Harbors; sand	SCICo	Core
CAT042	-118.52111	33.46335	H	2 x 0.3m corrugated plastic	Howland's Landing; sand	SCICo	Core
CAT043	-118.52625	33.46722	MH	0.3m corrugated plastic	Emerald Bay; sand	SCICo	Visual/ flow only
CAT045	-118.52963	33.46932	MH	Earthen; rocky beach	Emerald Bay; gravel	SCICo	Core

Notes:
All ASBS 26 (Subarea II) discharges are listed as a low threat and therefore are not included in the above monitoring locations.
Outfall identifiers and corresponding threat levels are as documented in the SCCWRP 2003 survey (Appendix 5).

A mooring monitoring sampling and analysis plan was submitted to the SWRCB on May 16, 2013, for regulatory response. Clarifications were made on May 28, 2013 (personal communications with Mariela Paz Carpio-Obeso, SWRCB). Mooring monitoring was conducted on a monthly basis, May through October in 2013. The mooring monitoring results were submitted to the SWRQCB June 3, 2014. Mussels (Mytilus californianus) were collected on May 3, 2013, for bioaccumulation testing and the results will be provided to the SCCWRP for inclusion in a regional report. A second reconfirmation mussel bioaccumulation study was performed using mussel outplantings due to issue of mussel contamination from man made structures from resident mussels from the May 2013 event. The mussel transplant samples were deployed for approximately six weeks and collected on May 12, 2014 and submitted for testing. The results of the mussel outplant samples are pending data summation and reporting by SCCWRP.

Special Protections and concurrent Bight ’13 receiving water sampling were conducted in the 2012-2014 wet seasons due to an exceptionally dry spring in 2013. While final results are pending, preliminary results were presented by SCCWRP on August 21, 2104. The Bight ’13 site for ASBS No 25 was at Two Harbors, adjacent to the CAT028 discharge. The preliminary Bight ’13 results indicate that the ASBS No. 25 receiving water quality is overall near reference condition relative to other ASBS. Analytes presented in the preliminary report for Bight ‘13 included total suspended solids, ammonia as N, nitrate as N, orthophosphate as P, cadmium, chromium, copper, lead, nickel, silver, selenium, zinc, oil and grease, organophosphates, PAHs, and pyrethroids. Samples that were collected and analyzed as part of the Bight ’08 program were significantly higher, but these results are considered suspect due to a likely sampling error are therefore considered inconclusive.

Preliminary results from the Bight ’13 sampling effort indicate three constituents of concern within ASBS No. 25: ammonia, phosphate, and oil and grease. However, pre and post receiving water samples for oil and grease were the same, so they are representative of ambient concentrations. In each case, while the elevated level is above the 85 percentile relative to reference, the results are well below the Ocean Plan (2012) limit for each constituent. Possible sources of phosphate include fertilizers and detergents. Ammonia could be introduced into the receiving water from decaying animal waste, or fertilizers. Due to the preliminary results for Two Harbors, additional efforts will be made to identify potential sources of ammonia and phosphates. This source identification will be used as a means for source reduction and public outreach. The need for further receiving water monitoring will be assessed based the results of final Bight 13 monitoring report.

4.0 EROSION POTENTIAL AND CONTROL

Santa Catalina Island was created and uplifted by an offshore major restraining bend along a right-slip fault zone (Legg et al., 2004). The island is part of Continental Borderland of the Southern California Bight (SCB). The borderland of Southern California is the wide continental shelf offshore and is characterized by ridges (the Channel Islands are ridges that extend above sea level) and basins. The SCB is a marine province stretching from Point Conception in central California to the area between Punta Colnett and Punta Eugenia in Baja California, Mexico.

The most likely source of sediment is natural erosion of canyon and open space areas within ASBS 25 (Subarea I) and ASBS 26 (Subarea II). The coastline is also subjected to landslide runoff. Anthropogenic Sediment loading to storm water may result from land disturbance such as landscaping, construction, and exposure of non-vegetated soils. Other potential sources of turbidity are urban and residential land uses as well as transportation uses, such as roads and parking facilities. Of these potential sources, open spaces, rock quarries, or construction activities can generate large sediment loads. Despite being a very steep mountain range in the ocean with high natural rates of erosion, the near shore areas of Catalina Island are well known for their extremely high water clarity and their diversity of marine life. This is likely due to the very low overall amounts of development in the island's watersheds.

4.1 Construction Activities

Construction projects in drainage areas that disturb one or more acres of soil, and projects that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ (SWRCB, 2009b) (Construction General Permit). The Construction General Permit requires the development and implementation of a SWPPP, which contains a plan for preventing erosion and controlling sediment delivery to the ASBS. The SWPPP must list BMPs that the discharger will use to protect storm water runoff and specify the placement of those BMPs. There are currently no construction projects that would qualify for additional construction monitoring. Should a plan be presented for a qualifying construction project within ASBS 25 (Subarea I) or ASBS 26 (Subarea II) within the permit period, this compliance plan will be modified accordingly, as outlined in Section 9.0.

4.2 Coastal Bluffs and Open Space Areas

Development on the coastal bluffs is subject to the California Coastal Act of 1976, which sets forth policies to guide new development in and improve public access to coastal areas. The California Coastal Act was enacted to ensure that development occurs in a manner that fulfills several goals:

- Protect the overall quality of the resources and the natural and topographic character of the area.
- Encourage a sensitive form of development.

- Retain biodiversity and interconnected habitats.
- Maximize physical and visual public access to and along the shoreline.
- Reduce hazards due to flooding in specific areas and yet minimize the need to construct flood control facilities.

Currently, the owners of private property are responsible for assessing their property's erosion problems and selecting appropriate protection.

4.3 Herd Animals

Herd animals can be a significant cause of erosion and habitat degradation. At various times in the past cattle, sheep, goats and pigs have been abundant on Catalina Island. Sheep and Cattle were removed decades ago and the Conservancy eradicated goats and pigs by the early 2000s.

The Conservancy presently maintains a small herd of American Bison (150-200 individuals). This herd is closely monitored and population is controlled using a contraception program.

4.4 Hiking Trails

The Conservancy requires hikers and bikers to obtain permits and provides information about appropriate trail use and etiquette. Rules are enforced by Conservancy Rangers. The Conservancy has a full-time Trail Manager and seasonal trail crews and implements sustainable trail building and maintenance practices.

4.5 Sediment from Roads, Parking Lots, and Roadside Vistas

The Two Harbors community is 13 miles west of Avalon. Its roadways are rugged terrain, and minimally paved in selected high-erosion areas. The Isthmus is a break in this terrain and permits fog and wind to reach the leeward side (Two Harbors).

The main access road crosses the Isthmus through Two Harbors and the community is immediately accessible via several graded dirt roadways. There are three primary designated parking areas within Two Harbors proper, and several (designated and undesignated) residential parking areas adjacent to local housing. Sediment potential may become significant during large or chronic storm events. The main road (West End Road) continues west and traverses along the northwestern coastline, accessing the developed coves along the route and terminating at Parson's Landing.

There are several narrow four-wheel drive only tertiary dirt roads that traverse the interior of the West End. One road extends from Parson's Landing to Starlight Beach and is also the western end of the Trans-Catalina Hiking Trail. Silver Peak Road travels from Catalina Harbor along the central interior ridge-line to Starlight Beach. There are also several other tertiary dirt tracks that connect Silver Peak Road to the West End Road. All of these roads can only be accessed

through locked gates by CIC, SCICo or by camp staff that has been issued gate keys. Vehicle traffic is very low. Maintenance occurs every 1-3 years and consists of spot grading of road areas exhibiting rutting. Runoff is primarily managed by sheet flow into surrounding natural vegetation. There are no significant culverts or water diversion structures. The few culverts that do exist are short (<30 feet) sections of 10-20 inch pipe.

Oiling of roads is not permitted on Santa Catalina Island. During the dry seasons, a United States Environmental Protection Agency (USEPA)-approved dust-binding agent is applied for dust control in the vicinity of Two Harbors. The currently used and approved product is Dustac®, a lignin (plant)-based additive. This additive is mixed with water at a ratio of 20:1 and applied by a spray truck as needed, typically during the drier, high traffic summer months.

5.0 IMPLEMENTED BEST MANAGEMENT MEASURES AND PRACTICES

Two Harbors Enterprises (formerly a wholly-owned subsidiary of the Santa Catalina Island Company, but now part of a consolidated entity, Santa Catalina Island Resort Services [SCIRS]) is identified under the General Permit as a Category 11 Facility (Certain Facilities Where Industrial Materials, Equipment or Activities are Exposed to Storm Water). Pursuant to the General Permit, Two Harbors/SCIRS operates under Waste Discharger Identification Number 419I019647. As required by the General Permit, SCICo has prepared and adopted a SWPPP (Appendix A) as part of the storm water management program.

Two Harbors/SCIRS services include maintaining and improving infrastructure and reducing the pollutants entering the storm drain system.

5.1 Best Management Practices

The purpose of BMPs is to reduce and minimize potential contaminants from storm water runoff that degrade the natural water quality in the ASBS. The combined use of non-structural and structural BMPs makes pollutant reduction more practical and effective.

Non-structural BMPs are designed to reduce pollutant loads before they enter the storm drain system. Source reduction strategies, such as addressing the discharge of trash and disposal of animal waste, often reduce multiple pollutants, including nutrients, sediment, and bacteria.

Non-structural BMPs may include good housekeeping, preventative maintenance, spill response, material handling and storage, employee training, erosion control, and inspections. Outreach programs have been designed to educate and change behaviors and attitudes in visitors, residents, and businesses alike.

Structural BMPs, including storm water infiltration systems, are designed to reduce pollutant loading by treatment and by reducing runoff volume via capture, retention, and infiltration.

Structural BMPs consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges, such as overhead coverage, retention ponds, control devices, containment structures and treatment systems.

BMPs were evaluated from various sources throughout California and other states, including Clean Marina programs, USEPA, water quality agencies, coastal commissions, and private associations. The BMP evaluation is provided in Appendix A of the Waterfront and Marina Operations Plan (Appendix A). Based on this evaluation, BMPs were identified for implementation.

This section discusses current treatment processes, pollution controls, and BMPs currently implemented in ASBS 25 (Subarea I) and ASBS 26 (Subarea II). Table 5-1 summarizes their potential benefits.

Table 5-1.
Summary of Implemented BMPs and Potential Benefits

Best Management Practice	Pollutant Reduction and Prevention	Runoff		Erosion Control
		Reduction and Elimination	Treatment	
Non-Structural BMPs				
Fish Waste Management	✓			
Liquid Materials	✓			
Petroleum Control	✓			
Boat and Mooring Cleaning	✓	✓		
Inspections	✓	✓		✓
Trash Management	✓			
Animal Waste Management	✓			
Channel and Slope Stabilization	✓			✓
Sanitary Sewerage Management	✓	✓		
Smart Gardening and Water Conservation	✓	✓		✓
Education and Outreach	✓	✓		✓
Pesticides and Other Chemical Management	✓			
Structural BMPs				
Low-Flow Diversions	✓	✓	✓	
Low-Impact Development	✓	✓	✓	✓

5.2 Implemented Non-Structural BMPs

Non-structural BMP reduction strategies are defined as those actions and activities intended to reduce storm water pollution that does not involve construction of a physical component or structure to filter and treat storm water. Non-structural BMPs also include landscape-based measures that involve construction and earth moving, but whose functions are not exclusively limited to storm water filtration or treatment. Non-structural BMPs consist of processes, prohibitions and procedures that prevent pollutants associated with island activities from contacting storm water discharges and authorized non-storm water discharges. In general, non-structural BMPs options are considered for each pollutant source prior to structural BMPs.

This section describes currently implemented BMPs and/or management tasks intended to protect ASBS water quality. Sections 5.1.1 through 5.1.9 describe non-structural BMPs implemented in the watershed. Some non-structural BMPs are implemented island-wide and are not exclusive to ASBS 25 (Subarea I) or ASBS 26 (Subarea II). In addition, examples of current non-structural BMPs are provided in Figure 5-1 and structural BMPs, in Figure 5-2.

5-1a. Animal Waste Signage- Two Harbors

5-1b. Cigarette Butt Collection Station- Two Harbors

5-1c. Rain Barrel- Emerald Bay

5-1d. Recycling - Two Harbors

5-1e. Water Wise Signage- Emerald Bay

5-1f. Minimized Vehicle Washing- Two Harbors

FIGURE

Non Structural Best Management Practices

5-1

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5-1g. Daily Water Metering- Emerald Bay

5-1h. Fuel Spill Signage- Two Harbors

5-1i. Boaters Guide- Two Harbors

5-1j. Decomposed Granite for Walkways - Howland's Landing

5-1k. Low Water Native Plants- Emerald Bay

5-1l. Trail Exclusion Fence- Emerald Bay

Non Structural Best Management Practices

FIGURE 5-1 continued

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5-2a. Covered Hazardous Materials Area- Two Harbors

5-2b. Vegetated Swale- Two Harbors

5-2c. Retention Basin- Cherry Cove

5-2d. Dust Supression- Two Harbors

Structural Best Management Practices

FIGURE 5-2

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5.2.1 Fish Waste Management

Fish waste can degrade water quality at marinas and mooring fields where a lot of fish are landed. In general, the waste from fish cleaning should not be disposed of into a marina basin or mooring area because of the chance of it overwhelming the natural ability of the water body to assimilate and decompose it. The dissolved oxygen consumed by the decomposing fish parts can cause anaerobic, foul-smelling conditions. Unconsumed or floating fish parts are also an unattractive nuisance to the mooring fields. Fish waste is better disposed of in offshore waters (if permissible) where the fish are caught, or deposited in proper trash containers, as other waste is. Proper disposal of fish waste by boat patrons helps keep embayments clean and free of waste. It is a good management practice for marinas to promote proper fish waste disposal.

The following BMPs have been implemented to prevent waste discharges to the ASBS:

- Encourage catch-and-release fishing, which does not kill the fish and produces no fish waste.
- Fish wastes and shellfish carcasses should not be disposed of in marina basins.
- Fish wastes may be deposited in the off-shore ecosystem where they were originally harvested.
- Fish wastes and shellfish carcasses should not be recycled into tidal waters or managed in such a way that they will wash up onto any shoreline, or cause odors or other nuisances.
- Fish cleaning on docks and floats should not be allowed unless fish wastes are collected, contained, and disposed of in an approved manner and in designated containers.
- Fish wastes should be reused or recycled in an environmentally sound manner (e.g., use fish as bait or compost).
- Marinas should provide designated fish-cleaning areas, including covered cleaning stations wherever feasible.
- Rinse-water drainage from fish-cleaning areas should be screened and free of solids, and then discharged to a sanitary sewer.

Generally, fishing activity in ASBS Subarea I is nominal to light. No major fishing tournaments are held at Two Harbors, Emerald Bay, and Howland's Landing, nor is there any particular area where a significant amount of fishing takes place. While there is no public endorsement of catch-and-release fishing, it is believed that many boaters and patrons employ this practice while fishing in the area. For those boaters catching fish for consumption, it is believed that most of the fish are cleaned at sea. Staff has not observed any significant amount of fish waste being disposed of in its onshore public dumpsters or trash receptacles. Further, there is no evidence of fish wastes floating in the marina, nor being washed ashore on its beach.

Consequently, there do not appear to be any currently significant issues relating to fish waste within the marinas and mooring fields, although greater public endorsement and education of boaters about managing fish waste is advisable, and should be promoted by the Two Harbors Visitor Center and Harbor Department as well as by all the youth camps and yacht clubs. Fishing Policies are included in the readily available Two Harbors Boater and Visitor Guide (reference Figure 5-1i).

5.2.2 Material Handling and Storage

This discussion includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

5.2.2.1 Liquid Materials Storage

Typical maintenance facilities store a variety of liquid materials for boat and vehicle maintenance operations, which generate various liquid wastes. Adequate storage and disposal facilities are important if these materials are to be kept out of the environment. Boat patrons and employees are more likely to properly dispose of liquid wastes if adequate and safe disposal facilities are provided. Proper storage and disposal of potentially harmful liquid materials can eliminate their entering receiving waters and harming the aquatic environment in the ASBS. Liquid materials for sale or use at the Tow Harbors marina, such as fuels, oils, solvents, and paints, are stored in a manner that minimizes the chance of a spill and contains a spill if one occurs. Liquid wastes such as waste fuel, used oil, spent solvents, and spent antifreeze are stored until they can be recycled or disposed of properly.

The following precautions are observed:

- To contain spills, build curbs, berms, or other secondary containment around areas used to store liquid materials.
- Place storage and disposal areas for liquid materials (a) in or near the repair and maintenance areas, (b) undercover, (c) protected from runoff, with berms or secondary containment; and (d) away from flood areas and fire hazards.
- Limit storage of hazardous materials to minimal quantities.
- Provide clearly labeled, separate containers for the disposal of waste oils, fuels, and other liquid wastes.
- Recycle liquid materials where possible.
- Prepare a hazardous materials spill recovery plan and update it as necessary.
- Keep adequate spill response equipment where liquid materials are stored.

For its own maintenance operations, SCICo stores and manages relatively small amounts of hazardous materials. The bulks of the materials are in one-gallon or smaller containers, and kept in flammable cabinets, such as oil, solvents, paints and similar maintenance chemicals. Drums are kept on containment pallets. SCICo operates a central hazardous storage area, which has overhead protection, secondary containment, security, and other features to control spills or leaks (reference Figure 5-2a). Hazardous materials management practices include frequently recording hazardous material inventories and the pickup and disposal of all hazardous materials by licensed disposal companies. For a small fee, SCICo receives and properly disposes of used oil and engine coolant collection for boaters.

5.2.2.2 Petroleum Storage

Fuel is easily spilled into surface waters from the fuel tank air vent while fueling a boat (if overfilling), and oil is easily discharged during bilge pumping. Small amounts of oil spilled from numerous boats can accumulate to create large oil sheens. Gasoline spills are also a safety problem because of gasoline's flammability. Hydrocarbons may be dangerous to aquatic plants and animals, both at and below the water surface.

SCICo has implemented the following BMPs to minimize discharges from petroleum:

- During all fueling system operations, an anchorage attendant who is familiar with the operation and trained in emergency shutdown should be in on duty.
- Fueling facilities and storage areas must be secured when not in use by appropriate shutdown devices and security locks.
- Provide signage and verbal warnings requesting boaters to estimate the quantity of fuel it will take to fill their boat, and ask them not to top off their tanks (reference Figure 5-1h).
- When fueling a boat, ensure that absorbent pads and booms are readily available; store spill containment and control materials in a clearly marked, readily accessible location.
- Any sign of leakage or spillage is to be investigated immediately, promptly cleaned up, and reported accordingly.
- Emergency telephone numbers are posted in a conspicuous location.
- The SCICo operates a fuel dock for boaters, at which there is a trained SCICo employee (during all hours of operation) who provides customer service and monitors all fuel dock activities.
- The fuel dock is also equipped with containment booms in case of any fuel spills.

Fuel at Two Harbors is currently stored in permitted aboveground storage tanks, which are a few hundred feet inland from the waterfront and have secondary containment. A fuel dispenser next to the storage area provides fuel for vehicles that support the Two Harbors facilities, including cars, light-duty trucks, and a trash truck as well as for the youth camps, yacht clubs and the general public.

5.2.2.3 Spill Response

These measures specify spill cleanup procedures and the necessary cleanup equipment, based upon the quantities and locations of significant hazardous materials that may spill or leak. SCICo has developed and implemented a spill prevention containment and countermeasure (SPCC) plan for its aboveground fuel storage tanks that prescribes the safe operation of the tanks. These measures represent best practices for fuel storage and management, and have generally proved to be effective.

5.2.3 Boat and Mooring Cleaning

Preventing the entry of chemicals from boat cleaners, cleaning solvents, and paint chips into marine waters is the most direct way to prevent their harming the aquatic environment. Boat maintenance employees and boat owners may use a variety of boat cleaners, such as teak cleaners, fiberglass polishers, and detergents, and boats are usually cleaned while in the water or onshore adjacent to the water; some of the cleaner ends up in the water. Additionally, when boat bottoms are cleaned aggressively in the water, antifouling paint can be abraded off and deposited into marina waters and sediments. Similarly, cleaning and maintaining moorings will have similar impacts on the marine waters, unless precautions and preventative measures are used. This management measure aims to minimize the release of harmful ingredients from the use of cleaners, bottom paints, and harmful residues on boat hulls into marine waters.

SCICo has implemented the following BMPs to minimize discharges from boat and mooring cleaning:

- Wash boat hulls above the waterline by hand; where feasible, remove boats from the water and clean them where debris can be captured and properly disposed of.
- If using cleansers, use cleansers that will have minimal impact on the aquatic environment.
- Try to wash boats often enough that cleansers are not necessary.
- Use low-toxicity or nontoxic antifouling paints.
- Avoid in-the-water hull scraping or any underwater abrasive process that could remove paint from the boat hull or mooring.
- Minimize the impacts of wastewater from hydropressure washing for boats and moorings.

SCICo operates a fleet of boats, including the Harbor Patrol vessels, shore boats, and various maintenance vessels. Further, SCICo maintains more than 700 moorings around the Two Harbors areas. SCICo's related general practices for maintaining boats and moorings include:

- SCICo does not repair, perform maintenance on, or clean boats in the water, but performs maintenance on its fleet boats ashore in a dedicated area.

- SCICo occasionally uses hydropressure washing to remove barnacles and debris from boat hulls. The current practice is to erect a temporary containment structure built from 8-inch straw sediment retention booms and plastic sheeting to contain removed fouling. Preliminary results from the Bight ’13 sampling indicate that current BMPs in place are performing well and that there is not a water quality issue (i.e., metals) that necessitates additional BMPs.
- Moorings are typically cleaned during the offseason (January through May); for this work, SCICo has a dedicated boat that lifts the moorings out of the water and so barnacles can be manually removed .
- When required, SCICo uses environmentally compliant and low-toxicity paints on its boats and moorings.

5.2.4 Good Housekeeping

Good housekeeping generally consists of practical procedures to keep all facilities, equipment, and storage areas clean and orderly.

5.2.5 Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as of other facility equipment and systems.

5.2.6 Record-Keeping and Reporting Recordkeeping

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, and visual observations are developed, retained, and provided, as necessary, to the appropriate facility personnel.

5.2.7 Facility Site Inspections

Storm water runoff is regulated by multiple types of permits, including NPDES permits, a state-wide Construction Activities Storm Water General Permit, and a state-wide Industrial Activities Storm Water Permit (General Permit), and herein under the General Exception.

A pollution prevention team carries out the storm water management activities outlined in the SWPPP, SWMP, and General Permit. The specific responsibilities of this team are to:

- Implement the elements of the SWPPP and SWMP
- Evaluate the effectiveness of the SWPPP and SWMP
- Modify the SWPPP and SWMP as needed to comply with the General Permit
- Supervise sampling of storm water discharges
- Supervise inspections

- Prepare the records and reports as required by the SWPPP, SWMP, and General Permit; and interface with regulatory agencies

Inspections of operations or activities are an effective way to quickly assess potential impacts on water quality and to correct deficiencies and/or change behaviors. These types of evaluations increase efficiencies in addressing discharges, correcting behaviors, and abating sources of targeted pollutants from residential, commercial, and light industry areas.

SCICo requires the following inspection frequencies in accordance with the General Exception:

- Municipal facilities: Once before and once during the rainy season
- Construction sites: Weekly during the rainy season
- Industrial facilities: Monthly during the rainy season
- Commercial facilities: Twice during the rainy season
- Outfalls at least 18 inches in diameter: Once prior to the beginning of rainy season (October 1), once during the rainy season, and then maintained to remove trash and other anthropogenic debris as needed. Specifically, this applies to the CAT028 outfall at Two Harbors and to the CAT042 outfall at Howland's Landing.

5.2.8 Trash Management

The waste generated around the island at various landings is hauled by trucks to the City of Avalon, where it is either recycled or buried in a landfill. It is required that waste be separated (trash, recyclables, and compostable wastes) before it arrives in Avalon. Camps on the island educate campers on these requirements prior to their arrival, and enforce these actions. Visitors are urged to avoid bringing items such as new purchases with excessive packaging, disposable items, or any other items that generate excess trash (CELP, 2013).

Trash management focuses on controlling solid waste from boats and the general public. Solid waste from boater trash and from boat cleaning, maintenance, and repair might contain harmful substances, such as paint chips or solvents used to clean or polish metal or wood. Further, solid waste from general activities and marina use, such as plastic bags, cups, cigarette butts, and food containers, also pollutes surface waters and degrades the habitats of aquatic animals and plants. Picking up and properly disposing of trash minimizes this form of nonpoint source pollution. Providing sufficient waste receptacles, separating wastes into classes of recyclables, and preventing litter are all generally accepted practices.

SCICo procedures or processes for handling, storing, and disposing of waste materials and recyclable materials include:

- Post signs directing patrons to solid waste disposal and recycling areas, clearly spell out rules, and note any prohibited wastes; no disposal of hazardous waste or hazardous material receptacles is allowed.

- Provide plenty of containers for collection of recyclables.
- Furnish separate containers for glass, recyclable plastics, scrap metal, aluminum, wood pallets, papers, and cardboard.
- Cover trash receptacles and dumpsters at all times.
- Inspect solid waste collection facilities (by marina personnel).
- Encourage marina patrons to participate in waste disposal and recycling programs.
- Clean up uncontained waste immediately.
- Secure waste receptacles that are placed adjacent to or over the water, such as docks, piers, berths, and ramps.
- Require use of tarpaulins and vacuums to contain and collect paint chips, sanding waste, and other debris from boat maintenance areas.
- Do not allow deck and dock hosing to wash debris into drains or directly into receiving waters.
- Prohibit the open burning of waste, including petroleum waste, plastics, garbage, and any material that generates black smoke.
- Visually inspect the Isthmus Cove beachfront daily (by Two Harbors personnel); immediately pick up and properly dispose of any observed trash or debris.

Two Harbors currently has a rigorous solid waste management program that serves visitors, boaters, and residences:

- Trash receptacles are placed strategically around public areas.
- Dumpsters and mixed recyclable bins are provided and easily accessible near the Isthmus pier.
- There is weekly trash pickup service at all public areas, the residential grounds, and commercial operations.

A general visual observation of Isthmus Cove area and beaches indicates that very little, if any, trash or debris is on the ground, which is evidence that these solid waste management practices are generally effective. Waste Management Policies are included in the Two Harbors Boater and Visitor Guide, through extensive signage and available receptacles for segregated trash (reference Figure 5-1a,b,d).

5.2.9 Animal Waste Management

Pet waste stations are provided along the waterfront for the convenience of boaters (reference Figure 5-1a).

5.2.10 Sanitary Sewerage Management and Boat Sewage Facilities

5.2.10.1 Boat Sewage Facilities

Boat sewage is a problem when discharged into surface waters without pretreatment. The result is similar to situations in which discharges of municipal sewage close beaches when heavy rainstorms overburden the sewer systems and rainwater mixed with raw sewage overflows directly to surface waters. Sewage from boats is more concentrated than that from either combined sewer overflows or sewage treatment plants because marine heads use very little water for flushing, nor is their sewage diluted by water from bathing, dishwashing, or rain. Nutrients in boat sewage stimulate growth of aquatic plants and pathogens, which can cause human health problems directly through contact in the water or indirectly through eating contaminated seafood.

SCICo has implemented the following BMPs to manage and eliminate discharges of sewage waste:

- Provide pump-out service at convenient times and at a reasonable cost or no cost.
- Keep pump-out stations clean and easily accessible.
- Establish practices and post signs to control pet waste problems.
- Provide public restrooms, showers, and lockers near public access piers and boat ramps.
- Provide pet waste areas for the convenience of boaters.
- Declare all marina waters to be “No-Discharge Zones.”
- Educate boaters about waste discharges.
- Prohibit the use of Y-valves on boats on marina waters.

Currently, SCICo offers boaters a free Pumpahead pump-out station, located on the Isthmus pier. SCICo also maintains a portable toilet dump station adjacent to the public restrooms. These marine wastes are consolidated into a 2,000-gallon holding tank, and subsequently transported to Avalon for disposal on the mainland.

5.2.10.2 Sanitary Sewerage System

There are two waste treatment plants in the Two Harbors area. One plant services the USC WMSC campus and the other is for the Two Harbors area proper. Both systems pump their sanitary sewer waste to a plant that provides primary and secondary treatment, then disposes of the aqueous waste in dedicated spray fields. Both treatment plants are regulated under stand-alone permits.

5.2.11 Smart Gardening and Water Conservation

The island provides various resources that promote smart gardening and educate and inspire residents through exhibits and programs featuring water conservation and the sustainable use of related natural resources. SCICo/CIC and many leaseholders actively encourage water conservation and smart gardening practices, such as resources for plants for California-friendly landscapes and other sustainable landscaping resources. Specifically, these include:

- Vegetated Swales: Biofiltration BMPs reduce a runoff velocity, which allows sediment and other pollutants to settle out; biofiltration also absorbs nutrients (reference Figure 5-2b).
- Revegetation: Replacing non-native ornamental vegetation with native, drought-resistant vegetation reduces erosion, water use, and subsequent runoff (reference Figure 5-1k). The Conservancy operates a native plant nursery and provides consultation to camps and other landowners on installing and caring for native, drought-resistant vegetation.
- Water Conservation: On an island, water resources are limited; programs that include water harvesting in rain barrels (reference Figure 5-1c) and signage encouraging water conservation help conserve water and prevent water pollution by reducing the amount of runoff entering the storm drain system (reference Figure 5-1e). Southern California Edison, in conjunction with resources from the Metropolitan Water District of Southern California, recommends many effective ways for island residents and businesses to conserve water. In addition, Catalina Environmental Leadership Program (CELP) has posted sustainability requirements at http://celp.net/about/sustainability/camp-conservation-guidelines-sustainability-sub-page/

5.2.12 Education, Outreach, and Training

5.2.12.1 Education and Outreach

Public education is one of the most effective ways to reduce pollution in and around marinas and from recreational boating. A primary factor in the success of any pollution prevention program is the widespread support by an educated public. Public education is a low-cost, effective, proven method to improve and reinforce environmentally conscious behavior in all segments of the public, including the boating public. These programs educate and inform residents, visitors, and business owners that it is illegal, and punishable by fines, to discharge non-storm water discharges into the storm drain system.

The Conservancy has a full-time Education Department that currently offers multiple, environmental education programs on Catalina Island including the following:

1. Naturalist Training. This is an innovative program offered at no-cost to island businesses and camps where Conservancy staff provides training on the basics of island ecology with practical information on how to live and work on the island in an environmentally knowledgeable and responsible way. Over the past 3 years, training is provided to staff of all of the West End camps

on an annual basis as well as drivers, guides and other staff of business on Catalina Island. The Conservancy is currently developing an Ocean Module to supplement the current Naturalist Training I and II courses.

2. Two Harbors Mobile Nature Center. During the busiest boating and tourist season, the Conservancy deploys a mobile nature center at Two Harbors that is staffed by trained, seasonal naturalists. This center currently focuses on island-wide conservation information and is located in Buffalo Park behind the main Two Harbors visitor area. Information specific to the ASBS, water quality and marine conservation and protection could be included in the information panels and programming operating out the center. Additionally, deploying the center in a more centralized location at Two Harbors (e.g. next to the pump station in front of the visitor center in the main Two Harbors courtyard) would increase the number of visitor contacts and the ability to disseminate information about good boating and land practices.

3. Stop-the-Spread. This is an innovative program where the Conservancy works with camp staff to train and use campers to map and control invasive plants within the camp boundaries.

In addition, to the West End programs discussed above, CIC offers environmental education programs that protect and restore endangered species and threatened habitats, such as the following:

- Avalon Canyon and Airport-in-the-Sky Nature Centers
- Wrigley Memorial and the Botanic Garden
- Guided touring experiences in the Island's rugged interior
- An award-winning radio series, Isla Earth
- The CIC website, http://www.catalinaconservancy.org/index.php?s=about&p= about_cic

Finally, all of the West End camps have trained environmental education staff and a strong focus on marine activities and education for their campers.

SCICo has multiple approaches to educating its residents, visitors, and industry on ways to prevent pollution and protect local waterways. These include the following:

- Boater and Visitor Guide: This guide is free and provides tips for protecting Santa Catalina Island's marine environment (reference Figure 5-1i).
- Signage: Signs designate the locations of waste and recycling areas, prescribe animal waste management, and address fuel spill prevention.
- Fact Sheets and Brochures: The visitor center prominently displays Surfrider Foundation tri-fold brochures promoting habits to keep the beaches clean.
- Tenant and Lease Restrictions

- Communications: Two Harbors has several touch points or areas through which it communicates with new and returning boaters and patrons. These communication ports are the Harbor Patrol, fuel docks, the visitor center, the local restaurant, the SCUBA diving shop, its website, email lists, newsletters, and mailing lists. These methods are being used more often to publicize and promote environmental practices. These are effective means to educate and promote ASBS information and environmentally friendly practices, such as boat cleaning, sewage disposal, and solid waste management.
- Town Hall Meetings: Meetings conducted by SCICo and CIC staff that informs residents of General Exception environmental monitoring requirements and the associated environmental fee to support this monitoring and its importance in maintaining the health of the island's ASBS.

5.2.12.2 Employee Training

Through its pollution prevention team, SCICo trains its personnel who:

- Implement activities identified in the SWPPP
- Conduct inspections, sampling, and visual observations
- Manage storm water

This program is described in the SWPPP (Appendix B, Section 4).

5.2.13 Management of Pesticides and Other Chemicals

There is limited use within the developed areas of the ASBS Subarea I. Such use includes the spot application of pesticide in the summer to control fleas (which are primarily due to feral cats), enclosed pesticide-laced bait stations to control yellow jackets; and enclosed pesticide bait trays for rodent control. SCICo/CIC provides resources and educational information on pest control and proper lawn care, in an effort to reduce use of pesticides on the island. SCICo/CIC encourages native plant use in landscaping to eliminate pesticides and reduce use of fertilizers and water.

In the interior areas of the West End, the CIC has been implementing an invasive plant control program for over 10 years. Common herbicides (e.g., glyphosate) are used in a targeted fashion to control common invasive plant species on the island (e.g. fennel, Harding grass, etc.). All herbicide use is in accordance with state and federal law and manufacturer label instructions and is only performed by properly licensed and trained staff.

5.3 Implemented Structural BMPs

This section describes the structural BMPs, including low-impact development (LID) measures, which are currently being implemented. To control storm water discharge to the ASBS during a design storm, permittees must first consider using LID practices to infiltrate, use, or evapotranspire storm water runoff onsite.

LID emphasizes conservation and use of onsite natural features to protect water quality. LID can significantly increase the protection of water quality by implementing engineered small-scale controls that replicate the pre-development hydrologic regime of watersheds by infiltrating, storing, evaporating, and detaining runoff close to its source.

In Emerald Bay, there are numerous structural BMPs integrated into the surrounding landscape that flow into the CAT045 drainage channel or through other minor discharges towards the ASBS. These include LID features; the entire main plaza area is covered with pervious pavers, a rain barrel to capture storm water from the main complex roof, trail exclusion fencing to discourage cliff side trail erosion, low water native plants along the embankment of the CAT045 channel walls; plantings of native vegetation throughout the camp; annual removal of non-native fennel during the summer months; daily water metering to identify potential water leaks and for targeted water use.

Structural BMPs are built into the development at the site scale, or at a large scale for centralized structural BMPs, which are regional facilities that receive flows from neighborhoods or larger areas and often serve the dual purposes of flood control and groundwater recharge. These BMPs are often in public spaces and can be co-located in parks or green spaces. Structural BMPs reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. These structural BMPs collectively address the prohibition of dry weather flows under the General Exception and reduce loading of pollutants through runoff capture and treatment. These structural BMPs include:

- Retention ponds that reduce the pollutants in storm water discharges and in authorized non-storm water discharges
- Berms or other devices that channel or route runon and runoff away from pollutant sources
- Vegetated swales
- Secondary Containment
- Overhead Structures

Examples of specific structural BMPs that are currently employed are detailed in the following subsections.

5.3.1 Retention Ponds, Berms and Vegetated Swales

Retention ponds are basins, ponds, surface impoundments, berm areas, etc. that prevent storm water from discharging from the facility and also allow the storm water to infiltrate into the water table. There are small retention basins in Two Harbors and Cherry Cove; see Figure 2-2 and 5-2c, respectively).

Due to the natural low lying area of Two Harbors area, there is an established system of berms and drainage ditches that direct storm water to several main vegetated swales (reference Figures 2-2, and Figure 5-2b).

In both Emerald Bay and Howland's Landing there is an extensive, deep (3-5 feet) vegetated swale installed that collects storm water from the upland drainage basin, diverts it away from anthropogenic structures, and then allows it to pool in large, gravel bermed, retention ponds (reference Figures 2-3 and 2-4). These retention ponds allow storm water to infiltrate into the ground, filtering out particulates and other potential pollutants while recharging groundwater. The retention ponds rarely breach during storms (e.g., these retention ponds did not breach during 2012-2014).

In Howland's Landing, soil berms divert storm water sheet flow away from work areas and hazardous materials storage that reduce the potential for pollutants to enter the ASBS. Moreover, a retention wall installed upgradient of the tennis court reduces sheet flow and flow velocity of storm water, and permeable gravel paths that promote infiltration have been installed throughout camp.

5.3.2 Secondary Containment Structures

These containment structures are placed around storage tanks and other areas to collect any leaks or spills. These structures are employed at the hazardous material storage and fuel storage tank areas in Two Harbors, (reference Figure 5-2a), Emerald Bay, and Howland's Landing

5.3.3 Overhead Coverage

Overhead coverage structures are found in Two Harbors, Emerald Bay, and Howland's Landing. They provide horizontal (roof) coverage of materials, chemicals, and pollutant sources that prevents their contact with storm water and authorized non-storm water discharges. (reference Figure 5-2a).

6.0 PLANNED AND PROPOSED BMPS

The Santa Catalina Island Company and the Catalina Island Conservancy will implement required programs and practices, evaluate their effectiveness, and make adjustments over the implementation period of the compliance Plan. The prioritization process for implementing BMPs carefully considers many factors, including feasibility, cost-effectiveness, and the potential to reduce pollutant loads. These factors have been considered and analyzed as part of the development process for each individual management practice. Prioritization allows BMPs with the highest feasibility, highest cost-effectiveness, and greatest potential to reduce pollutant loads to be implemented early in the implementation schedule.

To quantify the effectiveness of BMP implementation, the General Exception provides water quality target levels, as follows:

- Table B, Instantaneous Maximum Water Quality Objectives, in Chapter II of the 2012 Ocean Plan or
- A 90 percent reduction in pollutant loading during storm events for SCICo/CIC's total discharges

Pending the results of the current monitoring, existing BMPs will continue to be maintained and/or enhanced. These BMPs and enhancements are described in Section 6.1.

6.1 Non-Structural BMPs

6.1.1 Good Housekeeping

- Continue employee training on good housekeeping practices, possible source reductions, inventory management, and selection of alternative "green" products (as practical) to minimize the quantity and types of products that could degrade storm water.

6.1.2 Fish Waste Management

As part of the Two Harbors environmental policies:

- Endorse catch-and-release.
- Prohibit fish waste cleaning or disposal in the marina and waterfront areas.
- Further publicize the fish waste policy as currently described in the Two Harbors Boater and Visitors Guide. Evaluate utilizing the Mobile Nature Center (location and content delivery) to aid in this effort.

6.1.3 Material Handling and Storage

- Update the Spill Contingency Plan for fueling operations and for the fuel dock.
- Research and implement green alternatives.
- Evaluate materials for reuse or recycling.
- Publicize the used oil collection point currently offered at Isthmus Cove.
- Post the telephone numbers of an emergency contact (a key SCICo employee who lives in Two Harbors).

6.1.4 Boat and Mooring Cleaning

As part of the Two Harbors environmental policies:

- Establish and publicize a boat cleaning policy.
- Evaluate using green practices in mooring cleaning procedures.

6.1.5 Inspections

- Perform inspections routinely, satisfying the requirements of both the General Permit and General Exception.
- Continue the current inspection schedule (as detailed in Section 6.1.7) for future inspections.

6.1.6 Erosion Control

- Continue to apply dust control (Dustac®) to most used roads in Two Harbors (reference Figure 5-2d).
- Leave vegetation in drainage swales to the extent practical (e.g., to maintain fire suppression (reference Figure 5-2b).
- Encourage landscaping using drought tolerate native plants for slope stability and soil retention (reference 5-1k). Collaborate with CIC's native plant nursery and restoration staff on use of drought tolerant plants and native habitat restoration in the Two Harbors area.
- Limit access to high erosion coastal trails and encourage use of designated pathways (reference Figure 5-1l).

6.1.7 Trash Management

- Provide additional containers for public use for combined recyclable wastes.
- Post additional signage in all areas that prohibit burning trash.

- Provide additional waste receptacles for trash on the fuel dock, for boaters as a convenience to dispose of onboard trash while fueling.

6.1.8 Sewerage System Management

- Maintain signs showing the locations of pet waste areas and other facilities.
- Publicize a no-discharge zone through public outreach.
- Publicize prohibition of Y-valves for boaters.

6.1.9 Water Conservation

- Control watering of grass area in Two Harbors.
- Audit water use to evaluate water-saving upgrades, such as low-flow fixtures, dry mounts, and metering.
- Maintain and publicize minimal vehicle washing (reference Figure 5-1f).

6.1.10 Education and Outreach

- Publicize ASBS information and environmental policies in the Annual Boater and Visitor Guide.
- Provide additional signs and maps to publicize ASBS information and the Two Harbors Environmental Policies.
- Develop and/or adopt fact sheets and/or additional links to SCICo/CIC websites and their information on key environmental practices and topics.
- Integrate environmental requirements and practices into tenant leases, plus campsite reservations, mooring reservations and other legal agreements.
- Promote, educate, and reinforce the Two Harbors Environmental Policies regarding ASBS information, targeting both new and returning visitors through various communication media.
- Develop an education program or other cooperative efforts through which the Boy Scouts can learn and/or participate in the Two Harbors clean marina program.
- Educating boaters on the proper disposal and recycling of hazardous materials.
- Leverage the existing environmental education facilities (e.g., moving the Mobile Nature Center to a more visible location, working with the Emerald Bay Marine Center, developing school-based programs for Avalon Schools) to improve visitor contacts and information dissemination.

6.2 Planned or Proposed Structural BMPs

Preliminary results for the 85 percentile threshold of reference sample concentrations for the Bight ’13 regional monitoring study were disseminated by SCCWRP on August 21, 2104 for compliance to maintain natural water quality of ASBS. The paired receiving water discharge for the Bight ’13 study was collected at Two Harbors (reference Fig 2-2, CAT028). Two Harbors is the most developed area within ASBS 25 Subarea 1 and has the same general topography and geology as Emerald Cove and Howland’s Landing. Therefore, it is assumed these CAT028 results are conservative and applicable to the CAT042 and CAT045 discharges. Although results are preliminary, the majority of constituents were well below the 85 percentile reference criteria with the exception of oil and grease, ammonia and phosphate. Pre-storm concentrations of oil and grease in the receiving water are the same as post-storm and are therefore representative of ambient concentrations.

Due to the preliminary Bight ’13 results for Two Harbors, additional efforts will be made to identify potential sources of ammonia and phosphates (e.g., fertilizer and detergent use). This source identification will be used as a means for source reduction and public outreach. Additional wet weather paired receiving water sampling will be conducted at CAT028 for constituents of concern identified in the Bight’13 monitoring program final report to evaluate conformance for maintaining natural water quality.

Both Howland’s Landing and Emerald Cove were evaluated for adequacy of current BMPs and potential discharge to the ASBS. Due to the relatively limited development, the controlled educational/recreational use of these areas, the current structural BMPs that are in place, and the natural berm and soil/sand infiltration at CAT042 and CAT045, there are currently no significant additional structural BMPs anticipated for these areas.

Data comparison for potential alteration to natural water will be performed in 2015 and these results will be the basis for the design of planned and proposed structural BMPs, as deemed necessary. Any proposed structural BMPs and tentative implementation schedule will be submitted for SWRCB comment and approval by September 20, 2015. The implementation and construction schedule will target 2016-2017, with full implementation of structural BMPs prior to the March 20, 2018 operational deadline. Should the operational deadline not be met for financial or other implementation limitations, additional information to support an extension will be provided to the SWRCB prior to December 31, 2017 for regulatory comment and approval.

7.0 DISCHARGE REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

The General Exception specifically requires SCICo/CIC to address storm water runoff from parks and recreation facilities, including identification of all potential pollutant sources (including sediment) that may result in waste entering storm water runoff.

The several campgrounds owned and operated by SCICo/CIC are considered to be defined pollutant sources and are subject to implementation of appropriate runoff BMPs, including control of soil erosion and sediment impacts, public education and outreach, trash control, picnic areas, portable toilets waste management, runoff from parking areas, and park personnel housing. Other defined potential sources include fuel tanks, leach fields, piers, and boat launch facilities; however, there are no sewerage leach fields or fuel tanks at these campgrounds, and piers and boat launches are addressed in the Waterfront Plan.

The designated campsites, as described in Section 2.3, are Parson's Landing and Two Harbors Campground in ASBS 25 (Subarea I), and Little Harbor, Shark Harbor, and Ben Weston Beach in ASBS 26 (Subarea II).

Potential sources of pollutants identified for all of the above camping facilities are:

- Barbeque and fire rings
- Picnic tables
- Chemical toilets (except for Ben Weston Beach)
- Service roads
- Trash receptacles (except for Ben Weston Beach)

In addition, the Two Harbors and Little Harbor campgrounds have:

- Showers and fresh water
- Designated parking areas
- Ranger station (seasonal)
- A small riding ring (Little Harbor only)
- A small camper storage area (Little Harbor only)

Per the General Exception, the following subsections identify possible pollutant sources and corresponding controls to minimize or eliminate discharges to maintain natural water quality.

7.1 Trash Cans

Picnic areas can be a source of litter. Waste generated from recreational picnic area use (such as carelessly discarded trash, paper wrappers, and plastic bottles) has the potential to enter the receiving waters of the ASBS. Trash cans are regularly emptied especially during busy weekends and the summer season.

Providing maintained picnic areas reduces the spillover of food, trash, and decorations taken by visitors into more sensitive beach areas. Picnic areas provide designated areas for cooking and are near trash cans. Posted signs encourage users to maintain clean picnic areas.

7.2 Roads, Parking Lots, and Soil Erosion

Parson's Landing is subject to traffic only from service vehicles and staff (SCICo, CIC, camps) who have been issued gate keys. Parking is restricted to the bluff above the beach and vehicle impacts and parking lot runoff are considered minimal.

Both Two Harbors and Little Harbor have managed campgrounds, with parking areas near designated camp sites separated by maintained grounds that are planted with grasses and both native and non-native plants. However, both areas have relatively low vehicle traffic impact, because vehicle ownership and travel are restricted on the island and many visitors use public transportation or hike to these campgrounds.

As part of routine park maintenance and monitoring, parking lots will be visually checked for any significant incidental spills (vehicle leaks) and any such spills will be spot-removed and properly disposed. Roadways are situated to discourage vehicular beach access, and parking areas are set back from the beaches. Parking areas are graded seasonally on a as needed basis.

Vegetated areas are maintained to prevent soil erosion, and watering of landscaped areas is limited and restricted to discourage runoff.

The impact of sedimentation from runoff in these areas is considered negligible.

7.3 Chemical Toilets

Chemical toilets provide a self-contained, convenient, and hygienic means to control human wastes. These portable toilets use a deodorizer in the holding tank. This chemical is typically blue and, when it interacts with enough waste, it turns green. These portable facilities are regularly drained, cleaned, disinfected, and deodorized. Wastes are discharged to local sewerage at Two Harbors for subsequent treatment. Other nutrient collection systems (e.g. composting toilets) are being evaluated by CIC and may be deployed in the future after necessary permits are obtained from LA County Public Health and Regional Planning.

7.4 Showers

Showers are supplied with fresh water (from island wells) from the local municipal water supplier. Discharges are diverted to leach fields.

7.5 Ranger Stations and Maintenance Facilities

A seasonal (summer) ranger station trailer and fenced-off storage area for camper trailers are maintained at the Little Harbor Campground. Similarly, there is a summer camp host and a basic maintenance facility at the Two Harbors campground. Propane, firewood, and charcoal are available at these stations.

7.6 Parks and Recreation BMPs

Non-structural BMPs applicable to the parks and recreation facilities previously discussed are:

- Erosion control measures (Section 4)
- Education and outreach (Section 5)
- Trash management (Section 5)
- Good housekeeping (Section 5)

7.7 Public Signage and Notifications

The Two Harbors Boaters and Visitors Guide promotes BMPs to protect the marine environment, environmental policies for ASBS compliance for waste management, and environmentally protective policies for fishing, boat cleaning, and sewage management. Signs with camp rules and good housekeeping practices are posted at Little Harbor-Shark Harbor campgrounds.

Further public outreach is provided by extensive signage in the main plaza of Two Harbors (see Figure 5-1).

8.0 DISCHARGE REQUIREMENTS FOR WATERFRONT AND MARINE OPERATIONS FACILITIES

The General Exception requires a waterfront and marine operations plan be developed and implemented (Waterfront Plan, September 2012). The plan contains appropriate management measures and BMPs to address non-point source pollutant discharges to the affected ASBS, including identification of all waste discharges from the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations, to ensure that no beneficial uses of the receiving water are altered. BMPs to control waste entering the ASBS, address public education and outreach, control trash, and address discharges from marinas and recreational boating activities are included.

The General Exception prohibits the discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, and human sewage to the ASBS. Sinks and fish-cleaning stations are point source discharges of wastes and so are prohibited from discharging into ASBSs. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized. Limited-term activities, such as the repair, renovation, and maintenance of waterfront facilities (including, but not limited to, piers, docks, moorings, and breakwaters) are authorized only if they are protective of natural water quality.

The Waterfront Plan is intended to ensure that storm water and non-point source discharges are controlled to protect the beneficial uses of the affected ASBS. To accomplish these general objectives, the following key tasks were required to be performed:

- Identify key marina and waterfront activities that are potential sources of pollution affecting the natural state of local seawater.
- Evaluate management measures and practices that address potential sources of pollution, based on standard practices of similar marina operations or accepted guidelines of applicable regulatory authorities.
- Implement management measures and practices deemed relevant for the Two Harbors marina operations, as well as considered technically and economically feasible.

Isthmus Cove provides docking facilities to mainland cross channel passenger ferries and other cruise boats. Additionally, there are over 700 and anchorages throughout the Two Harbors area that accommodate private boats. Eight of these embayment areas with facilities are located in ASBS 25 (Subarea I). The waterfront locations with activities covered in this compliance plan and discussed in the Waterfront Plan (Appendix A), as described in Section 2, are:

- Isthmus Cove
- Fourth of July Cove
- Cherry Cove
- Little Geiger Cove

- Big Geiger Cove
- Howland's Landing
- Corsair Cove
- Emerald Bay West

Waterfront operations within Two Harbors and Isthmus Cove comprise various marina services: the Harbor Patrol, pump-out services, public ferry pier and dinghy dock, marine fuel dock, trash and recycling, public restrooms, showers, lockers and laundry, a general store, the Harbor Reef restaurant and saloon, the visitor center, residential areas, industrial operations, sanitary wastes, moorings, wastewater treatment, fuel storage, trash disposal, fleet operations, and hazardous material storage. More detailed operations and potential sources of pollutants are identified and discussed in the Waterfront Plan (Appendix A).

8.1 Waterfront Operation and Marine Operation BMPs

This section summarizes BMPs that fit the marina and waterfront operations at Two Harbors. Based on this evaluation, SCICo identified BMPs to prepare and implement. The BMP evaluation is provided in Appendix A of the Waterfront Plan (SCICo, 2012).

BMP categories that apply to the waterfront and marine operations previously discussed in Section 5 are:

- Trash management
- Fish waste
- Liquid materials
- Petroleum control
- Boat and mooring cleaning
- Sanitary sewerage management and sewage facilities
- Storm water
- Public outreach

8.2 Non-Compliance

If it is anticipated that SCICo will not fully implement the approved Waterfront Plan by September 20, 2014, a technical report shall be submitted to the SWRCB Executive Director or the Regional Water Board Executive Officer, as soon as practicable. The technical report shall contain the reasons for failing to meet the deadline and shall propose a revised schedule to fully implement the plan.

9.0 COMPLIANCE/BMP IMPLEMENTATION SCHEDULE

9.1 Required Reporting of Water Quality Exceedances

If the results of receiving water monitoring (described in Section IV.B of the General Exception) indicate that wet weather discharges that include storm water are causing or contributing to an degradation of natural water quality in the ASBS), a report must be submitted to the RWQCB within 30 days of receiving the analytical results. (See Figure 9-1 for exceedance determination.)

The report must:

- Identify the constituents in storm water that alter natural water quality and the potential sources of those constituents.
- Describe BMPs that are currently being implemented, BMPs that are identified in the ASBS compliance plan for future implementation, and any additional BMPs that may be added to the compliance plan to address the alteration of natural water quality.
- Include a new or modified implementation schedule.

Within 30 days of approval of the report by the RWQCB, the ASBS compliance plan must be revised to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required. Non-structural BMPs shall be implemented within one year of the approval (by the SWRCB or RWQCB) of the revised ASBS compliance plan. Structural BMPs shall be implemented as soon as practicable.

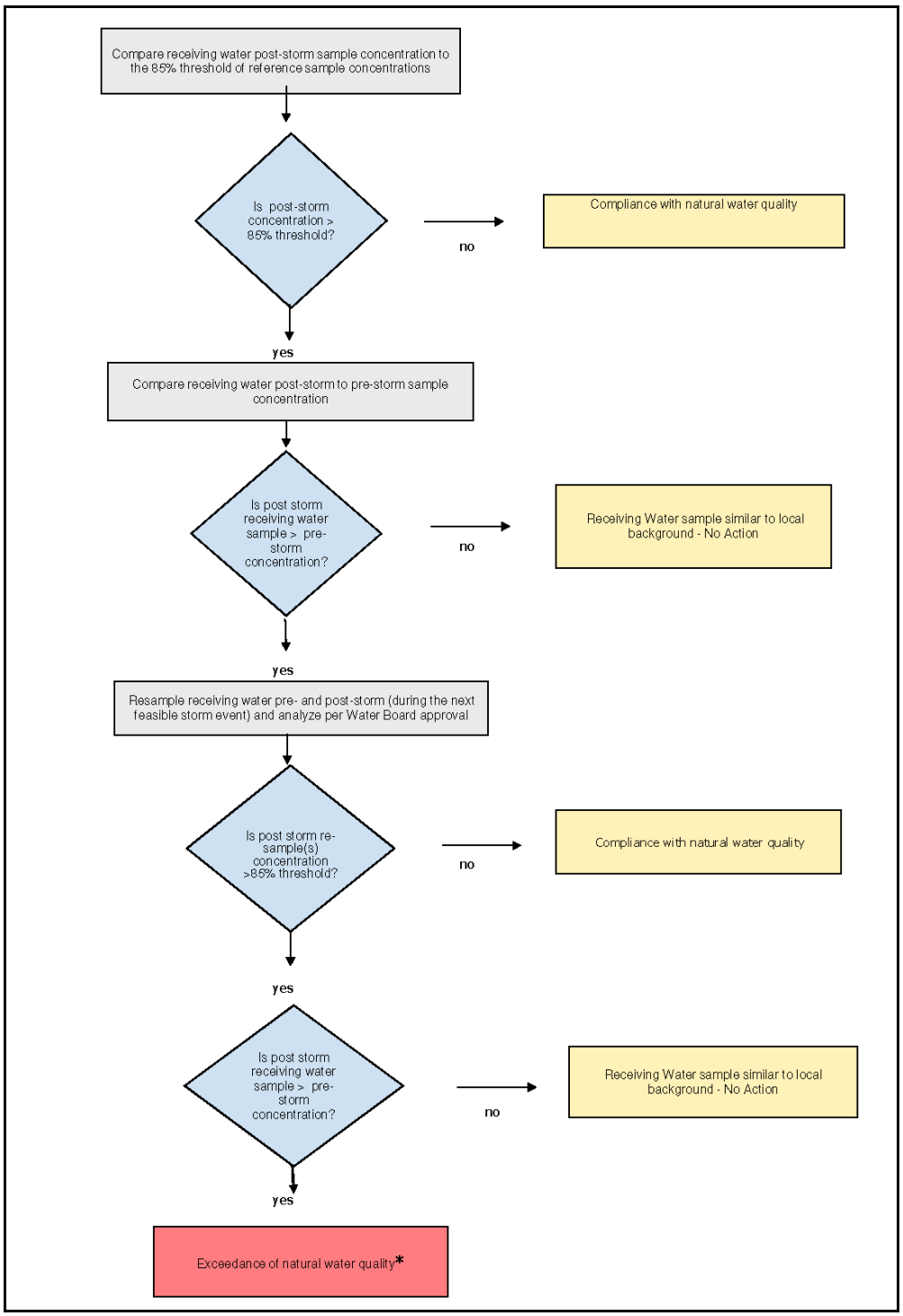
As long as these procedures have been complied the revised ASBS compliance plan is being implemented, and reporting is not required for continuing or recurring exceedances of natural ocean water quality conditions that are due to the same constituent.

9.2 Modifications to This Document

The ASBS compliance plan and associated figures/maps shall be a dynamic document that may be edited or updated as needed. Any updates, alterations, modifications, or amendments to the document must be submitted to the RWQCB for its approval. Modifications will be provided when changes occur that directly affect the purpose (Section 1.2), receiving water quality conditions (Section 9.1), or activities of this compliance plan.

This section provides the procedure for notifying the RCWQB of technical changes to the plan and for seeking a formal modification. This section is intended not to be an exhaustive review of all aspects of modification, but to provide a basis of updating or modifying this document in a manner that recognizes the document objective of protecting the natural water quality in ASBS 25 (Subarea I) and ASBS 26 (Subarea II). A modification is intended to be an efficient mechanism for notifying the RCWQB of a proposed change and for providing data to support the modification.

Figure 9-1. Flowchart To Determine Compliance with Natural Water Quality



*Note: When an exceedance of natural water quality occurs, the discharger must comply with Section I.A.2.h (for permitted storm water) or Section I.B.2.C (for non-point sources). Note that, when sampling data are available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.
Source: General Exception, Attachment 1

A proposed modification will include:

- A narrative justification with a detailed description of all changes and the reasons they are necessary.
- A form that includes, at a minimum: a summary of or an excerpt of the modified text and information, and the previous text and information (identified by its location in the document).

With the narrative justification the following must be submitted:

- Submit a cover letter on the organization letterhead, signed by appropriate organization representatives.
- Address the changes.
- Discuss and justify the necessity for the change(s).
- Identify and explain how the implications of the modification will affect components of the compliance plan.

One signed original copy of the modification documents must be submitted to the State Water Board Division of Water Quality to maintain its compliance status.

Any revised maps will be updated on an annual basis beginning September 20, 2015. These revisions will be made to this plan and submitted as a revised plan (e.g., version 1). If there are no significant structural BMPs or changes to the plan for that calendar year, a notification letter will be submitted to SWRCB indicating the most recent version is up to date.

9.2.1 Nonsubstantive Revisions

Nonsubstantive revisions are changes that do not affect the purpose of the compliance plan but relate to matters addressed in the requirements of Section 1.A.2 of the General Exception. Examples of nonsubstantive changes include, but are not limited to:

- Typographical errors in the compliance plan or underlying documentation.
- Department change of name, where there is no change in ownership or responsibility.

Notice must be provided to the RCWQB of such nonsubstantive changes promptly in writing, or whenever the need for a typographical change is recognized. An addendum sheet to the document shall summarize all updates to the ASBS compliance plan and shall be provided to the RCWQB. Although nonsubstantive revisions do not require the RCWQB's approval, a reply indicating agreement or disagreement that the change is nonsubstantive may be sent by the RCWQB. All nonsubstantive modifications will be included as part of the modification summary for the next following formal modification.

9.2.2 Modification for Alteration of Natural Water Quality and Non-Storm Water Flows

As discussed in Section 9.1, monitoring results indicating that wet weather causes or contributes to an alteration of natural water quality shall be reported to the RCWQB within 30 days. Within 30 days of approval of the report by the RCWQB, the plan shall be revised as described in Section 8.1.

If applicable, the revised compliance plan shall describe the measures by which non-storm water discharges will be eliminated and any interim measures that will be employed to reduce non-storm water flows until the final measures have been implemented.

9.3 Compliance Schedule and Planning

The General Exception states that all non-authorized storm water dischargers were prohibited on the effective date of the resolution (adopted March 2012). Within 18 months of the effective date, any non-structural controls that are necessary to comply with the General Exception must be implemented. In addition, a draft ASBS compliance plan must be submitted to the SWRCB Executive Director or the Regional Water Board Executive Officer describing its strategy to comply with these special conditions, including appropriate non-structural controls and a time schedule to implement structural controls. Within 30 months of the effective date, the final ASBS compliance plan is required to be submitted. Within 6 years of the effective date of the General Exception, any structural controls identified in this compliance plan shall be operational. In addition, within the 6 years, all discharges into ASBS 25 Subarea 1 and ASBS 26 Subarea II must maintain natural ocean water quality. Attainment of this water quality will be achieved by the post-storm receiving water quality data equaling less than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels.

The implementation schedule, in accordance with the General Exception for all dischargers, is as follows:

- **March 20, 2012:**
  - All non-authorized discharges to ASBS 25 (Subarea I) and ASBS 26 Subarea II are effectively prohibited.
- **September 20, 2013:**
  - Submit a Draft Compliance Plan for ASBS 25 (Subarea I) and ASBS 26 Subarea II to the SWRCB Executive Director or the Regional Water Board Executive Officer.
  - Submit a Draft Waterfront Plan for ASBS 25 (Subarea I) to the SWRCB Executive Director or the Regional Water Board Executive Officer.
  - All non-structural controls shall be implemented.

- **September 20, 2014:**
  - Submit the Final Compliance Plan for ASBS 25 (Subarea I) and ASBS 26 (Subarea II) with a final schedule for structural controls based on the results of monitoring runoff and receiving water.
  - Implement the Final Waterfront Plan for ASBS 25 (Subarea I).
- **September 20, 2015**
  - Submit any proposed structural BMPs and tentative implementation schedule for SWRCB comment and approval.
- **2016-2017**
  - Implementation and construction schedule target for approved structural BMPs.
- **March 20, 2018:**
  - Structural controls shall be operational.
  - Comply with the requirement that discharges into the ASBS maintain natural ocean water quality (within the 85th percentile threshold of reference water quality data and pre-storm levels). For exceedances, see flowchart in Figure 9-1 for appropriate actions.

10.0 REFERENCES

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APPENDIX A

WATERFRONT AND MARINA OPERATIONS MANAGEMENT PLAN

11358 Knott Street, Garden Grove, CA 92841
Tel (714) 373-3800 Fax (714) 373-3828 Web Site http://www.E5. com

DELIVERED VIA EMAIL ONLY

September 20, 2012

Mr. Dominic Gregorio
California State Water Resources Control Board
Ocean and Wetland Section
P.O. Box 100
Sacramento, CA 95812

File No. 2980.35

Subject: **Waterfront and Marina Operations Management Plan**

Location: Santa Catalina Island Company
Two Harbors
ASBS Area 25, Subarea I

Dear Mr. Gregorio:

Pursuant to the General Exception to the California Ocean Plan, as adopted by State Water Resources Control Board Resolution 2012-0012, please find enclosed the Waterfront and Marina Operations Management Plan for the above referenced ASBS location.

If there are any questions, please do not hesitate to call our office.

Sincerely,

E5, Inc.

Steven R. Walters, P.E., C.P.P.
Managing Director

Encl.

cc: Mr. Paul DeMyer
Group Vice President
Santa Catalina Island Company

Mr. Samuel Unger
Executive Officer
Los Angeles Regional Water Quality Control Board

Dr. Maria de la Paz Carpio-Obeso
Ocean Unit Chief
California State Water Resources Control Board

TWO HARBORS
SANTA CATALINA ISLAND COMPANY

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Waterfront and Marine Operations Plan

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TABLE OF CONTENTS

FIGURES

APPENDICES

ACKNOWLEDGEMENTS

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1.0 INTRODUCTION

1.1 Purpose

Pursuant to Resolution No. 2012-0012 and a letter issued by State Water Resources Control Board (State Board) dated May 30, 2012, the Santa Catalina Island Company (SCICO) was directed to prepare a Waterfront and Marine Operations Management Plan (Waterfront Plan).

This Waterfront Plan covers the waterfront and marina activities within that portion of ASBS Area 25, Subarea I which is generally referred to as "Two Harbors". Two Harbors is located on a stretch of land that lies between Catalina Harbor and Isthmus Cove. As legally defined by the State Board, ASBS Area 25, Subarea I includes all of the area generally known as Isthmus Cove where the principal waterfront and marina activities take place. ASBS Area 25, Subarea I does not include that portion of Two Harbors which is generally known as Catalina Harbor.

Among other items, this Waterfront Plan contains a description of marina activities, identification of potential pollutant sources and proposed Management Measures and Practices for related activities. As a result, although this Waterfront Plan may reference or otherwise include activities or measures which may also apply to activities at Catalina Harbor, the purpose of this plan is to address only those marina activities within ASBS Area 25, Subarea I.

1.2 Background

On July 6, 1972, the State Board adopted and subsequently revised the California Ocean Plan (Ocean Plan) with the latest revision in 2009. Among its requirements, the Ocean Plan prohibits the discharge of waste to designated Areas of Special Biological Significance (ASBS) within the State of California. ASBS are designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable.

Under the Marine Managed Areas Improvement Act, all ASBS are designated as a subset of state water quality protection areas and require special protection as determined by the State Water Board pursuant to the Ocean Plan and the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan).

In state water quality protection areas, waste discharges must be prohibited or limited by special conditions, in accordance with the Porter-Cologne Water Quality Control Act, California Water Policies §13000 et seq., and implementing regulations, including the Ocean Plan and Thermal Plan. The Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

On October 18, 2004, the State Water Board notified a number of parties that they must cease the discharge of storm water and nonpoint source waste into an ASBS or request an exception to the Ocean Plan. Dischargers were informed that they must cease discharges or request an exception to the prohibition, which included The Santa Catalina Island Company (SCICO) and the Santa Catalina Island Conservancy (The Conservancy).

Subsequently, in a letter dated December 15, 2004, SCICO requested an exception from the Ocean Plan prohibition for discharges of stormwater and nonpoint source waste into ASBS Area 25, Subarea I.

On August 18, 2005, the State Board sent a letter which acknowledged receipt of SCICO's request for exception, and further requested additional information for evaluation of the request, which included a description of marine life, natural background of the ASBS, historical data of runoff and ambient marine waters, specific sampling and other information indicating the public interest would be served in granting the exception. The State Board further recognized that SCICO was seeking an exception for both SCICO and the Conservancy which owns and operates portions of ASBS Area 25, Subarea I under separate title and ownership.

On May 31, 2006, SCICO submitted its response and technical support for its request for exception, which the State Board acknowledged receipt and deemed its application complete in a letter dated April 23, 2007.

On March 20, 2012, the State Board adopted Resolution No. 2012-0012 which approved a General Exception to the California Ocean Plan for the ASBS Waste Discharge Prohibition for Stormwater and Nonpoint Source Discharges, with Special Protections for beneficial use. The State Water Board resolved that granting the requested exceptions would not compromise protection of ocean waters for beneficial uses, provided that the applicants comply with the prohibitions and special conditions that comprise the Special Protections contained in the resolution.

Attachment "A" to the General Exception identified SCICO as an applicant for exception, and recognized that SCICO was also acting on behalf of The Conservancy. Attachment "B" to the General Exception identified the prohibitions and special conditions in the Special Protections, which are intended to ensure that storm water and nonpoint source discharges are controlled to protect the beneficial uses of the affected ASBS, including marine aquatic life and habitat, and to maintain natural water quality within ASBS. The Special Protections are also intended to maintain the natural hydrologic cycle and coastal ecology by allowing the flow of clean precipitation runoff into the ocean, while preserving coastal slope stability and preventing anthropogenic erosion.

The State Water Board further resolved that granting the requested exceptions is in the public interest because the various discharges are essential for flood control, slope stability, erosion prevention, and maintenance of the natural hydrologic cycle between terrestrial and marine ecosystems, public health and safety, public recreation and coastal access, commercial and recreational fishing, navigation, and essential military operations and national security.

All exceptions are scheduled to be reviewed during the next triennial review of the Ocean Plan. If the State Water Board finds cause to revoke or re-open the exceptions, the board may do so during the triennial review or at any other time. During the next triennial review period staff will also evaluate those aspects of the exception that are successfully protecting beneficial uses, to make recommendations on a potential Ocean Plan amendment to address storm runoff into ASBS.

In a letter dated May 30, 2012, the State Board notified SCICO (and The Conservancy) of the adoption of Resolution No. 2012-0012. Further, the State Board directed SCICO to complete the following tasks pursuant to the resolution:

(1) Conduct core monitoring for stormwater runoff and ambient seawater for receiving waters and reference sites, which may include either an individual monitoring program or participation in a regional integrated monitoring program. SCICO was required to notify the State Board by August 1, 2012 as to its preferred option for core monitoring.

(2) Develop a Waterfront and Marine Operations Management Plan (Waterfront Plan), which addresses and implements Management Measures/Practices to address pollutants associated with waterfront and marine activities. The Waterfront Plan is required to be filed with the State Board and the Regional Water Quality Control Board by September 20, 2012.

(3) Prepare and submit an ASBS Compliance Plan or ASBS Pollution Prevention Plan to address compliance with the special conditions and protect the natural water quality of the ASBS. The ASBS Compliance Plan or ASBS Pollution Prevention Plan must be submitted to the State Board by September 20, 2013, and shall include description of structural and non-structural controls with draft implementation schedule.

1.3 Plan Objectives

Per the General Exception, the Waterfront Plan is intended to ensure that storm water and nonpoint source discharges are controlled to protect the beneficial uses of the affected ASBS. To accomplish these general objectives, the following key tasks were required to be performed:

(1) identify key marina and waterfront activities, which may be potential sources of pollution affecting the natural state of local seawater;

(2) evaluate Management Measures/Practices that address potential sources of pollution based on standard practices of similar marina operations or accepted guidelines of applicable regulatory authorities; and

(3) implement Management Measures/Practices deemed relevant for the Two Harbors' marina operations, as well as considered technically and economically feasible.

2.0 SITE DESCRIPTION

2.1 Catalina Island

Santa Catalina Island (or Catalina Island) is part of the eight Channel Islands archipelago just off the west coast of California (refer to Figure 1). The eight Channel Islands that make up the archipelago are divided into two groups — the Northern Channel Islands and the Southern Channel Islands. Catalina Island is one of the four Southern Channel Islands, and is approximately 22 miles long and encompasses 74.98 square miles. It is eight miles across at its greatest width and 1/2 mile across at its narrowest width. The highest point on the island is Mt. Orizaba at 2,123 feet. Oriented in a general NW-SE direction, Catalina Island lies approximately 20 miles offshore of the Palos Verdes Peninsula at 33˚ 23' N Latitude, 118˚ 25 W Longitude. Catalina Island is considered within the jurisdiction of Los Angeles County, and the only incorporated area on the island is the City of Avalon with approximately 3,728 residents (refer to Figure 2).

In October 1894, the Banning Brothers (William, Hancock and Joseph) incorporated the Santa Catalina Island Company (SCICO), and placed title to the Catalina Island land holdings which they had acquired two years earlier into their newly-formed company. The Bannings planned to develop Catalina Island as a resort, and much of the initial development of the City of Avalon took place during their ownership. In 1919, William Wrigley Jr. acquired a majority interest in the Santa Catalina Island

Company from the Bannings. Over the next 56 years, the Wrigley family instituted various conservation practices, including animal controls, protection of watersheds, reseeding of overgrazed areas and other measures.

Of historic significance on the island was the creation of the Open Space Easement in 1974. Acting under a 1969 California State Law, counties were permitted to accept open space easements on privately held land if the governing authority deemed the action desirable. This allowed landholders to retain ownership for agreements to forego development for a specified period of time. On February 28, 1974, the Los Angeles County Board of Supervisors accepted from SCICO approximately 41,000 of Catalina Island's 48,469 acres in a 50-year Open Space Easement Agreement, which expires in 2024. In so doing, the supervisors sought to establish Catalina Island as a major element of the county's Open Space Planning program efforts. In turn, SCICO received a substantial reduction of property taxes on the easement territory.

Subsequently, P.K. Wrigley irrevocably donated 42,000 acres of the island to the Catalina Island Conservancy, which affected the transfer of ownership title for nearly all of the easement territory from SCICO to the Conservancy. Under the Open Space Easement Agreement, the County of Los Angeles and the Conservancy share the rights to make recreational improvements in the easement area.

2.2 Two Harbors

Two Harbors is an unincorporated area on the west end of the island which lies between Catalina Harbor and Isthmus Cove (refer to Figure 3). Two Harbors provides a major access point to both the Open Space Easement area and organized camps. Two Harbors is currently owned and operated by Two Harbors Enterprises, which is a wholly owned subsidiary of SCICO. There are approximately 80 to 100 permanent residents of Two Harbors who are employed by SCICO, and maintain the local recreational facilities and commercial services utilized by tourists. During the summer months, approximately another 80 temporary workers are hired, which increases the local residential population to approximately 160 from June through September.

At Isthmus Cove, docking facilities are provided to mainland cruise boats. Further, there are an estimated 720 moorings and anchorages throughout the Two Harbors area, where private boats can be accommodated. Services and facilities provided at the Isthmus Cove include automotive and marine fuel facilities, grocery store, restaurant, small lodges, SCUBA air and various marine related services, sewer pump stations, barge ramps, fire stations, electric substations, a wastewater reclamation plant, residential facilities and fresh water supply.

2.3 ASBS Area 25, Subarea I

ASBS Area 25, Subarea I is located along the western end of Catalina (refer to Figure 4). It includes most of the area west of Two Harbors (known as the Isthmus). The shoreline bordering the ASBS is 17.0 miles (27.4 km) in length. The seaward boundary of the ASBS is one mile offshore and the enclosed water surface is about 11,650 acres (4,718 hectares). Whereas the official ASBS land side boundary ends at the mean high tide line, the shoreline bordering the ASBS is approximately 2.7 miles in length.

The State Board has legally defined ASBS Area 25, Subarea I as: "From Point 1 determined by the intersection of the mean high tide line and a line extending due west from the USGS triangulation station "Channel" on Blue Cavern Point: thence due north to the 300 foot isobaths or to one nautical mile offshore, whichever distance is greater; thence northerly and westerly, following the 300-foot isobaths or maintaining a distance of one nautical mile offshore, whichever is the greater distance, around the northwestern tip of the island and then southerly and easterly, maintaining the distance offshore described above, to a point due south of USGS triangulation Station "Cone" on Catalina Head; thence due north to the intersection of the mean high tidal line and a line extending due south from USGS triangulation Station "Cone", thence returning around the northwestern tip of the Island following the mean high tide line to Point 1."

2.4 Covered Locations

This Waterfront Plan covers the marina and waterfront activities taking place at the following locations within ASBS Area 25, Subarea I:

Isthmus Cove. Isthmus Cove is owned and operated by SCICO. This is one of the primary landings into Two Harbors, which provides an estimated 257 moorings for private boats, plus string lines for another 64 boats. There is a dock for mainland cruise ships, fueling facilities, dinghy dock, boat repair, restaurant, grocery store and other services. Sanitary wastewater from this area is discharged to the wastewater treatment plant.

Fourth of July Cove. SCICO owns the property at Fourth of July Cove and leases to the Fourth of July Yacht Club. There are 42 moorings, and the area is used for boating and hiking. The area is improved with a pier, yacht club facilities, bathrooms and fresh water supply. Sanitary wastewater from this area is discharged into a local septic system.

Cherry Cove. Cherry Cove is owned by the Conservancy and leased by the San Gabriel Valley Boy Scouts. It is used for camping, hiking and boating. There are 103 moorings. This area has been improved with a pier, dining facilities, bathrooms and fresh water supply. Sanitary wastewater from this area is discharged into a local septic system.

Little Geiger Cove. Little Geiger Cove is owned by the Conservancy and leased by the Offshore Cruising Club. It is used for boating, hiking and diving. There are 3 – 15 anchorages and 1 mooring. The area is improved with a small shelter and barbeque area. There are no bathroom facilities nor fresh water supply in this area.

Big Geiger Cove. SCICO is the owner of the property at the Big Geiger Cove. The property is leased by Blue Water Cruising Club. It is used for boating and hiking. There are approximately 10 – 35 anchorages. The area is improved with a picnic shelter, fresh water supply and chemical toilet.

Howland's Landing / Sullivan's Beach. Owned by SCICO, this area is leased to a private camping company, Catalina Island Camping. This area is used for recreational activities that include camping, boating and hiking. There are 40 moorings, plus a string line for another 10 boats. This area has been improved with dining facilities, bathrooms and fresh water supply. Sanitary wastewater from this area is discharged into a local septic system.

Corsair Cove. This area is owned by the SCICO and leased by the Corsair Yacht Club. The recreational uses include boating, hiking, snorkeling and diving. There are 101 moorings, and the site is improved with yacht club facilities, bathrooms and fresh water supply. Sanitary wastewater from this area is discharged into a local septic system.

Emerald Bay West. This area is owned by SCICO and leased by the Great Western Council Boy Scouts. The area is used for camping, boating, hiking, snorkeling and diving. The area is improved with a pier, organized camp facility and fresh water supply. Sanitary wastewater from this area is discharged into a local septic system.

3.0 ENVIRONMENTAL SETTING

3.1 Land Use

The majority of the land adjacent to the ASBS is Open Space Easement and Conservancy Area. Two Harbors area and Little Geiger Cove to Howland's Landing are owned by SCICO. Two Harbors is a major port of entry and primary population and service community on Catalina. The Two Harbors community is located 13 miles westerly of Avalon. The roadway distance is twenty-six miles through rugged terrain, with an average driving time of one hour fifteen minutes. Two Harbors is equipped to supply basic emergency support services to residents of the Two Harbors community at large in the vicinity, as well as to the thousands of visitors frequenting the area each year. Two Harbors (Isthmus Cove and Catalina Harbor) is a major boating destination point and has historically been recognized as a general service center for all boating, camping and other visitor activities in the westerly portion of Catalina. The different land uses and total number of acres designated for possible development in the Two Harbors area as defined in the Local Coastal Plan are as follows:

Campgrounds/Hostels	18 Acres
View Corridor/Public Uses	56 Acres
Lodge/Inn	13 Acres
Commercial	3 Acres
Marine Commercial/Recreational Boating	6 Acres
Residential	128 Acres
Transportation Center	5 Acres
Utilities/Services	11 Acres

Some locations in the Two Harbors area have been leased and are under the control of entities other than SCICO. They include the USC employee housing, LA county employee housing, Long Beach Unified School District, Civil War Barracks and a private rental.

3.2 Climate

The general climate of Catalina Island is classified as semi-arid Mediterranean, characterized by mild, wet winters and a warm, dry period from late sprint to late autumn. Skies are generally clear, however heavy cloudiness occurs primarily in the early spring months when stratus clouds drifting in from the sea may cause low ceilings or fog. The mountainous land mass often limits the fog to the windward side of the island. The Isthmus is a break in this terrain and permits fog and wind to reach the leeward side.

The average daily temperature ranges from the high 70's ˚F in late summer and the low 50's˚F in winter. Rainfall occurs primarily between October and Ap ril; the northeast side of Catalina experiences greater rainfall than the southwest side. The average annual precipitation is 0.4 inches, based on data from October 1947 through May 2006 provided by the Conservancy.

The northeast facing slopes (toward the mainland) are protected from the drying effects of the prevailing west-northwesterly winds and hot afternoon sun. Santa Ana wind conditions usually occur between November and March. These north to northeast high winds are infrequent but dangerous, sometimes reaching 80 knots from Avalon to the West End, with breakers swamping inshore moorings and dragging moorings ashore.

3.3 Submarine Topography

Catalina Island is located on the coastal borderland of the Southern Catalina Bight (SCB). The borderlands of Southern California are the wide continental shelf that exists off southern California and is characterized by ridges (the Channel Islands are ridges that extend above sea level) and basins. The SCB is a marine province stretching from Point Conception in central California to the area between Punta

Colnett and Punta Eugenia in Baja California. Both Point Conception and Point Eugenia are zonal range boundaries for a large number of species and are referred to as biogeographic boundaries. The SCB therefore support a characteristic and unique assemblage of marine plants and animals that is fundamentally different than the marine provinces to the north and south (Parsons 2006). Catalina is bordered by basins to the northeast and southwest. The San Pedro Basin, with a maximum depth of approximately 900 meters, is located between Catalina and the mainland and the Catalina Basin of a depth of approximately 1,300 meters is located to the south west of Catalina (Parsons 2006). There is also a submarine canyon bisecting the western shelf near Little Harbor that forms an alluvial plane with the surrounding shelf at a depth of approximately 100 meters.

The shelf off Catalina is dominated by a sloping sandy plain with a depth between 50 and 150 meters. This shelf is extremely narrow compared to the mainland and is narrowest on the northeastern side. The shelf on the southwestern and southeastern ends is much wider and is up to 7 km wide in some areas. There is only a narrow strip of hard rocky bottom at depths where giant kelp and other algae can grow due to the steep submerged slope throughout most of Catalina that flattens out into the sloping sandy shelf. This limits the aerial extent of kelp forests as well as intertidal habitat.

ASBS Area 25, Subarea I is located on the north end of the island where the shelf is steepest. The ASBS area is rimmed by the shelf extending to a water depth of approximately 450 feet (140 m) approximately one mile offshore on the southern side from the intertidal zone toward Catalina Canyon. The shelf is less steep on the northern side and extends about 2 miles to the 450 foot (140 m) depth. The shelf is narrowest off Arrow Point. It has no prominent features and gradually rises to a near shore physiographic of steep boulder slopes and cliffs that usually begin at a sub tidal depth of approximately 100 feet.

3.4 Subtidal Substrate

Sand and mud comprise the majority of the subtidal substrate from the outer boundary of the ASBS to within approximately 500 yards (457 meters) offshore. Near shore, the main subtidal substrates in the ASBS are boulder slopes and sandy slopes, with a few rocky reefs. Cliffs are rare.

In general, the subtidal area of the ASBS is rimmed with boulder slopes to a depth of 50 – 100 feet (30 meters). Boulder size varies with depth. Shallow sloped areas often have a narrow band of medium-sized boulders (1 meter diameter) interspersed with coarse sand closer to shore. Cactus Bay exemplifies this type of substrate. Larger boulders (4 – 8 m diameter), also interspersed with sand, are found from 10 to 50-foot (15 meters) depths. With increased depth, the number and size of boulders decreases and the percentage of san increases. In most areas

surveyed, sand comprised nearly 100% of the substrate beyond 100-foot (30 meters) depths.

Sandy substrate is rare in water shallower than 40 feet (12 meters) between Catalina Head and Arrow Point, with the exception of Starlight Beach and Parson's Landing. However, from Arrow Point to Blue Cavern Point there are many coves such as Emerald Bay, Howland's Landing and Isthmus Cove, with sand subtidal substrate. These coves are enclosed by rock outcroppings and boulders extending to a depth of approximately 40 feet (12 meter).

There are three type of nearshore sediments: 1) Lithic sediment composed of rock particles; 2) organic sediment composed of biological fragments such as shells and sea urchin; and 3) calcareous sediment composed of $CaCO_3$, primarily from coralline algae. Catalina Head and West End areas, which have large populations of mollusks and relatively heavy wave action, have organic sediments. Sediments found in some of the coves from Emerald Bay to Big Fisherman Cove contain a large percentage of calcareous debris.

3.5 Water Quality and Temperature

Water clarity data measurements were taken approximately daily from 1970 – 1978 at Bird Rock (surface and twenty meter depths). Though this station is located close to shore, the clarity is not indicative of those areas on the Island coastline subjected to extensive landslide runoff. For example, during the winter of 1977 – 1978 heavy rains and subsequent runoff resulted in poor clarity in the near shore waters. Clarity is usually greatest (about 25 meters) between October and January and poorest (8 meters) between April and July when plankton blooms occur.

Surface water temperature measurements were taken approximately daily from 1970 – 1978 at Bird Rock. Ocean water temperatures for this period at Bird Rock ranged from 11° C in the winter to 20° C in September and October. Long term temperatures were measured from 1992 – 2001 at a depth of 4.6 meters, 9.1 meters, 18.3 meters and 30.5 meters at the east end, west end and Little Harbor. The average yearly variation was 6° C at 4.6 meters but only 2.5° C at 30.5 meters. The temperature at 4.6 meters reached its maximum in August but at 30.5 meters, the maximum was in October. Similarly, the minimum temperature at shallower depths occurred at the end of February while at the deepest depth (30.5 meters) the lowest temperature was in April.

4.0 WATERFRONT OPERATIONS

Boating, camping, hiking, fishing, diving and sightseeing are the principal activities of visitors to the Two Harbors area. Through its marina at Isthmus Cove, it is estimated that Two Harbors receives 13,000 boater-nights per month during the summer months (June through September). During winter months (October through May), visitors are reduced to approximately 3,000 boater-nights. Two Harbors estimates that most visitors are "return visitors" who have frequented or visited the area previously, and are familiar with the various services and facilities. Typically, most visitors will moor or anchor boats in the various coves and landings within the Two Harbors area. Visitors will also arrive (and depart) via the Catalina Island Express or Catalina Island Flyer, which are the primary mainland cruise boats that dock at Isthmus Cove. Visitors may also arrive via a private helicopter service or public access road which connects the City of Avalon.

4.1 Marina Services

Isthmus Cove serves as the primary access point for most visitors, plus SCICO's headquarters for the Two Harbors' operations (refer to Figure 5). SCICO employees

operate and provide several marina services and commercial establishments which are available to the general public, which include:

Harbor Patrol. Harbor Patrol is a main interface with boaters as they enter the marina providing boater assistance, mooring designations and other customer service. For assistance, boaters contact Harbor Patrol via VHF Channel 9 when entering Two Harbors.

Pumpout Services. There are two (2) pumpout stations located on the main Isthmus Pier, which are provided to the public at no cost. Plus, there is a portable toilet dump station for boaters located adjacent to the public restrooms, which is proximately located near the Isthmus Pier.

Dinghy Dock. As a convenience to boaters, there is a small dock in Isthmus Cove for dinghies less than 14 feet in length.

Marine Fuel Dock. Gas, diesel and water are available year-round from the fuel dock. Hours of operation are 8:00 AM to 4:00 PM, with extended hours during the summer.

Trash & Recycling. All Santa Catalina Island trash outside Avalon is shipped to the mainland. A trash pick-up vessel, "The Salad Bowl", services all leeside coves during the summer months. In addition, public trash dumpsters and recycling bins are provided throughout the Two Harbors area for visitors and residences.

Public Restrooms, Showers, Lockers & Laundry. These recently upgraded public facilities are open year-round 24 hours per day, and are located east of the main plaza and a short walk from the Isthmus Pier. The showers, laundry and lockers are coin operated.

Two Harbors General Store. The General Store operates 365 days a year providing groceries, beach accessories, fishing gear, casual apparel, souvenirs and other items.

Parts & Supply Warehouse. Located behind the General Store and Boat Shop, the Parts & Supply Warehouse offers propane tank fills, filters, v-belts, hoses, marine batteries, fuel pumps, bilge pumps and other parts or supplies.

Harbor Reef Restaurant/Saloon. This restaurant and bar is open to the general public and SCICO employees providing a full menu of hot and cold meals, and beverages.

Visitor Center. Located at the end of Isthmus Pier, the Visitor Center provides maps, brochures, campsite reservations and other assistance to visitors. Internet access, fax services and ATM machines are also provided for a fee.

4.2 Residential

Approximately 80 to 100 permanent residents live in Two Harbors all year round, which are all employees of SCICO and responsible for the general operation and maintenance of the facilities. During summer months, an additional 80 seasonal employees are hired which will also live at Two Harbors. SCICO provides housing for its resident employees, which includes approximately forty-four (44) houses and dormitories. Fresh water is supplied to the residences via water wells and supply infrastructure owned by Southern California Edison (SCE). Sanitary flow from the residential areas pumped to the wastewater treatment plant, which is owned and operated by SCICO.

4.3 Industrial Operations

There are no significant industrial, manufacturing or similar operations which exist in the Two Harbors areas.

4.4 Sanitary Wastes

In May 2006, SCICO completed a new pier renovation which including many improvements that were beneficial to the Two Harbors' operations and protective of the marina. The improvements included a new waste pumping station, waste "Pumpahead" pumpout stations and 2,000 gallon holding waste tank. The pumping station receives all sanitary flow from the restaurant, offices, residences and bathroom facilities, which then pumps the discharge to the wastewater treatment facility located farther inland. The Pumpahead stations are located on the pier with public access to boaters, which SCICO provides at no cost and are available 24 hours per day. Waste materials collected in the Pumpahead stations are transferred to a 2,000 waste holding tank located a few hundred feet inland. Since boaters' wastewater may contain salt water, it cannot be treated in the wastewater treatment plant. Instead, the waste is held in the 2,000 gallon holding tank, and routinely picked up for shipment back to the mainland for disposal.

4.5 Moorings

In total, SCICO offers and maintains an estimated 544 moorings throughout the Two Harbors area (refer to Figures 6 through 10), excluding Catalina Harbor. As boaters enter Isthmus Cove, visitors contact Harbor Patrol which provides mooring designations. In Two Harbors, SCICO cleans all of its moorings on an annual basis between January and May of each year. As a general practice, the moorings are lifted and cleaned aboard a boat operated by SCICO personnel. Barnacles and other debris are manually scraped off each of the moorings, and then returned to

the water. Moorings are generally only returned ashore if chain replacement is required. In such case, there is a dedicated repair area located away from the shoreline in which this work is performed.

4.6 Wastewater Treatment

All sanitary wastes from residences, public bathrooms and commercial establishments at Isthmus Cove are manifolded into single pump house/station. From there, wastewater is pumped to the wastewater treatment facility. Post-treated water is then sprayed onto a hill side which is adjacent to the facility. At Two Harbors, the wastewater plant has an approximate capacity of 27,500 gallons per day, which is permitted by the Regional Water Quality Control Board and the SCAQMD.

4.7 Fuel Storage

Fuel storage is currently conducted with permitted aboveground storage tanks (6,000 gallon diesel fuel and 18,000 gallons unleaded gasoline), which operates a few hundred feet inland from the waterfront. The aboveground storage tanks are provided with secondary containment and surrounded by cinderblock walls on all four sides. Fuel tanks are loaded once per week during the summer season (June thru September), and every couple months during the winter season (October thru May). There is a fuel dispenser located next to the storage area providing fuel for SCICO vehicles that support the Two Harbors facilities, including, cars, light duty trucks and a trash truck. On the pier, there are two (2) fuel dispensers/pumps located where boaters may purchase fuel and fill their tanks. The fuel dock is open from 8 am to 4 pm (Monday through Sunday). During all hours of operation, there is a trained SCICO employee who provides customer service and monitors all fuel dock activities. The fuel dock is also equipped with containment booms in the event of any spills that may occur.

4.8 Trash Disposal

SCICO maintains trash receptacles and dumpsters throughout the Two Harbors area, plus operates its own trash truck. SCICO provides weekly service for trash pickups, and delivers collected trash to a compactor. The compacted trash is bundled and delivered via barge back to the mainland where Waste Management is contracted to pick up and dispose the trash in permitted landfills. Mixed recyclable materials are collected and shipped separately for proper recycling.

4.9 Fleet Operations

SCICO operates a fleet of twenty-eight (28) vessels that support its marina operations, including Harbor Patrol, mooring cleaning and shore boats. SCICO also operates a small number of cars, light duty vehicles and a trash truck for onshore employee transportation and operations. For general repair and maintenance, SCICO operates separate maintenance shops that service its boats and vehicles.

4.10 Hazardous Materials

The largest amount of hazardous materials kept at Two Harbors is the aboveground fuel storage tanks. Aside from these tanks, there are hazardous material storage cabinets and areas in the auto and boat repair shops, which maintain small quantities of maintenance chemicals, oil, paints, solvents and other liquids. Waste generated from these operations is collected in a central storage area within 55-gallon drums. This storage area is locked and equipped with secondary containment, plus overhead coverage is provided. Hazardous waste is picked up every 60 to 90 days by outside 3rd party licensed hazardous waste haulers, which ships and disposes of the wastes back on the mainland.

5.0 BEST MANAGEMENT PRACTICES

Best Management Practices (BMPs) were evaluated from various sources throughout California and other states, including, Clean Marina programs, U.S. Environmental Protection Agency, water quality agencies, coastal commissions, private associations and others. Many of the BMPs generally fall into specific categories or topic areas: Solid Waste, Fish Waste, Liquid Materials, Petroleum Control, Boat Cleaning, Sewage, Stormwater and Public Outreach. This Waterfront Plan evaluated those BMPs which fit the marina and waterfront operations that occur at Two Harbors. Many of these BMPs are currently employed at Two Harbors, while some are not employed or otherwise not applicable. The BMP evaluation for this Waterfront Plan is provided in Appendix A. Based on this evaluation, SCICO identified those BMPs for purposes of preparing and implementing this Waterfront Plan.

5.1 Solid Waste

This management measure is focused on controlling the solid waste that can collect at marinas from boaters and general public. Solid waste from boater trash, boat cleaning, maintenance, and repair might contain harmful substances such as paint chips or solvents used to clean or polish metal or wood parts. Further, solid waste from general activities and marina use, such as plastic bags, cups, cigarette butts, and food containers also pollutes surface waters and degrades the habitats of aquatic animals and plants. Picking up and properly disposing of trash minimizes

this form of nonpoint source pollution. Providing sufficient waste receptacles, separating wastes into classes of recyclables, and preventing litter are all generally accepted practices.

CURRENT IMPLEMENTATION

Two Harbors currently has a rigorous solid waste management program for visitors, boaters and residences. Trash receptacles are placed strategically around public areas, plus dumpsters and mixed recyclable bins are provided and easily accessible near the Isthmus Pier. Further, there is weekly trash pickup service for all public areas, plus the residential grounds and commercial operations. A general visual observation of Isthmus Cove area and beaches indicates very little, if any, trash or debris on the ground, which provides evidence that these existing solid waste management practices are generally proven to be effective.

BEST MANAGEMENT PRACTICES

- Signs should be posted directing patrons to solid waste disposal and recycling areas.
- Provide plentiful containers for collection of recyclables and encourage marina patrons to participate.
- Furnish separate containers for glass, recyclable plastics, scrap metal, aluminum, wood pallets, papers, cardboard, etc.
- All trash receptacles and dumpsters should be covered at all times.
- Signs should clearly spell out rules and note any prohibited wastes. Disposal of hazardous waste or hazardous materials receptacles is not allowed.
- Marina personnel should inspect solid waste collection facilities at least. Uncontained waste should be cleaned up immediately.
- Any waste receptacles placed adjacent to or over the water should be secured, such as docks, piers, berths, ramps and similar locations.
- Require use of tarps and vacuums to contain and collect paint chips, sanding waste and other debris from boat maintenance areas.
- Do not allow trash or other debris to accumulate and blow into the water. Deck and dock hosing must not cause debris to be washed into drains or directly into receiving waters.
- Prohibit the open burning of waste. Burning petroleum containing waste, plastics, garbage, and materials that generate black smoke is prohibited.

- Isthmus Cove beachfront is visually inspected daily by Two Harbors personnel, and any cigarette butts, paper, metal or other debris are immediately picked up and properly disposed.

FUTURE ACTIONS

- Additional containers for combined recyclable wastes should be provided for public use.
- Additional signage prohibiting trash burning for all areas.
- Additional waste receptacles for trash should be provided on the fuel dock, and offered to boaters as convenience to dispose of onboard trash while fueling.

5.2 Fish Waste

Fish waste can create water quality problems at marinas where a lot of fish are landed. This might be the case where long piers or breakwaters provide access to deep water or accommodation for many fishers, where fishing tournaments are held, or at any marina during the local high fishing season. In general, the waste from fish cleaning shouldn't be disposed of into a marina basin because of the chance of overwhelming the natural ability of the water body to assimilate and decompose it. The dissolved oxygen consumed by the decomposing fish parts can cause anaerobic, foul-smelling conditions. Unconsumed or floating fish parts are also an unattractive nuisance to the marina property. Fish waste is better disposed in offshore waters (if permissible) where the fish are caught, or treated as waste like any other and deposited in proper trash containers. Proper disposal of fish waste by marina patrons helps keep marinas clean and free of waste. It is a good management practice for marinas to promote proper fish waste disposal. Fish cleaning stations provide convenient places for marina patrons to clean fish and dispose of their waste material, and they help to keep the rest of the marina clean.

CURRENT IMPLEMENTATION

Generally, there is light to nominal fishing activities which take place in the immediate vicinity of the Two Harbors area. There are no major fishing tournaments which are held at Two Harbors, nor large areas where a significant amount of fishing takes place. While there is no public endorsement of "Catch and Release" by Two Harbors, SCICO believes many boaters and patrons employ this practice while fishing in the area. For those boaters catching fish for consumption, it is believed the majority of fish cleaning is being conducted while at sea. SCICO does not observe any significant amount of fish waste being disposed through its

onshore public dumpsters or trash receptacles. Further, there is no evidence of fish wastes floating in the marina, nor being washed ashore on its beach. Consequently, there does not appear to be many current significant issues relating to fish waste within the marina, although greater public endorsement and education of fish waste management to boaters would be advisable.

BEST MANAGEMENT PRACTICES

- Encourage catch and release fishing, which does not kill the fish and produces no fish waste.
- Fish wastes and shellfish carcasses should not be disposed into marina basins.
- Fish wastes may be deposited in the off-shore ecosystem where they were originally harvested.
- Fish wastes and shellfish carcasses should not be recycled into tidal waters or managed in such a way that they will wash up onto any shoreline, or cause odors or other nuisances.
- Fish cleaning on docks and floats should not be allowed unless fish wastes are collected, contained, and disposed in an approved manner and designated containers.
- Fish wastes should be reused or recycled in an environmentally sound manner (e.g., use fish as bait, composting, etc.).
- Marinas should provide designated fish cleaning areas, including covered cleaning stations wherever feasible.
- Rinse water drainage from fish cleaning areas should be screened and free of solids, then discharged to a sanitary sewer.

FUTURE ACTIONS

- Endorse “Catch and Release” within Two Harbors Environmental Policies.
- Prohibit fish waste cleaning or disposal in the marina and waterfront areas as part of the Two Harbors Environmental Policies.
- Establish (and publicize) a fish waste policy as part of Two Harbors Environmental Policies.

5.3 Liquid Materials

Marinas store a variety of liquid materials for boat and facility operations, which can generate various liquid wastes. Adequate storage and disposal facilities are important if these materials are to be kept out of the environment. Proper storage is also important to ensure that liquid materials do not become contaminated while in storage and are required to be disposed of prematurely. Marina patrons and employees are more likely to properly dispose of liquid wastes if adequate and safe disposal facilities are provided. Proper storage and disposal of potentially harmful liquid materials can eliminate their entering marina waters and harming the aquatic environment, aquatic organisms, and marina or customer property. Liquid materials for sale or use at the marina, such as fuels, oils, solvents, and paints, should be stored in a manner that minimizes the chance of a spill and contains a spill if one occurs. Liquid wastes, such as waste fuel, used oil, spent solvents, and spent antifreeze, should be similarly stored until they can be recycled or disposed of properly. Small quantities of many liquid wastes, including antifreeze, waste oil, pesticides, cleaners, solvents, and paints, can be harmful or deadly to people, wildlife, pets, fish, and other aquatic organisms. Marina staff and boaters should be informed about safe storage and disposal of liquid wastes. If a marina collects waste oil for recycling or disposal, precautions need to be taken to prevent contamination of one waste type with an incompatible type.

CURRENT IMPLEMENTATION

For its own maintenance operations, SCICO stores and manages relatively small amounts of hazardous materials. The bulk of the materials are one-gallon or smaller containers and kept in flammable cabinets, such as oil, solvents, paints and similar maintenance chemicals. Drums are kept on containment pallets. Further, SCICO operates a central hazardous storage area which has overhead protection, secondary containment, security and other features to control spills or leaks. Hazardous material inventories are also frequently taken, and hazardous wastes are picked up and disposed of by 3rd party licensed disposal companies. For boaters, SCICO provides a used oil and engine coolant collection service, which for a small fee, SCICO will receive and properly dispose of these materials. Although not encouraged or endorsed, from time to time, boaters will also leave old batteries or other hazardous materials near its public dumpsters which SCICO will collect, and properly dispose. Existing hazardous materials management practices appear to be effective for SCICO operations, however educating boaters on proper disposal and recycling of hazardous materials would be advisable.

BEST MANAGEMENT PRACTICES

- Build curbs, berms, or other barriers around areas used for liquid material storage to contain spills.
- Storage and disposal areas for liquid materials should be located in or near repair and maintenance areas, undercover, protected from runoff, with berms or secondary containment, and away from flood areas and fire hazards.
- Store minimal quantities of hazardous materials.
- Provide clearly labeled, separate containers for the disposal of waste oils, fuels, and other liquid wastes.
- Recycle liquid materials where possible.
- Prepare a hazardous materials spill recovery plan and update it as necessary.
- Keep adequate spill response equipment where liquid materials are stored.

FUTURE ACTIONS

- Publicize the used oil collection point currently offered at Isthmus Cove.

5.4 Petroleum Control

Fuel is easily spilled into surface waters from the fuel tank air vent while fueling a boat (if overfilling), and oil is easily discharged during bilge pumping. Fuel sheen on the water surface near docked boats is not an uncommon sight and can be caused by a spill of only a few drops or a slow leak from a gas tank. Because of the properties of oil, a cup of oil can spread as a very thin oil sheen over more than an acre of calm water. Small amounts of oil spilled from numerous boats can accumulate to create large oil sheens. Gasoline spills are also a safety problem because of gasoline's flammability. Hydrocarbons are dangerous to aquatic plants and animals both at and below the water surface. Less than half of spilled oil stays in the water, while the remainder tends to evaporates. Spread over the surface, oil creates a barrier to oxygen movement across the water surface and to animals (for instance, insect larvae) that must breathe at the surface. At and below the surface, oil attaches to plant leaves, decreasing their respiration, and bottom sediments.

CURRENT IMPLEMENTATION

SCICO operates a fuel dock for boaters, which during all hours of operation, there is a trained SCICO employee who provides customer service and monitors all fuel dock activities. The fuel dock is also equipped with containment booms in the event of any spills that may occur from fueling operations. Fuel storage is currently conducted with permitted aboveground storage tanks, which operates a few hundred feet inland from the waterfront. The aboveground storage tanks are provided with secondary containment. There is a fuel dispenser located next to the storage area providing fuel for SCICO vehicles that support the Two Harbors facilities, including, cars, light duty trucks and a trash truck. Further, SCICO has developed and implements a Spill Prevention Containment and Countermeasure (SPCC) Plan for its aboveground fuel storage tanks, which provides for the safe operation of the tanks. These measures represent best practices for fuel storage and management, and are generally proven to be effective.

BEST MANAGEMENT PRACTICES

- For fueling operations, marina personnel who is familiar with the operation and trained in emergency shutdown should be in attendance at all times when the system is operating.
- Fueling facilities and storage areas must be secured when not in use by appropriate shut-down devices and security locks.
- Provide signs or other warnings requesting boaters to estimate the quantity of fuel it will take to fill their boat, and ask them not to top off their tanks.
- Develop a Spill Contingency Plan for all fuel storage and dispensing areas. This plan must specify the quantities and types of fuels stored and dispensed on-site, prevention measures, and spill emergency procedures.
- The marina operator should maintain a list of hazardous materials on site with associated reportable quantities and storage locations.
- Make sure that absorbent pads and booms are readily available when fueling a boat. Spill containment and control materials should be stored in a clearly marked readily accessible location.
- Signs of leakage or spillage should be investigated immediately, and cleaned up and reported accordingly.
- Post emergency phone numbers in a conspicuous location.

FUTURE ACTIONS

- Update Spill Contingency Plan for fuel dock.
- Post emergency phone numbers which should be a phone number of a key SCICO employee who lives in Two Harbors.

5.5 Boat & Mooring Cleaning

Preventing the entry of chemicals from boat cleaners, cleaning solvents and paint chips into marina waters is the most direct way to prevent harm to the aquatic environment from these products. Marina employees and boat owners may use a variety of boat cleaners, such as teak cleaners, fiberglass polishers, and detergents, and boats are usually cleaned while in the water or onshore adjacent to the water. Some of the cleaner used ultimately ends up in the water. Additionally, when boat bottoms are cleaned aggressively while boats are in the water, antifouling paint can be abraded off and deposited into marina waters and sediments. Similarly, the cleaning and maintenance of moorings will have similar impacts on the marina waters, if precautions and preventative measures are not employed. This management measure is aimed at minimizing the release of harmful ingredients from the use of cleaners, bottom paints, and harmful residues on boat hulls to marina basin waters.

CURRENT IMPLEMENTATION

SCICO operate a fleet of boats which include the Harbor Patrol, shore boats and others. Further, SCICO is responsible for maintaining 700+ moorings around the Two Harbors areas. As a general practice, SCICO does not perform any boat repair, maintenance or cleaning while in the water. There is dedicated area in which its fleet boats are brought ashore for work to be performed. While hydrowashing is sometimes used to clean barnacles and debris from boat hulls, SCICO intends to construct a dedicated area in which rinse water can be captured and properly disposed. Moorings are typically cleaned during the offseason from January through May. SCICO has dedicated mooring cleaning boat, which will lift the moorings out of the water and barnacles are manually scraped off. When required, SCICO uses environmentally compliant and low toxic paints for its boats and moorings.

BEST MANAGEMENT PRACTICES

- Wash boat hulls above the waterline by hand. Where feasible, remove boats from the water and clean them where debris can be captured and properly disposed of.
- If using cleansers, use cleansers that will have minimal impact on the aquatic environment.
- Attempt to wash boats frequently enough that the use of cleansers will not be necessary.
- Switch to low-toxicity or nontoxic antifouling paints.
- Avoid in-the-water hull scraping or any abrasive process done underwater that could remove paint from the boat hull or mooring.
- Minimize the impacts of wastewater from hydropressure washing for boats and moorings.

FUTURE ACTIONS

- Establish (and publicize) a boat cleaning policy as part of Two Harbors Environmental Policies.
- Install a dedicated boat cleaning area that captures water from hydrowashing.

5.6 Sewage Facilities

Boat sewage can be a problem when discharged into surface waters without pretreatment. It is similar to situations in which discharges of municipal sewage close beaches when heavy rainstorms overburden sewer systems and rainwater mixed with raw sewage is discharged directly to surface waters through combined sewer overflows. Sewage from boats is more concentrated than that from either combined sewer overflows or sewage treatment plants because marine heads use little water for flushing and the sewage in marine heads is not diluted by water from bathing, dishwashing, or rain. Boat sewage contains nutrients that can stimulate growth of aquatic plants and pathogens, which can cause human health problems directly through contact in the water or indirectly through the consumption of contaminated seafood. Eliminating discharges of sanitary waste from boats can be performed with a variety of management measures, such as no discharge zones, installation of pumpout stations, marina restrooms, boater education programs and others.

CURRENT IMPLEMENTATION

Currently, SCICO offers boaters and patrons several facilities and services to address sewage management. On the Isthmus Pier, there are two (2) Pumpahead pumpout stations for boaters which are provided free of charge. Public restrooms, showers and lockers are also proximately located to Isthmus Pier. A portable toilet dump station is also located adjacent to the public restrooms. Pet waste areas and stations are provided for the convenience of boaters. These existing practices have proven to be effective for general management of sewage from boaters and patrons.

BEST MANAGEMENT PRACTICES

- ⌘ Provide pumpout service at convenient times and at a reasonable cost.
- ⌘ Provide portable toilet dump stations near small slips and launch ramps.
- ⌘ Establish practices and post signs to control pet waste problems.
- ⌘ Keep pumpout stations clean and easily accessible.
- ⌘ Provide public restrooms at all marinas and boat ramps.
- ⌘ Declare all marina waters to be “No Discharge Zones”.
- ⌘ Establish equipment requirement policies that prohibit the use of Y-valves on boats on marina waters.

FUTURE ACTIONS

- ⌘ Provide signage showing locations of pet waste areas and other facilities
- ⌘ Establish (and publicize) a No Discharge Zone
- ⌘ Establish (and publicize) prohibition on Y-valves

5.7 Storm Water Runoff

Storm water runoff from marina operations and other impervious areas can create sources of pollution during rain events. The pollutants that are typical of urban storm water runoff include metals, suspended solids, hydrocarbons, excess nutrients and bacteria. Boat scraping, cleaning, fueling, engine repair and other marina activities can elevate these and other pollutant concentrations during a rain event.

CURRENT IMPLEMENTATION

Pursuant to the General Industrial Storm Water Permit of California (General Permit), Two Harbors operates under WDID # 419I019647. As required by the General Permit, Two Harbors has prepared and adopted a Storm Water Pollution Prevention Plan (SWPPP) and Storm Water Monitoring Program (SWMP). The SWMPP identifies Best Management Practices (BMPs) to minimize storm water pollution, which consists of structural and non-structural BMPs. Non-structural BMPs generally include prohibitions, procedures or other measures to prevent pollutants associated with industrial activity from contacting with storm water discharges. Non-structural BMPs may include good housekeeping, preventative maintenance, spill response, material handling and storage, employee training, erosion control and inspections. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges, such as overhead coverage, retention ponds, control devices, containment structures and treatment systems. Many of the above referenced storm water BMPs have been discussed or implemented as part of other measures contained in this Waterfront Plan. The following are other BMPs which address potential pollution within the storm water runoff.

BEST MANAGEMENT PRACTICES

- Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility, equipment, storage areas and other areas.

- Preventive Maintenance. Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

- Employee Training. This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water.

- Erosion Control and Site Stabilization. This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, sandbags, silt screens, etc.

- Inspections. Regular inspections, tracking and follow-up procedures are described to ensure adequate corrective actions are taken.

- Overhead Coverage. This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

- Retention Ponds. This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

- Control Devices. This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

- Secondary Containment Structures. This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

- Treatment. This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

FUTURE ACTIONS

- Update Spill Contingency Plan for fueling operations.

5.8 Public Outreach

Public education is one of the most effective ways to reduce pollution in and around marinas and from recreational boating. A boating public that understands the causes and effects of pollution is more likely to want clean waters and healthy aquatic environments. If the public is told about the simple and effective ways that they can reduce their impacts on the environment, they are usually happy to do their part. One of the primary factors in the success of any pollution prevention program is widespread support for the program by an educated public. Public education is a low-cost, effective, proven method to improve and reinforce environmentally conscious behavior in all segments of the public, including the boating public. There are a variety of public education materials or programs that can be adopted to communicate environmental policies and environmentally friendly practices.

CURRENT IMPLEMENTATION

Two Harbors has several touch points or areas which it can communicate with boaters and patrons, whether return visitors or new visitors: Harbor Patrol, Fuel Dock, Visitor Center, Restaurant, SCUBA Shop, Website, Email Lists, Newsletters and Mailing List. Much of these areas or touch points have not been traditionally

used to publicize or promote environmental practices of Two Harbors. These areas can be effective means to educate and promote ASBS information to visitors and boaters, as well as provide information on environmental friendly practices, such as, Boat Cleaning, Sewage Disposal, Solid Waste Management and other topics.

BEST MANAGEMENT PRACTICES

- Environmental Policies for Two Harbors
- Boater and Visitor Guide
- Signage
- Fact Sheets / Brochures
- Maps
- Tenant/Lease Restrictions
- Communications
- Youth Programs

FUTURE ACTIONS

- Establish (and publicize) Two Harbors Environmental Policies
- Incorporate ASBS information and environmental policies into Annual Boater and Visitor Guide
- Additional signage/maps to be provided to publicize ASBS information and Two Harbors Environmental Policies.
- Develop and/or adopt fact sheets for key environmental practices/topics
- Integrate environmental requirements and practices into tenant leases, plus campsite reservations, mooring reservations and other legal agreements
- Promote, educate and reinforce the Two Harbors Environmental Policies, plus ASBS information with returning and new visitors through its various communication mediums.
- Develop an education program or other cooperative efforts where the Boy Scouts can learn and/or participate in the Two Harbors clean marina program.

6.0 REFERENCES

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8. California Coastal Commission, Clean Marina Toolkit

9. City of San Diego, Clean Marina Program

10. State of Alaska, Best Management Practices for Harbor Marina and Boat Operations

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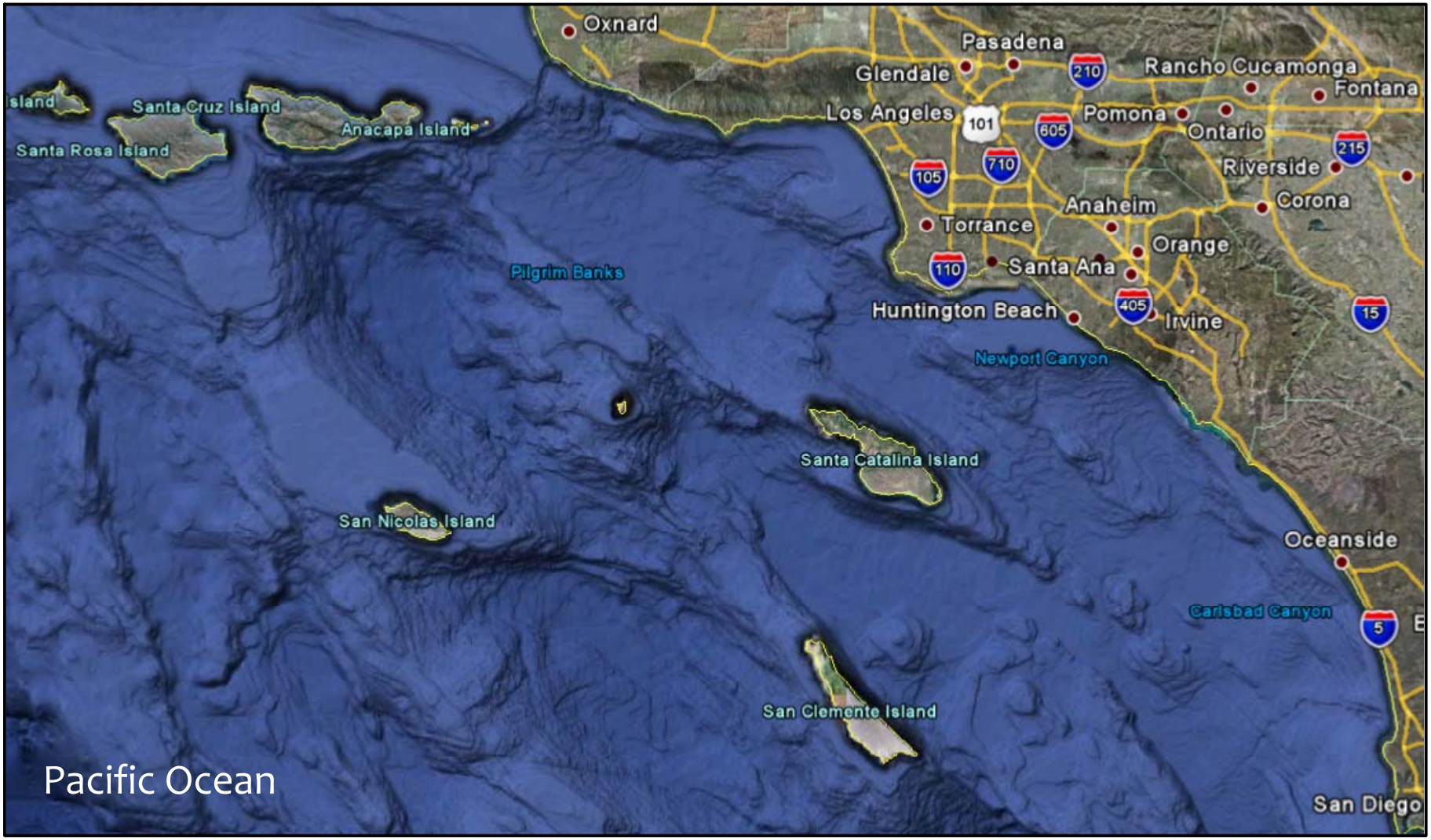
FIGURES



	Area Map		
E5NC	Two Harbors Santa Catalina Island Company		
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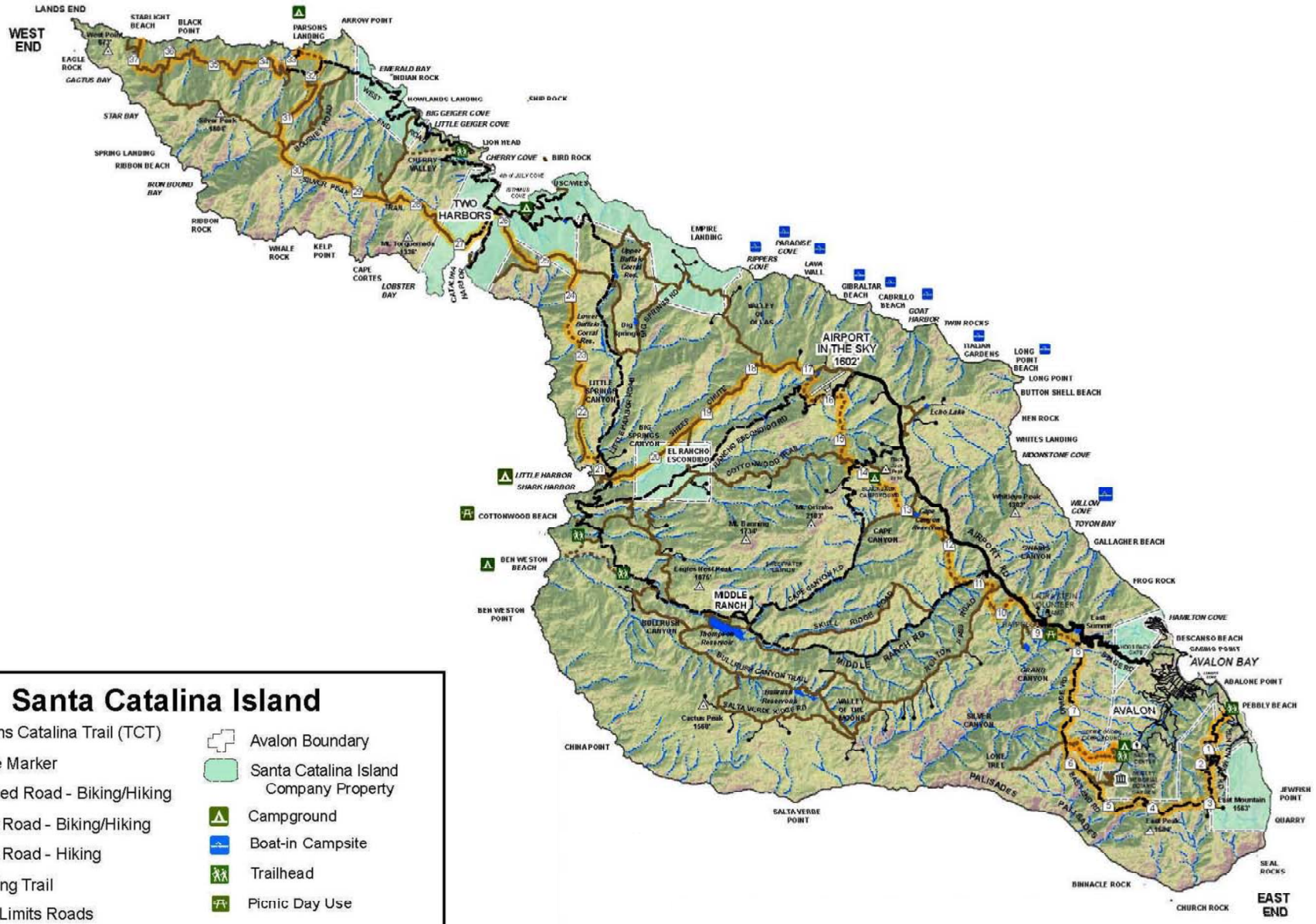

Santa Catalina Island

- Trans Catalina Trail (TCT)
- Mile Marker
- Paved Road - Biking/Hiking
- Dirt Road - Biking/Hiking
- Dirt Road - Hiking
- Hiking Trail
- Off-Limits Roads
- Ponds & Reservoirs
- Avalon Boundary
- Santa Catalina Island Company Property
- Campground
- Boat-in Campsite
- Trailhead
- Picnic Day Use

5/7/10

0 1 2 3 4 5 6 Miles

Catalina Island Map

Two Harbors
Santa Catalina Island Company

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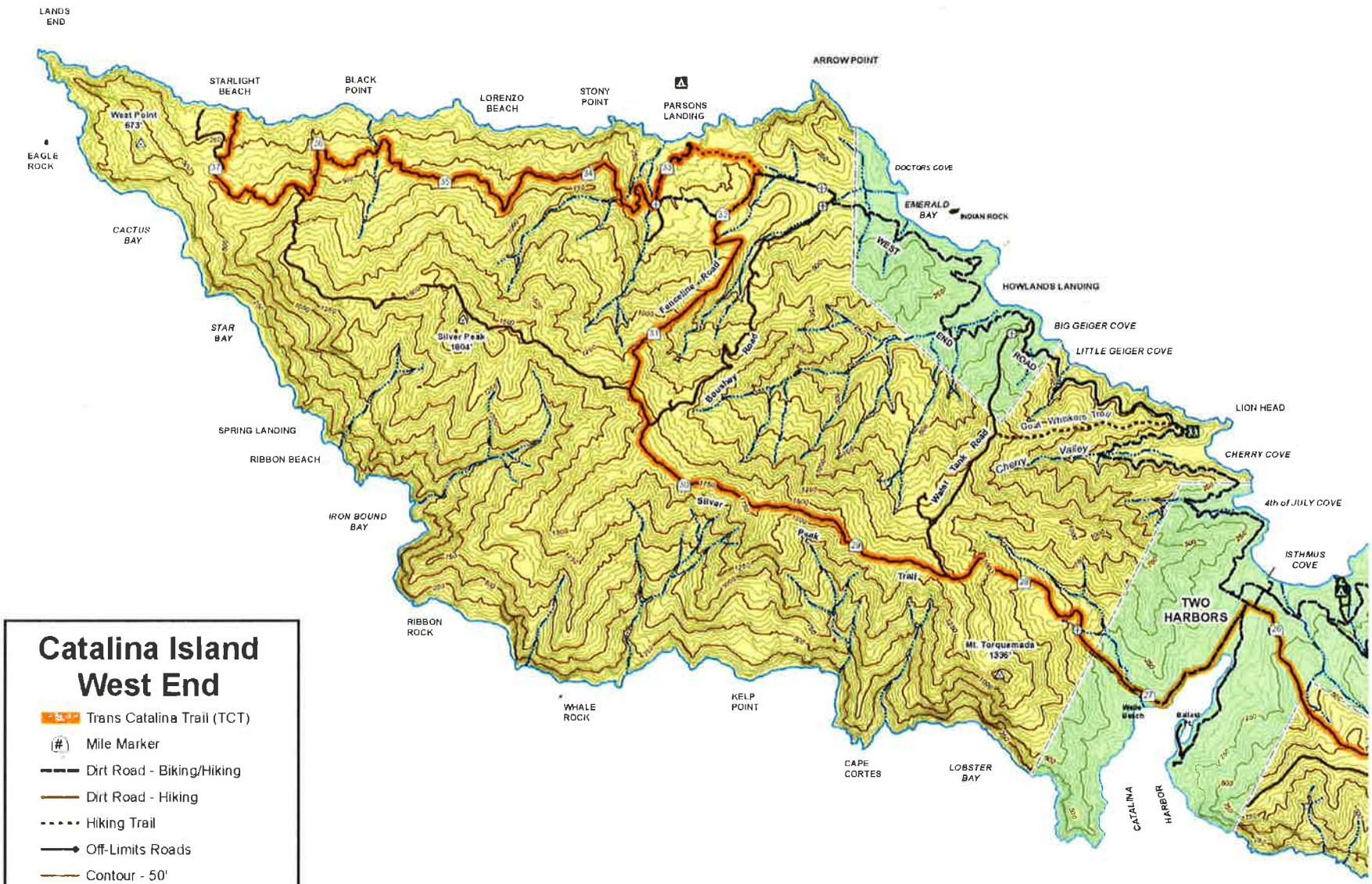


Catalina Island West End

- Trans Catalina Trail (TCT)
- Mile Marker
- Dirt Road - Biking/Hiking
- Dirt Road - Hiking
- Hiking Trail
- Off-Limits Roads
- Contour - 50'
- Gates
- Santa Catalina Island Company Property
- Ponds & Reservoirs
- Campground
- Trailhead

5/7/10

0 0.5 1 1.5 2 Miles

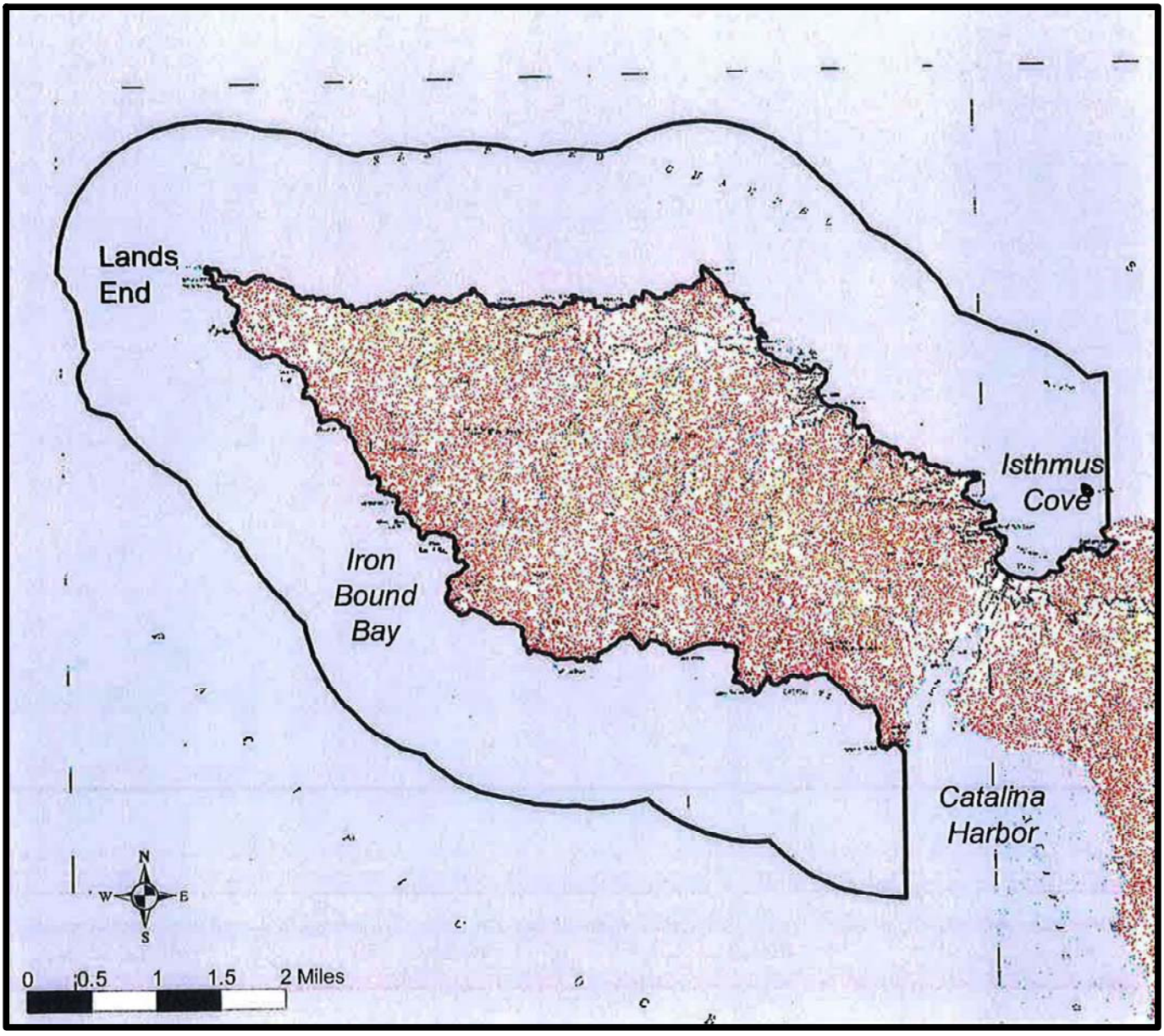
E5 INC

West End

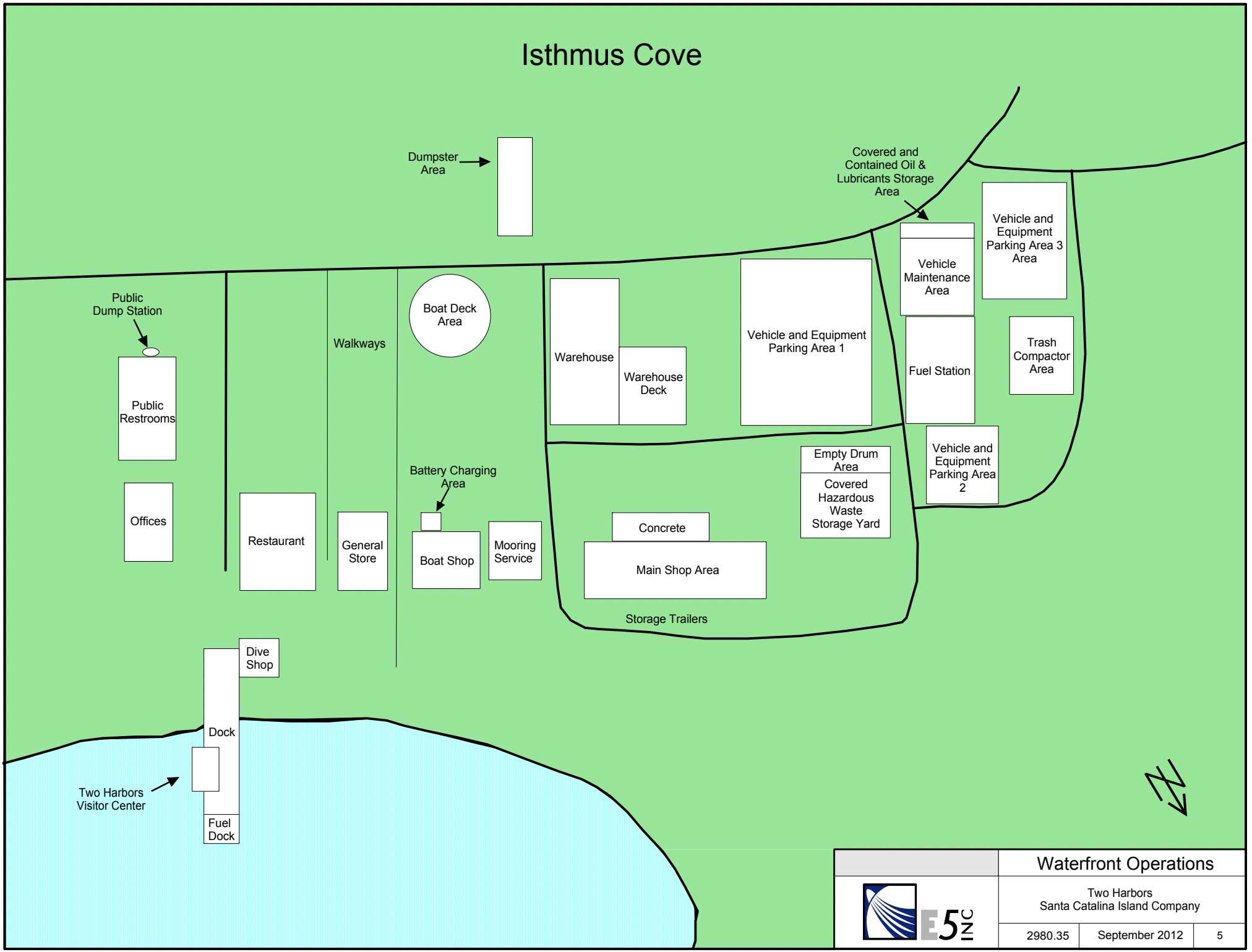
Two Harbors
Santa Catalina Island Company

2980.35	September 2012	3

Area of Special Biological Significance No. 25
Santa Catalina Island - Subarea One, Isthmus Cove to Catalina Head



	ASBS Boundary
E5NC	Two Harbors Santa Catalina Island Company Area of Special Biological Significance No. 25
Project 2980.35	Date September 2012	Figure 4


Isthmus Cove
Dumpster Area
Covered and Contained Oil & Lubricants Storage Area
Vehicle and Equipment Parking Area 3 Area
Vehicle Maintenance Area
Public Dump Station
Boat Deck Area
Walkways
Warehouse
Warehouse Deck
Vehicle and Equipment Parking Area 1
Fuel Station
Trash Compactor Area
Public Restrooms
Offices
Restaurant
General Store
Battery Charging Area
Boat Shop
Mooring Service
Empty Drum Area
Covered Hazardous Waste Storage Yard
Vehicle and Equipment Parking Area 2
Concrete
Main Shop Area
Storage Trailers
Dive Shop
Dock
Two Harbors Visitor Center
Fuel Dock
N
Waterfront Operations
Two Harbors
Santa Catalina Island Company
2980.35
September 2012
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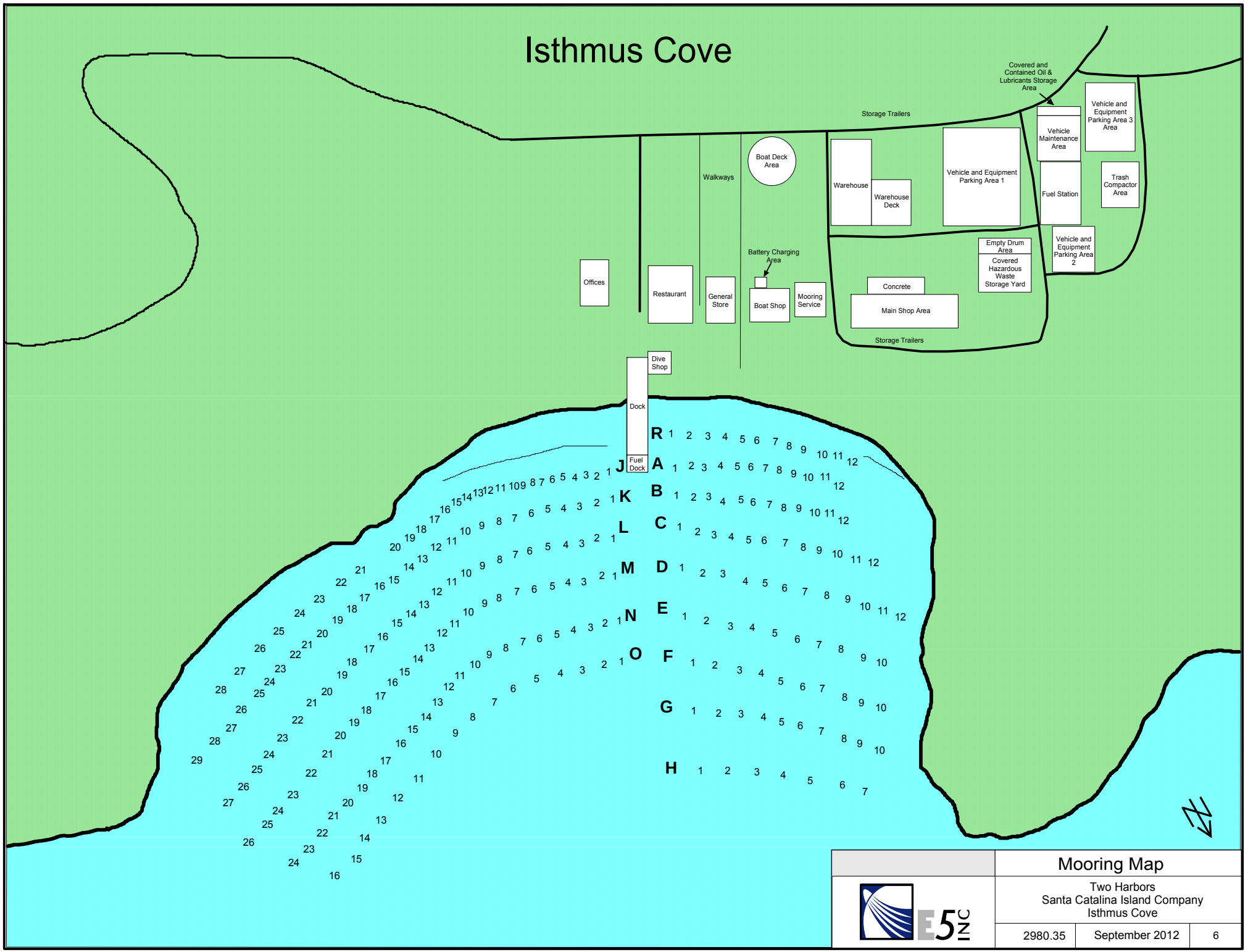

Mooring Map

Two Harbors
Santa Catalina Island Company
Isthmus Cove

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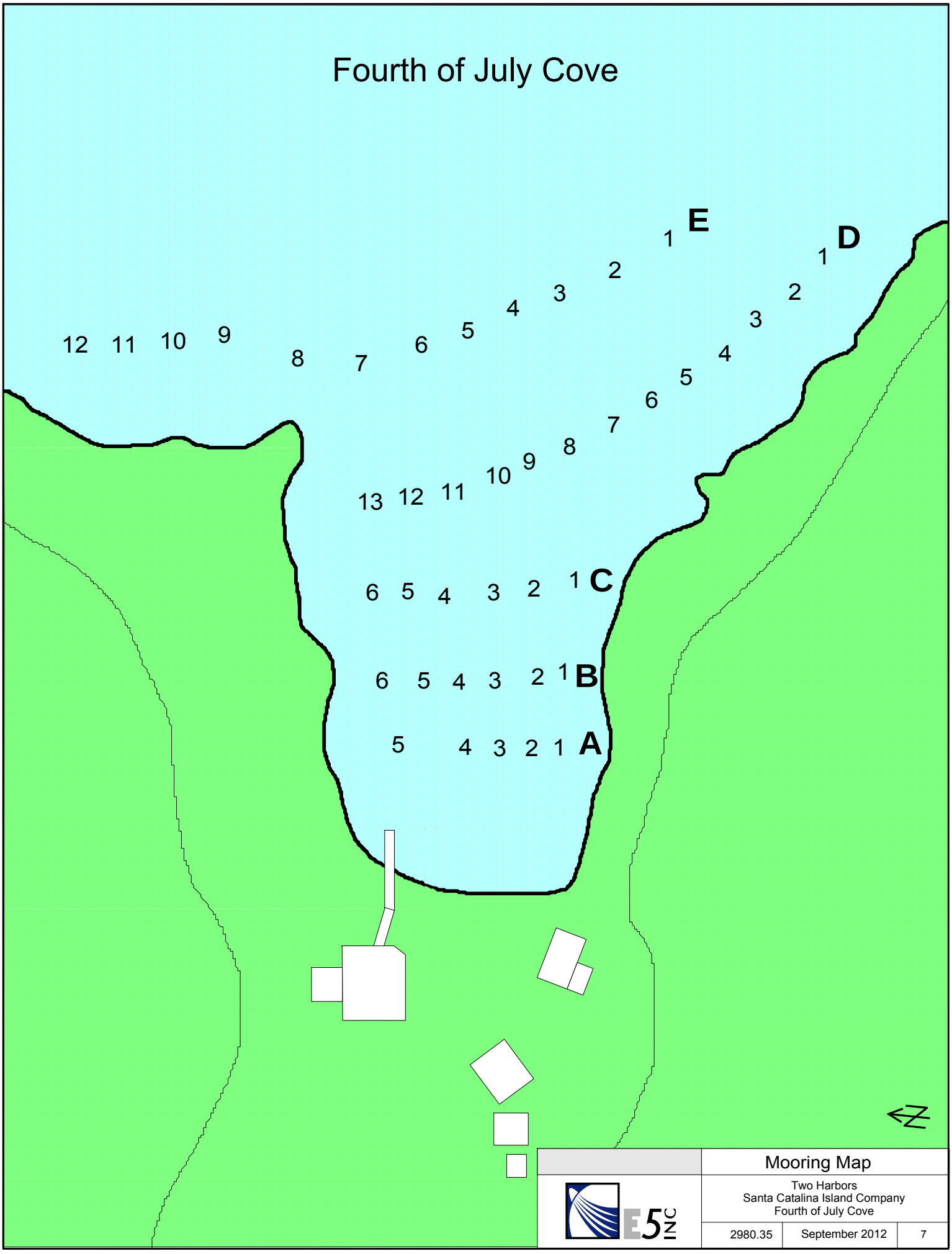

Mooring Map

Two Harbors
Santa Catalina Island Company
Fourth of July Cove

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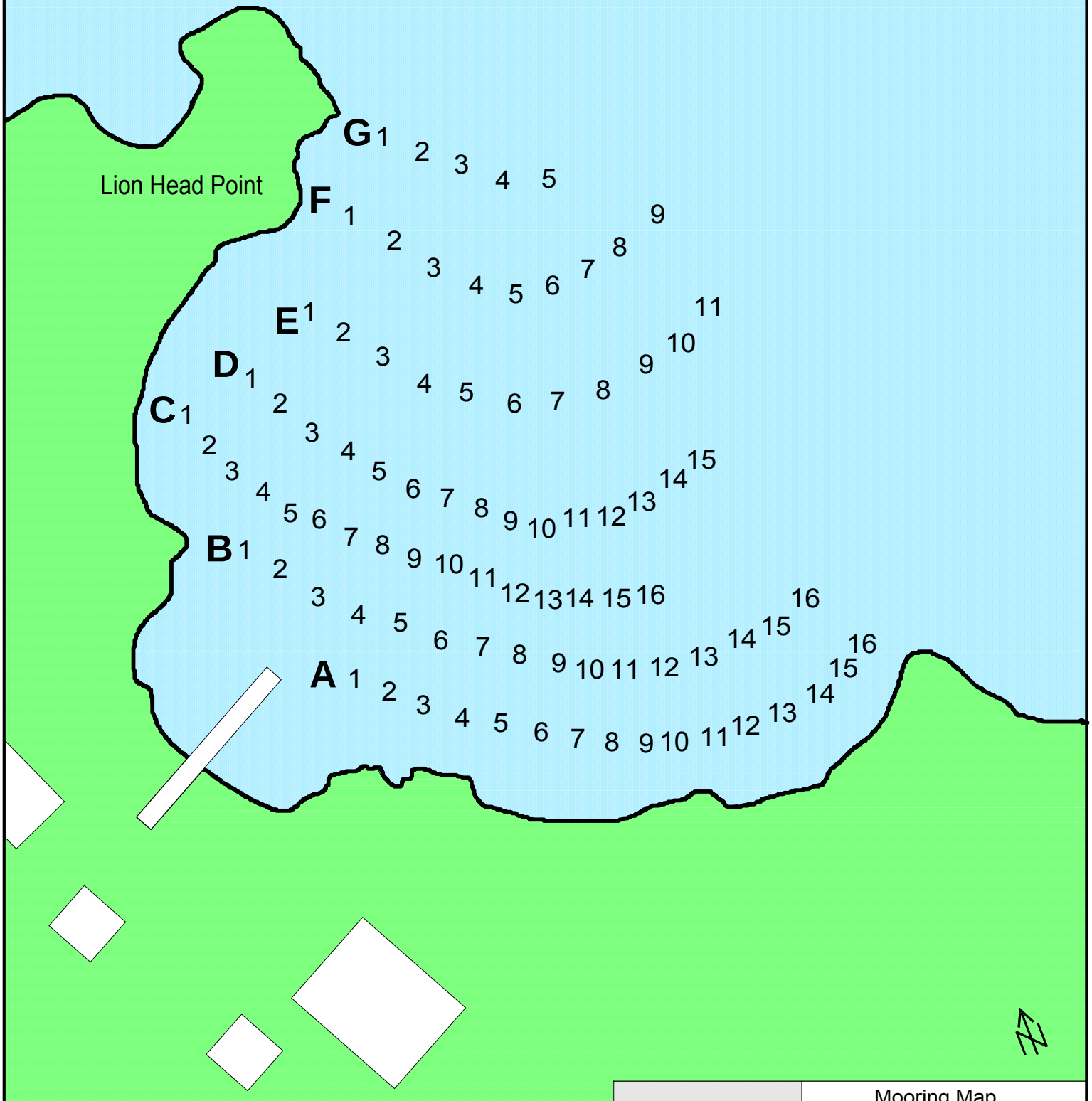
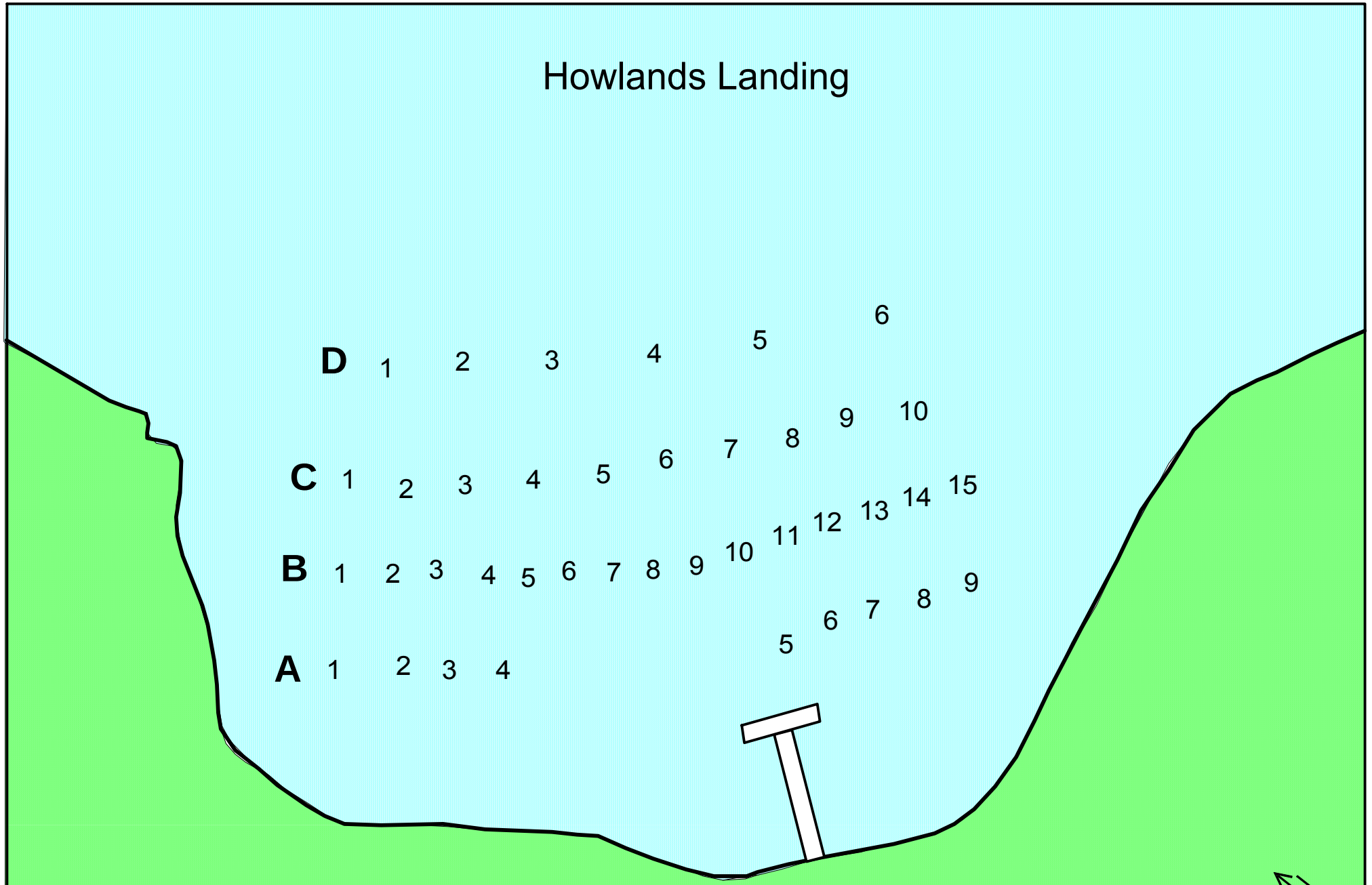
Cherry Cove



Boy Scout Camp- Cherry Valley

	Mooring Map		
E5 INC	Two Harbors Santa Catalina Island Company Cherry Cove		
	2980.35	September 2012	8

Howlands Landing



	Mooring Map		
E5NC	Two Harbors Santa Catalina Island Company Howlands Landing		
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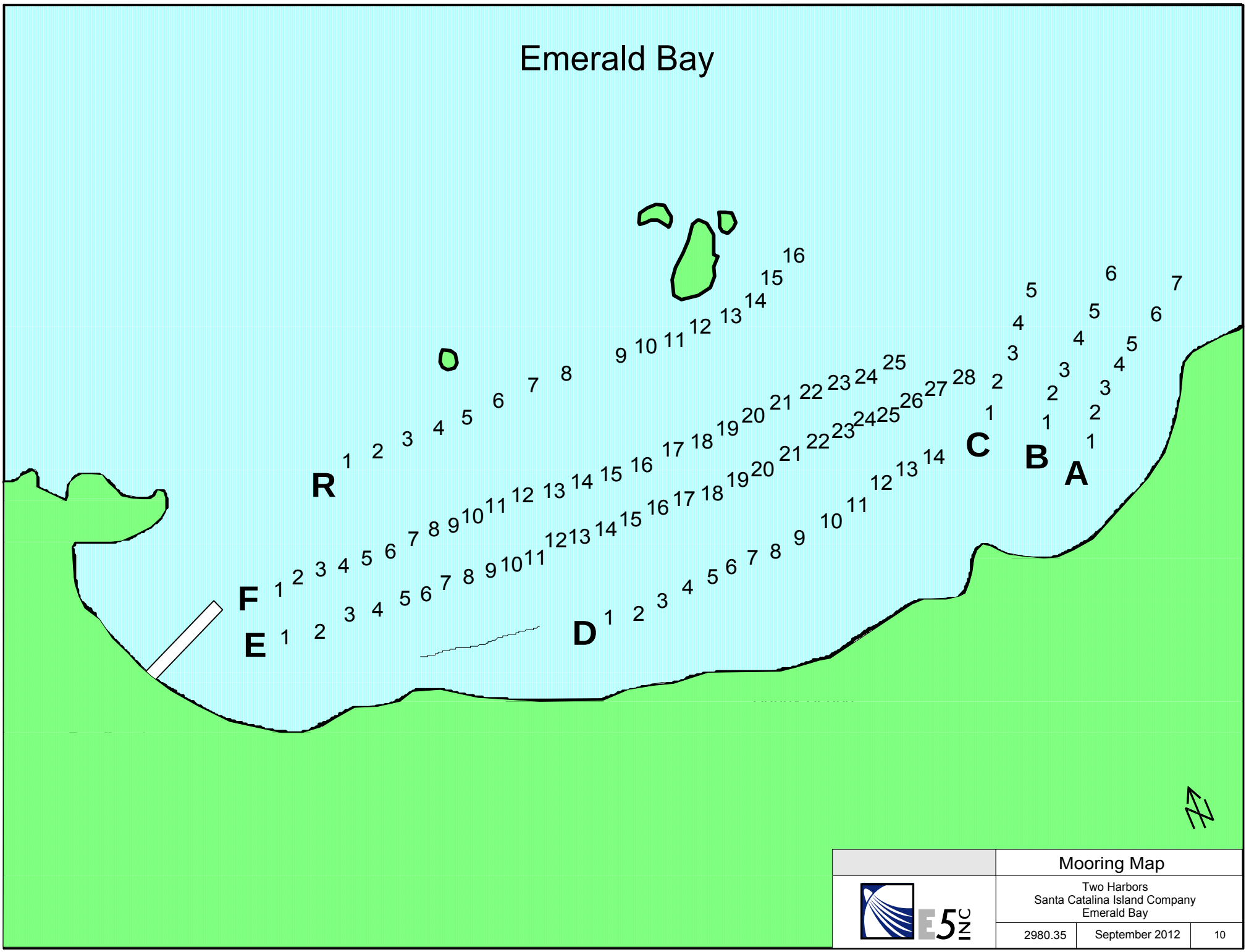
Emerald Bay
R
F
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Mooring Map
Two Harbors
Santa Catalina Island Company
Emerald Bay
2980.35
September 2012
10

APPENDIX A

Best Management Practices

BEST MANAGEMENT PRACTICES: SOLID WASTE MANAGEMENT

WATERFRONT AND MARINE OPERATIONS MANAGEMENT PLAN
ASBS AREA 25, SUBAREA I
TWO HARBORS, SANTA CATALINA ISLAND

Activities	Waste Disposal – Boaters, Visitors, Residences, Businesses
Pollutants	Trash, Debris, Recyclables (Glass, Aluminum, Plastic, Paper)

Reference	Management Practice	Current Implementation	Future Actions
SW-1	Signs posted directing patrons to solid waste disposal and recycling areas. Signs which spell out rules and any prohibited wastes.	Locations have signage directing patrons for disposal of trash. Trash receptacles and dumpsters are provided throughout.	Additional signage required to specifically identify prohibited wastes and other restrictions related to Two Harbors.
SW-2	Provide plentiful containers for collection of recyclables and encourage marina patrons to participate.	Two Harbors provides, maintains and picks up trash receptacles at all covered locations on a daily basis. Plus, Two Harbors provides a trash collection vessel (The Salad Bowl) which gathers onboard trash from moored boats.	No further action.
SW-3	Furnish separate containers for glass, recyclable plastics, scrap metal, aluminum, wood pallets, papers, cardboard, etc. Post notices to inform users of separation practices.	Due to the types of solid waste at Two Harbors, additional receptacles offering disposal of combined recyclable wastes would be recommended for Isthmus Cove.	Blue and green containers for combined recyclable wastes should be provided for public use.
SW-4	Prohibit open burning of waste, plastics, garbage and other materials that generate black smoke.	Open burning of waste or trash is prohibited at Two Harbors.	Additional signage prohibiting trash burning for all areas.
SW-5	Waste disposal and recycling bins, dumpsters, and containers should be clearly marked and conveniently located. Dumpsters should be covered.	Receptacles provided throughout public areas. Dumpsters for both recyclables and trash are centrally located at Isthmus Cove.	Maps or other signage to be provided on Isthmus Cove and other areas which identify locations of trash dumpsters and recyclable materials.

Reference	Management Practice	Current Implementation	Future Actions
SW-6	Provide appropriate receptacles for used oil and spent antifreeze.	Boaters are not permitted to dump used oil or coolant in trash receptacles or dumpsters. However, Two Harbors provides a used oil collection center where boaters may dispose of used oil for a small fee.	As part of public outreach, publicize the used oil collection service which is currently offered by Two Harbors.
SW-7	Marina personnel should inspect solid waste collection facilities at least daily. Uncontained waste should be cleaned up immediately. Any waste receptacles placed on docks or near waters' edge should be secured.	Daily inspections and trash pickups occur at Isthmus Cove, including the beachfront. There are no waste receptacles located on the Isthmus Pier or otherwise over or very close to the water's edge.	Additional waste receptacles for trash should be provided on the fuel dock, and offered to boaters as convenience to dispose of onboard trash while fueling.
SW-8	Require use of tarps and vacuums to contain and collect paint chips, sanding waste, and other debris from boat maintenance areas. Dispose of non-hazardous solids in a covered dumpster or other covered solid waste receptacle.	Tarps, drip pans, overhead coverage and containment are provided for all boat maintenance areas. All non-hazardous solids are collected and segregated from hazardous wastes items.	No further action.
SW-9	Do not allow debris to accumulate and blow into the water. Sandblasting debris should be collected frequently. Deck and dock hosing must not cause debris to be washed into drains or directly into receiving waters.	No sandblasting is conducted nor allowed. Debris on the Isthmus Pier and along water's edge are visually inspected and collected on a daily basis.	No further action.

Reference	Management Practice	Current Implementation	Future Actions
SW-10	If possible, reuse or recycle empty drums and containers rather than disposing them. If not recycled, drums should be emptied and flattened according to local landfill specs. Residues from the drum should be collected and managed properly.	Empty drums are not disposed. As required, any empty drums are recycled or otherwise managed accordingly.	No further action.

BEST MANAGEMENT PRACTICES: FISH WASTES

WATERFRONT AND MARINE OPERATIONS MANAGEMENT PLAN

ASBS AREA 25, SUBAREA I
TWO HARBORS, SANTA CATALINA ISLAND

TWO HARBORS
SANTA CATALINA ISLAND COMPANY

Activities	Fish Cleaning and Disposal – Boaters, Visitors
Pollutants	Fish Waste and Debris

Reference	Management Practice	Current Implementation	Future Actions
FW-1	Encourage catch and release fishing, which does not kill the fish and produces no fish waste.	Fishing is permitted in all areas of Two Harbors. No current policy exists concerning Catch and Release.	Endorse "Catch and Release" within Two Harbors Environmental Policies.
FW-2	Fish wastes and shellfish carcasses should not be disposed into marina basins.	Two Harbors does not permit or allow any fish wastes to be disposed within its marina basin. There is no signage or other public warnings provided to boaters or visitors.	Prohibit fish waste disposal as part of the Two Harbors Environmental Policies, and provide signage to support this policy.
FW-3	Fish wastes may be deposited in the off-shore ecosystem where they were originally harvested.	Two Harbors does not permit or allow any fish wastes to be disposed within its marina basin. However, there is no signage or other public warnings provided to boaters or visitors.	Establish (and publicize) a fish waste policy as part of Two Harbors Environmental Policies.

Reference	Management Practice	Current Implementation	Future Actions
FW-4	Fish wastes and shellfish carcasses should not be disposed into tidal waters or managed in such a way that they will wash up onto any shoreline, or cause odors or other nuisances.	Two Harbors does not permit fish waste disposal within its marina. In general, there are no visual evidence of fish wastes in marina waters, or washed up onto the beach.	Establish (and publicize) a fish waste policy as part of Two Harbors Environmental Policies.
FW-5	Fish cleaning on docks and floats should not be allowed unless fish wastes are collected, contained, and disposed in an approved manner and designated containers.	Fish cleaning is not permitted within Isthmus Cove or other outlying coves.	Establish (and publicize) a fish waste policy as part of Two Harbors Environmental Policies.
FW-6	Fish wastes should be reused or recycled in an environmentally sound manner (e.g., use fish as bait, composting, etc.).	Fish cleaning is not permitted within Isthmus Cove or other outlying coves. Consequently, there are no fish wastes to be disposed, recycled or managed.	Establish (and publicize) a fish waste policy as part of Two Harbors Environmental Policies.
FW-7	Marinas should provide designated fish cleaning areas, including covered cleaning stations wherever feasible.	Since fish cleaning is not permitted within Two Harbors area, there are no designated fish cleaning stations or fish waste disposal areas.	Establish (and publicize) a fish waste policy as part of Two Harbors Environmental Policies.
FW-8	Rinse water drainage from fish cleaning areas should be screened and free of solids, then discharged to a sanitary sewer. On-site septic systems would be quickly overwhelmed and should not be used as a disposal option for fish waste.	There are no fish cleaning stations or fish waste disposal receptacles/collection areas. Consequently, management of rinse water drainage is not required.	Establish (and publicize) a fish waste policy as part of Two Harbors Environmental Policies.

BEST MANAGEMENT PRACTICES: LIQUID MATERIALS

WATERFRONT AND MARINE OPERATIONS MANAGEMENT PLAN
ASBS AREA 25, SUBAREA I
TWO HARBORS, SANTA CATALINA ISLAND

Activities	Repair and Maintenance Shops – Isthmus Cove
Pollutants	Oil, Solvents, Chemicals, Hazardous Wastes

Reference	Management Practice	Current Implementation	Future Actions
LM-1	Build curbs, berms, or other barriers around areas used for liquid material storage to contain spills.	Flammable cabinets are provided hazardous materials storage within repair shops. Drums are stored on containment pallets.	No further action.
LM-2	Storage and disposal areas for fluid materials should be located in or near repair and maintenance areas, undercover, protected from runoff, with berms or secondary containment, and away from flood areas and fire hazards.	Hazardous materials are kept inside buildings or under roof. There is central hazardous waste storage area which is constructed with overhead protection and concrete containment.	No further action.
LM-3	Store minimal quantities of hazardous materials.	Volumes of hazardous materials are limited by capacity of storage cabinets. Expired or out-of-date materials are properly disposed at least annually.	No further action.
LM-4	Provide clearly labeled, separate containers for the disposal of waste oils, fuels, and other liquid wastes.	All wastes are segregated and placed into properly labeled drums. Waste drums are picked up at least every 90 days, and shipped to mainland for disposal.	No further action.
LM-5	Recycle liquid materials where possible.	Current policy is to recycle oils, solvents and other materials wherever possible.	Publicize the used oil collection point currently offered at Isthmus Cove.

Reference	Management Practice	Current Implementation	Future Actions
LM-6	Prepare a hazardous materials spill recovery plan and update it as necessary.	Hazardous materials are inventoried annually as per Los Angeles CUPA requirements.	No further action.
LM-7	Keep adequate spill response equipment where liquid materials are stored.	Spill kits are proximately located in the repair and maintenance shops. Employees are HAZWOPER trained for spill response.	No further action.

BEST MANAGEMENT PRACTICES: PETROLEUM CONTROL

WATERFRONT AND MARINE OPERATIONS MANAGEMENT PLAN
ASBS AREA 25, SUBAREA I
TWO HARBORS, SANTA CATALINA ISLAND

Activities	Fuel Dock, Aboveground Fuel Storage Tanks
Pollutants	Diesel Fuel, Unleaded Gasoline

Reference	Management Practice	Current Implementation	Future Actions
PC-1	For fueling operations, marina personnel who is familiar with the operation and trained in emergency shutdown should be in attendance at all times when the system is operating.	Fuel dock is open for limited hours (8 am to 4 pm, Monday through Friday), with extended hours during summer months. During hours of operation, a dedicated marina employee provides customer assistance to boaters, and monitors all fuel dock activities.	No further action.
PC-2	Fueling facilities and storage areas must be secured when not in use by appropriate shut-down devices and security locks.	Fuel dispensers are locked during off hours. Aboveground storage tanks maintained within enclosure, which is locked at all times.	No further action.
PC-3	Provide signs or other warnings requesting boaters not to top off their tanks.	Boaters are required to pump their own fuel. There is current signage that warns boaters about topping off fuel tanks.	No further action.
PC-4	Develop a Spill Contingency Plan for all fuel storage and dispensing areas. This plan must specify the quantities and types of fuels stored and dispensed on-site, prevention measures, and spill emergency procedures.	Spill Contingency Plan for the fuel dock needs to be updated. Spill Prevention Containment and Countermeasure Plan (SPCC) is required for aboveground storage tanks.	Update Spill Contingency Plan for fuel dock.

Reference	Management Practice	Current Implementation	Future Actions
PC-5	The marina operator should maintain a list of hazardous materials on site with associated reportable quantities and storage locations.	Hazardous materials are inventoried annually as per Los Angeles CUPA requirements.	No further action.
PC-6	Make sure that absorbent pads and booms are readily available when fueling a boat. Spill containment and control materials should be stored in a clearly marked readily accessible location.	Containment booms are provided in well marked storage lockers and easily accessible location on the fuel dock.	No further action.
PC-7	Signs of leakage or spillage should be investigated immediately, and cleaned up and reported accordingly.	Fuel dock is monitored during all hours of operation by marina personnel. Any leaks or spills can be quickly observed and contained.	No further action.
PC-8	Emergency phone numbers to be conspicuously located.	No emergency phone numbers are posted at the fuel dock.	Post emergency phone numbers which should be a phone number of a key SCICO employee who lives in Two Harbors.

BEST MANAGEMENT PRACTICES: BOAT AND MOORING CLEANING

WATERFRONT AND MARINE OPERATIONS MANAGEMENT PLAN
ASBS AREA 25, SUBAREA I
TWO HARBORS, SANTA CATALINA ISLAND

Activities	Boat Cleaning, Mooring Maintenance
Pollutants	Cleansers, Solvents, Paints, Wastewater

Reference	Management Practice	Current Implementation	Future Actions
BC-1	Wash boat hulls above the waterline by hand. Where feasible, remove boats from the water and clean them where debris can be captured and properly disposed of.	Two Harbors does not provide any private boat cleaning or maintenance services. For its own fleet, any cleaning or maintenance is conducted at its onshore repair shop.	No further action.
BC-2	If using cleansers, use cleansers that will have minimal impact on the aquatic environment.	There is no current policy or guidance provided to private boaters as concerning boat cleaning practices.	Establish (and publicize) a boat cleaning policy as part of Two Harbors Environmental Policies.
BC-3	Attempt to wash boats frequently enough that the use of cleansers will not be necessary.	Two Harbors has a routine maintenance schedule for its vessels, and all boat cleanings are conducted onshore .	No further action.
BC-4	Switch to low-toxicity or nontoxic antifouling paints.	Two Harbors uses environmentally compliant paints and coatings for its vessels and moorings.	No further action.
BC-5	Avoid in-the-water hull scraping or any abrasive process done underwater that could remove paint from the boat hull or mooring.	No in-water or underwater maintenance of boats or moorings are conducted. All boats and moorings are removed from the water prior to any maintenance work being performed.	No further action.
BC-6	Minimize the impacts of wastewater from hydro pressure washing for boats and moorings.	Fleet boats are brought ashore, and hydro pressure is used for cleaning of boat bottoms. Barnacles are manually scraped off moorings.	Install a dedicated boat cleaning area that is sloped to capture water from hydrowash and filter out debris/barnacles. Captured water to be properly disposed.

BEST MANAGEMENT PRACTICES: SEWAGE MANAGEMENT

WATERFRONT AND MARINE OPERATIONS MANAGEMENT PLAN
ASBS AREA 25, SUBAREA I
TWO HARBORS, SANTA CATALINA ISLAND

Activities	Sewage Disposal – Boaters, Visitors
Pollutants	Gray Water, Black Water

Reference	Management Practice	Current Implementation	Future Actions
SM-1	Provide pumpout service at convenient times and at a reasonable cost.	Two Harbors provides pumpout stations on the Isthmus Pier, which are available to the general public free of charge.	No further action.
SM-2	Provide portable toilet dump stations near small slips and launch ramps.	Portable toilet dump station is currently provided near the public restrooms at Isthmus Cove.	No further action.
SM-3	Establish practices and post signs to control pet waste problems.	Two Harbors allows pets ashore, however requires owners to pick up after their pets and dispose of pet wastes.	Provide signage/maps indicating the locations of pet waste stations and/or designated pet areas.
SM-4	Keep pumpout stations clean and easily accessible.	Pumpout stations are clean, and readily accessible to the public 24 hours per day.	No further action.
SM-5	Provide public restrooms at all marinas and boat ramps.	Public bathrooms, showers and locker facilities are provided within short walk from the Isthmus Pier. Bathroom facilities are also provided at other coves and landings.	No further action.

Reference	Management Practice	Current Implementation	Future Actions
SM-6	Declare all marina waters to be “No Discharge Zones”.	There is no current policy or guidance provided to private boaters as concerning No Discharge Zone.	Establish (and publicize) a No Discharge Zone as part of Two Harbors Environmental Policies.
SM-7	Establish equipment requirement policies that prohibit the use of Y-valves on boats on marina waters.	There is no current policy or guidance provided to private boaters as concerning use of Y-valves.	Establish (and publicize) prohibition on Y-valves as part of Two Harbors Environmental Policies.

BEST MANAGEMENT PRACTICES: STORMWATER RUNOFF

WATERFRONT AND MARINE OPERATIONS MANAGEMENT PLAN
ASBS AREA 25, SUBAREA I
TWO HARBORS, SANTA CATALINA ISLAND

TWO HARBORS
SANTA CATALINA ISLAND COMPANY

Activities	Hazardous Materials, Fuel Storage, Maintenance, Repairs
Pollutants	Oil, Solvents, Chemicals

Reference	Management Practice	Current Implementation	Future Actions
SR-1	Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility, equipment, storage areas and other areas.	Two Harbors requires and trains its employees on all manners of good housekeeping within its operations.	No further action.
SR-2	Preventive Maintenance. Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.	There are regular inspections of pollutant sources, sampling points and other areas, as per the Storm Water Pollution Prevention Plan and Monitoring Program.	No further action.
SR-3	Employee Training. This includes training of personnel who are responsible for storm water management, inspections, sampling and other measures.	Two Harbors has dedicated staff responsible for implementation of the Storm Water Pollution Prevention Plan and Monitoring Program.	No further action.
SR-4	Erosion Control and Site Stabilization, which may include planting and maintenance of vegetation, diversion of run-on and runoff, sandbags, silt screens, etc.	It estimated that Two Harbors land areas comprises less than 30% impervious surfaces with the remainder as exposed soil, gravel or vegetation. Dirt roads are maintained for erosion control. Further, Two Harbors institutes a weekly dust control measure in which an eco-friendly dust suppressant material is applied to its dirt roads and other exposed soil areas.	No further action.

Reference	Management Practice	Current Implementation	Future Actions
SR-5	Inspections. Regular inspections, tracking and follow-up procedures are described to ensure adequate corrective actions are taken.	Two Harbors has dedicated staff responsible for implementation of the Storm Water Pollution Prevention Plan and Monitoring Program.	No further action.
SR-6	Overhead Coverage. This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.	Overhead coverage is provided for majority of hazardous materials handling areas and storage facilities. The aboveground storage fuel tanks are not covered, however are equipped with secondary containment, security features and other spill control measures.	No further action.
SR-7	Retention Ponds. This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.	Due to geographical and other physical constraints, it is not possible for Two Harbors to provide retention ponds to contain its storm water runoff.	No further action.
SR-8	Control Devices. This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.	Wherever possible, diversionary and other control devices are used to channel runoff away from pollutant sources.	No further action.
SR-9	Secondary Containment Structures. This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.	Secondary containment is provided for satellite drum storage locations, as well as hazardous waste storage location. The aboveground storage fuel tanks are also equipped with secondary containment, security features and other spill control measures.	Update existing Spill Contingency Plan for fueling operations.
SR-10	Treatment. This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.	Sanitary wastewater from Isthmus Cove are all captured and treated at the wastewater treatment plant. Post-treated sanitary water is used as irrigation for adjacent hillsides. Treatment of hazardous wastes or other pollutant sources are neither permitted nor feasible.	No further action.

BEST MANAGEMENT PRACTICES: PUBLIC OUTREACH

WATERFRONT AND MARINE OPERATIONS MANAGEMENT PLAN
ASBS AREA 25, SUBAREA I
TWO HARBORS, SANTA CATALINA ISLAND

TWO HARBORS
SANTA CATALINA ISLAND COMPANY

Activities	Boating, Fishing, Camping, Hiking, Sightseeing
Pollutants	Trash, Fish Wastes, Sewage, Recyclable Materials

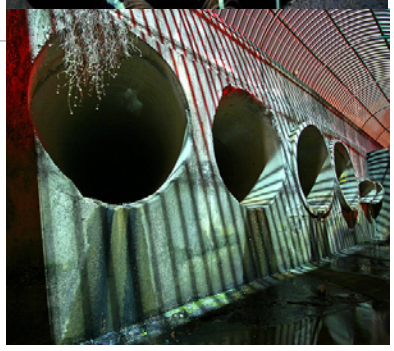
Reference	Management Practice	Current Implementation	Future Actions
PO-1	Two Harbors Environmental Policies	Two Harbors does not publicize any specific environmental practices or policies for its areas.	Establish (and publicize) Two Harbors Environmental Policies, which address key areas: - Solid Wastes - Fish Waste - Recyclable Materials - Boat Cleaning - Hazardous Materials - Sewage / No Discharge Zone
PO-2	Boater & Visitor Guide	On annual basis, Two Harbors produces a full color brochure that promotes its various recreational activities and services.	Incorporate ASBS information into the brochure for 2013 and beyond. Include the Two Harbors Environmental Policies.
PO-3	Signage	Two Harbors does not have signage publicizing its various management practices, or environmental Policies.	Additional signage should be provided on Isthmus Pier to publicize ASBS information and Two Harbors Environmental Policies.

Reference	Management Practice	Current Implementation	Future Actions
PO-4	Fact Sheets	Two Harbors operates a Visitor Center where information is provided, however there are no fact sheets on clean marina practices such as No Discharge Zone or other eco-friendly practices.	Develop and/or adopt fact sheets for key environmental practices, such as: Vessel Cleaning & Maintenance Boat Sewage Oil & Fuel Trash & Marine Debris Gray Water Hazardous Wastes
PO-5	Maps	All maps provided to visitors relate to hiking and camping locations throughout Two Harbors. No maps are provided which relate to this Waterfront Plan.	Develop new maps and/or integrate into existing maps the following items: Pumpout stations Public bathroom and showers Trash dumpsters Recyclable material bins/dumpsters Pet waste areas or waste stations
PO-6	Tenant/Lease Restrictions	There are few or nominal terms and conditions within lease or tenant agreements relating to environmental practices of Two Harbors.	Integrate specific environmental requirements and practices into the primary tenant leases, plus campsite and mooring reservation documents.
PO-7	Communications	Currently, there are several public touch points where Two Harbors is capable of communicating with Return Visitors and New Visitors: Harbor Patrol, Fuel Dock, Visitor Center Restaurant, Scuba Shop, Website Email List, Newsletters, Mailing List	Where feasible, Two Harbors plans to promote, educate and reinforce the Two Harbors Environmental Policies, plus ASBS information with returning and new visitors through its various communication mediums.
PO-8	Youth Programs	Currently, the Boy Scouts lease Cherry Cove and Emerald Bay West.	Develop an education program or other cooperative efforts where the Boy Scouts can learn and/or participate in the Two Harbors clean marina program.

APPENDIX B

STORM WATER POLLUTION PREVENTION PLAN

Environmental Consultants & Engineers
Permitting • Audits • Risk Assessments • Compliance • Technology



National Pollutant Discharge Elimination System

Storm Water Pollution Prevention Plan

General Industrial Storm Water Permit
of the State of California

Prepared for:

Two Harbor Enterprises, Inc.
P.O. Box 5086
Avalon, CA 90704

WDID No. 419I09647

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TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 INTRODUCTION

1.1 Background

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act (CWA)) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which established a framework for regulating municipal and industrial storm water discharges under the NPDES program.

On November 16, 1990, the U.S. Environmental Protection Agency published final regulations that establish application requirements for storm water permits. The regulations require that storm water associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit. Facilities regulated by an NPDES permit must also implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm discharges.

On November 19, 1991, the California State Water Control Board (Board) adopted a General Industrial Storm Water Permit (GISP or General Permit) that applied to all storm water discharges requiring a permit, except construction activities. On April 17, 1997, the Board reissued the General Permit with several revisions to key permit requirements.

1.2 Purpose

This document was prepared to comply with the Storm Water Pollution Prevention Plan (SWPPP) requirements of the General Permit. The General Permit requires that all subject facilities prepare, retain on site, and implement an SWPPP and Storm Water Monitoring Program (SWMP).

Among other items, the SWPPP contains a description of the facility, identification of potential pollutant sources and proposed Best Management Practices (BMPs), sedimentation and erosion control practices, preventative maintenance and good housekeeping practices, spill prevention and response, inspections, record keeping, employee training, and program management responsibilities.

1.3 SWPPP Objectives

There are two main objectives of the SWPPP: (1) to help identify the sources of pollution that affect the quality of industrial storm water discharges and authorized non-storm water discharges, and (2) to describe and ensure the implementation of Best Management Practices to reduce or prevent pollutants in industrial storm water discharges and authorized non-storm water discharges.

2.0 DESCRIPTION OF POLLUTANT SOURCES

2.1 Site Description

Santa Catalina Island (or Catalina Island) is part of the eight Channel Islands archipelago just off the coast of California (refer to FIGURE 3 - Location Map). The eight islands that make up the archipelago are divided into two groups — the Northern Channel Islands and the Southern Channel Islands. Catalina Island is one of the four Southern Channel Islands, and is approximately 22 miles long and encompasses 74.98 square miles. It is eight miles across at its greatest width and 1/2 mile across at its narrowest width. The highest point on the island is Mt. Orizaba at 2,123 feet.

Main population areas include the City of Avalon which is the only incorporated area on the island located on the eastern coastline, and Two Harbors which is an unincorporated town near the northern tip of the island.

Two Harbors Enterprises, Inc.'s (THE) location at the Isthmus on Catalina Island, California is a recreational destination for boaters and campers. THE operates a variety of businesses in support of the recreational activities and location's infrastructure. The major areas associated with Storm Water directives include the Two Harbors area, Wells Beach, and the Waste Water Treatment Plant area. The activities in these areas include boat and vehicle maintenance, fueling operations, fuel storage, vehicle and equipment parking, trash compacting, welding, and waste water treatment. THE is identified under the General Permit as a Category 11 Facility – Certain Facilities where Industrial Materials, Equipment or Activities are exposed to Storm Water.

2.2 Stormwater Discharge

Two Harbors Enterprises, Inc.'s (THE) location at the Isthmus on Catalina Island, California is a recreational destination for boaters and campers. THE operates a variety of businesses in support of the recreational activities and location's infrastructure. The major areas associated with Storm Water directives include the Two Harbors area, Wells Beach and the Waste Water Treatment Plant area. The activities in these areas include boat and vehicle maintenance, fueling operations, fuel storage, vehicle and equipment parking, trash compacting, welding, and waste water treatment. The location consists of several buildings as identified on the Site Map provided in the Figures section of this manual. Activities that may introduce pollutants to storm water discharge are identified and described below. The flow of storm water is illustrated Figures 3-5 in the Figures section.

2.3 Potential Pollutant Sources

Potential pollutant sources may include areas where industrial processes are conducted outdoors, outside storage areas, dust generating activities, significant spills or leaks, non-storm water discharges, and soil erosion may occur. The following is a list of the potential pollutant sources at this location.

Table 2.3-1
List of Pollutant Sources

Operation/Activities	Figure
Main Shop Area	3
Boat Shop Area	3
Vehicle Maintenance Area	3
Fuel Dock	3
Fueling Island	3
Trash Compactor Area	3
Waste Water Treatment Area	4
Mooring Service Area	3
Hazardous Waste Storage Area	3
Warehouse Area	3
Vehicle and Mobile Equipment Parking Areas no. 1, 2, 3, & 4	3, 5

2.4 Inventory of Materials and Chemicals

Given the large number of industrial activites in this area, a detailed inventory of materials and chemicals could not be prepared. However, a general list of chemicals is provided below based on the type of operations and activities in this area, which include primarily low quantity usage and storage of petroleum hydrocarbons, machine oil, solvents, paints and other industrial chemicals. Table 2.4-1 below provides a list of expected chemicals and pollutants from each operation and activity in this area. Figures 3-5 show approximate locations of industrial tenants where these materials would be expected to be used and stored.

Table 2.4-1
List of Pollutant Sources

Industrial Operations/Activities	Figure	Potential Chemicals/Pollutants
Main Shop Area	3	Lubricants, oils, grease, solvents, paints
Boat Shop Area	3	Lubricants, oils, grease, solvents,Battery Acid
Vehicle Maintenance Area	3	Lubricants, oils, grease, solvents, antifreeze
Fuel Dock	3	Gasoline and Diesel Fuels
Fueling Island	3	Gasoline and Diesel Fuels
Trash Compactor Area	3	Refuse Debris
Waste Water Treatment Area	4	Chlorine
Mooring Service Area	3	Paint, Metals, Solvents
Hazardous Waste Storage Area	3	Hydrocarbons, battery acids
Warehouse Area	3	Hydrocarbons – automotive fluids
Vehicle and mobile Equipment Parking Areas no. 1, 2, 3, & 4	3, 5	Hydrocarbons – oils, grease, lubricants, antifreeze

3.0 BEST MANAGEMENT PRACTICES

Best Management Practices (BMPs) are required under the General Permit and include both non-structural and structural practices to minimize the discharge of pollutant sources within storm water. It is anticipated that the BMPs identified herein will minimize pollutant discharges with storm water to the best extent possible. Each of the pollutant sources in this plan were evaluated for applicable BMPs, non-structural and structural. The BMPs may change periodically based upon changes in production processes, pollutant sources, or other factors. Sampling will be performed in accordance with the General Permit to assist in evaluating the effectiveness of these and other BMPs being implemented.

Non-structural BMPs that were evaluated and implemented include good housekeeping, preventative maintenance, spill response, material handling and storage, employee training, waste handling/recycling procedures, recordkeeping, erosion control, inspections and quality assurance. Structural BMPs that were evaluated and implemented include overhead coverage, retention ponds, control devices, secondary containment and treatment. Appendix A provides a complete list and description of pollutant sources, activities and applicable BMPs. General descriptions of non-structural and structural BMPs are provided below.

3.1 Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. In general, non-structural BMPs options are considered for each pollutant source prior to structural BMPs. Below is a list of non-structural BMPs that were evaluated for each pollutant source. Appendix A provides a complete list and description of pollutant sources, activities and applicable BMPs.

Good Housekeeping. Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility, equipment, storage areas and other areas.

Preventive Maintenance. Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

Spill Response. These measures include spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

Material Handling and Storage. This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

Employee Training. This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water.

Waste Handling/Recycling. These measures include procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

Recordkeeping and Reporting. This includes the procedures to ensure that all records of inspections, spills, maintenance, activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

Erosion Control and Site Stabilization. This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, sandbags, silt screens, etc.

Inspections. Regular inspections, tracking and follow-up procedures are described to ensure adequate corrective actions are taken.

Quality Assurance. This includes the procedures to ensure that all elements of the SWPPP and monitoring Program are adequately conducted.

3.2 Structural BMPs

Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that were evaluated for each pollutant source. Appendix A provides a complete list and description of pollutant sources, activities and applicable BMPs.

Overhead Coverage. This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

Retention Ponds. This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

Control Devices. This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

Secondary Containment Structures. This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

Treatment. This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

3.3 Sediment Control and Mitigation

Approximately 70% of the entire location is unpaved and exposed to storm water. The majority of this area consists of access roads and vehicle and equipment parking areas. Unpaved areas exposed to storm water in which Industrial Activity occurs include approximately 20% of the Main Shop area and the aeration basins and solidifier located at the waste water treatment area. The entire waste water treatment area is heavily graveled to minimize soil erosion. In addition, road areas are routinely coated with a water-based emulsion to prevent erosion.

It is anticipated that this potential pollutant source of sediment may include both industrial and non-industrial activities in the immediate vicinity. Due to these circumstances, THE plans on implementing the following additional BMPs to minimize excess particulate, solids and other sediment that may build up along these private access roads in areas immediately up gradient from Outfalls 1 and 2:

- During dry season, quarterly visual inspections of private access road in areas up gradient from outfalls
- During wet season, monthly visual inspections of private access road in areas up gradient from outfalls
- As required, routine street/gutter cleaning of private access roads in areas up gradient from outfalls based on visual observations
- As required, install additional paving, berms or other structures for unpaved driveways or other areas up gradient from outfalls

Future sampling and analytical results from storm water discharges will be evaluated to determine the effectiveness of these BMPs for sediment control and mitigation.

4.0 RECORDKEEPING AND COMPLIANCE

4.1 Pollution Prevention Team

The Pollution Prevention Team shall be responsible for carrying out the storm water management activities outlined in the SWPPP, SWMP and General Permit. The Pollution Prevention Team for this facility includes: (1) Harry Petersen, Facilities Manager; (2) Ann Luchau, First VP & Chief Administrative Officer. Although not listed above, the Pollution Prevention Team may involve other personnel to perform activities necessary to implement the SWPPP and SWMP. The specific responsibilities of this team include the following:

- Implement the elements of the SWPPP and SWMP;
- Evaluate the effectiveness of the SWPPP and SWMP;
- Modify the SWPPP and SWMP to comply with the General Permit;
- Supervise the sampling of storm water discharges;
- Supervise the performing of inspections;
- Prepare the records and reports as required by the SWPPP, SWMP, and General Permit; and interface with regulatory agencies.

4.2 Annual Comprehensive Site Compliance Evaluation

A comprehensive site compliance evaluation (evaluation) shall be conducted during each reporting period (July 1 – June 30). Evaluations shall be conducted within 8 – 16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

- A review of all visual observation records, inspection records, and sampling and analysis results.
- A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e of the General Permit for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification (refer to Section 7.0) that the facility operator is in compliance with the General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with

the General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years.

4.3 Stormwater Records

Records will be kept on-site of all storm water-related compliance activities for a minimum of five years. The materials that will be retained to document compliance with the NPDES Storm Water General Permit will consist of the following:

- SWPPP and future revisions
- Records of spills and cleanup activities
- All observation forms related to storm water and non-storm water
- Records of preventative maintenance activities
- Employee training records, if any
- Copy of Notice of Intent
- Copy of General Permit
- Annual Reports submitted to the Regional Water Quality Control Board
- Correspondences with regulatory agencies regarding storm water discharge
- Records of storm water monitoring and sampling results
- Significant Materials Inventory revisions

4.4 Storm Water Management Notebook

All records, documents and reports related to the storm water management activities of this facility shall be maintained in a Storm Water Management Notebook. The notebook shall retain at least the following information:

- A copy of the SWPPP, SWMP, and General Permit;
- Records for all visual observations
- Records of all storm water sampling events;
- Laboratory analysis reports for each storm water sample;
- A copy of each Annual Report
- Internal memorandums and other correspondence related to storm water management activities.

5.0 SWPPP GENERAL REQUIREMENTS

5.1 Plan Availability

The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

5.2 Agency Review

The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

5.3 Plan Revisions

The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

5.4 Revision Timeline

The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this General Permit.

5.5 Notifications

When any part of the SWPPP is infeasible to implement by the deadlines specified in Provision E.2 or Sections A.1, A.9, A.10.c, and A.10.d of the General Permit due to

proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

5.6 Public Document

The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308 (b) of the Clean Water Act.

6.0 CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: _____

Signature: _____ Date: _____

Title: _____

APPENDIX A

Pollutant Sources and Best Management Practices

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: MAIN SHOP AREA
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Boat Maintenance and Repair	Lubricants, oils, grease, solvents, paints	• Materials stored in covered area. • Maintenance performed under cover and in paved area whenever feasible. • Drip pans placed under boat parts when draining fluids or leaks are suspected. • Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills. • Paints applied with bushes only

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: BOAT SHOP AREA
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Inboard/Outboard Boat Motor Maintenance and Repair	Lubricants, oils, grease, solvents	• Materials stored in covered area. • Maintenance performed inside whenever feasible. • Drip pans placed under boat parts when draining fluids or leaks are suspected. • Awnings used when maintenance activities are conducted outdoors whenever feasible.
2. Battery Charging	Battery Acid	• Battery charging occurs in a roofed and paved substructure. • Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: VEHICLE MAINTENANCE AREA
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Vehicle Maintenance	Petroleum Hydrocarbons, Sulfuric Acid, Lead, Oil and Grease, Anti-Freeze, Solvents, Paints	• Vehicle/equipment maintenance performed only in designated areas. • Vehicle/equipment maintenance is also performed inside garage/building, whenever feasible. • Vehicle/equipment maintenance is also performed under roofed space, whenever feasible. • Clearly labeled drums and other containers placed in convenient locations to hold waste fluids and spent batteries removed from equipment. • The remaining capacities of waste receptacles monitored and arrangements for pick-ups made promptly • Waste oils, waste antifreeze, spent solvents, used oil filters, and discharged batteries recycled. • Procedures established to ensure draining of engine fluids and transfer of waste fluids to drums or containers without spillage. • Drip pans placed under vehicles/equipment when draining fluids or leaks suspected • Area equipped with dry spill cleanup equipment and covered standby drums. • Employees instructed on the proper procedures for cleanup of minor spills.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: FUEL DOCK
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Gasoline and Diesel Fuels Dispensing	Gasoline and Diesel Fuels	• Only authorized and trained attendants allowed to dispense fuels. • Automatic shutoff controls to prevent overfill. • Emergency shutoff controls. • Dispensers inactivated when not attended. • Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills and notification procedures for spills. • Written procedures for fueling operations established and followed. • Dispensers inactivated when not attended.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: FUELING ISLAND
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
2. Gasoline and Diesel Fuels Dispensing	Gasoline and Diesel Fuels	• Only authorized and trained attendants allowed to dispense fuels. • Automatic shutoff controls to prevent overfill. • Emergency shutoff controls. • Dispensers inactivated when not attended. • Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills and notification procedures for spills. • Written procedures for fueling operations established and followed. • Dispensers inactivated when not attended.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647
SOURCE: TRASH COMPACTOR AREA
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Trash Compacting	Refuse Debris	• Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: WASTE WATER TREATMENT FACILITY
LOCATION: FIGURE 4

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Treatment of Sanitary Waste Water	Chlorine	• Chlorination tanks covered. • Chlorine feed systems in covered shed with secondary containment. • Chlorine feed systems automatically controlled. • Chlorine stored in shed with secondary containment. • Area secured from entry by unauthorized personnel. • Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills and notification procedures for spills.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: MOORING SERVICE AREA
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Buoy Maintenance	Paint, Metals, Solvents	• Drift minimized by walls or other wind barriers. • Environmentally acceptable paints used. • Brushes or mittens used for paint application. • Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills and notification procedures for spills.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: HAZARDOUS WASTE STORAGE AREA
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Hazardous Waste Storage	Hydrocarbons, Battery Acid	• Area secured to prohibit entrance by unauthorized personnel. • Area paved and covered. • All containers stored on secondary containment pallets. • Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills and notification procedures for spills. • All containers clearly marked, labeled and sealed. • Daily inspections conducted.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: WAREHOUSE AREA
LOCATION: FIGURE 3

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Storage	Hydrocarbons – automotive fluids	• Materials stored under cover. • Spill cleanup materials readily available. • Employees instructed on the proper procedures for cleanup of minor spills and notification procedures for spills.

POLLUTANT SOURCE AND BEST MANAGEMENT PRACTICES ASSESSMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

TWO HARBORS ENTERPRISES, INC., WDID # 419I019647

SOURCE: VEHICLE AND EQUIPMENT PARKING AREAS 1, 2, & 3
LOCATION: FIGURE 3, 5

Activity	Potential Pollutant	Best Management Practices (BMPs)
1. Vehicle and Equipment Storage	Hydrocarbons – oils, grease, lubricants, antifreeze	• Vehicle maintenance and inspections. • Drip pans used to control leaks once discovered. Leaking vehicles promptly repaired.