

Appendix V: Preliminary Descriptions of State Marine Protected Areas in the North Central Coast (CDFG 2004)

Mendocino County

Manchester and Arena Rock State Marine Conservation Area

Sonoma County

Del Mar Landing State Marine Park

Salt Point State Marine Conservation Area

Gerstle Cove State Marine Conservation Area

Fort Ross State Marine Conservation Area

Sonoma Coast State Marine Conservation Area

Bodega State Marine Reserve

Marin County

Tomales Bay State Marine Par

Point Reyes Headlands State Marine Conservation Area

Estero de Limantour State Marine Conservation Area

Duxbury Reef State Marine Conservation Area

San Francisco County

Farallon Islands State Marine Conservation Area

San Mateo County

James V. Fitzgerald State Marine Park

Manchester and Arena Rock State Marine Conservation Area

Year established: 1970

Approximate Area: 3.95 nm²

Approximate Shoreline length: 3.23 nm

Approximate Depth range (feet): 0 to 125

Habitat types: Sandy bottom dominates with exposed wash rock and rocky pinnacles.

Surrounding habitat types: This coastline is notable for its unique geomorphology. The San Andreas Fault re-enters the ocean at the mouth of Alder Creek at the northern boundary of the MPA. The coastline above this point is characterized by steep headlands with accompanying narrow bands of rocky intertidal, a subtidal substrate of mixed soft and hard bottom, and numerous nearshore rock islands. Coastal streams have cut through the marine terrace at various points creating wetland and riparian habitat and pockets of sandy beaches. Directly to the south at Arena Cove and Mote Creek are highly productive intertidal reefs composed of sedimentary rock. Large portions of sand beach are also found in this area. Offshore of Iversen Point, approximately 10 miles south of Point Arena, is Saunders Reef which contains one of the largest stands of bull kelp, *Nerocystis luetkeana*, along the north coast.

Summary of existing regulations: Only the following species may be taken recreationally: finfish, red abalone, chiones, clams, cockles, rock scallops, native oysters, crabs, lobsters, ghost shrimp, sea urchins, and marine worms except that no worms may be taken in any mussel bed unless taken incidentally to the take of mussels. Only the following species may be taken commercially: finfish, crabs, ghost shrimp, jackknife clams, sea urchins, algae (except giant kelp and bull kelp) and worms except that no worms may be taken in any mussel bed, nor may any person pick up, remove, detach from the substrate any other organisms, or break up, move or destroy any rocks or other substrate or surfaces to which organisms are attached.

Primary objectives for establishment of site: This site was originally designated as a State Park and State Underwater Park. State parks are designated to preserve outstanding natural, scenic, and cultural values, indigenous aquatic and terrestrial fauna and flora, and the most significant examples of such ecological regions. (Public Resources Code 5019.53 and Title 14, Section 4752).

Existing enforcement: The Department of Parks and Recreation works in cooperation with the Department of Fish and Game, assimilating its regulations in the state park system.

Baseline and ongoing monitoring and research studies: The State Parks System conducts periodic resource evaluations.

Basic Evaluation: The subtidal habitat consists of primarily sandy bottom, with the exception of the Arena Rock area. The primary objective in originally establishing this site as a state park was to preserve a significant example of the geomorphology within this ecological region. This goal, separate from any biological goal, is met under the current designation. Enforcement in this region is generally difficult due to the remoteness of the site but can be accomplished with the Department's long-range patrol vessels.

Published references related to effectiveness of this MPA: None found.

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: None found.

Unpublished references related to use of this MPA as a research tool: None found.

Del Mar Landing State Marine Park

Year established: 1972

Approximate Area: 0.06 nm²

Approximate Shoreline length: 0.6 nm

Approximate Depth range (feet): 0 to 42

Habitat types: Primarily rocky subtidal habitat

Surrounding habitat types: To the north, south, and offshore are rocky subtidal habitat, and some sandy areas.

Summary of existing regulations: Take of all living marine resources is prohibited except the recreational take of finfish by hook and line or spear.

Primary objectives: This area was originally designated as an ecological reserve. Fish and Game Code Section 1580 (ecological reserves) states that "the policy of the state is to protect threatened or endangered native plants, wildlife, or aquatic organisms or specialized habitat types, both terrestrial and non-marine aquatic, or large heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves." Although the language does not specifically refer to ecological reserves in marine areas, the Fish and Game Commission has extended this policy to those areas.

Existing enforcement: Enforcement is difficult due to the remoteness of the area.

Baseline and ongoing monitoring and research studies: No baseline or ongoing monitoring or research has occurred or does occur.

Basic Evaluation: Thus far, very little study specific to the efficacy of this area as a marine protected area has been pursued. However, this is an area where the degree of protection could be increased and site boundaries could be expanded with little opposition from consumptive groups. The community is very supportive of a state marine reserve in this area and would contribute to the effectiveness of local enforcement.

Published references related to effectiveness of this MPA: None found.

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: None found.

Unpublished references related to use of this MPA as a research tool: None found.

Salt Point State Marine Conservation Area

Year established: 1970

Approximate Area: 1.24 nm²

Approximate Shoreline length: 3.5 nm

Approximate Depth range (feet): 0 - 222

Overlapping area: Gerstle Cove State Marine Conservation Area

Habitat types: The area contains exposed and sheltered coastline with mostly hard bottom, and includes numerous wash rocks and rock shelves interspersed with gravel/sandy bottom. The substrate is primarily Franciscan sandstone and shale parent rock.

Surrounding habitat types: The surrounding area contains primarily gravel/sandy bottom with rocky outcroppings.

Summary of existing regulations:

Only the following species may be taken recreationally: finfish, red abalone, chiones, clams, cockles, rock scallops, native oysters, crabs, lobsters, ghost shrimp, sea urchins, mussels and marine worms except that no worms may be taken in any mussel bed unless taken incidentally to the take of mussels. Only the following species may be taken commercially: finfish, crabs, ghost shrimp, jackknife clams, sea urchins, algae (except giant kelp and bull kelp) and worms except that no worms may be taken in any mussel bed, nor may any person pick up, remove, detach from the substrate any other organisms, or break up, move or destroy any rocks or other substrate or surfaces to which organisms are attached.

Primary objectives: This site was originally designated as a State Park. State parks are designated to preserve outstanding natural, scenic, and cultural values, indigenous aquatic and terrestrial fauna and flora, and the most significant examples of such ecological regions (Public Resources Code 5019.53 and Title 14, Section 4752, CCR). The Department of Parks and Recreation's General Plan states "the primary purpose of Salt Point State Park is to preserve the outstanding scenic, scientific, natural, and cultural values found on the Sonoma Coast, including offshore areas...".

Existing enforcement: Long-term cooperative enforcement between State Park Rangers, State Fish and Game Wardens and Sonoma County Sheriff Deputies.

Baseline and ongoing monitoring and research studies: No quantitative studies have been conducted at Salt Point. The State Parks System Dive Team and the California Underwater Parks and Preserves Advisory Board have conducted numerous dives here starting in the late 1960s. Seltnerich and DeMartini (1979) reported on interpretation and management of

Mendocino Headlands and Salt Point State Underwater Parks. They described the biota of various depths and physical environments. This report can be considered a qualitative baseline.

Basic Evaluation: Salt Point is a highly utilized recreational and commercial fishing area. Due to the number of people frequenting the area that are aware of the limited restrictions currently in place, the MPA functions to the extent of those regulations. Anecdotal references to increased numbers and size of individual species have varied from year to year, but in general speak to a positive effect relative to areas outside the MPA. Commercial Passenger Fishing Vessels commonly anchor here, shore-based anglers frequent the access points, and commercial urchin fishing activity also occurs in this area. Rocky habitat, wash rocks and similar habitat lay both north and south of the current MPA boundaries. Expansion of the MPA would provide for larger scale representation of this habitat but would meet with considerable opposition from both commercial and recreational consumptive users.

Published references related to effectiveness of this MPA: Rogers-Bennett, L. and J.S. Pearse. 2001

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: Morgan, L.E., et al. 2000(1); Morgan, L.E., et al. 2000(2); Smith, B.D., et al. 1998; Wing, S.R., et al. 1995(1); Wing, S.R., et al. 1995(2)

Unpublished references related to use of this MPA as a research tool: None found.

Gerstle Cove State Marine Conservation Area

Year established: 1971

Approximate Area: 0.01 nm² **Approximate Shoreline length:** 0.3 nm

Approximate Depth range (feet): 0 to 16

Overlapping area: Salt Point State Marine Conservation Area

Habitat types: Exposed wash rock, gravel/sandy bottom with rocky outcroppings.

Surrounding habitat types: Offshore rocks, rocky walls and boulders; gravel/sandy bottom locally dominant.

Summary of existing regulations: Take of all living marine resources is prohibited except the commercial take of finfish and algae (except giant kelp and bull kelp).

Primary objectives: Protection of an area representative of the ecological characteristics and aquatic organisms of the region.

Existing enforcement: Enforcement has been active in this area, but difficult. This is the major access point for multiple users of the surrounding stretch of coastline.

Baseline and ongoing monitoring and research studies:

The Department of Parks and Recreation conducts periodic resource evaluations.

Basic Evaluation: Anecdotal information suggests that current protection within the Gerstle Cove State Marine Conservation Area has enhanced and provided for increased abundance of individuals of a variety of species. Qualitative surveys conducted shortly after (3 years) the MPA was established indicated an increase in the abalone population within the MPA. This site would benefit from State Marine Reserve designation or it could be incorporated into a larger State Marine Conservation Area plan. An expansion of the boundaries of the MPA would enhance the biological diversity that already exists, providing for a larger range of habitat protection. Prohibition of commercial finfish take would provide a refuge for individual species and enforcement would be simplified no-take regulations would make violations obvious.

Published references related to effectiveness of this MPA: None found.

Unpublished references related to effectiveness of this MPA: Anonymous. 1974

Published references related to use of this MPA as a research tool: None found.

Unpublished references related to use of this MPA as a research tool: None found.
Descriptions and Preliminary Evaluations of Existing California Marine Protected Areas in the North-Central Coast (Department of Fish and Game, 2005)

Fort Ross State Marine Conservation Area

Year established: 1970

Approximate Area: 0.17 nm² **Approximate Shoreline length:** 0.9 nm

Approximate Depth range (feet): 0 to 102

Habitat types: Exposed and sheltered coastline with mostly hard bottom; numerous wash rocks, rock shelves interspersed with gravel/sandy bottom. Franciscan sandstone and shale parent rock. Sandy bottom at 60 feet supports an unusual stand of eelgrass.

Surrounding habitat types: Sandy bottom with rocky outcroppings, offshore wash rocks.

Summary of existing regulations: No recreational take of living or non-living marine resources is allowed except: finfish, red abalone, chiones, clams, cockles, rock scallops, native oysters, crabs, lobsters, ghost shrimp, sea urchins, mussels and marine worms except that no worms may be taken in any mussel bed unless taken incidentally to the take of mussels. Commercial take of species other than giant kelp and bull kelp is allowed.

Primary objectives: This site was originally designated as a State Historic Park and State Underwater Park. State historic parks are established to preserve objects of historical, archaeological, and scientific interest, historic sites and places commemorating important persons or historic events (Public Resources Code 5019.59 and Title 14, Section 4751, CCR).

Existing enforcement: Long-term cooperative enforcement between State Park Rangers, State Fish and Game Wardens and Sonoma County Sheriff Deputies.

Baseline and ongoing monitoring and research studies: No quantitative studies have been conducted at Fort Ross. The State Parks System Dive Team and the California Underwater Parks and Preserves Advisory Board have conducted numerous dives here starting in the late 1960s. In 1981, the US Navy worked with State Parks to document shipwreck sites using on board magnetometers; 14 sites were plotted. Navy and parks divers recorded some sites with video cameras. These videos show the general biota of wreck sites. Marine scientists from Indiana University and the Department of Parks and Recreation have carefully documented this site over the last few years. Qualitative observations of the biota, video and still documentation is in progress.

Basic Evaluation: The primary objective in originally establishing this state historic park was the preservation of the various shipwreck sites in the area; preservation of these sites is achieved under the current status. The current regulations provide limited protection for the invertebrate species listed above, however this area does not function as a biological reserve. Fort Ross Cove is utilized regularly by Commercial Passenger Fishing Vessels. Two long-term

diving rangers have reported substantial declines in rockfish populations over the past 20 years. Commercial urchin fishing currently occurs within the MPA boundaries, and could continue as it has had a positive effect on kelp establishment and overall biodiversity. The archeological sites within the current boundaries could be designated as a State Marine Cultural Preservation Area, but any additional regulatory restrictions would need considerable public support to facilitate enforcement.

Published references related to effectiveness of this MPA: None found.

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: Morgan, L.E., et al. 2000; Smith, et al. 1998

Unpublished references related to use of this MPA as a research tool: None found.

Sonoma Coast State Marine Conservation Area

Year established: 1970

Approximate Area: 0.68 nm² **Approximate Shoreline length:** 4.2 nm

Approximate Depth range (feet): 0 to 26

Overlapping area: Bodega State Marine Reserve

Habitat types: Exposed coast with mostly hard bottom, rock shelves with gravel/sandy bottom interspersed.

Surrounding habitat types: Offshore wash rocks, rocky pinnacles and sandy bottom.

Summary of existing regulations: No recreational take of living or non-living marine resources is allowed except: finfish, red abalone, chiones, clams, cockles crabs, ghost shrimp, mussels, native oysters, rock scallops, sea urchins and marine worms except that no worms may be taken in any mussel bed unless taken incidentally to the take of mussels. Commercial take of species other than giant kelp and bull kelp is allowed.

Primary objectives: This site was originally designated a State beach. State beaches are designed in areas with frontage on the ocean or bays designed to provide swimming, boat, fishing, and other beach-oriented activities. (Public Resources Code 5019.56 and Title 14, Section 4753, CCR)

Existing enforcement: Long-term cooperative enforcement between State Park Rangers, State Fish and Game Wardens and Sonoma County Sheriff Deputies.

Baseline and ongoing monitoring and research studies: Many studies by UC Bodega Marine Laboratory, Sonoma State University and the College of Marin. A number of senior projects have been done along Sonoma Coast. Dr Gordon L. Chan, College of Marin, prepared a Marine Coastal Ecology Syllabus (1972) which focuses to the San Francisco Bay Region and useful as well for the Sonoma Coast.

Basic Evaluation: Maximum upwelling values for the west coast system consistently occur along the Sonoma and Mendocino coast. This seasonal process transports nutrient rich water from the deep ocean into the sunlit surface layers near shore. The Bodega Submarine Canyon heads in the southern part of Sonoma Coast State Marine Conservation Area underwater unit and acts as a conduit of nutrient rich water. As upwelling occurs spring and summer, phytoplankton rich waters stimulates the growth of many organisms and produces a highly diverse and productive biota.

The primary objective in establishing this site, as stated above, was to provide for recreational activities, including fishing. The site fulfills this objective. However Sonoma Coast State Marine Conservation Area does not function as a marine protected area other than providing limited protection for invertebrate species. Commercial Passenger Fishing Vessels frequently utilize this area of coastline, and an increase in protection, while providing refuge for many fish species, would meet opposition from consumptive user groups.

Published references related to effectiveness of this MPA: None found.

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: None found.

Unpublished references related to use of this MPA as a research tool: None found.

Bodega State Marine Reserve

Year established: 1965 (full protection established in 1999)

Approximate Area: 0.20 nm² **Approximate Shoreline length:** 1.0 nm

Approximate Depth range (feet): 0 to 36

Overlapping area: Sonoma Coast State Marine Conservation Area

Habitat types: Rocky outcrops in sandy bottom.

Surrounding habitat types: Exposed coastline, wash rocks, rocky bottom interspersed with sand.

Summary of existing regulations: All commercial and recreational take prohibited.

Primary objectives: Protection of marine plants and invertebrates.

Existing enforcement: Enforcement is effective because of the close proximity of the site to the Bodega Marine Laboratory.

Baseline and ongoing monitoring and research studies: Bodega Marine Laboratory utilizes this MPA on a regular basis for research projects and observation.

Basic Evaluation: This MPA is relatively small and is the only existing MPA in the North Central region which is entirely marine and which has complete protection for all marine organisms. Complete protection has only been afforded to this MPA, originally established as a Marine Life Refuge, since 1999, a relatively short time period in which to assess its function as a no-take reserve. However, several studies utilize the MPA as a comparative baseline for species protected from the effects of fishing (i.e., urchins, crab, and abalone). The current boundaries of the MPA are honored and generally accepted by users groups. Any proposed enlargement of the boundaries likely will be met with opposition.

Published references related to effectiveness of this MPA: Botsford, L.W., et al. 1999

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: Botsford, L.W. 2001; Botsford, L.W., et al. 1994. MacFarlane, R.B. and E.C. Norton. 1999; Morgan, L.E., et al. 2000(1); Morgan, L.E., et al. 2000(2); Norton, E.C. and R.B. MacFarlane. 1995; Norton, E.C. and R.B. MacFarlane. 1999; Norton, E.C., et al. 2001; Quinn, et al. 1993; Rogers-Bennett,

L., et al. 1995; Rogers-Bennett, L. and J.S. Pearse. 2001; Smith, B.D., et al. 1998; Wing, et al. 1995(1); Wing, S.R., et al. 1995(2); Wing, S.R. and M.R. Patterson 1993

Tomales Bay State Marine Park

Year established: 1973

Approximate Area: 0.58 nm² **Approximate Shoreline length:** 9.08 nm

Approximate Depth range (feet): not available

Habitat types: Intertidal marsh and estuarine

Surrounding habitat types: estuarine

Summary of existing regulations: Take of all living marine resources is prohibited except the recreational hook and line take of species other than marine aquatic plants. Only lightweight, hand-carried boats may be launched or operated within the Park.

Primary objectives: This area was originally designated as an ecological reserve. Fish and Game Code Section 1580 (ecological reserves) states that "the policy of the state is to protect threatened or endangered native plants, wildlife, or aquatic organisms or specialized habitat types, both terrestrial and non-marine aquatic, or large heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves." Although the language does not specifically refer to ecological reserves in marine areas, the Fish and Game Commission has extended this policy to those areas.

Existing enforcement: Tomales Bay State Marine Park is patrolled regularly by the Department of Fish and Game. Baseline and ongoing monitoring and research studies: None found.

Basic Evaluation: Insufficient information for evaluation at this time.

Published and unpublished references: None found.

Point Reyes Headlands State Marine Conservation Area

Year established: 1972

Approximate Area: 0.60 nm² **Approximate Shoreline length:** 3.5 nm

Approximate Depth range (feet): 0 to 85

Habitat types: Rocky intertidal and subtidal mixed with sandy bottom.

Surrounding habitat types: Mixture of sand and hard bottom offshore.

Summary of existing regulations: Take of all living marine resources is prohibited except the commercial take of finfish and algae other than giant kelp and bull kelp.

Primary objectives: Protection of invertebrates.

Existing enforcement: Enforcement has been difficult due to the lack of personnel active in the area, as well as the difficulty in distinguishing recreational from commercial fishing from shore.

Baseline and ongoing monitoring and research studies: Baseline data for individual species varies from data collected in 1931 (algae) to 1980 (salmonids). No baseline data for finfish.

Current research includes: No specific research projects related to MPA status.

Basic Evaluation: There are no current studies that speak to the efficacy of this site as a marine protected area; the existing regulations provide limited protection for invertebrates in the nearshore (primary objective). Additional protection may be considered as fishing activities have disturbed marine mammal haul-outs and seabird nesting colonies. This site could be extended seaward to protect birds and mammals and increase protection to benefit nearshore fishes provided that a cooperative enforcement plan with National Park personnel is implemented. A boundary extension of the MPA would be feasible and effective if users groups are consulted.

Published references related to effectiveness of this MPA: None found.

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: Botsford, L.W. 2001; Wing, S.R., et al. 1995(2)

Unpublished references related to use of this MPA as a research tool: None found.

Estero de Limantour State Marine Conservation Area

Year established: 1971

Approximate Area: 0.64 nm² **Approximate Shoreline length:** 10.15 nm

Approximate Depth range (feet): not available

Habitat types: Estuarine and marsh

Surrounding habitat types: Intertidal sandy bottom with rocky outcroppings interspersed.

Summary of existing regulations: Take of all living marine resources is prohibited except the commercial take of finfish and algae other than giant kelp and bull kelp.

Primary objectives: To protect estuarine habitat.

Existing enforcement: Enforcement at this site has been limited.

Baseline and ongoing monitoring and research studies: While no baseline studies have been conducted in this area, monitoring of the area is conducted regularly as part of the National Seashore.

Basic Evaluation: There are no studies reporting the efficacy of this area as an MPA. Although this MPA technically permits some commercial take, it functions as a defacto fully protected area from consumptive use.

Published and unpublished references: None found.

Duxbury Reef State Marine Conservation Area

Year established: 1971

Approximate Area: 0.50 nm² **Approximate Shoreline length:** 3.8 nm

Approximate Depth range (feet): 0 to 13

Habitat types: Monterey shale, rocky intertidal and subtidal habitat.

Surrounding habitat types: Rocky intertidal and subtidal habitat interspersed with sand.

Summary of existing regulations: Only the following species may be taken recreationally: red abalone, Dungeness crabs, rock crabs, rockfish (family Scorpaenidae), lingcod, cabezon, surfperch (family Embiotocidae), halibut, flounder, sole, turbot, salmon, kelp greenling, striped bass, steelhead, monkeyface-eel, wolf-eel, smelt, and silversides. Commercial take of species other than giant kelp and bull kelp is allowed.

Primary objectives: Protect communities of a Monterey shale outcrop, especially the intertidal biota.

Existing enforcement: Enforcement is not effective due to lack of personnel in the area.

Baseline and ongoing monitoring and research studies: Dr. Gordon Chan of the College of Marin conducted several long-term categorical studies as well as a study of user effects on the invertebrate and algae population prior to MPA designation. Floral and faunal surveys were done by the Gulf of the Farallones National Marine Sanctuary in 1996.

Basic Evaluation: The primary objective in establishing this area was to provide protection for invertebrate species while allowing hook-and-line fishing from shore. Due to local conservation education efforts, this MPA fulfills its initial objective to prohibit recreational take of invertebrate species. Use of the area has evolved since the MPA designation and commercial harvest occurs on the reef and near the reef, possibly affecting the populations the original designation was designed to protect. There is considerable community support (including consumptive user groups) for designating this area as a State Marine Reserve.

Published references related to effectiveness of this MPA: Chan, G.L. 1968, Starr and Green 2007

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: Chan, G.L. 1967, Starr and Green 2007

Unpublished references related to use of this MPA as a research tool: Anonymous. 1979

Farallon Islands State Marine Conservation Area

Year established: 1991

Approximate Area: 13.3 nm² **Approximate Shoreline length:** 4.2 nm

Approximate Depth range (feet): 0 to 240

Habitat types: Complex hard bottom habitat with varying degrees of relief.

Surrounding habitat types: A variety of complex habitats lie immediately adjacent to the MPA boundary. Farther to the east is the primarily soft-bottom portion of the Gulf of the Farallones. A short distance to the west, the continental shelf drops off rapidly.

Summary of existing regulations: Area closures prevent fishing within 300 feet of the shore of portions of Southeast Farallon Island and the four islets of the North Farallon Islands from March 15 through August 15 of each year. A five nautical mile per hour speed limit is in effect for all vessels within 1,000 feet of any shoreline of the above islands. Otherwise all other forms of legal take are allowed. Other restrictions currently limit recreational and commercial fishing in certain depths.

Primary objectives: This area was originally designated as an ecological reserve. Fish and Game Code Section 1580 (ecological reserves) states that "the policy of the state is to protect threatened or endangered native plants, wildlife, or aquatic organisms or specialized habitat types, both terrestrial and nonmarine aquatic, or large heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves." Although the language does not specifically refer to ecological reserves in marine areas, the Fish and Game Commission has extended this policy to those areas. The Farallon Islands were designated specifically to protect populations of nesting marine birds and breeding marine mammals from noise associated with vessel traffic. The U.S. Fish and Wildlife Service (USFWS) wanted to prohibit fishing within 1 mile of shore of all of the Farallon Islands year-round, but a compromise was reached with fishing interests and the Department to establish seasonal closures closer to shore around some of the islands.

Existing enforcement: Department enforcement vessels patrol the area. Staff from the Point Reyes Bird Observatory (PRBO) are stationed on Southeast Farallon Island, under an agreement with USFWS. They monitor wildlife populations, and can notify enforcement personnel of potential violations.

Baseline and ongoing monitoring and research studies: Monitoring of marine bird and mammal populations is conducted by PRBO staff and the Gulf of the Farallones National Marine Sanctuary (GNMS), with occasional assistance from the Environmental Protection Agency. PRBO has more than 30 years of data, beginning in 1971, on marine bird populations

at the islands. Since 1993 GFNMS staff have been conducting intertidal surveys of invertebrate and algal populations three times a year. In 2005 GFNMS staff, in cooperation with the Partnership for Interdisciplinary Studies of Coastal Oceans, will establish a permanent intertidal monitoring station at Southeast Farallon Island. GFNMS staff have also conducted sporadic surveys of krill abundance in nearshore waters using hydroacoustic technology.

Basic Evaluation: Although technically an MPA, this site offers no additional permanent protection to subtidal marine organisms above and beyond the relevant Fish and Game regulations. The seasonal area closures afford a greater degree of protection to marine birds and mammals from the aspect of behavioral disturbances and may provide protection to nearshore subtidal species.

Published references related to effectiveness of this MPA: Pyle et al 2001, Sydeman et al 2001

Unpublished references related to effectiveness of this MPA: CSWRCB 1979, Cosentino et al 2001, Davis and Engle 1991, Emslie and Sydeman 1999, Huber et al 1985, Nusbaum and Sydeman 2000, Smith 2002, Tomanek and Somero 1998

Published references related to use of this MPA as a research tool: Abraham et al 2000, Ainley et al 1985, Anderson et al 1996, Goldman and Anderson 1999, Hastings and Sydeman 2002, Klimley and Anderson 1996, Klimley et al 2002.

Unpublished references related to use of this MPA as a research tool: Pyle 1992, Pyle et al 2001

James V. Fitzgerald State Marine Park

Year established: 1969

Approximate Area: 0.58 nm² **Approximate Shoreline length:** 3.0 nm

Approximate Depth range (feet): 0 to 33

Habitat types: Rocky intertidal and subtidal Monterey shale.

Surrounding habitat types: Rocky reefs interspersed with sandy bottom.

Summary of existing regulations: Take of all living marine resources is prohibited except the recreational take by hook and line or spear of: rockfish (family Scorpaenidae), lingcod, surfperch (family Embiotocidae), monkeyface eel, rock eel, white croaker, halibut, cabezon, kelp greenling, and smelt (Families Osmeridae and Atherinidae).

Primary objectives: The shoreline and reef area has been of interest to biologists, preservationists, and collectors since as early as 1908. As a result of the popularity of the site, resource depletion has long been an issue. In an effort to protect the area, in the 1960's the County of San Mateo proposed that the State of California designate the area as a state reserve. Legislation was approved for reserve status in 1969.

Existing enforcement: Enforcement of this area is effective because of the combined resources available through the state, county and public. This is a high use area, despite the MPA status, because of its accessibility to the public.

Baseline and ongoing monitoring and research studies: Baselines are old (1975 and 1976) and major changes have occurred. Subsequent baseline study and baseline studies were published in 1993. Staff are now compiling new information and has written a Management Plan in respect of how people may use the area. The San Mateo County Parks and Recreation Division is proposing a resource assessment project for Fitzgerald that will 1) determine the amount (if any) of resource degradation from visitation, fishing and gathering; 2) propose, relative to visitation, fishing and gathering, various actions that can best protect the terrestrial reserve and MPA's natural resources; and 3) evaluate how (if at all) these actions will affect those who visit, fish and gather at Fitzgerald.

Basic Evaluation: Areas within the MPA that are remote from access as well as areas that are policed often function to protect species as originally intended. However, this is a high use area in which the primary concern is user access hampering resource protection. This MPA would benefit from both increased protection (fishing regulations), and foot traffic control. The enforcement resources, as well as public support, exist to facilitate MPA status.

Published references related to effectiveness of this MPA: Breen, B., et al. 1997; Murray, S., et al. 1997

Unpublished references related to effectiveness of this MPA: None found.

Published references related to use of this MPA as a research tool: None found.

Unpublished references related to use of this MPA as a research tool: None found.