

MLPA North Central Coast Project, Marine Bird and Mammal Disturbance Work Group
Options for Marine Bird and Mammal Protection Areas (Special Closures)
Revised March 12, 2008

Note: Memos from the MLPA I-Team to the MLPA North Central Coast Regional Stakeholder Group (February 20, 2008 and March 12, 2008) provide contextual information about this menu of special closure options
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Area Name ¹	Proposed Options ²	Seasonality (Year round or specific season)	Species Involved	Conservation Benefit		
				Low	Medium	High
Fish Rocks (A)	Option A1: Status quo. No special closure.		Largest and most diverse seabird colony in northern sub region of north central coast study region. 9 species, 905 breeding birds. Most birds on West rock. Eastern rock has few birds. Seabird species include pelagic cormorants, pigeon guillemots, Brandt's cormorants, Leach's storm petrel and small numbers of rhinoceros auklet, Cassin's auklet, and tufted puffin. Mammals mostly found on sand spit at low tide between the two rocks. Haul out for California sea lions and Steller sea lions, and harbor seals.	2 responses: no protection.	no responses	no responses
	Option A2: Square with eastern edge bisecting Western Island and bounded by northern and southern points of island, extending 500 ft. west.	Suggestion needed. Seabird breeding season is March to Aug. Sea lions numerous at Fish Rocks in all months but May, with peak in summer and fall. (1980-1982 report)			no responses	2 responses: a.) There was very little practical or immediate experience within the Work Group on this site, which causes concern about whether either conservation or feasibility values are completely or accurately considered b.) Would be improved if closure also extended 500 ft to north & south because seabird habitat extends to north and south ends. Especially necessary since no proposed MPAs around rocks. Suggest year-round to cover entire period that birds and mammals present.
Gualala Point Island (B)	Option B1: Status quo. No special closure.		5 nesting seabird species, 324 breeding birds. Seabird species include pelagic cormorant, pigeon guillemot, Western gull, and black oystercatcher. Brandt's cormorant colony that is declining. 264 breeding birds in 2003. Previously around 1200 birds. This year 90 pairs of Brandt's cormorants. Some cormorants may be shifting to Fish Rocks, a few miles north. Foraging area just off river mouth for remnant population of rare federally threatened marbled murrelet. Large Brown Pelican roost.	2 responses: no protection.	no responses	no responses
	Option B2: 500 ft closure around Gualala Pt Island.	Year-round closure			1 response	1 response: Large Brown Pelican roost and declining Brandt's cormorant colonies that are not protected in current MPA proposals. Fireworks still potentially an issue.

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Fish Rocks (A)	no responses	no responses	1 response		Importance of colony, potential impacts from boat activity in area.	Option A2 designed to protect birds on West Rock while not impacting small boat/kayak traffic between mainland and rocks.
	1 response	2 responses (incl. 1 medium-high): designed to allow continued boat traffic between rocks and mainland, but shape may be a little difficult to understand. Most likely that recreational boat use is highest on east side of rocks so impact to recreational use low. Does not affect general transiting, anchoring, etc. However, little enforcement presence in area. Would need outreach or buoys to educate boaters.	no responses	Coastal abalone divers and important spearfishing area from kayaks. Recreational kayakers pass between mainland and nearshore rock, and outside of rock. Anchorage south of islands and to cove. Could impact salmon trolling.		
Gualala Point Island (B)	no responses	no responses	1 response		Importance of colony, potential impacts from boat activity in area. Fireworks display started last year on bluff above town - about 1 mile from colony. Report on disturbance is soon to be released.	Little observation except for short term monitoring on fireworks. One of few larger islets for breeding habitat north of Bodega, making Gualala and Fish rocks stand out as larger seabird nesting colonies subregionally. Might upwelling be affecting forage base? Is coastal area within 1000ft of Sea Ranch?
	1 response	no responses	2 responses: does not contact the mainland. BLM California Coastal National Monument is developing public education gateway in Gualala and has local stewardship group that could help educate boaters and document violations. Probably little impact on boating community.	Most of commercial fishing activity offshore. Private access limits divers, but not along river. Other uses not known. People kayak in Gualala river but there is limited shore access.		

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Russian River area (D)	Option D1: Status quo. No special closure.		Arched Rock, Gull Rock, and Russian River Rocks. Between the 3 colonies, 7 breeding species, 1,056 birds. Cormorants move around between rocks. Double Crested Cormorant colonies (mostly on Russian River Rocks) - not represented in other closure options. Brandt's cormorants, pelagic cormorants, pigeon guillemots, Western gull, black oyster-catcher. Mid-march to mid-August is breeding season. Large Brown Pelican roosts. Large harbor seal haul out and rookery (about 450 seals).	2 responses: Some protection might be afforded MPA proposals that surround colonies are adopted, but colonies still susceptible to recreational boat disturbance in this busy area.	no responses	no responses
	Option D2: 1000 ft closures around Arched Rock, Gull Rock	Year-round closure		no responses	1 response	2 responses: Closure will help protect colonies (esp. Brandt's cormorants) for which survey data has shown birds often switch between rocks between years, a sign of possible disturbance impacts. However, incl. colony known as Russian River Rocks just north of Russian River mouth will greatly improve protection, esp. to Pelagic Cormorants & Double-crested Cormorant roosts; the latter not represented in other special closure options. Current MPA proposals do not cover Russian River Rocks
Bodega Rock (E)	Option E1: Status quo. No special closure.		Mainly California sea lion haul out, with small Steller sea lion haul out, northern elephant seals, and harbor seals. Largest Brandt's cormorant colony in the northern sub-region of the north central coast study region. Other breeding seabird species include western gull, pigeon guillemot, and small number of rhinoceros auklets.	2 responses: no protection.	no responses	no responses
	Option E2: Closed area proposed to protect Steller sea lions but size nor season determined. (Lack of information on distance from rock of vessel traffic between rock and mainland.)			2 responses	1 response: Large marine mammal forage area nearby with very few haul out places. 500 ft. no disturbance zone needed	1 response: Bodega Rock not covered in any current MPA proposals. Diverse mammal haulout (most diverse on NCC mainland after Pt Reyes), presence of state species of concern for birds (Rhinoceros Auklets).

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Russian River area (D)	no responses	no responses	1 response		Importance of colonies, potential impacts from high boat activity in area. Movement in Brandt's and Double Crested cormorant colonies is consistent with colonies that are disturbed. No data collected on disturbance in area. Colonies photographed every year for population estimates. Population counts have been lower for last 3 years in Sonoma-Mendocino coast.	Bird decline reflective of reduced forage base from oceanographic conditions?
	2 responses: important area to several different fisheries. Difficult to enforce, education might be best bet.	1 response: May be issues with non-compliance in this high use area. However, outreach of regulations and reasons will improve compliance. Lower concern if associated with an MPA because numbers of boaters in area will likely be reduced already.	no responses	Crabbing in area. Commercial salmon fishing against western edge of rock. Abalone and rockfish fishing near rocks. Intense recreational salmon fishing from shore. Uncertain about where most kayak activity is concentrated.		
Bodega Rock (E)	no responses	no responses	1 response		Importance of colony, potential impacts from high boat activity in area.	Need input from Coast Guard on feasibility
	3 responses: a.) Since almost all boats near rock come from the Bodega harbor signage, would be easy and appropriate option b.) Without a weigh-in by Coast Guard and vessel user groups, evaluation and recommendations on this site seem premature and deficient. c.) important passage for boats, which generally do not go close to the rocks on either side. Closing the area may force small boats into dangerous situations. Education to stay clear of the rocks would be safer for fisherman.	2 responses (including 1 medium/low): Close to Bodega Harbor. Important to leave vessel passage between mainland and rock - not clear where the boundary would be.	no responses	Safety issue for small boats. Small boats hang around buoys. Salmon trolling. People dive for abalone near Bodega Rock. Mostly transit issues related to harbor entrance.		

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Bird Rock at Tomales Point (F)	Option F1: Status quo (no special closure) with increased signage and educational outreach effort.		Roosting brown pelicans (population > 500). Seve nesting seabirds species, 894 birds, including Brandt's Cormorant, Ashy storm-petrel, western gull, pigeon guillemot, rhinoceros auklet, black oystercatcher. Bird Rock is a hotspot for species diversity and overall abundance. A major harbor seal pupping spot and occasional haul-out.	2 responses: High use recr. area that is likely to continue to be closely approached in absence of regulations. Shore-based signage likely to be of little effectiveness for close approach by boat but may help isolated instances of approach by foot during ultra low tides.	no responses	no responses
	Option F2: Closure of 300 ft around Bird Rock	Year round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species most likely to benefit (Nov-Sept), and peak roosting season for brown pelicans (Aug.-Nov))		2 responses: Marginal conservation benefits w/considerable feasibility hurdles. Minimal disturbance factors--uprotected, often hazardous (shallow, rocky, surgy) waters adjacent to Bird Rock do not present inviting transit choice for boaters. Most commercial fishermen, CPFVs & large sportfishing vessels neither fish nor transit close to this very rough shoreline. The little vessel traffic that does occur often when non-instrumented boats get caught by fast moving fog banks & need to "feel" way back to harbor. Majority of vessels that choose to be in these waters very small skiffs & zodiacs that do not have adequate (or any) navigational systems to allow compliance w/specific distance-from-shore requirement. According to DFG feasibility guidelines, small distances such as 300ft difficult to enforce & therefore not recommended. Given that Bird Rock is within jurisdiction of Pt. Reyes National Seashore w/an excellent public programs, much, if not all, potential for vessel or shore-based fishing disturbances could be addressed through outreach & education.	2 responses: This year round closure would likely eliminate 65.4% of alarm behaviors and 76.2% of flushing behaviors in this important seabird and pinniped colony. Based on USFWS seabird monitoring data, a greater distance (e.g., 500-1,000 feet) would nearly eliminate disturbances.	no responses

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Bird Rock at Tomales Point (F)	no responses	1 response: Educational program is feasible but will be difficult to get large-scale compliance if only a recommendation.	1 response (high/medium): Status quo is clearly feasible - it is happening now. General Seabird Colony protection Program outreach may be helpful for this location.		Importance of colony, potential impacts from high boat activity in area (mainly approaches from small boats (skiffs) that use the intertidal area nearby).	A lot of sharks in area. Concern about displacement factor - people excluded would dive or fish somewhere else - higher impact on adjacent areas. Finger beaches south of area used as haul-outs for harbor seals, pigeon guillemot colonies. Puts pressure on these populations. Existing interpretive signage telling how to interact with coyotes, tule elk, and mountain lions; suggest expanding to include marine species. 300 ft. is proposed as closure distance because larger closure would impact safe harbor, and may lead to problems with displacement
	2 responses: Would push small boats out into unprotected water-disturbance. Education would be a better alternative.	2 responses: The rock is isolated and would have foot access limitation issues only during ultra low tides. The 300 ft closure would allow existing local recreational use by boat and access to entering/exiting Tomales Bay. Outreach or buoys will be necessary to educate public of closure. Monitoring for compliance and effectiveness could be conducted by Pt. Reyes National Seashore, USFWS, CDFG and/or others.	no responses	Use is small boats: 15-18 ft. skiffs out of Tomales Bay. Only safe anchorage is on lee side of Bird Rock. (near Tomales Pt.) Shore-based abalone. Land on East side of point and go over to collect in intertidal. Also tide poolers and birders who walk out from McClures Beach. Also, whale watchers. Area north of Rock is very rough so people don't go there. No beach on bird rock. People tend not to land on rock. Enforcement		

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Point Reyes (G)	Option G1: Status quo. (Existing sport fishing exclusion zone)		Nine nesting seabird species, more than 43,000 birds. Largest seabird colony is South subregion and third largest in NCCSR. Common murre, pelagic cormorants, Brandt's cormorants, pigeon guillemots, western gulls, rhinoceros auklets, roosting brown pelicans (>100 pelicans) Bird colonies from tip of Chimney Rock to tip of lighthouse. Elephant seal rookery. Whole headlands is important. Largest murre colony is outside of existing headland.	1 response: Although current 1000 ft recreational fishing use closure exists, wildlife disturbances have been documented here.	1 response: USFWS seabird monitoring data has shown a dramatic increase in sport fishing and other boating off Pt. Reyes Headlands in recent years with some disturbances, including several alleged violations of current MPA. Also, current boundaries do not include largest seabird nesting area on NW corner of headlands. Concern about increasing recreational boat use in future.	no responses	
	Option G2: Closed area around headlands, 1000 ft offshore between Chimney rock and the Lighthouse. (Same boundary as current sport fishing exclusion zone.)	Year round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species most likely to benefit (Nov-Sep), & peak roosting season for brown pelicans (Aug.-Nov)).			1 response: the area is already closed to fishing, and the closed area is only going to get larger	1 response medium/high: Will prevent nearly all potential disturbances within closure; however, boundary should be extended to north at west end of headlands to encompass largest seabird nesting area in Pt. Reyes.	2 responses: This year round closure would likely eliminate 91.4% of alarm behaviors and 95.2% of flushing behaviors. This is one of the most significant seabird breeding areas on the NCC based on the number of breeding species and number of breeding individuals.
	Option G3: same as option G2 with borders going straight south 1000 ft instead of east and west.	Year round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species most likely to benefit (Nov-Sep), & peak roosting season for brown pelicans (Aug.-Nov))			1 response: the area is already closed to fishing, and the closed area is only going to get larger	1 response (medium/high): Will protect majority of area of headlands but will not protect largest seabird nesting area at west end of headlands and large Pigeon Guillemot colony at Chimney Rock.	1 response: same as G2

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Point Reyes (G)	no responses	no responses	2 responses: Currently being implemented. Requires additional outreach and enforcement of regulations.		Pressure growing from illegal recreational fishing, kayakers, and tide poolers. Monitoring study from 1997-99 (late April - mid August each year) recorded 23 vessels approaching within 460m (1500ft). Results show seven disturbance events, including a flushing of common murre, Brandt's cormorants, and brown pelicans.	General agreement among disturbance work group that this area warrants a special closure.
	1 response: the area along the bluff is sometimes the only area of safe passage during high wind/seas conditions.	no responses	3 responses: Every MPA package proposal has a SMR in this area which removes the need for fishing vessels (majority of vessels accessing this area) to closely approach. Additionally, shore based access is naturally restricted by cliffs. Monitoring can be continued; outreach program being implemented and could be increased in area; Pt. Reyes NS could possibly assist enforcement.			
	1 response: the area along the bluff is sometimes the only area of safe passage during high wind/seas conditions.	no responses	2 responses: same as G2.			

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Drakes Estero (H)	Option H1: Status quo (no special closure).		A couple of significant harbor seal haul-outs. Major waterfowl wintering area and migrant shorebirds.	1 response: Recr. boating likely causes most disturbance, so special closures will be needed to afford medium to high level of protection. Marine reserve would provide some benefit.	no responses	no responses
	Option H2: Two closures of 1320 ft proposed around two harbor seal pupping areas.	Seasonality?			no responses	1 response
Point Resistance (I)	Option I1: Status quo (no special closure) with more signs focused on seabird and mammal disturbance.		Large common murre colony on rock from waterline up to peak of rock. Pelagic cormorants in cove and pigeon guillemots in caves. More than 100 roosting brown pelicans.	2 responses: Area may be closely approached in the absence of regulations. In this remote location shore-based signage is likely to be of little effectiveness for close approach by boat but may help isolated instances of approach by foot.	no responses	no responses
	Option I2: No access from sea from 1320ft around rock. Signage on land.	Year round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species most likely to benefit (Nov-Aug), & peak roosting season for brown pelicans (Aug.-Nov)). Boating activity doesn't really begin until April.			no responses	1 response

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Drakes Estero (H)	no responses	no responses	no responses		Pressure growing from kayaks. Popular recreational use area. Oyster farming.	Seashore doesn't allow powerboat traffic in Estero. General agreement from disturbance work group on recommendation for closing area.
			2 responses: Easy to monitor; could post signs at launch points.			
Point Resistance (I)	no responses	1 response- Outreach will help but will be difficult to reach specific boaters entering area.	1 response: Status quo is clearly feasible - it is happening now and General Seabird Colony protection Program outreach may be helpful.		Cliff trail passes a rock, potentially causing disturbance from hikers going off trail. In 2005 counted 20 boats during an observation period (late April-early August) and one disturbance event (alert behavior from birds). Protection from potential increases in disturbance in future.	Caves destination for hikers. Horse accessibility. Great nature trips on party boats. Suggest signage through NPS. Observations over past few years in addition to regular colony surveys. Partnership Program (NMS, F&G, F&W, State Parks, BLM, other agencies) started in 2005 looking at seabird disturbance. Major component of program education & outreach. Program expanding every year. Project covers all of Gulf of Farallones & Monterey Bay sanctuary. Signs at Monterey, tide books w/tips on how to minimize disturbance.
	no responses	2 responses: Dangerous for mariners to be close to shore however some fishing activities do occur. There is very limited shore-based access due to remoteness.	1 response: Little impact to boating community. Currently, most boat activity is recreational fishing, so outreach will need to target these groups. Area is remote. Buoys may be necessary. Seabird and marine mammal monitoring efforts could help monitor for compliance.	Possible to fish all rocks, but dangerous at low water. Not popular fishing because all sandy substrate too far out. Enforcement challenge colony offshore but closure would encompass shore - BLM, Pt. Reyes seashore, Coastal Cmsn, F&G Cmsn cooperation needed. Currently no regular ranger patrols. Not much SCUBA activity. Abalone diving, but expensive due to inaccessibility.		

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Double Point (K)	Option K1: Status quo. No special closure.		About 700-1000 harbor seals in haul-out and breed along beach; California sea lions haul out on islets. Stormy Stack is 2nd largest breeding colony in the subregion with 16,000 breeding birds, almost entirely on Stormy Stack. Murres	2 responses: Area may be closely approached in the absence of regulations. This has been identified by the Seabird Colony Protection Program as a significant seabird breeding area. General Seabird Colony protection Program outreach may be helpful for this location.	no responses	no responses
	Option K2: 600 ft. closure around Stormy Stack	Year round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species most likely to benefit (Nov-Aug), and peak roosting season for brown pelicans (Aug.-Nov))	Brandt's cormorants, pelagic cormorants, pigeon guillemots, and Ashy storm petrels. Roosting brown pelicans (>100 pelicans).	no responses	1 response	2 responses: USFWS monitoring data has recorded boat disturbances at this large and important seabird colony. This year-round closure would likely eliminate 80.2% of alarm behaviors and 90.5% of flushing behaviors. This has been identified by the Seabird Colony Protection Program as a significant seabird breeding area. Closure would be highly beneficial to seabirds but may not protect large harbor seal colony on adjacent beach.
	Option K3: 300ft year-round closure around Stormy Stack	Year-round		no responses	3 responses: This year round closure would likely eliminate 65.4% of alarm behaviors and 76.2% of flushing behaviors. This has been identified by the Seabird Colony Protection Program as a significant seabird breeding area. 300 ft. closure will not protect colony to same level as 600 ft. closure.	no responses

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Double Point (K)	no responses	no responses	2 responses: Status quo is clearly feasible - it is happening now.		Recent colony monitoring data has shown disturbance from boats that transport surfers to break off of Stormy Stack and from recreational fishing.	Option K2 designed to avoid impact to halibut fishing in cove, and would not encompass the shore.
	no responses	1 response	2 responses: Fishing activity is outside 600 ft and there is no coastal access here due to remoteness and terrain. Most boating is recreational fishing, occasionally boat-in surfing and other recreational. Outreach will need to target those groups. Buoys would assist with compliance. USFWS and PRNS seabird and pinniped monitoring could assist monitoring for compliance .	Recreational craft dropping off surfers. Hot halibut spot inside of cove (inside of Stormy Stack) . Fishing occurs outside of kelp. No transit issue between Stormy Stack and shore.		
	no responses	1 response	2 responses: Fishing activity is outside 600 ft and there is no coastal access here due to remoteness and terrain.			

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Devil's Slide (N)	Option N1: Status quo. No special closure.		Common murre and Brandt's cormorant colony on Devil's Slide, or "Egg", Rock. Pigeon guillemots, pelagic cormorants, western gulls, and black oystercatcher colonies extend south along mainland to Gray Whale Beach. Roosting brown pelicans on rock and mainland (>100 pelicans).	2 responses: Increasing levels of disturbance is of great concern at this seabird restoration site. Area may be closely approached in the absence of regulations. This has been identified by the Seabird Colony Protection Program as a significant seabird breeding area. General Seabird Colony protection Program outreach may be helpful for this location	no responses	no responses
	Option N2: 300 ft closure around Egg Rock	Year-round closure		no responses	3 responses: This year round closure would likely eliminate 65.4% of alarm behaviors and 76.2% of flushing behaviors. This has been identified by the Seabird Colony Protection Program as a significant seabird breeding area and is the site of a seabird restoration project. Based on USFWS data, this will reduce disturbance but several disturbances have occurred beyond 300 feet.	no responses
	Option N3: 1000 ft closure around Egg Rock	Year-round closure		1 response	no responses	2 responses: This year round closure would likely eliminate 91.4% of alarm behaviors and 95.2% of flushing behaviors. This has been identified by the Seabird Colony Protection Program as a significant seabird breeding area and is the site of a seabird restoration project. Will nearly eliminate boat disturbance on Devil's Slide (Egg) Rock but will not protect other species and nesting areas on mainland cliffs.
	Option N4: 1000 ft rectangle encompassing Egg Rock and mainland Devil's Slide.	Year-round closure		1 response	no responses	2 responses: This year round closure would likely eliminate 91.4% of alarm behaviors and 95.2% of flushing behaviors. This has been identified by the Seabird Colony Protection Program as a significant seabird breeding area and is the site of a seabird restoration project.

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Devil's Slide (N)	no responses	no responses	1 response: Status quo is clearly feasible - it is happening now.	High recreational use coming from San Pedro. Reserve negates fishing in some current MPA proposals. Fish halibut and white sea bass in this area.	Seeing increase in disturbance from air, small recreational boats, construction of highway in April of 06 (before egg laying started). Rarely see kayaks, but a few have caused disturbance. Most disturbance is on Egg Rock. Personal water craft flush birds off of mainland. Closure would help protect seabird restoration site.	Working with CalTrans to figure out if there will be an impact. Boilers make area dangerous for boats. Calm days see more recreational boats.
	1 response	no responses	2 responses: There is some use by a limited number of kayakers (on very calm days). Little reason to approach this closely to rock. Will not affect transit or anchoring. Minimal commercial or sport boat activity observed there. Ongoing monitoring can assist documentation of compliance.			
	1 response	no responses	2 responses: Same as above. Little added impact from 300 foot closure.			
	1 response	1 response: Kayakers (on very calm days) and limited commercial fishing.	1 response: Same as above. Almost no added impact to boaters from closure just around rock. Nearly all boats observed close to shore are near Devil's Slide Rock.			

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				Low	Medium	High	
Pescadero (P)	Option P1: Status quo (no special closure) with recommendation to State Parks that where marine mammals are being disturbed there is a need for better education.		Harbor seal rookery and haul out	no responses	1 response: Shore-based ranger programs may be helpful.	Shore-based ranger programs may be helpful.	
	Option P2: Closure between parking lots going 500ft offshore, plus educational enhancement at 2 access points.	Year-round closure			1 response	no responses	2 responses: Present harbor seal population & use as rookery site being limited by low persistent harassment. Marine mammal guidelines suggest 300 ft buffers. Rookery close to bluff provides great educational & recreation (wildlife viewing, photography) benefit.
North Farallon Islands (Q)	Option Q1: Status quo.	no responses	Steller sea lions haul out on N. Farallon. More than 72,000 nesting seabirds including common murres, pelagic cormorants, Brandt's cormorants, pigeon guillemots, western gulls, Cassin's auklets	1 response: There are significant seabird and Stellar Sea Lion populations. This has been identified by the Seabird Colony Protection Program as a significant seabird breeding area.	1 response: Provides limited protection to only half the area. Steller sea lion haul-out on east side of north island not protected. Also, does not protect Steller sea lions and murres in fall-winter. 300 feet may be inadequate for protection of these exposed sites.	no responses	
	Option Q2: Existing closure boundaries, but year-round closure instead of seasonal.	Year-round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species likely and most likely to benefit)			1 response: few go there, and when they do, it's late summer and fall when most breeding is done. Boats rarely get close enough to disturb because of weather.	2 responses: If this assumes 300 ft closure, then Medium. Year round closure would likely eliminate 65.4% of alarm behaviors & 76.2% of flushing behaviors. Identified by Seabird Colony Protection Program as significant seabird breeding area. Improvement for protection to sea lions & murres throughout year but provides limited protection & only half the area. Steller sea lion haul-out on east side of north island not protected. 300 ft may be inadequate for protection of these exposed sites.	1 response
	Option Q3: 500ft closure around southern single rock to allow charter boats closer than 1000ft. 1000 ft. year-round closure for other 3 rocks (east, west, north)	Year round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species likely and most likely to benefit.)			2 responses: few go there, and when they do, it's late summer and fall when most breeding is done. Boats rarely get close enough to disturb because of weather.	1 response (medium/high): 1000 ft off three northern rocks is high benefit, esp. for murres and Steller sea lions. However, some concern for South Islet, which also has large numbers of Steller sea lions.	1 response: This year round closure would likely eliminate 80.2% of alarm behaviors and 90.5% of flushing behaviors. This is critical habitat for the Endangered Stellar Sea Lion and is very significant for breeding seabirds as identified by the Seabird Colony Protection Program.

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Area Name ¹	Feasibility			Human Uses potentially Impacted	Rationale for Closure (i.e., current or potential disturbance)	Site-specific Comments, Questions or Information
	Low	Medium	High			
Pescadero (P)	no responses	2 responses: Rangers can only advise. Without regulation person can ignore advice. Any legal action can only be taken after damage is done Docent/ranger effort would need to be focused here.	no responses		Shore fishing and kayak angling is a threat to disturbance of marine mammals.	One of the few places on the west coast where good, close wildlife viewing of harbor seals is possible.
	2 responses: In a State park with limited number of access points so signage and ranger enforcement and education possible	1 response: Coastal access would be affected within a State Park.	no responses			
North Farallon Islands (Q)	no responses	no responses	2 responses: Status quo is clearly feasible - it is happening now. Remoteness and rough seas limit access. Should be minimal impact on fishing, recreational boating. Almost no enforcement but that could be increased.		Mainly to protect threatened Steller sea lions and large murre colony. There is not currently any monitoring program on North Farallon. The Farallon National Wildlife Refuge has noted that for the more remote and exposed North Farallon Islands, closer approach by boats likely has more damaging impacts and has recommended a year-round, 1000 ft. closure to protect Steller sea lions and seabirds.	Bob will fine tune with Greg where Steller sea lion haul outs are and where dive sites are. Steller sea lions are mostly on North and South rocks. Few observations here due to remote location. Title 50 Dept. of Commerce states that Steller sea lion Critical habitat includes an aquatic zone that extends 3,000 ft. (0.9 km) seaward in State and Federally managed waters from the baseline or base point of each major rookery in California and Oregon.
	1 response: enforcability (or lack of), pushing fishermen out of the more protected water. A great deal of the available fish holding water is already going into a protected zone.	no responses	3 responses: Rough sea conditions, remoteness, and numerous exposed clustered rocks.	SCUBA divers at North Islands.		
	2 responses: enforcability (or lack of), pushing fishermen out of the more protected water. A great deal of the available fish holding water is already going into a protected zone.	2 responses: ecotourism operators wanting to approach Stellar Sea Lions. Different closure distances may cause confusion. Possible impact on small number of boats wishing to transit between North Island and two middle islets during rough seas.	no responses			

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Note: Shaded areas indicate where three or more responses were received

Area Name ¹	Proposed Options ²	Seasonality (Year round or specific season)	Species Involved	Conservation Benefit		
				Low	Medium	High
South Farallon Islands (R)	Option R1: Status quo. Existing seasonal access restrictions.		Steller sea lions haul out and rookery on West End Island and formerly on Southeast Farallon and Saddle Rock; Northern fur seals breed on West End, Northern elephant seals breed on both islands, California sea lions haul out on both islands. More than 180,000 seabirds. Nesting seabirds include common murre, pelagic cormorant, Brandt's cormorant, Double-crested cormorant, pigeon guillemots, western gulls, tufted puffins, Cassin's auklets, rhinoceros auklet, Ashy storm-petrels, Leach's storm-petrel, black oystercatcher, roosting brown pelicans (>1000 pelicans)	no responses	3 responses (incl. one medium-high): a.) Data document continuing disturbance at most critical breeding site in NCC. In conjunction w/north farallon island, largest concentration of breeding seabirds in contiguous US. Data shows improvement from no closure but disturbance still occurs & threat of increase in future. Most pinnipeds present all year; threatened Steller sea lions present year-round (peak #s in nonbreeding season); Common Murres present late Oct to Aug. Some of island's largest colonies not protected by current closure. b.) with current restrictions & adherence to regs (boat speed, noise, closed areas) disturbances minimal & animal pops (bird & marine mammal) increasing.	no responses
	Option R2: Existing closure boundaries, but year-round closure instead of seasonal.	Year- round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species likely and most likely to benefit)		1 response: the existing regs protect the sensitive areas during the breeding season, yet allow for wildlife viewing the rest of the year	2 responses a.) Higher than status quo but will not achieve benefits of eliminating 65.4% of alarm behaviors and 76.2% of flushing behaviors because it is only over a portion of the island. An improvement from status quo, esp. for protection of Steller sea lions and Common Murres attending nesting areas in fall-winter. But some large nesting areas not protected.	1 response
	Option R3: Expand closure to 1000 ft around whole island. Make closure year-round w/permit exemption for research, education (ecotourism), with conditions for lights, loudspeaker, sound etc. (provisions outlined in previous agreement w/GGFA agreement?)	Year- round closure (based on SAT guidelines for sensitive life stage, primary breeding/nesting times for resident species likely and most likely to benefit)		2 responses: the existing regs protect the sensitive areas during the breeding season, yet allow for wildlife viewing the rest of the year	no responses	2 responses: Would nearly eliminate boat disturbance at the islands. This year round closure would likely eliminate 91.4% of alarm behaviors and 95.2% of flushing behaviors. In conjunction with north farallon island, this is the largest concentration of breeding seabirds in the contiguous US.

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	Low	Medium	High			
South Farallon Islands (R)	no responses	no responses	3 responses: Currently being implemented and monitored by researchers on island. Compliance high. The bird populations are increasing when the food is there. The disturbances are minimal, and will be less with the fishing closures that are certain to come to the area.		Largest seabird breeding colony in lower 48 states. Designated critical habitat for threatened Steller sea lions. One of only two Northern Fur seal colonies south of Alaska. Formerly, abalone and urchin boats caused large number of disturbances to seabirds & pinnipeds. Steller sea lions moved pupping site in response to disturbance. Not currently a disturbance monitoring program on the S.E. Farallon Islands, but since 2002, if resident	The Farallon National Wildlife Refuge has recommended the following: the 300 ft. closure to include the entire area, extend from seasonal to year-round, and extend closure distance while maintaining quality wildlife viewing opportunities.
	1 response: anchoring needs for safe boat operations, education & wildlife viewing opportunities will be limited. Enforcement not there now (other than charterboat enforcement), how would it change. Comm. boats have not been problem - small fishing boats that have been involved in few disturbances will be pushed further away from islands w/new closed zones. Permit option for education & ecotourism (that is critical for operator support) doesn't seem feasible at this time.		3 responses: a.) Allowance for use of anchorage and sites most popular with wildlife viewing operators. B.) same as above	Safe anchorage (USCG): Fisherman cove (N. Buoy w/ 100 ft. line). East Landing, COMU cove. Shark viewing within 300ft of Saddle Rock. Wildlife viewing needs at Shubrick Pt. - permit options? 3000ft for Steller sea lion critical habitat. Abalone diving.	biologists are in area and see disturbance, they note cause & severity of the disturbance. Biologists also note vessels that come within 300 ft. during seasonal closure if observed. Disturbance has been observed at times outside of seasonal closure & disturbances have taken place outside of area that is currently closed.	
	3 responses: Anchoring needs for safe boat operations, education and wildlife viewing opportunities will be limited. Enforcement- it's not there now (other than charterboat enforcement), how would it change? The commercial boats have not been the problem, the small fishing boats that have been involved in the few disturbances seen will be pushed further away from the islands with the new closed zones. The permit option for education and ecotourism (that is critical for operator support) doesn't seem to be feasible at this time.	1 response: Can be monitored and enforced. May have compliance issues with boat operators.	no responses			

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Area Name ¹	Proposed Options ²	Seasonality (Year round or specific season)	Species Involved	Conservation Benefit				
				Low	Medium	High		
	<p>General Feedback (from disturbance work group members who provided general feedback on special closure options rather than a site-specific characterization)</p> <p>a.) "The special area closures are of very limited conservation value and would pose extreme feasibility issues for implementation."</p> <p>b.) "Given the many current regulations, such as the Marine Mammal Protection Act, and many seabird protection statutes, the further protection of Special Closures becomes duplicative and not in the best interest of enforcement efforts that could be better directed at MPA's that are currently being developed."</p> <p>"My own observations of exploding populations of Common Murre, Brandt's Cormorant, Brown Pelican, Harbor Seals, Harbor Porpoise, California Sea Lion, Western Gull, and others, gives me NO reason to support the use of further regulations, such as Special Closures, at this time."</p> <p>"...serious efforts [should] be made to provide meaningful, informative, and effective public outreach and education programs to mitigate or eliminate the potential for any unnecessary disturbance. The lessons learned from programs, such as these, would encourage respect to all wildlife in all areas of interest, and beyond."</p> <p>"...several of the proposed sites are safe anchorages to the local fishing fleets that occur in our study region. If sites, such as Fish Rocks and the Farallone Islands are restricted from safe anchorage, severe danger and death could easily result."</p>							

¹ Lettering is not consecutive because hot spots without alternative options to the status quo have been removed

² All options (including the status quo) recommend an enhanced education and outreach program on bird and mammal disturbance issues