

REPORT

# **COMPILATION OF FISHERIES** MANAGEMENT POLICIES IN MARINE PROTECTED AREAS IN THE UNITED STATES

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# **EXECUTIVE SUMMARY**

he United States encompasses 12.4 million square kilometers (km²) of marine areas, nearly half of which are situated in the Pacific island regions¹. Within these areas, state waters typically extend from shore out to 3 nautical miles², federal waters start from state water boundaries and extend out to the exclusive economic zone (EEZ) 200-nautical-mile boundary³. As of 2016, according to the National Oceanic and Atmospheric Administration (NOAA), there are more than 1200 marine protected areas (MPAs)⁴, covering approximately 3.2 million km² (26%) of the sea area under U.S. jurisdiction⁵. Of these, 97% of the areal extent of MPAs is located in federal waters and 3% is located in state and coastal waters.

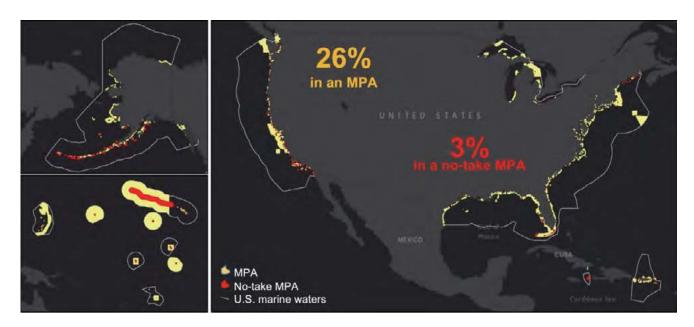


Figure 1 MPA distribution in the U.S., more than half of MPAs are in the Pacific Island regions (Source: NOAA)

Approximately 2.8 million km², or 23% of the entire U.S. marine area, is comprised of highly or fully protected MPAs<sup>6</sup>. Highly protected MPAs prohibit any industrial extractive activities within their boundaries, including oil and gas drilling, seabed mining, and commercial fishing, but allow for light extractive activities such as subsistence and recreational fishing. Fully protected MPAs, usually called no-take areas, prohibit all extractive activities, including all types of fishing<sup>7</sup>. Scientists say that highly and fully protected MPAs provide the greatest benefits to biodiversity protection and ocean resilience<sup>8</sup>.

Most (97%) of the highly or fully protected MPA area in the U.S. is contained in marine national monuments (MNMs), which are established under the "Antiquities Act of 1906", and located primarily in the western Pacific Ocean<sup>10</sup>. These MNMs prohibit commercial fishing<sup>11</sup> and have regulations governing recreational<sup>12</sup> and subsistence fishing. A number of the monuments have phased in the commercial fishing prohibition over a number of years.

In addition to MNMs, there are three other major types of national MPA systems: National Marine Sanctuary System, National Park System and National Wildlife Refuge System. Each system has different designation objectives and different levels of protection.

In state waters, different states may design their own MPA systems and some have adopted laws and regulations regarding MPAs. Among all the coastal states, California has been a pioneer with the biggest state MPA coverage (16%)<sup>13</sup> and most systematic and science-based network design and inclusive decision-making process.

Management and jurisdictional control of U.S. MPAs is frequently complicated. Different types of federal designations, such as for a marine monument and a national wildlife refuge, may apply to the same area, resulting in shared management responsibilities between different federal agencies. MPAs may overlap both state and federal waters, thereby involving both state and federal agencies in their management. Native American tribes may also have special fishing rights. Enforcement may be done by still another set of entities, such as the U.S. Coast Guard and state wildlife agencies. Finally, regional fishery management councils instituted under the federal fisheries law, the Magnuson-Stevens Fishery Conservation and

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Management Act, frequently have a role in setting fishing regulations in the federal waters of MPAs. This is particularly the case with National Marine Sanctuaries, which has resulted in significantly fewer fishing restrictions in these MPAs compared to others.

The following compilation will give a brief introduction of the MPA systems at federal and state levels and outline fisheries management policy within a sample of MPAs within these systems. The MPAs used as examples were selected in order to provide a diversity of regions and types of protections, and include some

of the U.S. most well-known MPAs, such as MNMs, California's state MPA network system, and the Dry Tortugas Ecological Reserve. In this summary, we focus the discussion of fishing restrictions and prohibitions in MPAs designated for marine and coastal biodiversity and ecosystem protection (as opposed to, for example, areas closed for the principal purpose of reducing fishing mortality). In our discussions of fisheries regulations in specific MPAs and MPA types, we generally either include the specific applicable regulatory language or closely paraphrase the regulatory

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CHAPTER 1

# MARINE NATIONAL MONUMENTS

Marine national monuments (MNMs) encompass most of the MPA areas in the U.S. There are five MNMs, four in the Pacific Ocean and one in the Atlantic Ocean.

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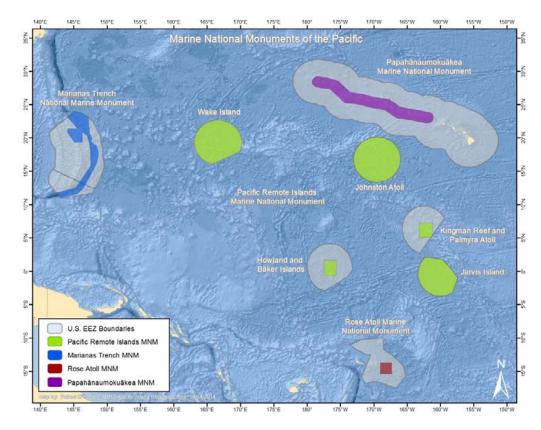


Figure 2 Four MNMs in the Pacific Ocean (Source: NOAA MPA Center)

MNMs are created under the authority of the Antiquities Act. The Antiquities Act has been the most important federal legislation for setting up large-scale MPAs. This law enables the President acting alone to establish fully and highly protected MPAs through Presidential Proclamations. As appreciation and understanding of the ocean's scientific, ecological and historic values have grown and threats to such values have increased over time, and with the expansion of the national EEZs around the world in the 1980s, monument designations in the ocean have expanded.

Although the Antiquities Act has been used to protect marine waters since 1925, its use to establish large-scale MPAs through creation of MNMs began in 2006, when President George W. Bush issued Presidential Proclamation 8031<sup>14</sup> to establish the Papahānaumokuākea Marine National Monument (PMNM) (initially called the Northwest Hawaiian Islands Marine National Monument). On January 6, 2009,

President Bush established three additional MNMs in the Pacific Islands under the authority of the Antiquities Act: Presidential Proclamation 8335<sup>15</sup> established the Marianas Trench Monument; Proclamation 8336<sup>16</sup> established the Pacific Remote Islands Monument; and Proclamation 8337<sup>17</sup> established the Rose Atoll Monument. Among other things, the Proclamations define the monuments' boundaries and address the management of monument resources.

President Obama utilized the Antiquities Act three times during his tenure to increase the area of U.S. waters under protection. In 2014, he issued Presidential Proclamation 9173 to expand certain units of the Pacific Remote Islands Marine National Monument out to 200 miles from shore <sup>18</sup>. In 2016, he also expanded PMNM to 200 miles from shore in Proclamation 9478 <sup>19</sup>. Finally, the same year, through Proclamation 9496 <sup>20</sup>, Obama created the Northeast Canyons and Seamounts Marine National Monument off New En-

gland, the first MNM off of the continental U.S. The vast majority (greater than 99%) of the highly and fully protected MPA area in the U.S. are contained in the MNMs established and expanded by Presidents Bush and Obama.

# PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT (PMNM)

Originally established in 2006 by President George W. Bush and then significantly expanded by President Obama, PMNM protects "the marine area of the Northwestern Hawaiian Islands and the historic and scientific objects therein<sup>21</sup>." It currently encompasses 1,508,870 km<sup>2</sup> of the Pacific Ocean, is the largest highly protected area under U.S. jurisdiction, and is one of the largest MPAs in the world (Figure 3) <sup>22</sup>. Within PMNM, the ocean area that extends 3 nautical miles off shore from Nihoa Island in the south to Kure Atoll (excluding Midway Atoll) in the north are called the Northwestern Hawaiian Islands Marine Refuge and are subject to state regulation<sup>23</sup>.

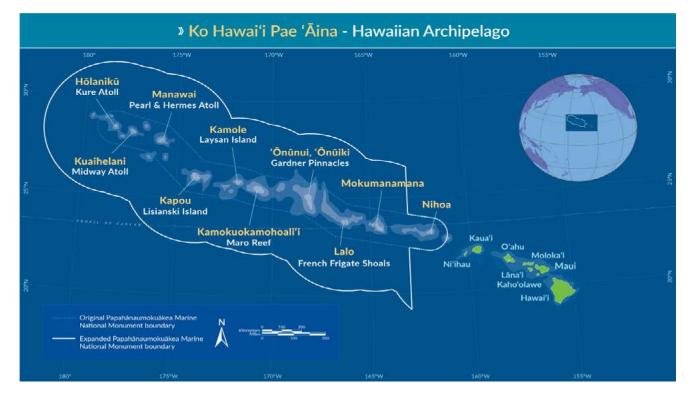


Figure 3 Papahānaumokuākea Marine National Monument map with original and expanded boundary (Credit: NOAA/USFWS/State of Hawaii/OHA.)

PMNM administration is shared between four Co-Trustees: Department of Commerce, Department of the Interior, State of Hawai'i and Office of Hawaiian Affairs. Respective management responsibilities are outlined in Table  $1^{24}$ .

TABLE I PMNM CO-TRUSTEE MANAGEMENT RESPONSIBILITIES		
DIVISION/OFFICE	RESPONSIBILITIES	
Department of Commerce NOAA	Primary marine area management responsibility, in consultation with the Secretary of the Interior	
Department of the Interior U.S. Fish and Wildlife Service (FWS)	Sole management responsibility of the overlaying wildlife refuge areas, in consultation with the Secretary of Commerce.	
State of Hawai'i Department of Land and Natural Resources (DLNR)	Primary management responsibility of Northwestern Hawaiian Islands Marine Refuge and State Seabird Sanctuary at Kure Atoll	
The Office of Hawaiian Affairs	Representing Native Hawaiian community	

### FISHING REGULATIONS

Limited types of commercial fishing were allowed to continue in the Monument for five years after the initial 2006 designation, but commercial fishing is now prohibited. Limited "sustenance" and subsistence<sup>26</sup> fishing are allowed in the Monument, subject to regulation<sup>27</sup>. Finally, fishing restrictions can differ between state and federal waters, and between different subunits or subareas of the Monument.

The following provides additional detail on fishing restrictions in the federal waters of the monument:

### 50 CFR § 404.10 - Commercial fishing.

- (a) Lobster fishing. Any commercial lobster fishing permit is subject to a zero annual harvest limit condition.
- (b) Fishing and bottomfish and pelagic species.
  - (1) NotwithstanDing the prohibitions in \$
    404.7(a) and (h), commercial fishing for
    bottomfish and associated pelagic species
    may continue within the Monument subject
    to paragraph (c) of this section, until June 15,
    2011, provided that:
    - The fishing is conducted in accordance with a valid commercial bottomfish permit issued by NOAA; and
    - (ii) Such permit was in effect on June 15, 2006, and is subsequently renewed

pursuant to NOAA regulations at 50 CFR part 665, subpart E as necessary.

- (2) Total landings for each fishing year from fishing allowed under paragraph (b)(1) of this section may not exceed the following amounts:
  - 350,000 pounds for bottomfish species;
     and
  - (ii) 180,000 pounds for pelagic species.
- (3) Commercial fishing for bottomfish and associated pelagic species is prohibited in the Monument after June 15, 2011.
- (c) General requirements. Any commercial fishing within the Monument shall be conducted in accordance with the following restrictions and conditions:
  - (1) A valid permit or facsimile of a valid permit shall be on board the fishing vessel and available for inspection by an authorized officer;
  - (2) No attempt is made to falsify or fail to make, keep, maintain, or submit any logbook or logbook form or other required record or report.
  - (3) Only gear specifically authorized by the relevant permit issued under the Magnuson-Stevens Fishery Conservation and Management Act is allowed to be in the possession of a person conducting commercial fishing under this section;
  - (4) Any person conducting commercial fishing notifies the Secretaries by telephone, facsimile, or electronic mail at least 72 hours before entering the Monument and within 12 hours

- after leaving the Monument in accordance with § 404.4(b) and (c);
- (5) All fishing vessels must carry an activated and functioning VMS unit on board at all times whenever the vessel is in the Monument;
- (6) All fishing vessels must carry an observer when requested to do so by the Secretaries;
- (7) The activity does not take place within any Ecological Reserve<sup>28</sup>, any Special Preservation Area<sup>29</sup>, or the Midway Atoll Special Management Area<sup>30</sup>.

### $50~\mathrm{CFR}$ § $404.11~\mathrm{Permitting}$ procedures and criteria

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- (e) Additional findings for Native Hawaiian practice permits. In addition to the findings listed in paragraph (d) of this section, a permit to allow Native Hawaiian practices<sup>31</sup> under paragraph (c)(4) of this section, may not be issued unless:
  - The activity is non-commercial and will not involve the sale of any organism or material collected;
  - (2) The purpose and intent of the activity are appropriate and deemed necessary by traditional standards in the Native Hawaiian culture (pono), and demonstrate an understanding of, and background in, the traditional practice, and its associated values and protocols;
  - (3) The activity benefits the resources of the Northwestern Hawaiian Islands and the Native Hawaiian community;
  - (4) The activity supports or advances the perpetuation of traditional knowledge and ancestral connections of Native Hawaiians to the Northwestern Hawaiian Islands; and
  - (5) Any Monument resource harvested from the Monument will be consumed in the Monument.

••••

(h) Sustenance fishing<sup>32</sup>. Sustenance fishing, as defined in 404.3, may be allowed outside of any Special Preservation Area as a term or condition of any permit issued under this part. Sustenance fishing in the Midway Atoll Special Management Area shall not be allowed unless the activity has been determined by the Director of the U.S. Fish and Wildlife Service or his or her designee to be compatible with the purposes for which the Midway Atoll National Wildlife Refuge was established. Sustenance fishing must be conducted in a manner compatible with the Proclamation and this part, including considering the extent to which the conduct of the activity may diminish Monument resources, qualities, and ecological integrity, as well as any indirect, secondary, or cumulative effects of the activity and the duration of such effects. Sustenance fishing is subject to systematic reporting requirements when developed by the Secretaries.

### MARIANAS TRENCH MARINE NATION-AL MONUMENT

Established by Presidential Proclamation in January 2009, the Marianas Trench Marine National Monument is cooperatively managed by the Secretary of Commerce (NOAA), the Secretary of the Interior (U.S. Fish and Wildlife Service) and the Commonwealth of the Northern Mariana Islands (CNMI) Government, in cooperation with the Department of Defense and the Department of State<sup>33</sup>.

The Monument consists of three different areas in the Northern Mariana Islands, including: (i) the Islands Unit; (ii) the Volcanic Unit and; (iii) the Trench Unit. Importantly, the waters above the submerged land in the Volcanic Unit and the Trench Unit are not included in the Monument.

The Islands Unit is comprised of the waters surrounding the three northernmost islands - Asuncion, Maug and Uracas (also known as Farallon de Pajaros) – extending a radius of 50 nm from shore. This management area is recognized as one of the most biologically diverse regions in the western Pacific, and its waters are occupied by large populations of reef fish and apex predators<sup>34</sup>.

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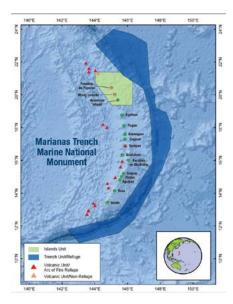


Figure 4 Marianas Trench Marine National Monument map (Source: fws.org)

### FISHING REGULATIONS

Commercial fishing is prohibited in the Islands Unit. Sustenance and recreational fishing are allowed. "Traditional indigenous fishing" is also allowed, and there are different perspectives on the degree to which this allows for certain commercial fishing<sup>35</sup>.

Below is additional detail on fishing restrictions in the Islands Unit of the monument:

### 50 CFR. \$665.903 Prohibitions.

In addition to the general prohibitions specified in \$600.725 of this chapter, and \$665.15 and subpart D of this part, the following activities are prohibited in the Islands Unit and, thus, unlawful for a person to conduct or cause to be conducted.

- (a) Commercial fishing in violation of \$665.904(a).
- (b) Non-commercial fishing, except as authorized under permit and pursuant to the procedures and criteria established in \$665.905<sup>36</sup>.
- (c) Transferring a permit in violation of \$665.905(d).
- (d) Commercial fishing outside the Islands Unit and non-commercial fishing within the Islands Unit on the same trip in violation of \$665.904(c).

### 50 CFR \$665.904 Regulated activities.

- (a) Commercial fishing is prohibited in the Islands Unit.
- (b) Non-commercial fishing is prohibited in the Islands Unit, except as authorized under permit and pursuant to the procedures and criteria established in \$665.905.
- (c) Commercial fishing outside the Islands Unit and non-commercial fishing within the Islands Unit during the same trip is prohibited.

# 50 CFR \$665.905 Fishing permit procedures and criteria.

- (a) Marianas Trench Monument Islands Unit noncommercial permit
  - (1) Applicability. Both the owner and operator of a vessel used to non-commercially fish for, take, retain, or possess MUS<sup>37</sup> in the Islands Unit must have a permit issued under this section, and the permit must be registered for use with that vessel.
  - (2) Eligibility criteria. A permit issued under this section may be issued only to a community resident of Guam or the CNMI.
  - (3) Terms and conditions.
    - (i) Customary exchange<sup>38</sup> of fish harvested within the Islands Unit under a non-commercial permit is allowed, except that customary exchange by fishermen engaged in recreational fishing is prohibited.
    - (ii) Monetary reimbursement under customary exchange shall not exceed actual fishing trip expenses, including but not limited to ice, bait, fuel, or food.
- (b) Marianas Trench Monument Islands Unit recreational charter permit
  - (1) Applicability. Both the owner and operator of a vessel chartered to recreationally fish for, take, retain, or possess MUS in the Islands Unit must have a permit issued under this section, and the permit must be registered for use with that vessel. Charter boat customers

- are not required to obtain a permit.
- (2) Eligibility criteria. To be eligible for a permit issued under this section, a charter business must be established legally under the laws of Guam or the CNMI.
- (3) Terms and conditions.
  - (i) The sale or exchange through barter or trade of fish caught in the Monument by a charter boat is prohibited.
  - (ii) No MUS harvested under a recreational charter fishing permit may be used for the purposes of customary exchange.
- (c) Application. An application for a permit required under this section must be submitted to PIRO<sup>39</sup> as described in \$665.13.
- (d) Transfer. A permit issued under this section is not transferrable.
- (e) Reporting and recordkeeping<sup>40</sup>. The operator of a vessel subject to the requirements of this section must comply with the terms and conditions described in \$665.14<sup>41</sup>.

# PACIFIC REMOTE ISLANDS MARINE NATIONAL MONUMENT

The Pacific Remote Islands Monument area consists of approximately 1,282,534 km2 in the central Pacific Ocean<sup>42</sup>. The Pacific Remote Islands area consists of Wake, Baker, Howland, and Jarvis Islands, Johnston Atoll, Kingman Reef, and Palmyra Atoll, which lie to the south and west of Hawaii, and the waters around them (in the case of Jarvis and Wake Islands and Johnston Atoll, out to 200 miles). Established by Presidential Proclamation in January 2009 and expanded through Presidential Proclamation in 2014, the Pacific Remote Islands Marine National Monument is cooperatively managed by the Secretary of Commerce (NOAA) and the Secretary of the Interior (U.S. Fish and Wildlife Service), with the exception of Wake and Johnston Atolls, which are currently managed by the Department of Defense. National Wildlife Refuges also exist at each of the islands within the Monument, with Howland, Baker, and Jarvis designated as Refuges in 1974; Johnston in 1926; and Kingman and Palmyra in 2001.

### FISHING REGULATIONS

The Proclamation prohibits commercial fishing within the monument. The Secretary of Commerce, through the National Oceanic and Atmospheric Administration, has primary responsibility for managing fishery-related activities from 12 to 50 nautical miles from the islands<sup>43</sup>. The Secretary of the Interior, through the Fish and Wildlife Service, has primary responsibility, including over fishing, within 12 miles.

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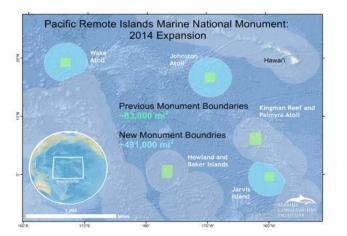


Figure 5 Pacific Remote Islands Marine National Monument with previous(green) and current(blue) boundaries (Credit: MPAtlas.org)

Non-commercial fishing may be permitted upon request, at specific locations in accordance with the proclamation. Noncommercial fishing opportunities currently allowed by the U.S. Fish and Wildlife Service at Palmyra Atoll may continue unless the Secretary of the Interior determines such fishing would not be compatible with the purposes of the Palmyra Atoll National Wildlife Refuge. The Secretary shall provide a process to ensure that recreational fishing shall be managed as a sustainable activity in certain areas of the monument, consistent with Executive Order 12962 of June 7, 1995, as amended, and other applicable law<sup>44</sup>.

Below are the applicable fishing restrictions in the monument:

### 50 CFR §665.933 Prohibitions.

In addition to the general prohibitions specified in \$600.725 of this chapter, and \$665.15<sup>45</sup> and subparts E and F of this part, the following activities are prohibited in the Monument and, thus, unlawful for a person to conduct or cause to be conducted.

- (a) Commercial fishing in the Monument.
- (b) Non-commercial fishing in the Monument, except as authorized under permit and pursuant to the procedures and criteria established in \$665.935.
- (c) Transferring a permit in violation of \$665.935(d).
- (d) Commercial fishing outside the Monument and non-commercial fishing within the Monument on the same trip in violation of \$665.934(c).
- (e) Non-commercial fishing within 12 nm of emergent land within the Monument, unless authorized by the U.S. Fish & Wildlife Service, in consultation with National Marine Fisheries Service(NMFS) and the Council<sup>46</sup>, in violation of \$665.934(d). For the purposes of this subsection, consultation means that the U.S. Fish & Wildlife Service will consult with NMFS, which in turn will consult with the Council.

### 50 CFR \$665.934 Regulated activities.

- (b) Non-commercial fishing is prohibited in the Monument, except under permit and pursuant to the procedures and criteria established in \$665.935 or pursuant to \$665.934(d).
- (c) Commercial fishing outside the Monument and non-commercial fishing within the Monument during the same trip is prohibited.
- (d) Non-commercial fishing is prohibited within 12 nm of emergent land within the Monument, unless authorized by the U.S. Fish & Wildlife Service, in consultation with NMFS and the Council. For the purposes of this subsection, consultation means that the U.S. Fish & Wildlife Service will consult

with NMFS, which in turn will consult with the Council.

50 CFR \$665.935 Fishing permit procedures and criteria.

- (a) Non-commercial fishing—(1) Applicability. Except as provided in section 665.934(d), a vessel that is used to non-commercially fish for, take, retain, or possess MUS in the Monument must be registered for use with a permit issued pursuant to \$\$665.603, 665.624, 665.642, 665.662, 665.801(f), or 665.801(g).
  - (2) Terms and conditions. Customary exchange of fish harvested in the Monument is prohibited.
- (b) Pacific Remote Islands Monument recreational charter permit—(1) Applicability. Except as provided in \$665.934(d), both the owner and operator of a vessel that is chartered to recreationally fish for, take, retain, or possess MUS in the Monument must have a permit issued under this section, and the permit must be registered for use with that vessel. Charter boat customers are not required to obtain a permit.
  - (2) Terms and conditions. (i) The sale or exchange through barter or trade of fish caught by a charter boat fishing in the Monument is prohibited.
    - Customary exchange of fish harvested under a Monument recreational charter permit is prohibited.
- (a) Commercial fishing is prohibited in the Monument. (c) Application. An application for a permit required under this section must be submitted to PIRO as described in §665.13.
  - (d) Transfer. A permit issued under this section is not transferrable.
  - (e) Reporting and recordkeeping. The operator of a vessel subject to the requirements of this section must comply with the terms and conditions described in \$665.14<sup>47</sup>.

# ROSE ATOLL MARINE NATIONAL MON-

The Rose Atoll Marine National Monument encompasses the Rose Atoll National Wildlife Refuge and has been part of the National Marine Sanctuary of American Samoa since 2014.

Established by Presidential Proclamation in January 2009, the Rose Atoll Marine National Monument is cooperatively managed by the Secretary of Commerce (NOAA) and the Secretary of the Interior (U.S. Fish and Wildlife Service), in cooperation with the Department of State, the Department of Defense, and the Government of American Samoa.

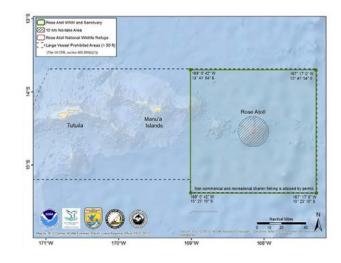


Figure 6 Rose Atoll Marine National Monument map (Source: NOAA)

### FISHING REGULATIONS

### 50 CFR \$665.963 Prohibitions.

In addition to the general prohibitions specified in \$600.725 of this chapter, and \$665.15 and subpart B of this part, the following activities are prohibited in the Monument and, thus, unlawful for a person to conduct or cause to be conducted.

(a) Commercial fishing in the Monument.

- (b) Non-commercial fishing in the Monument, except as authorized under permit and pursuant to the procedures and criteria established in \$665.965.
- (c) Transferring a permit in violation of \$665.965(d).
- (d) Commercial fishing outside the Monument and non-commercial fishing within the Monument on the same trip in violation of \$665.964(c).
- (e) Fishing within 12 nm of emergent land within the Monument in violation of \$665.964(d).

### 50 CFR \$665.964 Regulated activities.

- (a) Commercial fishing is prohibited in the Monument.
- (b) Non-commercial fishing is prohibited in the Monument, except as authorized under permit and pursuant to the procedures and criteria established in \$665.965.
- (c) Commercial fishing outside the Monument and non-commercial fishing within the Monument during the same trip is prohibited.
- (d) All fishing is prohibited within 12 nm of emergent land within the Monument.

### 50 CFR \$665.965 Fishing permit procedures and criteria.

- (a) Rose Atoll Monument non-commercial fishing permit—(1) Applicability. Both the owner and operator of a vessel used to non-commercially fish for, take, retain, or possess MUS in the Monument must have a permit issued under this section, and the permit must be registered for use with that
  - (2) Eligibility criteria. A permit issued under this section may be issued only to a community resident of American Samoa.
  - (3) Terms and conditions. (i) Customary exchange of fish harvested under a non-commercial permit within the Monument is allowed, except that customary exchange by fishermen engaged in recreational fishing is prohibited.
    - (ii) Monetary reimbursement under customary exchange shall not exceed actual fishing trip expenses, including but not limited to ice, bait, fuel, or food.

- (b) Rose Atoll Monument recreational charter permit — (1) Applicability. Both the owner and operator of a vessel that is chartered to fish recreationally for, take, retain, or possess MUS in the Monument must have a permit issued under this section, and the permit must be registered for use with that vessel. Charter boat customers are not required to obtain a permit.
  - (2) Permit eligibility criteria. To be eligible for a permit issued under this section, a charter business must be established legally under the laws of American Samoa.
  - (3) Terms and conditions.
    - (i) The sale or exchange through barter or trade of fish caught by a charter boat fishing in the Monument is prohibited.
    - (ii) No MUS harvested under a recreational charter fishing permit may be used for the purposes of customary exchange.
- (c) Application. An application for a permit required under this section must be submitted to PIRO as described in \$665.13.
- (d) Transfer. A permit issued under this section is not transferrable.
- (e) Reporting and recordkeeping. The operator of a vessel subject to the requirements of this section must comply with the terms and conditions described in \$665.14<sup>48</sup>.

### NORTHEAST CANYONS AND SEA-MOUNTS MARINE NATIONAL MONU-MENT

On September 15, 2016, President Barack Obama established the Northeast Canyons and Seamounts Marine National Monument by Presidential Proclamation 9496 (81 FR 65159). The monument is located about 130 miles off the coast of Cape Cod, Massachusetts and is approximately 12,725 km². It is the only MNM in the Atlantic Ocean<sup>49</sup>.

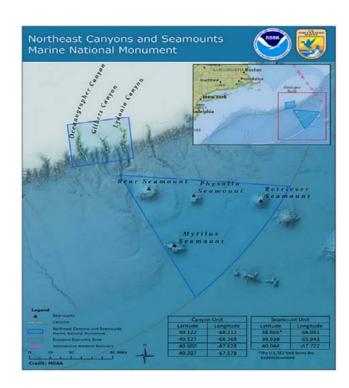


Figure 7 Northeast Canyons and Seamounts Marine National Monument map (Source: FWS)

The monument is composed of two units, which showcase two distinct geological features that support vulnerable ecological communities. The Canyons Unit includes three underwater canyons—Oceanographer, Gilbert, and Lydonia—and covers approximately 2,437 km². The Seamounts Unit includes four seamounts—Bear, Mytilus, Physalia, and Retriever—and encompasses  $10,287 \ \mathrm{km}^2$   $^{50}$ .

### FISHING REGULATIONS

The 2016 Proclamation established the following restrictions on fishing:

Prohibited activities include fishing commercially or possessing commercial fishing gear except when stowed and not available for immediate use during passage without interruption through the monument, except for the red crab fishery and the American lobster fishery. Commercial fishing for red crab and American lobster only was allowed for seven years af-

ter the monuments establishment (2023), after which red crab and American lobster commercial fishing would be prohibited in the monument.

The proclamation provides that recreational fishing may be permitted in the Monument if the Secretary concludes that such activity is consistent with the care and management of the objects within the monument. Currently, the NOAA Fisheries Greater Atlantic and Southeast Regions include for-hire and charter vessels within the definition of recreational fishermen for management purposes. The Atlantic Highly Migratory Species (HMS) Management Division includes private vessels, charter vessels, and head boat vessels within the definition of recreational fishermen for manage-

ment purposes. Any change to the scope and extent of permitted recreational fishing activities will be determined in implementing regulations with plenty of notice to fishermen about any changes<sup>51</sup>.

On June 5<sup>th</sup>, 2020, President Trump issued Proclamation 10049 that eliminated the prohibition on commercial fishing in the monument<sup>52</sup>. This action is currently being challenged in court. On January 20<sup>th</sup>, 2021, President Biden released an Executive Order with a range of actions to tackle the climate crisis, including a 90 day review and potential restoration of the commercial fishing prohibition in the Northeast Canyons and Seamounts Marine National Monument<sup>53</sup>.

CHAPTER 2

# NATIONAL MARINE SANCTUARY SYS-TEM

The National Marine Sanctuary System encompasses more than 1,553,993 km² of marine and Great Lakes waters. The system includes 14 national marine sanctuaries and Papahānaumokuākea and Rose Atoll MNMs (these MNMs have both sanctuary and MNM designation). The system includes areas in all regions of the U.S. (except the North Pacific) and the Great Lakes, and includes many of America's iconic natural and cultural marine resources 54 55.



Figure 8 National Marine Sanctuary System distribution map (Source: NOAA)

National marine sanctuaries are established under the National Marine Sanctuaries Act (NMSA) of 1972, and are the primary responsibility of the Office of National Marine Sanctuaries (ONMS) of NOAA. The sanctuary system works with diverse partners and stakeholders to promote responsible, sustainable ocean uses including recreation, tourism and commercial activities.

The NMSA provides several tools for protecting designated national marine sanctuaries. For example, the NMSA authorizes the issuance of regulations for each sanctuary and for the system as a whole. These regulations can specify the types of activities that may and may not occur within the sanctuary and reflect the management differences among sanctuaries. The regulations require the preparation and periodic updating of management plans that guide day-to-day activities at each sanctuary. The NMSA authorizes NOAA and the program to assess civil penalties (up to \$130,000 per day per violation) for violations of the NMSA or its implementing regulations and damages against people that injure sanctuary resources.

Most sanctuaries do not place special restrictions on commercial fishing. In the vast majority of areas in the marine sanctuaries (excluding the sanctuaries that are also MNMs), fisheries are generally only lightly regulated beyond the requirements of the Magnuson Stevens Act. The same fishing activities that occur

outside of sanctuaries are very often allowed to occur within sanctuaries. And fishing activities that were customarily conducted within the Sanctuary prior to its designation or expansion may be allowed to continue. Except for a small number of no-take areas, recreational fishing is generally allowed<sup>56</sup>.

Fishing activities in marine sanctuaries may only be regulated in close coordination with the regional fishery management councils created under the Magnuson-Stevens Act. Section 304(a)(5) of the NMSA sets out this procedure:

The Secretary [of Commerce] shall provide the appropriate Regional Fishery Management Council with the opportunity to prepare draft regulations for fishing with the Exclusive Economic Zones as the Council may deem necessary to implement the proposed [sanctuary] designation. Draft regulations prepared by the Council, or a Council determination the regulations are not necessary pursuant to this paragraph, shall be accepted and issued as proposed regulations by the Secretary unless the Secretary finds that the Council's action fails to fulfill the purposed and policies of this chapter and the goals and objectives of the proposed designation. In preparing the draft regulations, a Regional Fishery Management Council shall use as guidance the national standards of section 301(a) of the Magnuson-Stevens Act to the extent that

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the standards are consistent and compatible with the goals and objectives of the proposed designation. The Secretary shall prepare the fishing regulations, if the Council declines to make a determination with respect to the need for regulations, makes a determination which is rejected by the Secretary, or fails to prepare the draft regulations in a timely manner. Any amendments to the fishing regulations shall be drafted, approved and issued in the same manner as the original regulations. The Secretary shall also cooperate with other appropriate fishery management authorities with rights or responsibilities without a proposed sanctuary at the earliest practicable stage in drafting any sanctuary fishing regulations.

The ONMS and the regional fishery councils have agreed in a number of instances to protect from bottom trawling the important and sensitive benthic habitats that exist in many sanctuaries<sup>57</sup>.

# OLYMPIC COAST NATIONAL MARINE SANCTUARY (WASHINGTON)

The Olympic Coast National Marine Sanctuary (OCNMS) consists of an area of approximately 8,259 km² of coastal and ocean waters, and the submerged lands thereunder, off the central and northern coast of the State of Washington. The OCNMS is noteworthy for the significant fishing rights provided to a number of tribes.

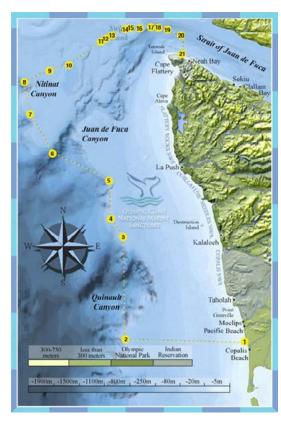


Figure 9 Olympic Coast National Marine Sanctuary map (Source: NOAA)

Olympic Coast National Marine Sanctuary is entirely encompassed by the traditional harvest areas of the Hoh, Makah, and Quileute tribes, and the Quinault Indian Nation. As sovereign nations, the tribes have treaty fishing rights and co-management responsibilities with the State of Washington for fishery resources and fishing activities within the sanctuary. These common interests and joint authorities led the Hoh, Makah, and Quileute tribes, the Quinault Indian Nation, the state of Washington and the NOAA Office of National Marine Sanctuaries to create the Olympic Coast Intergovernmental Policy Council (IPC) in 2007. The first of its kind in the nation, the IPC provides a regional forum for resource managers to exchange information, coordinate policies, and develop recommendations for resource management within the sanctuary<sup>58</sup>.

As a general matter, regulated commercial and recreational fishing are both allowed in the sanctuary. The

Pacific Fishery Management Council generally manages fishing in the federal waters portion of sanctuary.

# GREATER FARALLONES NATIONAL MARINE SANCTUARY (CALIFORNIA)

Greater Farallones National Marine Sanctuary (GF-NMS) encompasses an area of approximately 8,533 km² of coastal and ocean waters, and submerged lands thereunder, surrounding the Farallon Islands and Noonday Rock along the northern coast of California (Figure 10). NOAA established the GFNMS in 1981 to protect and preserve a unique and fragile ecological community, including the largest seabird colony in the contiguous United States and diverse and abundant marine mammals<sup>59</sup>.

Aquaculture was historically done in certain locations in this sanctuary. It took a significant political and legal effort, and many years, to end the practice $^{60}$ .

Regulated commercial and recreational fishing is generally allowed in the sanctuary. The Pacific Fishery Management Council generally manages fishing in the federal waters portion of the sanctuary.

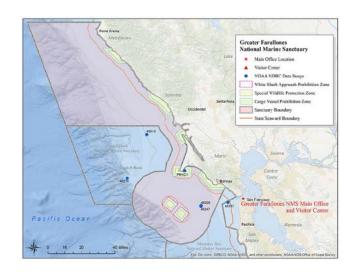


Figure 10 Greater Farallones National Marine Sanctuary encompasses 11,302  $\rm km^2$  of marine areas north and west of San Francisco Bay (Source: NOAA)

# MONTEREY BAY NATIONAL MARINE SANCTUARY (CALIFORNIA)

The Monterey Bay National Marine Sanctuary (MBNMS) was established in 1992 for the purposes of protecting and managing the conservation, ecological, recreational, research, educational, historical, and esthetic resources and qualities of the ocean area in and around Monterey Bay. The MBNMS is located offshore of California's central coast, adjacent to and south of the GFNMS<sup>61</sup>. It consists of two separate areas: (a) an area of approximately 10,401 km<sup>2</sup> of coastal and ocean waters, and submerged lands thereunder, in and surrounding Monterey Bay off the central coast of California; and (b) an area of approximately 2,006 km<sup>2</sup> of ocean waters and the submerged lands thereunder surrounding Davidson Seamount, which has been designated as the Davidson Seamount Management Zone (Figure 11). The Sanctuary supports some of the world's most diverse marine ecosystems, and is home to numerous mammals, seabirds, fishes, invertebrates, sea turtles and plants in a remarkably productive coastal environment.

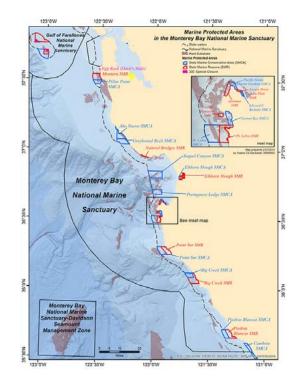


Figure 11 Monterey Bay National Marine Sanctuary (Source: NOAA)

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In 2003, the state of California implemented a network of marine reserves and conservation areas within the sanctuary's state waters portion, strengthening its marine conservation benefits. This MPA system is discussed more below in the section discussing California's system of Marine Life Protection areas. With the exception of the MPA network, regulated commercial and recreational fishing is generally allowed in the sanctuary. The Pacific Fishery Management Council generally manages fishing in the federal waters portion of the sanctuary.

In 2013, MBNMS, members of the fishing industry, and other stakeholders submitted a collaborative proposal to the Pacific Fishery Management Council to modify boundaries for Groundfish Essential Fish Habitat within the Sanctuary<sup>62</sup>. The overall goal of the proposal was to protect more total area and more sensitive habitats in MBNMS from bottom trawling while improving fishing opportunities for the trawl fleet. In January of 2020, NMFS adopted and implemented the plan as part of Amendment 28 to the Pacific Coast Groundfish Fishery Management Plan.

# CHANNEL ISLANDS NATIONAL MARINE SANCTUARY (CALIFORNIA)

On March 5, 1980, President Jimmy Carter signed PL 96-199 (94 Stat 67) to establish Channel Islands National Park 63. The park, which is managed by the National Park Service, includes Santa Barbara and Anacapa islands, Santa Rosa, Santa Cruz, and San Miguel islands as well as the rocks, islets, and submerged lands and waters within 1 nautical mile of each island.

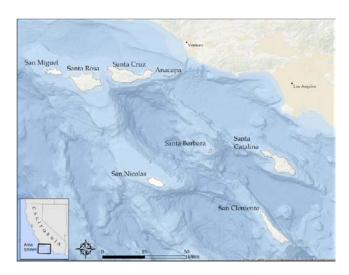


Figure 12 Overall map of Channel Islands in the Southern California bight, including 5 islands in the Park (Source: NOAA).

On October 2, 1980, NOAA designated the Channel Islands National Marine Sanctuary (CINMS), which encompasses marine waters within six nautical miles of marine waters surrounding Anacapa, Santa Cruz, Santa Rosa, San Miguel and Santa Barbara islands<sup>64</sup>. The CINMS encompasses approximately 3,807 km<sup>2</sup> of ocean waters.

In 2003, the state of California implemented a network of marine reserves and conservation areas within the sanctuary's state waters portion. In 2006 and 2007, the network was augmented and complemented by NOAA in federal waters, resulting in a total of eleven marine reserves and two marine conservation areas established within the sanctuary<sup>65</sup>.

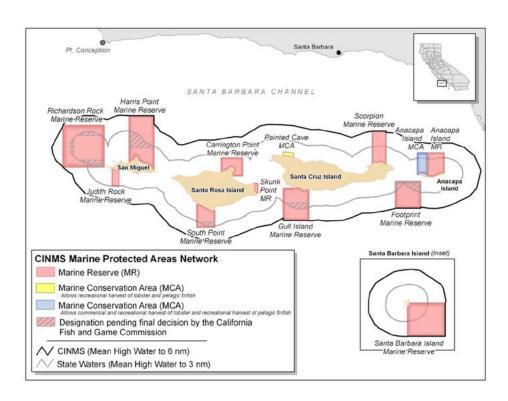


Figure 13 Channel Island National Marine Sanctuary with Channel Island National Park, Californian and federal MPAs inside (Source: NPS)

The eleven marine reserves are no-take and the two marine conservation areas allow limited lobster and pelagic fish harvesting activities<sup>66</sup>. MPAs within 3-nautical-mile state waters of five islands are part of California state MPA network managed by CDFW, and the MPAs that are between 3 nautical miles and 6 nautical miles are the federal MPAs under NOAA's administration.

Enforcement of rules and regulations is provided through a cooperative effort by the National Park Service, U.S. Coast Guard, CDFW and NOAA Office for Law Enforcement. Patrols are conducted using aerial surveillance, on-island rangers, and a variety of vessels. The Sanctuary contributes funding to the CDFG, serves as a liaison and coordinates multi-agency enforcement training sessions<sup>67</sup>. New technologies have also been developed to improve monitoring and enforcement, such as shore-based radar. Such technologies may be especially useful at sites that do not have a large enforcement staff or at sites that are farther offshore<sup>68</sup>.

The Channel Islands National Marine Sanctuary Advisory Council (SAC or Council) was established in December 1998 to assure continued public participation in management of the Sanctuary. The Council is supported by a number of working groups: the Conservation Working Group, the Sanctuary Education Team (SET), Commercial Fishing Working Group, the Recreational Fishing Working Group and the Research Activities Panel. These working groups are created by and operate under the purview of the Council, and help to bring additional community members and experts to the SAC to focus on specific issues.

Below are the applicable fishing restrictions in the CINMS.

### **NATIONAL PARK:**

Fishing in the waters of Channel Islands National Park is governed by the State of California. The State sport fishing regulations for ocean waters apply in the park. A valid California fishing license with an ocean enhancement stamp is required to fish within the park<sup>69</sup>.

36 CFR **§2.3** – Fishing

....

(d)(4) In accordance with federal statutory law, commercial fishing is authorized in the following areas, under the conditions noted:

Pursuant to a U.S. Supreme Court decision (436
U.S. 32 (1978)), commercial fishing is allowed in
park waters in accordance with State regulations<sup>70</sup>.

NATIONAL MARINE SANCTUARY:

15 CFR \$922.72 - Prohibited or otherwise regulated activities - Sanctuary-wide.

•••••

(9) Taking any marine mammal, sea turtle, or seabird within or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 et seq., Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 et seq., Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 et seq., or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

15 CFR \$922.73 Additional prohibited or otherwise regulated activities - marine reserves and marine conservation area

(a) Marine reserves. Unless prohibited by 50 CFR part 660 (Fisheries off West Coast States), the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted within a marine reserve described

- in appendix B to this subpart, except as specified in paragraphs (b) through (e) of \$922.72: (1) Harvesting, removing, taking, injuring, destroying, collecting, moving, or causing the loss of any Sanctuary resource, or attempting any of these activities. (2) Possessing fishing gear on board a vessel unless such gear is stowed and not available for immediate use. (3) Possessing any Sanctuary resource, except legally harvested fish on board a vessel at anchor or in transit.
- (b) Marine conservation area. Unless prohibited by 50 CFR part 660 (Fisheries off West Coast States), the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted within the marine conservation area described in appendix C to this subpart, except as specified in paragraphs (b) through (e) of \$922.72: (1) Harvesting, removing, taking, injuring, destroying, collecting, moving, or causing the loss of any Sanctuary resource, or attempting any of these activities, except: (i) Recreational fishing for pelagic finfish; or (ii) Commercial and recreational fishing for lobster. (2) Possessing fishing gear on board a vessel, except legal fishing gear used to fish for lobster or pelagic finfish, unless such gear is stowed and not available for immediate use. (3) Possessing any Sanctuary resource, except legally harvested fish.

These fishing restrictions in the federal portion of the MPAs are similar to those in the state portion of the MPAs $^{71}$ .

# GRAY'S REEF NATIONAL MARINE SANCTUARY (GEORGIA)

The Gray's Reef National Marine Sanctuary (GRNMS) consists of approximately 57 km² of ocean waters and the submerged lands thereunder, in the federal waters off the coast of Georgia. It is one of the largest nearshore "live-bottom" reefs of the southeastern United States To NOAA designated the sanctuary in 1981 to protect the quality of this unique and fragile ecological community. In December 2011, NOAA GRNMS designated the sanctuary in 1981 to protect the quality of this unique and fragile ecological community.

nated the southern third of the sanctuary as a dedicated research area. The purpose of the research area is to provide a place where scientists are able to study naturally-occurring live-bottom ecosystems to better understand the impact of human activities on the sanctuary's marine resources (ONMS, 2011) <sup>73</sup>.



Figure 14 Gray's Reef National Marine Sanctuary, which covers  $57~{\rm km^2}$  of marine waters, is one of the largest near-shore "live-bottom" reefs of the southeastern United States. (Source: NOAA)

The sanctuary has prohibited all commercial fishing within its boundaries; within the dedicated research area inside the sanctuary, both commercial and recreational fishing are prohibited. The South Atlantic Fishery Management Council has agreed to these restrictions.

The following are the applicable regulations in the sanctuary:

15 CFR § 922.92 - Prohibited or otherwise regulated activities - Sanctuary-wide.

(a) Except as specified in paragraphs (b) through (d) of this section and in § 922.94 regarding additional prohibitions in the research area, the following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted within the Sanctuary:

•••••

(6) Using any fishing gear within the Sanctuary except rod and reel, and handline gear, or for law enforcement purposes.

•••••

- (11) Possessing or carrying any fishing gear within the Sanctuary except:
  - (i) Rod and reel, and handline gear;
  - (ii) Fishing gear other than rod and reel, handline gear, and spearfishing gear, provided that it is stowed on a vessel and not available for immediate use;
  - (iii) Spearfishing gear provided that it is stowed on a vessel, not available for immediate use, and the vessel is passing through the Sanctuary without interruption; and
  - (iv) For law enforcement purposes.

•••••

15 CFR § 922.94 - Prohibited or otherwise regulated activities - Research area.

In addition to the prohibitions set out in § 922.92, which apply throughout the Sanctuary, the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted within the research area described in Appendix A to this subpart.

.....

(b) Using any fishing gear, or possessing, or carrying any fishing gear unless such gear is stowed and not available for immediate use while on board a vessel transiting through the research area without interruption or for valid law enforcement purposes.

The Office of National Marine Sanctuaries conducts its enforcement efforts through cooperative partnerships with other agencies. In addition to the U.S. Coast Guard, law enforcement in Gray's Reef relies on a cooperative partnership between the NOAA Office of Law Enforcement and the Georgia Department of Natural Resources (GADNR) and is carried out on the water by the GADNR Law Enforcement Team. Through

a Joint Enforcement Agreement, state officers are deputized to enforce Federal and state regulations, including sanctuary regulations<sup>74</sup>.

# FLORIDA KEYS NATIONAL MARINE SANCTUARY (FLORIDA)

In 1990, Florida Keys National Marine Sanctuary (FKNMS) became the ninth sanctuary to join the

National Marine Sanctuary System, in response to concerns about the decline of Florida's significant reef ecosystem. Today, the sanctuary includes more than 9,947 km² of Florida Keys coastal and ocean waters. It includes the continental United States' only barrier coral reef, which stretches south from Miami to the Dry Tortugas (Figure 15). Within these waters lie nationally-significant resources including seagrass beds, coral reef colonies, mangrove-fringed islands, and thousands of marine species<sup>75</sup>.

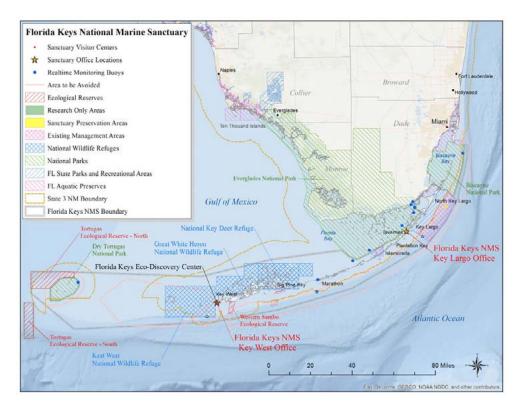


Figure 15 Florida Keys National Marine Sanctuary protects 13,034 km of waters, from south of Miami westward to encompass the Dry Tortugas, excluding Dry Tortugas National Park. (Source: NOAA)

Florida Keys National Marine Sanctuary established the nation's first comprehensive network of marine zones in 1997 after years of planning, design, and public input. Marine zoning is designed to protect and preserve sensitive parts of the ecosystem while allowing activities that are compatible with resource protection.

The marine zoning plan for the Sanctuary includes five types of zones with varying levels of protection<sup>76</sup>:

- Ecological Reserves: Ecological Reserves (ERs)
  are the largest of the sanctuary zones and protect
  a range of marine habitats found in Florida Keys
  National Marine Sanctuary. Within ERs, fishing by
  any means, removing, harvesting or possessing any
  marine life is prohibited<sup>77</sup>.
- There are currently two ERs in the sanctuary, the Western Sambo Ecological Reserve and the Tortugas Ecological Reserve, which together protect nearly  $549~\rm km^2$ . In one portion of the Tortugas

Ecological Reserve, vessels may only enter if they remain in continuous transit with fishing gear stowed (diving and snorkeling are also prohibited). In the other portion, diving and snorkeling are allowed, using one of the reserve's mooring buoys, but not fishing.

- Sanctuary Preservation Areas: Sanctuary Preservation Areas (SPAs) within Florida Keys National Marine Sanctuary protect shallow reefs along the reef tract. SPAs, which are small in size, encompass discrete, biologically important areas that help sustain critical marine species and habitats. SPAs have mooring buoys for boaters to use in order to prevent anchor damage to corals. There are 18 SPAs within the sanctuary, which together cover a total of about 17 km². Regulations for this zone type are designed to limit consumptive activities and to separate users engaged in different kinds of activities. Fishing is generally prohibited and diving, snorkeling and boating allowed inside these zones.
- · Wildlife Management Areas: Wildlife Management Areas (WMAs) are intended to minimize disturbance to sensitive or endangered wildlife and their habitats, such as bird nesting, resting or feeding areas, and turtle nesting beaches<sup>79</sup>. These areas, which are generally small in size, often include no-motor zones80, idle speed only/no wake zones<sup>81</sup>, and buffer<sup>82</sup> and closed zones. Fishing is generally allowed in these areas, except for closed zones, which can prohibit fishing. There are currently 27 WMAs in the sanctuary. Twenty of these areas are co-managed with the U.S. Fish and Wildlife Service as part of their plan for managing backcountry portions of the national wildlife refuges in the Florida Keys. The remaining seven WMAs are under sanctuary management.
- Existing Management Areas: Existing Management Areas (EMAs) are areas within Florida Keys
   National Marine Sanctuary that were established by
   NOAA or another federal agency prior to 1997 when sanctuary zoning regulations went into effect<sup>83</sup>.

There are six EMAs in the sanctuary, including Key Largo and Looe Key, which are managed by the sanctuary, and Crocodile Lake National Wildlife Refuge, Great White Heron National Wildlife Refuge, National Key Deer National Wildlife Refuge, and Key West National Wildlife Refuge, which are managed by the U.S. Fish and Wildlife Service. Fishing is generally allowed in these areas.

• Special-use Areas: Special-use Areas (SAs) are small areas that have been set aside for such purposes as scientific research and educational purposes, restoration, and monitoring<sup>84</sup>. Fishing is prohibited in SAs.

These areas minimize impacts on sensitive habitats and reduce user conflicts. The sanctuary's four Special-Use Research Only Areas are located at Conch Reef, Tennessee Reef, Looe Key (patch reef), and Eastern Sambo. Fishing by any means, as well as removing, harvesting, or possessing any marine life, are prohibited in SAs.

The following are the applicable fishing regulations in the Sanctuary:

 $15~\mathrm{CFR}$  § 922.164 - Additional activity regulations by Sanctuary area.

•••••

- (b) Existing management areas
  - (1) Key Largo and Looe Key Management Areas. The following activities are prohibited within the Key Largo and Looe Key Management Areas (also known as the Key Largo and Looe Key National Marine Sanctuaries) described in appendix II to this subpart:
    - (i) Removing, taking, damaging, harmfully disturbing, breaking, cutting, spearing or similarly injuring any coral or other marine invertebrate, or any plant, soil, rock, or other material, except commercial taking of spiny lobster and stone crab by trap and recreational taking of spiny lobster by hand or by hand gear which is

- consistent with these regulations and the applicable regulations implementing the applicable Fishery Management Plan.
- (ii) Taking any tropical fish.
- (iii) Fishing with wire fish traps, bottom trawls, dredges, fish sleds, or similar vessel-towed or anchored bottom fishing gear or nets.
- (iv) Fishing with, carrying or possessing, except while passing through without interruption or for law enforcement purposes: pole spears, air rifles, bows and arrows, slings, Hawaiian slings, rubber powered arbaletes, pneumatic and spring-loaded guns or similar devices known as spearguns.
- (d) Ecological Reserves, Sanctuary Preservation Areas, and Special Use (Research only) Areas.
  - (1) The following activities are prohibited within the Ecological Reserves described in appendix IV to this subpart, within the Sanctuary Preservation Areas described in appendix V to this subpart, and within the Special Use (Research only Areas) described in appendix VI to this subpart:
    - (iii) Except for catch and release fishing by trolling in the Conch Reef, Alligator Reef, Sombrero Reef, and Sand Key SPAs, fishing by any means. However, gear capable of harvesting fish may be aboard a vessel in an Ecological Reserve or Sanctuary Preservation Area, provided such gear is not available for immediate use when entering and during transit through such Ecological Reserve or Sanctuary Preservation Area, and no presumption of fishing activity shall be drawn therefrom.

# NATIONAL MARINE SANCTUARY OF AMERICAN SAMOA

The America Samoa Sanctuary is located in both territorial and federal waters of the U.S. territory of American Samoa. American Samoa constitutes the eastern portion of the Samoan archipelago, a 485 kilometer long volcanic island chain in the South Pacific Ocean region of Polynesia. American Samoa is midway between Hawai'i and New Zealand. The Sanctuary is comprised of six distinct units, forming a network of marine protected areas around the islands of the Territory of American Samoa (Figure 16).

NOAA co-manages the Sanctuary with the government of American Samoa and works closely with communities adjacent to the sanctuary, all within the context of Samoan cultural traditions and practices. Sanctuary regulations clarify that NOAA has primary responsibility for sanctuary management, and that the American Samoa Government will assist NOAA in the administration of the sanctuary act (15 CFR 922.106).

As a territorial partner and co-manager, the government of American Samoa provides a local alliance and support services to address territorial processes and coordination, as well as to collaborate on joint efforts in outreach, constituency building, and cooperation in the territory. Through this partnership, sanctuary staff are also able to coordinate efforts to reach out to local communities through the American Samoa government's Office of Samoan Affairs, whose staff serve as liaisons between the territorial government and local residents<sup>85</sup>.

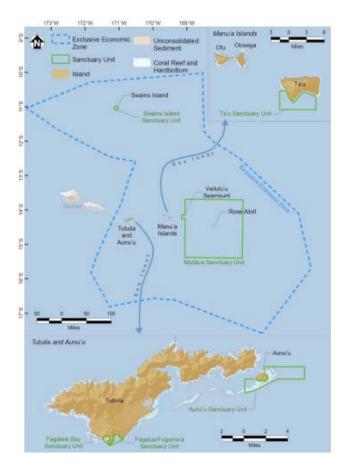


Figure 16 National Marine Sanctuary of American Samoa (Source: NOAA)

Certain fishing practices, such as bottom trawling, are prohibited throughout the Sanctuary. All fishing is prohibited in certain Sanctuary units.

The following are the applicable regulations in the sanctuary:

 $15~{\rm CFR~\$922.104~Prohibited~or~otherwise~regulated}$  activities—Sanctuary-wide except in the Muliāva Unit.

- (a) The following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted within any unit of the Sanctuary except the Muliāva Unit:
  - (1) Gathering, taking, breaking, cutting, damaging, destroying, or possessing any giant clam [Tridacna spp.], live coral, bottom formation including live rock and crustose coralline algae.

- (2) Possessing or using poisons, electrical charges, explosives, or similar environmentally destructive methods of fishing or harvesting.
- (3) Possessing or using spearguns, including such devices known as Hawaiian slings, pole spears, arbalettes, pneumatic and spring-loaded spearguns, bows and arrows, bang sticks, or any similar taking device while utilizing SCUBA equipment.
- (4) Possessing or using a seine, trammel, drift gill net, or any type of fixed net.
- (5) Disturbing the benthic community by bottom trawling.

15 CFR \$922.105 Prohibited or otherwise regulated activities—Unit-specific.

In addition to the prohibitions set forth in \$922.103 and \$922.104, the following regulations apply to activities conducted within specified Sanctuary units described in the appendix to this subpart.

- (a) The following activities are prohibited in the Fagatele Bay Unit:
  - (1) Harvesting, catching, removing, taking, injuring, destroying, collecting, moving, possessing or causing the loss of any Sanctuary resource, including but not limited to fishing, or attempting any of these activities.
  - (2) Possessing fishing gear unless such gear is stowed and not available for immediate use.
- (b) The following activities are prohibited in the Aunu'u Unit:
  - (1) In Zone A: Fishing from a vessel without providing notification to the Sanctuary Superintendent or his/her designee in the village of Aunu'u prior to each fishing trip.
  - (2) In Zone B:
    - (i) Fishing for bottom-dwelling species or otherwise harvesting, catching, removing, taking, injuring, destroying, collecting, moving, or causing the loss of any bottom-dwelling species, or attempting

any of these activities. Surface fishing for pelagic species, including trolling, is allowed.

- (ii) Disturbing the benthic community.
- (iii) Possessing any Sanctuary resource, except legally harvested fish on board a vessel.

....

15 CFR \$922.106 Management and enforcement.

The National Oceanic and Atmospheric Adminis-

tration (NOAA) has primary responsibility for the management of the Sanctuary pursuant to the Act. The American Samoa Department of Commerce (ASDOC) will assist NOAA in the administration of the Sanctuary, and act as the lead territorial agency, in conformance with the terms of designation, these regulations, and the terms and provisions of any grant or cooperative agreement.

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3

CHAPTER 3

# NATIONAL PARK SYSTEM

The U.S. national park system was established in accordance with the National Park Service Organic Act of 1916. One of the conservation objectives of the national park system is to protect local fish populations and their habitats and provide recreational fishing opportunities for current and future park visitors<sup>86</sup>. The national park system includes 423 individual units covering more than 343,983 km² in all 50 states, the District of Columbia, and US territories. In addition to national parks (of which there are 62), there are 19 other types of units in the system, including National Historical Parks (57 in number), National Memorials (31), National Recreation Areas (18), and National Seashores (10) <sup>87</sup>. The National Park Service (NPS) was established under Department of Interior to manage the national park system.

The national park system encompasses 17,703 km of coast and 10,117 km² of ocean and Great Lakes waters, including coral reefs, kelp forests, glaciers, estuaries, beaches, wetlands, historic forts and shipwrecks. There are about 81 ocean and coastal units in the system<sup>88</sup>. Conservation is the primary goal of MPAs in the national park system, although recreational use is encouraged when compatible with conservation goals<sup>89</sup>.

The ocean and coastal units in the national park system provide significant biological and recreational value to the nation. They attract over 88 million visitors each year and generate over \$4.8 billion in economic benefits to local communities<sup>90</sup>. Some units offer crabbing, lobstering, guided fishing trips, and ranger-led programs on fish identification and fishing techniques. The NPS manages the park units to preserve habitats and strives to manage sport fishing where it is allowed in a sustainable way, in order to ensure abundant fish populations for future generations to enjoy. Catch and release fishing is encouraged and may be required in some areas. The NPS also have authority to prohibit all fishing in specific park units or portions of park units.

The following regulations generally apply to all the national park units:

### 36 CFR § 2.3 - Fishing

Except in designated areas or as provided in this section, fishing shall be in accordance with the laws and regulations of the State within whose exterior boundaries a park area or portion thereof is located. Nonconflicting State laws are adopted as a part of these regulations.

- (d) The following are prohibited:
  - (4) Commercial fishing, except where specifically authorized by Federal statutory law.
  - (5) Fishing by the use of drugs, poisons, explosives, or electricity.
  - .....

- (7) Failing to return carefully and immediately to the water from which it was taken a fish that does not meet size or species restrictions or that the person chooses not to keep. Fish so released shall not be included in the catch or possession limit: Provided that at the time of catching the person did not possess the legal limit of fish.
- (8) Fishing from motor road bridges, from or within 200 feet of a public raft or float designated for water sports, or within the limits of locations designated as swimming beaches, surfing areas, or public boat docks, except in designated areas.
- (e) Except as otherwise designated, fishing with a net, spear, or weapon in the salt waters of park areas shall be in accordance with State law.
- (f) Authorized persons may check fishing licenses and permits; inspect creels, tackle and fishing gear for compliance with equipment restrictions; and inspect fish that have been taken for compliance with species, size and other taking restrictions.

••••

The following are specific examples of national park system units with MPAs, and their applicable fishing laws and regulations:

# GLACIER BAY NATIONAL PARK AND PRESERVE (ALASKA)

Glacier Bay National Park and Preserve is located in Southeast Alaska west of Juneau (Figure 17). The Alaska National Interest Lands Conservation Act (AN-ILCA) created Glacier Bay National Park and Preserve on December 2, 1980<sup>91</sup>. Glacier Bay became part of a binational UNESCO World Heritage Site in 1979, and was inscribed as a Biosphere Reserve in 1986. The park and preserve cover a total of 13,045 km² with 11,210 km² being designated as a wilderness area<sup>92</sup>.



Figure 17 Glacier Bay National Park and Preserve (Source: NPS)

As noted above, National Park Service regulations (36 CFR 2.3 (d)(4)) generally prohibit commercial fishing in parks "except where specifically authorized by Federal statutory law." Commercial fishing (salmon gillnetting) has been the most important harvest activity in Dry Bay (situated within the Preserve) since 1910. Over one million pounds of kings, sockeye, coho, chum and pink salmon are harvested from Dry Bay each year. Because of its importance to the community, Congress authorized commercial salmon fishing to continue when the Preserve was established in 1980<sup>93</sup>.

Under the regulations at 36 CFR \$13.1132, three types of commercial fishing are authorized in Glacier Bay non-wilderness waters: (1) longline fishing for halibut; (2) pot and ring fishing for Tanner crab; and (3) trolling for salmon. All other commercial fishing, or a buying or a processing operation not related to an authorized fishery is prohibited in Glacier Bay.

Glacier Bay commercial fishing is managed using a lifetime access permit (LAP) system. The following are the applicable regulations:

(b) On October 1, 2000, each fishery will be limited to fishermen who qualify for a non-transferable

- commercial fishing lifetime access permit (LAP)<sup>94</sup> (see \$13.1134). Commercial fishing without a permit issued by the superintendent, or other than in accordance with the terms and conditions of the permit, is prohibited.
- (c) The Superintendent shall include in a permit the terms and conditions that the superintendent deems necessary to protect park resources. Violating a term or condition of the permit is prohibited.

# 36 CFR \$13.1134. Who is eligible for a Glacier Bay commercial fishing lifetime access permit?

A Glacier Bay commercial fishing lifetime access permit will be issued by the superintendent to fishermen who have submitted documentation to the superintendent, on or before October 1, 2000, which demonstrates to the satisfaction of the superintendent that:

- (a) They possess valid State limited entry commercial fishing permits for the district or statistical area encompassing Glacier Bay for each fishery for which a lifetime access permit is being sought; and,
- (b) They have participated as a limited entry permit holder or crewmember in the district or statistical area encompassing Glacier Bay for each fishery for which a lifetime access permit is being sought.
  - (1) For the Glacier Bay commercial halibut fishery, the applicant must have participated as a permit holder or crewmember for at least 2 years during the period 1992-1998.
  - (2) For the Glacier Bay salmon or Tanner crab commercial fisheries, the applicant must have participated as a permit holder or crewmember for at least 3 years during the period 1989-1998.

As in other national parks, recreational fishing in Glacier Bay is generally authorized<sup>95</sup>. Under state law, recreational fishermen must purchase an Alaska state fishing license, which is available during the summer months in the Park. Fishers should also pay attention to the vessel entry permit requirements<sup>96</sup>.

# FIRE ISLAND NATIONAL SEASHORE (NEW YORK)

Fire Island National Seashore was established as a unit of the National Park Service on September 11, 1964. It protects a 42 km section of Fire Island, an approximately 48 km long barrier island separated from New York State's Long Island by the Great South Bay (Figure 18) <sup>97</sup>.



Figure 18 Fire Island National Seashore off New York (Source: USGS)

Commercial fishing is not allowed within the boundaries of Fire Island National Seashore. Recreational fishing in compliance with state recreational fishing regulations is allowed, except in Fire Island National Seashore's marinas and at designated lifeguarded swimming beaches. Unauthorized vessels are not permitted within 300 feet of the Fire Island Lighthouse Pier<sup>98</sup>.

### BISCAYNE NATIONAL PARK (FLORIDA)

Biscayne National Park is situated off the south Florida coast and encompasses 700km<sup>2</sup>. Ninety-five percent of the park is water<sup>99</sup>.



Figure 19 Biscayne National Park (Source: NPS)

The following are the provisions of applicable statutory law regarding fishing in the park:

### US Code TITLE 16 - CONSERVATION CHAPTER

- 1 NATIONAL PARKS, MILITARY PARKS, MONU-MENTS, AND SEASHORES SUBCHAPTER LIX-E - BISCAYNE NATIONAL PARK Sect. 410gg-2.
- (a) The waters within the park shall continue to be open to fishing in conformity with the laws of the State of Florida except as the Secretary, after consultation with appropriate officials of said State, designates species for which, areas and times within which, and methods by which fishing is prohibited, limited, or otherwise regulated in the interest of sound conservation to achieve the purposes for which the park is established: Provided, That with respect to lands donated by the State after the effective date of this subchapter, fishing shall be in conformance with State law.

••••

Florida saltwater fishing and lobster regulations apply in the Park<sup>100</sup>. The Park works with the State of Florida to promote regulations and ensure the sustainability of fisheries resources. There are special park regulations concerning such issues as the collection of tropical ornamental fish<sup>101</sup>. The taking of lobster is prohibited in the Biscayne Bay/Card Sound Spiny Lobster Sanctuary (Figure 20) including in all natural, artificial and tidal creeks between the islands and along the mainland. Legally taken lobsters may be transported through the sanctuary.

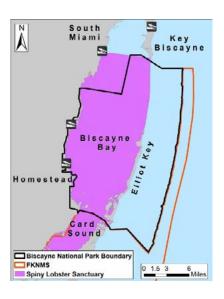


Figure 20 Biscayne Bay/Card Sound Lobster Sanctuary (Credit: Florida Fish and Wildlife Conservation Commission)

It is prohibited to collect ornamental aquarium species, plants and animals, or harvest giant land crabs in the Park. Prohibited species include goliath and Nassau grouper, queen conch, sawfish, sea turtles, stony and fire corals, sea fans, longspine sea urchins and numerous species of sharks<sup>102</sup>.

# DRY TORTUGAS NATIONAL PARK (FLORIDA)

The Dry Tortugas National Park is situated in the Gulf of Mexico almost  $113~\rm km$  west of Key West. This remote  $259~\rm km^2$  park is mostly open water with seven

small islands (Figure 21).



Figure 21 Dry Tortugas National Park (Source: NPS)

The following are the applicable fishing regulations for the park:

36 CFR § 7.27 - Dry Tortugas National Park.

(b) Are there recreational fishing restrictions that I need to know?

•••••

- ${\it (2)} \ \ \, {\rm Only \; the \; following \; may \; be \; legally \; taken \; from } \\ {\rm Dry \; Tortugas \; National \; Park:}$ 
  - (i) Fin fish by closely attended hook-andline;
  - (ii) Bait fish<sup>103</sup> by closely attended hook and line, dip net, or cast net and limited to 5 gallons per vessel per day; and
  - (iii) Shrimp may be taken by dip net or cast net.

(4) The following are prohibited:

(i) Possessing lobster within the boundaries of the park, unless the individual took

the lobster outside park waters and has the proper State/Federal licenses and permits. Vessels with legally taken lobster aboard which was taken outside the park may not have persons overboard in park waters. The presence of lobster aboard a vessel in park waters, while one or more persons from such vessel are overboard, constitutes prima facie evidence that the lobsters were harvested from park waters in violation of this chapter.

- (ii) Taking fish by pole spear, Hawaiian sling, rubber powered, pneumatic, or spring loaded gun or similar device known as a speargun, air rifles, bows and arrows, powerheads, or explosive powered guns. Operators of vessels within the park must break down and store all weapons described in this paragraph so that they are not available for immediate use.
- (iii) Use of a hand held hook, gig, gaff, or snare, except that a gaff may be used for landing a fish lawfully caught by hook and line when consistent with all requirements in this section, including size and species restrictions.
- (iv) Taking, possessing, or touching any ornamental tropical fish or marine life except as expressly provided in this section.
- (v) Dragging or trawling a dip net or cast net.
- (vi) The use of nets except as provided in paragraphs (b)(3)(ii)and (iii) of this section.
- (vii) Engaging in guide operations (fee for service), including but not limited to fishing and diving, except in accordance with the provisions of:
  - (A) A permit, contract, or other commercial use authorization; or
  - (B) Other written agreement with the United States administered under

this chapter.

# EVERGLADES NATIONAL PARK (FLORIDA)

Everglades National Park was established in 1947 to conserve the natural landscape and prevent further degradation of its land, plants, and animals<sup>104</sup>. Florida Bay is situated within the southern end of the park.



Figure 22 Everglades National Park (Source: USGS)

The following are the applicable fishing regulations in the Park, including Florida Bay:

36 CFR § 7.45 - Everglades National Park

(d) Fishing.

(4) A person engaged in guide fishing must possess a guide fishing permit issued by the Superintendent and administered under the terms of § 1.6 of this chapter. Guide fishing without a valid permit is prohibited.

- (5) Except for taking finfish, shrimp, bait, crabs, and oysters, as provided in this section or as modified under 36 CFR 1.5, the taking, possession, or disturbance of any fresh or saltwater aquatic life is prohibited.
- (6) Methods of taking. Except as provided in this section, only a closely attended hook and line may be used for fishing activities within the park.
  - (i) Crabbing for stone or blue crabs may be conducted using attended gear only and no more than five (5) traps per person. Persons using traps must remain within one hundred feet of those traps. Unattended gear or use of more than five (5) traps per person is prohibited.
  - (ii) Shrimp, mullet, and bait fish (minnows, pilchards, pinfish, mojarras, ballyhoo or bait mullet (less than eight inches (0.2m) in total length) may be taken with hook and line, dipnet (not exceeding 3 feet (0.91m) at its widest point) or cast net, for use as bait or personal consumption.
  - (iii) A dipnet or cast net may not be dragged, trawled, or held suspended in the water.
- (7) Tagging, marking, fin clipping, mutilation or other disturbance to a caught fish, prior to release is prohibited without written authorization from the Superintendent.
- (8) Fish may not be fileted while in the park, except that:

- (i) Up to four (4) filets per person may be produced for immediate cooking and consumption at designated campsites or on board vessels equipped with cooking facilities.
- (ii) Fish may be fileted while at the designated park fish cleaning facilities, before transportation to their final destination.
- (9) Nets and gear that are legal to use in State waters, and fish and other edible or non-edible sea life that are legally acquired in State waters but are illegal to possess in the waters of Everglades National Park may be transported through the park only over Indian Key Pass, Sand Fly Pass, Rabbit Key Pass, Chokoloskee Pass and across Chokoloskee Bay, along the most direct route to or from Everglades City, Chokoloskee Island or Fakahatchee Bay.
  - (i) Boats traveling through these passages with such nets, gear, fish, or other edible products of the sea must remain in transit unless disabled or weather and sea conditions combine to make safe passage impossible, at which time the boats may be anchored to await assistance or better conditions.

•••••

CHAPTER 4

# NATIONAL WILD-LIFE REFUGE SYS-TEM

The national wildlife refuge (NWR) was established in 1903. The NWR is governed by the "National Wildlife Refuge System Improvement Act of 1997". The mission of the NWR system is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States<sup>105</sup>.

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The NWR system is managed by the US Fish and Wildlife Service (FWS) within the Department of the Interior. It includes 550 refuges, of which 114 contain MPAs <sup>106</sup>. All NWR MPAs have a conservation focus,

and 61% also have a sustainable production focus. 73% of NWR MPAs are multiple use, which restricts some, but not all extractive uses. 27% of the NWR MPAs include "no take" or marine reserve areas

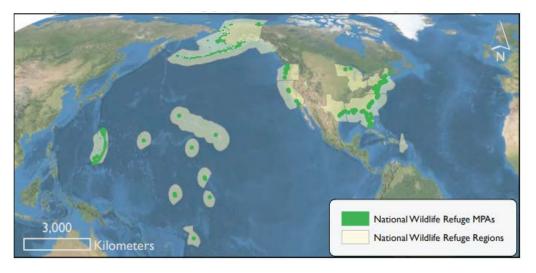


Figure 23 National Wildlife Refuge MPAs (in green) in the NWR system (Source: NOAA)

Commercial fishing is prohibited in most national wildlife refuges<sup>107</sup>. Subsistence and recreational fishing are allowed in some refuges consistent with state or site-specific regulations.

The following are the general applicable regulations concerning fishing in the NWR system:

# 50 CFR § 32.4 - Opening of wildlife refuge areas to fishing.

Wildlife refuge areas may be opened to sport fishing only after a determination is made that this activity is compatible with the purposes for which the refuge was established. In addition, the sport fishing program must be consistent with principles of sound fishery management and otherwise be in the public interest. The opening or closing of wildlife refuge areas to fishing is subject to the rulemaking requirements of the Administrative Procedure Act (5 U.S.C. 551 et seq.). Lands acquired as "waterfowl production areas" are open to sport fishing subject to the provisions of State laws and regulations and the pertinent provisions of

parts 25 through 31 of this subchapter: Provided, that fishing or entry on all or any part of individual areas may be temporarily suspended by posting upon occasions of unusual or critical conditions of, or affecting, land, water, vegetation or fish and wildlife populations.

### 50 CFR § 32.5 - Recreational fishing requirements

The following provisions shall apply to each person while engaged in public sport fishing in a wildlife refuge area:

- (a) Each person shall secure and possess the required State license.
- (b) Each person shall comply with the applicable provisions of Federal law and regulation including this subchapter.
- (c) Each person shall comply with the applicable provisions of the laws and regulations of the State wherein any area is located unless the same are further restricted by Federal law or regulation.
- (d) Each person shall comply with the terms and

- conditions authorizing access and use of the wildlife refuge area.
- (e) Each person must comply with the provisions of any refuge-specific regulation governing fishing on the wildlife refuge area. Regulations, special conditions, and maps of the fishing areas for a particular wildlife refuge are available at that area's headquarters. In addition, refuge-specific sport fishing regulations appear in §§ 32.20 through 32.72.

The following are examples of refuges in which fishing has historically occurred, and the applicable fishing regulations:

# ALASKA NATIONAL WILDLIFE REFUGES

### 50 CFR § 36.13 Subsistence fishing

Fish may be taken by local rural residents for subsistence uses in compliance with applicable State and Federal law. To the extent consistent with the provisions of this part and other Federal law, applicable State laws and regulations governing the taking of fish which are now or will hereafter be in effect are hereby incorporated by reference as a part of these regulations.

### 50 CFR § 36.32 - Taking of fish and wildlife

- (c) The following provisions shall apply to any person while engaged in the taking of fish and wildlife within an Alaska National Wildlife Refuge:
  - (2) Sport and commercial fishing.
    - (i) Each person shall secure and possess all required State licenses and shall comply with the applicable provisions of State law unless further restricted by Federal law; and

- (ii) Each person shall comply with the applicable provisions of Federal law.
- (d) Nothing in this section shall apply to the taking of fish and wildlife for subsistence uses.

••••

# DON EDWARDS SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE (CALIFORNIA)

The Refuge was created in 1972 largely as the result of grassroots efforts by the local community to protect the San Francisco Bay ecosystem<sup>108</sup>. Congressman Don Edwards, responding to local citizens who made up the South San Francisco Baylands Planning, Conservation and National Wildlife Refuge Committee, worked with Congress to create the San Francisco Bay National Wildlife Refuge. This group later became the Citizens Committee to Complete the Refuge and in 1988 helped add additional 81 km², doubling the size of the refuge.



Figure 24 The nation's first urban national wildlife refuge sits on the southern end of San Francisco Bay. (Source: Wikipedia)

The following are the applicable fishing regulations for the Refuge:

50 CFR § 32.24 - California.

•••••

(e) Don Edwards San Francisco Bay National Wildlife Refuge

.....

- (4) Sport fishing. We allow sport fishing on designated areas of the refuge subject to the following conditions:
  - (i) We close Mallard Slough to boats from March 1 through August 31, and we close Mowry Slough from March 15 to June 15.
  - (ii) We open designated fishing areas from legal sunrise to legal sunset each day.
  - (iii) We prohibit the collection of bait of any type from the refuge except from the Dumbarton Fishing Pier, where it is legal to collect bait for noncommercial purposes.
  - (iv) We prohibit the use of balloons to float hooks and bait farther than hand casting. Fishing is allowed by boat in the bay and sloughs, off the Dumbarton Pier at the end of Marshlands Road, in Coyote Creek Lagoon, and at the Faber-Laumeister Unit in East Palo Alto. Fishing is subject to the State of California Ocean Fishing regulations<sup>109</sup>.

### MONOMOY NATIONAL WILDLIFE REF-UGE (MASSACHUSETTS)

The following are the applicable regulations in the Refuge:

50 CFR § 32.40 - Massachusetts.

....

- (d) Monomoy National Wildlife Refuge
  - (4) Sport fishing. We allow sport fishing on designated areas of the refuge subject to the following conditions:
    - We allow fishing from legal sunrise to legal sunset on designated portions of

- the Monomoy Islands unless otherwise posted.
- (ii) We allow surf fishing from the Morris Island shore 24 hours a day.

•••••

Massachusetts state fishing regulations apply in the Refuge. A range of permits is required to fish in the Refuge:

- Recreational anglers are required to have a Massachusetts State license for saltwater fishing.
- Shell[fish] fishing is allowed in the Refuge and recreational shellfishermen are required to obtain local permits from the Town of Chatham and must follow local regulations. Recreational shellfish permits are issued for town residents and non-residents.
- A refuge permit is required for commercial fishing guides. Refuge-specific permits are not required for individual anglers. State and/or local permits are required for all fishing activities.



Figure 25 Established in 1944 to provide habitat for migratory birds. The Monomoy National Wildlife Refuge is  $31\,\mathrm{km}^2$  with varied habitats of oceans, salt and freshwater marshes, dunes, and freshwater ponds, of which  $13\,\mathrm{km}^2$  are designated Wilderness (Source: Wikipedia).

CHAPTER 5

# STATE WATER MPAS

Although most MPAs, and certainly the greatest areal extent of MPAs, in the U.S. are in federal waters, there are a number of MPAs in state waters, particularly on the Pacific Coast, that are important. These MPAs may also provide helpful lessons for China MPA system because most MPAs in China are similar in the proximity to shore and human activities.

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The following summaries provide a range of state MPA examples.

### WASHINGTON

Washington Department of Fish and Wildlife (WDFW) has established three types of MPAs, specifically 110:

- Conservation Areas (of which there are nine in the state): where the harvest of all marine resources is prohibited.
- Marine Preserves (17 in the state): where the harvest of some marine resources is prohibited.
- Sea Urchin and Sea Cucumber Exclusion Zones (two in the state): where the commercial harvest of only these species is prohibited.

Additionally, the recreational harvest of giant Pacific octopuses is prohibited in designated octopus preserves in the Puget Sound.

Local partners have helped improve marine conservation in the state. For example, in 2004, San Juan County Commissioners designated the entire county a marine stewardship area (MSA). The San Juan MSA has provided a focus for monitoring and research, outreach, and policy recommendations. Additionally, the MSA has improved coordination among MPAs by linking these protections with broader, ecosystem-based protection efforts afforded through educating and engaging citizens, recognizing community resources and values and bringing together local and regional marine

managers who have regulatory and non-regulatory management responsibilities within the region<sup>111</sup>.

Tribal members of Treaty Tribes are not bound by WDFW regulations, including MPAs. However, many of these areas have been adopted into tribal-state management plans and closed by individual tribes to harvest of some or all species as part of their management policies<sup>112</sup>.

The WDFW considers MPAs to be one of the agency's working tools for resource protection and management. The WDFW is responsible for MPA plan development and implementation to manage consumptive and/or non-consumptive uses. WDFW officers conduct law enforcement in state and federal waters and assist city and county law enforcement agencies, tribal authorities, and federal agencies. They enforce federal laws, state statutes, and county ordinances through memorandums of agreement. Officers also hold federal U.S. Fish and Wildlife and National Marine Fisheries Service commissions, and have jurisdiction over federal violations. Officers collaborate and coordinate with these agencies and the U.S. Coast Guard<sup>113</sup>.

Other agencies and landowners also have MPAs in state waters. For example, the state Department of Natural Resources operates an Aquatic Reserve Program that protects habitat and resources, and cities – such as Seattle, Tacoma, and Des Moines – have established a number of reserves at their shoreline parks<sup>114</sup>.

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# SPECIFIC EXAMPLES OF WASHINGTON STATE MPAS AND THEIR FISHING REGULATIONS ARE:

### BRACKETT'S LANDING SHORELINE SANCTUARY CONSERVA-TION AREA



Figure 26 Brackett's Landing Shoreline Sanctuary Conservation Area (Source: WDFW)

Within Brackett's Landing Shoreline Sanctuary Conservation Area, all commercial and recreational take are prohibited  $^{115}$ .

### FRIDAY HARBOR MARINE PRESERVE

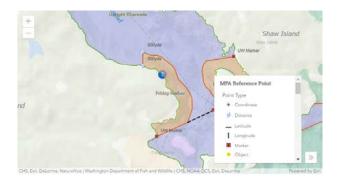


Figure 27 Friday Harbor Marine Preserve (Source: WDFW)

For recreational fishing, take of salmon, trout, herring and unclassified species<sup>116</sup> is allowed and other recreational fisheries are closed. For commercial fishing, the only open fisheries are salmon and herring<sup>117</sup>.

### **CARKEEK PARK MARINE PRESERVE**



Figure 28 Carkeek Park Marine Preserve (Source: WDFW)

For recreational fisheries, only fishing for salmon, bottomfish and forage fish by hook and line is generally allowed. If other species or types of fish are caught, they must be returned to the water in the same location. In terms of commercial fishing, only fishing for salmon, bottomfish and forage fish by hook and line is allowed. If other species or types of fish are caught, they must be returned to the water in the same location<sup>118</sup>.

### SAN JUAN AND UPRIGHT CHANNELS SEA URCHIN AND SEA CUCUMBER EXCLUSION ZONES

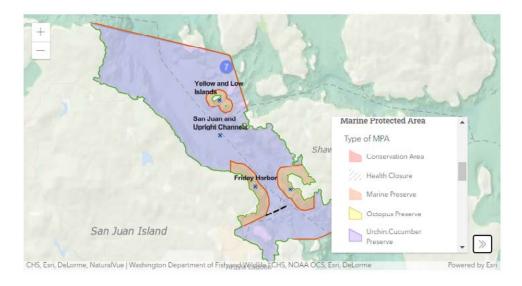


Figure 29 San Juan and Upright Channels sea urchin and sea cucumber exclusion zones (Source: ODFW)

This MPA only restricts catch of sea cucumber and sea urchin<sup>119</sup>.

### OREGON

The Oregon Department of Fish and Wildlife (ODFW) oversees the management and scientific monitoring of Oregon's marine reserve system — which includes five marine reserves and nine MPAs. The Cape Falcon, Cascade Head, Otter Rock, Cape Perpetua, and Redfish Rocks marine reserves are each named for local natural landmarks. All removal of marine life, including by fishing, is prohibited in the marine reserves. Some fishing activities are allowed in MPAs<sup>120</sup>.



Figure 30 Marine reserves and MPAs off Oregon coasts. (Source: ODFW)

Specific examples of Oregon MPAs and marine reserves and their fishing regulations are:

### CAPE FALCON

The Cape Falcon Marine Reserve is located on Oregon's north coast, just off of Oswald West State Park

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near the town of Manzanita. This is Oregon's northernmost protected area site and includes a marine reserve plus two MPAs (Figure 31). Fishing pressure in the area has been relatively low, due to distance from ports and habitats present<sup>121</sup>.

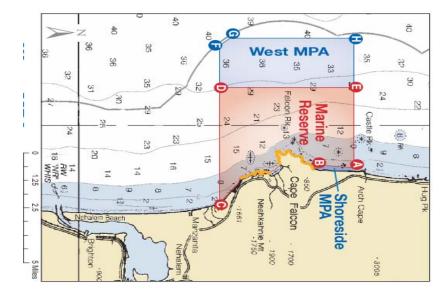


Figure 31 Cape Falcon marine reserve and MPAs map (Source: ODFW)

### **WEST MPA**

Take of any fish, invertebrates, seaweeds or wildlife is prohibited except take of crab and take salmon by  $troll^{122}$ .

### MARINE RESERVE

Take of any fish, invertebrates, seaweeds or wildlife or deployment of any fishing gear is prohibited. You can remove fishing gear that has drifted into the area (call Oregon State Police for permission) or transit with catch onboard.

### **SHORESIDE MPA**

Take of any fish, invertebrates, seaweeds or wildlife is prohibited, except recreationally use of hook and line from the shore and participation in all legal take above the low tide line, if not otherwise restricted.

### SHORELINE AREA (IN ORANGE LINE)

Take of invertebrates, seaweeds or wildlife living on shore in areas marked orange is prohibited, while take of species living on shore in areas not marked orange and above the low tide line is allowed.

### **CAPE PERPETUA**

The Cape Perpetua Marine Reserve is Oregon's largest marine reserve. The site is located off the central Oregon coast stretching between the towns of Yachats and Florence. The site includes a marine reserve, two Marine Protected Areas (MPAs), and a Seabird Protection Area (Figure 32). Historical fishing pressure has been relatively moderate on groundfish in rocky reef habitats. There used to be relatively high fishing pressure on crab in soft bottom habitats<sup>123</sup>.

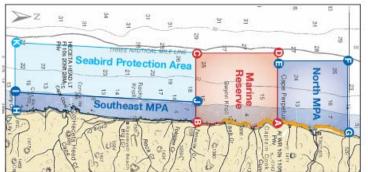


Figure 32 Cape Perpetua marine reserve and MPAs map (Source: ODFW)

### **NORTH MPA**

Take of any fish, invertebrates, seaweeds or wildlife is prohibited, except take of crab and take of salmon by troll or recreationally using hook and line from the shore <sup>124</sup>.

### **MARINE RESERVE**

Take of any fish, invertebrates, seaweeds or wildlife or deployment of any fishing gear is prohibited. You can remove fishing gear that has drifted into the area (call Oregon State Police for permission) or transit with catch onboard.

### **SOUTHEAST MPA**

Use of trawl fishing gear and take of Pacific herring, Pacific sardine, anchovies, smelt, Pacific sand lance and market squid are prohibited.

### **SHORELINE MPA**

Take of fish, invertebrates, seaweeds or wildlife in areas marked orange is prohibited. Fishing is otherwise allowed in areas not marked orange, above the low tide line.

### **SEABIRD PROTECTION AREA**

Take of Pacific herring, Pacific sardine, anchovies, smelt, Pacific sand lance is prohibited while participating in all other legal take is allowed.

### **CALIFORNIA**

The need to safeguard the long-term health of California's marine life was recognized by the California Legislature in 1999 with the passage of the Marine Life Protection Act (MLPA) <sup>125</sup>. This Act aims to protect California's marine natural heritage through establishing a statewide network of MPAs designed, created, and managed using sound science and stakeholder

input<sup>126</sup>. After a delay in its implementation, including because of opposition from fishing groups, the Act was implemented through a phased strategy called the "Marine Life Protection Act Initiative" (MLPA Initiative) <sup>127</sup>. The MLPA Initiative spanned from 2004-2012 and involved an extensive public planning process. It created stakeholder groups in four coastal regions<sup>128</sup>; a Blue Ribbon Task Force of political, business, legal, and academic leaders to provide policy guidance; and regional science advisory teams to provide scientific design guidelines and evaluate proposed MPA networks. As part of the science process, technical guidelines to use when designing MPA network alternatives were developed in the following four areas: habitat representation, habitat replication, MPA size and spacing<sup>129</sup>.

Over the eight-year planning effort, meetings, public workshops, and hearings were held throughout the state to collect public input and expert opinions on a range of MPA alternatives. In 2008, the California Fish and Game Commission (the Commission), the lead regulatory authority for California MPAs, adopted a Draft Master Plan as a "living document" to guide regional development of MPA network proposals, including consideration of existing MPAs, to ensure fulfillment of the law's conservation goals.

The Commission, a five-member body appointed by the Governor, is responsible for adopting all fish and wildlife regulations in the state. In June 2012, the Commission formally approved the final MPA network design. In 2016, the Commission adopted its current Master Plan for Marine Protected Areas. The Plan for Marine Protected Areas established a process to occur

once a decade for comprehensive evaluation of MPA network performance relative to the core goals of the MLPA, relying on analysis of data gathered from statewide MPA monitoring efforts.

The California Department of Fish and Wildlife (CDFW) played a central role in the MPA planning process, providing biological data and expertise to inform MPA decision-making. Currently, CDFW and the California Ocean Protection Council (OPC) collaboratively oversee the MPA monitoring program, which occurred in two main phases—baseline monitoring and long-term monitoring. California adopted its long-term monitoring plan after baseline monitoring was largely complete and evaluated regional MPA monitoring plans before committing to a statewide approach<sup>130</sup>.

California's MPA network lies within traditional territories of coastal Tribes who have stewarded California's marine and coastal resources for centuries. Tribes and Tribal organizations have engaged in baseline monitoring and built capacity related to MPA management<sup>131</sup>.

The regional engagement of a wide range of local stakeholders, agencies, and other organizations in MPA design helped bring about formation of county-based coalitions after MPA designation took place. This localized, public engagement has created important long-term buy-in and regional expertise that supports the state's MPA program at little or no cost 132.

Implementation was made more effective as a result of planning guidelines that favored locations near terrestrial protected areas as well as educational and research institutions<sup>133</sup>. In addition, the state assessed

the feasibility of proposed MPAs in terms of enforceability and other management concerns, and recommended adjustments to proposed MPAs to improve their design relative to such factors.

California's MPAs are managed as a statewide network through the MPA Management Program. This program consists of four focal areas (Research & Monitoring, Enforcement & Compliance, Outreach & Education and Policy & Permitting) and was designed to facilitate the adaptive management of California's MPA network as an interconnected system of protected areas along the entire California coast. The CDFW is responsible for managing MPAs through enforcement; monitoring, research, and evaluation; and outreach and education. OPC coordinates activities of ocean-related agencies and other partners to improve the effectiveness of state efforts to protect ocean resources including MPAs.

In 2014, California formally adopted "The California Collaborative Approach, Marine Protected Areas Partnership Plan," which outlines a partnership approach to managing California's network of MPAs among state agencies, California tribes and tribal governments, fishermen, non-consumptive recreational users, academics, federal and local governments, and non-profits<sup>134</sup>. At the same time, the MPA Statewide Leadership Team (Leadership Team)<sup>135</sup> was convened as a standing advisory body to ensure communication, collaboration, and coordination among entities that have significant authority, mandates, or interests that relate to the MPA Network<sup>136</sup>.

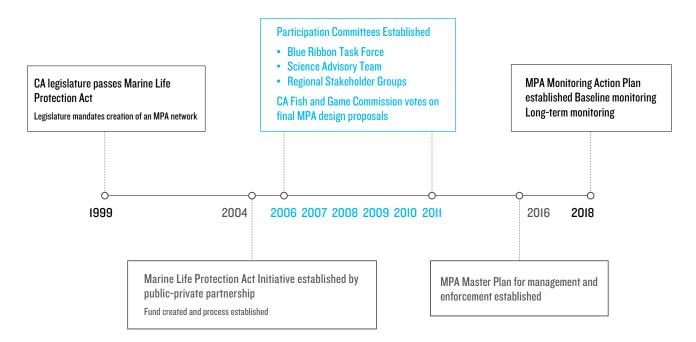


Figure 33 California MPA Network development history (Source: CDFW)

TABLE 2 MAJOR GOVERNMENTAL ENTITIES AND THEIR ROLES IN CALIFORNIA MPA NETWORK BUILDING PROCESS.		
DIVISION/OFFICE	RESPONSIBILITIES	
California Fish and Game Commission	Primary decision-making authority for California's MPA regulations and adopted the MPA Management Program and Master Plan for MPAs.	
California Department of Fish and Wildlife	Leads managing agency to implements and enforces the regulations set by the Fish and Game Commission, and works across all four focal areas of the MPA Management Program.	
Ocean Protection Council	Policy lead for California's MPAs and implementation of Marine Life Protection Act activities.	
MPA Statewide Leadership Team	Helps guide program activities and ensures communication, collaboration, and coordination among entities that have significant authority, mandates, or interests that relate to California's MPA Network.	

California now has the most comprehensive state MPA network in the U.S. It has set aside 16 percent of the state's coastal waters (extending from shore out to 3 nautical miles and from the Oregon border to Mexico) as MPAs and 9.4% of the state's coastal waters are no-take areas<sup>137</sup>. California has categorized MPAs into State Marine Reserves (SMR), State Marine Conservation Areas (SMCA and SMCA No-take), State Marine Parks (SMP), State Marine Recreational Management Areas (SMRMA) and Special Closures. No fishing, recreational or commercial, is allowed in SMR, SMCA (No-Take) and Special Closure areas. Recreational and commercial fishing activities are allowed but restricted in SMCA and SMRMA areas and no commercial

fishing is allowed in SMP areas<sup>138</sup>.



Figure 34 California MPA network map (Source: CDFW)

The following are more detailed summaries of activities allowed in each MPA category:

- State Marine Reserve (SMR): Damage or take<sup>139</sup>
  of all marine resources (living, geologic, or cultural), including recreational and commercial take, is
  prohibited;
- State Marine Conservation Area (SMCA): Limited recreational and/or commercial take of marine resources is allowed (restrictions vary);
- State Marine Conservation Area (No-Take): Take
  of living, geological, and cultural marine resources
  is generally prohibited, except that certain permitted activities that cause harm such as dredging and
  maintenance may continue<sup>140</sup>;
- State Marine Park (SMP): Unlawful to injure, damage, take, or possess any living or nonliving marine resource for commercial exploitation purposes. Any human use that would compromise protection of the species of interest, natural community or habitat, or geological, cultural, or recreational features, may be restricted by the designating entity or managing agency. All other uses are allowed, including scientific collection with a permit, research, monitoring, and public recreation, including recreational harvest, unless otherwise restricted. Public use, enjoyment, and education are encouraged, in a manner consistent with protecting resource values;
- State Marine Recreational Management Area (SMRMA): Recreational and commercial take of marine resources may be limited;
- Special Closure: Designated by the Fish and Game Commission and in which access and boating activities are prohibited or limited to protect sea bird rookeries or marine mammal haul-out sites<sup>141</sup>.

Specific examples of MPAs in the California network and their fishing regulations are:

### NORTHERN CALIFORNIA

### PYRAMID POINT STATE MARINE CONSERVATION AREA 142

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:

- a. The recreational take of surf smelt<sup>143</sup> by dip net or Hawaiian-type throw net is allowed.
- b. The following federally recognized tribe is exempt from the area and take regulations for Pyramid Point State Marine Conservation Area and shall comply with all other existing regulations and statutes: Tolowa Dee-ni' Nation (previously the Smith River Rancheria).

### POINT ST. GEORGE REEF OFFSHORE STATE MARINE CONSER-VATION AREA<sup>144</sup>

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:

- a. The recreational take of salmon by trolling and Dungeness crab by trap is allowed.
- b. The commercial take of salmon with troll fishing gear and Dungeness crab by trap is allowed.
- c. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations for Point St. George Offshore State Marine Conservation Area and shall comply with all other existing regulations and statutes: Elk Valley Rancheria, and Tolowa Dee-ni' Nation (previously the Smith River Rancheria).

### **READING ROCK STATE MARINE RESERVE**<sup>145</sup>

It is unlawful to injure, damage, take, or possess any

living, geological, or cultural marine resource.

### RUSSIAN GULCH STATE MARINE CONSERVATION AREA 146

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:

- a. All recreational take is allowed in accordance with current regulations.
- b. All commercial take is allowed in accordance with current regulations, except the commercial take of bull kelp (Nereocystis luetkeana) and giant kelp (Macrocystis pyrifera) is prohibited.

### NORTH CENTRAL CALIFORNIA 147

### SEA LION COVE STATE MARINE CONSERVATION AREA 148

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the exception that recreational and commercial take of finfish<sup>149</sup> is allowed.

### STEWARTS POINT STATE MARINE CONSERVATION AREA 150

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the exception that the following may be taken recreationally from shore only: marine aquatic plants other than sea palm, marine invertebrates, finfish by hook-and-line, surf smelt by beach net, and species authorized in Section 28.80 of these regulations by hand-held dip net.

### BODEGA HEAD STATE MARINE CONSERVATION AREA 151

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:

a. The recreational take of pelagic finfish<sup>152</sup> by trolling,

- Dungeness crab by trap, and market squid by handheld dip net is allowed.
- b. The commercial take of pelagic finfish by troll fishing gear or round haul net, Dungeness crab by trap, and market squid by round haul net, is allowed. Not more than five percent by weight of any commercial pelagic finfish or market squid catch landed or possessed shall be other incidentally taken species.

### DRAKES ESTERO STATE MARINE CONSERVATION AREA 153

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the exception that recreational take of clams is allowed.

### **DUXBURY REEF STATE MARINE CONSERVATION AREA 154**

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the exception that the recreational take of finfish from shore and abalone is allowed.

### PILLAR POINT STATE MARINE CONSERVATION AREA 155

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:

- a. The recreational take of pelagic finfish by trolling, Dungeness crab by trap, and market squid by handheld dip net is allowed.
- b. The commercial take of pelagic finfish by troll or round haul net, Dungeness crab by trap, and market squid by round haul net, is allowed. Not more than five percent by weight of any commercial pelagic finfish or market squid catch landed or possessed shall be other incidentally taken species.

### SAN FRANCISCO BAY<sup>156</sup>

### MARIN ISLANDS STATE MARINE PARK<sup>157</sup>

It is unlawful to injure, damage, take, or possess any living or non-living marine resource for commercial purposes. Any human use that would compromise protection of the species of interest, natural community or habitat, or geological, cultural, or recreational features, may be restricted, except that recreational hook-and-line take of species other than marine aquatic plants from shore only is allowed.

### CENTRAL CALIFORNIA 158

### **ELKHORN SLOUGH STATE MARINE CONSERVATION AREA**<sup>159</sup>

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions: (1) the recreational take of finfish by hook-and-line only and clams is allowed; and (2) clams may be taken only on the north shore of the slough in the area adjacent to the Moss Landing State Wildlife Area.

### EDWARD F. RICKETTS STATE MARINE CONSERVATION AREA 160

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:

- a. The recreational take of finfish by hook-and-line is allowed.
- b. The commercial take of giant kelp (*Macrocystis pyrifera*) and bull kelp (*Nereocystis spp.*) is allowed by hand in the area defined by sub-section 165(c)(4)
  (D) under the following conditions:

- A kelp harvester with a valid license issued pursuant to Section 165 may take no more than 12 tons of kelp from the portion of Administrative Kelp Bed 220 within the Edward F. Ricketts State Marine Conservation Area in any calendar month.
- Duplicate landing records must be kept on board the harvest vessel in accordance with the requirements of Section 165.

### **BIG CREEK STATE MARINE CONSERVATION AREA**<sup>161</sup>

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:

- a. The recreational take of salmon and albacore is allowed.
- b. The commercial take of salmon, albacore, and spot prawn is allowed.

# MORRO BAY STATE MARINE RECREATIONAL MANAGEMENT AREA<sup>162</sup>

It is unlawful to perform any activity that would compromise the recreational values for which the area may be designated. Recreational opportunities may be protected, enhanced, or restricted, while preserving basic resource values of the area, with the following specified exceptions:

- Take of all living marine resources is prohibited except the following activities are allowed north of latitude 35° 19.700'N;
  - The recreational take of finfish.
- Aquaculture pursuant to a valid State water bottom lease and permit.
- Storing finfish taken outside the Morro Bay State
   Marine Recreational Management Area in a receiver for bait purposes.
- Dredging for the purpose of harbor and channel operations and pursuant to required and valid permits and approvals.
- Harbor operations and maintenance and clean-

ing of vessel hulls and other man-made structures, including removal of living marine resources for these purposes.

### SOUTHERN CALIFORNIA 163

### NAPLES STATE MARINE CONSERVATION AREA 164

- It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:
- a. The recreational take by spearfishing of white seabass and pelagic finfish is allowed.
- b. The commercial take of giant kelp (*Macrocystis pyrifera*) by hand harvest or by mechanical harvest is allowed.
- c. Take pursuant to operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the Department.
- 2. The following federally recognized tribe is exempt from the area and take regulations found in subsection 632(b)(98) and shall comply with all other existing regulations and statutes: Santa Ynez Band of Chumash Indians.

### CRYSTAL COVE STATE MARINE CONSERVATION AREA 165

- It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for recreational and/or commercial purposes, with the following specified exceptions:
- a. The recreational take of finfish by hook-and-line or by spearfishing, and spiny lobster and sea urchin is allowed.
- b. The commercial take of sea urchin; spiny lobster by trap; and coastal pelagic species by round haul net, brail gear, and light boat is allowed. Not more than five percent by weight of any commer-

- cial coastal pelagic species catch landed or possessed shall be other incidentally taken species.
- c. Take pursuant to beach nourishment and other sediment management activities, and operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the Department.
- 2. Take of all living marine resources from inside tidepools is prohibited. For purposes of this section, tidepools are defined as the area encompassing the rocky pools that are filled with seawater due to retracting tides between the mean higher high tide line and the mean lower low tide line.

# RICHARDSON ROCK STATE MARINE RESERVE & FEDERAL MARINE RESERVE<sup>166</sup>

In both the state and federal reserves, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource.

# FARNSWORTH OFFSHORE STATE MARINE CONSERVATION AREA 167

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for commercial and/or recreational purposes, with the following specified exceptions:

- a. The recreational take of pelagic finfish, by hookand-line or by spearfishing; white seabass by spearfishing; marlin, tunas and dorado (dolphinfish) (Coryphaena hippurus) by trolling; and market squid by hand-held dip net is allowed.
- b. The commercial take of swordfish by harpoon; and coastal pelagic species by round haul net, brail gear, and light boat is allowed. Not more than five percent by weight of any commercial coastal pelagic species catch landed or possessed shall be other incidentally taken species.

•••••

According to one expert, the following lessons were learned as part of the California MPA network development process:

- The MLPA's statutory mandate was critical to providing the legal foundation for an MPA network design and ensuring that MPAs remained a priority over time<sup>168</sup>.
- It is important to create formal structures for interagency coordination. The MLPA does not guarantee a multi-stakeholder participatory MPA design process. The presence of regional stakeholder and science advisory groups in the MLPA Initiative and Blue Ribbon Task Force's policy coordination role has been key to incorporating local and scientific input into the MPA design. A considerable amount of time has been spent in scientific communications, discussions and negotiations, which was meaningful for subsequent implementation and compliance.
- Ensure focus on science. To support fulfilment of requirements, the MLPA law specified adoption of an MPA network "master plan" to guide both the design of the new network of MPAs and formulation of programs for monitoring, research, evaluation, and enforcement based upon "best readily available scientific information." California's statewide scientific advisory bodies have worked alongside regional stakeholder panels during their design phases, ensuring that regional MPA proposals followed science guidelines and fulfilled the MLPA's statutory requirements.
- Scale matters. Two earlier efforts (between 1999 and 2003) that attempted to implement the MLPA statewide all at once were both unsuccessful due largely to the cost and difficulty of planning over such a large area<sup>169</sup>. The regional approach used in the successful MLPA implementation process took advantage of local knowledge and interests, enabled more focused use of public and private capacity, and prevented the state and its partners from making the same mistakes previous regional planning had made.
- Monitoring is critical to MPA success. In California,

- recognizing the long-term value of MPA baseline data allowed MPA monitoring programs to access state bond funding restricted to investments in capital assets. If possible, baseline and long-term monitoring plans should be developed in conjunction early in the MPA planning process, to promote efficiencies and minimize data gaps. Meanwhile, consistent tracking of basic socioeconomic parameters, such as commercial fishing revenues and employment, recreational fishing activity, and non-consumptive use can help inform a range of ocean and coastal management efforts including understanding how MPAs may affect coastal economies<sup>170</sup>.
- Engaging indigenous tribes is important. Tribal governments and communities have their own protocols, processes, and timelines that must be observed and respected. California's MPA program has been improved by the participation of Tribes and Tribal representatives as partners, thought leaders, and keepers of indigenous traditional knowledge.
- Partnerships are critical. An important component of California MPA success has been flexibility to accommodate partnerships in varying degrees of formality, enabling adaptations throughout the planning and management processes. The MPA
- monitoring program explicitly encourages scientific research teams to partner with relevant community and citizen science organizations. This helps leverage volunteerism for improved data gathering, promotes coordination of efforts, and increases the likelihood of such data being used in management. Monitoring programs that directly engage fishermen can also help broaden MPA acceptance. Enforcement of MPA regulations is also a resource intensive process, and can be difficult to adequately fund over large geographic areas. To improve enforcement coverage, California partners with federal, local, and other state agencies with enforcement capacity, and sustains ongoing partnerships with community organizations that are heavily engaged in MPA outreach and education.
- Learn and adapt. The MPA network continues to evolve. California has responded to lessons learned from the first years of MPA implementation by refining both law and policy for enforcement to improve overall effectiveness, adopting innovative technologies, and building institutional knowledge within the state's judiciary system<sup>171</sup>.

## CONCLUSION

In this compilation, we examined different fisheries management systems and regulations in a range of U.S. MPAs, from the federal level to the state level, from remote islands in the Pacific Ocean to densely populated coastal areas off the continental U.S. The fisheries management policies in these MPAs play a significant role in how well they perform in providing fisheries benefits, protecting biodiversity, and enhancing ecological resilience. It is hoped that our descriptions of these policies in this compilation, including the inclusion of the specific regulatory language, provides China with helpful guideposts and examples as the country sets out to expand and improve its national MPA system.

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  Islands%20Marine%20Refuge%20includes%20the,into%20
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- 24. https://www.papahanaumokuakea.gov/new-about/ management/
- 25. Sustenance fishing means fishing for bottomfish or pelagic species that are consumed within the Monument, and that is incidental to an activity permitted" under the Proclamation.
- 26. Subsistence means harvesting for direct personal or family consumption by Native Hawaiians and not for commercial purposes. From https://dlnr.hawaii.gov/dar/files/2014/05/ ch60.5.pdf
- 27. For sustenance fishing, it is only allowed in the federal waters in Midway Atoll Special Management Area.
- 28. Ecological Reserve means the areas of the Monument, identified in the Proclamation, consisting of contiguous, diverse habitats that provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life, and also to protect and preserve natural assemblages of habitats and species within areas representing a broad diversity of resources and habitats found within the Monument. Specific coordinates for Ecological Reserves within the Monument are found in the Proclamation, and the Ecological Reserves consist of the areas within the geodetic lines connecting these coordinates. The Ecological Reserves are depicted on the map in appendix A to part 404.
- 29. Special Preservation Area (SPA) means discrete, biologically important areas of the Monument, identified in the Proclamation, within which uses are subject to conditions, restrictions, and prohibitions, including but not limited to access restrictions. SPAs are used to avoid concentrations of uses that could result in declines in species populations or habitat, to reduce conflicts between uses, to protect areas that are critical for sustaining important marine species or habitats, or to provide opportunities for scientific research. Specific coordinates for Special Preservation Areas within the Monument are found in the Proclamation, and the Special Preservation Areas consist of the areas within the geodetic lines connecting these coordinates. The Special Preservation Areas are depicted on the map in appendix A to part 404.
- 30. Midway Atoll Special Management Area means the area of the Monument surrounding Midway Atoll out to a distance of 12 nautical miles, established for the enhanced management, protection, and preservation of Monument wildlife and historical resources. The geographic coordinates of this area, which consists of the area within the geodetic lines connecting these coordinates, are found in the Proclamation. The Midway Atoll Special Management Area is depicted on the map in appendix A to part 404.

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- 31. Native Hawaiian Practices means cultural activities conducted for the purposes of perpetuating traditional knowledge, caring for and protecting the environment and strengthening cultural and spiritual connections to the Northwestern Hawaiian Islands that have demonstrable benefits to the Native Hawaiian community. This may include, but is not limited to, the noncommercial use of Monument resources for direct personal consumption while in the Monument.
- 32. Sustenance fishing means fishing for bottomfish or pelagic species in which all catch is consumed within the Monument, and that is incidental to an activity permitted under this part.
- 33. https://www.fisheries.noaa.gov/pacific-islands/habitatconservation/marianas-trench-marine-national-monument
- 34. https://www.soest.hawaii.edu/jimar/socioecon/Traditional%20 Fishing%20brochure.pdf
- 35. The Magnuson-Stevens Act defines any fisherman selling fish as commercial, but this definition is not consistently followed in some Island communities. Traditionally, Mariana fishermen have sold fish caught in the Islands Unit waters of the monument to recover trip costs. Without the sale of fish, trip expenses may be prohibitive enough to restrict access to the northernmost islands to all but the wealthy. At https://www.soest.hawaii.edu/jimar/socioecon/Traditional%20Fishing%20brochure.pdf
- 36. Non-commercial fishing means fishing that does not meet the definition of commercial fishing in the Magnuson-Stevens Fishery Conservation and Management Act, and includes, but is not limited to, sustenance, subsistence, traditional indigenous, and recreational fishing.
- 37. Management unit species or MUS means the Mariana Archipelago management unit species as defined in \$\$665.401, 665.421, 665.441, and 665.461, and the pelagic management unit species as defined in \$665.800.
- 38. Customary exchange means the non-market exchange of marine resources between fishermen and community residents, including family and friends of community residents, for goods, and/or services for cultural, social, or religious reasons. Customary exchange may include cost recovery through monetary reimbursements and other means for actual trip expenses, including but not limited to ice, bait, fuel, or food, that may be necessary to participate in fisheries in the western Pacific. Actual trip expenses do not include expenses that a fisherman would incur without making a fishing trip, including expenses relating to dock space, vessel mortgage payments, routine vessel maintenance, vessel registration fees, safety equipment required by U.S. Coast Guard, and other incidental costs and expenses normally associated with ownership of a
- 39. Pacific Islands Regional Office (PIRO) means the headquarters of the Pacific Islands Region, NMFS, located at 1845 Wasp Blvd., Bldg. 176, Honolulu, HI 96818; telephone number: 808-725-5000
- 40. The vessel operator must submit an original log sheet for each day of fishing to the NOAA Fisheries within 30 days of the end of each fishing trip.
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- 46. Council means the Pacific Fishery Management Council.
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- 54. https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate-crisis/
- 55. https://sanctuaries.noaa.gov/about/
- $56.\,15$  CFR \$ 922.42 Allowed activities. At https://www.law.cornell.edu/cfr/text/15/922.42
- 57. https://www.federalregister.gov/documents/2008/11/20/ E8-27220/gulf-of-the-farallones-national-marine-sanctuaryregulations-monterey-bay-national-marine-sanctuary
- 58. https://olympiccoast.noaa.gov/management/intergovernmentalpolicy.html
- $59. \ https://www.federalregister.gov/documents/2008/11/20/\\ E8-27220/gulf-of-the-farallones-national-marine-sanctuary-regulations-monterey-bay-national-marine-sanctuary$
- 60. The California Aquaculture Development Act of 1979 established the CDFW as the lead agency for aquaculture in the state. At https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/archive/management/mpr/mpr-GFNMS\_FMP-2014.pdf
- $61. \ https://www.federalregister.gov/documents/2008/11/20/\\ E8-27220/gulf-of-the-farallones-national-marine-sanctuary-regulations-monterey-bay-national-marine-sanctuary$
- $62.\,https://montereybay.noaa.gov/resourcepro/ebmi/welcome.html$
- $63.\ http://www.npshistory.com/publications/chis/nrr-2019-1899.$  pdf
- 64. NOAA, Channel Islands National Marine Sanctuary 2016 Condition Report at https://sanctuaries.noaa.gov/science/ condition/cinms/
- 65. https://channelislands.noaa.gov/marineres/
- $66. \ https://www.nps.gov/chis/planyourvisit/upload/CHIS\%20 \\ MPA\%202007.pdf$
- 67. https://channelislands.noaa.gov/marineres/enforcement.html

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- 68. https://www.cbd.int/doc/pa/tools/Marine%20protected%20 areas%20technology%20needs%20assessment.pdf
- 69. https://www.nps.gov/chis/learn/management/lawsandpolicies. htm
- 70. https://www.nps.gov/chis/learn/management/upload/CHIS-Superintendent-Compendium-2019.pdf
- https://wildlife.ca.gov/Conservation/Marine/MPAs/Network/ Southern-California#29960937-footprint-state-and-federalmarine-reserve-anacapa-channel
- 72. "Live bottom" is a term used to refer to hard or rocky seafloor that typically supports high numbers of large invertebrates such as sponges, corals and sea squirts. https://graysreef.noaa.gov/about/
- 73. https://nmsgraysreef.blob.core.windows.net/graysreef-prod/media/archive/management/mgmtplan/pdfs/grnms\_mgmt\_plan\_072014.pdf
- 74. https://graysreef.noaa.gov/protect/enforcement/welcome.html
- 75. https://floridakeys.noaa.gov/history.html?s=about
- 76. https://floridakeys.noaa.gov/zones/types.html?s=zones
- 77. https://floridakeys.noaa.gov/zones/ers/welcome.html
- 78. https://floridakeys.noaa.gov/zones/spas/welcome.html
- 79. https://floridakeys.noaa.gov/zones/wmas/welcome.html
- 80. No-motor zones prohibit using internal combustion motors or engines for any purposes. A vessel with an internal combustion motor or engine may access a "no-motor" zone only through the use of a push pole, paddle, sail, electric motor or similar means of propulsion.
- 81. Idle speed only/no wake zones prohibit operating a vessel at a speed greater than idle speed only/no wake.
- 82. Buffer zones prohibit entering the area by vessel.
- 83. https://floridakeys.noaa.gov/zones/emas/welcome.html
- $84.\,https://floridakeys.noaa.gov/zones/special/welcome.html$
- 85. https://americansamoa.noaa.gov/about/management.html 86. This compilation does not include national park freshwater
- fishing regulations.
- 87. https://www.nps.gov/aboutus/national-park-system.htm
- $88.\ https://www.nps.gov/subjects/oceans/ocean-and-coastal-parks.$  htm
- $89.\ https://www.nps.gov/glba/planyourvisit/glacier-bay-fishing-regulations.htm$
- 90. https://www.nps.gov/subjects/oceans/protect.htm
- 91. https://web.archive.org/web/20120523225914/http://alaska.fws.gov/asm/anilca/title02.html
- 92. https://web.archive.org/web/20110629022806/http://www.nps.gov/history/history/online\_books/nps/part2.htm
- 93. https://www.nps.gov/glba/planyourvisit/preserve.htm
- 94. There are fewer than 90 LAP holders as of 2016. https://www.nps.gov/glba/learn/historyculture/history-of-commercial-fishing-in-glacier-bay.htm
- 95. https://www.nps.gov/glba/learn/management/commfish.htm
- $96. \, https://www.nps.gov/glba/learn/management/laws and policies. \\ htm$
- 97. https://www.nps.gov/fiis/learn/historyculture/history-of-fire-island-national-seashore.htm
- 98. http://www.ohranger.com/fire-island
- https://www.nationalparks.org/connect/blog/wanderingwaters-biscayne-national-park

- 100. http://myfwc.com/fishing/saltwater/recreational
- 101. https://www.nps.gov/bisc/learn/management/lawsandpolicies.
- 102. https://www.nps.gov/bisc/planyourvisit/fishing-and-lobstering.
- 103. Minnows, pilchards, pinfish, mojarras, ballyhoo or bait mullet (less than 20 cm in total length) may be taken with hook and line, dipnet (not exceeding 91 cm at its widest point) or cast net, for use as bait or personal consumption.
- 104. https://www.nps.gov/ever/learn/historyculture/index.htm
- 105. https://www.fws.gov/refuges/about/
- 106. These 114 NWRs are included in the National Marine Protected Area Center's MPA Inventory https://nmsmarineprotectedareas.blob.core.windows.net/marineprotectedareas-prod/media/archive/pdf/helpful-resources/nwr\_mpa\_factsheet.pdf.
- 107. Commercial fishing might exist in NWRs if they were conducted before the NWR establishment, and are adequately regulated by federal and state regulations. Monomoy NWR was an example: https://www.chatham-ma.gov/sites/g/files/vyhlif2926/f/uploads/madeptoffishandgame10-10-14.pdf
- 108. https://www.fws.gov/refuge/Don\_Edwards\_San\_Francisco\_ Bay/about.html
- 109. https://www.fws.gov/refuge/Don\_Edwards\_San\_Francisco\_ Bay/rules.html
- 110. https://wdfw.wa.gov/fishing/management/mpa
- 111. https://wdfw.wa.gov/sites/default/files/publications/00038/wdfw00038.pdf
- 112. https://wdfw.wa.gov/fishing/management/mpa
- 113. https://wdfw.wa.gov/about/enforcement
- 114. https://www.dnr.wa.gov/managed-lands/aquatic-reserves
- ${\bf 115.\ https://wdfw.wa.gov/fishing/management/mpa/conservationareas/bracketts-landing-shoreline-sanctuary}$
- 116. "Unclassified" marine fish mean species existing in Washington state marine waters in a wild state that have not been classified as food fish, shellfish, game fish, protected wildlife, or endangered species. at https://app.leg.wa.gov/WAC/default. aspx?cite=220-311-040
- 117. https://wdfw.wa.gov/fishing/management/mpa/marine-preserves/friday-harbor
- 118. https://wdfw.wa.gov/fishing/management/mpa/marinepreserves/carkeek-park
- 119. https://wdfw.wa.gov/fishing/management/mpa/exclusion-zones/san-juan-upright
- 120.https://oregonmarinereserves.com/reserves/
- 121. https://oregonmarinereserves.com/reserves/cape-falcon/
- 122. https://www.dfw.state.or.us/MRP/docs/marinereserves/Cape\_Falcon\_Restrictions\_Coordinates.pdf
- 123. https://oregonmarinereserves.com/reserves/cape-perpetua/
- $124. https://oregonmarinereserves.com/content/uploads/2016/02/\\ CapePerpetua.pdf$
- 125. https://wildlife.ca.gov/Conservation/Marine/MPAs/MLPA
- 126. https://wildlife.ca.gov/Conservation/Marine/MPAs/FAQs#27530610-what-are-marine-protected-areas-mpas-
- 127. LESSONS FROM THE CALIFORNIA MARINE LIFE
  PROTECTION ACT INITIATIVE, RLF, 2019 at https://
  resourceslegacyfund.org/wp-content/uploads/2019/08/MLPAIBrochure-00495121xA1C15.pdf
- 128. To facilitate stakeholder and scientific input into MPA design,

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- California's 1,770 km coastline was divided into four regions based on biogeography. The planning in four regions took turns, making sure lessons learned from early planning periods can be adopted at the subsequent stage.
- 129. More in Saarman, E., Gleason, M., Ugoretz, J., Airamé, S., Carr, M., Fox, E., ... & Vasques, J. (2013). The role of science in supporting marine protected area network planning and design in California. *Ocean & Coastal Management*, 74, 45-56.
- 130. https://resourceslegacyfund.org/wp-content/uploads/2020/02/California-MPA-Monitoring-Lessons-Learned-final.pdf
- 131. https://resourceslegacyfund.org/wp-content/uploads/2020/03/ California-MLPA-Implementation-Lessons-Learned-3-20-20. pdf
- $132. \, https://resourceslegacyfund.org/wp-content/uploads/2019/08/\\ MLPAI-Brochure-00495121xA1C15.pdf$
- $133. \ https://resourceslegacyfund.org/wp-content/uploads/2019/08/\\ MLPAI-Brochure-00495121xAlC15.pdf$
- $134. \ https://www.opc.ca.gov/2014/12/adopted-final-version-of-the-california-collaborative-approach-marine-protected-areas-partnership-plan/$
- 135. Led by the OPC, the Leadership Team includes both a high-level Executive Committee that meets twice a year and a staff-level Working Group that meets at least quarterly, to complete tasks and projects identified in a publicly shared three-year work plan. The Leadership Team also conducts regular interagency coordination on current and emerging challenges, funding and policy opportunities, and any other issues affecting California MPAs. At https://resourceslegacyfund.org/wp-content/uploads/2020/03/California-MLPA-Implementation-Lessons-Learned-3-20-20.pdf
- 136. https://www.opc.ca.gov/programs-summary/marine-protected-areas/partnerships/
- 137. https://wildlife.ca.gov/Conservation/Marine/MPAs/Statistics
- 138. Specific gear and species restrictions may also apply in certain MPAs.
- 139. Take (Fish and Game Code, Section 86) means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill. ("Take" is also defined in CCR Title 14, Section 1.80)
- $140. \, https://wildlife.ca.gov/Conservation/Marine/MPAs/Network/\\ Southern-California$
- 141. https://wildlife.ca.gov/Conservation/Marine/MPAs/ Definitions#smp
- 142. https://www.parks.ca.gov/?page\_id=27816
- 143. Surf Smelt (CCR Title 14, Section 28.45) (Night Smelt, Day Fish, Whitebait Smelt) Limit: Twenty-five pounds in combination
- 144.https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=90252
- 145. https://www.parks.ca.gov/?page\_id=27882
- 146. https://www.parks.ca.gov/?page\_id=27878
- 147. https://wildlife.ca.gov/Conservation/Marine/MPAs/Network/North-Central-California#27289572-sea-lion-cove-state-marine-conservation-area
- 148. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=91413&inline
- 149. Finfish (CCR Title 14, Section 632(a)(2)), as defined for purposes of MPA regulations, are any species of bony fish or cartilaginous fish (sharks, skates and rays). Finfish do not include amphibians, invertebrates, plants or algae.
- 150. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=91786&inline

- 151. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=91776&inline
- 152. Pelagic finfish (CCR Title 14, Section 632(a)(3)), as defined for purposes of MPA regulations, are a subset of finfish defined as: northern anchovy (Engraulis mordax), barracudas (Sphyraena spp.), billfishes\* (family Istiophoridae), dolphinfish (Coryphaena hippurus), Pacific herring (Clupea pallasii), jack mackerel (Trachurus symmetricus), Pacific mackerel (Scomber japonicus), salmon (Oncorhynchus spp.), Pacific sardine (Sardinops sagax), blue shark (Prionace glauca), salmon shark (Lamna ditropis), shortfin mako shark (Isurus oxyrinchus), thresher sharks (Alopias spp.), swordfish (Xiphias gladius), tunas (family Scombridae), including Pacific bonito (Sarda chiliensis), and yellowtail (Seriola lalandi). \*Marlin is not allowed for commercial take.
- 153. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=91613&inline
- 154. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=91616&inline
- 155. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=91622&inline
- 156. https://wildlife.ca.gov/Conservation/Marine/MPAs/Network/San-Francisco-Bay
- 157. https://wildlife.ca.gov/Conservation/Marine/MPAs/Network/ San-Francisco-Bay#26757431-marin-islands-state-marine-park
- 158. https://wildlife.ca.gov/Conservation/Marine/MPAs/Network/ Central-California
- 159. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=96163&inline
- 160. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=96725
- 161. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=96770
- 162. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=96787&inline
- 163. https://wildlife.ca.gov/Conservation/Marine/MPAs/Network/ Southern-California
- 164. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=98198&inline
- 165. https://wildlife.ca.gov/Conservation/Marine/MPAs/Network/ Southern-California#27150496-crystal-cove-state-marineconservation-area
- 166. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=100877&inline
- 167. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=98214&inline
- $168. \, https://resourceslegacyfund.org/wp-content/uploads/2020/03/\\ California-MLPA-Implementation-Lessons-Learned-3-20-20.\\ pdf$
- $169. \ https://resourceslegacyfund.org/wp-content/uploads/2019/08/MLPAI-Brochure-00495121xAIC15.pdf$
- 170. https://resourceslegacyfund.org/wp-content/uploads/2020/02/California-MPA-Monitoring-Lessons-Learned-final.pdf
- $171.\ https://resourceslegacyfund.org/wp-content/uploads/2020/03/\\ California-MLPA-Implementation-Lessons-Learned-3-20-20.\\ pdf$

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