

## California MPA Network Decadal Management Review, Figure 5.1 Descriptive Alt text.

The figure shows two tables that report the responses in abundance/density and size/biomass inside MPAs compared to outside MPAs for individual fish and invertebrate species reported in the four primary rocky reef monitoring methods. The left column on the top table shows common fish species counted by monitoring groups. The top row includes the three bioregions, from left to right: North, central, south. The second and third rows include the survey method and depth range where monitoring occurs, from left to right: SCUBA (15-65 feet), Hook and Line (65-130 feet), and remotely operated vehicle, or ROV, (65-330 feet). Results for fish species: Quillback rockfish: North: SCUBA and hook and line-not reported. ROV-abundance/density and size/biomass significantly greater inside MPAs. Central and South: Not reported. Yelloweye rockfish: North: SCUBA and hook and line-not reported. ROV-abundance/density significantly greater inside MPAs, size/biomass-no difference. Central: SCUBA and hook and line-not reported. ROV-abundance/density and size/biomass no difference. South: SCUBA, hook and line, and ROV-not reported. Brown rockfish: North: SCUBA and hook and line-not reported. ROV-abundance/density significantly greater inside MPAs, size/biomass no difference. Central: SCUBA and hook and line-not reported. ROV-abundance/density and size/biomass no difference. Black rockfish: North: SCUBA-abundance/density-not reported, size/biomass significantly lower inside MPAs. Hook and line-abundance/density no difference, size/biomass greater inside MPAs but not significantly different. ROV-abundance/density and size/biomass no difference. Central: SCUBA-abundance/density not reported. Hook and line-abundance/density and size/biomass significantly lower inside MPAs. ROV-not reported. South: SCUBA, hook and line, and ROV-not reported. Canary rockfish: North: SCUBA-not reported. Hook and line-abundance/density significantly greater inside MPAs, size/biomass greater inside MPAs but not significantly different. ROV-abundance/density greater inside MPAs but not significantly different, size/biomass significantly greater inside MPAs. Central: SCUBA-not reported. Hook and line-abundance/density and size/biomass greater inside MPAs but not significantly different. ROV-abundance/density and size biomass no difference. South: SCUBA, hook and line, and ROV-not reported. Blue/deacon rockfish: North: SCUBA-abundance/density not reported, size/biomass significantly lower inside MPAs. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density and size/biomass no difference. Central: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density no difference, size/biomass greater inside MPAs but not significantly different. South: SCUBA-not reported. Hook and line-abundance/density no difference, size/biomass significantly lower inside MPAs. ROV-abundance/density and size/biomass no difference. Gopher rockfish: North: SCUBA-abundance/density not reported, size/biomass significantly lower inside MPAs. Hook and line-abundance/density greater inside MPAs but not significantly different, size/biomass significantly greater inside MPAs. ROV-abundance/density no difference, size/biomass greater inside MPAs but not significantly different. Central: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density and size/biomass no difference. South: SCUBA-not reported. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density and size/biomass no difference. Copper rockfish: North: SCUBA-not reported. Hook and line-abundance/density significantly greater inside MPAs, size/biomass greater inside MPAs but not significantly different. ROV-abundance/density and size/biomass significantly greater inside MPAs. Central: SCUBA-not reported. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV: abundance/density and

size/biomass no difference. South: SCUBA-not reported. Hook and line and ROV-abundance/density and size/biomass significantly greater inside MPAs. Vermilion rockfish: North: SCUBA-not reported. Hook and line-abundance/biomass and size/density significantly greater inside MPAs. ROV-abundance/density significantly greater inside MPAs, size/biomass no difference. Central: SCUBA-not reported. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density and size/biomass no difference. South: SCUBA-not reported. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density no difference, size/biomass significantly greater inside MPAs. Kelp rockfish: North: SCUBA, hook and line, and ROV-not reported. Central: SCUBA-abundance/density no difference, size/biomass significantly lower inside MPAs. Hook and line and ROV-not reported. South: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line and ROV not reported. Cabezon: North: SCUBA, hook and line, and ROV-not reported. Central: SCUBA-abundance/density not reported, size/biomass significantly lower inside MPAs. Hook and line and ROV-not reported. South: SCUBA, hook and line, ROV-not reported. Lingcod: North: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density significantly greater inside MPAs, size/biomass no difference. Central: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-abundance/density and size/biomass greater inside MPAs but not significantly different. ROV-abundance/density significantly greater inside MPAs, size/biomass no difference. South: SCUBA and hook and line-not reported. ROV-abundance/density significantly greater inside MPAs, size/biomass no difference. Kelp greenling: North: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-not reported. ROV-abundance/density significantly greater inside MPAs, size/biomass no difference. Central: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-not reported. ROV-abundance/density and size/biomass no difference. South: SCUBA and hook and line-not reported. ROV-abundance/density and size/biomass no difference. California sheephead: North and Central: SCUBA, hook and line, ROV-not reported. South: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density significantly greater inside MPAs, size/biomass not reported. Ocean whitefish: North and Central: SCUBA, hook and line, and ROV-not reported. South: SCUBA-not reported. Hook and line: abundance/density and size/biomass significantly greater inside MPAs. ROV-abundance/density no difference, size/abundance not reported. Kelp bass: North and Central: SCUBA, hook and line, ROV not reported. South: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-abundance/density and size/biomass significantly greater inside MPAs. ROV-not reported. Blacksmith: North and Central: SCUBA, hook and line, and ROV not reported. South: SCUBA-abundance/density not reported, size/biomass significantly greater inside MPAs. Hook and line-not reported. ROV-abundance/density no difference, size/biomass not reported. [End of results for fish species]. The lower table presents results for common invertebrate species in each bioregion. The first and second rows include the survey method or habitat and depth range where monitoring occurs, from left to right: Intertidal (0-6 feet), SCUBA (15-65 feet), and ROV (65-330 feet). Results for invertebrate species: Red sea urchin: North: Intertidal-not reported. SCUBA-abundance/density and size/biomass significantly lower inside MPAs. ROV-abundance/density significantly higher inside MPAs, size/biomass not reported. Central: Intertidal-not reported. SCUBA-abundance/density significantly lower inside MPAs, size/biomass significantly greater inside MPAs. ROV-abundance/density significantly lower inside

MPAs, size/biomass not reported. South: Intertidal-not reported. SCUBA-abundance/density significantly lower inside MPAs, size/biomass significantly greater inside MPAs. ROV-abundance/density significantly lower inside MPAs, size/biomass not reported. Purple sea urchin: North: Intertidal-not reported. SCUBA-abundance/density significantly lower inside MPAs, size/biomass significantly greater inside MPAs. ROV-not reported. Central: Intertidal-not reported. SCUBA-abundance/density and size/biomass significantly greater inside MPAs. ROV-not reported. South: Intertidal-not reported. SCUBA-abundance/density significantly greater inside MPAs, size/biomass significantly lower inside MPAs. ROV-not reported. Red abalone: North: Intertidal-abundance/density and size/biomass significantly greater inside MPAs. SCUBA-abundance/density and size/biomass significantly greater inside MPAs. ROV-not reported. Central: Intertidal-abundance/density and size/biomass significantly greater inside MPAs. SCUBA-abundance/density significantly greater inside MPAs, size/biomass significantly lower inside MPAs. ROV-not reported. South: Intertidal-abundance/density and size/density significantly greater inside MPAs. SCUBA-abundance/density significantly lower inside MPAs, size/biomass no difference. ROV-not reported. Black abalone: North, Central, and South: Intertidal-abundance/density no difference, size/biomass-greater inside MPAs but not significantly different. SCUBA and ROV-not reported. All abalone: North: Intertidal-not reported. SCUBA-abundance/density and size/biomass significantly greater inside MPAs. ROV-not reported. Central: Intertidal-not reported. SCUBA-abundance/density significantly higher inside MPAs, size/biomass significantly lower inside MPAs. ROV-not reported. South: Intertidal-not reported. SCUBA-abundance/density significantly lower inside MPAs, size/biomass no difference. ROV-not reported. California and warty sea cucumber: North and Central: Intertidal, SCUBA, ROV-not reported. South: Intertidal-not reported. SCUBA-abundance/density significantly greater inside MPAs, size/biomass greater inside MPAs but not significantly different. ROV-not reported. California sea cucumber: North and Central: Intertidal and SCUBA-not reported. ROV-abundance/density and size/biomass no difference. South: Intertidal and SCUBA-not reported. ROV-abundance/density significantly greater inside MPAs, size/biomass-not reported. Warty sea cucumber: North and Central: Intertidal, SCUBA, and ROV-not reported. South: Intertidal-not reported. SCUBA-abundance/density significantly higher inside MPAs, size/biomass significantly lower inside MPAs. ROV-abundance/density significantly higher inside MPAs, size/biomass not reported. Spiny lobster: North and Central: Intertidal, SCUBA, and ROV-not reported. South: Intertidal-not reported. SCUBA-abundance/density and size/biomass significantly greater inside MPAs. ROV-not reported. Corals and gorgonians: North, Central, South: Intertidal and SCUBA-not reported. ROV-abundance/density significantly greater inside MPAs, size/biomass not reported. Sponges: North, Central, South: Intertidal and SCUBA-not reported. ROV-abundance/density significantly greater inside MPAs, size/biomass not reported.