

SECTION 2 EXECUTIVE SUMMARY

PURPOSE

MCBH encompasses approximately 4,500 acres across eight properties containing forest, wetland, coastal dune, marine, and urban environments. These habitats support nine Federally-listed¹ and two State-listed² threatened or endangered species – plant, birds, insect, and marine life; over 50 species of native and migratory birds³ – resident and visiting; and six species that are on either Federal or State species of concern lists⁴ – marine life and plants (Appendix C2). The Base hosts a number of tenant commands, support personnel, and military families. Protection of natural resources on MCBH properties is guided by this INRMP. It complies with the Sikes Act Improvement Act (SAIA) amendments of 1997 that require all military installations with significant natural resources to prepare, implement, and regularly review/update INRMPs. These plans must support “no net loss” in capability of the installations’ lands and waters to support military readiness while complying with a suite of Federal laws governing natural resources management and stewardship, and public access to the same, subject to safety, environmental, and military security constraints (Appendix A3).

This INRMP is an *update* of the original 2001 MCBH INRMP/EA (Environmental Assessment) and the first two updates (2006 INRMP and 2011 INRMP), rather than a *revision*.⁵ Management actions programmed and described in this plan cover a five-year time frame (2017 – 2021) (Appendix F2). Recurring actions or later phases of projects started in the time frame of previous INRMPs demonstrate sustained effort. INRMP implementation progress is reviewed annually, and the INRMP is revised or updated at least once every five years to ensure MCBH has a *compliant INRMP* (Appendix F1). A shift in natural resource management policy to allow hunting at MCBH required changes to the INRMP in 2013 that were issued in an INRMP Supplement.⁶ The next INRMP review is programmed for fiscal year (FY) 2020 and will cover the time period 2022 – 2026.

The INRMP, and its required continuing review and update process, help ensure support of the Marine Corps’ and MCBH’s mission and vision by helping to maintain quality training lands and quality of life for the affected military population. It also complies with Federal laws and military directives to integrate military

¹ Federally endangered: ‘ohai (*Sesbania tomentosa*); Hawaiian stilt (*Himantopus mexicanus knudseni*); Hawaiian moorhen (or gallinule) (*Gallinula galeata sandvicensis*); Hawaiian coot (*Fulica alai*); Hawaiian duck (koloa-like & hybrid) (*Anas wyvilliana*); Hawaiian Yellow-faced bee (*Hylaeus anthracinus*); Hawaiian monk seal (*Neomonachus schauinslandi*); Hawaiian Hawksbill sea turtle (*Eretmochelys imbricata*). Federally threatened: Hawaiian green sea turtle (*Chelonia mydas*). By default, any Federally-listed species receives the same status at the State level.

² State endangered: Hawaiian short-eared owl or pueo (*Asio flammeus sandwichensis*) – O’ahu only; humpback whale (*Megaptera novaeangliae*).

³ MCBH manages for resident populations of wedge-tailed shearwaters (*Ardenna pacifica*) and red-footed boobies (*Sula sula rubripes*).

⁴ Federal: Inarticulated brachiopod (*Lingula reevii*); Irregular rice coral (*Montipora dilatata*). State: Blue rice coral (*Montipora flabellata*); Sandpaper rice coral (*Montipora patula*); Maiapilo (*Capparis sandwichiana*); Nama (*Nama sanwicensis*).

⁵ See Appendix I for definitions of: INRMP Update, INRMP revision, Compliant INRMP, and Review for operation and effect, as found in the 2013 Tripartite MOU between DoD, USFWS, and AFWA (included as Appendix A6).

⁶ The additions and changes identified in the INRMP Supplement were considered part of the MCBH INRMP and needed to be viewed in conjunction with the 2011 INRMP. Relevant changes are incorporated into this 2017 INRMP Update.

1 land use and natural resources management in a manner consistent with Federal and State stewardship
2 requirements, while being responsive to host community and other stakeholder concerns.

3 **COOPERATIVE PREPARATION**

4 Per the SAIA, this INRMP is prepared in cooperation with the U.S. Fish and Wildlife Service (USFWS) and
5 Hawai'i Department of Land and Natural Resources (DLNR). Since the INRMP also covers coastal and
6 marine resources, the plan is also coordinated with National Oceanic and Atmospheric Administration
7 (NOAA) Fisheries. Section 9 and Appendix G, H2, and H3 contain a record of coordination with these Sikes
8 Act partners and other stakeholder agencies.

9 **SCOPE**

10 The INRMP covers three MCBH parcels on windward O'ahu in the Ko'olaupoko district: MCBH Kaneohe
11 Bay on Mōkapu Peninsula, Marine Corps Training Area Bellows (MCTAB) in Waimānalo, and Waikane
12 Valley Impact Area in Waikane Valley. On the leeward side, the INRMP covers Camp H.M. Smith in Halawa
13 Heights, Pu'uloa Range Training Facility (RTF) on the 'Ewa coastal plain, and Pearl City Annex located on
14 Pearl City peninsula.⁷ Sections 4 and 6 contain information on these locations and their management
15 environments.

16 MCBH follows an ecosystem and adaptive management approach involving execution of a suite of
17 management actions within Course of Action (COA) areas across the full array of natural resources and
18 MCBH geographic areas (Section 7). Section 3 contains details on the planning approach and structure of
19 this INRMP, and the guidance followed in its preparation. Section 5 highlights laws, regulations, and
20 guidelines relevant to natural resources management. The management actions are discussed in further
21 detail in the COA, some of which have been slightly reorganized and/or renamed:

- 22 7.0 INRMP Program Management and Implementation
- 23 7.1 Wildlife Management
- 24 7.2 Wetland Management
- 25 7.3 Watershed Management
- 26 7.4 Coastal and Marine Resources Management
- 27 7.5 Landscape Maintenance and Vegetation Management
- 28 7.6 Natural Resources-based Outdoor Recreation, Outreach, and Public Access Management
- 29 7.7 Resource Information Management.

30 **IMPLEMENTATION PROGRESS SINCE THE ORIGINAL 2001 INRMP/EA**

31 November 2001 marks the beginning of MCBH INRMP implementation, when the INRMP was first
32 published as a combined plan and EA-- to guide MCBH's ecosystem-based approach to natural resource
33 management, while supporting quality of life and 'no net loss' in training options. The plan was reviewed
34 and concurred with by in-house stakeholders and the INRMP/Finding of No Significant Impact (FONSI) was
35 signed off by the Base commander and distributed for public review and comment. Required regulator
36 concurrence was received from USFWS, NOAA Fisheries, and Hawai'i DLNR. Documentation of the final
37 concurrence and public notice process for INRMP/EA and FONSI completion/distribution is contained in
38 Appendix H1, along with a copy of the signed FONSI (still in effect).

⁷ Manana Housing Area and Molokai Training Facility do not contain significant natural resources and are minimally covered in the INRMP.

1 The MCBH INRMP has been updated at five year intervals with review and concurrence by Sikes Act
2 partners. Annual progress reports, summarizing how management actions were addressed, provide an
3 idea of how those actions will continue to be carried out, and demonstrate steady implementation of planned
4 actions. Some actions were implemented ahead of schedule and some unforeseen opportunities were
5 exploited. Some less critical management actions were deferred to address emergent priorities, budget
6 shortfalls, or temporary staff shortages. Despite these variations, since 2001 steady progress has been
7 made to implement the MCBH INRMP on time and within budget, with favorable annual reviews from Sikes
8 Act partners (Appendix F1). Table F1-1 shows how discrete management projects, totaling about \$15.2M
9 in funds spent, have been conducted to fulfill INRMP commitments since 2001.

10 This INRMP Update contains details to clearly demonstrate MCBH's commitment to continue the same
11 level of effort during the next five years (2017-2021) as in the first fifteen years of INRMP implementation
12 (2002-2016). Since the existing level of INRMP program implementation is continuing, no revision to the
13 National Environmental Policy Act (NEPA) analysis is required.

14 **ACCOMPLISHMENTS DURING THE 2012-2016 TIME FRAME**

15 Several major accomplishments, both personnel and project specific, since the 2011 INRMP are worthy of
16 being highlighted.

- 17 • Operating with limited staff for much of the past five years, the Environmental Department's
18 Conservation Division (Natural Resources section) continued MCBH's history of program
19 accomplishments by winning back-to-back Secretary of Defense Environmental Awards [Natural
20 Resources Conservation, Small Installation] for FY2011 and FY2013 (Section 9.3).
- 21 • A second Federal Conservation Law Enforcement Officer (CLEO) was hired in 2013, giving MCBH two
22 full time CLEOs (Section 4.4.2).
- 23 • A shift in natural resource management policy that permitted hunting at MCTAB required an EA as well
24 as information to be inserted in the INRMP to outline certain aspects of the recreational hunting
25 program. An INRMP Supplement, prepared in 2013, was considered part of the 2011 INRMP; all
26 relevant information has been incorporated into this INRMP Update (Section 6.2.4 and COA 7.6).
- 27 • A multi-year project to restore 1.5 acres of the Waimānalo Stream floodway on MCTAB was completed
28 in December 2014. In addition to restoring watershed functioning, this restoration is expected to reduce
29 flooding upstream in the Waimānalo community and at the adjoining Olomana Golf Course.
- 30 • A project initiated in 2002 to design, fabricate, and install four water cannons as a secondary fire
31 suppression to protect a Federally-protected seabird colony of red-footed boobies from range fires was
32 completed with modifications in 2016. The water cannon controls originally consisted of a wired system,
33 but after a major mishap that damaged the wiring, the system was redesigned to be remotely controlled
34 via a wireless radio frequency signal. An infrared camera was added to the project to monitor for
35 hotspots and flare-ups on the range.
- 36 • After years of unauthorized access into Nu'upia Ponds Wildlife Management Area (WMA) by off-road
37 vehicles, mountain bikes, individuals and units conducting physical training, and pets, 1,000 feet of new
38 aluminum fencing and five gates were constructed in 2016 at the northern boundary of the WMA (north
39 of Pa'akai Pond). The fence was installed to protect Endangered Species Act (ESA) plants and
40 waterbirds, Migratory Bird Treaty Act (MBTA) protected shorebirds, and sensitive cultural sites and
41 ancient Hawaiian remains.

42 **CURRENT MANAGEMENT CHALLENGES**

43 Natural Resources staff shortages, contracting limitations, recreational pressures, and high military
44 operational tempo are among the things that pose challenges to adequately manage natural resources for
45 which MCBH has stewardship responsibility. The Natural Resources division has had to scale back

1 outreach activities like tours and environmental service projects due to minimum staff and staff time. This
2 has resulted in a lower rate of education and outreach activities, which is disconcerting due to the sensitive
3 nature of MCBH's natural resources and an ever changing Base population – civilian and military, as well
4 as visitors.

5 Increasing Base population and off-Base visitors, Base expansion, an increase in natural resources
6 oriented recreational activities, increasing biosecurity threats, and climate change have all added pressure
7 to the Base's natural resources – both on and off-shore. One of the biggest challenges facing the
8 management of MCBH natural resources, recreation, and training is the threat of introducing a highly
9 invasive and harmful organism, whether plant, animal, insect, or other vector, through intra- and inter-island
10 and international movement of personnel and equipment. There are numerous examples of harmful
11 introductions including cats (*Felis catus*) and mosquitos (avian malaria) on native birds; coconut rhinoceros
12 beetle (CRB) (*Oryctes rhinoceros*) and erythrina gall wasp (*Quadrastichus erythrinae*) on native flora;
13 mosquitos and their associated pathogens (dengue, Zika) on public health; and invasives like devil weed
14 and kiawe on the condition of training lands.

15 Due to the significant amount of construction occurring on Kaneohe Bay, the effects of lighting on seabirds
16 and marine life is becoming more pronounced. Even though the Base is installing lighting fixtures that follow
17 International Dark Sky guidelines, the significant glow on Base from these fixtures is negating this mitigation
18 measure. In 2016 there was a 50% increase in the number of seabirds rescued during 'shearwater fall-out'
19 season. More innovative measures will need to be incorporated into designs to limit the number of birds
20 affected by light pollution while still ensuring safety and security are not compromised.

21 Another major challenge is climate change, and associated sea level rise. The effects of climate change
22 will have serious impacts to MCBH coastal training areas, facilities, and the habitat of endangered species
23 that MCBH manages and protects. Protection of coral reefs within MCBH jurisdictional waters is critical as
24 they provide a mitigating buffer to destructive waves produced by storm surges that can penetrate inland.
25 Assessing potential vulnerability and employing adaptive management will be essential to identifying
26 proactive strategies to mitigate projected impacts.

27 The ability to partner with NOAA Fisheries and USFWS to monitor MCBH's shorelines for marine animals
28 that come ashore; leverage volunteers, State organizations, and other Federal agencies to conduct invasive
29 species surveys and perform control work; and the addition of another CLEO to provide better enforcement
30 of natural and cultural resources laws have made some of these challenges manageable.

31 **PROGRESS EXPECTED DURING THE 2017-2021 TIME FRAME**

32 MCBH intends to continue INRMP implementation as described in Section 7 and Appendix F2. In addition
33 to routine management actions, Natural Resources staff has 26 STEP projects planned for implementation
34 over the next five years (Section 3.3.2).⁸ Table F2-1 illustrates how funds will be invested for these projects
35 across the COA. Site-specific environmental analyses, interagency consultations, and/or permit
36 applications are required for many STEP projects (Table 2-1).

37 Details on the staff and funding to support INRMP implementation are presented in Sections 4 and 7.0 and
38 Appendix F3. INRMP implementation will continue the investment of funding at current levels of staffing
39 and materials support, and will take advantage of other opportunities (e.g., interagency partnering,
40 community volunteer assistance, and securing supplemental funding sources) as possible.

⁸ This does not include recurring funding identified in COA 7.0 for INRMP Program Management (e.g., staff, expenses, training), or the support for feral and nuisance animal control (COA 7.1).

1 As documented in the annual progress reports, there have been a number of events and actions that have
 2 influenced management action completion schedules, accelerating some, delaying others, and leading to
 3 additional projects programmed. Unforeseeable events, shifts in priorities, lack of funding, or contracting
 4 issues may occur over the INRMP implementation time frame that similarly influence planned management
 5 actions. Such changes will continue to be documented in annual progress reports and reviewed with
 6 regulators as required.

7 **Table 2-1. MCBH INRMP Active and Programmed Projects Requiring**
 8 **NEPA/ESA Section 7 Consultations/USACE Permits (2017-2021)**

STEP Number	Project Title	COA	Level of NEPA Required	ESA Sec 7 (Y/N)	Permits (Y/N)
HI2CONESC1044684205	Nu'upia Ponds WMA Endangered Species Observation Towers	7.1	CATEX	Y	N
HI2CONESC1045854222	Repair/Replace Nu'upia Ponds Footbridge	7.1	EA	Y	Sec 10
HI2CONONC1045674217	Repair / Replace Artificial Nesting Platforms for Migratory Birds in Ulupa'u Crater	7.1	CATEX	Y	N
HI2CONWLC1044744305	Nu'upia Hema Wetland Restoration	7.2	EA	Y	Y
HI2CONWLC1044754306	Salvage Yard Wetland Restoration	7.2	EA	Y	Y
HI3COMPLC2244054202	Pu'uloa Shoreline Erosion Repair Project	7.4	EA	Y	Sec 10
HI3CONFRC2243654204	Integrated Wildland Fire Management Plan	7.5	EA	Y	N

9 Note: Additional projects requiring NEPA, consultations, or permits may be programmed during this five year INRMP
 10 implementation period.

11 OTHER CONSIDERATIONS

12 The implementation of this INRMP will be consistent with other pertinent land use and natural resource-
 13 related plans, polices, and controls in the affected regions as described in Section 8. Section 9 describes
 14 how management actions in the INRMP will continue to achieve stakeholder participation in such areas as
 15 public involvement and outreach, interagency partnering, and cooperative conservation.

16 CONCLUSION

17 This updated INRMP fulfills the requirements of the SAIA, other pertinent laws, and military directives,
 18 including the requirements to sustain support of the Marine Corps and MCBH mission and vision and to
 19 preserve, protect, and enhance the inherent values of the natural resources held in the public trust and for
 20 the public interest on MCBH properties. This updated INRMP demonstrates how MCBH will continue to
 21 direct efforts toward an overall ecosystem management goal of improving the sustainability and native
 22 biological diversity of the ecosystems of which it is a part, while supporting MCBH's military mission. This
 23 goal-driven document shows how MCBH will manage its natural resources by adhering to specific
 24 objectives and management actions (Section 7). A set of standardized natural resource conservation
 25 metrics continues to be used to assess MCBH's natural resource management and INRMP implementation
 26 progress (Section 3.4). Working with Sikes Act partners, other military departments, outside organizations,
 27 volunteers, and others remains essential to successful natural resources management.

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