



STATE OF HAWAI'I

WETLAND
PROGRAM
PLAN

2021 - 2025

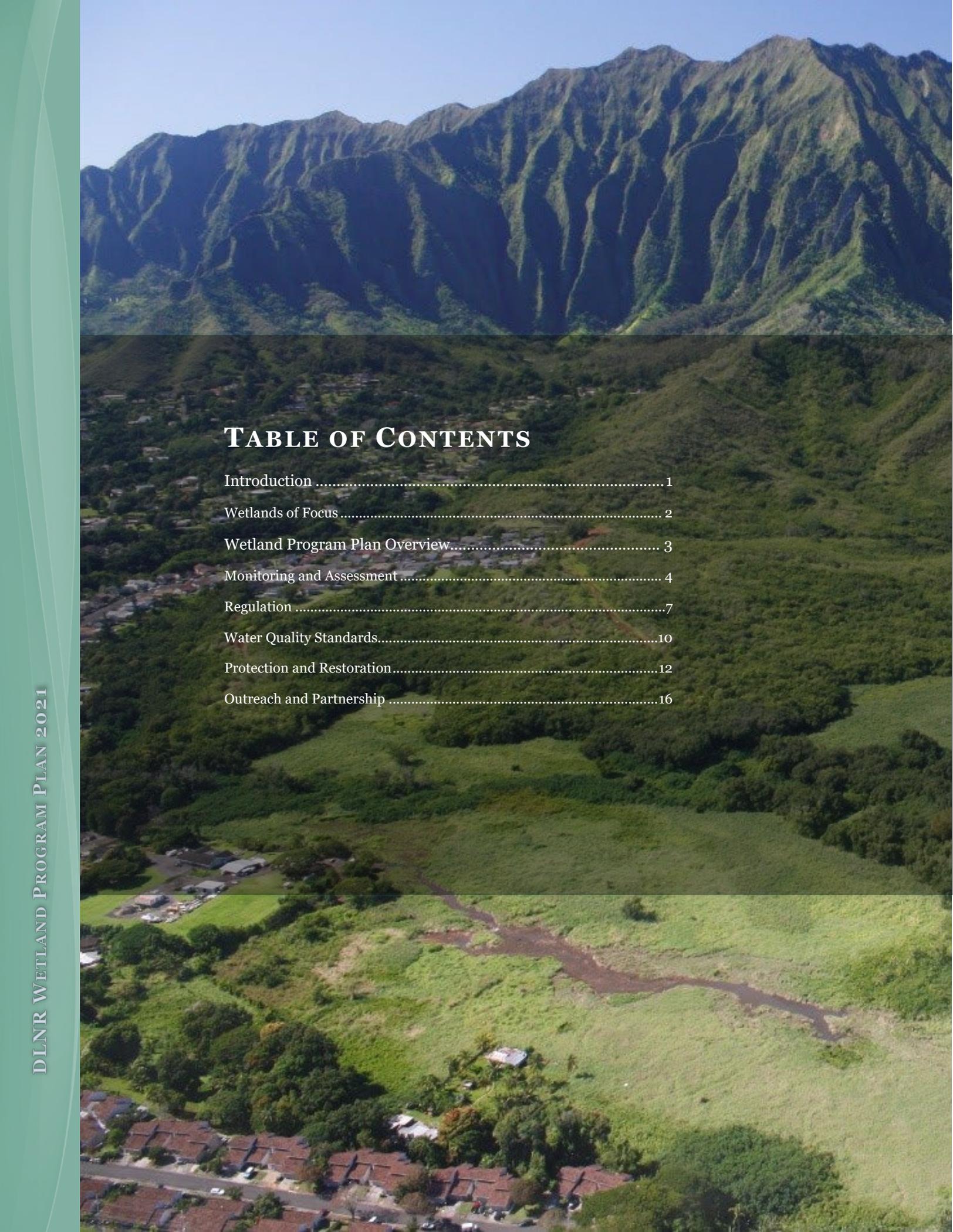
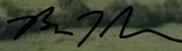
An aerial photograph of a lush green valley. In the foreground, a river flows through a grassy area. The middle ground shows a residential area with houses and trees. In the background, there are large, rugged mountains with deep green vegetation under a clear blue sky.

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ACRONYMS

BMP	Best management practice
CEF	Core Elements Framework
DAR	Division of Aquatic Resources
DLNR	Department of Land and Natural Resources
DOCARE	Division of Conservation and Resource Enforcement
DOFAW	Division of Forestry and Wildlife
DOH	Department of Health
EPA	U.S. Environmental Protection Agency
QA/QC	Quality assurance and quality control
SOP	Standard Operating Procedures
TEK	Traditional Ecological Knowledge
WPP	Wetland Program Plan
WQS	Water Quality Standards

INTRODUCTION TO THE WETLAND PROGRAM PLAN

The State of Hawai'i *Wetland Program Plan 2021 – 2025* was developed by the Department of Land and Natural Resources (*DLNR*) Division of Aquatic Resources (*DAR*) with support from the Division of Forestry and Wildlife (*DOFAW*) and the U.S. Environmental Protection Agency (*EPA*). This wetland program plan (*WPP*) is based on the EPA's [Core Elements of Effective State and Tribal Wetland Programs](#), known as the Core Elements Framework (*CEF*).

The mission of this Wetland Program is *to align management priorities for wetlands within the DLNR, and to enhance, protect, conserve, and manage Hawai'i's wetland ecosystems statewide.*

DLNR's wetland activities, projects, and programs are diverse and extensive, and DAR and DOFAW are only two of several divisions with such programs. DAR previously established Hawai'i's first WPP: the Hawai'i Coral Reef Strategy, which has since been updated for [2020 – 2030](#). It is included under this WPP as a subprogram plan.

In 2020, the division began to coordinate and prioritize its work in all wetland ecosystems under the state's first comprehensive WPP. DAR held weekly planning meetings with DOFAW staff to develop the goals, objectives, and strategies under five core elements:

1. Monitoring and Assessment
2. Regulation
3. Water Quality Standards
4. Protection and Restoration
5. Outreach and Partnership

This WPP is the first of an iterative planning document that provides a strategic vision for developing and coordinating a DLNR wetland program. In future years, DAR and DOFAW will collaborate with the other divisions to ensure their goals and objectives are represented in the WPP.

WETLANDS OF FOCUS

The diversity of wetland types in Hawai‘i is impressive, including but not limited to bogs, upland marshes, swamps, lowland freshwater and saline marshes, estuaries, ponds, fresh and saline lakes, anchialine pools, and coral reefs¹. While the divisions have active projects in many different ecosystems, implementation of the WPP will focus on four key ecosystems:



Anchialine Pools: brackish water pools that are land-locked, but connected to the ocean and groundwater underground. They fluctuate with tides and are home to a diverse array of endemic species found only in Hawai‘i.



Estuaries: where freshwater and saltwater mix and form critical nursery grounds for coastal species and havens of biological diversity. The most isolated estuaries in the world are found in Hawai‘i, of which there are about 150 statewide.



Marshes: areas of land covered by water for long periods of time, and generally dominated by grasses and other herbaceous plants. These wetlands are important habitat for Hawaiian waterbirds, migratory shorebirds and waterfowl, and native fish species.



Coral Reefs: reef-building organisms are the foundation of these marine ecosystems. Coral reefs span over 410,000 acres of living reef in the main Hawaiian islands. The [Hawai‘i Coral Reef Strategy 2030](#) presents DAR’s priorities for this ecosystem.

¹ Joy Browning et al., “Hawai‘i: The Wetland System of Hawai‘i,” 2019, <https://doi.org/10.1016/B978-0-12-409548-9.11915-3>; Dennis D. Peters, “National Wetland Inventory for Hawaii” (Portland, Oregon: U.S. Fish and Wildlife Service, 1979).

WETLAND PROGRAM PLAN OVERVIEW

In 2021 – 2025, DLNR will make progress under the following goals and objectives. The actions presented in the table on subsequent pages of this WPP represent the program’s priorities for the Wetlands of Focus, and are divided into phases 1: 2021 – 2022, 2: 2023 – 2025, and 3: 2026-2030.

MONITORING AND ASSESSMENT

Goal: Investigate the coverage, function, and integrity of Hawai‘i wetlands over time to inform management decisions.

- Objective 1: Develop a Monitoring and Assessment Strategy for wetland ecosystems.
- Objective 2: Implement an effective and adaptive monitoring program consistent with the Monitoring and Assessment Strategy.
- Objective 3: Integrate the results of the Monitoring and Assessment Strategy into wetland management.

REGULATION

Goal: Facilitate regulatory compliance activities and authorities that preserve and improve wetland ecosystems.

- Objective 1: Clearly define the jurisdictional regulatory authority for wetlands.
- Objective 2: Administer regulatory activities efficiently and consistently.
- Objective 3: Evaluate regulatory activities to protect, preserve, and improve wetlands.

WATER QUALITY STANDARDS (WQS)

Goal: Support water quality standards for healthy communities and ecosystems.

- Objective 1: Ensure that wetlands are included within state water quality programs.
- Objective 2: Co-develop wetland-specific water quality standards with partners.
- Objective 3: Incorporate water quality standards into wetland management and regulation.

PROTECTION AND RESTORATION

Goal: Protect and restore wetlands for conservation and sustainable use.

- Objective 1: Develop a Protection and Restoration Strategy for Wetland Ecosystems.
- Objective 2: Protect or mitigate wetlands from degradation or destruction.
- Objective 3: Restore wetland coverage, condition, and function.
- Objective 4: Evaluate and adapt protection and restoration efforts to continue supporting wetlands and their management.

OUTREACH AND PARTNERSHIP

Goal: Engage stakeholders in the collaborative stewardship of Hawai‘i’s wetlands.

- Objective 1: Promote the importance of wetland ecosystems and their services.
- Objective 2: Support sustainable use of and public access to wetland areas.
- Objective 3: Increase local capacity to steward and manage wetlands.

Goal: Investigate the coverage, function, and integrity of Hawai‘i wetlands over time to inform management decisions.

M 1 Objective 1: Develop a Monitoring and Assessment Strategy for wetland ecosystems.				Phase
M 1.1	Align monitoring and assessment goals within the DLNR.	110	Identify relevant programs and initiatives within the Divisions.	1
		111	Establish a DLNR Working Group to advise various Division wetland monitoring and assessment efforts and to prioritize goals.	1
M 1.2	Incorporate partnerships into the Strategy.	120	Identify agencies, organizations, and other groups and individuals with relevant experience in wetland monitoring and assessment.	1
		121	Define roles and priorities for agencies, organizations, and other groups.	1
		122	Convene a Scientific Advisory Board for the development, assessment, and improvement of the Strategy.	1
M 1.3	Define wetland classifications and categories within Hawai‘i .	130	Define a State wetland classification and identification process.	1
		131	Define and describe wetland categories.	1
		132	Identify wetland types in Hawai‘i and add or edit categories as needed.	1
M 1.4	Establish reference conditions and indicators for wetland categories.	140	Identify and define indicators that will characterize condition on a gradient of unimpaired to severely impaired.	1
		141	Review and confirm indicators with the Scientific Advisory Board.	1
		142	Identify reference wetlands that either reflect an entire or a select set of ecological conditions.	1
		143	Develop methods for monitoring and assessing indicators.	1
M 1.5	Develop short and long-term objectives.	150	Identify priority wetland ecosystems for DLNR divisions and partners.	1
		151	Identify and compile sources of monitoring data.	1
		152	Evaluate the suitability of existing methods for monitoring and assessment at ongoing and future sites.	1
		153	Outline available resources, needs, and gaps.	1
		154	Set timeline, actions/activities, outputs, and outcomes.	1
		155	Craft comprehensive and tenable monitoring objectives.	1

M 1.6	Develop data management protocols and infrastructure for monitoring and assessment.	160	Design database within existing data management systems.	1
		161	Develop capability of data management systems to track reference conditions.	1
		162	Build system capabilities for analyzing data and/or exporting data for analysis.	1
		163	Integrate previous monitoring data to maximize the reliability between datasets.	1
		164	Ensure data collection, monitoring, and reporting involves quality control and quality assurance.	1
		165	Use geospatial mapping tools for a statewide inventory of wetlands and their attributes.	1
M 2	Objective 2: Implement an effective and adaptive monitoring program consistent with the Monitoring and Assessment Strategy.			Phase
M 2.1	Develop Standard Operating Procedures (SOPs) for site-specific monitoring and assessment based on the Strategy.	210	Categorize the wetland(s) and review applicable indicators for monitoring and assessment.	1
		211	Select methods for applicable indicators and draft SOPs.	1
		212	Implement SOPs using pilot sites.	2
		213	Publish methods, results, and analyses in peer-reviewed journals, technical reports, and other formats.	2
M 2.2	Improve and adapt SOPs using current science and management needs and priorities.	220	Evaluate case studies, pilot projects, and other methods to verify or modify SOPs.	2
		221	Assess the ability of SOPs to inform management decisions and adjust indicators and methodologies accordingly.	2
		222	Account for available resources, staff, budget, and partner capacity to ensure effective program operation.	2
		223	Scale revised SOPs to include broader geographic and ecological coverage as appropriate.	3
		224	Continuously evaluate and improve SOPs through periodic review.	3
M 2.3	Ensure data collected is recorded accurately and timely within the database management systems.	230	Input data into centralized database location.	2
		231	Administer and update the database management systems as needed.	2
		232	Perform quality assurance and quality control (QA/QC) on data inputs.	2
		233	Georeference data as gathered and protect sensitive data as appropriate.	2

M 2.4	Analyze monitoring data to evaluate wetland coverage, condition, and function.	240	Include data analysis steps in SOPs.	2
		241	Train/Hire staff to perform data analyses using the data management system and other available tools.	2
		242	Review and establish baselines for wetland condition indicators.	2
		243	Periodically analyze changes in size and condition relative to reference condition.	2
		244	Evaluate the impacts of climate change on wetland ecosystems, including ocean acidification, sea level rise, carbon sequestration, spread of aquatic invasive species, and other relevant considerations.	2
		245	Review wetland status and trends with partners and publish status reports that are available to the public.	2
		246	Use geospatial mapping services to track wetland condition and to inform spatial management.	2
M 3 Objective 3: Integrate the results of the Monitoring and Assessment Strategy into wetland management.				Phase
M 3.1	Address management and regulatory decision-making needs and knowledge gaps.	310	Convene Scientific Advisory Board and DLNR Working Group to identify knowledge gaps.	1
		311	Revise indicators and SOPs to address management knowledge gaps.	2
		312	Assess the temporal adequacy of monitoring and assessment activities for management purposes.	2
		313	Obtain up-to-date scientifically rigorous information on the status and trends (quantity, quality, functions and services) of wetlands to make wise management decisions.	2
M 3.2	Evaluate and improve wetland management using the Strategy.	320	Incorporate the Monitoring and Assessment Strategy into restoration efforts.	2
		321	Establish ecologically-meaningful benchmarks to gauge protection and restoration progress.	1
		322	Assess wetland conditions for the different categories, geographies, and sizes, and revise management priorities as needed.	3
		323	Include ecosystem services, along with social and cultural considerations, in condition evaluations.	1
		324	Revisit site prioritizations and confer with the Scientific Advisory Board, DLNR Working Group, and stakeholders during periodic review.	2
		325	Develop management plans for wetlands and wetland categories.	2
M 3.3	Ensure that wetlands are included in discussions and planning efforts related to climate change.	330	Designate member(s) of the DLNR Working Group to act as a liaison with the Climate Change Working Group within DLNR.	1
		331	Monitor, assess, and support management interventions that mitigate the impacts of climate change on wetland ecosystems.	1
		332	Evaluate the ecosystem services and cultural importance of wetlands through the lens of climate change and share these findings with policy makers, partners, and natural resource managers.	2

Goal: Facilitate regulatory compliance activities and authorities that preserve and improve wetland ecosystems.

R 1 Objective 1: Clearly define the jurisdictional regulatory authority for wetlands.				Phase
R 1.1	Identify local, state, and federal regulatory offices and define jurisdictional scope for each as it pertains to wetlands.	110	Complete a review of regulatory authorities and verify roles with each.	1
		111	Compile relevant statutes, rules, and policies within the DLNR that apply to wetland protection.	1
		112	Consult with regulatory partners at agencies and regulatory programs to confirm scope and roles.	1
		113	Clarify jurisdictional coverage of state waters including streams, rivers, lagoonal estuaries, and anchialine pools on private and public lands.	1
		114	Assess enforcement capacity and gaps.	1
R 1.2	Identify the regulatory permitting and approval processes for activities with potential impacts to wetlands.	120	Develop a list of regulated activities in consultation with regulatory partners and identify necessary approvals, permits, and consultations.	2
		121	Identify variables and conditions that determine the required regulatory processes, such as species, scale and location.	2
		122	Evaluate agency mechanisms to expedite regulatory processes for common activities that fit pre-approved criteria, such as SOPs, exemption lists, rulemaking, and policy.	2
		123	Perform periodic reviews to revise and update the list of regulated activities.	3
R 1.3	Provide clear guidance to the public on how to comply with regulatory requirements.	130	Create a public resource of wetland regulators and reference to their respective programs.	2
		131	Publish clear and accessible resources for identifying wetlands, streams, and other waters.	2
		132	Share and update the list of regulated activities and the regulatory processes associated with each.	2
		133	Provide guidance on activity conditions that qualify for expedited permit review processes.	2

R 2 Objective 2: Administer regulatory activities efficiently and consistently.				Phase
R 2.1	Create, revise and adopt policies and rules that improve the regulatory process for wetland ecosystems.	210	Develop standard operating procedures with regulatory partners for fast-tracking permit applications with minimal regulatory concerns.	2
		211	Expand exemption lists to facilitate wetland restoration activities.	3
		212	Develop and propose legislation to support ecosystem-based and adaptive management regulatory authority.	3
		213	Develop and propose policy, rules, and amendments to promote ecosystem-based and adaptive management regulatory oversight for wetlands.	1
		214	Create standard operating procedures for emergency or otherwise time-sensitive regulatory review.	3
		215	Identify solutions for regulators to expedite permit application processing such as checklists, electronic forms, and populated templates for decision documents based on the applicant's form.	2
R 2.2	Develop evaluation criteria for regulated activities.	220	Use variables and conditions identified in Action R 1.2 to establish review criteria for regulated activities.	3
		221	Include federal mitigation requirements into the review process.	3
		222	Ensure that cumulative impacts are taken into consideration when regulating wetland activities.	3
		223	Incorporate climate change considerations (e.g. spatial dynamics), into the review process.	3
		224	Include evaluation criteria that assess site-specific activities for potential impacts to protected species.	3
		225	Publish evaluation criteria for public reference to promote transparency and compliance.	3
R 2.3	Review proposed activities with potential impacts to wetlands.	230	Provide consultations and approvals for natural resource concerns and impacts to wetland ecosystems.	1
		231	Connect regulators and action proponents with relevant data, indicators, and reference conditions for wetlands.	1
		232	Develop monitoring and assessment guidance for regulatory decision-makers to require of action proponents in permit conditions.	2
		233	Evaluate the feasibility and capacity of action proponents to avoid, minimize, and mitigate impacts, and to develop long-term benefits and protections to wetlands.	1

R 3 Objective 3: Evaluate regulatory activities to protect, preserve, and improve wetlands.				Phase
R 3.1	Track monitoring and assessment efforts in regulated activities.	310	Require projects to conform to SOPs and methods from the Monitoring and Assessment Strategy whenever possible.	3
		311	Develop the Department's capacity to track mandatory monitoring and assessment efforts for permitted activities.	3
		312	Track project performance measures and success criteria to evaluate compliance with permit conditions.	3
		313	Report out programmatic metrics for all regulated activities such as % mitigation sites meeting performance goals, # of unauthorized impacts brought into compliance, and % mitigation sites monitored.	3
R 3.2	Enforce aquatic resource and protected species protections.	320	Support regulatory partners in their evaluations of project performance measures and success criteria.	3
		321	Require adaptive management planning in the event that projects do not meet success criteria.	3
		322	Expand compensatory mitigation requirements in the event that negative impacts exceed pre-approved levels.	3
		323	Coordinate with the DLNR Division of Conservation and Resource Enforcement (DOCARE) to enforce and evaluate the efficacy of regulations.	3
		324	Revise regulations to improve enforcement and compliance.	3
R 3.3	Incorporate ecosystem-based management and the watershed approach into the regulatory decision-making process.	330	Develop or adopt function/condition assessment methodologies.	2
		331	Establish ecosystem-based performance standards and success criteria for mitigation.	3
		332	Evaluate mitigation against reference and pre-impact sites regularly; revise performance standards, review criteria, and/or functional/condition assessment methods accordingly.	3
		333	Identify and preserve the integrity of ecosystem services that improve resilience to climate change impacts.	1

Goal: Support water quality standards for healthy communities and ecosystems.

W 1 Objective 1: Ensure that wetlands are included within state water quality programs.				Phase
W 1.1	Identify local, state, and federal water quality programs in Hawaii and their jurisdictional scope for each as it pertains to wetlands.	110	Include a review of water quality authorities and verify roles with each in Action R 1.1.	1
		111	Compile relevant statutes, rules, and policies within Hawai'i that apply to wetland WQS.	1
W 1.2	Include wetlands in legal definitions pertaining to WQS.	120	Develop the relationship between DLNR and the Department of Health (DOH) to support the state's Clean Water Branch in setting appropriate WQS.	2
		121	Support partners to include the definitions of state waters in WQS programs that apply to Hawai'i wetland ecosystems.	3
		122	Review any relevant Department statutes, rules, and policies and identify how to include wetland WQS as appropriate.	1
		123	Remove any language excluding defined wetlands from WQS.	3
W 2 Objective 2: Co-develop wetland-specific water quality standards with partners.				Phase
W 2.1	Establish WQS for a gradient of wetland conditions.	210	Identify the WQS policies and programs within DLNR divisions and align goals.	1
		211	Develop separate WQS for wetland categories from Action M 1.3.	1
		212	Include water quality metrics in the reference condition standards from Action M 1.4.	1
		213	Expand water quality data collection to address any gaps in defining reference condition standards.	2
		214	Coordinate water quality monitoring efforts with partners and stakeholders.	2

W 2.2	Ensure designated uses are sustainable and preserve the ecological services and function of wetlands.	220	Include use types for wetland sites in the inventory of state wetlands from Action M 1.3.	1
		221	Create map layers for use types that can be included in Action M 1.6.	1
		222	Establish evaluation criteria to assess the impacts of use types on wetland services and functions.	2
		223	Approach WQS from an ecological perspective.	2
		224	Integrate qualitative and quantitative considerations into biological, physical, and chemical criteria.	2
		225	Evaluate uses and implement management interventions to avoid and/or minimize impacts where appropriate.	2
W 3 Objective 3: Incorporate water quality standards into wetland management and regulation.				Phase
W 3.1	Incorporate WQS into the Monitoring and Assessment Strategy.	310	Include WQS into methods developed in Action M 2.1.	2
		311	Use geospatial mapping tools to track water quality monitoring statewide.	2
		312	Publish a five-year review of wetlands status and trends relative to WQS.	3
W 3.2	Use WQS to inform regulatory decision-making.	320	Require water quality monitoring and reporting in permit applications, where appropriate.	2
		321	Evaluate potential impacts to WQS and wetland condition in Action R 3.1.	3
		322	Include WQS in permitted project assessments in Action R 3.2.	3
W 3.3	Incorporate WQS into protection and restoration effort.	330	Include WQS in watershed protection and restoration guidelines.	1
		331	Prioritize projects with anticipated benefits to WQS.	1
		332	Track protection and restoration projects that are monitored for compliance with WQS.	2
		333	Identify remedial measures for sites that do not meet wetland WQS.	2

Goal: Protect and restore wetlands for conservation and sustainable use.

P 1 Objective 1: Develop a Protection and Restoration Strategy for Wetland Ecosystems.				Phase
P 1.1	Align protection and restoration goals within the DLNR.	110	Identify wetland protection and restoration efforts within DLNR.	1
		111	Review wetland locations, classifications, conditions and priorities from Action M 1.3 - 1.5.	1
		112	Coordinate and develop goals within the DLNR Working Group from Action M 1.1.	1
P 1.2	Incorporate partnerships into the Strategy.	120	Identify partners with relevant programs and/or experience in wetland protection and restoration.	1
		121	Align protection and restoration goals with partners.	2
		122	Define roles and priorities for divisions, partners, and other groups.	2
		123	Integrate scientific and traditional ecological knowledge (TEK) into the development, assessment, and improvement of protection and restoration strategies.	2
		124	Use geospatial mapping tools to identify partner protection and restoration activities in wetlands statewide.	2
P 1.3	Develop prioritization methods to inform site selection.	130	Review wetlands from Action M 1.3 and priority wetland ecosystems from Action M 1.5 for priority protection and restoration efforts.	1
		131	Evaluate local capacity for long-term management, ecosystem services, and condition when prioritizing sites.	1
		132	Include an Advisory Board and/or stakeholders in prioritization exercises.	2
		133	Identify candidate sites that are data-deficient and recommend these for further monitoring and assessment.	2
		134	Develop criteria that support watershed-based, regional, and statewide management.	2
		135	Evaluate the suitability of wetland ecosystems for mitigation banking.	3

P 1.4	Establish methods and standard operating procedures (SOPs) that are practicable and effective.	140	Identify recommended approaches based on wetland classifications, conditions, and other essential attributes.	1
		141	Use pilot site evaluations, peer-reviewed literature, and other scientific evidence to develop SOPs.	1
		142	Consult regulatory partners to identify qualifying conditions for activities with minimal regulatory concern from Action R 2.1.	1
		143	Identify methods for mitigation banking in suitable locations.	3
		144	Provide trainings, workshops, and other guidance for partners and stakeholders interested in implementing restoration activities.	3
		145	Integrate monitoring and evaluation methods from Action M 2.1.	2
P 1.5	Integrate climate change considerations into the Strategy.	150	Identify relevant ecosystem services provided by candidate wetland sites and threats due to climate change from Action M 3.3.	1
		151	Include considerations for these services when selecting sites and methods.	1
		152	Identify sites where impacts due to climate change may be avoided or minimized.	1
P 2 Objective 2: Protect or mitigate wetlands from degradation or destruction.				Phase
P 2.1	Coordinate protection efforts statewide with partners and stakeholders.	210	Update partner activities, priorities, and roles from Action P 1.2 annually.	2
		211	Provide guidance to partners to develop management plans for protected wetlands.	2
		212	Convene the DLNR Working Group annually for the purpose of updating the participating divisions on activities and initiatives relevant to wetland protection.	2
		213	Ensure members of the DLNR Working Group are aware of, attend meetings for, and otherwise provide assistance to partner efforts.	2
		214	Give partners and stakeholders access to mapping resources, data, and other tools to inform their decision-making process.	2
P 2.2	Establish and institutionalize wetland protections under the authority of the DLNR divisions.	220	Develop management plans for managed wetlands that ensure long-term protections.	2
		221	Draft and support rules, regulations, and guidance related to protecting wetland ecosystems and their species.	2
		222	Implement conservation easements.	3

P 2.3	Anticipate and prepare for potential impacts from climate change.	230	Map wetland areas and potential changes to Hawai'i wetland distributions as a result of sea level rise.	2
		231	Integrate resiliency planning into wetland management plans.	2
		232	Ensure that impacts, resilience and adaptation planning, and other factors associated with climate change are considered in site prioritization.	2
P 3 Objective 3: Restore wetland coverage, condition, and function.				Phase
P 3.1	Reestablish impacted wetlands in priority watersheds.	310	Identify impaired wetlands within managed watershed areas and determine whether they are suitable candidates for restoration.	1
		311	Work with community groups within managed watersheds to assist with reestablishment efforts.	1
		312	Develop and improve condition and function for reestablished wetlands within the applicable watersheds.	1
P 3.2	Implement restoration projects that improve natural wetland conditions and functions.	320	Coordinate restoration efforts among DLNR divisions.	1
		321	Prioritize projects with potential to protect and restore long-term ecological services.	1
		322	Include appropriate indicators to monitor restoration progress and detail methods in site-specific management plans.	1
		323	Ensure freshwater inflow into estuaries and streams is prioritized for wetland restoration.	1
		324	Pilot methods for invasive species controls like herbicides, and evaluate and adapt SOPs accordingly.	1
		325	Support long-term invasive species removal and control in priority areas through partnerships and capacity-building.	1
P 3.3	Establish and strengthen partnerships to increase the collective capacity for sustainable, long-term restoration.	330	Prioritize wetland restoration projects with partnerships and community support.	1
		331	Share the Protection and Restoration Strategy with partners and stakeholders, and provide support to develop management and restoration plans.	2
		332	Encourage partners to share data and align monitoring and assessment plans with the Strategy as much as possible.	2
		333	Update and share maps of restoration activities, wetland condition and attributes, and other resources to facilitate statewide coordination.	2
		334	Consult with partners on a regular basis to determine what resources and support is needed most, and prioritize those needs.	1
		335	Provide technical and regulatory guidance where needed.	2
		336	Procure and maintain equipment that can be shared with community partners.	3

P 4 Objective 4: Evaluate and adapt protection and restoration efforts to continue supporting wetlands and their management.				Phase
P 4.1	Develop evaluation criteria for protected and restored wetlands on a measurable continuum of progress.	410	Align evaluation criteria to program goals from the Protection and Restoration Strategy.	2
		411	Use reference conditions from Action M 1.4 to define progress in protection and restoration.	1
		412	Add relevant reference conditions for restoration projects.	1
		413	Establish a schedule for evaluations and define roles and responsibilities.	1
		414	Assess the capacity for projects to self-evaluate, and provide support where needed.	1
P 4.2	Evaluate protection and restoration progress in improving wetland conditions and function.	420	Integrate the geospatial mapping tools from Actions M 2.4 and P 1.2 to track protected and restored wetland attributes.	2
		421	Ensure that monitoring and assessment methods are tracking indicators for evaluating site condition and function.	2
		422	Perform routine quality assurance and quality control on monitoring and assessment data.	2
		423	Evaluate monitoring and assessment data as described in Action M 2.4 and M 3.2.	2
		424	Develop resources for partners to evaluate and adapt their efforts independently.	3
P 4.3	Ensure protection and restoration efforts are aligned with watershed management.	430	Identify past, ongoing, and future watershed management interventions mauka and makai of wetland protection and restoration sites.	1
		431	Identify the important linkages between wetland and non-wetland watershed management efforts.	1
		432	Include wetland protection and restoration efforts in watershed management plans.	1
		433	Update watershed partners and stakeholders on protection and restoration progress.	2
P 4.4	Adapt the Protection and Restoration Strategy to reflect the best available information for wetland management.	440	Convene the DLNR Working Group to reassess priorities, goals, and progress as described in Action P 1.1.	2
		441	Check in with partners and stakeholders, and update roles and priorities from Action P 1.2.	2
		442	Align wetland management with the State's energy goals and other priority initiatives.	2
		443	Reevaluate site prioritization methods from Action P 1.3.	2
		444	Reevaluate methods and SOPs from Action P 1.4.	2

Goal: Engage stakeholders in the collaborative stewardship of Hawai'i's wetlands.

O 1 Objective 1: Promote the importance of wetland ecosystems and their services.				Phase
O 1.1	Update and improve the shared education materials between DLNR divisions.	110	Compile existing education materials among the DLNR divisions with wetland programs.	1
		111	Identify stakeholder groups across division programs and identify gaps and overlap.	1
		112	Coordinate with education specialists to identify and prioritize needed resources.	1
		113	Share educational resources and provide data to maintain publicly-accessible resources like web maps, infographics, and scientific publications.	2
		114	Develop web pages that link wetland programs and provide updated and coordinated information wetlands.	2
O 1.2	Coordinate with partners on education and outreach efforts to the public.	120	Establish agreements with partners to use existing education materials where possible.	2
		121	Confer with partners when prioritizing new education resources for development.	1
		122	Support partner events with resources, staff, and/or educational materials.	1
		123	Identify popular programs, outreach methods, and high-demand resources to improve efforts statewide.	1
		124	Promote wetland awareness annually on February 2nd, World Wetland Day.	1
O 1.3	Encourage and train project staff to support high-quality education.	130	Host DLNR education specialists on field site visits.	2
		131	Train project staff in social media protocols to share updates from the field.	2
		132	Encourage field staff to take videos and photos of their work to share in education efforts.	2
		133	Develop project staff skills for communicating science and sharing results from the field.	2
		134	Adapt technical reports and scientific publications into updates for non-scientific audiences.	2

O 1.4	Provide ecosystem-based education on wetlands and their many services and functions.	140	Identify opportunities to provide wetland-specific education to public audiences.	1
		141	Emphasize the many uses, services, and functions of wetlands, mauka to makai.	1
		142	Promote the diversity of Hawai‘i’s wetland ecosystems in education programs.	1
		143	Discuss threats to wetlands and share actions that members of the public can take to address them.	1
O 2 Objective 2: Support sustainable use of and public access to wetland areas.				Phase
O 2.1	Integrate social, cultural, and traditional uses of wetlands into management and planning efforts.	210	Work with local stakeholders to identify social, cultural, and traditional uses of wetlands.	2
		211	Evaluate the different uses and develop strategies to minimize or mitigate potential impacts to wetland ecosystems.	2
		212	Identify and encourage pono practices within communities for wetland-based activities.	1
		213	Reduce conflict between mixed user groups through communication and planning.	2
		214	Develop guidance for rulemaking and management plans to provide and protect sustainable uses.	2
O 2.2	Promote legal protections for sustainable uses of and public access to wetland areas.	220	Collaborate with community members to develop supported and needed rules for wetlands.	3
		221	Evaluate compliance with and the efficacy of existing rules and policies in supporting sustainable uses.	3
		222	Support the DOCARE in outreach and enforcement activities related to wetlands.	2
		223	Ensure cultural and traditional uses are preserved to the greatest extent possible.	2
O 2.3	Provide the public with guidance on best practices when using and/or visiting wetlands.	230	Integrate pono practices identified in Action O 2.1 into education programs.	1
		231	Provide place-based guidance on applicable rules, policies, and best practices for wetland activities.	1
		232	Develop a public-facing map tool that shows allowable activities within wetland areas.	3
		233	Coordinate educational programs with commercial recreation providers to ensure their guests are informed and knowledgeable.	3

O 3 Objective 3: Increase local capacity to steward and manage wetlands.				Phase
O 3.1	Form and strengthen partnerships within and around wetlands.	310	Identify communities, groups, schools, and other stakeholder groups interested in working in wetlands.	1
		311	Create new or support existing volunteer service opportunities to engage local community members in restoration and stewardship activities.	2
		312	Encourage project staff to include local groups in project tasks whenever possible.	2
		313	Join partners in the areas they're already working and support their efforts.	1
		314	Coordinate partnerships to strengthen the long-term sustainability of projects.	1
		315	Consult with collaborators to prioritize and provide trainings, research, and other forms of support.	2
		316	Share SOPs and regulatory guidance.	2
O 3.2	Implement place-based planning from local to statewide scales.	320	Include community members in prioritizing, planning and managing local wetlands.	2
		321	Integrate scientific and traditional ecological knowledge into planning and management.	2
		322	Publicly celebrate and share management successes, track progress, and discuss challenges.	2
		323	Develop strategies to better include communities in monitoring, data collection, and reporting.	2
		324	Evaluate progress under the goal and objectives to inform adaptive approaches to partnerships and outreach.	3

A scenic landscape of a tropical valley. In the foreground, a calm river reflects the sky and surrounding greenery. To the left, several tall palm trees stand prominently. The middle ground shows a lush green valley with a river winding through it. In the background, a range of mountains is visible, with some peaks partially obscured by soft, white clouds. The sky is a vibrant blue, filled with large, fluffy white clouds. The overall atmosphere is peaceful and natural.

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