

# WETLAND PROGRAM PLAN FOR IOWA

## Introduction and Background

Original wetland basins once covered 4 to 6 million acres of Iowa. That represented approximately 11% of Iowa's land surface based upon historical surveys and maps of the landscape prior to European settlement. Wetlands remain part of every watershed in Iowa, but 90-95% of the original wetlands were drained and are no longer fully functional. At the time that most wetland-altering development occurred, Iowans were focused on the benefits of agriculture and, eventually, manufacturing and urban center creation. Congress gave incentives to drain and develop land as fast as possible without regard to preserving wetlands to protect wildlife habitat, water quality, topsoil, natural food supplies, or to protect settlements in areas prone to flooding. Despite facing many challenges, the first century of Iowa farmers did an amazing job at making the land productive according to standards in-force at the time. Today there is a greater scientific understanding of how landscapes function as a whole. It is now known that this loss of wetlands has contributed to poorer water quality, increased flooding, and loss of wildlife habitat, as well as a growing list of adverse economic and aesthetic impacts. Iowans are currently facing as great an environmental challenge as did the original settlers: finding a way to strategically improve our landscape without fundamentally disrupting existing land use choices.

The Iowa Department of Natural Resources (Iowa DNR) Environmental Services Division, with the assistance of federal, local, and non-profits, has developed a new guidance document for Iowa called the Wetland Program Plan. Iowa Department of Natural Resource bureaus with substantial roles in wetland protection, restoration, research and monitoring include:

- Water Quality Bureau - The Water Quality Monitoring and Assessment Section of the Iowa DNR is responsible for the design, implementation and management of Iowa's Ambient Water Monitoring Programs, including wetlands. The purpose of these programs is to provide consistent, unbiased information about the condition of Iowa's surface and groundwater resources so that decisions regarding the development, management, and protection of these resources may be improved.
- Fisheries Bureau – The Iowa DNR Fisheries Bureau provides technical expertise to landowners and partners in restoring lakes and wetlands to improve water quality and recreational opportunities.
- Wildlife Bureau – The Iowa DNR Wildlife Bureau provides technical expertise to landowners interested in restoring wetlands on their property. Private Lands Biologists are able to assist landowners in evaluating their properties potential for wetland restoration, setting goals and identifying priorities for their land. Wildlife Bureau biologists can also assist landowners by identifying potential partners and state and federal programs that can help the landowner construct and cover costs of restoring wetlands.

The goal of this document is to provide a coherent and concise guidance for wetland education, management, monitoring, restoration, and protection activities planned for the state of Iowa. This document addresses EPA’s four core elements of a state wetland program plan and an additional core element titled “education”. The core elements of this plan include: 1) Monitoring and Assessment; 2) Voluntary Restoration and Protection; 3) Regulatory; 4) Water Quality Standards; and 5) Education. Outlined below are the actions and timeframes provided by those entities that have contributed to the Iowa Wetland Program Plan. The goal will be met for that action item when the activity is accomplished. The Iowa Wetland Action Plan (2010) was used and reviewed extensively during the creation of the Wetland Program Plan, which will be published on the Iowa DNR website.

**Wetland Program Plan Timeframe**

Iowa’s Wetland Program Plan includes the years 2016-2020 with biennial reviews and updates anticipated during this time period.

**Contacts/Agency**

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This plan was made possible by the cooperation and consultation of the contributors listed below.

**List of Contributors**

Iowa Department of Natural Resources
Iowa Institute of Hydraulic Research
United States Fish and Wildlife Service
Iowa State University
Polk County Conservation Board
Ducks Unlimited
Iowa Department of Agriculture and Land Stewardship
Iowa Department of Transportation
Iowa Environmental Council
United States Army Corp of Engineers
The Nature Conservancy
Iowa Natural Heritage Foundation

## List of Acronyms and Abbreviations

ASWM	Association of State Wetland Managers
CCB	County Conservation Board
Corps	United States Army Corps of Engineers
CP 27	Farmable Wetlands Program
CP 28	Upland Buffer Program
CRP	Conservation Reserve Program
DOI	Department of the Interior
DU	Ducks Unlimited
EPA	Environmental Protection Agency
EQuIS	Environmental Quality Information System
IBI	Index of Biological Integrity
IDALS	Iowa Department of Agriculture and Land Stewardship
Iowa DNR	Iowa Department of Natural Resources
Iowa DOT	Iowa Department of Transportation
INHF	Iowa Natural Heritage Foundation
ISU	Iowa State University
MOU	Memorandum of Understanding
NGO	Non-Governmental Organization
NRCS	Natural Resource Conservation Service
NWCA	National Wetland Condition Assessment
TNC	The Nature Conservancy
USFWS	United States Fish and Wildlife Service

**Program Development Activities for MONITORING AND ASSESSMENT Core Element**

**Overall Objective:** Develop a full and complete monitoring and assessment strategy consistent with Elements of a State Water Quality Monitoring and Assessment Program for Wetlands (EPA, 2006) that the State can use to inform management decisions and achieve goals that protect and restore wetlands resources.

<b>Action: Development of Groundwater and Open Water Wetland Methods</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Research existing methods used by in-state partners and other Region 7 states and tribe's and the potential for National Wetland Condition Assessment (NWCA) protocol applicability for use in Iowa.	X	X	X	X	X	Region 7 States	None Required
Field-test NWCA and other methods.	X	X				Iowa DNR, Colleges and Universities	EPA, Iowa DNR, Colleges and Universities
Review field-tested methods and select standard methodology.			X	X		Iowa DNR	None Required
Implement selected standard methodology.				X	X	Iowa DNR	EPA, Iowa DNR
<b>Action: Partner with Region 7 EPA and State Partners on NWCA.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Participate in site selection and planning for 2016 field work.	X					Iowa DNR	EPA, Iowa DNR
Attend training for 2016 NWCA.		X				Iowa DNR, EPA	EPA, Iowa DNR, IIHR
Conduct field work for 2016 NWCA.		X				Iowa DNR, NRCS, EPA	EPA, Iowa DNR
Review data and provide comments and feedback.		X	X	X		Iowa DNR	EPA, Iowa DNR
Assist with data and report distribution to lowans and partners.				X	X	Iowa DNR, EPA	EPA, Iowa DNR
<b>Action: Create an Ambient Wetland Monitoring Network</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Select wetland types and locations for monitoring.	X					DU, Iowa DNR, Iowa DOT, INHF, NRCS, TNC, USFWS, Colleges and Universities	Iowa DNR

Conduct field work and data collection.		X	X	X	X	Iowa DNR	Iowa DNR
Data analysis and wetland assessment/report.		X	X	X	X	Iowa DNR, Colleges and Universities	Iowa DNR
<b>Action: Develop Data Retention Schedule and Data Sharing Portal for the Public.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Format data for migration into the state's water quality database (EQuIS).	X	X	X	X	X	Iowa DNR	Iowa DNR
Work with database manager to upload data into EQuIS and then regularly upload data through WQX to EPA.	X	X	X	X	X	Iowa DNR	Iowa DNR
<b>Action: Mapping of Fen Sites</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Locate and log fen sites into fen database.	X	X	X	X	X	Iowa DNR, NRCS, Corps, CCB's, TNC, INHF, Colleges and Universities	EPA, Iowa DNR, NRCS, Corps, CCB's, TNC, INHF, Colleges and Universities
Create GIS map layer and map sites for Iowa.	X	X				Iowa DNR, Colleges and Universities	EPA, Iowa DNR, Colleges and Universities
<b>Action: Enhance long term management of wetlands.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Develop tools, provide data and reports to wetland managers.	X	X	X	X	X	Iowa DNR, NRCS, Colleges and Universities	EPA, Iowa DNR, Colleges and Universities
<b>Action: Build upon the existing Iowa DNR "Wetlands" website.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Add data and information to website on an as-needed basis including monitoring reports, site maps, and fact sheets on wetlands. Create instructional tools (including video clips) for private landowners to enhance and protect wetlands on their property.	X	X	X	X	X	Iowa DNR, USFWS, NRCS, DU, TNC, INHF, Colleges and Universities	Iowa DNR, USFWS, NRCS, DU, TNC, INHF, Colleges and Universities

**Program Development Activities for VOLUNTARY RESTORATION AND PROTECTION Core Element**

**Overall Objective:** Restore, increase, maintain, and protect wetland ecosystems by voluntary means.

<b>Action: Identify Critical Wetland Areas for Higher Priority in Terms of Protection and Restoration.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Locate and log Critical Wetland Areas.	X	X	X	X	X	Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS, Colleges and Universities	Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS, Colleges and Universities
Create GIS map layer and map sites for Iowa.	X	X	X	X	X	Iowa DNR, Colleges and Universities	Iowa DNR, Colleges and Universities
<b>Action: Increase Wetland Conservation Work</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Target 4,000 restoration acres/year through acquisitions at a 3:1 acre ratio (upland:wetland).	X	X	X	X	X	Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS	EPA, Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS
Continue successful wetland conservation initiatives.	X	X	X	X	X	Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS	EPA, Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS
Seek new (non-traditional) partners and funding.	X	X	X	X	X	Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS	None Required
Promote successful restoration programs.	X	X	X	X	X	Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS	None Required
Continue to focus on restoring complexes of wetland areas to ensure that several types of wetlands are present on Iowa's landscape; not just permanent and semi-permanent types.	X	X	X	X	X	Iowa DNR, USFWS, TNC, INHF, DU, IDALS, NRCS	None Required

Develop management strategies based on ecoregion for different wetland types.	X	X	X	X	X	Iowa DNR, USFWS, TNC,INHF, DU, IDALS, NRCS	None Required
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Create an action plan to promote a permanent easement (goal) on 25,000 acres coming out of CP27/CP28 over 5 years. CP27 (wetland restoration) and CP28 (buffer program) are Conservation Reserve Programs (CRP).	X	X	X	X	X	Iowa DNR, USFWS, TNC,INHF, DU, IDALS, NRCS	Iowa DNR, USFWS, DU, NRCS
Target and restore 500 acres/year through agreements only.	X	X	X	X	X	Iowa DNR, USFWS, TNC,INHF, DU, IDALS, NRCS	EPA, Iowa DNR, USFWS, TNC,INHF, DU, IDALS, NRCS

**Action: Promote Coordination of Interagency and NGO functions impacting wetlands.**

Activity	2016	2017	2018	2019	2020	Potential Partners	Possible Funding
Creation of a state Ad-Hoc Wetlands Team.	X	X	X			Iowa DNR, Iowa DOT, CCB's, USFWS, TNC,INHF, DU, IDALS, NRCS, Colleges and Universities	None Required
Coordinate ongoing Agency and NGO wetland restorations for long term monitoring via the Ad-Hoc Wetlands Team.	X	X	X	X	X	Iowa DNR, Iowa DOT, CCB's, USFWS, TNC,INHF, DU, IDALS, NRCS, Colleges and Universities	None Required

**Action: Develop and implement fen protection/preservation project.**

Activity	2016	2017	2018	2019	2020	Potential Partners	Possible Funding
Raise awareness of the value of fen habitats through outreach to landowners.	X	X	X	X	X	EPA, Iowa DNR, DU, IOWA DOT, IDALS, USFWS, TNC,INHF, NRCS, Colleges and Universities, CCB's	EPA, Iowa DNR, DU, IOWA DOT, IDALS, USFWS, TNC,INHF, NRCS, Colleges and Universities

Seek funding sources to implement fen protection easements.	X	X	X	X	X	EPA, Iowa DNR, DU, IOWA DOT, IDALS, USFWS, TNC, INHF, NRCS, Colleges and Universities, CCB's	None Required
Find and add additional fen site locations on private land to Iowa DNR's Fen Database.	X	X	X	X	X	Iowa DNR, DU, CCB's IOWA DOT, IDALS, USFWS, TNC, INHF, NRCS, Colleges and Universities	EPA, Iowa DNR, DU, IOWA DOT, IDALS, USFWS, TNC, INHF, NRCS, Colleges and Universities
Assess fen quality using vegetation surveys, invertebrate surveys, hydrological measurements, and a fen rapid assessment method.	X	X	X	X	X	Iowa DNR, DU, CCB's IOWA DOT, IDALS, USFWS, TNC, INHF, NRCS, Colleges and Universities	EPA, Iowa DNR, DU, IOWA DOT, IDALS, USFWS, TNC, INHF, NRCS, Colleges and Universities
Formation of a Fen Committee to coordinate efforts at a statewide level.	X	X	X	X	X	Iowa DNR, DU, CCB's IOWA DOT, IDALS, USFWS, TNC, INHF, NRCS, Colleges and Universities	None Required

**Program Development Activities for WETLANDS REGULATORY PROGRAM Core Element**

**Overall Objective:** To preserve, enhance, and restore the quantity and quality of Iowa's Wetlands while avoiding, minimizing, and mitigating for project-related impacts.

<b>Action: Improve 401 Water Quality Certification regulations, policies, and guidance.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Iowa DNR will review requests for Clean Water Act Section 401 Water Quality	X	X	X	X	X	Iowa DNR	None Required
Iowa DNR will review and/or update the Administrative Rule for Water Quality Certifications			X			Iowa DNR	None Required
Agency coordination with the Corps, USFWS, and EPA will be achieved through the Joint Public Notice process of Clean	X	X	X	X	X	Corps, Iowa DNR, USFWS, EPA	None Required



Water Act Section 404 Department of the Army Permit and Section 401 Water Quality Certification.							
Iowa DNR will actively participate with each Corps District and other partners, such as EPA and USFWS, during the Nationwide Permit renewal process, including development of Iowa regional conditions.			X			Corps, Iowa DNR, USFWS, EPA	None Required
Maintain an Iowa DNR website for online information about CWA Section 404 permitting and Section 401 certification.	X	X	X	X	X	Iowa DNR	Iowa DNR
Review other states wetland mitigation ratios to determine if a guidance document should be produced.	X	X				Iowa DNR, USACE	None Required
Review other Region 7 state wetland mitigation strategies.	X	X	X	X	X	Region 7 States	None Required
<b>Action: Natural Resource Conservation Service oversees Farm Bill compliance for wetland protection.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
The 2014 Farm Bill (The Agricultural Act of 2014) kept certain authorizations from the 1985 Food Security Act intact involving the “Swampbuster” provision of which provides guidance and policy to USDA. This provision discouraged the conversion of wetlands into non-wetland areas. The “Swampbuster” provision denied federal farm program benefits to producers who converted wetlands to non-wetland areas after December 23, 1985. Later Farm Bills strengthened this provision by making violators ineligible for farm program benefits. A MOU developed in 1994 between USDA, EPA, DOI, Corps gave NRCS authority to make section 404 jurisdictional determinations on ag-lands using the Food Security Act definition of agricultural lands.	X	X	X	X	X	NRCS	NRCS
<b>Action: Iowa Department of Transportation wetland mitigation for road projects.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
The Iowa Department of Transportation (Iowa DOT), as required by the Clean Water Act, develops and constructs wetland areas that serve as compensatory mitigation for wetlands impacted by roadway construction. Compensatory wetland mitigation is traditionally carried out through restoration of a previously-existing wetland, creation of a new	X	X	X	X	X	Iowa DNR, Iowa DOT, CCB, Cities	Iowa DNR, Iowa DOT, CCB, Cities

wetland, enhancement of an existing degraded wetland, or preservation of a unique wetland. The Iowa DOT regularly partners with county or state conservation agencies in the development and long-term management of mitigation wetlands.							
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**Program Development Activities for WATER QUALITY STANDARDS Core Element**

**Overall Objective:** Improve and protect the water quality of Iowa wetlands in accordance with the Clean Water Act.

<b>Action: Iowa DNR works to develop a classification and water quality standards system.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Begin wetland classification discussion using Federal definition.		X	X	X		Iowa DNR	None Required
Identify and separate wetlands and shallow lakes from lakes in Iowa's surface water classification.			X			Iowa DNR	None Required
Initiate rulemaking procedures for wetland water quality standards. Timeline to be determined.						Iowa DNR	None Required
Establish reference wetlands for Iowa:							
-Identify candidate reference wetlands.		X	X	X	X	Iowa DNR, Colleges and Universities, NRCS	EPA, Iowa DNR, Colleges and Universities, NRCS
-Habitat metrics – Develop habitat metrics for wetlands.		X	X	X	X	Iowa DNR, Colleges and Universities, NRCS	EPA, Iowa DNR, Colleges and Universities, NRCS
-Develop methodology for determining reference conditions.		X	X	X	X	Iowa DNR, Colleges and Universities, NRCS	EPA, Iowa DNR, Colleges and Universities, NRCS
-Begin establishment of statewide reference wetland dataset.			X	X	X	Iowa DNR	Iowa DNR
Macroinvertebrate index of biological integrity (IBI) – Develop an IBI for wetlands. The IBI quantifies the invertebrate community with respect to its overall tolerance to pollution by summing the tolerances of individual taxa. The goal of establishing an IBI is to provide a tool for characterizing wetland function and condition, and to ultimately develop appropriate numeric water quality criteria.			X	X	X	Iowa DNR, Colleges and Universities	EPA, Iowa DNR, Colleges and Universities

**Program Development Activities for EDUCATION Core Element**

**Overall Objective:** Develop educational strategies that provide state resource managers and citizens with information to protect and promote wetland resources in Iowa.

<b>Action: Participate in meetings, workshops, and outreach activities with interested parties to promote wetland resources.</b>							
<b>Activity</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Potential Partners</b>	<b>Possible Funding</b>
Iowa DNR participates in Association of State Wetland Managers (ASWM) webinars for continuing education and training in wetland science and current resource issues.	X	X	X	X	X	Iowa DNR, ASWM	None Required
Various agencies may provide training on regulatory topics for 404 updates (e.g., delineation, etc.).	X	X	X	X	X	EPA	None Required
Resource-specific training through EPA and ASWM by webinar and class room.	X	X	X	X	X	ASWM, Iowa DNR, EPA	None Required
Conduct wetland education and outreach.	X	X	X	X	X	CCB, INHF, TNC, Colleges and Universities	CCB, INHF, TNC, Colleges and Universities
Conduct Iowa DNR staff education and training in cooperation with Corps on stream and wetland mitigation methods.		X	X	X	X	Iowa DNR, Corps	Iowa DNR, Corps
Promote wetlands-specific education for engineers, architects, and planning and zoning officials working on projects involving Iowa wetlands.	X	X	X	X	X	Colleges and Universities	Colleges and Universities
Develop technical resources on functions and values of wetlands and provide technical support to staff, partners, and private land managers.	X	X	X	X	X	Iowa DNR, USDA, Colleges and Universities	EPA, Iowa DNR, USDA, Colleges and Universities
Promote volunteer wetland monitoring.	X	X	X	X	X	Iowa DNR, Colleges and Universities	Iowa DNR, Colleges and Universities