

Chapter 2. Administration and legal considerations before initiating a project or repair

I. Administration and legal considerations before initiating a project or repair

Summary

Project planning with particular emphasis on environmental resources considerations is necessary in order to shepherd a drainage project or repair to final success. Early assessment and forethought to wetland and natural resources, regulations and coordination with applicable units of government direct the drainage project development or repair process. Several environmental laws, rules, regulations, and ordinances impact the drainage project or repair planning process, including:

- Food Security Act of 1985 and Amendments (“Swampbuster”);
- Clean Water Act;
- Minnesota Environmental Policy Act;
- Minnesota Public Waters and Public Waters Wetlands;
- Minnesota Wetland Conservation Act;
- Shoreland Management and Floodplain Management Standards;
- 2015 Buffer Law;
- State-Approved and Locally Adopted Water Management Plans; and
- Watershed Restoration and Protection Strategies (WRAPS).

A. Introduction to administration and legal considerations before initiating a project or repair

Planning and forethought determine a drainage project’s success or failure. The complexity of pre-petition considerations has increased as government at all levels is now engaged in protecting and restoring water quality, wildlife habitat, wetlands, and other critical natural resources, as well as mitigating downstream flood damages and altered stream flow dynamics. Early consideration of wetland and natural resources regulations and coordination with regulating entities and other interested individuals and organizations can contribute to the ultimate success of drainage projects and other drainage work.



Early consideration of wetland and natural resources regulations can contribute to the ultimate success of drainage projects and other drainage work.

B. Other Environmental Laws, Rules, Regulations, and Ordinances Affecting Drainage

Prior to establishing a drainage project or repair, the drainage authority must consider environmental, land use, and multipurpose water management criteria (as directed by [Minn. Stat. 103E.015](#)). This requires the drainage authority to investigate whether external sources of funding are available for purposes of including wetland preservation or restoration, creation of water quality improvements, flood control, and alternative measures identified in applicable state-approved and locally adopted water management plans. (Chapter 2, Section I, C)

In planning a drainage project or repair, the drainage authority may encounter land owned in fee or subject to a variety of conservation easements managed by the U.S. Fish and Wildlife Service. If the United States acquires property through which a public drainage system exists, the United States acquires that property subject to the drainage system operation in the same manner as the original owner. However, new drainage projects proposing to cross property owned in fee by the United States or subject to a U.S. Fish and Wildlife Service conservation easement may not proceed without consent from the United States. (Chapter 2, Section I, D)

This section addresses environmental laws, rules, regulations, and ordinances that affect the establishment of drainage projects and impact the maintenance and repair of established drainage systems. Understanding the distinction between a drainage project and a repair is important to the application and limitation of environmental regulation. Drainage “projects” include establishment of a new drainage system, an improvement of a drainage system, and improvement of an outlet, or a lateral.¹ Several procedures within the drainage code fall outside the definition of a “project,” including repair of a drainage system, the redetermination of benefits and damages, consideration of a petition to use a drainage system as an outlet, consideration of a petition for removal of property from a drainage system, and consideration of a petition for partial or total abandonment of a drainage system.

1. Food Security Act of 1985 and Amendments (“Swampbuster”)

The wetland conservation compliance provisions of the Food Security Act of 1985, as amended, discourage the conversion of wetlands for the purpose, or to have the effect, of making the production of an agricultural commodity possible.² Under these provisions, commonly known as “Swampbuster,” wetlands are defined as “land that has a predominance of hydric soils, is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions, and under normal circumstances does support a prevalence of such vegetation.”³

Any person who in any crop year produces an agricultural commodity on wetland converted after December 23, 1985, shall be ineligible for United States Department of Agriculture (USDA) program payments or loans for that crop year.⁴ Any person who in any crop year beginning after November 28, 1990, converts a wetland by draining, dredging, filling, leveling, or any other means for the purpose, or to have the effect, of making the production of an agricultural commodity possible on the converted wetland shall be ineligible for USDA payments and loans for that crop year and all subsequent crop years.⁵

Beginning on February 7, 2014, Congress linked eligibility for any portion of the federal crop insurance premium paid by the Federal Crop Insurance Corporation (FCIC) to similar wetland conservation

compliance provisions. Any person who converts a wetland after February 7, 2014, shall be ineligible to receive crop insurance premium subsidies in subsequent reinsurance years.⁶

Certain actions and certain types of wetlands are exempt from the wetland conservation compliance provisions. Prior-converted cropland, for example, is completely exempt from Swampbuster.⁷ Prior-converted cropland is converted wetland where the conversion occurred prior to December 23, 1985, an agricultural commodity had been produced at least once before December 23, 1985, and as of December 23, 1985, the converted wetland did not support woody vegetation and:

- (i) Inundation was less than 15 consecutive days during the growing season or 10 percent of the growing season, whichever is less, in most years (50 percent chance or more); and
- (ii) If a pothole, playa or pocosin, ponding was less than 7 consecutive days during the growing season in most years (50 percent chance or more) and saturation was less than 14 consecutive days during the growing season in most years (50 percent chance or more).⁸

Producers may maintain existing drainage systems on drained wetlands designated as farmed wetlands in the same manner as they did before December 23, 1985, without loss of USDA benefits and federal crop insurance premium subsidies as long as these actions do not drain additional wetlands.⁹ The scope and effect of the original system is the major consideration.¹⁰

In the context of public drainage, Swampbuster wetlands do not impede a project from proceeding. The conversion of the wetland by a drainage authority does not automatically result in the landowner, operator, or tenant's ineligibility¹¹; however, planting on a wetland converted by the drainage authority would trigger the ineligibility rules of the wetland conservation compliance provisions.

The Federal Privacy Act prevents petitioners and drainage authorities from inquiring at the local Natural Resources Conservation Service (NRCS) office as to whether a proposed drainage project will convert wetlands unless the proponent owns or operates the land in inquiry.¹² Therefore, it can be challenging for the drainage authority to determine what the impact on wetlands subject to Swampbuster will be unless the other landowners or operators cooperate in providing that information voluntarily. Many drainage project engineers employ the use of wetland delineators to provide information related to the existence of wetlands on property affected by the proposed drainage project.

2. Clean Water Act

The Clean Water Act provides important protections for wetland resources and a framework for protecting and improving water quality of waters of the United States. Section 404 of the Clean Water Act (CWA) authorizes the United States Army Corps of Engineers (USACOE) to regulate the discharge of dredged or fill material into "waters of the United States" (WOTUS).¹³ Court cases, federal regulations, and guidance and policy documents describe the USACOE's jurisdiction over WOTUS.

A. Section 404 of the Clean Water Act

All three of the following criteria must be met before a Section 404 permit is required for a drainage project:

1. The project must involve work in a WOTUS¹⁴.
2. The work must result in a discharge of dredged or fill material into a WOTUS;¹⁵ and
3. The work resulting in the discharge into a WOTUS must not be exempt.¹⁶

Even if a project is exempt, the “recapture provision” may apply.¹⁷ The following sections provide additional information on those four topics (WOTUS, discharges of dredged or fill material, exemptions, and the recapture provision).

Definition of WOTUS

WOTUS includes navigable waters, their tributaries and most wetlands described in regulation below:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of waters identified in paragraphs (1) through (4) of this section;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section.
8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.¹⁸

In Minnesota, if there is a WOTUS within the area of a drainage project, it is most often a stream, ditch, or wetland. Waters regulated or protected by the state of Minnesota—public waters and public waters wetlands—may be WOTUS. In addition, waters that are not regulated by the state may also be WOTUS.

In 2015, a new definition of WOTUS was jointly issued by the United States Environmental Protection Agency (EPA) and the USACOE. The WOTUS rule was issued in response to 2001¹⁹ and 2006²⁰ United States Supreme Court decisions which raised questions on the extent of the CWA’s jurisdiction.

The rule became effective on August 28, 2015; forty-three days later, however, it was stayed by the Sixth Circuit Court of Appeals.²¹ In the meantime, the USACOE has resumed use of the agencies’ prior

regulations to define WOTUS. The USACOE applies prior regulations, together with relevant case law, applicable policy, and the best available science and technical data to determine which waters are protected by the CWA.²² All approved jurisdictional determinations completed in the St. Paul District are available for viewing here.

As of summer, 2021, the EPA and the Department of the Army announced their intent to revise the definition of "waters of the United States." This undertaking is going to include two rulemakings. The first rulemaking is to repeal and replace the 2020 Navigable Waters Protection rule and re-implement the pre-2015 WOTUS rules, including the Supreme Court decisions. The second rulemaking is to craft a durable definition based on Supreme Court precedent and drawing from the lessons learned from the current and previous regulations.

A proposed rule was announced by the EPA and Department of the Army in November 2021, and on December 7, 2021, [the proposed rule was published in the Federal Register](#), opening a public comment period through February 7, 2022. The agencies propose to put back into place the pre-2015 definition of "waters of the United States," updated to reflect consideration of Supreme Court decisions, for a stable implementation of the rule.

Discharge of Dredged or Fill Material

Determining if the activity proposed to take place in a WOTUS meets the definition of a discharge of dredged or fill material is the second question relevant to determining if a Section 404 permit is necessary.²³

Dredged material is defined as "material that is excavated or dredged from waters of the United States."²⁴ The addition of dredged material into a WOTUS²⁵ includes but is not limited to, the following activities:

- (i) The addition of dredged material to a specified discharge site located in waters of the United States;
- (ii) The runoff or overflow from a contained land or water disposal area; and
- (iii) Any addition, including redeposit other than incidental fallback, of dredged material, including excavated material, into waters of the United States which is incidental to any activity, including mechanized landclearing, ditching, channelization, or other excavation.²⁶

Activities that do not result in the discharge of dredged material include, but are not limited to non-point-source discharges of pollutants into WOTUS²⁷ and cutting or removing of vegetation without mechanized land clearing (e.g., cutting at the stump or mowing) and incidental fallback.²⁸

Fill material is defined as:

... material placed in waters of the United States where the material has the effect of:

- (i) Replacing any portion of a water of the United States with dry land; or
- (ii) Changing the bottom elevation of any portion of a water of the United States.²⁹

Activities resulting in the discharge of dredged or fill material into a WOTUS that may require a permit can include: placement of fill material, side-casting excavated material, levee and dike construction, land

grading/leveling, road construction, placement of riprap, temporary stockpiling, and temporary access roads.³⁰

Exemptions

Although an activity may result in a discharge or dredged or fill material into a WOTUS, it is possible that the project may qualify for an exemption, meaning no Section 404 permit is required. Exempt activities are summarized below:

1. Normal farming, silviculture and ranching activities such as plowing, seeding, cultivating, minor drainage³¹, and harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices . . .³²
2. Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design. Emergency reconstruction must occur within a reasonable period of time after damage occurs in order to qualify for this exemption.³³
3. Construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not construction) of drainage ditches.³⁴
4. Construction of temporary sedimentation basins on a construction site which does not include placement of fill material into waters of the U.S.³⁵
5. Any activity with respect to which a State has an approved program under section 208(b)(4) of the CWA which meets the requirements of sections 208(b)(4) (B) and (C).³⁶
6. Construction or maintenance of farm roads, forest roads, or temporary roads for moving mining equipment, where such roads are constructed and maintained in accordance with best management practices (BMPs).³⁷

To qualify for the farming, silviculture and ranching exemption, the activities must be part of an established (on-going) farming, silviculture, or ranching operation.³⁸ Activities on fallow land that is part of a conventional, rotational cycle is considered an established operation.³⁹ In contrast, when an area will be (or has been) converted to another use or has lain idle so long that modifications to the hydrological regime are necessary to resume operations, activities are no longer a part of an established operation.⁴⁰ Activities which bring an area into farming, silviculture, or ranching use are not part of an established operation.⁴¹

Any work in uplands, such as ditching and tiling, incidental to the planting, cultivating, protecting, or harvesting of crops does not involve a discharge of dredged or fill material into WOTUS and never require a Section 404 permit.⁴² The discharge of dredge or fill material incidental to connecting upland drainage facilities to WOTUS adequate to effect the removal of excess soil moisture from upland crops is exempt.⁴³

Exempt maintenance of drainage ditches involves activities that keep a ditch or drainage system in its as-constructed state or condition or preserve it from failure or decline. For example, excavation of accumulated sediments; restoring a ditch to original contours; re-shaping of ditch side-slopes; bank stabilization using best management practices; armoring, lining and/or piping⁴⁴; and replacement of existing control structures.⁴⁵

Generally, to be considered exempt, drainage ditch maintenance or repairs cannot include new features that would result in increased drainage of previously undrained water or wetland areas.⁴⁶ Replacement of water control structures such as culverts is considered a maintenance activity only if the original function is not changed and original approximate capacity is not increased. If a ditch has not served a drainage function for an extended period of time, ditch re-establishment would, in most cases, be considered construction and ineligible for an exemption. Maintenance of ditches to current engineering standards (often with more graduated side-slopes) is allowed under the exemption, so long as those modifications of the ditch will not result in the drainage, degradation, or destruction of additional natural wetlands or other WOTUS.

In determining if a ditch project is eligible for an exemption, the USACOE will often require an applicant to submit data that supports the proposed ditch maintenance plans. Ideally, construction plans would show that the proposed work would preserve the original, as-built configuration of the ditch and any structures would only restore the original function and the approximate capacity of the ditch. In the absence of as-built plans, soil data is the next best method to recreate the original dimensions of the ditch.

A combination of auger and probe data can be used to determine the original ditch dimensions along with a survey of the current ditch. Culvert elevations can be submitted as a secondary source of information as its reliability as a historical record can vary widely.

Ditch construction activities that are not eligible for the exemption include: ditch relocation; ditch conversion into pipe; ditch re-establishment; placement of new control structures; and ditch lining (placing impervious material such as concrete, clay, or geotextile within the flow perimeter of an open canal, lateral, or ditch with the intent of reducing seepage losses and improving conveyance efficiency). Existing culverts that are modified such that the capacity is increased or the invert is lower than an approved flowline will also require CWA authorization.⁴⁷

Recapture Provision

The recapture provision is a two part test that determines eligibility of a proposed project for a CWA Section 404 exemption. If the answers to both parts are “yes,” a Section 404 permit is required for the activity.⁴⁸

Part one asks: is the discharge part of an activity whose purpose is to convert an area of the WOTUS into a use to which it was not previously subject? This first part of the test is met if there would be a change of use. For example, a permit would be required if a wetland that has been in silvicultural use would then be converted for agricultural purposes, if a discharge of dredged or fill material into WOTUS is used to affect such conversion. A change in use also occurs when there is a “conversion of a section 404 wetland to a non-wetland.”⁴⁹

If part one of the test is met, the USACOE then considers part two of the test: may the activity also impair the flow or circulation of WOTUS or reduce the reach of such waters? The determination as to whether maintenance of a drainage ditch would result in a significant discernible alteration in flow or circulation or a reduction in reach of a WOTUS is made on a case-by-case basis.⁵⁰ Some of the factors the USACOE will consider to answer this question include:

1. Does the proposed ditch maintenance harmfully sever or fragment the wetland or water body;

2. Does the proposed maintenance significantly and discernibly alter flow or circulation or reduce reach through sidestepping into the wetland or water body;
3. Does the maintenance harm the wetland or water body by substantially increasing or decreasing water levels;
4. What is the relative size of the ditch compared to the wetland or water body; and
5. Are the proposed maintenance techniques and BMPs designed to minimize impacts and ensure that there is not significant discernible alteration of flow or circulation or reduction of reach?

Techniques commonly employed to avoid having a ditch maintenance activity trigger the recapture provision include avoiding spreading excavated material in WOTUS and ensuring there are at-grade openings in berms where material is side-cast to avoid altering the flow of water into or out of the ditch.

Section 404 Permits or Exemptions for Drainage Projects

If a Section 404 permit is required, the USACOE St. Paul District has various permit vehicles designed to apply the appropriate level of review for a wide range of projects. A project may qualify for a General Permit (GP), Nationwide Permit (NWP), Letter of Permission (LOP) or Standard Permit (SP), depending on the type and amount of impact proposed. The joint local, state and federal application for wetland and water projects is available here.

If a project proposer or local government would like to know if a ditch, wetland or stream within a review area is a WOTUS, the USACOE permits project proponents to obtain a standalone jurisdictional determination specifying whether a particular property contains WOTUS.⁵¹ A jurisdictional determination may be either “preliminary,” advising the project proponent that such waters “may” be present, or “approved,” definitely stating the presence or absence” of WOTUS.⁵² Jurisdictional determinations are subject to judicial review under the Administrative Procedures Act.⁵³

Determinations on whether a project qualifies for an exemption can be quick if an applicant provides all necessary as-built information. Three to four months is normally required to process a routine application involving a public notice. GP or NWP permit reviews normally do not require public notices and can often be issued faster. Applicants are encouraged to apply as early as possible to be sure all required approvals are in place before the planned project start date. Delays may occur as a result of additional coordination the USACOE is required to conduct to under the Endangered Species Act, Historic Preservation Act, Section 14 Rivers and Harbors Act and to comply with Executive Orders.

It is highly recommended that project proposers contact the USACOE to schedule a pre-application consultation meeting during the early planning phase of a project. Pre-application meetings help applicants understand if the USACOE believes the proposed project requires a Section 404 permit or if it eligible for an exemption.

B. Water Quality Standards

The central purpose of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”⁵⁴

Major CWA programs include:

1. Establishment of water quality standards (WQS) and anti-degradation policy;⁵⁵
2. Monitoring and assessment of surface waters;⁵⁶
3. Section 319 nonpoint source pollution management and funding program;⁵⁷

4. Preparation of restoration plans through the establishment of total maximum daily loads (TMDLs);⁵⁸
5. The National Pollutant Discharge Elimination System (NPDES) permit program for discharges from point sources;⁵⁹
6. The section 404 program regulating discharge of dredged or fill materials to wetlands and other waters;⁶⁰ and
7. The section 401 program which certifies compliance with state water quality standards for section 404 permits.⁶¹

Minnesota has adopted (and EPA has approved) WQS consistent with the statutory goals of the CWA.⁶² Water bodies are monitored to determine whether the WQS are met. If a water body is not meeting WQS, it is placed on the 303(d) list of impaired waters⁶³ and a TMDL must be prepared that allocates acceptable loads among sources of the relevant pollutants causing the impairment.⁶⁴ The portion of pollution loading allocated to nonpoint sources (including agricultural runoff) is called the “load allocation.” Drainage authorities should be aware of TMDLs related to areas within proposed drainage projects and the downstream watersheds to understand potential flow and water quality impacts of the proposed project, and how the project impacts may affect the TMDL. Minnesota incorporates TMDLs into Watershed Restoration and Protection Strategies (WRAPS). WRAPS are discussed below in Subparagraph 8. By building an awareness of these critical water quality issues, drainage system design decisions can incorporate techniques to mitigate flow and water quality impacts through the use of best management practices (BMPs).

3. Minnesota Environmental Policy Act

The Minnesota Environmental Policy Act (MEPA) was enacted to (a) to declare a state policy that will encourage productive and enjoyable harmony between human beings and their environment; (b) to promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of human beings; and (c) to enrich the understanding of the ecological systems and natural resources important to the state and to the nation.⁶⁵

Minnesota’s Environmental Quality Board administers implementation of MEPA, including environmental review. The Environmental Quality Board defines the purpose of environmental review as “to avoid and minimize damage to Minnesota’s environmental resources caused by public and private actions.”⁶⁶

MEPA may require that an Environmental Assessment Worksheet (EAW) or and Environmental Impact Statement (EIS), or both, be prepared for certain drainage work. This requirement may be 1) mandatory by rule or 2) upon the decision of the responsible government unit. By rule, the Environmental Quality Board has established categories of actions for which environmental impact statements and environmental assessment worksheets are mandatory and categories of actions for which no environmental review is required.⁶⁷ The process for responsible government unit decision-making is described in the Guide to Environmental Review available here.

If an EAW or an EIS is required, a project may not be started and a final government decision may not be made to grant a permit, approve a project, or begin a project until:

1. The petition for an environmental assessment worksheet is dismissed;
2. A negative declaration has been issued on the need for an environmental impact statement;

3. The environmental impact statement has been determined adequate; or
4. A variance has been granted from making an environmental impact statement by the Environmental Quality Board.⁶⁸

MEPA also provides that: “No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state’s paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct.”⁶⁹

The Minnesota Supreme Court has held that repair projects are not exempt from MEPA.⁷⁰

Guidance on environmental review is available [here](#).

Environmental Impact Statements

Where there is potential for significant environmental effects resulting from any major governmental action, the action must be preceded by a detailed EIS prepared by the responsible government unit.⁷¹ The EIS must describe the proposed action in detail, analyze its significant environmental impacts, discuss appropriate alternatives to the proposed action and their impacts, and explore methods by which adverse environmental impacts of an action could be mitigated.⁷²

Government action is defined to mean “activities, including projects wholly or partially conducted, permitted, assisted, financed, regulated, or approved by units of government including the federal government.”⁷³

The drainage authority is the responsible government unit for drainage work. If an EIS is necessary, drainage work “may not be started and a final governmental decision may not be made to grant a permit, approve a project, or begin a project, until the environmental impact statement has been determined adequate; or a variance has been granted from making an environmental impact statement by the environmental quality board.”

An EIS is not a decision-making document. It does not and cannot prohibit a project from proceeding. Rather an EIS is an informational document. An EIS examines the environmental consequences of an action, explores alternatives, and suggests measures that could be helpful in mitigating any adverse environmental impact caused by the action.⁷⁴

Mandatory Environmental Impact Statements

By rule, the Environmental Quality Board has established categories of actions for which an EIS must be prepared as well as categories of actions for which no EIS is required.⁷⁵

A mandatory EIS is required for drainage work that will eliminate a public water or public waters wetland.⁷⁶

While there is an exemption from environmental review for “routine maintenance or repair of a drainage ditch within the limits of its original construction flow capacity, performed within 20 years of construction or major repair,” this exemption does not apply to activities that are in a mandatory environmental impact statement category.⁷⁷

The cost of preparing an EIS is borne by the entire drainage system as are all other costs of repair.⁷⁸

[EIS Required by Positive Declaration on an EAW](#)

Once a responsible government unit has completed an EAW (see discussion below), it must make a decision on the need for an EIS. If the decision is a positive one, the EIS is prepared just as it would be for a mandatory EIS.

[Environmental Assessment Worksheets](#)

An EAW is required when drainage work may have potential for significant environmental effects.⁷⁹ An EAW may be mandatory by rule, or petitioned for by 100 individuals who reside or own property in the state.

[Mandatory Environmental Assessment Worksheets](#)

At least two mandatory EAW categories are applicable to drainage work. These apply to projects:

That will change or diminish the course, current or cross-section of one acre or more of any public water or public waters wetland except for those to be drained without a permit pursuant to Minnesota Statutes, chapter 103G; or

That will change or diminish the course, current or cross-section of 40 percent or more or five or more acres of types 3 through 8 wetland of 2.5 acres or more, excluding public waters wetlands, if any part of the wetland is within a shoreland area, delineated flood plain, a state or federally designated wild and scenic rivers district, the Minnesota River Project Riverbend area, or the Mississippi headwaters area.⁸⁰

[EAW by Petition](#)

Petitioned for EAWs are provided for under Minn. Stat. § 116D.04, subd. 2a(c): “An environmental assessment worksheet shall also be prepared for a proposed action whenever material evidence accompanying a petition by not less than 100 individuals who reside or own property in the state, submitted before the proposed project has received final approval by the appropriate governmental units, demonstrates that, because of the nature or location of a proposed action, there may be potential for significant environmental effects. Petitions requesting the preparation of an environmental assessment worksheet shall be submitted to the Environmental Quality Board. The chair of the board shall determine the appropriate responsible governmental unit and forward the petition to it. A decision on the need for an environmental assessment worksheet shall be made by the responsible governmental unit within 15 days after the petition is received by the responsible governmental unit. The board's chair may extend the 15-day period by not more than 15 additional days upon request of the responsible governmental unit.”

In most cases the drainage authority will be the responsible government unit for drainage work.

Once an EAW is completed, the responsible government unit must promptly publish notice of the completion of an EAW by publishing the notice in at least one newspaper of general circulation in the geographic area where the project is proposed, by posting the notice on a web site that has been designated as the official publication site for publication of proceedings, public notices, and summaries of a political subdivision in which the project is proposed, and shall provide copies of the EAW to the Environmental Quality Board and its member agencies.⁸¹ Publication of the notice starts a 30-day period for the submission of comments to the responsible government unit on the need for an EIS.⁸² Within 15

days of the close of the comment period, the responsible government unit shall make a decision on whether an EIS is needed based on the EAW and the comments received.⁸³

Despite the statutory mandate that public drainage authorities maintain the drainage systems located in their jurisdiction, the Minnesota Supreme Court has held that repair projects are not exempt from the MEPA.⁸⁴

4. Public Waters and Public Waters Wetlands

The Minnesota Department of Natural Resources (DNR) administers a number of laws to protect the state's water resources. As discussed below, some of these laws affect drainage work.

Definition of Public Waters and Public Waters Wetlands

A "public waters"⁸⁵ or "public waters wetland" may not be drained unless authorized by a DNR permit and replaced by public waters that will have equal or greater public value.⁸⁶ Any person proposing to "change or diminish the course, current, or cross section of public waters, entirely or partially within the state, by any means including filling, excavating, or placing of materials in or on the beds of public waters" (which includes the act of draining or partially draining a lake or wetland) must first obtain a public waters work permit from the DNR.⁸⁷

The state's jurisdiction for public waters and public waters wetlands is to the ordinary high water level (OHWL)⁸⁸, which is defined as the highest point where water levels have "been maintained for a sufficient period of time to leave evidence upon the landscape, commonly the point where the natural vegetation changes from predominately aquatic to predominately terrestrial."⁸⁹ For watercourses, the OHWL is "the elevation of the top of the bank of the channel."⁹⁰ For reservoirs and flowages, the OHWL is "the operating elevation of the normal summer pool."⁹¹

The DNR maintains a public waters inventory (PWI) map for each county which shows the waters of the state within the county which are public waters of the state of Minnesota.⁹² Approximate boundaries of lakes, watercourses, altered natural watercourses, and wetlands that fall within the definition of public waters are shown on statewide PWI maps. These boundaries do not represent the OHWL, which must be established by field survey for each public water. The maps were established by DNR during the inventory process in 1979 through the early 1980s and are subject to revision to correct inventory errors.⁹³ Copies of the original scanned PWI maps are available for viewing at the county auditors' offices; DNR Division of Ecological and Water Resources, at DNR's central, regional, and area offices; soil and water conservation district offices; and watershed district offices. You may also view the original scanned PWI maps and updated GIS-based PWI maps (as they become available) online here.

DNR Permits and Permissions for Drainage Project

Drainage work under Minn. Stat. § 103E may require a DNR permit under [Minn. Stat. § 103G.245](#) or a DNR permission under [Minn. Stat. § 103E.011](#), or both.

A. DNR Permission

Under [Minn. Stat. § 103E.011, subd. 3](#), the drainage authority "must receive permission from the DNR Commissioner to: (1) remove, construct, or alter a dam affecting public waters; (2) establish, raise, or lower the level of public waters, or (3) drain any portion of a public water."⁹⁴

B. DNR Permit

Public drainage activities may also require public waters work permits if they fail to meet the exceptions for a public water work permit set forth in [Minn. Stat. § 103G.245, subd. 2](#). The Supreme Court of the State of Minnesota has said that a drainage authority has no jurisdiction to establish a drainage project affecting public waters where no permit has been obtained from the DNR.⁹⁵

There are two exceptions to the public waters permitting requirements for drainage systems: (1) work in altered natural watercourses that are part of a drainage system established and undertaken pursuant to Minn. Stat. 103D or 103E and (2) a drainage project for a drainage system established under chapter 103E that does not substantially affect public waters.⁹⁶ While the term “substantially affect public waters” is not defined, a number of courts have addressed the term. What constitutes a substantial effect depends on the facts surrounding the impacts of the proposed drainage project.⁹⁷ In addition, DNR excavation rules allow certain minor actions without a permit.⁹⁸ Conditions found to be substantial effects include: a project that drains a lake during dry periods,⁹⁹ changes in a drainage system that cause a wetland to be reclassified from public waters wetland to a non-public water wetland,¹⁰⁰ and a project that causes increased flow and erosion in a public water, lowering a brook bed and a downstream lake¹⁰¹.

The fact that a public waters work permit is not required does not relieve the drainage authority or the DNR of their statutory obligations pursuant to [Minn. Stat. § 103E.011](#).

Additional Requirements for Drainage of Public Waters Wetlands

[Minn. Stat. § 103G.225](#) directs the state to provide for necessary work to allow proper use and maintenance of the drainage system, while still preserving the public waters wetlands, where public waters wetlands are located on or adjacent to existing public drainage systems.

[Minn. Stat. § 103G.221](#) prohibits the DNR from issuing a permit draining a public water wetland for whatever purpose unless the public waters wetlands to be drained are “replaced by wetlands that will have equal or greater value.” A public water wetland is defined as all types 3, 4, and 5 wetlands as defined by the U.S. FWS Circular No. 39 (1971), not included within the definition of public waters, that are ten acres in size in unincorporated areas or 2 ½ acres or more in incorporated areas and designated on the PWI map and list for each of the 87 Minnesota counties.¹⁰²

Repairs that May Affect Public Waters

Before a repair is ordered, the drainage authority must notify the DNR if the repair may affect public waters.¹⁰³ It is recommended that the drainage authority contact the area hydrologist before undertaking a repair.

A repair should, as nearly as practicable, be to the same hydraulic capacity as constructed and subsequently improved according to the procedures set forth in Minnesota Statute chapters 103E and/or 103D.¹⁰⁴ This provides assurance that the repair will retain the hydrology of the public waters in the state as it existed when the drainage system was established or subsequently improved.

Defining the Repair Configuration

The drainage authority should document or establish, based on best evidence, the as-constructed and subsequently improved configuration (“ACSIC”) of the drainage system for repairs under Minn. Stat. §

103E.701 that are conducted along public waters or public waters wetlands. This will enable the drainage authority and DNR to determine if the proposed repair will affect public waters.

The best evidence of the ACSIC is an as-constructed survey of the ditch. These documents are required to be maintained by the drainage authority.¹⁰⁵ In the absence of an as-constructed survey, the drainage authority will have to reconstruct the drainage system records including a survey of the ditch to determine the ACSIC, including alignment, dimension, grade and hydraulic capacity of crossing.¹⁰⁶

This procedure must involve, at a minimum, investigation and a report of findings by a professional engineer licensed in Minnesota supported by existing records and evidence, “including, but not limited to applicable aerial photographs, soil borings or test pits, culvert dimensions and invert elevations, and bridge design records. The existing and reestablished records together must define the alignment; cross-section; profile; hydraulic structure locations; materials; dimensions; and elevations.”¹⁰⁷ For more information on the process of reestablishing public drainage system records, see Chapter 2, Section III, H. Reestablishment of Drainage System Records.

Issues may arise between DNR and the drainage authority regarding the allowable configuration that meets the definition of “repair.” In such a case, the appropriate mechanism to resolve disagreements between the drainage authority and the DNR is the process established by [Minn. Stat. § 103E.701, subd. 2](#). If the Commissioner disagrees with the drainage authority’s representation of the repair depth, the drainage authority engineer, a representative appointed by the DNR Director of Ecological Services and Water Resources, and a soil and water conservation district technician must jointly determine the repair depth using soil borings, field surveys, and other available data or appropriate methods. The drainage authority may accept the joint recommendation and proceed with the repair.¹⁰⁸

Public Waters Work Permit Exemptions for Repairs and Projects

Drainage repairs conducted in an altered natural water course do not require a public waters permit if the repairs are performed in compliance with Minnesota Statute chapters 103E or 103D.¹⁰⁹ As noted in the footnote, this permitting exemption is both statutory and rule-based. This exemption applies solely to work done in public waters that are altered natural water courses and does not authorize unpermitted work in public waters that are not altered natural water courses.¹¹⁰

1. Notwithstanding the exception in Minn. Stat. § 103G.245, subd. 2, a repair is prohibited if the excavation proposed as part of the drainage system repair:
2. Will be detrimental to significant fish and wildlife habitat and there are no feasible, practical, or ecologically acceptable means to mitigate the effects;¹¹¹
3. Will take a federal or state threatened or endangered species¹¹² listed in either the Federal Endangered Species List¹¹³ or the State Endangered Species List¹¹⁴;
4. Will not provide an effective solution to a problem because of recurrent sedimentation and there are feasible and practical alternative solutions which do not require excavation¹¹⁵;
5. Does not include provisions for acceptable disposal of excavated materials¹¹⁶; or
6. Will cause increased seepage of water which would lower the water level of public waters and result in subsurface drainage.¹¹⁷

DNR guidance provides that no public waters permit is required for maintenance excavation in an altered natural watercourse so long as the spoil materials resulting from the maintenance work are placed upon a previously constructed dike or berm. Therefore, non-organic spoils removed from the

basin during repairs must be disposed of outside of the public water except where the spoils are placed upon a previously created dike or berm without expanding the footprint of the dike or berm within the public water.

The above-listed criteria provide a prudent checklist for the drainage authority and its engineer when planning for and designing a repair. They also provide a framework within which drainage authority coordination with the DNR should occur.

5. Wetland Conservation Act

The Minnesota Wetland Conservation Act (WCA) intersects directly with drainage projects. Project proposers should become familiar with WCA's requirements and exemptions.

WCA regulates activities that result in the draining, filling, or excavation of wetlands.¹¹⁸ WCA applies to all wetlands, except public waters wetlands shown on DNR's PWI inventory maps.¹¹⁹ The purpose is to retain the important benefits of wetlands and to comply with the legislative intent of "no net loss" in quality, quantity, and biological diversity of existing wetlands. WCA requires that impacts to wetlands be avoided and minimized where possible. Unavoidable impacts to wetlands must be replaced by restoring or creating wetland of equal or greater public value.

The Board of Water and Soil Resources (BWSR) has overall administrative oversight of the rule, while local units of government are responsible for implementation including making decisions on applications.¹²⁰

The law also recognizes differences in Minnesota's geography by dividing the state into pre-settlement zones based on wetlands that existed at time of statehood.¹²¹ Counties are classified in categories of less than 50 percent of the pre-settlement area intact, 50 to 80 percent of the pre-settlement area intact, and greater than 80 percent of the pre-settlement area intact. Each of these geographic areas are treated slightly differently in determining allowable wetland impacts under the de minimus exemption; determining replacement ratios; and in the siting of replacement wetlands. To view the map, [click here](#).

The jurisdictional boundary of a wetland is determined using the 1987 United States Army Corps of Engineers Wetland Delineation Manual.

The method uses an indicator base methodology to determine if a wetland is present and the extent of its boundaries.

WCA does not prevent the use of the bed of wetlands for pasture or cropland during dry periods if dikes, ditches, tile lines, or buildings are not constructed or improved and the agricultural use does not impact the wetlands.¹²² WCA also does not regulate impacts to incidental wetlands, which are wetland areas that the landowner can demonstrate, to the satisfaction of the local government unit, were created in non-wetland areas solely by actions, the purpose of which was not to create the wetland.¹²³ Incidental wetlands include drainage ditches, impoundments, or excavations constructed in non-wetlands solely for the purpose of effluent treatment, containment of waste material, storm water retention or detention, drainage, soil and water conservation practices, and water quality improvements and not as part of a wetland replacement process that may, over time, take on wetland characteristics.¹²⁴ Though excavation in wetlands is generally covered by the WCA, the coverage is limited to the permanently and semi-permanently flooded areas of type 3, 4, or 5 wetlands, and in all wetland types if the excavation results in filling, draining, or conversion to non-wetland.¹²⁵

WCA also includes a number of categories of activities that are exempt from regulations allowing certain projects with minimal impacts to proceed without replacement.

An impact is exempt from replacement if it qualifies for any one of the listed exemptions found in [Minn. R. 8420.0420](#). An impact is not disqualified when it is indicated as not exempt under a different exemption. When the total amount of impact exceeds the amount allowed under the applicable exemption, the impact is not exempt and the entire amount of impact must be replaced.¹²⁶

No exemptions apply to: calcareous fens as identified by the commissioner; wetlands that have been deposited in the state wetland bank; wetlands that have previously received replacement credit as a result of an approved replacement or banking plan; or wetlands that were partially impacted, so that the remainder would be eligible for an exemption.¹²⁷ The person proposing to impact a wetland bears the burden of demonstrating that the impact is exempt.

There is a replacement exemption for draining or filling of wetlands resulting from maintenance and repair of existing public drainage systems, but it does not apply to types 3, 4, and 5 wetlands that have been in existence for more than 25 years. ([Minn. Stat. § 103G.2241, subd. 2\(c\)](#)).

When a drainage project will result in unavoidable impacts to wetlands protected by WCA, the drainage authority must obtain approval of a wetland replacement plan from the appropriate local government unit.¹²⁸

Contractors who conduct projects that will impact a wetland are required to notify the local unit of government by completing a Landowner Statement and Contractor Responsibility Form.¹²⁹

Various wetland forms and guidance are available on BWSR's website.

6. Shoreland Management and Floodplain Management

Minnesota Statute [Chapter 103F](#) contains the State's Floodplain¹³⁰ and Shoreland¹³¹ programs,¹³² each of which may impact drainage project planning. The legislature authorized the DNR to promulgate minimum development standards for each program, and then ensure that those minimum standards were adopted and enforced by local units of government via their zoning, subdivision, and/or building code regulations.

Once adopted, these (or any other) local government land use regulations may require a permit from the local government for the excavation, grading/filling, or other construction proposed by the drainage authority. These state-mandated land use programs are generally adopted by municipalities for incorporated areas or county government for unincorporated areas. Each local unit of government may have adopted slightly different zoning, subdivision, or building code regulations. Project proposers are advised to meet with staff of all local governments in the project area to understand how each community's floodplain and shoreland regulations may apply in the project area.

The Shoreland Management rules promulgated by DNR are found in [Minn. R. Part 6120](#) and apply to the shoreland of the state's public waters¹³³. "Shoreland" is defined to be that area of land located within 1,000 feet of the normal high watermark of a lake, pond, or flowage and 300 feet of a river or stream or the landward side of a floodplain delineated by ordinance on the river or stream, whichever is greater.¹³⁴

The removal of logs and dead trees and branches from the shoreland is exempt from any permit requirements, unless otherwise required by a local government unit.¹³⁵

[Minn. Stat. § 103F.101](#) to [Minn. Stat. § 103F.151](#) require local units of government to adopt, administer, and enforce floodplain management ordinances.¹³⁶ The ordinances must include the following: (1) the delineation of floodplains and floodways; (2) the preservation of the capacity of the floodplain to carry and discharge regional floods; (3) the minimization of flood hazards; and (4) the regulation of the use of land in the floodplain.¹³⁷

If a floodplain has been delineated by a floodplain management ordinance, alteration to a structure in existence on the effective date of the ordinance or a new fill structure, deposit, or other floodplain use that is not in accordance with the local government unit's adopted floodplain management ordinance may not be permitted after the effective date of the ordinance delineating the floodplain.¹³⁸

7. 2015 Buffer Law

By November 1, 2018, all open ditch drainage systems must have a 16.5 foot minimum width continuous buffer of perennially rooted vegetation.¹³⁹ If the drainage system is also public waters, it will require a 50-foot average width, 30-foot minimum width, continuous buffer of perennially rooted vegetation.¹⁴⁰ When damages are determined to acquire or otherwise provide compensation for buffer strips, the viewers and the drainage authority must consider the land use prior to the buffer strip installation in determining the fair market value of the property.¹⁴¹

8. Water Quality Laws

State-Approved and Locally Adopted Water Management Plans

Before establishing a drainage project, the drainage authority must consider alternative measures, including measures identified in applicable state-approved and locally adopted water management plans to:

1. Conserve, allocate, and use drainage waters for agriculture, stream flow augmentation, or other beneficial uses;
2. Reduce downstream peak flows and flooding;
3. Provide adequate drainage system capacity;
4. Reduce erosion and sedimentation; and
5. Protect or improve water quality.¹⁴²

In considering alternative measures, the drainage authority is directed by language in [Minn. Stat. § 103E.015](#) to consider alternative measures identified in applicable state-approved and locally adopted water management plans. The primary state-approved, locally adopted water management plans are the County Comprehensive Local Water Management Plans¹⁴³ or the One Watershed One Plan.¹⁴⁴

As a general-purpose unit of government, counties, with their planning and land-use authorities, are uniquely positioned to link many land-use decisions with local goals for surface and groundwater protection and management. Through the Comprehensive Local Water Management Act (Act),¹⁴⁵ counties are encouraged to make this link through the development and implementation of comprehensive local water management plans (county water plans).

According to the Act, these county water plans must:

1. Cover the entire area within a county;
2. Address water problems in the context of watershed units and groundwater systems;
3. Be based upon principles of sound hydrologic management of water, effective environmental protection, and efficient management; and
4. Be consistent with local water management plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or groundwater system.

County Commissioners also are responsible for appointing watershed district managers.

BWSR has a role in local planning. That role is to ensure that county water plans are prepared and coordinated with existing local, and state efforts; and that plans are implemented effectively. BWSR fulfills this role through Board review and approval of the plans while BWSR staff members provide overall program guidance, process affiliated grants, and provide plan review and comments.

All parts of Minnesota have state-approved and locally-adopted county water plans in place. However, water management in Minnesota recently began an evolution towards watershed-based, rather than jurisdictional based water plans.

One Watershed One Plan is the watershed-based evolution of the County Comprehensive Local Water Management Plans. Rooted in Minnesota's long history of water management by local government, the Local Government Water Roundtable (Association of Minnesota Counties, Minnesota Association of Watershed Districts, and Minnesota Association of Soil and Water Conservation Districts) recommended in 2011 that the local governments charged with water management responsibility should organize and develop focused implementation plans on a watershed scale. One Watershed One Plan, authorized by the Minnesota Legislature in 2013, encourages local governments to transition local water management plans to a watershed approach. In 2014 and 2015, BWSR worked with 5 pilot watersheds. A statewide program based on the experience with the pilot watersheds will be operational in early 2016.¹⁴⁶

The pilot program resulted in recommendations that plans developed through One Watershed, One Plan build off existing local water management plans and priorities, existing and new studies and data, Watershed Restoration and Protection Strategies (WRAPS) and other related plans from state agencies. Some examples of these plans include: MDA State Nitrogen Management Plan, MPCA State Nutrient Reduction Strategy, DNR Prairie Conservation Plan, Minnesota Department of Health Wellhead Protection Plans, and the Metropolitan Council 2030 Water Resources Management Policy Plan. Development of One Watershed One Plans will be locally-led; and will be watershed-based with prioritized, targeted, and measurable implementation actions.

BWSR recognizes that reorganization of the state's watershed planning efforts will take time. A transition period of 10 years is anticipated for: completion of a comprehensive assessment of Minnesota watersheds and development of WRAPS by major watershed by the PCA. These strategies will be followed by BWSR-supported, locally-led collaborative development of watershed-based plans.

The goals for One Watershed, One Plan are:

1. Acknowledge and build off of existing local government structure, water plan services, and capacity;

2. Incorporate and make use of data and information including newly developed Watershed Restoration and Protection Strategies;
3. Clearly identify the responsibilities and actions necessary to achieve the goals of the plan;
4. Solicit input from and engages experts from agencies, citizens, and stakeholder groups;
5. Consolidate the number of water plans from over 200 to less than 100; and
6. Focus on implementation actions that are prioritized, targeted, and measurable.

Watershed Restoration and Protection Strategies (WRAPS)

Watershed Restoration and Protection Strategies (WRAPS) are developed cooperatively by state agencies and local Soil and Water Conservation Districts. WRAPs include detailed local strategies for alternative measures to reduce erosion and sedimentation, and protect and improve water quality. These plans include local implementation strategies for use of best management practices (BMPs) and associated acreages needing various types of drained-land BMPs, such as controlled drainage on slopes less than one percent, drainage waters treated in constructed wetlands, cover crops on tilled lands and geologically sensitive lands, and/or saturated buffers to treat drainage waters before discharging into ditches and streams.

WRAPS are authorized by the Clean Water Legacy Act (CWLA)¹⁴⁷ and funded by the Clean Water, Land, and Legacy Amendment. In combination, the CWLA and the Legacy Amendment (through the Clean Water Fund) has changed how Minnesota approaches water quality, allowing a systematic approach to addressing water quality in our state. Minnesota's watershed program has evolved to a watershed approach that leads to comprehensive restoration and protection strategies for each of the state's major watersheds (HUC8) described in comprehensive watershed management plans (e.g., One Watershed One Plan). The WRAPS process streamlines water management by systematically and predictably delivering data, research, and analysis and empowering local action. The WRAPS approach assesses all lakes and streams within a watershed and focuses on restoring water quality and protecting healthy waters.

Minnesota's watershed approach involves land and water managers at all scales. Public drainage system authorities can help meet the watershed approach objective of integrating hydrologic management systems into watershed plans. Drainage authorities can also play a key function in ongoing water management implementation, which can affect both the system itself, and downstream receiving waters. To fulfill this role, drainage authorities should understand the basic concepts in the watershed approach.

The watershed approach consists of the following steps:

1. Understand and build on ongoing local implementation;
2. Intensive water monitoring and assessment (physical, chemical and biological) to determine if rivers and lakes meet water quality standards;
3. Water resource characterization and problem identification. This critical step involves identifying conditions that stress or degrade the aquatic community (fish and bugs), as well as healthy conditions that foster them. This may include the development of TMDLs if monitoring and assessment has identified rivers and lakes that do not meet water quality standards;
4. Developing Watershed Restoration and Protection Strategies (WRAPS), which include identification of the extent, locations, and types of actions that point and nonpoint sources of

- pollution should undertake to reduce pollutant loading in order to protect and restore rivers and lakes. WRAPS also includes any applicable TMDLs and a 10-year implementation timeline; and
5. Implementing changes by conducting projects and leading efforts to restore and protect waters through local water plans.

The watershed approach is coordinated by several state agencies (e.g., MPCA, BWSR, DNR), however, the process relies heavily on local partners, such as SWCDs, WDs, and WMOs. Local partners, including drainage authorities, take the lead in the last step—implementation. Local partners and the MPCA seek input from citizens, agricultural landowners and others throughout the process. This approach develops strategies based on local data and sound science that can lead to targeted action to protect and restore Minnesota waters into the future. WRAPS include local implementation strategies for use of best management practices (BMPs), including agricultural conservation practices.¹⁴⁸ Relating this to agricultural drainage, a WRAPs can estimate associated acreages needing various types of drained-land BMPs, such as controlled drainage on slopes less than one percent, drainage waters treated in constructed wetlands, cover crops on tiled lands and geologically sensitive lands, or saturated buffers to treat drainage waters before discharging into ditches and streams. The developing process to use a “treatment train” or sequence of practices, is strongly suggested and discussed further in Chapter 5.

When a drainage authority is assessing how to meet the multipurpose water management criteria of Minn. Stat. § 103E.015, consideration should be given to the drained-land BMP needs identified in WRAPS reports and any relevant local planning strategies.¹⁴⁹ These BMP needs were developed for specific watersheds from the scientific information summarized in the WRAPS. The WRAPS also include specific pollutant reduction targets in TMDLs needed to restore water quality so that, over time, standards are met. These plans and strategies also typically estimate the number of BMPs and associated acreages needing various types of treatment. When BMPs are needed on fields outside of the public drainage system to meet water quality goals, the public drainage system authorities for the project should inform land owners who use the public drainage system of the specific field BMP adoption goals for collectively achieving water quality objectives.

C. Consideration of Income Generating Alternatives

Before establishing a drainage project, [Minn. Stat. § 103E.015](#) requires drainage authorities to consider environmental, land use, and multipurpose water management criteria. ([Minn. Stat. § 103E.015, subd. 1](#)).

When planning a drainage project, or a repair by petition under [Minn. Stat. § 103E.715](#), the drainage authority must investigate the potential use of external sources of funding for the purposes of wetland preservation or restoration, creation of water quality improvements, flood control, and alternative measures, including measures identified in applicable state-approved and locally adopted water management plans. ([Minn. Stat. § 103E.015, subd. 1a](#)). The use of external sources of funding is authorized in [Minn. Stat. § 103E.011, subd. 5](#) and alternative measures refers to the multipurpose water management criteria listed in [Minn. Stat. § 103E.015, subd. 1 \(2\)](#). It is recommended that this investigation take place as early as possible in the drainage project or repair planning and proposal process. Early coordination with the soil and water conservation district, county, and watershed district water planning authorities is required and must take place prior to making an order on the engineer’s preliminary survey report for a drainage project or the engineer’s report for a petitioned repair ([Minn. Stat. § 103E.015, subd. 1a](#)). However, proponents of drainage projects and repairs (petitioned, or not)

are encouraged to consider potential external funding sources much earlier in the process. Additional information about potential funding or technical assistance for wetland preservation or restoration, creation of water quality improvements, flood control, and alternative measures may be requested from BWSR. ([Minn. Stat. § 103E.015, subd. 1a](#)).

The DNR Commissioner's Preliminary Advisory Report must state any additional investigation that should be done relating to the environmental, land use and multipurpose water management criteria in [Minn. Stat. § 103E.015, subd. 1](#) ([Minn. Stat. § 103E.255](#)). Again, however, proponents of drainage projects or repairs are encouraged to investigate potential external funding sources much earlier in the process.

[Minn. Stat. § 103E.011, subd. 5](#) provides for the use of external sources of funding for drainage work as follows: "a drainage authority may accept and use funds from sources other than, or in addition to, those derived from assessments based on the benefits of the drainage system for the purposes of wetland preservation or restoration or creation of water quality improvements or flood control. The sources of funding authorized under this subdivision may also be used outside the benefited area but must be within the watershed of the drainage system."

[Minn. Stat. § 103E.015 subd. 1a](#) requires the drainage authority to investigate potential use of external sources of funding and technical assistance as follows: "When planning a drainage project or a repair under section [Minn. Stat. § 103E.715](#), and prior to making an order on the engineer's preliminary survey report for a drainage project or the engineer's report for a repair, the drainage authority shall investigate the potential use of external sources of funding to facilitate the purposes indicated in section [Minn. Stat. § 103E.011, subd. 5](#), and alternative measures in subdivision 1, clause (2). This investigation shall include early coordination with applicable soil and water conservation district and county and watershed district water planning authorities about potential external sources of funding and technical assistance for these purposes and alternative measures. The drainage authority may request additional information about potential funding or technical assistance for these purposes and alternative measures from the executive director of the Board of Water and Soil Resources."

The following are some of the sources of funding and technical assistance that may be available to accomplished multi-purpose water management benefits.

(i) [United States Department of Agriculture Conservation Reserve Program](#)

The Conservation Reserve Program (CRP) pays a yearly rental payment in exchange for landowners removing environmentally sensitive land from agricultural production and planting species that will improve the environmental quality.

To be eligible for CRP enrollment, land must be either cropland that is planted to an agricultural commodity in 4 of the previous 6 crop years from 2008 to 2013, and which is physically and legally capable of being planted in a normal manner to an agricultural commodity or certain marginal pastureland that is suitable for use as a riparian buffer or for similar water quality purposes.

There is no obligation to continue keeping the lands out of production after the expiration of the ten-year contract. Land enrolled under wetland criteria will retain the original wetland designation when the contract expires.

For more information, the local Farm Service Agency office or local Natural Resources Conservation Service office should be contacted.

(ii) Board of Water and Soil Resources' Wetland Reinvest in Minnesota Program

The BWSR administers several programs dealing with wetland restoration and preservation. The program most related to drainage projects is the Reinvest in Minnesota (RIM) Reserve program.

RIM Resources Act was adopted in 1986 to restore marginal and environmentally sensitive agricultural land in order to protect soil and water quality and support fish and wildlife habitat.¹⁵² It is implemented in cooperation with county SWCD's. The RIM Reserve program compensates landowners for granting conservation easements and establishing native vegetation habitat on economically marginal, flood-prone, environmentally sensitive or highly erodible lands. The program focuses on permanent wetland restoration, adjacent native grassland wildlife habitat complexes, and permanent riparian buffers.

The intent is to restore wetlands by plugging ditches, blocking or altering subsurface drainage systems, or using other methods to re-establish the wetland areas. All restoration will be completed on private land after limited land rights have been acquired with a perpetual easement. The landowner will receive a one-time lump sum payment for conveying the easement to the state.

All construction costs are covered by the RIM Reserve program and other agencies or private organizations. The minimum wetland restoration size is one acre, along with up to six acres of cropped upland for each acre of wetland restored. The landowner is paid using a formula based approach indexed from the average township assessed values for cropland. The landowner input has a hand in restoring the wetland and determining the vegetative cover on the easement. The easement acquired prohibits alteration of wildlife habitat or other natural features agricultural crop production (unless specifically approved), grazing of livestock, spraying with chemicals, and, of course, drainage.¹⁵³

The land remains in private ownership and the landowner retains responsibility for maintenance and paying applicable real estate taxes and assessments.

In 2013, the Minnesota legislature changed the way in which property burdened by RIM easements and other conservation easements are treated when valued for tax purposes. The change prohibits reducing the property value based on the conservation easement unless the easement falls into one of the following categories:

- Easements covering riparian buffers along lakes, rivers, and streams that are used for water quantity or quality control;
- Easements in a county that has adopted, by referendum, a program to protect farmland and natural areas since 1999 (only Dakota County has done this); and
- Easements entered into prior to May 23, 2013.¹⁵⁴

(iii) Wetland Banking

The purpose of wetland banking regulations is to provide standards for the establishment and administration of a state wetland banking system, including individual wetland bank sites, as authorized by [Minn. Stat. § 103G.2242](#). The purpose of the state wetland banking system is to provide a market-based structure that allows for replacement of unavoidable impacts with pre-established replacement wetlands. The board or the board's designee is responsible for managing the bank, which includes

recording all bank transactions, maintaining bank records, and ensuring that the operation of the bank complies with parts [Minn. R. 8420.0700-.0755](#).

One of the challenges associated with wetland banking is the interaction of restorations and long-term protection mechanisms with drainage law. They often conflict particularly when public drainage systems occur in sites targeted for wetland banking.

D. Other Laws Impacting Drainage Projects and Repair

1. U.S. Fish and Wildlife Service Land Acquisition Program

The U.S. Fish and Wildlife Service (FWS) implements and manages several programs under which the United States acquires property interests, either under easement or fee ownership. In instances where the United States acquires ownership interest, it is important to understand whether its interest is subject to pre-existing rights. For example, if the United States acquires property through which a public drainage system exists, the United States, unless it has acquired rights from the owners of all property affected by the drainage system, acquires that property subject to the drainage system in the same manner as the original owner.¹⁵⁵ In most cases these existing rights would include the right to maintain the drainage system across FWS managed property in the same manner as other property on the system. They would also include the obligation of the United States to petition for certain actions to modify or impound waters on the drainage system.¹⁵⁶ Since land cannot be acquired from the United States involuntarily, drainage projects proposing to cross such property may not proceed without consent of the United States. Because ownership is the exception, rather than the norm, this manual will focus on the FWS' conservation easement program.

The conservation easement program is a voluntary program where willing landowners are paid a percentage of their wetland or agricultural property's fair market value for purchase of the farming, draining, or development rights, depending on the terms of the specific easement, in perpetuity. FWS easements help conserve wildlife and habitat and provide a number of other conservation benefits. Other limited term agreement programs through the FWS restore and protect thousands of acres of valuable wetland habitats throughout Minnesota. Land that is wet and not economical to be improved may be eligible for sale or payment from the U.S. Fish and Wildlife Service (FWS) by conveying the land for a wildlife refuge or by conveying an easement over the land to protect the wetlands, prairie potholes, native grasslands, and other land and water resources.

The primary objective for most FWS easements is to protect existing wetland resources through restrictions on filling, burning, or draining. A number of easements have additional restrictions such as no cropping, haying, grazing, etc. and many allow the restoration and subsequent management of drained and altered wetlands.

Lands and water protected by FWS easements become a part of the National Wildlife Refuge System and are managed by the local FWS Wetland Management District and/or National Wildlife Refuge.¹⁵⁷ Federal law states that “[n]o person shall knowingly disturb, injure, cut, burn, remove, destroy, or possess any real or personal property of the United States, including natural growth, in any area of the [National Wildlife Refuge] System.”¹⁵⁸ “Any person who knowingly violates or fails to comply with any of the provisions of this Act or any regulations issued thereunder shall be fined under Title 18 or imprisoned for not more than 1 year, or both.”¹⁵⁹ Any person who unknowingly violates or fails to comply with the Act or its regulations may be fined or imprisoned for up to 180 days or both.¹⁶⁰

In planning a drainage project or repair, the drainage authority may encounter land subject to a variety of conservation easements managed by the U.S. Fish and Wildlife Service (FWS), each with its own limitations as to work that can take place on that property.

When properties covered by FWS easements are encountered by a new drainage project, it is the project engineer's responsibility to consult with the FWS and begin developing a record of communication that demonstrates a good faith and reasonable attempt to determine the scope of the federal government's property interest in that conservation easement. This is the extent of what courts expect from landowners and drainage authorities and provides the necessary means for protecting the drainage authority from liability for violating the terms of the FWS conservation easement and thus the requirements of the National Wildlife Refuge System Act.¹⁶¹

FWS conservation easements cannot inhibit a drainage authority's ability to repair and maintain public drainage systems ordered and constructed prior to the recording of the conservation easement. This is because the willing landowner granting the conservation easement does not have the authority to diminish the right-of-way obtained by the entire drainage system on the willing landowner's property when the project is ordered. Petitions for improvements or laterals filed after the conservation easement is recorded, however, must oblige with the terms and limitations of the easement.

FOOTNOTES

1 Minn. Stat. § 103E.005, subd. 11 (2015).

2 See 16 U.S.C. § 3821(d) (West 2015).

3 16 U.S.C. § 3801(a)(27) (West 2015).

4 16 U.S.C. § 3821(a) (2014); 7 C.F.R. § 12.4(a)(2).

5 16 U.S.C. § 3821(d) (West 2015); 7 C.F.R. § 12.4(a)(3).

6 16 U.S.C. § 3821(c)(2)(B)(1) (West 2015).

7 7 C.F.R. § 12.5(b)(1)(i).

8 7 C.F.R. § 12.2(a), wetland determination (8).

9 7 C.F.R. § 12.33(d).

10 7 C.F.R. § 12.33(d).

11 See 7 C.F.R. § 12.5(b)(1)(vii)(D) (stating that "the activities of a drainage district or other similar entity will not be attributed to a person to the extent that the activities of the district or entity were beyond the control of the person and the wetland converted is not used by the person for the production of an agricultural commodity or a forage crop for harvest by mechanical means"); National Food Security Act Manual § 514.42(C) (5th ed.); Farm Service Agency Handbook for Highly Erodible Land Conservation and Wetland Conservation Provisions, 6-CP, Par. 218 C & D (Rev. 4).

12 5 U.S.C. § 552a(b).

13 33 U.S.C. 1344; 33 C.F.R. § 323.4 (2014).

14 See 33 U.S.C. § 1344(a).

15 See 33 U.S.C. § 1344(a).

16 See 33 U.S.C. § 1344(f).

17 See 33 U.S.C. § 1344(f)(2).

18 33 C.F.R. § 328.3 (2014).

19 Solid Waste Agency of N. Cook Cnty. vs. U.S. Army Corps of Eng'rs, 531 U.S. 159 (2001).

20 Rapanos, et al. v. U.S. & Carabell et al. v. U.S. et al., 547 U.S. 715 (2006).

21 In re: Env't'l Protection Agency & Dep't of Defense Final Rule; "clean Water Rule: Definition of Waters of the United States," 80 Fed. Reg. 37,054 (June 29, 2015), 803 F.3d 804 (6th Cir. 2015).

22 Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States, (signed December 2, 2008), provides guidance to EPA regions and U.S. Army Corps of Engineers (Corps) districts implementing the Supreme Court's decision in the consolidated cases Rapanos v. United States and Carabell v. United States.

23 See 33 U.S.C. § 1344(a).

24 33 C.F.R. § 323.2(c) (2014).

25 "Incidental fallback" is excluded from the term "discharge of dredge or fill material." 33 CFR 323.2(d)(ii)(3) (2014).

26 33 C.F.R. § 323.2(d)(1) (2014).

27 These discharges are subject to Section 402 of the Clean Water Act. The Minnesota Pollution Control Agency and Environmental Protection Agency manage the Section 402 program in Minnesota. It is possible that extraction and deposit of a pollutant material in a water of the United States may require a permit from the Corps.

28 33 C.F.R. § 323.2 (d)(2) (2014).

29 33 C.F.R. § 323.2(e)(1) (2014).

30 Both temporary and permanent discharges may require a Section 404 permit.

31 See 33 C.F.R. § 323.4(a)(1)(iii)(C)(1) & (C)(2) (2014).

32 33 C.F.R. § 323.4(a)(1)(i) (2014).

33 33 C.F.R. § 323.4(a)(2) (2014).

34 33 C.F.R. § 323.4(a)(3) (2014).

35 33 C.F.R. § 323.4(a)(4) (2014).

36 33 C.F.R. § 323.4(a)(5) (2014).

37 33 C.F.R. § 323.4(a)(6) (2014).

38 33 C.F.R. § 323.4(a)(1)(ii) (2014).

39 33 C.F.R. § 323.4(a)(1)(ii) (2014).

40 33 C.F.R. § 323.4(a)(1)(ii) (2014).

41 33 C.F.R. § 323.4(a)(1)(ii) (2014).

42 33 C.F.R. § 323.4(a)(1)(iii)(C)(1)(i) (2014).

43 See 33 C.F.R. § 323.4(a)(1)(i) & (3)(C)(1)(i) (2014).

44 These activities qualify as maintenance only where a previously armored, lined, or piped section is being repaired and all work occurs within the footprint of the previous work.

45 U.S. Army Corps of Engineers. Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of Clean Water Act, Regulatory Guidance Letter No. 07-02. July 4, 2007.

46 Under 33 C.F.R. § 323.4(c) (2014), exemptions under 33 C.F.R. § 323.4(a)(1-6) (2014) do not apply if the discharge into a water of the US “is part of an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States may be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernable alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration.”

47 U.S. Army Corps of Engineers. Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of Clean Water Act, Regulatory Guidance Letter No. 07-02. July 4, 2007.

48 33 U.S.C. § 1344(f)(2) (2015).

49 33 C.F.R. § 323.4(c) (2014).

50 33 C.F.R. § 323.4(c) (2014).

51 33 C.F.R. 331.2, jurisdictional determination (2014).

52 33 C.F.R. 331.2, preliminary jurisdictional determination & approved jurisdictional determination (2014).

53 See U.S. Army Corps of Eng’rs v. Hawkes Co., Inc., 136 S. Ct. 1807 (2016).

54 33 U.S.C. § 1251 (2015).

55 See 33 U.S.C. § 1313 (2015).

56 See 33 U.S.C. §§ 1314(b) & 1313(d) (2015).

57 See 33 U.S.C. § 1329 (2015).

58 See 33 U.S.C. § 1313 (2015).

59 See 33 U.S.C. § 1342 (2015).

60 See 33 U.S.C. § 1344 (2015).

61 See 33 U.S.C. § 1341 (2015).

62 See Minn. R. ch. 7050 (2015).

63 [[https:// www.pca.state.mn.us/water/minnesotas-impaired-waters-list](https://www.pca.state.mn.us/water/minnesotas-impaired-waters-list) Minnesota Pollution Control Agency’s impaired waters list]

64 Minnesota Pollution Control Agency’s TMDL projects

65 Minn. Stat. § 116D.01 (2015).

66 2010 Guide to Minnesota Environmental Review Rules, (Guide to Environmental Review)

67 Minn. Stat. § 116D.04, subd. 2a(a) (2015).

68 Minn. Stat. § 116D.04, subd. 2b (2015).

69 Minn. Stat. § 116D.04, subd. 6 (2015).

70 Coon Creek Watershed Dist. v. State Env't'l Quality Bd., 315 N.W.2d 604, 605 (Minn. 1982).

71 Minn. Stat. § 116D.04, subd. 2a (2015).

72 Minn. Stat. § 116D.04, subd. 2a (2015).

73 Minn. Stat. § 116D.04, subd. 1a(d) (2015).

74 Coon Creek Watershed Dist. v. State Env't'l Quality Bd., 315 N.W.2d 604 (Minn. 1982).

75 Minn. Stat. § 116D.04, subd. 2a(a) (2015).

76 Minn. R. 4410.4400, subp. 20.

77 Minn. R. 4410.4600, subp. 17.

78 Coon Creek Watershed Dist. v. State Env't'l Quality Bd., 315 N.W.2d 604 (Minn. 1982).

79 Minn. Stat. § 116D.2a(c) (2015).

80 Minn. R. 4410.4300, subp. 27.

81 Minn. Stat. § 116D.04, subd. 2a(b) (2015).

82 Minn. Stat. § 116D.04, subd. 2a(b) (2015).

83 Minn. Stat. § 116D.04, subd. 2a(b) (2015).

84 Coon Creek Watershed Dist. v. State Env't'l Quality Bd., 315 N.W.2d 604, 605 (Minn. 1982).

85 The term public water is defined by the Minnesota Legislature in Minn. Stat. § 103G.005, subd. 15a (2015).

86 Minn. Stat. § 103G.211 (2015).

87 Minn. Stat. § 103G.245, subd. 1(2) (2015).

88 Carpenter et al. v. Bd. of Comm'rs of Hennepin Cnty., 58 N.W. 295, 296 (Minn. 1894) (adopting the concept of the high water level); Mitchell v. City of St. Paul, 31 N.W.2d 46, 48–50 (Minn. 1948) (establishing the jurisdiction of the state of Minnesota up to the ordinary high water level); Minn. Stat. § 84.027, subd. 2 (2015).

89 Minn. Stat. § 103G.005, subd. 14(1) (2015).

90 Minn. Stat. § 103G.005, subd. 14(2) (2015).

91 Minn. Stat. § 103G.005, subd. 14(3) (2015).

92 Minn. Stat. § 103G.201(a)(2015).

93 Minn. Stat. § 103G.201(e)(2)(i) (2015).

94 Minn. Stat. § 103E.011, subd. 3(a) (2015).

95 Holden v. Le Sueur Cnty., 232 N.W.2d 806, 807 (1975) (citing Herschman v. Dep't of Natural Res., 225 N.W.2d 841 (Minn 1975)).

96 Minn. Stat. § 103G.245, subd. 2(2) (Minn. 2015).

97 Bloomquist v. Sanders, 202 N.W. 496 (Minn. 1926) (finding substantial effect where modification will increase flow and erosion lowering the bed of the brook to the lake and the surface of the lake but observing that should it later be discovered that the projected erosion and lowering of the beds did not occur abutting shore owners not party to the present action could seek judicial redress).

98 Minn. Rules, part 6115.0200, subp. 4

99 Petition of Jacobson, 234 Minn. 296,300-01, 48 N.W.2d 441, 444 (Minn. 1951)

100 Minnesota Center for Environmental Advocacy v. Big Stone County, 638 N.W.2d 198, 201 (Minn. Ct. Ap. 2002) (finding wetland project that changes a wetland from a Type-5 to a Type-2 wetland is a substantial change).

101 Bloomquist v. Sanders, 202 N.W. 496 (Minn. 1926) (finding substantial effect where modification will increase flow and erosion lowering the bed of the brook to the lake and the surface of the lake but observing that should it later be discovered that the projected erosion and lowering of the beds did not occur abutting shore owners not party to the present action could seek judicial redress).

102 See Minn. Stat. §§ 103G.005, subd. 15a & 103G.201 (2015).

103 Minn. Stat. § 103E.701, subd. 2 (2015).

104 Minn. Stat. § 103E.701, subd. 1 (2015).

105 Minn. Stat. § 103E.101, subd. 3 (2015).

106 See Minn. Stat. § 103E.101, subd. 4a(a) (2015).

107 Minn. Stat. § 103E.101, subd. 4a(a) (2015)

108 Minn. Stat. § 103E.701, subd. 2 (2015).

109 See Minn. Stat. § 103G.245, subd. 2(1) (2015) (allowing work in altered natural watercourses that are part of drainage systems established under chapter 103D or 103E if the work in the waters is undertaken according to 103D or 103E); Minn. Stat. § 103G.225 (2015) (requiring the state to provide for necessary work to allow proper use and maintenance of the drainage system while still preserving the public waters wetlands).

110 Minn. Stat. § 103G.245, subd. 2(1) (2015).

111 Minn. R. 6115.0200, subp. 3C (2008). The Minnesota Supreme Court has held that under the “no feasible and prudent alternative standard,” the court must find truly extraordinary circumstances if it will permit the destruction of protected natural resource assets because there is no feasible and prudent alternative. People for Evtntl. Enlightenment & Responsibility v. Minn. Evtntl. Quality Council, 266 N.W.2d 858, 870 (Minn. 1978).

112 16 U.S.C. § 1538(a)(1)(B); Minn. Stat. § 84.0895, subd. 1 (2015); Minn. R. 6115.0200, subp. 3 D (2008). The concept of take includes harassing, harming, and adversely affecting critical habitat. 16 U.S.C. § 1532(19) & Babbitt v. Sweet Home Ch. of Cmty. For a Great Or., 515 U.S. 687 (1995) (holding the term “take” also includes adversely impacting the critical habitat of the species). Both the Federal Endangered Species Act and the State Endangered Species program permit the incidental take of a threatened or endangered species under a very narrow set of circumstances.

113 Federally listed threatened or endangered species in Minnesota are listed on the endangered/ U.S. Fish and Wildlife Services Endangered Species list

114 The State Endangered Species List is found in Minn. R. Ch. 6134.

115 Minn. R. 6115.0200, subp. 3F (2008).

116 Minn. R. 6115.0200, subp. 3G (2008).

117 Minn. R. 6115.0200, subp. 3 (2008).

118 Minn. R. ch. 8420.

119 Minn. R. 8420.0105, subp. 1 (2009).

120 Minn. R. 8420.0220.

121 Minn. R. 8410.011.

122 Minn. R. 8420.0105, subp. 2.A (2009).

123 Minn. R. 8420.0105, subp. 2.D (2009).

124 Minn. R. 8420.0105, subp. 2.D (2009).

125 Minn. R. 8420.0105, subp. 1 (2009).

126 Minn. R. 8420.0420, subp. 1 (2009).

127 Minn. R. 8420.0420, subp. 1.B (2009).

128 Minn. R. 8420.0330, subp. 1 (2009).

129 Minn. R. 8420.0335.

130 See Minn. Stat. §§ 103F.101–103F.165 (2015).

131 See Minn. Stat. §§ 103F.201–103F.227 (2015).

132 See Minn. Stat. §§ 103F.301–103F.345 (2015).

133 Minn. R. 6120.2800, subp. 1 (2008).

134 Minn. Stat. § 103F.205, subd. 4 (2015).

135 Minn. Stat. § 103F.211, subd. 4 (2015).

136 Minn. Stat. § 103F.121, subd. 1 (2015).

137 Minn. Stat. § 103F.121, subd. 1 (2015).

138 Minn. Stat. § 103F.121, subd. 5 (2015).

139 Minn. Stat. § 103F.48, subd. 3(a)(2) (2015).

140 Minn. Stat. § 103F.48, subd. 3(a)(1)(i) (2015).

141 Minn. Stat. § 103E.315, subd. 8(b) (West 2016).

142 Minn. Stat. § 103E.015, subd. 1(2) (2015).

143 Minn. Stat. § 103B.301 to 103B.355 (2015).

144 Minn. Stat. § 103B.101 subd. 14 (2015).

145 Minn. Stat. § 103B.301 to 103B.355 (2015).

146 <http://www.bwsr.state.mn.us/planning/1W1P/index.html>

147 See Minn. Stat. ch. 114D (2015).

148 <http://www.bwsr.state.mn.us/practices/science-based-outcomes.pdf>

149 <https://www.pca.state.mn.us/water/watershed-approach-restoring-and-protecting-water-quality>

152 See Minn. Stat. §§ 103F.501-103F.535.

153 Minn. Stat. §§ 103F.501-601.

154 Minn. Stat. § 273.117 (2015).

155 Note, however, that the Antideficiency Act (31 U.S.C. § 1341) will prevent future assessments for the drainage system against the United States.

156 See Minn. Stat. § 103E.227 (2015) (proceedings to impound, reroute, or divert drainage system waters).

157 16 U.S.C. § 668dd(a)(1) (2015).

158 16 U.S.C. § 668dd(c) (2015).

159 16 U.S.C. § 668dd(e) (2015).

160 16 U.S.C. § 668dd(f)(2) (2015).

161 See *U.S. v. Johansen*, 93 F.3d 459, 468 (8th Cir. 1996) (“The wetland acquisition program was conceived of as a partnership between the federal government, the states, and individual property owners. As with any partnership, success requires good faith and reasonability.”).