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Minnesota's Wetlands Legacy

IS MINNESOTA DOING ENOUGH TO PROTECT ITS REMAINING WETLANDS?

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Cover photo: A wetland in Springbrook Nature Center. *Photo by Trevor Russell.*

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EXECUTIVE SUMMARY

Wetlands are a treasured resource for Minnesota: swamps, bogs, marshes, potholes, and wet meadows all are a part of Minnesota's great water heritage. Wetlands provide recreation for people, habitat for migratory birds plus many kinds of animals and plants, and flood and pollution control. All of these functions give economic benefit to the state.

Wetlands have been drained and lost due to the desire to use the land they occupy for agriculture, business development, roads, utilities, or homes. Only about 9 million acres of wetlands remain of the 20 million acres that existed in the 1850s.

The Wetlands Conservation Act (WCA), passed by the Minnesota legislature in 1991, has provided important protection for the quantity, quality, and biological diversity of Minnesota's remaining wetlands. One of its goals is to ensure that there is no net loss of wetland acreage; this is accomplished by regulating some actions taken on wetlands.

When an action is to be taken on a wetland, WCA regulations include creating a plan, gaining approval from the local government unit (LGU), replacing losses, and monitoring the actions taken. WCA contains ten kinds of exemptions where action can be taken without a permit or a replacement plan.

WCA is having a positive impact on the quality and quantity of wetland preservation in Minnesota. However, the Sierra Club North Star Chapter's Water and Wetlands Committee supports changes to current regulations that would improve wetlands, thus ensuring their continued ecological and economic benefits to the state.

- RECOMMENDATION 1** All actions to wetlands exempted by WCA must be reported. Landowners must be required to report all wetland drain and fill activities to their LGU, regardless of whether their wetland is exempt under WCA. This would allow for accurate and consistent measurements of wetlands loss in Minnesota and would assist state agencies and decision makers in their efforts to prevent wetlands loss.
- RECOMMENDATION 2** LGUs should be required to keep permanent files on wetland-related decisions. Additionally, wetlands should be mapped statewide.
- RECOMMENDATION 3** Minnesota has an opportunity to provide protection for isolated wetlands affected by the United States Supreme Court decision *Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers* (SWANCC) by providing isolated wetlands with at least the same protection in the state law that they enjoyed prior to the court's decision in SWANCC. One way to accomplish this would be to remove or limit the exemption for isolated wetlands (type 1, 2, or 6) so that applicants seeking to drain these types need to develop a replacement plan.
- RECOMMENDATION 4** Minnesota should require the use of the 1979 Cowardin Classification of Wetlands when documenting and making determinations about a wetland's value and type. This would assist in attaining the goal of replacing wetlands with ones that have the same values and functions as the destroyed wetlands.
- RECOMMENDATION 5** When upland restoration is part of a wetland replacement plan, the wetland replacement and the upland replacement need to be accounted for separately.

The entire report is available at
<http://northstar.sierraclub.org/campaigns/water/wetlands/drippingReport20060301.pdf>

Minnesota's Wetlands Legacy

What are Wetlands?

Wetlands are a treasured resource for Minnesota: swamps, bogs, marshes, potholes, and wet meadows all are a part of Minnesota's great water heritage. Wetlands are a key component of the entire ecological system. They also have social and economic values.

A wetland is an area that

- is either covered by shallow water or contains water-saturated soil for at least part of the growing season
- has soil that lacks oxygen
- grows water-loving plants.

Minnesota currently has over 9 million acres of wetlands.¹ Wetlands occur in many forms, including forested swamps, deep and shallow marshes, bogs, and prairie potholes. Each of these different types of wetlands has its own important functions.

Why Are Wetlands Important?

Recreation

Wetlands provide many opportunities for outdoor recreation such as hunting, hiking, fishing, and birding.² In Minnesota, 35% of the people fish, 15% hunt, and 54% watch wildlife for recreation.³ Both Minnesotans and non-state residents purchase licenses to hunt or fish. All this activity is important to Minnesota's economy since outdoor recreation

contributes \$4.25 billion to the gross state product, which generates \$201.7 million in tax revenue per year.⁴

Losses of wetlands reduce recreational activity and, consequently, the amount of revenue generated for the economy. Reduced opportunity for these recreational activities is also a quality-of-life issue.

Habitat for Migratory Birds

Wetlands across the nation provide breeding, nesting, and feeding habitats for millions of birds of all types. Wetlands are especially important for migratory birds, which follow special routes during seasonal migrations. These routes are typically aligned with wetlands crucial to the survival of these birds. As the number of wetlands is reduced, these birds are forced to change their flight paths, which reduces their chances of survival and successful reproduction.⁵ Minnesota, along with North and South Dakota and Iowa, has historically been of vital importance to these migration paths because of the abundance of small, scattered, highly productive wetlands in these areas.⁶

Loss of these vital migratory habitats has a profound effect on the bird population. In the past 15 years alone, the destruction of wetlands is a key factor in the continental duck breeding population falling from 45 million to 31 million birds—a decline of 31 percent.⁷

Biodiversity

Wetlands provide homes and sustenance for more than migratory birds. They share these habitats with an abundance of plant and animal species. Wetlands are among the

¹ Minn. Dept. Natural Resources, *Wetlands*, "Wetland Facts," <http://www.dnr.state.mn.us/wetlands/index.html> (accessed Feb. 4, 2006).

² Minn. Bd. Water Soil Resources, *Wetland Regulation in Minnesota*, "Why Are Wetlands Important?" <http://www.bwsr.state.mn.us/wetlands/publications/wetlandregulation2.html> (accessed Feb. 4, 2006).

³ Minn. Dept. Natural Resources, *Natural Resources, Recreation & the Economy*, <http://www.dnr.state.mn.us/faq/mnfacts/economy.html> (accessed Feb. 4, 2006).

⁴ *Id.*

⁵ Natural Resources Conservation Serv., *Wetlands Values and Trends: RCA Brief #4*, "Wetlands – A Valuable Asset," <http://www.nrcs.usda.gov/technical/land/pubs/ib4text.html> (Nov. 1995).

⁶ *Id.*

⁷ U.S. Envtl. Protec. Agency, *Threats to Wetlands 1*, <http://www.epa.gov/owow/wetlands/pdf/threats.pdf> (Sept. 2001).

richest and biologically most productive habitats on earth. Wetlands in the United States support about 5,000 plant species, 190 amphibian species, one-third of all bird species, and numerous invertebrates.⁸ Wetlands are even more important as habitats for endangered species. They provide habitat for about one-half the fish, one-third of the birds, one-fourth of the plants, and one-sixth of the mammals on the U.S. threatened and endangered species lists.⁹

Flood Control

Wetlands reduce flood damage by serving as holding areas for water and absorbing and slowing down excess floodwaters and runoff during times of heavy rain.¹⁰ By acting as reservoirs that fill up with excess water, wetlands have the ability to act as flood control agents and reduce erosion.

The protection and restoration of wetlands throughout the state could significantly reduce flood damage in all of the watersheds in Minnesota. In fact, the destruction of this form of flood control has been a significant factor in the flooding of the Mississippi River.¹¹

Restoration of natural wetlands could save millions spent annually on artificial flood management structures and insurance, and, combined with changes to other land use practices in flood plains, could potentially save billions in future flood damage.

Pollution Control and Water Quality

Wetlands have the ability to work as a natural form of pollution control, removing nutrients, pesticides, and sediments from surface waters.¹² When water enters a wetland, pollutants and nutrients are filtered from the water before

it flows into lakes and rivers, resulting in cleaner waters.¹³ Some types of wetlands are so good at this filtration function that environmental managers construct similar artificial wetlands to treat storm water and wastewater.¹⁴ For example, a study on the bottomland hardwood wetlands in South Carolina showed that the same amount of pollution removal would require a water treatment plant costing at



Seminary Fen. Photo by Trevor Russell.

least \$5 million (in 1991 dollars) to construct and even more to maintain.¹⁵

What are Uplands?

Uplands are the lands adjacent to a wetland and are important to a properly functioning wetland. These buffer areas prevent the natural filling of wetlands from erosion because the upland vegetation holds the adjacent soils in place that prevents degradation of the wetland environment.

Erosion of uplands can also destroy wildlife nesting and breeding grounds, degrade the habitat of macro-invertebrates living and breeding in the wetland, and alter the flood- and storm water-retention capabilities of the wetland.

⁸ Natural Resources Conservation Serv., *Wetlands Values and Trends: RCA Brief #4*, "Did You Know," <http://www.nrcs.usda.gov/technical/land/pubs/ib4text.html> (Nov. 1995).

⁹ *Id.*

¹⁰ Minn. Bd. Water Soil Resources, *Wetlands in Minnesota 2*, <http://www.bwsr.state.mn.us/wetlands/publications/wetland.pdf> (accessed Feb. 6, 2006).

¹¹ Richard P. Novitzki, R. Daniel Smith & Judy D. Fretwell, *Wetland Functions, Values, and Assessment*, <http://water.usgs.gov/nwsum/WSP2425/functions.html> (accessed Feb. 6, 2006).

¹² Natural Resources Conservation Serv., *Wetlands Values and Trends: RCA Brief #4*, "Wetlands – A Valuable Asset," <http://www.nrcs.usda.gov/technical/land/pubs/ib4text.html> (Nov. 1995).

¹³ Virginia Carter, *Wetland Hydrology, Water Quality, and Associated Functions*, "Maintenance of Water Quality," <http://water.usgs.gov/nwsum/WSP2425/hydrology.html> (accessed Feb. 6, 2006).

¹⁴ U.S. Envtl. Protec. Agency, *Functions and Values of Wetlands 1*, http://www.epa.gov/owow/wetlands/pdf/fun_val.pdf (Sept. 2001).

¹⁵ Natural Resources Conservation Serv., *Wetlands Values and Trends: RCA Brief #4*, "Wetlands Help Us in Many Ways," <http://www.nrcs.usda.gov/technical/land/pubs/ib4text.html> (Nov. 1995).

State Protection of Wetlands: The Wetlands Conservation Act

Background

In 1858 when Minnesota became a state, it had 18.6 million acres of wetlands.¹⁶ Since then, agriculture and development in the state have eliminated half of the wetlands to make way for crops, roads, and buildings.¹⁷ Now only about 9 million acres are left.¹⁸ In fact, some areas have lost over 90% of their wetlands.¹⁹

Agriculture used to be the main source of wetland loss, as wetlands were filled in to increase crop acreage, but now development is the leading cause of wetland loss, as urban sprawl continues to grow.²⁰ From 1982 to 1992, 57% of wetland loss was due to development.²¹ Pollution, runoff, and invasive species have led to a marked decrease in the quality of existing wetlands.



A wetland amidst glacial moraine in Todd County. Photo by Sue Rich.

What is the Wetlands Conservation Act?

In an effort to prevent more wetlands from disappearing, the Minnesota Legislature passed the Wetlands Conservation Act (WCA) of 1991 with overwhelming support.²²

WCA has four goals:

1. Achieve no net loss in the quality and quantity of wetlands.
2. Increase the quantity, quality, and biological diversity of Minnesota's wetlands.
3. Avoid activities that harm wetlands.
4. Replace wetlands when damage is unavoidable.²³

WCA mandates that the wetlands regulated by the law cannot be filled or drained, either wholly or partially, without being replaced by a wetland of at least equal value.²⁴ In fact, in most instances, there must be two acres of replacement wetland for every one acre that is destroyed.²⁵

The Minnesota Board of Water and Soil Resources (BWSR) was named the authority for implementing and overseeing WCA regulations.²⁶

WCA contains exemptions specifying that some existing wetlands are not subject to the law's regulations. These exemptions allow a landowner to destroy certain wetlands without any legal consequences.²⁷ There are ten distinct categories of exemptions: agricultural, drainage, federal approvals, wetland restoration, incidental wetlands, utilities/public works, forestry, approved development, de minimis, and wildlife habitat.²⁸

When some action (such as construction) is proposed for an area containing a wetland, the preferred option is to design the project so no harm is done to the wetland. Any landowner who desires to drain or fill a regulated wetland must create a replacement plan and have it approved by his/her local government unit (LGU).²⁹ An LGU can be a city council, county board, or a watershed district,

¹⁶ Minn. Bd. Water Soil Resources, *Wetlands in Minnesota* 1, <http://www.bwsr.state.mn.us/wetlands/publications/wetland.pdf> (accessed Feb. 6, 2006).

¹⁷ *Id.*

¹⁸ Minn. Dept. Natural Resources, *Wetlands*, "Wetland Facts," <http://www.dnr.state.mn.us/wetlands/index.html> (accessed Feb. 6, 2006).

¹⁹ Minn. Bd. Water Soil Resources, *Wetland Regulation in Minnesota*, "Why are Wetlands Important?" <http://www.bwsr.state.mn.us/wetlands/publications/wetlandregulation2.html> (accessed Feb. 6, 2006).

²⁰ U.S. Env'tl. Protect. Agency, *Threats to Wetlands* 1, <http://www.epa.gov/owow/wetlands/pdf/threats.pdf> (Sept. 2001).

²¹ Natural Resources Conservation Serv., *Wetlands Values and Trends: RCA Brief #4* pie chart, <http://www.nrcs.usda.gov/technical/land/pubs/ib4text.html> (Nov. 1995).

²² Dean Rebuffoni, *State Wetlands Bill Approved; Gov. Carlson Says He'll Sign It*, *Star Tribune* (Minneapolis, Minn.) 4B (May 22, 1991).

²³ Minn. Stat. § 103A.201 Subd. 2(b) (2004).

²⁴ Minn. Stat. § 103G.222 Subd. 1(a) (2004).

²⁵ See Minn. Stat. § 103G.222 Subd. 1(e) (2004).

²⁶ Minn. Stat. § 103G.2242 Subd. 1(a) (2004).

²⁷ See generally Minn. Stat. § 103G.2241 (2004).

²⁸ *Id.*

²⁹ Minn. Stat. § 103G.222 Subd. 1(a) (2004).



Bass Lake Trail, north of Ely in the Boundary Waters. *Photo courtesy of Friends of the Boundary Waters.*

depending on where the landowner lives.³⁰ The replacement plan must show that there was first an attempt to avoid or minimize damage to the current wetland.³¹

A technical evaluation panel consisting of scientific professional wetlands experts from state and local agencies evaluates the plan to ensure that it complies with WCA regulations.³² A recommendation is then made to the LGU.³³

If there is expected to be damage to a wetland that could be avoided or minimized, the LGU is required to reject the plan; otherwise the landowner is allowed to proceed with the project according to the approved replacement plan.³⁴

The landowner must monitor the replacement wetlands and report to the LGU for five years to ensure the replacement plan has been followed.³⁵

WCA also refers briefly to upland buffers, stating that there are circumstances where upland buffers can be

considered part of the replacement plan for a destroyed wetland.³⁶

Impact of the Wetlands Conservation Act

In many cases, WCA is being used to protect the original wetland in an area that a landowner wants to change. In 1999 and 2000, 41% of total wetlands projects were redesigned to successfully avoid impacting wetlands.³⁷ Also there is an awareness of WCA regulations in Minnesota that is sometimes causing landowners to avoid wetlands when planning development projects.³⁸

While there have been positive results, the quantity and quality of our wetlands continues to decrease. Although the stated goal of WCA is “no net loss,” actual net wetland loss, both in quantity and quality, is occurring. This is due, in part, to the issues listed in the next section.

³⁰ Minn. Stat. § 103G.005 Subd. 10e (2004).

³¹ Minn. Stat. § 103G.222 Subd. 1(b) (2004).

³² Minn. Stat. § 103G.2242 Subd. 2(a) (2004).

³³ *Id.*

³⁴ Minn. R. 8420.0540 Subp. 1 (2004).

³⁵ Minn. R. 8420.0610 (2004).

³⁶ Minn. R. 8420.0541 Subp. 6 (2004).

³⁷ Minn. Bd. Water Soil Resources, *1999/2000 Minnesota Wetland Report* 1 (2001).

³⁸ Minn. Bd. Water Soil Resources, *2001-2003 Minnesota Wetland Report* 2 (2005).

Recommendations for Improving Protection of Minnesota's Wetlands

PROBLEM 1

Actions to wetlands exempted by WCA are not currently required to be reported

When a landowner has a wetland area that is exempt from WCA regulation, the landowner can destroy or change the wetland at will. No application or registry is necessary to qualify for an exemption before the destruction of the wetland.³⁹ Because this activity is not reported, these losses are not calculated in the wetland loss numbers, even though they represent an actual loss.

De minimis exemptions allow landowners to destroy between 400 and 10,000 square feet of wetlands at a time, depending on wetland type and location.⁴⁰ Agricultural lands receive the most exemptions. When WCA was passed, 78% of wetlands on Minnesota's farmland were considered exempt because they were already enrolled in federal farm programs.⁴¹

It is generally accepted that most destruction occurs under exemptions that are not reported.⁴² According to the Department of Natural Resources, since 1995 more than 11,000 wetlands acres have been reported destroyed and only 6,000 replacement acres have been created.⁴³

From 2001-2003, there were 1,708 acres of exempted wetlands destroyed that were reported, leaving a net loss of 1,367 acres under WCA activities.⁴⁴ These numbers would be significantly higher if actions taken to exempted wetlands were also reported and included in the acres lost.

The lack of an application requirement can result in wetland destruction that property owners assumed was an exempted activity but was actually disallowed under WCA. It may also come from lack of knowledge or of judgment about the WCA exemption standards.

In summary, no accurate totals exist for the total destruction of wetlands under WCA exemptions. The "no net loss" equation is therefore impossible to calculate when unreported wetlands are being left out.

³⁹ Minn. Stat. § 103G.2241 Subd. 11(c) (2004) (saying the state "encourages" those filling or draining a wetland under an exemption to contact the local government unit before doing so, but does not require it).

⁴⁰ Minn. Stat. § 103G.2241 Subd. 9 (2004).

⁴¹ Dean Rebuffoni, *State Wetlands Bill Approved; Gov. Carlson Says He'll Sign It*, Star Tribune (Minneapolis, Minn.) 4B (May 22, 1991).

⁴² See Minn. Bd. Water Soil Resources, *1999/2000 Minnesota Wetland Report* 5-6 (2001) (stating "many, if not most WCA-exempt losses are not recorded").

⁴³ Chris Niskanen, *Minnesota Still Losing Wetlands: 1991 law meant to protect them lacks oversight, agencies say*, St. Paul Pioneer Press A1 (Jan. 18, 2005).

⁴⁴ Minn. Bd. Water Soil Resources, *2001-2003 Minnesota Wetland Report* 4, tbl. 2 (2005).

RECOMMENDATION

All actions to wetlands exempted by WCA must be reported.

Landowners must be required to report all wetland drain and fill activities to their LGUs, regardless of whether their wetland is exempt under WCA. This would allow for actual and consistent assessment of wetlands lost in Minnesota and would assist state agencies and decision makers in their efforts to prevent wetlands loss.

The state and local units of government and private property owners would all benefit from requiring prior approvals for the draining of all wetlands, either in the form of a filed form, approval letter, or more formal certification. This will also provide assurances to property owners that they are applying the exemption criteria properly.

By assessing each application before issuing the permit, BWSR or the LGU would be able to verify that every wetland destroyed under an exemption does, in fact, comply with the exemption criteria. This would reduce the number of violations, disputes, and costs for all parties involved.

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PROBLEM 2

Minnesota has an inadequate wetlands accounting and recording system

Besides the lack of reporting on activity to exempted wetlands noted above, the lack of a total inventory of wetlands prevents accurate calculations of wetlands gained and lost.

To see where wetlands are located, the Department of Natural Resources relies on county highway maps made for the Department of Transportation for a purpose other than locating wetlands. These maps are inadequate for assessing the current status of wetlands and tracking wetland changes.

Additionally, LGUs are required to keep wetlands-related records for only ten years.⁴⁵ This time period does not provide enough history when new actions are considered. When a replacement wetland is wooded, a longer period is needed to assess its status. The longer time period will allow for historical assessment.



Springbrook Nature Center. Photo by Trevor Russell.

⁴⁵ Minn. R. 8420.0220 (2004).

RECOMMENDATIONS

A. Wetlands should be mapped statewide. Money should be allocated to allow state agencies to inventory the size and location of wetlands throughout the state of Minnesota. This recommendation is in support of current allocations to create the maps, but goes further because it also suggests that money should be provided beyond a one-time effort to create the maps.

2 A more detailed map of the state's wetlands could be created through a combination of aerial photography and satellite mapping. A complete map of the state's wetlands would serve many valuable functions. First, by viewing the current layout of wetlands, the map will allow agencies to calculate more accurately how many have been destroyed in the past. More importantly, it would serve as a reference to check against future unreported wetland destruction. If there has been a suspected unreported wetland destroyed, enforcement agencies will be able to check the map to see if there was a wetland at the location in the past. Finally, a map such as this would be valuable to those conducting studies on wetlands. Also, many different agencies, social groups (like outdoors clubs), and environmental groups would benefit from an accurate wetland map of Minnesota.

B. LGUs should be required to keep permanent files on wetland-related decisions. Currently, LGUs need to keep wetland records on file for only ten years. This can create a problem if long-term data is needed but is no longer available. Access to this data would be useful for determining state progress for achieving no net loss, fact finding for decisions, and other purposes.

PROBLEM 3

Isolated wetlands are not protected under WCA

Isolated wetlands are those that are not adjacent to or connected via surface water to another navigable water body, such as a lake or river.

From 1974, when the federal Clean Water Act was passed, until 2001, the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Army Corps) regulated wetlands in a comprehensive manner. These agencies used the “commerce clause” of the U.S. Constitution to interpret the Clean Water Act in a way that gave them broad authority to regulate isolated wetlands and require permits before isolated wetlands were dredged or filled.⁴⁶ This federal jurisdiction greatly decreased the number of acres of destroyed wetlands. National losses went from an estimated 458,000 acres annually pre-CWA, to just about 58,500 acres annually between 1986 and 1997.⁴⁷

In 2001, however, the U.S. Supreme Court decided *Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers* (SWANCC),⁴⁸ and limited the federal government’s authority to regulate intrastate, isolated wetlands. The Court found that the Clean Water Act did not give the EPA and the Army Corps jurisdiction to regulate isolated wetlands where the only connection to interstate commerce is the use of these isolated wetlands by migratory birds.⁴⁹

In 2003, BWSR performed a study to determine how the SWANCC decision would impact Minnesota’s wetlands.⁵⁰ They found that between 12% and 23% of Minnesota’s wetlands have lost protection since the 2001 SWANCC decision.

RECOMMENDATION

Minnesota has an opportunity to provide protection for wetlands affected by the SWANCC decision by providing isolated wetlands with at least the same protection in the state law that they enjoyed prior to the court’s decision in SWANCC.

One way to accomplish this would be to remove or limit the exemption for isolated wetlands (type 1, 2, or 6) so that applicants seeking to drain these types need to develop a replacement plan.

With such a large potential loss of wetlands, state protection of isolated wetlands is required to achieve no net loss.

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⁴⁶ *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159, 163, 165-166 (2001).

⁴⁷ Mark A. Chertok & Kate Sinding, *Federal Regulation of Wetlands*, SJ101 Am. Law Inst. – Am. Bar Assn. Continuing Leg. Educ. 1051, 1053 (June 23-26, 2004).

⁴⁸ *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001).

⁴⁹ *Id.* at 174.

⁵⁰ Minn. Bd. Water Soil Resources, *Federal Deregulation of Isolated Wetlands: What it Might Mean for Minnesota*, Board of Water and Soil Resources Update 2 (March 2003) (available at <http://www.bwsr.state.mn.us/aboutbwsr/updates/march2003.pdf>). See also Minn. Bd. Water Soil Resources, *2001-2003 Minnesota Wetland Report* 38-46, tbls.10-11, figs. 23-27 (2005).

PROBLEM 4

Minnesota's wetlands classification system is out of date

WCA currently uses the wetland typing created in 1956 by the U.S. Fish and Wildlife Service Circular 39.⁵¹ This system categorizes wetlands by amount and length of water coverage.

In 1979, the Cowardin system was created in order to add the ecological considerations of the type of plants growing in the wetland. The U.S. Fish and Wildlife Service adopted the Cowardin system in 1980.⁵² When WCA was written, the 1956 Circular 39 system was used to define wetland types.

Many states have moved to the Cowardin classification in their laws. It provides a better method for calculating wetland replacement requirements and measuring wetland values.

Because the 1956 system does not consider plant types, replacement plans can actually propose different plant communities for the replacement wetland than those that existed in the destroyed wetland. As a result, the replacement wetland can be of lower quality. Although wooded wetlands are being destroyed, they are seldom replaced by another wooded wetland.

RECOMMENDATION

Minnesota should require the use of the 1979 Cowardin Classification of Wetlands when documenting and making determinations about a wetland's value and type.

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Hunters value wetlands for the habitat it provides wildlife. Shown here amongst cattails are Ken Little and his son, Matt Little. *Photo by Andy Hyser.*

⁵¹ Minn. Stat. § 103G.005 Subd. 17b (2004).

⁵² U.S. Fish Wildlife Serv., *660 FW2: Wetlands Classification System* § 2.4, <http://www.fws.gov/policy/660fw2.html> (June 21, 1993).

PROBLEM 5

WCA allows upland replacements to count as wetland replacements

WCA allows a person to receive wetland replacement credit for upland creation. For example, if a person is required to replace a one-acre wetland at a 2:1 ratio, in some cases, rather than creating two new acres of wetland, one acre can be wetland and the other replacement acre can be upland. This outcome can be a good plan since uplands are so important to the health of a wetland. However, the upland replacement acre is counted as a wetland acre gained for the purposes of measuring gains and losses. The artificial gain number can mask other losses.

Conclusion

These recommendations provide to state agencies, landowners and interested groups information they need to evaluate the current status of wetlands and wetland protection in Minnesota. They help to ensure protection of isolated wetlands and extend protection to uplands. The Sierra Club North Star Chapter hopes that all Minnesota agencies and citizens will support wetland preservation by supporting these recommendations.

RECOMMENDATION

If wetlands are replaced with uplands, the upland portion should not be counted as a wetland gain.

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