

Assessment of Community Wetland Protection Needs

This questionnaire was developed for use by anyone with an interest in documenting the importance of wetlands in their community and compiles some basic information to support a local wetland protection effort that addresses the specific environmental concerns and regulatory drivers in the community.

The results of this questionnaire can be used to help gain support from decision makers for expanded local wetland protection, as outlined in the Wetlands-At-Risk Protection Tool (WARPT) provided online: www.wetlandprotection.org. The WARPT outlines a process to inventory and evaluate the functions provided by wetlands and to make decisions about how to protect these functions at the local level using regulatory and voluntary measures. Completing the questionnaire provides insight into which aspects of the WARPT will be most useful to your community.

To complete the questionnaire, answer the 12 questions below for your community and record your responses on this form. The form is designed so you can save your responses electronically in the pdf. It can be completed for a single jurisdiction, or responses from multiple jurisdictions within a single watershed can be compiled on one form for a watershed approach to wetland protection. Don't worry if you can't answer all the questions, just do the best you can and skip the ones that are not relevant. Some potential methods and data sources are provided to help you answer each question, and some background information is provided as well to help you make the case to your local leaders.

Questions

Wetland Services

1. What wetland services are you most interesting in harnessing and protecting?

Flood protection. *Wetlands prevent or help abate flooding issues associated with coastal storm surges, river flooding, storm sewer capacity problems, and more.*

Recreation. *Wetlands provide opportunities for recreation such as hunting, fishing, birdwatching, and hiking, which may be important to the local economy.*

Drinking water quality. *Wetlands maintain streamflow and remove pollutants, protecting the quality of downstream water supplies.*

Shoreline property protection. *Shoreline wetlands provide protection from erosion by stabilizing the soil and absorbing floodwaters.*

Maintain stream baseflow. *Wetlands have significant storage and recharge capacity, and play a critical role in the hydrology of downstream waters. This may be particularly important in arid or semi-arid regions where water is scarce and withdrawals are permitted or where in-stream flow standards are in place.*

Wildlife habitat and biodiversity. *Wetlands are some of the most diverse habitats on the planet, and provide refuge for both aquatic and terrestrial wildlife. They often provide habitat for plant and animal species that are rare, threatened, or endangered.*

Commercial products from wetlands. *Certain wetland types are important for harvesting peat, timber, cranberries, rice, fish or shellfish, which may form a significant part of the local economy.*

Reduce pollutants in streams and stormwater. *Wetlands transform nutrients, retain sediment, and remove other types of pollutants from surface runoff and streamflow, affecting the quality of waters downstream.*

Other (list):

This question should be completed by local government staff that is familiar with the community programs and needs, if possible. Otherwise, it can be answered by consulting local environmental experts.

Regulatory Context

1. Check all that apply. My community:

Contains waters that are on the 303(d) list, have a Total Maximum Daily Load (TMDL) study, and/or implementation plan.

Wetlands transform nutrients, retain sediment, and remove other types of pollutants from surface runoff and streamflow, affecting the quality of waters downstream. The WARPT can identify wetlands that provide these functions, and recommended wetland conservation and restoration activities can be included as part of a TMDL implementation plan.

Is a permitted Municipal Separate Storm Sewer System (MS4) under federal/state discharge permitting programs.

An effective local stormwater management ordinance requires land use planning as the first BMP, meaning that developers who identify and protect significant natural resources on their www.wetlandprotection.org

sites usually have reduced stormwater management requirements. The WARPT can help to support this type of ordinance by providing an inventory of important wetlands sites in advance of site plan submittal.

Has a flood protection program.

The WARPT can generate a map of sites important for flood protection to include in the community floodplain program.

Has a wetland mitigation banking, wetland restoration, or off-site mitigation program.

The WARPT can provide a ready list of wetland sites as part of a wetland banking program.

Has a transfer of development rights (TDR) or purchase of development rights (PDR) program

The WARPT can determine wetland areas to include in sending zones for a TDR program or high priority sites for a PDR program

Has a comprehensive plan, watershed plan or other natural resource plan.

The WARPT can identify priority wetlands to incorporate into conservation planning for the community and/or watershed.

Has a stake in the Clean Water Act (CWA) Section 404 permitting process.

*Having a wetland inventory that identifies important functions may help to provide greater predictability regarding CWA Section 404 jurisdictional determinations because these data can inform decisions about whether a “significant nexus” exists between the wetland and a jurisdictional waterbody. More importantly, this information is provided **in advance of site plan submittal** for the entire watershed or community and should be evaluated in the field.*

This question should be completed by local government staff that is familiar with the community programs and needs, if possible. Otherwise, the question can likely be found on your municipal website or by calling up the appropriate local department staff.

2. Is there a state statute, regulation, or program that protects waters of the state?

If Yes:

- a) Does the state definition of regulated waters include wetlands of all sizes/types?
- b) Are there maps?
- c) What activities are regulated?

*The goal of questions 11 and 12 is not to determine precisely which wetlands are protected by federal, state or local measures, but rather to identify any existing regulations and programs that **may** directly or indirectly protect wetlands. This helps to give a general sense of the need for local wetland protection and can identify potential gaps that can be filled by local regulations or programs. The most effective protection for wetlands will likely be provided using a combination of approaches. Communities with no state or local protection for wetlands may get the greatest benefit from the WARPT. However, communities with state or local programs to protect wetlands may find that these do not protect all wetlands (or all significant wetlands) from all types of impacts, and may wish to fill these gaps using the WARPT.*

- Use the following resources to determine what level of protection exists for wetlands in your state:
 - State Wetlands Information Tool : <http://www.cicacenter.org/swift.html>
 - Association of State Wetland Managers' State Wetland Program website: <http://aswm.org/swp/statemainpage9.htm>
 - Environmental Law Institute's report *State Wetland Protection: Status, Trends & Model Approaches* (ELI, 2008): http://www.elistore.org/reports_detail.asp?ID=11279
- Call your State's wetland program or other relevant agencies for additional (and the most up-to-date) information

3. Are there any local measures that protect wetlands? (check all that apply)

wetland protection ordinance

wetland buffer ordinance (could be part of a stream buffer ordinance)

special protection zoning for wetlands

special stormwater criteria for discharges to wetlands

discharges of untreated stormwater to wetlands prohibited

adopt-a-wetland program

wetland-related outreach and education

If this information is not readily known, a quick review of your community websites, phone call to local staff and/or a review of your community's local codes, ordinances and programs can provide the necessary information.

Wetlands In Your Community

1. What is the current wetland acreage in your community?

This establishes the baseline for wetlands in your community and gives you an idea of how much effort may be needed to identify priority areas for protection. For example, if wetland coverage is very low, you might skip the prioritization process and adopt a program to protect all remaining wetlands. If wetlands are extensive, you'll need to determine which ones provide the most benefits so you can direct resources towards protecting them.

- Get estimate from an existing land use plan, watershed plan or natural resources plan for your community
- Use state or local wetland inventories to estimate wetland acreage
- If no state/local data available, use the NWI (see wetland mapping question)

2. How much wetland loss has occurred/is occurring in your community?

If wetland losses from agriculture and urban development have been significant, it is likely that your community has also lost valuable functions provided by these wetlands such as flood storage or water cleansing. This information can help to make the case for protecting remaining wetlands. It can also be useful to find out the extent of permits issued under Section 404 so that you can provide input on these determinations. Historic wetlands maps can also be used to identify potential sites for wetland restoration.

- Consult the U.S. Fish and Wildlife Service Status and Trends reports for state or region-wide estimates of wetland losses:
<http://www.fws.gov/wetlands/StatusAndTrends/index.html>
- Check local libraries or natural heritage agencies for regional or local historic wetlands maps
- Estimate using old U.S. Geological Survey maps or soil surveys

- Obtain statistics on acres and types of wetlands filled under Section 404 permits from your Army Corps District office:
<http://www.mvm.usace.army.mil/regulatory/information/Locations.htm>
- Use Natural Resources Conservation Service wetland determinations (aka “Swampbuster” maps) to identify farmed wetlands (wetlands that have been drained for agricultural use)
- Use mapping data to develop a rough estimate of historic wetland coverage. For example, the West Eugene Wetlands Special Area Study assumed that all land below 400 feet in elevation with hydric soil was formerly a wetland (Lane Council of Governments, 1991). Tiner (2005) describes a process for identifying historic wetlands in the Nanticoke River in MD/DE using the NWI, soils and aerial photos.

3. Are there any locally or regionally significant wetland types? If yes, describe the types and why they are significant.

“Significant” is a relative term, but the idea here is to find out which specific wetlands or types of wetlands have already been identified as having value in your community (for wildlife, tourism, flood protection). You can get this information from the sources below or from other local sources or simply based on local knowledge of the area and community attitudes.

- Check with state or local plans to identify wetlands designated as significant: e.g., state wetlands conservation plans, watershed plans, Special Area Management Plans, green infrastructure plans
- Check with the state natural heritage program to identify rare wetland types or wetlands that provide habitat for rare, threatened, or endangered species in your community
- Use wetland maps to identify wetland types that are especially sensitive to land disturbance, such as bogs, fens, vernal pools, prairie potholes, pocosins, and sedge meadows (Cappiella et al., 2006)
- Use wetland maps to identify wetland types that are considered difficult to replace (DTR) aquatic resources by your local Army Corps District:
<http://www.mvm.usace.army.mil/regulatory/information/Locations.htm>
- Check with the state to identify any wetlands designated as Outstanding Natural Resource Waters
- Use research studies and local knowledge to identify other wetlands that are of value to the community

4. Are there extensive “isolated” wetlands? If yes, estimate the extent and/or types.

There is no universal or legal definition of an “isolated” wetland but it generally refers to wetlands that may be unregulated under the Clean Water Act (CWA) due to their lack of apparent surface water connection to larger, navigable waterways. The question of whether these isolated wetlands are regulated under the CWA came about as a result of three Supreme Court rulings: Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, 531 U.S. 159 (2001) (SWANCC) and Rapanos v. United States and Carabell v. United States Army Corps of Engineers, 126 S. Ct. 2208 (2006) (Rapanos). Since the SWANCC and Rapanos rulings, some states have made initial estimates of the extent of isolated wetlands, while scientists are documenting the values and extent of various types of wetlands that can be considered isolated. It is important to remember that even wetlands that are regulated under the CWA Section 404 are not automatically protected from impacts. Permits for wetland fills are issued all the time under this program and other activities that can degrade wetlands, such as discharges of stormwater, are not regulated under Section 404. However, communities with extensive isolated wetlands have an opportunity to provide much greater wetland protection at the local level.

- If you live in one of the following states, use the resources below for estimates of isolated wetland extent and/or values:
 - Illinois: <http://www.nwf.org/wildlife/pdfs/CleanWaterActIllinois.pdf>
 - Ohio: <http://www.nwf.org/wildlife/pdfs/CleanWaterActOhio.pdf>
 - Michigan: <http://www.nwf.org/wildlife/pdfs/CleanWaterActMichigan.pdf>
 - Montana: http://mtnhp.org/reports/Isolated_Wetlands.pdf
 - New Mexico: <http://www.nwf.org/wildlife/pdfs/CleanWaterActNewMexico.pdf>
 - New York: <http://www.nwf.org/wildlife/pdfs/CleanWaterActNewYork.pdf>
 - North Carolina: http://www.aswm.org/fwp/summary_of_headwater_wetlands_nc.pdf
 - Rhode Island: McKinney and Charpentier (2008)
 - South Carolina: <http://sc.audubon.org/PDFs/atrisk.pdf>
- Use the Figure 1 to see if any of the 19 types of geographically isolated wetlands identified by Tiner (2003) and Tiner et al. (2002) are located in your region (hatched areas on map). <http://library.fws.gov/Wetlands/isolated.pdf>
- Go to the Nature Serve website to download data on isolated wetland types by ecological divisions of the U.S. (from Comer et al., 2005): <http://www.natureserve.org/publications/isolatedwetlands.jsp>

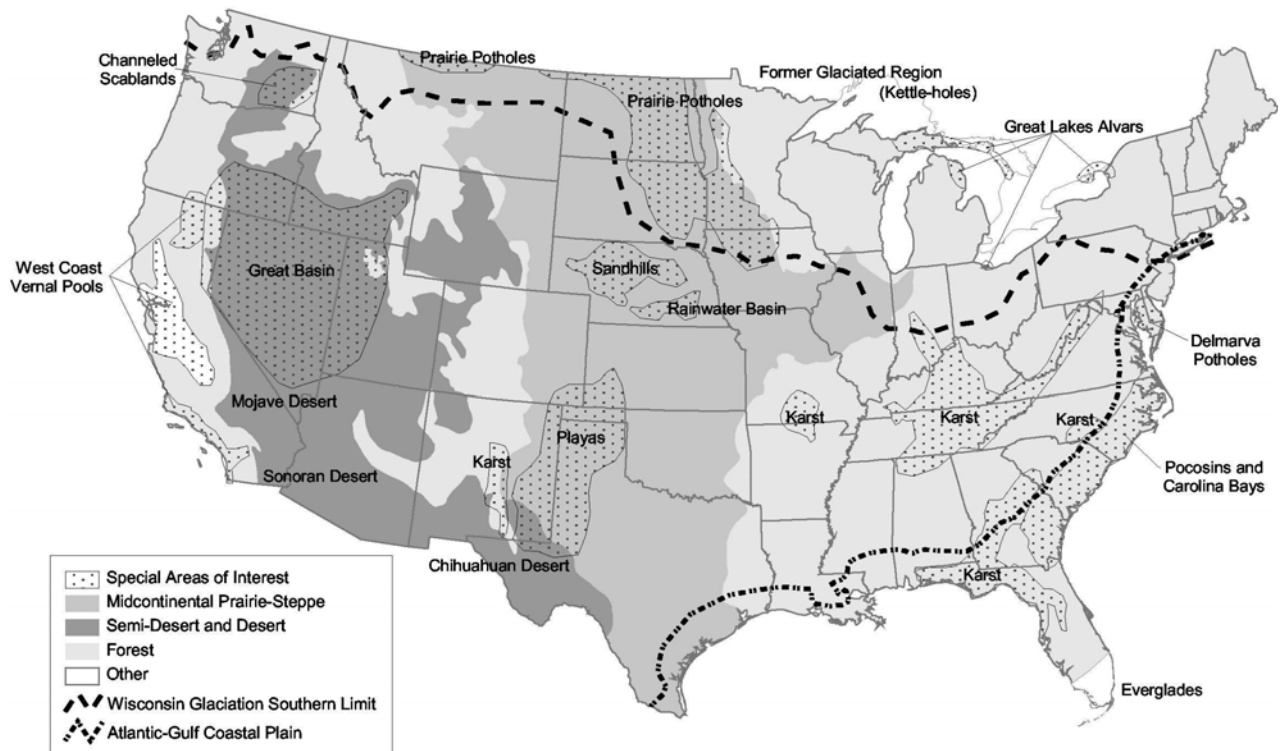


Figure 1. 19 types of geographically isolated wetlands (Tiner, 2003)

Development In Your Community

1. How much growth is anticipated in your community over the next 20-50 years?

This can be reported as population projections or increases in urban land, with the goal of getting a sense of the degree of development pressure on remaining undeveloped lands such as wetlands.

- Look at your community's comprehensive plan for growth projections, including population growth, urban growth boundaries, and acres of land planned for development.
- Use state or Census population projections:
<http://www.census.gov/population/www/projections/stproj.html>

2. Where and how will this development occur?

Your comprehensive plan or zoning map should indicate not only where future development will be concentrated (or conversely, whether it will be widespread and sprawling), but also the types of development planned. You can compare this information with wetland maps to evaluate the relative risk of impacts to remaining wetlands, especially significant ones. The results of questions 8 and 9 can give you a sense of how urgent the need is for local wetland protection in your community.

- Look at your community's comprehensive plan and zoning map to identify areas with the most development pressure and determine the proposed development intensity. Specific elements to look for include: urban growth boundaries, priority areas for development, zoning categories and allowable densities, proposed sewer/water service areas, roads and existing infrastructure, and resource protection zones.
- Check with your state planning department for state or regional studies that evaluate development pressure.

3. What other planned activities (e.g., agriculture, forestry, mining, infrastructure projects) might adversely affect wetlands in your community?

Wetland Mapping

1. What types of wetland maps are available? (check all that apply)

National Wetland Inventory (NWI)

State or local wetland inventory

Maps of protected wetlands

Wetlands associated with intermittent and ephemeral streams

Wetlands less than 1 acre

Geographically isolated wetlands

www.wetlandprotection.org

Uncertain

If National Wetland Inventory (NWI) maps are the best available for wetland in your community, you may consider doing the WARPT as a way to update maps locally. The NWI is based on data from the 1980s, and tends to underestimate wetland coverage, specifically wetlands smaller than 3 acres and ephemeral wetlands. State or local wetland inventories generally have greater accuracy. If your state or local wetland inventory is very old or is based on low-resolution data, you may want to do an update. In general, if your wetland inventory includes wetlands less than 1 acre and wetlands associated with intermittent and ephemeral streams they are probably of sufficient detail to protect wetlands locally. If maps of protected wetlands or geographically isolated wetlands are available, they will be useful to identify priority wetlands as part of the WAPRT. It is much easier to protect wetland resources when you have good maps of their locations.

Resources

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