

Nowhere Near No-Net-Loss

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The goal of "no-net-loss" of wetlands was first set out by President George H.W. Bush during his 1988 presidential campaign, and was announced as an administration policy at an EPA press conference in January, 1989. The concept was originally developed by the National Wetlands Policy Forum, a stakeholder panel brought together by the Conservation Foundation. The results of the Forum were published in 1988 and called for a short-term goal of no overall net loss of wetlands, and a longer term goal of achieving a net gain of the nation's wetlands. The goal did not just apply to the extent of wetlands acreage in the country, but also to the functions and values of those wetlands, a much more difficult goal to achieve and to measure.

The goal of no-net-loss was embraced and expanded on by President Bill Clinton. His administration's Clean Water Action Plan for the first time articulated an administration goal of achieving a net gain of wetlands. This Action Plan set a goal of attaining a net increase of 100,000 acres per year by 2005.

President George W. Bush's administration has also embraced the goal of no-net-loss of wetlands and is working on plans to ensure a net gain of wetlands acreage. One such plan for net gain is presented below, along with an analysis of its feasibility.

Are We There Yet?

Thanks to enactment of the Clean Water Act, and the Swampbuster disincentive provision of the Farm Bill, and the rapid growth of incentive-based restoration programs over the past 15 years, the consensus among professionals who work on tracking wetland losses is that net losses of wetlands have declined significantly over the past 30 years. However, these professionals also agree that we are still a long way from achieving no-net-loss. Unfortunately, there is no comprehensive wetland survey currently that can detail precisely the current status of our nation's wetlands. While a few states have undertaken fairly comprehensive wetland mapping projects, the two national wetlands trends surveys conducted by the Federal government use only sampling to assess changes in status of the nation's wetlands. While these surveys help reveal national trends over time, they are not as useful at determining the current status of the nation's wetlands. Other efforts to simply apply data from regulatory and incentive programs to determine wetland status have been even less successful.

National Wetlands Inventory (NWI)

The U.S. Fish and Wildlife Service conducts this survey that tracks wetlands status and trends during ten year periods on both public and private land. The last report covered the period between 1986 - 1997. The survey is based on an examination of remote sensing data and some

field surveys of 4,375 randomly selected sample plots, each four square miles in size. The 1986-1997 report estimated a net annual loss of wetlands and open water habitats during the ten year period of 58,500 acres of wetlands. However, if ponds and lakes, which are not equivalent in function to wetland, aren't counted, the study actually reveals a 130,480 acre per year net loss of wetland and estuarine habitat.

A major weakness of the NWI is that it does not include ephemeral wetlands, those that dry out during part of the year. Since ephemeral wetlands are common throughout the country and are often the most easily converted – and thus frequently targeted for development and agriculture – this is an enormous gap in the usefulness of the Status and Trends report.

"The minimum size wetland on NWI maps is generally one to three acres. Very narrow wetlands in river corridors, forested wetlands, and wetlands cultivated at the time of mapping are generally not depicted. What this means is that the NWI is designed to err on the side of omission. If an NWI map indicates the presence of a wetland in a given area, it is highly likely that a wetland is there. If the NWI does not indicate a wetland, one is usually not there, but the maps omit many small and drier-end wetlands and others that are difficult to photointerpret." (http://www.ag.iastate.edu/centers/iawetlands/NWIhome.html)

"Improvements in data collection methods result in wetlands inventoried at the beginning of a succeeding inventory exceeding wetlands inventoried at the end of a previous inventory. A naïve reading of these data can lead to the conclusion that wetlands extent had actually increased; in reality, the adjusted estimates reveal that wetland conversion continued from a previously underestimated base." USDA, Economic Research Service, Wetlands and Agriculture: Private Interests and Public Benefits.

The National Resources Inventory (NRI)

The National Resources Inventory (NRI) is a statistical survey of land use and natural resource conditions and trends on U.S. non-Federal lands. Non-Federal land includes privately owned land, tribal and trust land, and lands controlled by State and local governments. The NRI is conducted by the U.S. Department of Agriculture, Natural Resources Conservation Service in cooperation with Iowa State University's Center for Survey Statistics and Methodology. The NRI program serves as the Federal Government's principal source of information on the status, condition, and trends of soil, water, and related resources in the United States.

NRI is is a poor indicator of overall wetland status because it:

- Doesn't include public lands
- Doesn't do a good job of surveying coastal or suburban losses
- Based on old statistical designs and the survey is done differently from state to state
- Wasn't created to provide a national wetlands status report, but to show trends on Agricultural lands
- Doesn't capture regional trends, like the large amount of wetlands lost in the Carolinas after the National Mining Association decision struck down the Tulloch rule.

A joint study by the Illinois Natural History Survey and the Illinois State Geological Survey, found that "no effective inventory of Illinois wetlands exists. In one test watershed, current inventory methods missed 7% of wetland acreage, and 21% of inventoried wetland acreage did not actually exist." http://www.isgs.uiuc.edu/wetlands/wet6.htm

Data Analysis

The least sound method for determining the status of the nation's wetlands is data analysis of regulatory and incentive program data. This is due to the weaknesses of the data collected by both regulatory and incentive programs. Army Corps of Engineers regulatory program data quantify the amount of wetlands permitted to be destroyed and the amount of "mitigation" required to replace the wetland functions and values lost. The problem with the Corps data is that they account for all forms of "mitigation," including: creation and restoration of former wetlands (results in actual wetland gains to offset losses), as well as preservation and enhancement of existing wetlands or even upland buffers (none of these results in actual gains of wetlands acreage to offset losses - though sometimes it results in gains in function).

For example, a permit is granted to fill a 10 acre wetland and 20 acres of existing wetlands are acquired and donated to a park district as mitigation. The database would show this as a 10 acre net gain, when in actuality, this results in a net loss of 10 acres of wetlands. Additionally, the data does not account for the fact that even wetland restoration and creation may not result in gains because of the high failure rate of such projects. Incentive programs also rarely distinguish between activities conducted on existing wetlands and those solely designed to restore former wetlands. Several programs may also count the same wetlands acreage since they frequently partner on restoration projects. Vastly improved data tracking is needed for both regulatory and incentive programs. Yet even with better data, wetlands destroyed illegally, unregulated wetlands destruction, and losses due to natural events, such as coastal Louisiana erosion, would not be captured.

What is Needed to Track Acreage Goal

The only way to truly reveal the extent of the nation's wetlands is to undertake a three-pronged strategy of sampling, comprehensive mapping and modeling. Sampling programs, like the NRI and NWI, reveal overall trends. Mapping will tell where losses and gains are occurring. Modeling will help us understand what will happen, for example, with global warming, deregulation, etc. While sampling programs have been functioning for many years, wetland mapping is proceeding very slowly due to a lack of funding. Only when mapping is completed will modeling efforts be meaningful.

Net Loss of Wetlands Functions and Values

To date, there has been no real effort to track net loss of wetland functions. Indeed, the oft-repeated National Wetlands Inventory statistic of 58,000 acres per year of net loss ignores function to a ridiculous extent since the use of this number implies that gaining ponds and lakes can offset the loss of natural wetlands. Even the concept of "no-net-loss" is in some ways misleading as it assumes that we can actually "replace" all the functions and values of natural wetlands by building or restoring former wetlands elsewhere – frequently in another watershed entirely. Study after study shows how unlikely efforts to date to restore wetlands result in fully functioning systems, and to date, there is no plan to ensure that the functions and values restored are in any way equivalent to those lost. In reality, the nation is far away from meeting the nonet-loss goal for wetlands functions and values and it does not appear that there will be a serious effort any time soon to attempt to quantify this enormous net loss.

Due to failures of mitigation requirements, "... the Section 404 permitting process has been fostering an 80 percent net loss of wetlands."

R. Turner, A.M. Redmond, and J.B. Zedler, 2001. Count it by Acre or Function: Mitigation Adds up to Net Loss of Wetlands. National Wetlands Newsletter 22:6

"The goal of no-net-loss of wetlands is not being met for wetland functions by the mitigation program, despite progress in the last 20 years."

Compensating for Wetland Losses Under the Clean Water Act (2001). Committee on Mitigating Wetland Losses, National Research Council. National Academy Press, Washington, DC.

Additional Hurdles to No-net-loss

- A 2003 General Accounting Office report revealed a significant lack of enforcement of
 the Swampbuster program, the primary line of protection against continued drainage of
 wetlands on farmland. "Almost half of NRCS's field offices are not implementing one or
 more aspects of the conservation provisions of the 1985 act as required." GAO. 2003.
 "Agricultural Conservation: USDA Needs to Better Ensure Protection of Highly Erodible Cropland and
 Wetlands."
- An EPA/Army Corps of Engineers' policy directive related to the U.S. Supreme Court's SWANCC decision, issued in January, 2003 puts (in EPA's own estimate) 20 million acres of wetlands at risk. Even a 1% increase in wetland losses due to SWANCC would represent about as many acres of wetlands as have been lost the last 10 years.
- NWF's recent report, <u>Crossroads: Congress, the Corps of Engineers and the Future of America's Water Resources</u> examines just 29 proposed civil works projects that together threaten more than 640,000 acres of wetlands and shoreline areas. This includes the Yazoo Pump project in Mississippi, which would drain more than 200,000 acres of wetlands, and the St. John's Bayou, New Madrid Floodway project in Missouri, which would destroy 75,000 acres of wetlands.
- The coastal marshes of Louisiana regularly hold half of the wintering duck population of the Mississippi Flyway; the coastal wetlands of Texas are the primary wintering site for ducks using the Central Flyway. Loss rates have slowed in recent years to about 16,000-22,400 acres/year, but projections for the next 50 years suggest an additional 630,000 acres of marsh and forested wetland will be lost despite intensive and expensive efforts geared toward protection and restoration in the coastal zone. http://www.ducks.org/conservation/Projects/Southern/GulfCoastalPlain/index.asp

Net Gain of Wetlands?

The US EPA has reportedly been working on a net gain goal for the administration for some time. A deliberative draft of EPA Administrator Leavitt's 500-day Water Quality Plan obtained last winter included a net gain goal of 1 million acres of wetlands. An EPA official recently presented some figures (given below) for how the administration might go about pursuing a net gain goal for 100,000 acres per year under current programs and policies. While it is good that the administration is stating its intent to achieve net gain, the reality is that the country is still far from achieving no-net-loss. And wetland functions and values seem to be entirely missing from the equation.

"Working with Partners, achieve a net annual increase of 100,000 acres per year

- Will continue to sustain losses of up to 100,000 acres per year
- Farm Bill agriculture incentive programs 125,000 acre per year gain
- Restoration programs (e.g. FWS, NMFS) 40,000 acres per year gain
- State/Tribal/local/Non-governmental programs 35,000 acres per year gain"

Presentation by John Meagher, EPA Office of Wetlands Oceans and Watersheds. Association of State Wetland Managers Annual Winter Meeting, March 25, 2004

While the fact that the administration is articulating a net gain goal is good, we have yet to reach the elusive goal of no net loss. There are a number of factors that make the plan presented above less than realistic. Additionally, the tools needed to track no-net-loss and net gain are not yet available and resources need to be dedicated to developing them.

Will continue to sustain losses of up to 100,000 acres per year

Continuing to allow a net loss of 100,000 acres of natural wetlands a year is a very poor policy goal. While there are always going to be some losses of existing wetlands, these losses much be minimized to the greatest extent possible. Due to the difficulty of building or restoring former wetlands to even partially replace the functions and values of natural wetlands, there can be no realistic policy for net gain or even no-net-loss policy that includes writing off such a large amount of natural wetlands. Losses to natural wetlands must be avoided and minimized, to the greatest extent practicable, as per Clean Water Act, Section 404 (b)(1) guidelines. Replacing them functionally is an extremely difficult, if not an impossible task. A policy that allows for such a large loss of existing wetlands will almost certainly lead to a net loss of wetland functions.

Incentive programs alone cannot ensure a net gain of wetlands. All remaining wetlands must receive the highest level of protection available. The most important policy step the administration can take is to halt overly-broad readings of the U.S. Supreme Court's SWANCC decision, including withdrawal of the current policy directive on SWANCC, directing all regulatory personnel to enforce current regulations to the full extent of the law, and supporting passage of the Clean Water Authority Restoration Act (H.R. 962 and S. 473) in Congress. However, efforts must also include strong enforcement of both the Swampbuster provision of the Farm Bill and the Clean Water Act (especially requirements that impacts to wetlands be avoided where practicable alternatives exist). Additionally, mitigation efforts must be improved and enforced, data tracking mechanisms improved, and funding for the Corps of Engineers regulatory program must be substantially increased.

Farm Bill agriculture incentive programs - 125,000 acre per year gain

This goal simply cannot be met under current program levels. The Farm Bill conservation programs (many are covered below) are excellent programs for recouping lost wetland acreage. The 2002 Farm Bill authorized the Wetlands Reserve Program (WRP), the largest of the incentive-based restoration programs at 250,000 acres per year. However, the administration has failed to fully fund the WRP, allowing only 200,000 acres in FY 02, 213,000 acres in FY 03 and 189,144 acres for FY 04 (about 10,000 acres more than requested by the President). In 2001, 140,000 acres were enrolled, a fairly typical amount for the late 90s. Thus, only an additional 40,000-80,000 acres per year are being authorized, not the 125,000 acres needed under this plan. Further, land enrolled in WRP tends to be marginal farming areas producing limited income. They are not those wetlands that are most threatened by development, therefore they probably do not do a very good job replacing the functions and values of wetlands lost to development activities.

Several other Farm Bill conservation programs provide incentives to restore or protect wetlands. The Wildlife Habitat Incentives Program provides some funding for cost-share agreements to restore wetlands and in-stream habitats. However, only about 10 percent of the funds for this program are used for aquatic habitats. The Conservation Reserve Program and Conservation Reserve Enhancement Program (along with the state CREP match) provide some funding for the restoration and enrollment of wetlands and some riparian habitats in conservation easements.

However, the majority of CRP funds are spent on upland habitats and most easements in these programs are short-term. The Continuous sign-up Conservation Reserve program also provides funding for riparian restoration, however, agreements are for only 10-15 years.

Restoration programs (e.g. FWS, NMFS) - 40,000 acres per year gain

This 40,000 acre/year goal seems ambitious, but achievable if the appropriate emphasis is placed on restoration, rather than simply enhancing and preserving existing wetlands. All of the existing programs were designed to work with, not replace the Federal Clean Water Act and most were in place in the 90s when the Fish and Wildlife Service was still projecting 130,480 acres per year net loss of wetland and estuarine habitats. Therefore, they will do little to offset enormous potential losses through the regulatory program, such as the estimated 20 million acres of wetlands put at risk by the Corps of Engineers/EPA joint guidance on the U.S. Supreme Court's SWANCC decision, issued in January, 2003. Here is an examination of some of the larger federal programs and their contribution to our nation's wetlands base as of Spring, 2003.

Partners for Fish and Wildlife

This program, administered by the U.S. Fish and Wildlife Service has helped to restore or enhance 574,800 acres of wetlands since 1987 (Martha Naley – USFWS, personal communication). Unfortunately, wetlands restored through this program are not usually protected by a legal mechanism. They are thus vulnerable to future development projects.

Coastal Wetlands Restoration Program

The Coastal Wetlands Conservation grant program has awarded \$32 million to 23 coastal States and 1 U.S. Territory. Through this grant program about 40,000 acres of coastal wetlands have been acquired, protected, or restored by Spring, 2003. It is unknown how much of this figure accounts for restoration.

National Wildlife Refuge System

The National Wildlife Refuge System, in its 100 years of operation, has protected some very key wetland habitats across the nation as refuges and waterfowl production areas. Nationally, about 35-40 percent of the refuge system's 95 million acres (including waterfowl production areas) is some type of aquatic habitat (Ken Grannemann – USFWS, personal communication). However, new acquisition is not proceeding very rapidly as full funding of the Land and Water Conservation Fund has yet to occur. In fact, the President's budget request for FY 04 represented about a 60 percent cut in funding for refuge acquisition despite his promise to fully fund the LWCF (Jim Waltman – The Wilderness Society, personal communication). Chronic under-funding of refuge operations and maintenance programs also prevents many refuge-owned areas from being restored as wetlands. While the wetlands already protected within the refuge system enjoy fairly good protection from dredge and fill activities, it is not anticipated that new acquisitions will increase significantly within the next few years.

5 Star Restoration Program

With average grants that run about \$10,000 per project, the 5 Star Restoration Program is more effective at leveraging local funding and labor for stream and wetland restoration and clean up programs than it is a major force for long term conservation of aquatic systems. While the program has achieved impressive results with small amounts of funding, no long-term protection mechanisms are required to ensure that the progress is not eventually reversed.

North American Wetlands Conservation Act

Through the North American Wetlands Conservation Act, the Fish and Wildlife Service estimates that in addition to wetlands that have been enhanced for waterfowl use, or existing wetlands that have been acquired or put under protective easement, about 205,072 acres of wetlands/aquatic habitats have been restored. (Joe Moteo – USFWS, email and personal communications 4/10/03)

State/Tribal/local/Non-governmental programs - 35,000 acres per year gain

Very little information has been gathered about state/tribal/local and non governmental efforts to restore wetlands. It is not likely, however, that this is a realistic goal at the present time. For example, while Ducks Unlimited has contributed to the restoration, acquisition, and enhancement of 11 million acres of wetlands in its 66 year history, the group has not significantly expanded their restoration activities in recent years.

Conclusion

Although net losses of wetlands acreage have declined in the past 30 years, and restoration programs have rapidly expanded over the past 15 years, wetlands are perhaps more endangered today than they have been for decades. The Administration and Congress need to commit themselves fully to achieving the goal of no-net-loss for wetlands functions, values and acreage and to planning for a net gain of wetlands to support the functions and values most needed by human and wildlife communities. The following actions are needed immediately:

All remaining wetlands should receive the highest level of protection available

- Overly broad readings of the SWANCC decision must stop and all regulatory personnel must be directed to enforce current regulations to the full extent of the law.
- The Clean Water Act, Section 404 program must be strongly enforced, especially provisions dictating avoidance of impacts where practicable alternatives exist.
- Funding of the Corps of Engineers Regulatory Program must be significantly increased and data tracking mechanisms improved.
- Mitigation requirements must be improved and rigorously enforced to ensure full replacement of wetland acreage and function.
- Swampbuster must be fully enforced in all states and penalties implemented.
- The Clean Water Authority Restoration Act should be passed by Congress (H.R. 962, S. 473).
- Existing incentive programs should be expanded and new programs developed according to a national plan to ensure restoration of all types of wetlands and their functions and values in all regions of the country.
- Tracking mechanisms need to be improved to accurately account for functions, values and acreage of wetlands and national and regional trends.