

Interior Releases First-of-its-Kind Regional Study as Part of National Assessment of Carbon Storage in U.S. Ecosystems -

Report evaluates amount of carbon absorbed by wetlands, grasslands and forests in the Great Plains region

The Department of the Interior today released the first in a series of regional studies measuring the amount of carbon stored in U.S. ecosystems. Published by Interior's U.S. Geological Survey (USGS), the study examines the current and projected future carbon storage in the Great Plains region, as part of a nation-wide assessment.

"This is truly groundbreaking research that, for the first time, takes a landscape-level look at how our lands naturally store carbon and explores how we can encourage this capability in ways that enhance our stewardship of natural resources," said Deputy Secretary of the Interior David J. Hayes. "Our landscapes are helping us to absorb carbon emissions that would otherwise contribute to atmospheric warming."

This is the first regional report applying a comprehensive methodology designed by the USGS in 2010 to assess how much carbon is stored in various ecosystems, such as wetlands, forests and rangelands. The study covers an area of the United States that includes parts of fourteen states from eastern Montana to southern Texas and eastern Iowa.

Following the Great Plains study, the USGS is expected to release studies on the western, eastern, Alaskan and Hawaiian regions. The full national assessment is expected to be completed around 2013.

A key finding in the Great Plains study is that the region is currently an overall "carbon sink," meaning it takes up more carbon than it emits. In addition, the amount of carbon sequestered offsets most of the emissions of nitrous oxide and methane from this region.

On a national scale, the amount of carbon that is currently stored per year in ecosystems within the Great Plains is about 21 percent of emissions from personal vehicles and 3.6 percent of total fossil fuel emissions nationwide. The values for vehicle and total fossil fuel emissions are not part of the USGS study but were calculated using the 2009 EPA national greenhouse gas inventory report.

Using the uniform methodology developed by USGS also allows for comparisons between regions and ecosystems. For example, the regional study shows that the southern part of the Great Plains has a substantial amount of woody vegetation, which has a strong potential to store additional carbon. Agricultural lands in the eastern part of the Great Plains similarly have a strong potential to store carbon; however, these areas also are associated with high greenhouse gas emissions.

"For the first time, we will have a comprehensive view of how carbon is cycling through our Nation's ecosystems: sources, sinks, and relative residence times in the various biological components," explained USGS Director Marcia McNutt. "This study will not only result in better land-use decisions but should also advance our fundamental understanding of one of the most important chemical cycles on the planet."

Congress called for the USGS carbon sequestration research in 2007 legislation sponsored by then-Senator Ken Salazar. At the 2009 United Nations Framework Convention on Climate Change (COP-15), Salazar - as Secretary of the Interior - presented the initiative, noting the importance of biological carbon sequestration.

As part of the study, USGS scientists produced current carbon storage estimates and made projections into the year 2050. Future estimates incorporate Intergovernmental Panel on Climate Change projections of climate change as well as USGS projections of land use and land cover change. By 2050, the USGS study estimates that carbon stored in the region is expected to increase by 29 to 36 percent, while emissions of nitrous oxide are expected to increase by 7 to 11 percent and methane is expected to change by -1.6 to 16%.

"This report will give tools to the policymakers, land managers and the public to make sound decisions, such as whether to restore wetlands, harvest trees, develop agricultural lands, or consider no-till farming practices," said Hayes. For example, a community might need to decide whether to convert grasslands and forests to croplands or urban areas to meet the demands of a growing population. Such decisions have varying consequences related to carbon sequestration and greenhouse gas emissions.

Changes in carbon storage are driven by both short - and long-term changes to the landscape. In the Great Plains, carbon storage is expected to increase based on near-future land use and management practices such as decreased timber harvesting and changes to crop management, including expanded fertilizer applications and no-till farming. The rate of increase is projected to slow somewhat over time due to climate change and land-use transitions such as grasslands or forests conversion to croplands or urban areas.

Research conducted by USGS scientists on the carbon cycle and potential for carbon sequestration was mandated by the Energy Independence and Security Act of 2007. In addition to the biological carbon sequestration assessment, the USGS is also assessing the nation's potential for geologic carbon sequestration, which is the storage of carbon dioxide in underground rock formations. Following the Great Plains study, the USGS is expected to release studies on the western, eastern, Alaskan and Hawaiian regions. The full national assessment is expected to be completed around 2013.

The report "[Baseline and Projected Future Carbon Storage and Greenhouse-Gas Fluxes in the Great Plains Region of the United States](http://pubs.usgs.gov/pp/1787/)" can be found online in the USGS publications warehouse at <http://pubs.usgs.gov/pp/1787/>.

Special Report Preview and Podcast: From Amber Waves to Muddy Rivers

Here is a preview of an upcoming five-part series on the environmental threat of the Minnesota River. Series can be downloaded by [signing onto our replica e-edition](#) of The Free Press. To hear the Podcast between Free Press Editor Joe Spear and reporter Tim Krohn, click the audio file at the right.

Day 1: Sunday, Dec. 4- Overview: When a river is the threat

In-depth research shows the continued degradation of the Minnesota River and its growing environmental impact on other watersheds.

The issue is creating growing friction between farmers and environmentalists and residents on Lake Pepin who are suffering from the Minnesota River's pollution. Scientists point to agriculture as the main culprit, while farmers challenge that assertion with their own research.

For the entire preview of the 5-part series: [Special report preview and podcast: From Amber Waves to Muddy Waters](#)

Twenty grants totaling \$1.83 million have been awarded to conservation groups to improve state Habitat through the Conservation Partners Legacy Grant Program (CPL).

The Minnesota Department of Natural Resources (DNR) manages the CPL program to provide competitive grants from \$5,000 to \$400,000 to local, regional, state, and national nonprofit organizations, including government entities. The grants are for work to enhance, restore, or protect the forests, wetlands, prairies, and habitat for fish, game, or wildlife in Minnesota. The grants are made possible by Clean Water, Land and Legacy Amendment dollars.

"Every year, Minnesotans envision new projects that can make our lands healthier and our waters cleaner for fish and wildlife habitat," said Ed Boggess, director of DNR's Fish & Wildlife Division. "The CPL program is funded by appropriations from the Outdoor Heritage Fund and enables people to convert these dreams into realities."

Among this year's recipients are the National Wild Turkey Federation, which received \$48,000 to restore and enhance 100 acres of oak savanna on state wildlife management areas (WMAs); the Fergus Falls Fish and Game Club, which received \$17,000 to restore native grasses to 178 acres of current cropland on new Waterfowl Production Areas; and MN Pheasants-Blue Earth Chapter, which received \$10,000 to remove encroaching woody vegetation on 110 acres of prairie on the Maple River WMA.

[Click here to see the list of funded applications from this fall.](#)

Boggess encouraged nonprofit organizations to take advantage of this unique program. "Funds are available," he said. "The application process is easier than ever. It's a great way to leave a conservation legacy in your local community." Remaining funds will be awarded in a second round of applications that will be announced soon.

The remaining \$3.48 million in fund will be made available for a second round of grants, set to open in mid-December of this year. The deadline for applications to be submitted will be in February- check the DNR's website periodically or watch for another email when the dates are set.

Since the CPL program began, more than 100 grants totaling \$9.7 million have been awarded. The DNR's CPL program is an outgrowth of the Lessard-Sams Outdoor Heritage Council, which recommended its creation to the state legislature. The program is now in its fourth funding cycle. Grant funds are provided annually from the Outdoor Heritage Fund. This fund receives a portion of the income generated by the Clean Water, Land and Legacy Constitutional Amendment sales tax. Minnesota voters approved the amendment, which instituted a statewide sales tax of three-eighths of 1 percent for a period of 25 years, in 2008.

For more information on the CPL grant program, please [visit our website.](#)

Support Independent Song Writers

Hi All, As a member of the Minnesota Association of Songwriters (MAS) I am presently listed and have my original material posted on <http://www.hearitlocal.com> both on the website and on the radio. It is new and just beginning to take off and is very exciting for all of us who value creativity. It is only in two areas of the U.S. at present, San Francisco and the Twin Cities but I am sure it will grow quite fast. I am on the recent listings or you can just search my name and take a listen, make a comment, or what ever. It is a great venue for those of us creating original material. Most of my stuff is environmental but I have several other options for fun lovers as well, I hope you enjoy. You will be amazed at the scores of other artists and it will turn you on to a lot of great talent and entertainment in and around the greater twin cities and beyond. Supporting independent artists is a part of freedom of expression we can't afford to lose in these times of over produced board room corporate influenced music. The groundswell of democracy lives on my friends, just blow on the flames a little and stand back.

Events:

December 7th (Wednesday) is the **Showing of the documentary: *Green Fire*** at the School Sisters of Notre Dame (170 Good Counsel Drive) in Mankato at 7:00 p.m. *Green Fire* is the first full-length, high definition documentary film ever made about legendary conservationist Aldo Leopold. The film explores Aldo Leopold's life in the early part of the twentieth century and the many ways his land ethic idea continues to be applied all over the world today. Admission is free. Sponsored by the Many Rivers Chapter of The Prairie Enthusiast, Center for Rural Ministry and Earth Spirituality, and the Water Resources Center at Minnesota State University Mankato. For more information contact Scott Kudelka at 507-389-2304.

January 5th (Thursday) is the **Showing of the documentary: *Okie Noodling*** at the Treaty Site History Center in St. Peter. For centuries, a unique breed of fishermen has been catching monster catfish with their bare hands in the rivers and lakes of Oklahoma. Today, the tradition of "noodling" still has Okie anglers hooked. Admission is free. Sponsored by St. Peter Public Schools, Nicollet County Historical

Society, River Rock Coffee and St. Peter Food Co-op. For more information, <http://mavdisk.mnsu.edu/kudels/documentaryfilmseries.pdf>. Please contact 507-934-2160 or jessica@nchsmn.org for details.

January 5th (Thursday) is the **Showing of the documentary; Green Fire** at the New Ulm Library (17 North Broadway Street) at 7:00 p.m. *Green Fire* is the first full-length, high definition documentary film ever made about legendary conservationist Aldo Leopold. The film explores Aldo Leopold's life in the early part of the twentieth century and the many ways his land ethic idea continues to be applied all over the world today. Admission is free. Sponsored by the Many Rivers Chapter of The Prairie Enthusiast, Center for Rural Ministry and Earth Spirituality, and the Water Resources Center at Minnesota State University Mankato. For more information contact Kris Wiley, Assistant Director New Ulm Public Library, 507-359-8334 or kwiley@tds.lib.mn.us

January 17th (Tuesday) is the Minnesota River Watershed Alliance Quarterly Meeting from 6:00 p.m. to 9:00 p.m. at Ridgewater College (2 Century Avenue SE) in Hutchinson. Sponsored by the Friends of the Minnesota Valley, the meeting begins at 6 p.m. with a social hour to give participants time to interact with each other along with sharing stories and concerns about what is happening in their part of the Minnesota River Basin. At 7 p.m., the formal part of the meeting starts, with the group striving to wrap up all discussion by 9 o'clock. For more information, <http://watershedalliance.blogspot.com/>

February 2nd (Thursday) is a **Showing of the documentary: River Revival – Working Together to Save the Minnesota River** at 7:00 p.m. at the New Ulm Public Library (17 North Broadway Street). "River Revival" tells the story of the Minnesota River Basin from its geological origins to the present day. Through the seasons and throughout the basin, the documentary examines the river's many pollution problems and highlights the efforts of people from all walks of life – academics, farmers, natural resource professionals, anglers, homeowners, students, paddlers, politicians and citizen activists – to restore the river. John Hickman, Executive Producer of River Revival will be on hand to share his insights of making the documentary and answer questions. For more information contact Kris Wiley at 507-359-8334 or kwiley@tds.lib.mn.us

February 11th (Saturday) is the **Clean Up the River Environment (CURE) Annual Meeting** at the Hollywood Theater (Main Street) in Montevideo from 5 p.m. to 10 p.m. (meal served at 6:30 p.m.). Speakers include Scott Sparlin, founder of the clean up the Minnesota River movement; Dennis Frederickson, DNR Region 4 Commissioner; and Jon Olson, Board of the directors of the Mississippi Market Food Co-Op in St. Paul. Malena Handeen will be joined by artists and musicians from throughout the state to put on a special show. Cost of the meeting is \$25 per person if you register by February 7th (includes local foods banquet, door prizes and entertainment). Cost of registration after February 7th will be \$30. To reserve a spot, mail in your reservations (117 South 1st Street; Montevideo, MN 56265), call Dixie Tilden at 1-877-269-2873 or email cure@cureriver.org. For more information, http://www.curemnriver.org/events.html#annual_meeting

Check out additional upcoming events and workshops on the Minnesota River Calendar at: <http://mrbdc.mnsu.edu/calendar>

Environmental/Conservation Articles:

[Auditor finds room for improvement on state Legacy funds](#) (Associated Press). Minnesota can improve how it manages hundreds of millions of dollars in Legacy Amendment funds, and needs to watch to make sure the dedicated money doesn't simply replace budget cuts, Legislative Auditor James Nobles told lawmakers Wednesday.

[Editorial: Keep legacy money true to purpose](#) (Mankato Free Press). A recent state audit on Minnesota's Legacy fund offered good news and bad news.

[Legislative Auditor: More documentation needed for Legacy Amendment](#) (Minnesota Public Radio). The state Legislative Auditor on Wednesday recommended more documentation on how Legacy Amendment funds are spent to ensure lawmakers and the groups that receive money are complying with the law.

[Editorial: Continue to conserve sensitive land](#) (Mankato Free Press). The farm economy is booming and we should all be cheered by it.

[Super committee gridlock spares conservation cuts](#) (Minnesota Outdoor News). The Congressional "super committee," appointed to reduce the nation's deficit by \$1.2 trillion over 10 years, announced defeat and dissolution earlier this week, signaling potential cuts to conservation and most other programs funded by the federal government will be spared indefinitely.

[An eco-friendly high school](#) (Alexandria Echo Press). The new District 206 high school in Alexandria will be energy efficient due to a decision made at the most recent school board meeting.

[Single zebra mussel detected on dock equipment removed from Pelican Lake](#) (Alexandria Echo Press). A single juvenile zebra mussel was found recently on dock equipment removed from Pelican Lake in Crow Wing County near Brainerd, the Minnesota Department of Natural Resources (DNR) said.

[County, Xcel work together to provide drug drop-off](#) (Mankato Free Press). There's now a safe place to put leftover prescription pills, expired over-the-counter allergy medicines and even the white powdery substance that kid claimed to be holding for a friend.

[Tiny Hopkins energy start-up ready for major launch](#) (Minneapolis Star Tribune). A 'new twist on an old technology' aims to turn ag waste into energy.

[MPCA smaller amid state cutbacks, staff retirements](#) (West Central Tribune). Its responsibilities may be growing, but not its staff.

You can't be suspicious of a tree, or accuse a bird or a squirrel of subversion or challenge the ideology of a violet – Hal Borland

Please register at the Minnesota River Watershed Alliance's bulletin board at <http://mail.mnsu.edu/mailman/listinfo/mrwa> to receive regular updates on what is happening in the Minnesota River Watershed.

The Minnesota River Watershed Alliance (Watershed Alliance) is an organized network of citizens, public agencies, and private organizations dedicated to communicating the benefits of an ecology healthy Minnesota River Watershed to others and are actively working towards its improvement and protection. We meet four times a year and encourage landowners and recreational users of the river to be part of the effort. For more information on the Watershed Alliance:

<http://www.watershedalliance.blogspot.com>

Thanks,

Scott

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