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Open Channels

A SWANCC In The Duck Factory

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In no portion of the Rock Island District and possibly the country is the impact of the January 9, 2001, Supreme Court decision known as SWANCC (Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers) more profound than in the Prairie Pothole Region. Encompassing an area of more than 300,000 square miles that includes parts of Canada, North Dakota, eastern South Dakota, western Minnesota and approximately 12,500 square miles of north-central Iowa, the Prairie Pothole Region contains some of the oldest, and most productive wetlands in North America.

The prairie potholes are left over from the last glaciation period, which receded from North America about 11,000 years ago. As the glaciers receded, great blocks of ice broke off and were strewn across the landscape. As they slowly melted over many seasons, these ice blocks, partially due to their shear weight, caused bowl-shaped, closed depressions, also known as kettles, from a few feet across to up to 500 acres in size, to form across what would become the Tall Grass Prairie. So dense are they in some parts of their range that up to 155 prairie potholes may occupy a square mile.

Prairie pothole vegetation is characterized by concentric rings of plants adapted to growing in varying degrees of wetness. Surrounding upland areas, when not farmed, may be dominated by prairie grasses and forbs. Near the top of the pothole where the soil is saturated one may find a band of smartweed and beggar-ticks, then a band of spike rush and sedges, followed by a band of river bulrush or cattails. And finally, where water is ponded, submerged and floating aquatic plants such as bladderwort or potamogeton may exist. The seedbeds in prairie potholes are known to be very persistent, and even after decades of intensive farming or several years of extended drought, native plants quickly spring back to life when the farming stops or the rains return.

In the spring, prairie potholes fill up with snowmelt and rainwater, often holding water well into late summer. Because they fill with water early, and their saturated soils are filled with protein-rich, egg production essential invertebrates, prairie potholes are extremely important to ducks, shore birds and wading birds, which use them as staging and feeding sites during their long spring migrations. Also, since undrained prairie potholes hold water late into the year, they make up the most important waterfowl production region on the North America continent. Up to seventy percent of the 12 million waterfowl in the lower 48 states call the Prairie Pothole Region home for the growing season, with upwards of 15 species of ducks arriving in the prairie pothole wetlands each March to raise their young. The prairie potholes are extremely productive, and studies have shown that they can support as many as 140 ducks per square mile. It is no wonder the Prairie Pothole Region has been nicknamed the nation's duck factory.

Water Smartweed

(see Prairie, next page)

Porcupine Sedge

Originally, Section 404 of the Clean Water Act simply stated that the Secretary of the Army may issue permits for the discharge of dredged or fill material "into navigable waters" (owing to their role in interstate commerce). Subsequent court decisions extended Section 404 jurisdiction to prairie potholes and other waters outside of the navigable tributaries. This was based on the fact that migratory birds use these waters and the recreation industry profits from the presence of the birds (interstate commerce).

Creeping Bladderwort

In the SWANCC case, the Corps claimed 404 jurisdiction over some abandoned sand pits based on the existence of a rookery of migratory wading birds.

In a landmark decision, the Supreme Court struck down the use of migratory birds for asserting jurisdiction under the Clean Water Act. The SWANCC decision effectively removed millions of acres of isolated wetlands from 404 regulation. Prairie potholes, with typically no surface inlet or outlet to connect them to other waters, which are themselves tributaries to navigable waters of the United States, serve as a poignant example of the type of wetland affected by SWANCC. With the Clean Water Act sidelined, only the Food Security Act remains in the game to offer any regulatory protection for America's prairie potholes.

Under the Food Security Act's Swamp Buster provisions, farmers can be penalized for manipulating wetlands to improve production. However, given that the Food Security Act applies only to participating farmers, development in prairie potholes, whether industrial, commercial or residential is no longer Federally regulated. Also, according to current Department of Agriculture rules, unless a new determination is requested by a property owner, old wetland inventories must be used to determine Food Security Act jurisdiction. The old inventories have been found to contain gross inaccuracies. In one well-documented case prior to SWANNC, in the heart of the Rock Island District's pothole country, District staff found 105.8 acres of jurisdictional wetland where existing Department of Agriculture inventories indicated there were only ten acres.

Great Blue Heron

Therefore, as Swamp Buster and the Clean Water Act are administered within the Rock Island District, the majority of prairie potholes are unprotected. Unfortunately, it appears America's duck factory will be downsized in the near future.

St. Louis District Stream Mitigation banks
The catchphrase of the 1990's; Wetland Mitigation Banking

By Phil Brown
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Though sometimes burdensome, compensating for wetland impacts is a relatively straightforward task. However, compensating for stream impacts is often much more difficult. For the most part, creating a new stream to replace an impacted or lost stream is not a viable option. Therefore, the only option to mitigate for the permitted impacts is to take an existing stream in a degraded state, and restore or enhance it. However, this can be a very difficult task. As such, the St. Louis District has worked to create two stream mitigation banks.

In a partnering effort with the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the Missouri Department of Conservation, the Missouri Department of Natural Resources, SCI Engineering, Inc., and the Bank Sponsor Mr. Don Breckenridge, the Fox Creek Stream Mitigation Bank (FCSMB) was approved on May 30, 2000, making it the first stream mitigation bank in the country.

FCSMB is located along the border of St. Louis and Franklin Counties, Missouri. Even though the Missouri Department of Conservation lists Fox Creek as a high-quality urban stream, the portion of Fox Creek that is enrolled under this banking initiative is in a severely degraded state. FCSMB consists of approximately three miles of Fox Creek from Interstate 44 to its confluence with the Meramec River. Developmental encroachment at this portion of Fox Creek could compromise the integrity of the entire stream. As such, the FCSMB will have a minimum 100-foot corridor of trees replaced along both banks of the stream, with some portions of the corridor reaching 400-feet. There will be additional in-stream structures for stabilization purposes, and upland waterway enhancement by revegetation of warm and cool season grasses. Due to the success of the FCSMB, the bank sponsors are considering the establishment of a wetland mitigation bank immediately adjacent to the stream mitigation bank. Of the 196.3 total credits in FCSMB, 37.9 have been sold to date.

The total credits available in FCSMB were originally set at 197.2. Approximately 13,800 linear feet (LF) of stream is included in the bank. The original bank instrument stated that 70 LF (average 300 LF width of corridor) is equal to one credit. Therefore, 13,800 LF divided by 70 LF is equal to 197.2 credits. However, as credits were starting to sell, it was noticed that debiting credits from the bank based on linear feet was somewhat confusing and possibly inaccurate. For example, Fox Creek is a perennial stream. If a proposed project is impacting 1000 LF of an intermittent or ephemeral stream, is it justifiable to have them mitigate by purchasing 1000 LF (i.e. 14.29 credits) from FCSMB? What if the impacted stream has a limited or absent riparian corridor?

The functions and values of the impacted stream may not necessarily justify the quality and quantity of functions and values provided by FCSMB.

As a result, the bank instrument was amended to change the total credits to reflect acreage. The total credits in FCSMB are now set at 196.3. FCSMB includes a total of 98.149 acres (stream plus riparian corridor). Thus, 300 LF (average width of corridor) multiplied by 70 LF (initial credit base) and divided by 43,560 square feet (one acre) is equal to 0.48 acres. Therefore, 0.5 acres (rounded for simplicity) is equal to one credit. Proposed project impacts (stream plus corridor) can now be calculated in acres and credits purchased from FCSMB will also be debited in acres. So, for the same 1000 LF intermittent or ephemeral stream (assuming 5 LF wide and no riparian corridor), the total area impacted is equal to 0.11 acres. Then, 0.11 acres divided by 0.5 acres per credit is equal to 0.22 credits (at a one to one ratio).

In addition to the FCSMB, the St. Louis District approved the Richland Creek Mitigation Bank (RCMB) on December 17, 2001. It was established through a partnering effort with the U.S. Fish and Wildlife Service, the Illinois Department of Natural Resources, SCI Engineering, Inc., and the Bank Sponsor, Mr. Leland Nollau.

(see Wetland, next page)

-Wetland-

RCMB is located near Smithton, St. Clair County, Illinois and is on and immediately adjacent to the West Fork of Richland Creek, which is a primary tributary to Richland Creek. Richland Creek is listed by the Illinois Environmental Protection Agency as a 303d impaired water.

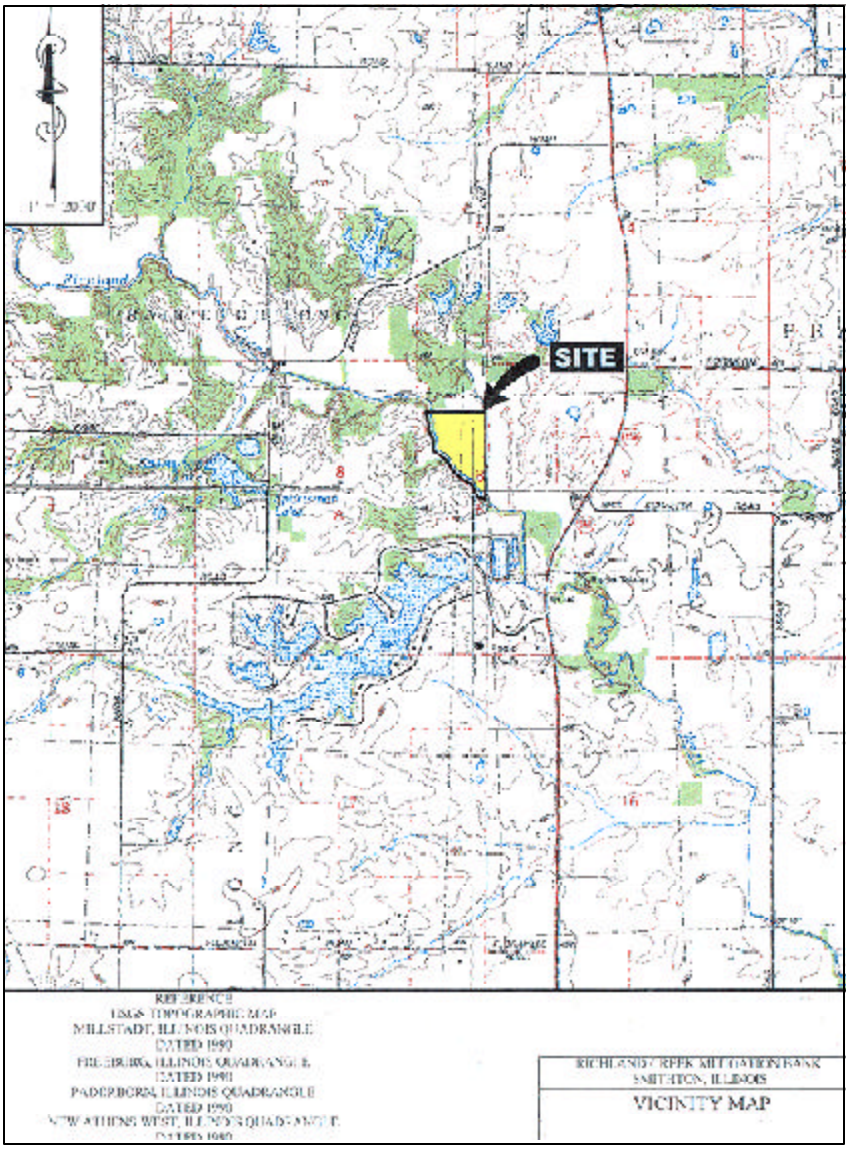
RCMB has both wetland and stream mitigation components. The stream bank consists of 2,110 linear feet of creek bank and will have a 100-foot riparian corridor on the east side of the creek, as well as some minor in-stream stabilization structures.

A 50-foot riparian corridor on the west side of the creek is currently included in a separate conservation easement as part of an adjacent residential subdivision and wastewater treatment facility. This conservation easement is not included in the mitigation bank.

The surrounding area is rapidly being developed with residential subdivisions, which could possibly pose a threat to the integrity of the entire Richland Creek watershed. RCMB also includes a 19.8-acre wetland bank (8.2-acres emergent, 2.3-acres scrub-shrub, 9.3-acres forested) immediately adjacent to the stream bank. RCMB has 19.8 total wetland credits and 21.1 total stream credits.

To date, 1.15 wetland credits have been sold, however no stream mitigation credits have been sold from the RCMB.

The total stream credits available in RCMB are 21.1. As noted previously, approximately 2110 LF of stream is included in the bank.



`The bank instrument states that 100 LF (average 100 LF corridor) is equal to one credit. Therefore, 2110 LF divided by 100 LF is equal to 21.1 stream credits. The West Fork of Richland Creek is also a perennial stream. However, at this time, the total credits have not been amended to reflect an acreage basis.

The wetland credits are calculated at one acre is equal to one credit. Therefore, 19.8 total wetland credits are included in RCMB.

Both FCSMB and RCMB provide significant environmental benefits to each immediate area, as well as their respective watersheds.

Mississippi River Partnering Conference

"The Greatest Living and Working Watershed"

and

Mississippi River Commission

125th Anniversary Celebration

June 28-29, 2004

Memphis, TN

Hosted by the

U.S. ARMY CORPS OF ENGINEERS

Mississippi Valley Division

US Army Corps of Engineers

OBJECTIVES

Build Effective Partnerships

Develop Common Guidelines for a Living, Working Watershed

Understanding USACE Transformation

MAJOR ACTIVITIES

Congressional Speakers, Panel Discussions, Interactive Sessions, Mississippi River Commission 125th Anniversary Dinner, Social Activities and more.

MARK YOUR CALENDARS

Details about this conference and registration material are available on our website.

ADDITIONAL INFORMATION

- ✓ The historic **Peabody Hotel (149 Union Ave, Memphis, TN)** has blocked rooms for the nights of June 27 and 28 at the rate of $119 per night plus tax. Reservations can be made after March 15 by calling 1-800-Peabody or local (901) 529-4000. Rooms are blocked under the Corps of Engineers.
- ✓ See our Web site (www.mvd.usace.army.mil) for more information on the conference.

Questions

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