



March 12, 2004

SWAN 5A LAKE RECEIVES REPORT CARD

Landowners, operators and stakeholders in the Swan Lake Watershed area did an excellent job last week in attending a public meeting about the Swan 5A recreational lake. The group learned about water quality concerns and resource concerns in the area. Ron Fleecs, manager of the Lower Big Blue NRD, emphasized to landowners that chances for watershed improvements in the level of magnitude they were talking about do not happen very often. In fact, in his career as manager of the NRD, there has been only one other example to compare to with grant money from the EPA and that was the Walnut Creek Watershed near Crete. The NRD has confirmation they will receive \$250,000 in EPA 319 grant money to improve water quality in the lake. Officials at the meeting came up with a water quality report card.

The lake received a "D" grade in heavy metals in fish tissue. Fish tissue samples in 1997 in largemouth bass and carp samples had mercury concentrations that exceeded the action level of .215 ppm. Swan lake samples were close at .217 and .239 ppm. Air deposition from coal burning power plants are believed to be the cause. In lower concentrations, hexachlorobenzene, DDE, PCB's and selenium were found. DDE is from the pesticide DDT banned years ago. The lake was drained last year to restore critical fish habitat.

The lake received a "C" in pesticides in fish tissue and a "D" in pesticide residue in the water. The herbicide Atrazine was the only modern pesticide found in the lake that exceeded the health standards. Seven out of 8 violations occurred in 1997 with 32 samples taken. Samples of coliform bacteria were collected on the swimming beach in 1997 and 2003. Three of 38 samples exceeded the Nebraska standards so bacteria receives a "B plus."

Other lake quality factors in the report card are nutrient levels, "B minus"; water clarity, "C"; algae growth, "C"; and dissolved oxygen, "B plus." Phosphorous concentrations were within an expected range for Saline County and were below the target range of 978 ppb. Too much phosphorous can cause algae blooms.

In 2002 and 2003, water clarity only averaged 1 foot deep. When the lake was drained last year, the remaining water began to boil because the lake was full of carp. Officials removed all the fish with a natural toxin called rotenone. About 95% of the fish population were carp. There were so many carp in the lake, they were causing sediment to be stirred up in the water all the time. Algae blooms have not been a problem because sunlight could not penetrate the water deep enough. Oxygen levels were good except below 9 feet deep. Estimates are showing that erosion of topsoil into the lake is averaging 1.1 tons per acre per year. This number isn't too bad as the report card says "B plus." The lake is losing about 0.5 % of its volume in the conservation water pool each year. The benchmark is .75%.

Fishing enthusiasts will be happy to hear Game and Parks will be stocking 8,000 bass fingerlings this year. By June, they should grow to 5-6 inches in length. One-hundred adult bass will be moved in along with 1,000 bluegill fingerlings and 2,850 catfish. Next year it is hoped the bass will be in the 10-12 inch range. A good healthy bass population will keep the bullhead population



down. Shoreline restoration to reduce erosion and adding two islands and cedars will decrease erosion, and provide fish habitat.

Volunteers for the watershed committee include Elvin Filipi, Mike Cheney, Bill Baxter, Roger Rada, Frank Schultz, Jan Buzek and Gary Baxa. These citizens will be involved in helping to establish cost share rates and incentives to landowners to improve water quality. A summer sign-up is expected with work to begin this fall. Farm practices designed to reduce erosion, farm pond improvements, grassland management, and fixing septic systems were all mentioned as current priority needs in the watershed. For more information, contact Scott Sobotka at the Lower Big Blue NRD at 228-3402 or Ross Scott at the NRCS at 821-2251.

Randy Pryor, Extension Educator
University of Nebraska-Lincoln Extension in Saline County
306 West 3rd Street, Wilber, NE 68465
Phone (402) 821-2151 • Fax (402) 821-3398 • e-mail: randy.pryor@unl.edu