

To: All Employees and Conservation Partners

1. Papio Missouri River Board of Directors Tour – Thursday Afternoon Ken Noonan and I had the privilege of accompanying some of the Papio Missouri River NRD Board, NRD staff, NRCS District Conservationist Verlon Barnes and NRCS Engineer Chuck Leinen on a conservation tour of the NRD. The diversity and quantity of conservation being applied in the Papio NRD is nothing short of amazing, which reinforced by appreciation for the unique NRD concept that we enjoy in Nebraska. Equally impressive was the active partnership between NRCS and the NRD as we work together like hand in glove blending each other's programs for the benefit of the natural resources within the NRD. Below are a few excerpts of our afternoon tour.

Papio Dam Site 13 or The Estates at Village Ridge – Our first stop was a NRD flood control dam at 192nd and West Dodge nearing completion that will be another critical piece of the flood protection work that the NRD is providing for the Omaha urban area. As with many of the flood control NRD projects this dam will also serve as another public recreation lake. Developers are capitalizing on the lake by constructing an upscale subdivision on the north and west side overseeing the lake, but a green belt around the entire reservoir will serve as protecting buffer. The City of Omaha will develop a park and boat landing on the east side.

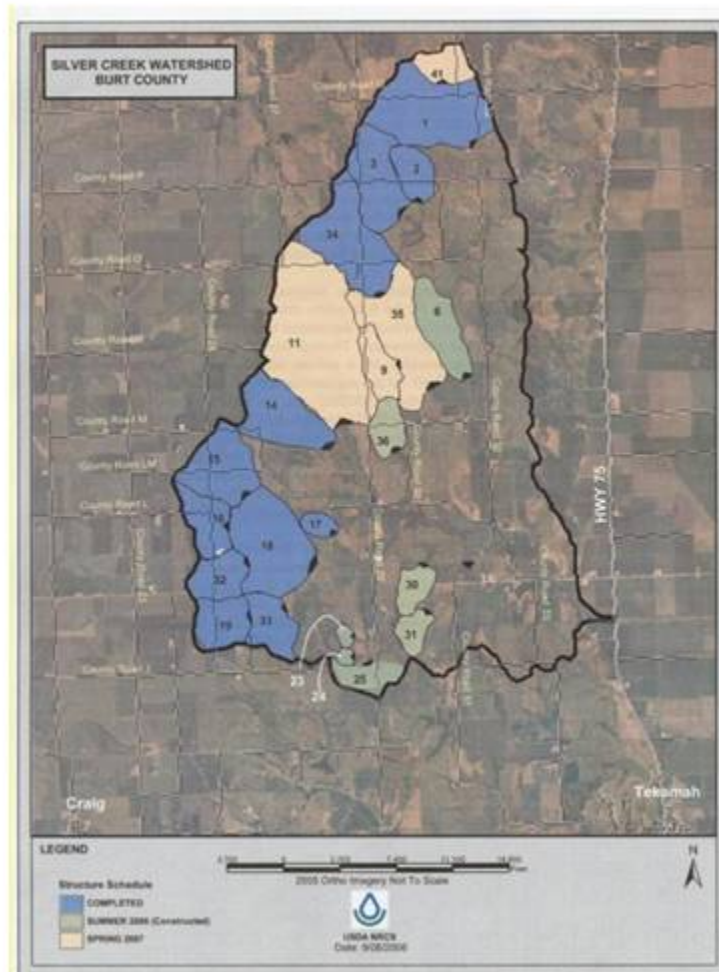
Elkhorn River Public Access – Thanks to a cooperative project of Nebraska Game & Parks, the Village of Waterloo and the Papio-Missouri River NRD a new access area to the Elkhorn River on West Maple Road recently opened to the public. This site includes a boat ramp, parking lot, picnic tables, restroom facilities and a fishing pier. The 6.7 acres of land was donated by the Robinson Family.

Missouri River Trail to Boyer Chute National Wildlife Refuge – We observed another completed section of trails within the beautiful Boyer Chute National Wildlife Refuge. This section of trail brings the Papio NRD very close to the overall completion of 16 miles of trails from Boyer Chute Landing to Lewis & Clark Landing and on in downtown Omaha Old Market area and beyond. NRCS was a participant in restoration of wetlands within the Boyer Chute refuge area through the WRP program and now the Lower Missouri River Wetland Reserve Enhancement Program (WREP) is being utilized to restore many additional wetlands adjacent to the refuge.

Silver Creek Watershed – One of the most impressive stops on the tour was within the Silver Creek Watershed, a 25 square mile drainage area that in the past has delivered 80,000 tons of sediment annually to Burt-Washington Drainage District each year. The sedimentation and flood waters have caused considerable damage over the years to Missouri River bottomlands north and east of Tekamah.

In 1995, NRCS completed a watershed plan that identified 30 erosion control dam sites as well as land treatment practices such as terraces, grassed waterways and conservation tillage. To date, 19 of the 30 dams have been constructed. The first 12 dams were entirely planned, survey, design and construction inspected by NRCS (blue areas). For structures 6, 11, 23, 24, 25, 30, 31, 35 and 36 a contribution agreement between NRCS and the Papio NRD is being implemented resulting in the hiring of a technical service provider engineering firm to do the designs. EQIP has paid for some of the dam's construction costs, while on others the NRD is paying for the construction. The landowner is required to have 75% land treatment on the drainage area above each dam.

Driving over the rolling hills I was struck by the awesome beauty of a healthy watershed where agriculture is truly in sustainable harmony with the land. Cattle grazing lazily on healthy green pastures interspersed with rotated crop fields treated with terraces and grassed waterways and ribbons of tree lined riparian stream corridors was like a picture out of a Hugh Hammond Bennett biography.



Thurston County Rural Water Supply System – Like many of the NRDS, the Papio NRD does own and operate rural water supply systems. We made a quick stop at the Thurston County Rural Water System in the Village of Pender. This system provides 105 miles of pipeline to rural Thurston County delivering 28,000,000 gallons of water annually. The elevated storage reservoir holds 100,000 gallons of water.

Randy Rink No-till Farming Operation – A special treat for the tour group was a visit with renowned Pender area no-tiller Randy Rink. Randy is uniquely no-till in that rather than strictly corn-soybeans he uses complete no-till on a base five year rotation of Corn-Corn-Soybeans-Wheat-Soybeans, plus he includes cover crops of canola, proso millet, red clover and lentils. Rink actually gets a double crop of bird seed from the proso millet.

Rink has been in his continuous no-till system for 6 years, but because he put his no-till system on a fast track by maximizing cover crops and deep rooted legumes Randy has seen a much quicker positive response to no-till than the more common 5-year response time that most no-tillers observe. Some of those benefits he has observed are that no water ever runs off the fields, ditches that he had to annually plow have disappeared, crop rotations have greatly reduced insect problems, time savings, energy (fuel savings) and improved soil structure. Speaking specifically about canola Randy related that including it in the rotation takes care of soybean nematode problems and canola puts down a deep tap root for soil structure improvement. Randy also said that, “No till and crop rotations makes life much more interesting” versus the boredom of a strictly corn-soybean rotation.

I have included a picture of Randy Rink kneeling in a soybean field that was no-tilled in last year’s wheat stubble and millet cover crop.



Pigeon Jones Watershed and Planned Reservoir – I guess Marlin Peterman and the staff wanted to save the most impressive stop for last. I am including 2 pictures of this watershed. The first shows the 20 watershed dams that NRCS is planning, surveying, designing and constructing inspecting to assure maximum protection for the planned flood control and recreational lake that is in the second picture. Dam site 15 will eventually be a 238 acre lake and 595 acres of park land including the ultimate in recreational opportunities of equestrian trails, biking trails, fishing piers and structures, boat ramps, recreation sports field, savanna study area, prairie study and scenic overlooks. All of this while providing 100-year flood protection for the overloaded levee system currently downstream. The NRD hopes to have this lake and park in place by 2010.





Admiral Kramper Commissioned – The annual tour event always concludes with a dinner in Vince Kramper’s machine shed on his farm near Dakota City. Vince is well known for his service on the Natural Resources Commission and the Environmental Trust Board as well as his many years on the Pappio Missouri River NRD Board. It was not surprising that former Secretary of State Alan Beerman was on hand to represent Governor Heineman in presenting Vince with the state’s most prestigious award of being commissioned as an honorary Admiral in the Nebraska Navy. Vince is truly a gentleman and one of our state’s most committed conservationists. The recognition of Admiral could not go to a more deserving and nicer guy than Vince Kramper.

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2. NRCS and Papio Missouri River NRD Cooperate on Midlands Lake Project – It was my privilege on Thursday to visit the Midlands Lake PL566 Flood Control project, which is under construction as part of the Papillion Creek Watershed flood control project. Also known as Site-30 this dam is located 1 mile south of Highway 370 and east of 84th Street within the city limits of Papillion. Thanks to the diligent work of Marlin Petermann and the Papio Missouri River NRD a Congressional earmark of NRCS PL566 funds totaling \$1,140,100 were secured in this past year's NRCS budget. NRCS contracted the technical assistance for construction through the Papio-Missouri River NRD who in turn hired Lamp Ryneason & Associates as the primary contractor. Subcontractors include Brian Havens Kleinfelder for Geotechnical Services, John Engel, PE of HDR for Design and Construction Oversight and M.E. Collins (Wahoo) and McCardle Grading (Elkhorn) as grading contractors.

The dam will be 36 feet high at the inlet with over 100,000 cubic yards of earth moved to complete the dam. A huge concrete box inlet dumps into an 8 feet by 5 feet concrete pipe through the dam. Once full the dam will create an 11.2 surface acres reservoir with 158 acre-feet of storage. Below are a couple of pictures of the dam under construction.



HDR Construction Oversight Engineer John Engel, NRCS Field Engineer Chuck Leinen and NRCS CET Mitch Keebler standing on the concrete box inlet for Midlands Lake. The

earthen dam seen in the foreground will be 8 feet higher than the top of the inlet when construction is complete.



Keebler, Leinen and Engler are standing above the outlet of the pipe. Note the 8 feet by 5 feet opening to the concrete outlet and the large baffle plates to slow the outflow. Also note the new home above the lake. Like most flood control reservoirs in Omaha the land around this lake is already platted for expensive homes.

3. Omaha NRCS Using Innovative Rock Chute to Solve Head Cutting Erosion – Head cuts from eroding gullies are usually solved with traditional drop structures, but not all sites are conducive to traditional solutions. The Startzer's had fought an eroding gully on their property for 17 years until NRCS Field Engineer and CET Mitch Keebler found an innovative rock chute solution to the gully problem. The project was funded with \$31,000 from EQIP, \$29,000 from the Papio-Missouri River NRD funds and the remainder was paid by the landowner. Pictures below show how the erosion problem was solved.



This aerial shot shows how the rock chute was created to remove 16.5 feet of overall. The grassed waterway will be reestablished to join with the upper end of the chute.



Steve Chick, Chuck Leinen and Mitch Keebler are standing on the rock within the chute. 830 cubic yards of rock or 1200 tons were used to create the chute. The structure will handle the 100-year storm. Mitch Keebler designed the Chute, while Chuck Leinen, Rich Weber and Owen Kvittum reviewed and approved the final design.