



Thief River Watershed Sedimentation Initiative

Evidence points to the fact that large amounts of sediment have been coming into Agassiz National Wildlife Refuge (NWR) in northwest Minnesota since its creation and the cumulative effects of long-term sedimentation are readily apparent. The Natural Resources Conservation Service and the local Soil and Water Conservation Districts are aware of this issue. Local agencies and stakeholders agree that the amount of sediments reaching the refuge can be lessened using federal and non-federal programs to implement a conservation initiative that consists of a few select practices.

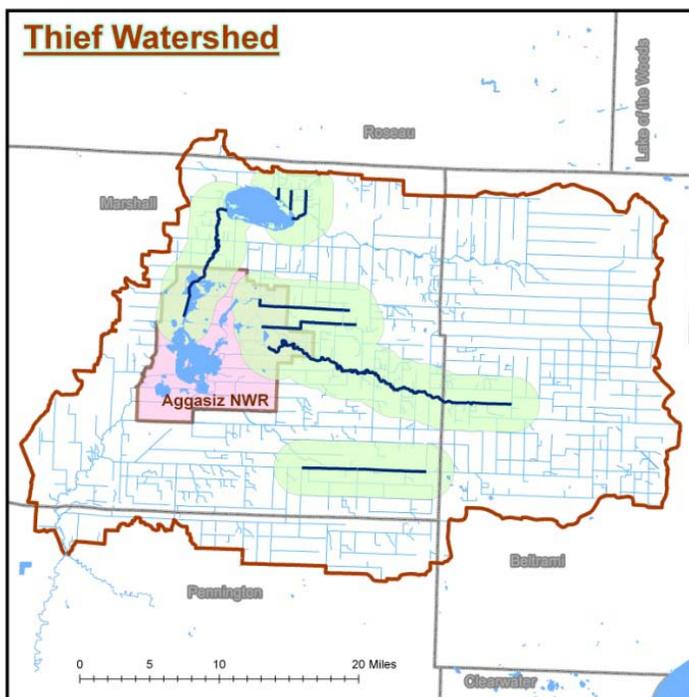


Figure 1 - Thief River Watershed with initiative priority areas highlighted in green.

Priority areas have been determined for use as a starting point to implement the initiative. Soil and Water Assessment Tool (SWAT) modeling results show that the greatest amounts of sediment are coming from the area between Thief Lake and Agassiz NWR (figure 2). Recent sediment “fingerprinting” research within Agassiz NWR has determined that the majority of the sediment deposited within the refuge’s pools originated in agricultural fields. Continued stakeholder involvement will be critical to the success of any initiative within the watershed. A landowner meeting has already been scheduled to take place in Priority Area #1. The meeting will take place at a local landowner’s residence to discuss where producers feel that the movement of soil is at its greatest. Once that is determined, ways to combat the problems and dollars needed to make the initiative work will then be discussed.

The first line of defense would consist of working with landowners and operators and exercise the option of conservation tillage. Utilizing the Environmental Quality Incentives Program (EQIP) would be one way for producers to give conservation tillage and even no-till farming a try while receiving payments from the NRCS or other avenues for adopting their new management style.

The initiative would also consist of planting vegetated buffers along any watercourse (natural or man-made ditch) within the priority areas. Producers could choose the width of that buffer, between a set range, to be planted along their watercourse. The amount of the incentive payment would coincide with the width of the buffer strip - the wider the buffer, the greater the payment. This payment would be an extra incentive over and above the current incentives offered by the Farm Service Agency. These buffers could be installed under the Continuous Conservation Reserve Program (CCRP) or possibly be installed with no federal involvement depending on future initiative

program decisions. Many landowners have suggested that an option to hay the filter strips and plant a mix geared more towards haying (alfalfa/grass) would make the idea much more appealing. Since CCRP does not allow this, the ability to install filter strips through a separate program may be ideal.

Thirdly, if there are concentrated flow areas coming off of agricultural fields, they would be evaluated for the possibility of installing an erosion control structure such as a side water inlet. Incentive dollars for each of these practices have yet to be established. After further talks with landowners and inputs from a number of agencies are compiled, we will begin to assign dollar amounts for future cooperators in this initiative.

The SWAT model shows that buffer strip and side water inlet structures can be very effective at keeping sediment out of the waterways of the Thief River watershed. We feel that intensive implementation of a combination of conservation practices within targeted sub-basins will result in a significant amount of sedimentation reduction in the Thief River Watershed.

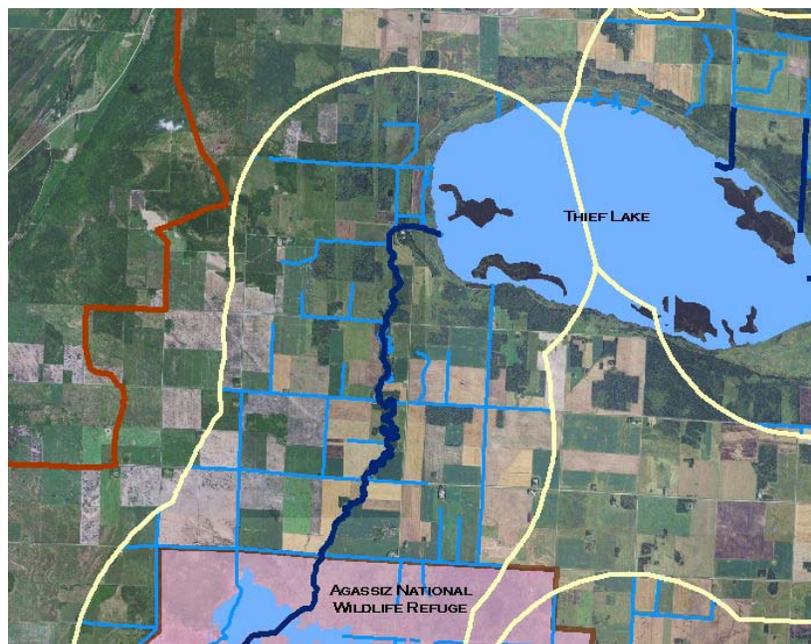


Figure 2 - Priority area #1 from Thief Lake to Agassiz National Wildlife Refuge. Light and dark blue lines indicate the priority water features in the watershed.