



Appendix D | Windshield Survey Methodology

Red Cedar River

Watershed Management Plan

June 25, 2015

WINDSHIELD AND WALKING ASSESSMENT DESCRIPTIONS

Step 1. Windshield Assessment

- The entire subwatershed was assessed via windshield survey. Due to the wide open nature of many subwatersheds, large sections of channel could be assessed from the roadway, thereby eliminating the need to traverse on foot.
- If impairments such as sedimentation or streambank erosion were identified during the windshield survey, the channel was assessed on foot. If no impairments were identified, the section of channel was eliminated from further assessment.
- All locations with larger livestock (e.g. cattle, horses, sheep, pigs), were recorded and along with the estimated number of animals. Notes were also recorded relative to proximity to streams or drains, excessive accumulation or storage of manure, etc.
- General notes were recorded including, but not limited to, tillage practices, high quality areas, congregations of waterfowl, etc.

Step 2. Walking Assessment

- Those reaches determined to potentially be impaired during the windshield survey were assessed by foot. Each source of pollution was identified and the location was recorded on field maps. Examples of NPS sites include:
 - eroding streambanks
 - gully erosion on adjacent lands
 - livestock access points and pastures
 - animal holding facilities located adjacent the channel
 - highly maintained golf course properties
 - orchards
 - manure application
 - cropland
 - failing septic systems, cheater pipes, etc
 - Maintained lawns adjacent lakes
 - Open channel with no canopy
- Site-specific data was recorded at each point. At a minimum, enough data was collected to estimate the pollutant load at each site.

Step 3. The cause of pollution was identified for each source documented during Step 2.

- Examples of causes of pollution include:
 - Indiscriminant access to the stream for livestock
 - Altered morphology
 - Altered hydrology
 - Over or improper application of manure
 - Over or improper application of lawn fertilizers and chemicals
 - Lack of riparian buffer adjacent channel
 - Lack of filter strips on erosion-prone cropland
 - Improper grading or drainage at livestock holding facilities
 - Improper maintenance of septic systems