

STREAMBANK ASSESSMENT

PROCESS AND DEFINITIONS

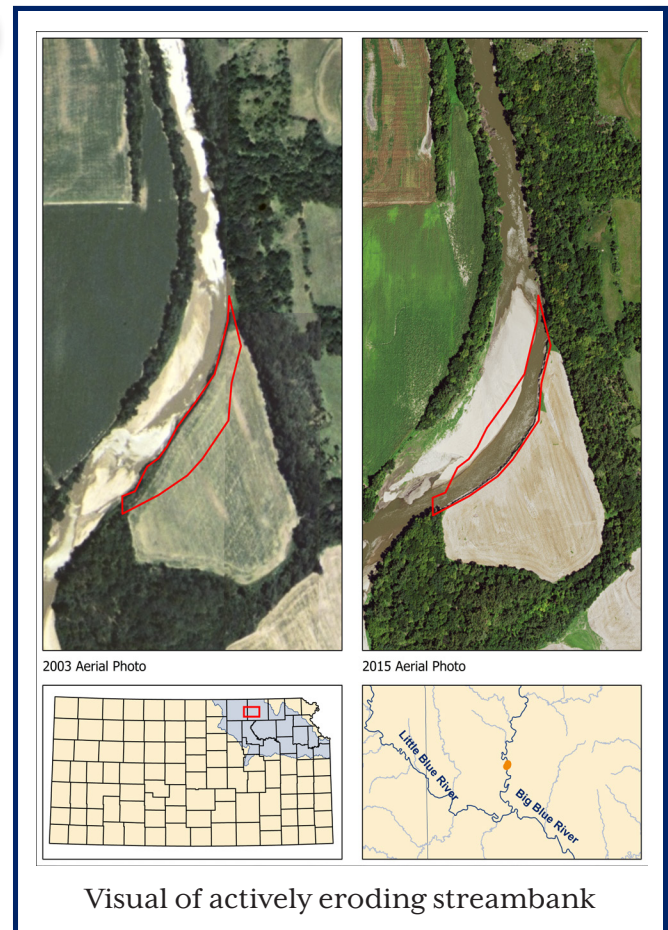
- **Streambank Erosion:** Refers to the loss of soil and other material, such as rock and vegetation, from the streambank. Streambank erosion is a naturally occurring process, but the rate at which it occurs is often increased by human activities, such as urban development and agriculture
- **Streambank Hotspot:** An eroding streambank where 2,000 sq. feet or more of streambank surface area was lost between 1991 or 2003 and 2015

Purpose of KWO Streambank Erosion Assessment

- Identify areas with erosion concerns and estimate erosion losses to provide a better understanding of erosion trends and rates in particular watersheds for mitigation purposes
- To guide prioritization of streambank stabilization by identifying reaches of streams where erosion is most severe in the watersheds above our water supply reservoirs

How Assessment is Completed

- Current assessments were performed by overlaying 2015 aerial imagery onto 1991 or 2003 aerial imagery
- “Aggressive movement” of the streambank between 1991 or 2003 and 2015 aerial photos are identified, at a 1:2,500 scale, as a site of streambank erosion
- “Aggressive movement” represents areas of 2,000 sq. feet or more of streambank movement between 1991 or 2003 and 2015 aerial photos
- Streambank erosion sites are denoted by geographic polygon features “drawn” into the software program
- The polygon features were created by sketching vertices following the 2015 streambank and closing the sketch by following the 1991 or 2003 streambank at a 1:2,000 scale
- It should be noted that the identified streambank erosion locations are only a portion of all streambank erosion occurrences in the watershed



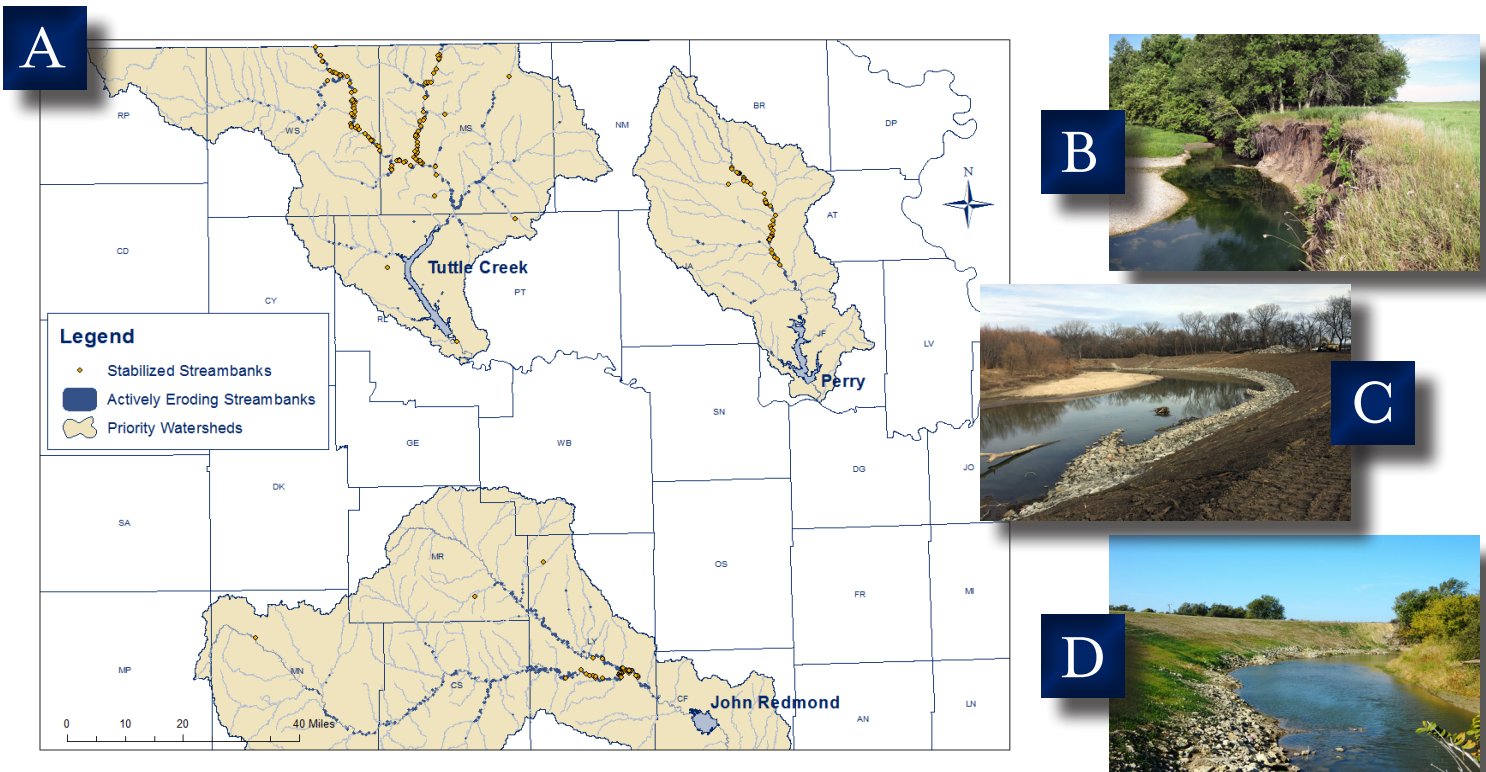
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What Assessment Includes

- Quantifies annual tons of sediment eroded from a specific watershed over an average of 18 years between 1991 or 2003 and 2015 above specific reservoirs in Kansas
 - The volume of sediment was found by multiplying bank height, soil bulk density, and surface area lost over the 17 year period between the 1991 or 2003 and 2008 aerial photos
- Also included in assessment are watershed location, site ID, stream name, and type of riparian vegetation

Additional Information

- Streambank erosion is often a symptom of a larger, more complex problem requiring solutions that may involve more than just streambank stabilization
- A watershed-based approach to developing stream stabilization plans can accommodate the comprehensive review and implementation
- KWO plans to keep assessment data current by continuing to evaluate specific water supply watersheds with newer aerial imagery as it is made available. Updated assessment reports will be released as completed



A Actively eroding streambanks in the three priority watersheds
 C Recently completed stabilized streambank site
B Eroding streambank along Fall River
 D Completed stabilized streambank site