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River and stream restoration is different than other in or near stream approaches to control flooding, reduce erosion and protect infrastructure in that it prescribes improvements that do these things plus improve water quality and support the aquatic community function and value.

A River and Waterways Restoration Program helps local communities by restoring and enhancing the *function* and *value* of waterways

Local Needs

- Expertise for methodology and techniques used in stream restoration that support the function and value of rivers and streams.
- Adopted protocol for assessing stream impacts so mitigation can be accomplished in a cost effective and equitable manner.
- Identification of river and stream segments that local governments and businesses can improve as part of mitigation efforts. – need some type of recommended approach to assess streams that may provide increased benefits (water quality, protection of infrastructure, recreation, etc).
- Training and education for the conservation and engineering community – a high percentage of professionals working in the conservation and engineering community do not have the knowledge and training to implement these projects.

Universal Traits of Rivers and Streams

1. Streams and waterways evolve to become more complex and varied through time.
2. Streams and waterways become more efficient at recycling and reusing nutrients before they are lost to the system through time.

Function and Vital Roles that Streams Provide related to Water Quality

1. Recycling of nutrients through system diversity
2. Serve as a connecting link in the water cycle connecting uplands with low lands and surface water with ground water.

River and stream restoration methods should focus on promoting a diverse aquatic community and riparian zone to recycle and sequester nutrients.

Local Issues

1. Interest in stream restoration to stabilize banks and improve water quality at the local level is increasing faster than on-the-ground expertise. Information and expertise needed to facilitate projects is not available. – A state coordinated program is necessary to set priorities, train professionals, provide guidance and help control costs.
2. With increasing demand to clean up our water it is important people understand that waterways help clean water by recycling and sequestering nutrients – Most people, including the majority of conservation professionals, don't understand the value and function of rivers and waterways in keeping our water clean. A statewide program needs to be established that provides accurate and

unbiased information to local officials. This information is critically needed by the urban and agricultural communities.

3. Through the Clean Water Act when negative impact occurs, businesses and local governments are faced with mitigating damage to the system. Because no state programs exist to identify priorities and set standards for methods, unnecessary delays and extra costs are passed on to the local community and businesses. – Iowa needs a standardized system for assessing impact and recommended mitigation options to streamline the process for local communities and businesses. Other states have adopted stream mitigation plans to help local governments and businesses administer requirements of the Clean Water Act.
4. Flooding tributaries and main stem rivers impact thousands of acres of agricultural, residential and commercial developments and stream and waterway restoration methods can be used to reduce flooding and protect these investments – We need a program identifying accepted methods and officials at the state level are positioned to efficiently and effectively train and coordinate local efforts.

Rivers and Waterways

- Recycle and sequester nutrients
- Provide outdoor recreation opportunities
- Serve as aquatic and riparian habitat for fish and wildlife
- Connect things together such as our communities, public and private land and other states
- Serve to store floodwater during runoff events

Local Issues of Importance that a Stream Restoration Program would address:

1. Clean water - nutrient recycling and sequestration
2. Protection of stream banks and infrastructure
3. Flooding
 - a. creating buffers through 2nd floodplains to reduce flooding
 - b. re-meander streams to slow runoff and reduce flooding
4. Fish and wildlife habitat including better fishing
5. Economic benefits – recreation and water supply
6. Mitigation needs related to negative impacts from development (public and private)
7. Removal or modification of aging and deteriorating dams present opportunities for increasing the health of our streams while at the same time increasing economic benefits through expanded recreational opportunities.
8. Streams and waterways serve as focal points within our communities, parks and neighborhoods – a stream restoration program would provide information that local people could use to beautify their communities.