

Resolution to Support the Protection and Restoration of Fish Passage at Bridges, Culverts, Crossings, and Other Infrastructure to Reduce Fragmentation, Enhance Native Species Diversity, Abundance and Sustainability, and Preserve Habitat

Whereas, recreational fishing is an important economic activity within the lakes and streams of the State of Wisconsin; and

Whereas, non-recreational native fish species are critical to a properly functioning ecosystem and;

Whereas, placement of public and private transportation related infrastructure such as bridges, culverts, and other crossings on the landscape by humans can be a barrier to fish migrations both upstream and downstream of said infrastructure; and

Whereas, improper planning and construction of said infrastructure will negatively impact the transport of water and sediment necessary to maintain stable and properly functioning stream and floodplain morphology, water quality and aquatic habitat characteristics, and;

Whereas, the maintenance and continuity of sustainable game fish species of economic importance and those species and other aquatic organism upon which they depend (i.e. forage fishes and invertebrates) is associated to a large degree with the protection, restoration, and access to appropriate habitat; and

Whereas, research has shown that bridges, culverts, crossings, and other infrastructure, while not always complete barriers to fish passage, have the potential to limit the frequency and timing of fish passage due to inadequate water depth and width, and/or resting areas as well as extremes in water velocity, particularly at the inlet and outlet points of transition of a structure; and

Whereas, road/stream crossings can interrupt the natural transport of sediment that can lead to streambed and bank failure, which can be detrimental to the long-term stability and function of streams and floodplains, and can compromise stream ecology both upstream and downstream of the crossing; and

Whereas, research also has shown that such infrastructure can fragment the aquatic habitat necessary to support a healthy sustainable fishery by restricting access during one or more critical life history stage including refuge from predation and environmental extremes such as drought, flood, and temperature; juvenile rearing; feeding; and, spawning of fishes and other organisms; and

Whereas, research has shown that increases in the number and frequency of crossings has been invariably associated with decreased abundance and diversity of fishes and other aquatic organisms as well as degraded habitat associated with increased discharge, erosion, deposition of sediment and diminished water quality and other habitat; and

Whereas, experience has shown that adequate long-term fish passage can be achieved through retrofitting existing infrastructure, replacement, and/or removal; and

Whereas, these infrastructure are not permanent, and require replacement or modification over time requiring federal, state and tribal review and permits; and

Whereas, the permit review process insures that the replacement or modification of these infrastructure are consistent with sound engineering practices while limiting impacts to public safety, flood conveyance and the natural environment; and

Whereas, the State of Wisconsin has determined that full consideration of the potential for the spread of Aquatic Invasive Species (AIS) and measures to minimize the risk of spreading non-native species in general and AIS in particular are to be recognized.

Therefore be it Resolved, that the Wisconsin Chapter of the American Fisheries Society urges its members to partner with federal, state, and municipal engineers and other professionals in the assessment, design and construction of crossings of lakes and streams to ensure adequate fish passage for game fish and other aquatic organisms upon which they depend without compromising the structural integrity of crossings, public safety, and passage of flood flows; and

Be it Further Resolved, that the Wisconsin Chapter of the American Fisheries Society supports the efforts of federal, state, and municipal engineers and other professionals in the implementation of strategies to limit the number of stream crossings and other structures to the extent possible, to design crossings to allow the passage of aquatic organisms, to adopt design standards adequate to support the passage of fish and other aquatic organisms at the time of reconstruction or replacement of such infrastructure, and to remove unnecessary structures where practicable; and

Be it Finally Resolved, that the Wisconsin Chapter of the American Fisheries Society urges its members to develop a protocol and provide training for fish passage assessment and design for retrofitting and replacing structures, including measures to minimize the risk of spreading non-native species in general and Aquatic Invasive Species (AIS) in particular.

Submitted by your Environmental Issue Committee Chair, Thomas M. Slawski, PhD, Past
President of Wisconsin Chapter of the American Fisheries Society
January 31, 2011