**Quarterly Report April – June 2017**

**Sheboygan River Area of Concern Fish Tumor Study**

Submitted By Vicki Blazer and Patricia Mazik

Vicki Blazer and three graduate students traveled to Sheboygan, Wisconsin, March 29-April 1 to complete necropsy-based assessments and collect otoliths for aging and tissues for histopathological assessment. Wisconsin Department of Natural Resources personnel successfully collected 200 adult white sucker from the lower Sheboygan River during their spawning run. Over a two day period these fish were processed for assessment of the fish tumor beneficial use impairment. Fish were weighed (nearest gm), measured (nearest mm), any grossly visible abnormalities were documented, any abnormal areas on the body surface, fins or lips were removed and placed in Z-fix for histological analyses. At least five separate areas of liver were removed and placed in fixative for histological analyses and any grossly visible abnormalities documented. For select lesions (skin and liver) small pieces were also removed and placed in RNAlater for gene expression analyses. The otoliths were removed were removed for aging.

All of the field collected data has been entered into a database and the aging is completed. The tissues have been cut into cassettes, skin tissue decalcified, tissue processed and embedded into paraffin blocks. Over 1,000 blocks were produced. Approximately 75% of the blocks have been microtomed and slides produced and stained.

In the next quarter the remaining blocks will be microtomed and slides production completed. Independent assessment of the slides by two pathologists (V. Blazer and H. Walsh) will begin.