Goals and Objectives from 2009-2010 Steering Committee Meetings

A. Water Quality

Goal:

Protect and restore water quality, reduce phosphorus loading (both internal and external), and reduce the occurrence and intensity of blue-green algae blooms

Objectives For Improving Water Quality:

a. *Reduce internal phosphorus loading into Lake Eau Claire through installation of a pipeline aeration system to destabilize the western area of the lake that falls below the 12 foot depths. The Eau Claire County Land Conservation Division (ECC-LCD) and Lake Eau Claire Association (LECA) will apply for a WDNR Lake Restoration/Protection grant to assist with implementation costs. The grant application will be submitted in May 2010. (WDNR, ECC-LCD, LECA)*

b. *The ECC-LCD will work with Eau Claire County farms in the Lake Eau Claire contributing watershed to ensure cost share dollars are made available to bring the farms into compliance with NR151 non-point runoff standards and ATCP 50 nutrient management regulations.*

c. *Develop partnerships with other lake districts/lake associations and bordering County Land Conservation Departments within the Eau Claire River watershed in order to take a more watershed approach to dealing with nutrient and sedimentation issues within the watershed. In addition, form partnerships with Rivers Alliance and other NGO's that could assist us in this effort. (ECC-LCD, LECA)*

d. *Utilize the UW-Stevens Point SWAT Model to address implementation of best management practices in land uses, such as agriculture and forestry practices, that have been identified as potential sources of nutrients and sediment to Lake Eau Claire. (WDNR, ECC-LCD, LECA)*

e. *Educate riparian landowners of the importance of managing stormwater runoff from their properties and provide education and technical assistance in the installation of rain barrels and rain gardens to reduce stormwater runoff from impervious surfaces along shoreland properties. (ECC-LCD, LECA)*

f. *Educate riparian landowners of the importance of regular maintenance of private onsite wastewater systems (septic systems) (ECC-CCHD)*

B. Fisheries

Goal:

Protect and improve the aquatic life of Lake Eau Claire, including a self-sustaining fishery and diverse aquatic plant community. (Objectives for this goal could be established that pertain to studies and management of all aspects of aquatic life.)

Objectives For Improving Lake Fisheries:

a. *Monitor the lake's fish population every four years to assess trends in the fish community. Under WDNR's lake monitoring program, the next scheduled survey would take place in 2012. However under WDNR's treaty assessment program, a fisheries survey is planned for 2013. In conjunction with this survey, an angler creel survey also will be conducted. Data from this fish survey will be compared to the 2008 survey, and information gathered from the creel survey will be used to evaluate the desires and perspectives of anglers on Lake Eau Claire as well as the angler's impact on the fish community. (WDNR)*

b. *Adopt an annual voluntary creel/fishing experience survey that will be combined with current invasive species surveillance program at the main boat landings. The creel survey will assist by providing more data on fishing experiences of angler's and may assist in overcoming some of the current negative public perception about the lake. (LECA and BCR/CCS oversight by WDNR)*

c. *Continue stocking muskellunge in Lake Eau Claire on a biennial basis (odd-numbered years) at a rate of one large fingerling per acre.*

d. *Within the confines of natural variations, maintain fish populations at densities and size structure that are desirable for anglers. Using 2008 and 2013 survey data, evaluate population density, size structure, growth and mortality rates of the dominant gamefish and panfish species in Lake Eau Claire to determine whether or not regulation changes are needed to improve the quantity and/or quality of these populations.*

e. *Explore the possibility of establishing slow-no-wake areas around mid-lake plant beds to protect them from boat and jet ski activity. Develop a boating traffic study that will assess the impact of boating activity on these and other critical plant beds in the lake that may be negatively affected by boating traffic. (LECA, Ludington and Bridge Creek Townships)*

C. Habitat

Goal:

Protect and improve in-lake and shoreline habitat to promote a healthy and diverse community of aquatic life in Lake Eau Claire. (WDNR, ECC-LCD, LECA)

Objectives For Habitat Protection and Improvement:

a. *Educate riparian landowners of the importance of coarse woody habitat (CWH) and aquatic plants in the lake to the community health of fish and other aquatic life in the lake. (ECC-LCD, LECA)*

b. *Develop a plan to increase CWH in the lake. LECA will send letters out to lakeshore property owners about the plan to improve CWH and solicit participation in a voluntary tree drop campaign. The Habitat Committee of LECA conducted a visual survey of the lakeshore and identified trees that are likely to fall into the lake within the next few years. To prevent shoreline erosion problems, these trees could be dropped into the lake to enhance littoral zone habitat. Utilize these structures to stabilize aquatic plant habitat. (LECA, WDNR)*

c. *Conduct tree drops along the shoreline to increase the amount of CWH in the littoral zone. Along developed shorelines, it is desirable to have a minimum of 1-2 pieces of CWH per 100 ft. of shoreline. Along undeveloped shorelines, it is desirable to have a minimum of 3-6 pieces of CWH per 100 feet of shoreline. Tree drops should not be used in lake areas with moderate to high density aquatic plant populations. (LECA, WDNR)*

d. *Install log fish cribs in deeper portions of the lake to increase the amount of deep water habitat available to fish. Fish cribs must have a minimum clearance of five feet of water over the top of the structure. Note this will be a long range objective to be implemented once water clarity improvements have been seen. (LECA, WDNR).*

e. *Install half-log structures in the littoral zone to increase spawning habitat for smallmouth bass. These structures must be placed in water less than five feet deep, and will provide spawning habitat along shorelines where tree drops may not be possible or desirable (LECA, WDNR).*

f. *Conduct a critical habitat designation survey of Lake Eau Claire in 2010. WDNR will utilize aquatic plant surveys conducted in 2003 and 2009 and a team of biologists and regulatory staff to determine the type and amount of habitat in the lake that is critical for protecting water quality, wildlife, fish and other aquatic life as well as aesthetics. Once a critical habitat designation has been completed, it can be used as a tool by the lake association, Eau Claire County, WDNR and others to protect these important lake features. (WDNR, ECC-LCD, LECA)*

g. *Educate riparian landowners of the importance of restoring shoreland areas to reduce the amount of sediment and erosion occurring to the lake. Educate landowners as to the importance of a healthy self-sustaining benthic plant community and it's influence on improving water quality. The ECC-LCD will provide technical assistance to landowners on installation of proper shoreland buffers and educate the lake community on the importance of restoring and protecting the shoreland. (ECC-LCD, LECA)*

h. *Develop shoreland restoration demonstration projects on at least two different shoreland properties on Lake Eau Claire and conduct a public education effort to educate the riparian landowners on the importance and benefits of shoreland restoration and use of native plants in restoration efforts.*

D: Erosion and Sedimentation

Goal:

Reduce overall erosion and sedimentation occurring in Lake Eau Claire, restore areas within the lake that have been adversely affected by excess sedimentation and assess the amount of sedimentation coming into lake Eau Claire from watershed impacts.

Objectives For Reversing and Preventing Adverse Sedimentation Trends:

a. *Educate riparian landowners of the importance establishing healthy vegetative buffers along the shoreland to reduce erosion of shoreline*

areas. Provide technical assistance on slowing the flow of stormwater runoff that may accelerate this erosion. (ECC-LCD, LECA)

b. *Maintain the current sediment traps installed along the north shore of the lake by regular dredging every 1-3 years depending on sediment build-up. (ECC-LCD, LECA)*

c. *Install additional sediment trap on NW corner of lake to control sediments entering lake from that tributary. (ECC-LCD, LECA)*

d. *Work with UWEC Geography Dept to assess streambank erosion along select sections of the Eau Claire River upstream of Lake Eau Claire. (UWEC-Geog, WDNR, ECC-LCD, LECA)*

e. *Work with USGS to quantify the bedload for the Eau Claire River from upstream land uses. (UWEC-Geog/USGS?, WDNR, ECC-LCD, LECA)*

f. *Dredge out meander loop area upstream of Skid Row Boat landing to avoid future loading threat to lake. (ACOE Ecosystem Restoration Project?,, ECC-LCD, LECA)*

g. *Develop sediment traps at 1-2 sites upstream of Skid Row Boat Landing. The trap should have enough capacity to handle 4,500 cubic yards of sediment, which is the estimated load in the river expected over a 1-3 year period. First trap will be installed under WDNR Lake Protection Grant at Skid Row, second would be near original gravel pit. (WDNR, ECC-LCD, LECA)*

h. *Work with County, state and private forestry departments to ensure proper implementation of BMPs in forestry practices in Lake Eau Claire watershed (WDNR, ECC-LCD, LECA)*

i. *Collect sediment cores in the lake to assess sediment accumulation and sources. (WDNR, ECC-LCD, LECA)*

j. *Stabilize island margins in heavy boating areas to minimize future slumping of sediments. (WDNR, ECC-P&F, ECC-LCD, LECA)*

k. *Conduct a boating impacts study in areas where there is likely sediment mobilization to determine if boating restrictions should be instituted in the future. (WDNR, ECC-LCD, LECA)*

<u>E: Invasive Species Control</u>

Goal:

Prevent the expansion and new infestations of invasive species

Objectives For Prevention of Invasive Species Problems:

a. *Utilize the current Clean Boats/Clean Waters program to educate riparian shoreland owners and lake users about the risk of spreading aquatic invasive species from lake to lake and the practices that should be utilized to minimize the spread of invasive species between lakes. (BCR/CCS, ECC-LCD, LECA)*

b. *Continue to recruit volunteers to work in the Clean Boats/Clean Waters program for Lake Eau Claire. (BCR/CCS, LECA)*

c. *Educate riparian landowners of the importance of maintaining a healthy plant community and encourage them to leave aquatic vegetation along their shorelines. (BCR/CCS, ECC-LCD, LECA)*

d. *Recruit volunteers to work with the Beaver Creek Reserve to monitor for all invasive species. Beaver Creek/Citizen's Science Center will train volunteers to detect invasive species and establish a routine monitoring program (BCR/CCS, LECA)*

e. *WDNR will conduct aquatic plant surveys utilizing techniques used in 2009 at least every 3 years. WDNR will analyze the data collected from the 2009 survey and present it to the Lake Association. (WDNR, BCR/CCS, ECC-LCD, LECA)*

F: Recreation

Goal:

Provide safe and multifaceted recreational opportunities

Objectives For Improvement of Recreational Opprotunities:

a. *Provide appropriate and safe public access though proper maintenance and assessment of beach and boat ramps/docks. (WDNR, ECC-P&F)*

b. *Add signage to islands of where bathroom and garbage facilities are located to minimize the usage of islands for waste disposal sites. (LECA)*

c. *Conduct a boating traffic/usage study to determine if any potential boating impacts may exist to public safety, recreational usage/enjoyment, and/or damage aquatic plant communities in critical habitat areas or cause resuspension of sediments in shallow areas. (LECA)*

d. *Propose improvements to public restroom facilities and piers for better access at public boat landing and County Park. (LECA, ECC-P&F)*

e. *Educate lake users and riparian land owners on revised shoreland rules NR115 and revised recreational boating rules and how it could change boating activities near shoreland and islands.*