Discussion with Walt Baker – Leland Myers Nutrient Implementation Concepts

Guiding Principals:

The following principals are used in the development of this implementation document for nutrient criteria:

1. Nutrient criteria development programs are here to stay. Eventually all water will be evaluated and nutrient criteria or indicators developed.
2. There are limited resources to address water quality and specifically nutrient reduction or TMDL implementation.
3. Implementation of nutrient criteria should protect existing high quality water resources, have a significant potential for restoration of a minimally impaired system, or be shown by calibrated models to provide a principal means of restoration for a impaired ecosystem. Evaluation of any nutrient criteria benefit should include an evaluation of natural conditions and ecosystem habitat.
4. Except for existing regulated point sources, agricultural interests should be held harmless from significant economic impact. The state should establish by statute a cost share requirement for agricultural improvements (eg Wisconsin 80%/20% split). The Federal or State governments should provide funding for such non-point source improvements.
5. When required, nutrient reductions should be balanced between point and non-point sources. A thorough understanding of the nutrient balance is required. Point sources should be regulated to a technically achievable economic end point not limits of technology.

Implementation Strategy:

Given limited resources the following actions will form the priority for implementation of nutrient criteria. Prior to beginning any nutrient criteria development an expert science panel will be convened to define end points where a negative response occurs as a result of nutrient enrichment. The development of an end point could be based on generic conditions such as eco-regional variances or it could be based on site-specific conditions such as natural or habitat impacted light penetration.

Step 1

Immediately begin developing numeric criteria for all Category 1 and 2 waters. Compare existing water quality against the developed water quality criteria.

A. Where the existing water quality meets or exceeds the proposed criteria, proceed to proposed rule making for the water quality criteria.

B. If the existing water quality does not meet the proposed criteria evaluate the following:
    i. Are there existing natural conditions which prevent the criteria from being met? If so re-evaluate proposed nutrient criteria level for the water body.
    ii. Does site-specific modeling demonstrate that the system can be improved with nutrient reduction? If not, re-evaluate proposed nutrient criteria for this water body.
    iii. If natural conditions do not exist and modeling demonstrates that improvements can be achieved, proceed to rule making for this water body.

Step 2

After completion of Step 1, or when there are available additional resources, begin classification of all Category 3 waters. Nutrient screening values for different groupings of Category 3 waters should be developed. These will be used to develop different classes. Category 3 classifications should include the following sub-groups:

A. Where existing water quality meets or exceeds nutrient screening values, further analysis will be made to determine appropriate nutrient criteria. At this time a decision would be made to propose rule making for water quality criteria.
C. When the water body exceeds nutrient screening levels, the following actions should taken:
    i. Are there existing natural conditions which prevent the criteria from being met? If so re-evaluate proposed nutrient criteria level for the water body.
    ii. Does site-specific modeling demonstrate that the system can be improved with nutrient reduction? If not, re-evaluate proposed nutrient criteria for this water body.
    iii. If natural conditions do not exist and modeling demonstrates that improvements can be achieved, proceed to rule making for this water body.
    iv. If adequate modeling does not indicate significant benefit from nutrient reduction, a nutrient indicator may be adopted for this water body and determination made for 303B listing.
D. Water bodies where a TMDL exists should be exempted from immediate nutrient criteria development. The TMDL process should be followed.

Step 3

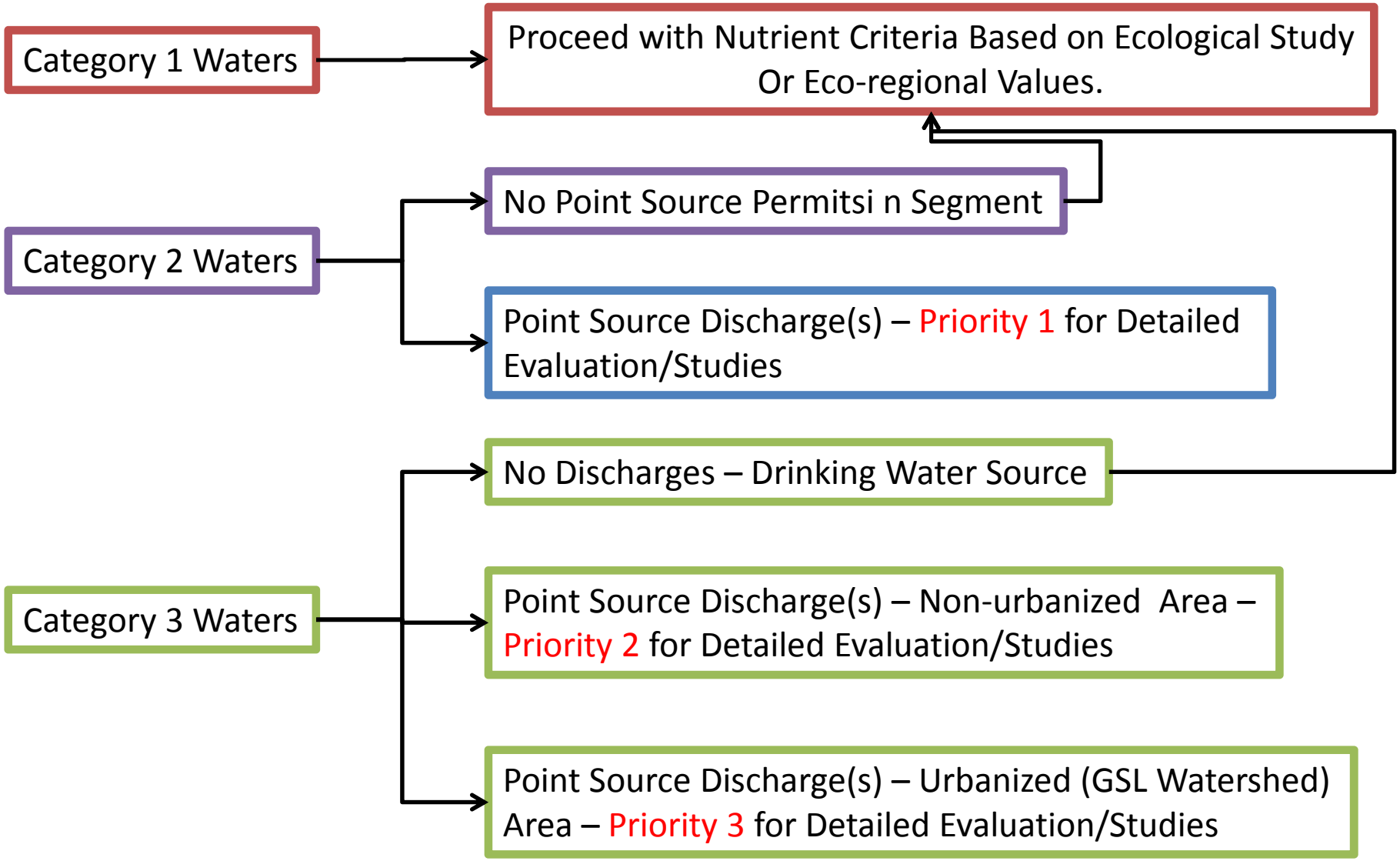
Great Salt Lake is a unique ecosystem and deserves extensive evaluation and protection. For years, significant research on lake water quality has been

performed only when a major driver exists such as the case for the development of a tissue-based selenium standard. Some research has been performed when either an outside agency gets grant funding or EPA has provided targeted grants. There has been no concerted effort to evaluate the entire Lake system, nor has there been any significant attempt at adequate, continued funding for such studies. The applies to nutrient cycling in the Lake as well as for other water quality criteria. A recent Great Salt Lake Advisory Council Lake health evaluation shows that the current health of the lake is generally good, but, there are specific areas where the Lake has problems, areas where not enough research has taken place to make an assessment and there are significant possible future threats. There are two approaches that could be taken to protect the lake. The first would be the precautionary principal. This would include the use of criteria and indicators developed for other water bodies and related ecosystems. While this may be an easy way to develop multiple criteria for the Lake, it may cause significant economic harm by being overly protective or it may be under protective. In addition, special interest groups will protest any contentious criteria as to overly protective or not protective enough. The second approach is to develop a priority for criteria development and to develop a funding mechanism for the appropriate research. The following sources for research funding should be considered:

i. Develop a voluntary funding mechanism from the regulated community who discharge to the Lake. This would require more coordination and groupthink than normally used by EPA/DWQ.
ii. Approach the legislature for a dedicated funding stream such as a surcharge on sewer discharges in the ecosystem. This would insure continued funding but would be difficult to get through the legislature.
iii. Develop a specific appropriation from the legislature from the general fund. This would have to be justified annually.
iv. Any combination of the above.

Generally Great Salt Lake is either the elephant in the room that no one wants to recognize needing attention, or the escape goat that people use to justify current operations. There should be a courageous attempt to address protection of the Lake in a balanced process.

Like all other pollutants the Lake receives, nutrients may be beneficial, neutral or the driver for Lake health crash. Nutrients should be included in the lake health priority and handled separately for the general nutrient criteria development process.



Proposed Category Classification - LJM

Temporary and Technology Based Treatment Requirements

- Point Sources in GSL – Urbanized Areas
  - Total Phosphorus Annual Limit – 1 mg/L
  - Total Inorganic Nitrogen Annual Limit – 20 mg/L
- All Other Point Sources (Needed???)
  - Total Phosphorus Annual Limit – 1 mg/L
  - Total Inorganic Nitrogen Annual Limit – 10 mg/L
- Variances – Once a Numeric Criteria has been established, a variance can be given for economic hardship
- 80% Grants required for agricultural Requirements