



## **Great Lakes Trading Network**

developing and implementing market-based  
strategies for healthy, sustainable ecosystems

### **DRAFT**

### **October 23, 2002 Conference Call**

Representatives from the following organizations participated in the conference call: U.S. EPA's National Risk Management Research Laboratory (Hale Thurston); Kieser & Associates (K&A)(Mark Kieser, Nicole Ott, Andrew Fang); Virginia Water Conservation District (Jim Wallace, Brian Noyes); Minnesota Pollution Control Agency (Jim Klang); Washington Suburban Sanitary Commission (Cy Jones); Massachusetts Department of Environmental Protection, (Marcia Sherman). Mark Kieser chaired the call.

#### **GLTN Incorporation**

Mark Kieser updated the Network on the status of the incorporation of the Environmental Trading Network as a non-profit entity. The Purpose Statement and Articles of Incorporation have been forwarded to the Network's attorney for review. He also reported that the environmental multiple markets white paper has been forwarded to the project partners (Environmental Financial Products, the Wetlands Initiative and the World Resources Institute) for their review. After those revisions are made, the paper will be distributed to the Network.

#### **Trading to Remediate Acid Mine Drainage in West Virginia**

Mark Kieser provided a brief overview of an October meeting he had with participants in a Cheat River, WV, trading initiative. The Cheat River, at the headwaters of the Mississippi River Watershed, is impacted by acidic drainage from abandoned mines. The headwaters of the Cheat River are pristine and valued for their recreational attributes. However, the tailwater streams are devoid of fish and benthic macroinvertebrates, due to acid mine drainage from a limited number of abandoned mines, making restoration of habitat impairments and water quality improvements virtually pointless. 1970s legislation generally relieved mining companies from responsibilities over the mines they abandoned. Therefore, there was little or no money available to address abandoned mines until a trust fund was later established. However, the monies in that fund primarily targeted health and safety issues, such as steep cliffs and subsidence. The trust fund is scheduled for reallocation next year. Political debate will attempt to allocate a portion of those funds for environmental remediation.

Acid mine drainage is treated as a non-point source, despite the relative ease in identifying localized sources. Additionally, it is difficult to treat the drainage, given the maintenance costs for dosing and the large area necessary to treat the drainage via wetlands. The Cheat River group, which

includes participants from West Virginia University, the state and environmental groups, is investigating trading as a means to potentially address acid mine drainage. Currently, the market is “thin”; i.e., there are few drivers to create a demand for credits.

A political dichotomy exists between the eastern and western sides of West Virginia. Most active mining in West Virginia currently occurs in the eastern region, while the western region has a vast number of abandoned mines. Hale Thurston has been involved with the Canaan Valley Institute in eastern West Virginia. The Institute has been researching various types of valuation techniques for setting restoration priorities. He wondered whether the Institute’s scope encompassed the Cheat River and indicated he would make contact with representatives in the Cheat River Watershed.

### **Massachusetts Investigating Trading to Address Nitrogen Loading to its Estuaries**

Marcia Sherman from the Surface Water Quality Division of the Massachusetts Department of Environmental Protection joined the call as a part of her research into the potential of trading to reduce nitrogen loading to 80-plus of the state’s estuaries. Massachusetts does not currently have any trading projects. Therefore, Marcia is researching the applications of trading in other states, as it may serve as a tool in Massachusetts. Estuaries in the Southeastern and Cape Cod regions are impacted by nitrogen loads from nonpoint sources. She has not been able to find many examples of trades between non-point sources or between point and non-point sources. She asked the Network where to find information on those types of trades. Jim Klang indicated that two such NPDES permits exist in the State of Minnesota: phosphorus-phosphorus trades, and P/N-BOD trades. Reductions of non-point sources are used to offset industrial discharges. It was also suggested that Marcia peruse the studies linked to the GLTN website, particularly a USEPA paper detailing offset programs.

### **Minnesota River TMDL**

Jim Klang provided a summary of the TMDL revision for the Lower Minnesota River (25 river miles). Tetra Tech has been contracted to model the watershed. They are utilizing the HSPF model, which is the foundation for the USEPA’s Basins mapping program. Various scenarios need to be modeled in order to define the reductions needed in the watershed to meet low flow water quality criteria. A strawman proposal is being presented to the stakeholders in which trading between point sources is being considered as a flexible mechanism to meet the TMDL goals. Non-point to point source trading may not be applicable.

Waste load allocations are being established to meet a 40% load reduction from a 10 million acre watershed area upstream of the TMDL zone. Phosphorus concentration limits are established for average wet weather flows. However, there are problems establishing dry weather limits. There can’t be a mass dry weather cap because when the watershed as a whole is experiencing dry weather conditions, small thunderstorms may be occurring that cause localized loads to rise. A TMDL with a mass cap needs a mechanism to relieve the pressure of that cap. Point source managers favor trading within a group of point sources to serve that purpose.

For the dry weather TMDL, all loading was considered to be from point sources. This disregards phosphorus release from river sediments (internal cycling). The Minnesota River TMDL may be established over seasonal time periods. Conversely, most TMDLs set annual load reduction goals. It is estimated that 35% of the phosphorus loading is from nonpoint sources. But because storms cannot be predicted, the TMDL cannot dictate loads on a small time frame. The only way to deal with those loads from localized thunderstorms is to recommend the use of appropriate BMPs across the basin.

If the oxygen demand of sediments could be modeled, then non-point source trading could be included in the plan. The current model is steady state and doesn't take flow into account. A more dynamic model of sediment oxygen demand is desired.

### **TMDLs in Maryland**

Cy Jones indicated that low flow and average annual condition TMDLs are being written in Maryland. The low flow TMDLs ignore internal loading and only dictate point source load reductions. The Chesapeake Bay Program Office has not calculated nitrogen loading to the Bay on a seasonal basis. However, there is some anecdotal evidence that loading does fluctuate on a seasonal basis.

The next conference call is scheduled for Wednesday, November 20, 2002 from 10:30 to noon, EST.