

January 6, 2005

To: Knoxville City Council Members; Knoxville Mayor Bill Haslam;
Mr. David Hill; Cindy Mitchell, City Recorder

From: Mark Quarles, P.G., Globally Green Consulting, Nashville, Tennessee

Cc: Hayes Hickman, Staff Reporter, Knoxville News Sentinel; Mayor Mike
Ragsdale

RE: Tennessee Clean Water Network and Knox County Clean Water Alliance Position
on Proposed Request for Proposal for Stormwater Engineering Services

The Request for Proposal RFP is a waste of time and taxpayer money because:

- An interpretation (the purpose of the RFP) of the 2001 Urban Agreement can be obtained free-of-charge from the authors of the Agreement (they still reside in Knoxville), rather than hiring a consultant to make that interpretation.
- The 2001 Urban Agreement does not include any details on the technical requirements for meeting stormwater goals. Therefore, there is nothing in the Agreement to interpret relative to stormwater.
- The RFP does nothing to address existing water quality problems. It only delays the process of cleaning polluted waters.
- The RFP does nothing to create a more effective ordinance to improve on Knoxville and Knox County water quality, even though a large percentage of the streams in the area are polluted and impaired due to uncontrolled and unregulated urbanization. The Tennessee Department of Environment and Conservation (TDEC) has determined that there are 35 streams associated with 357 river miles that are polluted in Knox County.
- The RFP contradicts itself. It specifically says that the consultant will not evaluate NPDES (define) compliance (p.4) and then requests an analysis of NPDES requirements (p.6). This opens the door for the selected consultant to request additional funds to address NPDES issues, thereby spending even more taxpayer money.

The Tennessee Clean Water Network and the Knox County Clean Water Alliance prefers that the RFP be modified to include a public forum to develop a scope of work to:

- Create an ordinance that effectively cleans up polluted waters on the 303(d) list. The primary pollutant sources are land development and municipal stormwater runoff due to uncontrolled and unregulated urbanization.
- Create an ordinance that is more protective of all Knox County streams from future urbanization efforts.
- Details action items to meet Tennessee's Total Maximum Daily Load (TMDL) requirements for pathogens, siltation, and habitat alterations.

- Details action items to meet Tennessee’s Anti-Degradation Policy, and
- Details action items to meet Phase I / Phase II Municipal Separate Storm Sewer System (MS4) permit requirements.

TECHNICAL SUMMARY OF THE POLLUTION PROBLEM

Knox County streams have been severely impaired by the release of pollutants from the affects of urbanization. Existing ordinances have not been affective in preventing the pollution of 35 streams and their associated 357 river miles. TDEC has listed these streams as being polluted for one or more use classifications. Under Tennessee law, as mandated by the U.S. EPA, TDEC has the authority to stop economic development in Knox County if water quality standards do not improve.

The City and the County need to address water quality issues by implementing actionable items and measurable standards that protect clean water in order to prevent the loss of economic development and to protect our waters for future generations.

SUMMARY OF POLLUTED STREAMS IN KNOX COUNTY

**Knox County Impaired (303(d) List) Waterways
HOLSTON RIVER WATERSHED**

Waterbody	Miles Impaired	Pollutant(s) as Defined by TDEC	Pollutant Source(s) As Defined by TDEC
Love Creek	9.7	Siltation, streamside habitat loss	Land development
Roseberry Creek	20.0	Escherichia coli	Pasture grazing, septic tanks
Swanpond Creek	16.3	Siltation, streamside habitat loss	Land development
Little Flat Creek	30.3	Escherichia coli	Confined animal feeding ops
Flat Creek	2.8	Siltation, streamside habitat loss	Dam construction
5 polluted streams in Knox County in this watershed	79.10 river miles	Siltation (60% of streams) habitat loss (60% of streams) E coli (40% of streams)	80% pollutant sources are man-made 40% are polluted by land development

**Knox County Impaired (303(d) List) Waterways
UPPER TENNESSEE RIVER WATERSHED**

Waterbody	Miles Impaired	Pollutant(s) as Defined by TDEC	Pollutant Source(s) As Defined by TDEC
Roddy Branch	6.4	Streamside habitat loss, Physical stream alterations, siltation, Escherichia coli	Pasture grazing, channelization, removal of streamside habitat
Little Turkey Creek	14.0	Siltation	Municipal stormwater discharge
Casteel Branch	2.0	Siltation	Pasture grazing, municipal stormwater discharge
Twin Branch	1.87	Streamside habitat loss, Siltation	Pasture grazing, Municipal stormwater discharge
Grandview Branch	1.7	Escherichia coli	Municipal stormwater discharge
McCall Branch	1.73	Siltation	Municipal stormwater discharge , stream bank modifications
High Bluff Branch	1.25	Escherichia coli	Municipal stormwater discharge
Stock Creek	3.77	Physical stream alterations, Siltation, Escherichia coli	Pasture grazing, channelization
Gun Hollow Branch	1.36	Escherichia coli	Pasture grazing
Stock Creek	1.98	Escherichia coli	Pasture grazing
Third Creek	20.7	Nitrates, Siltation, anthropogenic alterations, Escherichia coli	Municipal stormwater discharge, land development , collection system failure
Whites Creek	10.2	Anthropogenic alterations, Escherichia coli	Municipal stormwater discharge , stream bank modifications
First Creek	16.1	Nitrates, Siltation, anthropogenic alterations, Escherichia coli	Municipal stormwater discharge, urbanized high density area, collection system failure
Second Creek	12.8	Anthropogenic alterations	Municipal stormwater discharge, urbanized high density area



Turkey Creek	15.8	Siltation , Escherichia coli	Municipal stormwater discharge
Sinking Creek	1.5	Escherichia coli	Municipal stormwater discharge
Sinking Creek	21.9	Streamside habitat loss, Siltation	Municipal stormwater discharge
Fourth Creek	14.9	Physical stream alterations , Escherichia coli	Municipal stormwater discharge
Williams Creek	2.8	Anthropogenic alterations , Escherichia coli	Municipal stormwater discharge, collection system failure
Baker Creek	3.3	Nitrates, anthropogenic alterations , Escherichia coli	Municipal stormwater discharge, collection system failure
Goose Creek	4.9	Siltation, anthropogenic alterations , PCBs, Escherichia coli	Municipal stormwater discharge, collection system failure, RCRA hazardous waste
Polecat Creek	1.85	Streamside habitat loss, Siltation	Land development, channelization
20 polluted streams in Knox County from this watershed	162.81 river miles	Escherichia coli (75% of streams) Siltation (60% of streams) Anthropogenic alterations (35% of streams) Streamside habitat loss (20% of streams) Nitrates (15% of streams) Physical stream alterations (10% of streams) PCBs (5% of streams)	88% of pollutant sources are man-made 85% are polluted by municipal stormwater discharge 30% are polluted by pasture grazing 10% are polluted by land development

**Knox County Impaired (303(d) List) Waterways
LOWER CLINCH WATERSHED**

Waterbody	Miles Impaired	Pollutant(s) as Defined by TDEC	Pollutant Source(s) As Defined by TDEC
Grable Branch	1.3	Oil and grease, Siltation , streamside habitat loss	Industrial discharge, channelization, Municipal stormwater discharge
Hines Branch	3.2	Streamside habitat loss	Municipal stormwater

			discharge
Knob Fork	8.1	Siltation , streamside habitat loss	Municipal stormwater discharge
Grassy Creek	8.2	Siltation	Land development
Meadow Creek	5.0	Siltation	Land development
Beaver Creek	22.5	Phosphorus, Nitrate, Escherichia coli, Siltation , streamside habitat loss	Municipal wastewater discharge , pasture grazing, land development
Beaver Creek	21.2	Escherichia coli, Siltation , streamside habitat loss	Pasture grazing, land development
Williams Branch	2.4	Siltation	Industrial discharge
Foster Branch	1.2	Siltation	Industrial discharge
North Fork Bullrun Creek	19.0	Biological loss	Municipal wastewater discharge
Bullrun Creek	11.8	Siltation, streamside habitat loss	Pasture grazing, channelization
Bullrun Creek	11.4	Escherichia coli	Pasture grazing
10 polluted streams in Knox County from this watershed	115.30 river miles	Siltation (90% of streams) Streamside habitat loss (60% of streams) Escherichia coli (30% of streams) Phosphorus/Nitrates (10% of streams) Oil and grease (10% of streams) Biological loss (10% of streams)	84% of pollutant sources are man-made 40% are polluted by pasture grazing 40% are polluted by land development 30% are polluted by municipal stormwater discharge 30% are polluted by municipal stormwater discharge 30% are polluted by industrial discharge 20% are polluted by municipal wastewater discharge 20% are polluted by channelization

SUPPORTING INFORMATION

Tennessee 303(d) List Facts

- If the stream is on the 303(d) list, TDEC cannot use its regulatory authority to allow additional sources of the same pollutant(s) for which it is listed. This means that dischargers will not be allowed to expand or to locate on 303(d) listed streams until the sources of the pollution have been controlled.
- Once a stream has been placed on the 303(d) list, it is considered to be a priority for water quality improvement efforts.

Fort Loudon Lake Watershed TMDL Facts

- TDEC is required to develop Total Maximum Daily Loads (TMDLs) for those water bodies that are not meeting water quality standards (i.e. on the 303(d) list).
- TDEC has developed the Siltation / Habitat Alteration TMDL. The current City of Knoxville stormwater permit includes TMDLs for pathogens. The Siltation / Habitat Alteration conditions will soon be required as a part of that permit.
- TMDL process includes pollutant reduction requirements to meet water quality standards.
- Required load (pollutant) reductions for siltation and habitat alterations for Municipal Separate Storm Sewer System (MS4) and Construction stormwater runoff are up to 81% from current conditions.
- Required load (pollutant) reduction for non-point sources are up to 81% from current conditions.

Tennessee's Anti-Degradation Statement

- In Tier I waters found to not meet water quality standards for a substance, new or increased discharges of that substance may not be allowed.
- For substances or conditions that are not currently at or are in violation of water quality standards, new or additional degradation of a stream will only be allowed if the applicant has demonstrated to the Department that reasonable alternatives to degradation are not feasible.