

**Information Outline**  
**Cascade Thornapple River Association, Thornapple River, Inc. and**  
**Michigan Department of Environmental Quality**  
**Gerald R. Ford International Airport**  
**NPDES Permit (Stormwater Discharge) Meeting**  
**November 1, 2011**  
**9:00 a.m.**

**Attendees:** Scott Rissi, CTRA, John Kuiper, TRI, Ryan Grant, MDEQ, Luis Saldivia, MDEQ, Mike Worm, MDEQ, Jim Dixon, Dixon Environmental  
**Note:** MDEQ Permit Unit attendees cancelled.

**Purpose:** Thornapple River association members, neighbors within the watershed and other environmental groups are concerned with the MDEQ's regulatory permitting process, oversight and enforcement positions relating to the environmental impact to Trout Creek (Outfall 001). The stakeholders are also concerned with GRFIA's new proposal that considers rerouting the Trout Creek discharge to a new large diameter pipe/channel directly into the Thornapple River without any substantial changes to the reduce ADF volume or introduce control methodologies to minimize impact to the environment.

**1. January 1, 2011 NPDES (Stormwater) Permit**

- A. Fails to recognize full toxicological characterization of stormwater effluent and consideration for safety/exposure to downgradient residents, recreational uses and aquatic life.
  - i. Glycol is not "sugar water". Propylene glycol (PG) is an alcohol solvent with antifreeze properties. PG is capable of dissolving and transporting more dangerous and toxic hazardous/toxic substances released on the tarmac. The solvent properties of PG and the additional hazardous/toxic substances handled on the tarmac are not considered in this permit or in previously issued permits.
  - ii. Application does not disclose documented toxic additives in the propylene glycol anti-icing and de-icing fluids (ADF). Full disclosure of ADF product contents was not provided in GRFIA application or considered in the permit.
  - iii. Permit fails to recognize the limitation of the GRFIA's collection and conveyance system (no equalization/retention basins, no flow control or diversion applications) and the "first flush" impact associated with these limitations. GRFIA's design has severe limitations. High loading will occur over short durations that can provide excessive shock to the inhabitants of Trout Creek. The permit has no means to identify or monitor this particular exposure. Documented erosion and sediment loading has not been addressed relating to the uncontrolled discharge. Extensive erosion and sediment deposits exist and will remain a considerable threat to bathymetric conditions of Trout Creek, Burger Bayou and the Thornapple River.

- iv. The previous airport wetlands, which were the receiving waters for tarmac stormwater effluent prior to 1990's, were impacted with heavy metals and other hazardous substances which required remediation prior to closure. The site history supports that the hazardous/toxic substances were documented in historical runoff sediments. This historical information should have been considered for any subsequent permits to alternative outfall locations.
  - v. Trout Creek meanders through backyards of numerous residential homes which are serviced with on-site private drinking water wells. A Groundwater Discharge Permit does not exist and is apparently exempt for airport de-icing operations. Special consideration should have been included to assess this regulatory gap even if this was not a typical consideration for an NPDES stormwater permit.
  - vi. GRFIA requested and was granted waivers by the MDEQ for most of the standard monitoring parameters. COD, pH and flow are the only parameters requiring periodic monitoring. There does not appear to be justification for limiting the monitored parameters.
  - vii. No provisions exist within the permit to control, limit or terminate stormwater effluent discharge. The permit does not regulate the discharge to protect the public or the water resource in any meaningful manner. Permit did not recognize advisory effluent limits that were previously calculated by the MDEQ in 2000. The effluent limits consistently exceeded the advisory effluent limits. If effluent limits were included as part of this permit or previous permits, the biofilm issue may have been avoided.
- B. The permit provides an unconventional condition to allow GRFIA to continue discharging throughout the term of this permit in a manner that does "not support the designated use for other indigenous aquatic life" in Trout Creek.
- i. The permit required GRFIA to conduct an investigation and provide a Long Term Solution to eliminate strictly the biofilm issue observed at Trout Creek.
  - ii. The unconventional condition combined with the MDEQ's policy on contributing sources (even if COD discharge could be reduced to an infinitesimal amount, any subsequent biofilm flourishing in Trout Creek would be GRFIA's responsibility) forced GRFIA to abandon any long term solution that would allow Trout Creek to remain the future outfall. The unconventional condition of the permit drove GRFIA to seek a new outfall and not seek to correct the problem.
  - ii. The Long Term Solution only requires the abatement of the biofilm issue at Trout Creek. Other violations of the narrative standard (turbidity, color, erosion/sediment, odor) or potential toxicological issues (including sediment deposits) have not been addressed and were not considered as part of the Long Term Solution or the permit.

- iii. Long Term Solution had limited public involvement and key stakeholders (downgradient river associations and other important stakeholders) were not involved in the process. MDEQ failed to consider public or other stakeholder input within the permit for the Long Term Solution condition.
- iv. GRFIA's primary component for a Long Term Solution related to relocating discharge from Trout Creek to large diameter pipe or channel conveyed directly to the Thornapple River. The proposed outfall location has high recreational and scenic value to residents and community on Thornapple River.
- vi. The airport consultants believe that biofilms should not occur at the proposed location, but, they admit that there are no guarantees since biofilm growth is dependent upon many factors.
- vii. The Long Term Solution of shifting an outfall from a smaller receiving water body to a larger receiving water body only supports the "dilution is the solution" concept. The airport's favored alternative does not consider any significant improvements to assist in source recovery, source limitation, or alternative de-icing technology. In addition, none of the discussion/permitting has identified that other hazardous/toxic substances coexist in the effluent and are regulated at much lower thresholds.
- viii. Part 8 - The Water Quality Based Effluent Development Limit for Toxic Substance - R323.1201 states "The department [MDEQ] is committed to, and strongly encourages, the use of pollution prevention, source control, and other waste minimization programs." The MDEQ, however, does not appear to stand firm regarding the dilution alternative proposed by the airport. The MDEQ only appears to consider whether the scope of the long term solution submittal satisfied the intent of the unconventional NPDES permit condition.
- ix. The EPA's Final Ruling on Effluent Limit Guideline (ELG) and New Source Performance Standards (NSPS) for the Airport De-icing Category is on the verge of being published and promulgated. During an interview with EPA's project manager, the project manager disclosed that the current version of the ELG/NSPS ruling is significantly different from the 2009 Proposed Draft ELG/NSPS. The draft version is not available to the public, but should be published prior to 2012. The ELG and NSPS may not have significant bearing on GRFIA, but, agreeing to a "long-term" solution ahead of the ELG and NSPS ruling appears short-sighted.
- x. GRFIA has no specific data relating to the Thornapple River to establish baseline conditions. GRFIA does not consider the cause and effect of this discharge on the existing water quality, the diverse aquatic wildlife ecosystems or the recreational value of the Thornapple

River resource. The Thornapple River is a complex river system that would require a significant effort to establish baseline conditions. In addition, the proposed storm water effluent has not been significantly characterized to consider all hazardous/toxic substances, sediment loading, acute and chronic toxicity, bathymetric changes, geochemical changes and overall volume of water proposed for rerouting. The MDEQ has maintained a position that GRFIA will be responsible for any regulatory violations at the new outfall, however, residence and public stakeholders are skeptical that the MDEQ will enforce objectively based on the history associated with the Trout Creek. In addition, the regulatory body should be supporting proactive preventative measures rather than gambling with the public trust resource and relying on GRFIA's willingness to participate in mitigation efforts.

- xi. Water Quality Standard violations have been previously documented by individuals and the MDEQ. MDEQ has not responded with violation notices associated with narrative rules or the unsupporting designated use for other indigenous aquatic life. GRFIA has not been provided any notice of violation (NOV). GRFIA portrays to the public that they have never had any violations and that they maintain full compliance with the permit. At a minimum, the MDEQ should put GRFIA on written notice that they are violating the permit and Water Quality Standards. MDEQ should also consider escalated enforcement action and maintain consistency with other responses demanded at other Michigan airports.

**2. Permit Modification of Existing NPDES (Stormwater) Permit**

If the MDEQ accepts the GRFIA's Long Term Solution, the MDEQ should outline special conditions. Within GRFIA's new application or modification to the existing permit for the new pipeline/channel, the stakeholders would wish for the MDEQ to strongly consider the shortcomings of previous permits and invoke specific conditions that would require control, limitations or termination of discharge.

- A. GRFIA should re-evaluate source control options closer and MDEQ should support such options to remain vigilant with the Part 8 rules. Proper characterization of the effluent and Trout Creek sediments is important to understanding the toxicity potential.
- B. Regulating permittee through enforcement after the damage has occurred is not a commonly accepted approach for a regulatory permit. There are no provisions proposed in the selected alternative to diminish the total loading to the new outfall other than dilution, so, technically this issue has not been resolved. If new/modified permit will rely on this theory, then, new permit must place a high value on establishing baseline conditions for invoking strict definitions for violations associated with biofilm and all narrative standard conditions.

- C. Permit must have provisions that control, limit or terminate discharge. Effluent Limits were advised previously by the permit section in 2000. Previous permits ignored the guidance advisory and did not invoke any limits. The calculation of new effluent limits is currently being conducted by the MDEQ. Permit writers should be vigilant of the Effluent Limits advisories. A permit without limits is not a permit.

**3. Assisting with Site Access for Independent Confirmation**

Stakeholders wish to independently monitor conditions along Trout Creek and pursue an independent investigation at Trout Creek and near the airport property. Stakeholders request that the MDEQ assist and support with site access (if necessary). The toxicological risk to designated uses has not been assessed and represents the a significant open issue. Erosion and sediment deposits and bathymetric changes to Trout Creek and the Thornapple River represent another concern to stakeholders.

**4. Public Participation and Communication**

The stakeholders and general public do not have immediate access to information relating to the process or updates from the MDEQ's perspective. Articles and information are errantly published and misleading. The process is complex for most citizens to follow and includes considerable understanding of many other rules and regulations. The public should be provided an outlet (hearing, meeting, website) for reviewing information with the public regulatory authority for such a controversial issue. A public hearing should be conducted and assessed prior to accepting the Long Term Solution.