



LAKE • GEORGE
WATERKEEPER®

PO Box 591, Lake George, NY 12845

Tel: (518) 668-5913 Fax: (518)-668-5915

Email: info@lakegeorgewaterkeeper.org

www.lakegeorgewaterkeeper.org

February 5, 2010

Mr. W. Richard Speidel
New York State Department of Environmental Conservation
232 Golf Course Rd.
Warrensburg, NY 12885

**Re: Koncikowski – Stormwater Discharge
Lake George (T), Warren Co.
Application No. 5-5222-00278/00001**

Dear Mr. Speidel:

The Lake George Waterkeeper would like to recognize the New York State Department of Environmental Conservation (“Department”) for allowing public comment on the above referenced permit application for the discharge of stormwater from a construction activity. We feel this is an important step in the water quality protection for the AA-Special waters of the Lake George watershed.

The above referenced site plan review application was personally reviewed in my capacity as a licensed professional engineer and the Lake George Waterkeeper. It is my opinion the submission fails to meet the design standards as set forth by the Department and other local stormwater regulations and will have negative impacts to water quality in the Lake George watershed. Please find attached detailed concerns and comments regarding the permit application:

PERMIT CONDITIONS

- 1. The permit should have numeric effluent limitations in the permit.** The Draft Permit is not compliant with the federal effluent limitation guidelines for construction stormwater effective on February 1, 2010. The condition in the Draft Permit state “There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions.” This is too subjective for a permit condition, difficult to enforce and permits a large impact from sediment to a water body before it may be determined there is a “substantial visible contrast.” Numeric effluent limits are used in other stormwater permits nationwide for sediment and must be incorporated into New York State permits.
- 2. In the Draft Permit, it is not clear if “sediment” is considered a pollutant?** This question has been raised previously by the Lake George Waterkeeper and the Department has yet to respond.



THE FUND for LAKE GEORGE

PROPOSED DESIGN INCREASES STORMWATER RUNOFF DURING CONSTRUCTION

3. The direct discharge from the sediment basins/pocket ponds fails to reduce the increased runoff violating state and local stormwater regulations. The proposed design installs sediment basins where post-construction stormwater management controls (pocket ponds) are proposed. The sediment basins will directly discharge runoff without stormwater management downgradient bypassing the infiltration basins. The sediment basins are not stormwater management controls and will not reduce tributary stormwater volumes as shown in the HYDROCAD calculations, a requirement of state and local regulations. Please refer to the following tables that compare pre-development and construction runoff volumes for the three drainage areas with sediment/stormwater controls.

| STORMWATER BASIN #3 | | | | |
|----------------------------|----------------------|-------------------------|-----------------|-------------------------------------|
| <u>CONDITION</u> | <u>DRAINAGE AREA</u> | <u>ACREAGE</u> (ac.) | <u>CAPTURED</u> | <u>10 YR. RUNOFF VOLUME</u> (af) |
| <u>POST</u> | 3 | 7.14 | YES | 0.186 |
| | 6 | 23.827 | NO | 0.148 |
| | TOTAL | 30.967 | ----- | 0.338 (+67%) |
| <u>PRE</u> | 2 | 32.53 | ----- | 0.202 |
| STORMWATER BASIN #2 | | | | |
| <u>CONDITION</u> | <u>DRAINAGE AREA</u> | <u>ACREAGE</u> (ac.) | <u>CAPTURED</u> | <u>10 YR. RUNOFF VOLUME</u> (af) |
| <u>POST</u> | 2 | 10.04 | YES | 0.198 |
| | 5 | 88.32 | NO | 0.554 |
| | TOTAL | 98.36 | ---- | 0.752 (+23%) |
| <u>PRE</u> | 1 | 98.57 | ---- | 0.613 |
| STORMWATER BASIN #1 | | | | |
| <u>CONDITION</u> | <u>DRAINAGE AREA</u> | <u>ACREAGE</u> (ac.) | <u>CAPTURED</u> | <u>10 YR. RUNOFF VOLUME</u> (af) |
| <u>POST</u> | 1 | 2.17 | YES | 0.130 |
| | 9 | 4.796 | NO | 0.030 |
| | TOTAL | 6.966 | ---- | 0.160 (+320%) |
| <u>PRE</u> | 5 | 7.927 | ---- | 0.050 |

As evident by the comparison of pre- vs. post-runoffs, runoff will increase 67%, 23% and 320% respectively for drainage areas tributary to Stormwater Basins 3, 2 and 1. This will result in negative water quality impacts and increased potential for erosion and sedimentation.

POCKET POND DESIGN

1. **Pocket ponds do not reduce stormwater runoff volumes as shown in calculations.** Pockets ponds have permanent pool elevations and will be constructed below groundwater elevation or have a liner installed. The New York State Stormwater Design Manual requires a 3-foot separation to groundwater for infiltration practices. Therefore, stormwater runoff volume cannot be reduced by the pocket pond controls since there is only 1-1.5 feet of freeboard. However, each pocket pond takes credit for the reduction in post-development stormwater runoff volume. Please refer to the following table that provides volume reductions for the 10-year storm event:

| <u>STORMWATER BASIN</u> | <u>VOLUME ENTERING (af)</u> | <u>DISCHARGE VOLUME (af)</u> | <u>% REDUCTION</u> |
|-------------------------|-----------------------------|------------------------------|--------------------|
| 1 | 0.130 | 0.096 | 27 |
| 2 | 0.198 | 0.103 | 48 |
| 3 | 0.186 | 0.090 | 52 |

- 2. Pocket ponds fail to address cold climate conditions.** Stormwater ponds installed in the Lake George watershed have been monitored over the past three winters. The ponds develop ice which reduces the level of treatment and management. In some applications, the ice accumulates and builds up to the primary spillway elevation eliminating all storage volume. (Please refer to the attached pictures.) The potential for ice accumulation will only increase on ponds proposed on a mountainside with greater exposure to cold weather. As rain events become more prevalent during winter conditions, the potential for high storm volumes increases along with corresponding negative water quality impacts.

PROPOSED CONSTRUCTION WILL DISTURB GREATER THAN 5 ACRES AT ONE TIME

Due to the extent of cut and fill necessary for the construction of the road, the extent of disturbance will be much greater than 5 acres at one time. The proposed construction sequence states the road will be constructed in three phases: Phase 1 Sta. 3+45 – Sta. 17+30; Phase 2 Sta. 17+30-Sta. 34+67; and Phase 3 Sta. 34+67-end. In addition, the applicant in a response letter and in the revised Stormwater Pollution Prevention Plan stated that not more than 5 acres would be disturbed at one time. However, it appears the cut and fill necessary for the road construction will require a disturbance much greater than 5 acres. The road requires significant fill between Sta. 3+50 to Sta. 27+50 with minimal cut sections. The majority of the fill for this section will come from Phases 2 and 3, which will create an area of disturbance closer to 10 acres. The construction sequence for the road should be readdressed with the applicant.

PROPOSED INDIVIDUAL LOT INFILTRATION PRACTICES DO NOT COMPLY WITH NYS STORMWATER MANUAL REQUIREMENTS

- 1. Infiltration controls (rain gardens) are proposed without adequate separation to groundwater or bedrock (Lots 3, 5 & 15).** Three feet of separation to groundwater and bedrock is required for infiltration devices and the proposed design fails to meet the requirement resulting in a reduction of treatment.
- 2. Infiltration cannot be applied to trenches in fill conditions (Lots 13 & 14) or installed in bedrock (lot 12).**

INFORMATION NECESSARY FOR ADEQUATE REVIEW WAS MISSING

A complete set of plans and recent subsurface soil information was not contained in the information available for review. The only drawing available for review was Sheet S-7 that was part of a revised submission. It is imperative all information is available for review and evaluation for the development of comprehensive comments.

Construction on steep slopes can have significant negative impacts to water quality and is one of the leading reasons Lake George continues to be on the 303(d) list as an impaired water body, despite its AA-Special water classification. The Department has realized the necessity to improve construction practices to protect water quality by developing the need for Individual Permits for Stormwater Discharges from Construction Activities. However, the proposed stormwater management design for the referenced project falls well short of the minimum requirement of the Design Manual and will result in increases in stormwater runoff.

The Lake George Waterkeeper recommends the following: 1) The Department require effluent limitation guidelines for discharges; 2) the stormwater discharge volumes during construction needs to be reevaluated, specifically the direct discharge from the sediment basins without any stormwater management; 3) the stormwater discharge volumes after construction needs to also be reevaluated in relation to the assumption of infiltration from the pocket ponds; 4) the effect of cold climates needs to be incorporated into the design; 5) the sequence of construction in regard to the extent of cut and fill operations needs to be revisited; and 6) the individual lot stormwater practices must comply with state regulations in the Design Manual. In addition, the Lake George Waterkeeper also hopes enforcement observation will improve from recent permit non compliances that were documented to the Department.

I look forward to Department's responses and am available to discuss any questions from the comments. The Lake George Waterkeeper looks forward to working with the New York State Department of Environmental Conservation to defend the natural resources of the Lake George watershed. Thank you for your consideration.

Sincerely,



Christopher Navitsky, PE
Lake George Waterkeeper

cc: David Gasper – NYSDEC
Bill Lupo, PE – NYSDEC
Michael White – Lake George Park Commission
Robb Hickey – Town of Lake George
Janelle Robbins – Waterkeeper Alliance



Photograph of wet pond constructed at the Blue Lagoon Resort. Note the standpipe on the left side of the pond and the ice elevation which reduces the ability for stormwater management.



Photograph of wet pond - Town of Hague subdivision taken on January 30, 2008. Note the freeboard height of the standpipe above the ice elevation.



Photograph of same wet pond – Town of Hague subdivision taken on March 20, 2008. Note that there is no freeboard on the standpipe above the ice resulting in direct discharge of runoff without management or treatment.



Photograph of same wet pond taken on March 11, 2009 during rain event. Note the lack of freeboard on standpipe resulting in direct discharge of runoff during rain event show in adjacent photograph.