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MEMORANDUM

To: Highlands Water Protection and Planning Council

From: Eileen Swan, Executive Director
Dan Van Abs, Senior Director of Planning and Science
Erin Lynam, Resource Management Specialist
Jim Hutzelmann, Water Resource Engineer
Christine Ross, Senior Resource Management Specialist
Casey Ezyske, Graduate Intern

Date: September 9, 2008 (revised from February 11, 2008)

Re: Application Type: *Proposed Amendment to Upper Raritan WQMP/
Somerset County WMP*
Name: *Trump National Golf Club*
Municipality: *Bedminster*
County: *Somerset*
Highlands Act Area: *Planning Area*
LUCM Location: *2007 LANDS- Conservation/ Preservation Zone*
Property: *Block 39, Lots 8, 10, 11, 12.02&12.03; Block 38, Lots 9, 13,
&14*
Proposed Use: *Build four 3- bedroom cottages; on-site wells, storage ponds and beneficial
reuse of effluent for golf course irrigation*
Nearest Waterway (Name): *Middle Brook*
Wastewater: *Proposed expansion of sewer service area served by Lamington Farms/
Trump National STP*
Water: *On-site wells and storage ponds*

1.0 PROJECT DESCRIPTION

This is a proposed amendment to the Upper Raritan Water Quality Management Plan (WQMP) and the Somerset County Wastewater Management Plan to allow for the expansion of the sewer service area of the Lamington Farms LLC, DBA Trump National Golf Club (Trump National) by 1.009 acres and to increase the water allocation for irrigation. The Trump National Golf Club is located in Bedminster Township, Somerset County on a 506-acre parcel of land on Block 38, Lots 9, 13, 14, and Block 39, Lots 8, 10, 11, 12.02, and 12.03. The property is bounded to the north by County Road 523, to the east by Cowperthwaite Road and to the south by River Road.

The proposed development addressed by the WQMP amendment includes the expansion of the sewer service area by 1.009 acres to include 4-three bedroom guest cottages. The sanitary flow associated with the expanded sewer service area will be increased from 18,831 gallons per day (gpd) to 29,631 gpd. Wastewater will be treated on-site by a package treatment plant and discharged on-site through a disposal field. Effluent may also be utilized for golf course irrigation.

In a related action, Trump National has applied to NJDEP to increase its existing water allocation permit from 10.1 million gallons per month (MGM), which supported one golf course, to 19.4 MGM (646,666 gpd) in support of a second golf course, of which about 616,000 gpd is needed for irrigation. The applicant proposes to store 50 million gallons of water onsite in 6 existing irrigation/detention ponds, 6 proposed detention basins/wet ponds, and 11 proposed detention/infiltration basins. The storage ponds will reduce the amount of ground water usage in the summer months when water demand is the highest.

The Trump National Golf Club WQMP amendment review is the result of an analysis of infrastructure capacity and the extent of environmentally sensitive resources. This review is based upon the standards, regulations, and policies set forth in the Final Draft Highlands Regional Master Plan (Final Draft RMP); the adopted RMP was not used in this review because the application was deemed administratively complete for review, and the staff draft WQMP amendment review was discussed on February 14, 2008 by the Natural Resources Committee of the Highlands Council, prior to the July 17, 2008 adoption of the RMP. Highlands Council staff expects that a new review based on the adopted RMP would not result in a finding of consistent, but would require significant effort to complete the review. However, it is acknowledged that the Highlands Council reserves the right to review the application utilizing the adopted RMP.

Note that this review was based on remote sensing and imagery information, including use of more recent aerial imagery than NJDEP's Land Use/Land Cover data, which identified recent modifications to the site for construction of the golf course itself but not the proposed buildings. At the time of Natural Resource Committee review on February 14, 2008, the proposed WQMP amendment included potential beneficial reuse of treated wastewater from the Environmental Disposal Corporation (EDC) facility. NJDEP has notified the Highlands Council staff that the WQMP amendment has been modified to eliminate all off-site water sources. The staff review and recommendations have been modified accordingly.

2.0 FINDINGS AND RECOMMENDATIONS

Findings

The Highlands Council staff has identified instances where the Trump National proposed development and sewer service area are inconsistent with the Goals, Policies, and Objectives of the Final Draft RMP. These inconsistencies are discussed below:

Environmentally Sensitive Lands within the Proposed Sewer Service Area

During the review of the proposed sewer service area, the Highlands Council staff identified the presence of environmentally sensitive lands whose development or alteration is inconsistent with the Final Draft RMP. Based on documented information from the applicant plus recent satellite

imagery, the area for the golf course itself is fully disturbed. Therefore, some of the recommendations are applicable to the remaining areas of the property, outside the golf course disturbance. In addition, the applicant has documented the creation of certain environmentally sensitive resources, including riparian and critical habitat restoration, on the former farmland.

Highlands Open Waters and Riparian Areas

Middle Brook, a C-2, FW2-NT tributary to the North Branch of the Raritan River is on the site. The proposed sewer service area extends into the protection buffers for Middle Brook. The project includes the proposed disturbance of Highlands Open Water Protection Areas within 300 ft of Middle Brook and associated on-site wetlands. The Highlands Council staff also identified the proposed disturbance of riparian areas, specifically, the wildlife corridor adjacent to the stream. The Highland Council staff recommends that the application be modified to exclude Highlands Open Water Protection Buffers from the sewer service area. The staff further recommends that riparian areas also be excluded from the sewer service area and any additional development activities throughout the site should limit the increase of impervious areas to the minimum extent necessary. The alteration of natural vegetation should also be minimized beyond the Highlands Open Water Protection Buffers.

Forests

The site contains forested lands that are within the Forest Resource Area. The Highlands Council staff examined the Microsoft Lives' 2007 Aerial Photographs, which reveal that the site is not a core forest area since construction of the second golf course was initiated. The Highlands Council staff recommends the sewer service area avoid any additional disturbance of forested areas. The applicant should be required by NJDEP to provide an approved Forest Management Plan that provides a mitigation plan, and that the development of forests use low impact development techniques.

Critical Habitat

The site contains significant natural areas for T&E species. The applicant conducted a barred owl survey and habitat evaluation for the state T&E species. The study determined that much of the on-site wood habitat is fragmented and successional in nature and, as such, is not critical to the survival of the local population or recovery potential of this species. NJDEP has concurred with the study's findings. NJDEP has requested that patches of wooded habitat around wetland/open water and within the golf course be maintained to allow some seasonal use by barred owls as the trees mature in the future. Also, in 2004, Trump National submitted a grassland bird conservation easement, consisting of 13.2 acres to promote the management of the existing grassland bird populations, specifically the bobolink, eastern meadowlark, and grasshopper sparrow. The easement provides mating habitat for these species of birds.

NJDEP is the source of Landscape Project data used by the Highlands Council and has determined that the actual habitat either does not support or is not critical to the species, or that the applicant is properly managing habitat for these species. Absent these findings, the Highlands Council would normally recommend that the applicant be required to exclude the critical wildlife habitat from the proposed sewer service area unless they can prove to NJDEP that the habitat is inappropriately mapped. The investigation has already occurred and NJDEP has accepted the results, and therefore no further action is warranted.

Agriculture

The site is identified as agricultural uses within an Agricultural Resource Area and important farmland soils occur on site. As noted above, construction of the golf course has commenced and the agricultural uses no longer exist. The Final Draft RMP requires that expansion of wastewater collection systems in the Conservation Zone requires that development be clustered on 20% of the site. The development consists of the sewer buildings and the golf course, which constitute more than 20% of the site. The sewer area itself is significantly less than 20% of the site, but the remaining area is not deed restricted for natural resources protection. It should be noted that remaining development rights for the entire site were extinguished in a conservation easement/deed restriction that was given to the Township of Bedminster and filed with the County of Somerset on December 31, 2005.

Water Quality

The Highlands staff identified a small, wooded area of prime ground water recharge within the proposed sewer service area but it is not within the development footprint. Further, a Total Maximum Daily Load (TMDL) for pH and phosphorus exists for one the subwatersheds and a TMDL exists for phosphorus and temperature in another subwatershed affected by the property. Both of the watersheds are on sublist 5 for aquatic life. The Highlands Council staff recommends that the project should be required to ensure that site contributions to pH and phosphorus conditions will be in support of the TMDL, including monitoring of streams leaving the site. The applicant has provided documentation of ongoing water quality monitoring on the affected streams, which would meet this recommendation if continued. The proposed sewer service area should avoid alteration of the prime ground water recharge areas. Development activities shall not reduce ground water recharge volumes and the development footprint, including the proposed buildings and parking lot, should not encroach upon this area. If the applicant does encroach upon this area, a recharge mitigation of 125% of pre-development recharge is required.

Water Capacity for the Proposed Development

The proposed project seeks an increase of water allocation from on-site wells, (which are located in three of the subwatersheds, although the project is located within four subwatersheds), and from on-site storage ponds. One of the source subwatersheds is a Current Deficit Area and the remaining two are Existing Constrained Areas.

The applicant requests to increase their existing water allocation from 10.1 million gallons per month (MGM) (approximately 337,000 gpd) to 19.4 MGM (646,666 gpd) in support of both the existing golf course and a second course, of which 616,000 gpd is proposed for irrigation with a consumptive/depletive rate of 90%-100%. Because the ground water withdrawals and proposed irrigation occur in a relatively small area and in close proximity to the three subwatershed boundaries, it is not possible to quantify the relative amount of water withdrawn from and returned to each subwatershed. Therefore, it is difficult to differentiate between what is a consumptive or a depletive use. It should be noted that the consumptive use coefficient associated with irrigation is 90%, close to the 100% rate associated with a depletive use, and therefore the distinction between consumptive/depletive is not significant.

At the February 14, 2008 Natural Resource Committee Meeting, the applicant submitted maps depicting 6 existing irrigation/ detention ponds, 6 proposed detention basins/ wet ponds, and 11 proposed detention/ infiltration basins. The irrigation for the golf courses will be drawn from the ponds, which in turn will be supplied as needed by the wells. The wells will pump when the water in

the ponds reaches a pre-defined elevation. The storage ponds are lined, so no direct extraction of ground water occurs at those locations.

The applicant has stated that the ponds can provide approximately 50 million gallons of storage and thus require no pumping in the summer months when the water demand is the highest. Insufficient information is available however, from the application and from the draft water allocation permit to determine how the irrigation demands will be satisfied between the wells and storage ponds. Therefore, this analysis assumes that withdrawals will emphasize use of the wells as the primary supply. To the extent that use of the storage ponds reduces the monthly and annual well withdrawals and consequently the impact on net or conditional water availability, the results of this analysis would be modified.

Under the Final Draft RMP policies, there are four distinct water availability issues. First, the amount of water available through net water availability and conditional water availability (a total of 135,936 gpd) is insufficient for the additional consumptive/depletive water demand of approximately 315,000 gpd. Unless the water allocation permit specifically limits well withdrawals to 135,936 gpd during June to August, then water availability will be exceeded. No restrictions were noted in the draft water allocation permit, so this proposed water use is inconsistent with the Final Draft RMP.

Second, the proposed use does not reflect the priorities of water use in the Conservation and Protection Zones. Specifically, golf course irrigation does not reflect the Conservation Zone priorities that available water be reserved for agricultural uses, clustered development, TDR receiving areas or redevelopment sites.

A third issue that arises is when conditional water availability is to be used, the Final Draft RMP requires that amount to be mitigated in the same subwatershed at a 125% rate through a permanent reduction of consumptive/depletive use or through ground water recharge. The three subwatersheds do not serve as a water source for any public water utility, so opportunities for off-site water conservation may not be available.

Finally, it is noted that the current Net Water Availability Analysis is based on 2003 data and does not take into account the existing irrigation associated with the original water allocation permit for Trump National Golf Club (approved in 2004). If that existing demand data (up to 0.3 MGD of use) were updated into the Council's Net Water Availability Analysis, then it is likely that all three source subwatersheds would be in deficit. These facts may require that the applicant develop water supplies for necessary water uses; such measures could include a combination of artificial recharge, high-flow skimming or additional storage of overland runoff in on-site ponds to provide for irrigation needs.

Wastewater Capacity for the Proposed Development

The proposed project plan includes an expansion to the existing on-site Lamington Farm Reclamation Facility and disposal area. The wastewater will be treated by the permitted on site treatment facility with a discharge to groundwater (Lamington Farms/ Trump National STP NJPDES #NJ0142883) and reused for irrigation. Wastewater will be treated onsite via Membrane Bio Reactor processes and treated to the NJDEP Ground Water Class II-A standards.

The expansion of wastewater collection systems in the Conservation Zone requires that development be clustered on 20% of the site. The development consists of the sewered buildings and the golf course, which constitute more than 20% of the site. The sewered area itself is significantly less than 20% of the site, but the remaining area is not deed restricted for natural resources protection. It apparently is deed restricted from further development, but the golf course itself constitutes a commercial use, rather than an agricultural or natural resource protection use.

Recommendations

The Highlands Council staff provides the following specific recommendations for consideration by the Highlands Council based on the Final Draft RMP. As stated earlier, the Highlands Council reserves the right to review the application utilizing the adopted RMP. In summary, the staff recommends that NJDEP **not approve** the application unless it is modified to address the following inconsistencies:

1. Environmentally Sensitive Areas: The review of the proposed WQMP/WMP amendment reveals several inconsistencies with the Final Draft RMP, including the proposed disturbance of Highlands Open Water Protection Areas, Riparian Areas, Forest Resource Areas, Prime Ground Water Recharge Areas, and Critical Habitat.
2. Water Availability: The project's proposed water use would exceed water availability for the three source subwatersheds and would create or exacerbate water availability deficits. The applicant should prove that the project will not exceed net water availability, will not exceed the conditional water availability, and will provide 125% mitigation of consumptive or depletive water uses from Current Deficit Areas. As the applicant is seeking a modified water allocation permit, the net water availability analysis should be based on the most recent annual water use data available.