

# **SANITARY SEWER**

## **Chapter Twelve**

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### **Introduction:**

The proposed Crossroads 312 project, shown in this FEIS, is a reduction in size from the one described in the DEIS which would generate less sewage flow from the proposed retail and restaurant uses. The site plans also show a hotel as a part of the principal uses proposed for the project. Therefore to reflect these changes, the proposed water usage has been revised to reflect the FEIS plans and is included in Chapter 11. The anticipated sewage flows have increased from those of the primary proposal in the DEIS due to the inclusion of the hotel. However, the FEIS is less than the sewage flow noted in the alternatives from the DEIS as the FEIS hotel is smaller than originally proposed in the DEIS at 100 rooms rather than the 200 rooms noted in the DEIS. A complete breakdown of proposed sewage flow for the FEIS is included in the response to Comment San-2 below.

### **Comment San-1**

*It appears that the wastewater flow calculations on page 10A-5 of the DEIS for buildings #2, 3, & 4 in the T2 phase of Terravest Corporate Park were derived by utilizing the hydraulic loading rate of 0.011 gallons per square foot of area, which is the rate used for general retail and retail uses. The DEIS should verify any prior approvals and their proposed uses for buildings #2, 3 & 4 in T2 and the appropriate wastewater calculations applied. (PCDOH (10/18/2013))*

### **Response:**

As indicated on Table A, on the following page, providing Wastewater Flow Calculations the flows projected for Buildings 2, 3, 4 in T-2 of Terravest are now less than the flows projected and approved as part of Phase 2 and 3 of Terravest in 2003. The higher flow projections at that time were the result of an assumption that buildings would contain a larger component of office space than has actually occurred. Actual flows from the sites occupied by Ace Endico and Westchester Tractor are less than a third of the original projections. It is presumed that the trend toward reduced office occupancy will continue at Terravest and potable water use correspondingly reduced. The hydraulic loading rate and factor of safety applied to the Buildings #2, 3, 4 more closely represents this current trend.

### **Comment San-2**

*The DEIS does not describe or specify the legal mechanism which will be utilized to insure that all properties/developments connected to the central water and wastewater systems will have the perpetual right to the central water supply and/or wastewater*

*service connections. It would appear beneficial if water and sewage works transportation corporations were formed to resolve this issue. (PCDOH (10/18/2013))*

**Response:**

With expansion of the service area to include the Crossroads project, it is intended to form water and sewage works corporations for administration and operation of the utilities.

**TABLE A - Wastewater Flow Calculations**

<b>Development Area Building</b>	<b>Wastewater Generation (GPD)</b>	<b>WWTP Remaining Capacity (GPD)</b>
Wastewater Treatment Plant (WWTP) Capacity		51,800
<b>Existing Usage:</b>		
Ace Endico (T-2) & Westchester Tractor (T-9) (3,000 GPD x 1.5)	4,500	47,300
<b>Proposed Development in Terravest Corporate Park:</b>		
T2 - Building 2 (16,000 sf x 0.011 x 1.5)	264	47,036
T2 - Building 3 (62,056 sf x 0.011 x 1.5)	1,024	46,012
T2- Building 4 (41,850 sf x 0.011 x 1.5)	690	45,332
T3 - Elderly Housing (60 units x 80 gpd x 1.5)	7,200	38,122
<b>Proposed Crossroads Primary Development: *</b>		
Supermarket	6,500	31,622
Restaurant	3,570	28,052
Hotel	11,000	17,052
Retail (Dry use)	1,225	15,827
<b>Total (GPD to WWTP)</b>	<b>35,973</b>	
Remaining Capacity		15,827

\* See response to # WS-4 for project design flow derivation.

### **Comment San-3**

*The DEIS shall identify the agency approvals obtained, to date, for the senior housing project in Section T3 of Terravest Corporate Park. (PCDOH (10/18/2013))*

Response:

The Terravest Senior Housing project has obtained all approvals necessary for Site Plan Approval including-

Town of Southeast Approvals ( Site Plan, Wetlands, Special Permit)

NYCDEP Approvals for WWTP, sewer connections and stormwater

NYSDEC Approvals for WWTP, stormwater

PCDOH approval for sewer connections and WWTP

The final approval required for construction was for the potable water supply (NYSDOH and PCDOH) which is ongoing.

### **Comment San-4**

*The water supply and wastewater disposal facilities which will serve this development must meet the standards of the Putnam County Sanitary Code and the New York State Department of Environmental Conservation and New York State Department of Health. A detailed review of the engineering plans and specifications will be required prior to final approval of the water supply and wastewater facilities serving this project. (PCDOH (10/18/2013))*

Response:

As noted, design plans and specifications will be prepared for the review and approval of all improvements associated with water supply and wastewater disposal facilities for the project. The current design is shown on the Utility Plan which is part of the Site Plan set.

### **Comment San-5**

- 1. The FEIS should include the annual Discharge Monitoring Report for the Terravest waste water treatment plant to demonstrate the existing usage level and capacity. (AKRF (11/12/2013))*

Response:

Operation of the wastewater treatment plant requires the submission of Discharge Monitoring Report forms on a monthly basis. The forms for each month of 2013 are now included in the Sanitary Sewer Appendix. From the data on the forms the average daily discharge of treated effluent for 2013 was 2,750 gpd which is far below the plant's 51,800 gpd treatment capacity.

#### **Comment San-6**

1. *The chapter (Chapter 19: Irreversible and Irretrievable Commitment of Resources) identifies the use of existing wells and waste water treatment plant capacity at Terravest. The FEIS should further disclose what caps on development would need to be placed on Terravest as a result of capacity that would be committed to this project. (AKRF (11/12/2013))*

Response:

The Wastewater Flow Calculation chart contained in Chapter 10A of the DEIS has been revised to include the current proposed uses and flow projections for the Crossroads project. This revised chart is included herein on Table A. Based on projected flows, the remaining capacity in the wastewater treatment plant after future connection of the sites remaining in T-2, the T-3 housing project and Crossroads would be 15,827 gpd.

The only uses within Terravest that have requested connection to the wastewater treatment plant are Ace Endico and Westchester Tractor. While it was originally projected that the uses in T-1 would utilize 21,456 gpd, not uses have yet requested connection. It is expected that future uses within T-1, T-2, and T-3 will therefore require little in the way of water and sewer service, thus freeing up capacity to serve Crossroads. Therefore, caps on development with Terravest are not necessary at this time. Limits may become necessary in the future should actual water usage within Terravest or Crossroads become higher than presently anticipated.

### **Comment San-10**

**The Comment intentionally left blank.**

Response:

No response required.

### **Comment San-8**

1. *As previously noted, the DEIS provides various references to support projected design flows, including the New York Department of Environmental Conservation (NYSDEC) publication "Design Standards for Wastewater Treatment Works, 1998" for restaurant and bank uses, and comparative data from a report done by Insite Engineering, Surveying & Landscape Architecture, P.C. for another project for retail uses. The incorporation of the text within this report on page 10A-7 is confusing, as it references design flows for a different project. Also, it would seem that for the big box retailer flow data to be relevant it should be provided as gallons per day per square foot and not just total gallons per day. (NLJA (11/12/2013))*

Response:

The discussion on page 10A-7 of the DEIS comparing actual to code derivation of design flows and measured flow from a sampling of wholesale warehouse and Home Improvement Center is no longer applicable to the proposed project. The metered water use projects referred to as Medium Dry Retail on page 10A-6 has been used.

### **Comment San-9**

2. *As previously noted, the DEIS should confirm the consistency of projected wastewater flows with the approved/allocated design flows for sites in the Terravest Corporate Park. (NLJA (11/12/2013))*

Response:

Please refer to the responses under Comment San-1 and San-6 above.

## **Comment San-10**

### **DEC Approvals Required**

2. *Article 17, P/C/I' SPDES - Required by Covington Management Co., LTD. For providing service from the Terravest Wastewater Treatment Facility for the proposed sewer extension. (NYSDEC (11/22/2013))*

### **Response:**

A request will be made to the New York State Department of Environmental Conservation for a SPDES Permit Modification. Please note however that although the service area will be expanded to include the Crossroads project lands no change is to occur to the volume of wastewater treated in the plant. Please refer to the explanations provided in responses to Comments #San-1 and San-6 above.

## **Comment San-11**

### **Wastewater**

*It appears that the Crossroads 312, LLC has entered into a service agreement with the Covington Management Co., LTD to be connected to the Terravest Corporate Park Wastewater Treatment Plant (WWTP). Documentation verifying that this WWTP can handle the projected 44,740 GPD needed to service Crossroads 312 should be provided. (NYSDEC (11/22/2013))*

### **Response:**

The service area for the wastewater treatment plant will be expanded and a sewage works corporation formed to include the Crossroads 312 project. The calculations showing the derivation of water use for the Crossroads 312 project are contained in response WS-4 under Water Supply. The average daily demand for potable water and wastewater generation is 22,295 gpd. The project flows in combination with other existing and proposed flows generated by Terravest uses is shown on Table A included in this section. As shown the projected wastewater flow to the plant from all uses remains 15,827 gpd under the plant capacity of 51,800 gpd.

### **Comment San-12**

*To this end, the following will need to be addressed:*

1. *Analysis should be submitted to prove that sufficient capacity is available in the existing WWTP to handle this project. Analysis should consider all unbuilt, approved (and pending) projects in the sewer district. (NYSDEC (11/22/2013))*

Response:

Please refer to response to Comment # San-11 above.

### **Comment San-13**

2. *There should also be a narrative description and discussion about the potential impacts that the proposed discharge will have on the existing quality of the receiving waters. (NYSDEC (11/22/2013))*

Response:

The discharge limitations placed on the effluent from the wastewater treatment plant in the SPDES permit have been consistently met. There is no direct discharge of effluent to surface water as the facility discharges to a subsurface disposal system. The high degree of treatment provided in the plant and subsequent subsurface discharge is expected to have no impact on surface water quality in the watershed.

### **Comment San-14**

*If all the approved projects in Terravest are built-out and added to a 150 room hotel, waste water capacity may be maxed out. In addition, the figure of 72 gallons per day (x1.5) is below most accepted estimates. And finally, using an airport hotel in Elmira, New York may not be a truly comparable example. I would be interested in the applicant providing more data on wastewater using more comparable hotels. (Lynn Edelson (11/12/13), (Michael Principe (11/11/2013), (Public Hearing (11/07/2013))*

Response:

The recently revised New York State Design Standard for Intermediate Sized Wastewater Treatment Systems (March 5, 2014) contains an updated list of hydraulic loading rates for various types of use. The recommended per room rate for the category of hotel proposed at Crossroads is 110 gpd. This closely corresponds with the rate applied to the hotel use in the DEIS;  $72 \text{ gpd} \times 1.5 = 108 \text{ gpd}$  per room. The flow calculations have been revised however to apply the rate currently recommended by the New York State Department of Environmental Conservation.

Please refer to the response to Comment San-6 for discussion of the Crossroad 312 impact on capacity of the wastewater treatment plant.

### **Comment San-15**

*Chapter 10(a), sanitary sewage. Here again we are dealing with an off-site situation. Please describe the type of system. The age of the system. Did the original Terravest FEIS mention off-site use? Describe the type of monitoring employed and where the performance records can be viewed. (Public Hearing (11/07/2013))*

#### **Response:**

The wastewater treatment plant located in Terravest was constructed approximately 10 years ago. The plant incorporates an advanced treatment process utilizing biological nutrient removal technology proven to successfully meet the stringent effluent limitations established by the New York State Department of Environmental Conservation for phosphorus and nitrogen. All critical components of the treatment process are duplicated and arranged in parallel to allow uninterrupted treatment during maintenance or repair of a given component. The treated effluent is discharged to a subsurface disposal system as a result of prohibition by the New York City Watershed Regulations on new surface water discharges. The level of treatment through the plant is however sufficient to meet surface water discharge standards. The subsurface system provides the added benefit of treatment by soil. The plant is monitored daily by the owner's operator, Allied Pollution Control. The operator is responsible for completing and forwarding monthly Discharge Monitoring Reports to the New York State Department of Environmental Conservation, Putnam County Health Department and New York City Department of Environmental Protection. A copy of those reports submitted for 2013 are included in the Sanitary Appendix.

Please refer to Comment San-6 for discussion of the plant's available treatment capacity and proposed connections.

### **Comment San-16**

*There is reference in the DEIS to a Terravest location in which the septic system failed. Please name the location and the circumstances and the date and type of remedy. (Public Hearing (11/07/2013))*

Response:

The subsurface sewage treatment system serving the building at 1 Geneva Road in Terravest required repair approximately 8 years ago. The original septic system served a company known as Kern Instruments and their employee occupancy was considerably less than the current number of County office employees. Wastewater volume increased beyond capacity of the original system requiring construction of a larger system on the lot. A new septic tank, pump chamber and leach field were provided.

### **Comment San-17**

*Why was data on sewer flows from Patterson Crossing used instead of Highlands data? (Public Hearing (11/07/2013))*

Response:

Each tenant space at the Highlands includes metering of potable water usage. The potable use does however include recycled grey water supplying toilets and urinals. Since the grey water use by each tenant is not metered, the metered reading of potable water does not represent the total water use by each tenant at the Highlands. The Patterson Crossing EIS data was determined to be a more accurate projection for comparable uses at Crossroads.

### **Comment San-18**

*During the spring, I was at Kohl's and noticed a strong odor of septic in the parking area? Why? Will the hotel experience similar problems? (Public Hearing (11/07/2013))*

Response:

The wastewater treatment plant serving the Highlands is located between Kohl's and Home Depot. All processes associated with the treatment of wastewater to the plant are located within the plant structure or in buried tanks which minimizes the escape of odors. The septic odor noted may have coincided with the removal of sludge from the plant. Odors can escape to the exterior during that process and can be detected in nearby parking areas depending on wind direction. The occurrence is short term and infrequent as the sludge holding tank generally requires weekly pumping.

The plant at Highlands is located over ½ mile from the proposed hotel where any odors generated would be undetectable.