

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATERSHED MANAGEMENT

ADOPTED AMENDMENT TO THE SUSSEX COUNTY WATER QUALITY
MANAGEMENT PLAN

Public Notice

Take notice that on **FEB 23 2005**, pursuant to the provisions of the New Jersey Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Statewide Water Quality Management Planning rules (N.J.A.C. 7:15-3.4), an amendment to the Sussex County-Wide Wastewater Management Plan (WMP) and the Sussex County Water Quality Management Plan (WQMP) was adopted by the Department of Environmental Protection (Department). This amendment was submitted by the Sussex County Department of Engineering and Planning, on behalf of Vernon Township (Township).

This amendment allows for a proposed 265,000 gallons per day (gpd) expansion of the Sussex County Municipal Utilities Authority (SCMUA) Upper Wallkill Regional Sewage Treatment Plant (STP), as well as the construction of a local wastewater collection system and a centralized sanitary sewage pump station and force main (connecting to the existing United Water wastewater conveyance to the SCMUA STP) to serve the Vernon Town Center Community Development Area (CDA). The CDA includes the Vernon Town Center and the Mountain Creek Resort. Under this amendment, the additional 265,000 gpd flow for the CDA will be pumped to the SCMUA STP, treated and pumped back to Vernon Township for final groundwater disposal at the Herold Square site located at the intersection of Routes 517 and 94 in the McAfee section of the Township. A New Jersey Pollutant Discharge Elimination System (NJPDDES) Discharge to Groundwater Permit will be required for the 265,000 gpd treated effluent groundwater disposal in the Township.

In addition to the increase in flow, this amendment expands the Vernon Town Center sewer service area to include 21 additional lots, totaling 20 acres (16 of these lots are on the western

side of the Town Center bordering Route 94 and five of these lots are on the southern portion of the Town Center bordering Route 515). Of these 21 lots, 18 are already developed using individual subsurface disposal (septic) systems for wastewater treatment. This amendment transfers this wastewater to the Upper Wallkill Regional STP. The three remaining undeveloped lots total 3.6 acres.

The Mountain Creek Resort contains the partially completed Black Creek Sanctuary, (a 133 unit resort condominium development) and the proposed Village Resort consisting of retail space, restaurants, condominium units, a ski lodge and the Appalachian Hotel. The Appalachian Hotel is presently under construction. The Mountain Creek Resort is proposed to include a total of 1000 residential units and approximately 245,000 sq. ft of commercial/conference space.

The SCMUA Upper Wallkill Regional STP currently has allocated 380,000 gpd of wastewater flow to all of Vernon Township. The entire 380,000 gpd allocation has already been assigned. Currently, the Township is only using approximately 200,000 gpd of the allocated flow. The partially completed Black Creek Sanctuary and the Appalachian Hotel, both under construction, will utilize a portion (72,000 gpd that is owned by Intrawest and 28,500 gpd that is currently allocated to the existing Base Lodge), of the total current flow allocation to Vernon Township of 380,000 gpd. Adding the projected 265,000 gpd of additional wastewater flow will result in an ultimate SCMUA total flow allocation of 645,000 gpd for all of Vernon Township.

This adopted amendment has been reviewed in accordance with Executive Order 109 (2000) (EO 109) and N.J.A.C. 7:15-5.18. With the exception of the 21 lots in the Town Center proposed to be added to the sewer service area, all of the lots in the CDA are within the existing SCMUA sewer service area designated for Vernon Township. However, due to the higher density zoning now proposed in the area of the Mountain Creek Resort and the proposed 265,000 gpd expansion of the Wallkill Sewage Treatment Plant, additional environmental analyses and a new build out analysis were required under EO 109, including areas outside of the 21 lot sewer service expansion area.

Environmental Constraints Buildout. An Environmental Constraints Buildout Analysis was submitted by Vernon Township. This analysis concludes that the proposed 645,000 gpd flow allocation is adequate to serve the wastewater collection and treatment needed to support the ultimate planned buildout of the Township. In reviewing this analysis, it was noted that the boundaries of the CDA, the SCMUA Vernon Township Sewer Service Area, and the Vernon Town Center Zoning do not align. In response to the Department's comments, the Township has executed an Administrative Consent Agreement (ACA) with the Department on February 23, 2005 in which the Township commits to update the Vernon Township Wastewater Management Planning component of the Sussex County-Wide WMP. As part of the Vernon Township Wastewater Management Plan update, the Township has agreed to improve the alignment of the CDA, the SCMUA Vernon Township Sewer Service Area, and the Vernon Town Center Zoning boundary lines. In order to more closely align these boundary lines, the Township will remove from the sewer service area several specified lots outside of the CDA that are currently designated as SCMUA Sewer Service Area, but are not currently served by wastewater collection systems. The ACA requires the Township to revise and refine their buildout analysis for the Department's approval once this realignment is accomplished. Any excess flow allocation resulting from the removal of these lots will be reserved for infill use, via a Transfer of Development Rights (TDR) program to support the regional master plan for the Highlands Region, pursuant to the Highlands Water Protection and Planning Act, N.J.S.A. 13:20-1 et seq. The Township intends to retain the McAfee C-2 Zone, and the unused lots on the Herold Square effluent disposal site, located outside of the CDA, but within the SCMUA Sewer Service Area, for future use as an additional Town Center, as TDR receiving zones or to comply with COAH obligations.

Discharge to Groundwater Point Source Pollutant Loading. Vernon Township relies on groundwater for its potable water supply needs. Recent water supply issues have emerged and there is concern that future groundwater withdrawals could adversely affect stream base flow. Therefore, the Department determined that the additional water supply demand enabled by this amendment should be offset by returning treated wastewater to a point as near as possible to the point(s) of withdrawal. Therefore, the proposed discharge of treated

wastewater to groundwater at the Herold Square site is the best discharge option to offset these impacts. A report entitled "Hydrogeologic Evaluation of Subsurface Wastewater Discharge Capacity at the Herald Square Site" was submitted in support of this amendment. A preliminary evaluation of that report finds this option to be both feasible and acceptable from a planning perspective. The technical, engineering and hydrogeologic details of this report, together with other information as may be submitted, will be fully evaluated during the Department's NJPDES permitting application review process to determine if the proposed project qualifies for a discharge permit.

Non-Point Source Pollutant Loading. The non-point source pollutant loading analysis for the Town Center portion of the CDA evaluated the three undeveloped lots (total of 3.6 acres with frontage on major roadways, zoned for commercial use) that are proposed to be added to the sewer service area in the Town Center. The remaining 18 lots proposed for inclusion within the sewer service area were not included in this analysis because they are already developed. The ultimate connection of the developed lots to the sanitary sewer system is not expected to increase the existing nonpoint source loadings. The remainder of the Town Center portion of the CDA is already included in the Vernon Township Sewer Service Area and is not impacted by this amendment. Applying Department approved pollutant loading coefficients to the three undeveloped lots resulted in de minimus projected total pollutant loading increases.

For the Mountain Creek Resort portion of the CDA, the applicant plans to utilize 29.5 acres of existing impervious surface for redevelopment. Stormwater management measures proposed for the Mountain Creek Resort include; two wet retention basins (already constructed and in use on the site adjacent to the Black Creek) and preservation of two parcels totaling 80 acres (44 acres to the North of the Black Creek Sanctuary and 36 acres to the South of the Village Resort) as open space. The Black Creek Sanctuary and the Appalachian Hotel portions of Mountain Creek Resort both received local approvals and Department permits prior to February 2, 2004 and therefore qualify under N.J.A.C. 7:8-1.6 for grandfathering under the adopted Stormwater Management rules (N.J.A.C. 7:8). These portions of the Mountain Creek Resort are already under construction and have been designed in accordance with the Stormwater Management requirements in place on February 1, 2004. The Village Resort

component of the project is still in the conceptual phases except for the Appalachian Hotel, which is under construction. The Village Resort will be engineered to comply with all applicable stormwater requirements during the site plan design phase. Because the Mountain Creek portion of the site is located on areas that consist largely of existing impervious surfaces, and in consideration of the stormwater management measures proposed to be incorporated into the site design, the amendment will not result in a significant change to the existing non-point source loads leaving the site. Further, the consolidation of development by increasing density in the CDA will result in long-term beneficial impacts by reducing non-point source pollution that would result from future unplanned sprawl development. In consideration of the above, the Non-Point Source Pollutant Loading Analysis was deemed to be satisfied.

Stream Corridor Analysis. The Township adopted a Stream Corridor Ordinance #04-04 on March 1, 2004 that creates a stream buffer conservation zone of 150 feet for Category One waters and 75 feet for Category 2 waters that will help recharge stormwater, and reduce suspended solids and other non-point source pollution entering the streams. The Township is aware of the new Category One 300-foot special water resource protection area requirement and as part of the Stormwater Plan implementation, intends to revise this ordinance accordingly during the WMP update. Two of the above mentioned 18 developed lots (Lots 19 and 20, Fledgings Montessori Pre-school) are bisected by Towne Brook (FW2-TM) and are subject to the above ordinance. During this interim period, those projects that are subject to the Residential Site Improvement Standards or those projects that will require either freshwater wetlands approvals or stream encroachment permits from the Department will be required to comply with the new 300-foot buffer adjacent to Category One waters. The Stormwater Management rules do not include a buffer for waters not designated as Category One. The 75-foot buffer adopted by the Township exceeds the stream corridor requirements under the current Flood Hazard Area Control rules (N.J.A.C. 7:13). Since there are no existing regulations governing Category Two stream buffers, the Vernon ordinance provides protection in excess of Department regulations. The Ordinance adopted by the Township is therefore an acceptable alternative to the removal of stream corridors from the proposed sewer service area, as the ordinance, RSIS and Stormwater Management rules will prevent the

extension of sewer service into these sensitive areas. Therefore, the Stream Corridor Analysis was deemed to be satisfied.

Consumptive and Depletive Water Use Analysis. A Black Creek Drainage Basin Water Balance Study (Study), comments submitted by one commenter on this application prior to the proposal of the amendment, and the applicant's subsequent rebuttal to the comments, were submitted and evaluated by the Department. The Department's evaluation found the Study to be lacking and inaccurate. However, the proposal will not generate major irrigation uses and the entire additional treated wastewater flow is proposed to be returned for discharge to the originating watershed via groundwater discharge. The SCMUA and the Township have further agreed to consider beneficial reuse of treated wastewater to replace potable water used for irrigation at existing golf courses. Therefore, the Department determined that this amendment will not result in any substantial depletive or consumptive water use.

Moreover, the Department has required the development of a realistic water budget for Vernon Township in the WMP update that will be completed in accordance with the executed ACA. The WMP update will also require the avoidance of any additional baseflow reduction, beyond that which would occur as a result of the current Vernon Township Sewer Service Area and projected buildout that was allowable prior to this amendment.

Threatened and Endangered (T&E) Species The Department's Fish and Wildlife Landscape Project Maps indicate that the Mountain Creek Resort development parcels are not mapped as critical habitat but do border areas that are mapped as critical habitat. Most of the planned development is located on areas that have been previously developed or disturbed. In order to offset impacts from development and provide buffering, Mountain Creek Resort entered into an agreement with the U.S. Fish and Wildlife Service (USFWS) to restore natural vegetation on 30 acres of disturbed wetlands at the Black Creek Sanctuary (the former Action Park), and set aside 44 acres of open space land that include lots designated as critical habitat. An Environmental Impact Statement for the Black Creek Sanctuary, and the impacts of the Mountain Creek Resort to the Barred Owl, Coopers Hawk and Wood Turtle were evaluated by the Department. Based on this review, the Department has determined that this

development site, that is part of the previously approved sewer service area and almost completed, is not considered suitable habitat for these species, and that any impacts to adjacent habitat suitability will be mitigated through the restoration and preservation outlined in the agreement between Mountain Creek Resort and the U.S. Fish and Wildlife Service. In consideration of the above, this analysis was deemed to be satisfied.

In accordance with N.J.A.C. 7:15-3.4 and the Sussex County Water Quality Management Plan Amendment Procedures, a public hearing for this amendment was noticed on August 16, 2004; in the New Jersey Register at 36 N.J.R. 3932-3934, the New Jersey Herald and the Star Ledger. Sussex County held a public hearing on September 22, 2004 and public comments were accepted by the Sussex County Division of Planning at the hearing and until October 7, 2004. The Sussex County Division of Planning prepared a summary of the written and verbal comments that were entered into the record, considered these comments and on December 15, 2004, the Sussex County Board of Chosen Freeholders approved the amendment in accordance with the Sussex County Water Quality Management Plan Amendment Procedures:

The following people submitted written and/or oral comments on this amendment:

Number – Last Name, First Name, Affiliation

1. Fasagio, Steve; Township of Vernon resident
2. Bicske, John; Township of Vernon resident
3. Gunn-Kadish, Carol; Township of Vernon resident
4. Lewis, Glen; Sussex County Economic Development Partnership
5. Horsfield, Tammie; President, Sussex County Chamber of Commerce and Economic Development Partnership
6. Bolts, Dan; Township of Vernon resident
7. Borstad, Dan; Township of Vernon business owner
8. Talmo, Ed; Township of Vernon resident
9. Merritt, Vernon; President, Vernon Chamber of Commerce
10. Miranda, Dennis; President, Northwest Group of the Sierra Club
11. Fuehrer, Chris; President, Vernon Civic Association
12. Cerenzio, Peter; Cerenzio and Panaro Consulting Engineers
13. Weiner, Ira; Mayor, Township of Vernon
14. McCartney, Kathy; Township of Vernon resident
15. Smith, Jacob; Township of Vernon business owner
16. Carew, Austin; Township of Vernon business owner
17. Osias, Gene; Director, Vernon Township Health Department

18. Blier, Charles; Vice President/General Manager, Mountain Creek
19. Longo, Danielle; Township of Vernon resident
20. Morrison, Janet; Deputy Mayor, Township of Vernon
21. Scouttan, Susan; Township of Vernon resident
22. McClouthic, Bill; Township of Vernon resident
23. Mulvihill, Gene; Township of Vernon business owner
24. Teolis, Don; Vernon Township Manager
25. Zaretsky, Bruce; Township of Vernon business owner
26. Palladini, Jessica; Township of Vernon resident
27. Seufert, Valerie, Township of Vernon resident
28. Williams, Craig; Township of Vernon Environmental Commission
29. Vernon Citizens for Intelligent Growth and Progress group petition (45 signatures)
30. Eleven hundred forty one preprinted, signed postcards

Summary of Comments Entered Into the Record And Responses:

The comments submitted and the Department's responses are summarized below. The number(s) in parentheses after each comment identifies the respective commenter(s) listed above

Comment 1:

One commenter indicated that a sewage treatment plant should not be built near wetlands. (1)

Response:

The wastewater to be generated by the CDA will be treated at the existing SCMUA Upper Wallkill Regional STP, located in Hardyston Township. The required additions will be constructed in an area located between the plant access roadway and existing treatment units. This area was reserved for future treatment units when the Upper Wallkill STP was constructed in 1984. This area was previously disturbed, and has been maintained as a lawn since 1984. There will be no wetlands impacts associated with the construction of the required additions.

Comment 2:

Several commenters were concerned about the impacts to groundwater levels from the development in the CDA, the ability of the aquifer to provide the proposed water withdrawal

to serve the CDA, and compliance with the Department's "Depletive and Consumptive Water Use" requirements. (2),(3),(7),(10),(11),(14)

Response:

Currently, almost all of the public community water supplied in Vernon is provided by United Water who will also be supplying the water to the CDA. United Water has stated by letter addressed to the Township, dated May 27, 2003, that they have sufficient water allocation currently permitted by the Department to supply an additional 332,000 gpd to the CDA. United Water's current allocation is 674,000 gpd based upon 72 hour pump tests and therefore no future increases in the present allocation are anticipated.

In addition, the entire volume of water utilized by the CDA will be treated, and will be returned to the watershed and recharged up gradient from the point of withdrawal, which will offset water usage and minimize impacts, if any, on the aquifer from such water withdrawal.

In view of the above, and the fact that there will be minimal irrigation uses of water in the CDA, the Department determined that there is sufficient water availability for the CDA's needs, there will not be substantial depletive (exportation) nor consumptive (evaporative) water use, and there will not be detrimental impacts on water availability for existing aquifer users.

Comment 3:

One commenter indicated that previous studies do not insure that there will be baseflow for the existing waterways. (10)

Response:

As indicated above, due to the return of used water to the aquifer after treatment, and limited irrigation uses of water associated with the CDA, there will not be substantial depletive nor consumptive water use as a result of the development proposed as part of this amendment.

Consequently, the proposed development will not cause a significant detrimental impact on the baseflow of Black Creek.

In order to insure maintenance of such baseflow in the future, the Township and the Department executed the above mentioned ACA. The ACA requires Vernon Township to develop a Township-wide water budget to prevent any baseflow reduction beyond that which could occur from sewer service areas and associated water uses approved prior to this Amendment and prior to the implementation of the CDA. Such prior sewer service areas were approved based on a Water Balance Analysis prepared in 1985 for the SCMUA by "Princeton Aqua Science", approved by the Sussex County Water Quality Management Agency, and accepted by the Department when it approved Treatment Works Approval (TWA) construction permits for wastewater facilities to serve such areas.

Comment 4:

One commenter indicated that it will not be possible to recharge as much water into the ground as is taken out, due to evaporation and other factors. (6)

Response:

The recharge beds will be designed to minimize or eliminate evaporation of treated water to be returned to the aquifer. In addition, the limited amount of irrigation use associated with the CDA will minimize water loss associated with the planned developments to be sewerred.

Comment 5:

Several commenters raised concerns regarding possible contamination of the aquifer and associated wells by the treated water to be recharged. This included concern over possible "man-made" compounds and chemicals that are not regulated or monitored. (1),(2),(6),(7),(10)

Response:

The wastewater generated by the CDA will be conveyed to the SCMUA's Upper Wallkill Regional STP located in Hardyston Township, for treatment.

SCMUA will provide a high treatment level at the STP, so that the water to be returned to Vernon for groundwater recharge will meet Class IIA groundwater quality standards. Most groundwater in Northern New Jersey, including Vernon Township, is classified as Class IIA. Class IIA groundwater means the following:

(1) Class IIA water can be used for potable water supply with conventional water treatment (generally disinfection, which is required for all public potable water supplies).

(2) Pertinent requirements of Class IIA groundwater, which the treated water must meet, include:

-Total Nitrogen in an amount less than 10 milligrams per liter

-Ammonia in an amount less than 0.5 milligrams per liter

-Fecal Coliform in an amount less than 200 organisms per 100 milliliters (therefore disease causing organisms should not be present).

The Department requires that the treated water be returned as near as possible upgradient of the point of withdrawal. SCMUA's selected groundwater recharge site meets this requirement, while maintaining the necessary distance between the recharge beds and the downgradient public potable water wells, in accordance with the Department's water supply regulations (N.J.A.C. 7:10-11), and the policy of the Bureau of Safe Drinking Water which requires a minimum of two (2) years hydraulic time of travel between discharge to groundwater projects and existing potable water wells.

Wastewater to be treated and returned to Vernon Township for recharge will be “domestic” in nature, and will be segregated from wastewater received at the Upper Wallkill Regional STP from non-domestic sources (domestic wastewater is wastewater received from predominantly residential units, schools, shopping center, restaurants, etc.).

Treated water will be recharged via use of subsurface recharge beds. Although recharged water will be treated to meet Class IIA standards, Department regulations mandate a minimum of two (2') feet of unsaturated soil between the base of recharge beds and seasonal high groundwater levels as described in the Department's Technical Manual for NJPDES Discharge to Groundwater Permits, June 2002, “Mounding Analysis”, page 23; SCMUA intends to provide a minimum of four (4') feet. The reason for unsaturated soil below the disposal bed is to provide a safety factor, since soil is a very effective medium for water purification. SCMUA will be required to provide groundwater monitoring wells at the recharge site, and will routinely monitor these wells.

The treatment processes at the Upper Wallkill Regional STP to be utilized for treating water to be recharged will include physical, chemical and biological processes:

- The aeration process to be utilized will remove any Volatile Organic Compounds (VOC's) (if any are present).
- Chemical and filtration treatment processes will cause metals to precipitate and be removed (if any are present).
- Disinfection will be utilized to kill pathogenic organisms (e.g. viruses, etc.).

All treated water at the Upper Wallkill Regional STP is required by the STP's NJPDES permit to be tested for numerous compounds to confirm treatment efficiencies and quality of the treated water, including natural and man-made compounds.

Besides standard testing for treatment efficiencies, treated water from the Upper Wallkill Regional STP is required to be tested for:

- 137 Priority Pollutants (VOC's, Pesticides, PCB's, Metals, etc.)

- Acute Toxicity

- Chronic Toxicity

The Acute Toxicity Test, performed by an independent certified lab, exposes highly sensitive organisms to treated water at concentrations as high as one hundred (100%) percent treated water, for forty-eight (48) hours, to determine if such treated water is toxic for any reason, including regulated and unregulated compounds.

The Chronic Toxicity test, also performed by an independent certified lab, exposes highly sensitive organisms to treated water, at concentrations as high as one hundred (100%) percent treated water, for seven (7) days, to determine if the treated water will inhibit the growth and/or reproduction of such organisms for any reason, including regulated and unregulated compounds.

Historically, wastewater treated at the Upper Wallkill Regional STP has passed all Priority Pollutant and Toxicity tests, and has not demonstrated any level of toxicity. The addition of flow from the CDA, being domestic in nature, would not change the nature of the wastewater historically received at the Upper Wallkill Regional STP, and therefore will not impact the ability of the plant to remove the compounds previously discussed.

Comment 6:

One commenter indicated that since the drinking water to be used for the developments in the CDA will be drawn from a "sole source aquifer", it is subject to USEPA review if Federal funding is used, and questioned whether USEPA review was conducted. Another indicated

that no additional nutrient loading in stormwater which would change the pH of the sole source aquifer is allowable. (3)

Response:

Projects for which Federal funds are intended to be used, and which could potentially impact a designated "Sole Source" aquifer, are required to obtain USEPA review prior to such funds being utilized. No Federal funds will be used by the SCMUA in financing the construction of the wastewater treatment facilities. It is possible that the Township may utilize some Federal funds for the local wastewater collection system to serve the Town Center area. The Township will be required to meet all Federal requirements prior to utilization of such funds. However, this is a financing issue, not a wastewater planning issue, and as such, is not relevant to this adopted amendment.

However, it should be noted that the SCMUA and the Township must comply with all of the requirements of Department regulations for discharges to groundwater for the construction and operation of the new wastewater system. Department oversight will be provided throughout the permitting, construction and operations phases via the NJPDES permitting process and TWA permit reviews. Similarly, all future development in the CDA which generates stormwater will be required to meet Department Stormwater Management regulations, N.J.A.C. 7:8. In view of this, protection of the aquifer will be ensured throughout the design, construction and operation of the facilities contained in this adopted amendment.

Comment 7:

Two commenters questioned whether the Hydrogeologic Study of the proposed recharge area was properly conducted specifically related to locating bedrock elevations, whether the treated water will discharge to the Black Creek rather than recharging the aquifer, and whether this adopted amendment should not be approved until full review of the Hydrogeologic Report via the permit process is completed. (10),(11)

Response:

SCMUA conducted a detailed "Hydrogeologic Study", utilizing a hydrogeologist experienced in the State of New Jersey in this type of study, to locate a suitable site for groundwater recharge. Numerous potential sites were evaluated, with a suitable site located near the intersection of Route 94 and Route 517 in the Township, known as the "Herold Square Site". This site is underlain with various soils, including various gradations of sand, gravels, and cobbles. The underlying bedrock is Franklin Marble (no limestone was encountered).

The study included:

- Twenty-one (21) test pits with geologic logging of material. Test pit excavation depth is typically limited by depth to bedrock or instability of test pit walls, whichever is encountered first.

- Eight (8) test borings to bedrock (located as deep as 45 feet), with geologic logging of materials encountered.

- Four (4) "two-dimensional resistivity surveys" were conducted to map the depth to bedrock throughout the site.

- Aquifer hydraulic testing, including a "long-duration pumping test", "long-duration injection test", and "extended duration aquifer test".

- Two (2) "large-scale basin infiltration tests".

The results of these tests were utilized to develop a groundwater flow model using the U.S. Geological Survey's model known as "MODFLOW". Using conservative model inputs, a groundwater "mounding analysis" was developed to determine the capacity of the site for recharge, while complying with Department requirements for distance between recharge bed

base and seasonal high groundwater. This site is capable of accepting the needed 265,000 gpd of treated water.

The model also demonstrated that the recharged water at the site will not enter Black Creek within a short flow path. Rather, a portion of the recharged water will flow along the valley to the northeast, and gradually enter the stream as baseflow. The remainder will become available for reuse as part of the source aquifer.

A preliminary evaluation of said study by the Department found this proposed recharge to be feasible from a planning perspective. The technical, engineering and hydrogeologic details of this study will be fully evaluated during the Department's review of the SCMUA's application for a "NJPDES-Discharge to Groundwater" permit, to determine if the above study is sufficient to allow the issuance of said permit. Department procedures require wastewater planning to be approved prior to the review of any permit application, that is, the permit application must be consistent with the approved WMP.

A copy of said study Report, entitled "Hydrogeologic Evaluation of Subsurface Wastewater Discharge Capacity at the Herold Square site in Vernon Township" is on file at the offices of the SCMUA, the Township, and the Department.

Comment 8:

One commenter indicated that the Hydrogeologic Study did not consider the impacts of groundwater recharge on the water table on the western side of Black Creek, near McAfee, as there are problems there that should be studied. (7)

Response:

The purpose of the study was to locate a suitable site for groundwater recharge. The recharged treated water will flow to the north on the eastern side of Black Creek. There will be no impact on the western side of Black Creek near McAfee.

Comment 9:

One commenter indicated that other schools and businesses have “package treatment plants” instead of central sewer service, so development can be built without central sewers. (11)

Response:

The SCMUA and the Township evaluated various alternative means of providing wastewater treatment services for flow to be generated by the CDA. The three (3) main options consisted of (1) treatment at the Upper Wallkill Regional STP with groundwater recharge in the Township, (2) treatment at a new treatment plant to be located within the Township, with groundwater recharge, and (3) purchase of the existing Legends Hotel treatment plant, with expansion and upgrade thereof and groundwater recharge. The evaluation of these three (3) options was provided in detail in the report by Cerenzio & Panaro, P.C. entitled “Vernon Town Center Wastewater Treatment Plan alternatives Assessment”. This Report was provided to the Department on June 6, 2003, and was considered by the Department in reviewing the proposed WMP Amendment. The conclusion of the alternatives assessment was that the proposed Plan, as reflected in the this adopted amendment, was the most appropriate plan to serve the CDA. The Department accepted this analysis and its conclusions.

Comment 10:

One commenter indicated concern over the need for proper disinfection of the existing sewage force main which will be utilized to convey treated water to the groundwater recharge site. (11)

Response:

Industry standard disinfection procedures will be utilized, similar to the procedures normally utilized for disinfecting potable water lines prior to use. Appropriate testing will be conducted prior to pipeline use to insure the effectiveness of the disinfection procedures.

Comment 11:

One commenter indicated concern regarding insuring proper operation and maintenance of the wastewater treatment plant. (11)

Response:

The Upper Wallkill Regional STP is staffed by wastewater operations professionals licensed by the State of New Jersey. All treatment units and critical equipment at the STP have one hundred (100%) percent backup to insure required treatment units are always operational. The STP has standby diesel-powered generators to insure that all STP's units and equipment are fully functional during commercial power outages. In addition, all functions at the STP are monitored twenty-four (24) hours per day, three hundred sixty-five (365) days per year. The STP is operated under the authorization and oversight of the Department in accordance with the terms of NJPDES Permit Number NJ0053350. The permit requires that the plant be staffed with a licensed operator qualified as per N.J.A.C. 7:10A-1.1.(i.e., S-4 license). In addition to periodic inspections conducted by the Department's Northern Bureau of Water Compliance and Enforcement, the SCMUA is required to have extensive testing by a certified laboratory of the plant's performance as described in Part III of the NJPDES permit and must submit monthly certified monitoring reports to the Department as required by Part IV of said permit.

Comment 12:

One commenter raised questions regarding tax revenue, bonding, and property assessments associated with the proposed project. (11)

Response:

This question is not relevant to this water quality management plan amendment, and would more appropriately be addressed directly to Township officials.

Comment 13:

One commenter indicated that he reviewed a schematic diagram of proposed modifications to the Upper Wallkill Regional STP to treat the water to be returned for groundwater recharge, and found a "crossover valve" on the schematic which could allow leachate from the landfill to be introduced into the new addition. (11)

Response:

The existing schematic drawings of the proposed plant modifications are basic and conceptual in nature. The commenter misinterpreted the direction of flow in the conceptual sketch. SCMUA has committed, at the request of the Township for the purpose of avoiding any perceived issues, to ensure that landfill leachate will not be allowed to be introduced into the waste stream which will be treated and returned to the groundwater recharge site. It should be noted, however, that SCMUA has accepted leachate from its County landfill for treatment at its Upper Wallkill Regional STP since 1990, and has consistently met all NJPDES permit effluent limits and toxicity requirements.

Comment 14:

One commenter indicated the public was not aware of the Vernon Township WMP Amendment or Public Hearing until receipt of a flyer from a local civic organization. Two commenters requested that project plans be placed on the Township web site. One commenter requested more information regarding this adopted amendment. (11),(14),(22),(26)

Response:

Notice of the Public Hearing on the proposed Vernon Township WMP/WQMP Amendment was published in accordance with N.J.A.C. 7:15.

Comment 15:

Several commenters were concerned regarding potential impacts of stormwater runoff as a result of this project, and indicated that a Non-Point Source Pollutant Loading and a Hydromodification Analysis should be required prior to this adopted amendment's approval. (10),(14)

Response:

The non-point source pollutant loading analysis for the Town Center portion of the CDA submitted to Department evaluated the three (3) undeveloped lots (total of 3.6 acres with frontage on major roadways, zoned for commercial use) that are proposed to be added to the sewer service area in the Town Center. The remaining eighteen (18) lots proposed for inclusion within the sewer service area were not included in this analysis because they are already developed. The ultimate connection of the developed lots to the sanitary sewer system is not expected to increase the existing nonpoint source loadings. The remainder of the Town Center portion of the CDA is already included in the Vernon Township Sewer Service Area and is not impacted by this adopted amendment. Applying Department approved pollutant loading coefficients to the three (3) undeveloped lots results in de minimus projected total pollutant loading increases.

For the Mountain Creek Resort portion of the CDA, 29.5 acres of impervious surface currently exists from the former Developer (Action Park). The proposed development at Mountain Creek will not increase this amount of impervious surface. Stormwater management measures proposed for the Mountain Creek Resort include: two (2) wet retention basins (already constructed and in use on the site adjacent to the Black Creek) and

preservation of two (2) parcels totaling eighty (80) acres (44 acres to the North of the Black Creek Sanctuary and 36 acres to the South of the Village Resort) as open space. The Black Creek sanctuary and the Appalachian Hotel portions of Mountain Creek Resort both received local approvals and Department permits prior to February 2, 2004 and, therefore, qualify under N.J.A.C. 7:8-1.6 for grandfathering under the Stormwater Management rules (N.J.A.C. 7:8). These portions of the Mountain Creek Resort are already under construction and have been designed in accordance with the Stormwater Management requirements in place on February 1, 2004. The Village Resort component of the project is still in the conceptual phases except for the Appalachian Hotel, which is under construction. The Village Resort will be engineered to comply with all applicable stormwater requirements during the site plan design phase. Because the Mountain Creek portion of the site is located on areas that consists largely of existing impervious surfaces, and in consideration of the stormwater management measures proposed to be incorporated into the site design, this adopted amendment will not result in a significant change to the existing non-point source loads leaving the site. Further, the consolidation of development by increasing density in the CDA will result in long-term beneficial impacts by reducing non-point source pollution that would result from future unplanned sprawl development. In consideration of the above, the Non-Point Source Pollutant Loading Analysis was deemed to be satisfied.

It should be noted that, by way of the Vernon Township ACA executed with the Department, the Township commits to expeditiously prepare a Township-wide Stormwater Management Plan conforming with the Stormwater Management rules at N.J.A.C. 7:8. This will include the drafting of stormwater management ordinances required by said rules.

The complete Stormwater Management Plan that is required by the ACA will include a significantly larger area (entire Township) than the area covered by this adopted amendment. Therefore, requiring approval of the complete Stormwater Management plan prior to review and approval of this project-specific adopted amendment is not necessary.

Comment 16:

One commenter was concerned because the Township's existing Stream Corridor Ordinance (No. 04-04) does not reflect the buffer requirements for C-1 waters, and suggested that the ordinance be required to incorporate the specific requirements of N.J.A.C. 7:9B-1.15 (c) through (h) in the Ordinance. The commenter also recommended that the suggested changes be required prior to the approval of this adopted amendment by the Department. (10)

Response:

The Township adopted a Stream Corridor Ordinance #04-04 on March 1, 2004 that creates a stream buffer conservation zone of 150 feet for Category One waters, and 75 feet for Category 2 waters, that will help recharge stormwater, and reduce suspended solids and other non-point pollution entering the streams. The Township initiated the Ordinance after meeting with the Department in July 2003. The Department's model Ordinance was utilized to develop the Township's Ordinance. After being reviewed by Township officials, the Ordinance had first reading on January 26, 2004, and was adopted on March 1, 2004. The Township is aware of the new Category One 300-foot special water resource protection area requirement, and as part of the Township-wide Stormwater Plan implementation, intends to revise this Ordinance accordingly as indicated in the ACA. During the interim period, those projects that are subject to the Residential Site Improvement Standards (RSIS), or those projects that will require either freshwater wetlands approvals or stream encroachment permits from the Department, will be required to comply with the new 300-foot buffer requirement adjacent to Category One waters. The Stormwater Management rules do not include a buffer for waters not designated as Category One waters. The 75-foot buffer adopted by the Township of Vernon exceeds the stream corridor requirements under the current Flood Hazard Area Control rules (N.J.A.C. 7:13). Since there are no existing regulations governing Category Two stream buffers, the Vernon ordinance provides protection in excess of Department's regulations. The Ordinance adopted by the Township is therefore an acceptable alternative to the removal of stream corridors from the proposed sewer service area, as the Ordinance, RSIS, and Stormwater Management rules, will prevent the extension of sewer service into these sensitive areas. Therefore, adequate protection of the stream corridors is provided without requiring the Ordinance to be amended prior to approval

of this adopted amendment. It should be noted that the Township is in compliance with the Tier B Municipal Stormwater Regulations.

Comment 17:

One commenter felt it would be impossible to properly ascertain the adequate wastewater treatment capacity allocation required without total alignment of the boundaries of the CDA, the SCMUA Sewer Service Area, and the Vernon Town Center Zoning, and therefore believes this adopted amendment should not be approved prior to the refinement of the alignment as committed to in the ACA. (11)

Response:

An Environmental Constraints Buildout Analysis was submitted by the Township. This analysis concludes that the total of the Township's existing plus proposed flow allocation (645,000 gpd) is adequate to serve the wastewater collection and treatment needed to support the ultimate planned buildout of the Township. In reviewing this analysis, it was noted that the boundaries of the CDA, the SCMUA Vernon Township Sewer Service Area, and the Vernon Town Center Zoning do not align. In response to the Department's comments, the Township agreed to execute an ACA with the Department, in which the Township commits to update the Vernon Township Wastewater Management Planning component of the Sussex County-Wide WMP. As part of the Vernon Township Wastewater Management Plan update, the Township has agreed to improve the alignment of the CDA, the SCMUA Vernon Township Sewer Service Area, and the Vernon Town Center Zoning boundary lines. In order to more closely align these boundary lines, the Township has agreed to remove from sewer service area several specified lots outside of the CDA that are currently designated as SCMUA Sewer Service Area, but are not currently served by wastewater collection systems. The ACA requires the Township to revise and refine their buildout analysis for the Department's approval once this realignment is accomplished. Any excess flow allocation resulting from the removal of these lots will be reserved for infill use, via a Transfer of Development Rights (TDR) program to support the regional master plan for the Highlands

Region, in accordance with the Highlands Water Protection and Planning Act. As stated in the ACA and this adoption notice, the Township, intends to retain the McAfee C-2 Zone, and the unused lots on the Herold Square effluent disposal site, located outside of the CDA, but within the SCMUA Sewer Service Area, for future use as an additional Town Center, as TDR receiving zones, or to comply with COAH obligations.

The Department determined that the ACA requirements are sufficient and that it is not necessary to require completion of the alignment activity prior to approval of this adopted amendment.

Comment 18:

One commenter expressed concerns about the impact of the CDA on New Jersey and Federal T&E species, and alleges that the Township did not submit any data to the Department regarding the presence of New Jersey T&E species. (10)

Response:

Mountain Creek has performed New Jersey and Federally T&E species habitat surveys. Such surveys were provided to Department. The Department's Fish and Wildlife Landscape Project Maps indicate that the Mountain Creek Resort development parcels are not mapped as critical habitat but do border areas that are mapped as critical habitat. Most of the planned development is located on areas that have been previously developed or disturbed. In order to offset impacts from development and provide buffering, Mountain Creek Resort entered into an Agreement with the U.S. Fish and Wildlife Service (USFWS) to restore natural vegetation on 30 acres of previously disturbed wetlands at the Black Creek Sanctuary (the former Action Park), and set aside 44 acres of open space land that includes lots designated as critical habitat. An Environmental Impact Statement for the Black Creek Sanctuary, and the impacts of the Mountain Creek Resort to the Barred Owl, Coopers Hawk and Wood Turtle were evaluated by the Department. Based on this review, the Department has determined that this development site, which is part of the previously approved sewer service area and is nearly

completed, is not considered suitable habitat for these species. The Department further determined that any impacts to adjacent habitat suitability will be mitigated through the restoration and preservation outlined in the Agreement between Mountain Creek Resort and the U.S. Fish and Wildlife Service.

In addition, wetlands delineations and T&E species surveys were conducted on the Herold Square groundwater recharge site. These documents were previously provided to Department. The Department has determined that no critical habitat will be impacted by either the recharge site or the proposed sewer system in the Vernon Town Center area.

In consideration of the above, the required analysis for T&E species was deemed to be satisfied.

Comment 19:

Two commenters indicated concern that the Water Balance Study by Killam Associates contained deficiencies, and did not adequately support a consumptive and depletive water use analysis. (10),(11)

Response:

In 1999, the Township and the SCMUA initiated the evaluation of a wastewater plan to serve the additional wastewater treatment capacity requirements of the CDA, which entailed the expansion of the existing Upper Wallkill Regional STP. This plan would include the discharge of the additional treated effluent from the STP to the Wallkill River within Hardyston Township.

Since such a plan would involve inter-basin transfer of water drawn from wells within the Black Creek Drainage Basin (source of potable water for the CDA) to the Wallkill River Drainage Basin, Killam Associates was retained to evaluate the impacts of such inter-basin transfer on the surface waters and the groundwater aquifer within the Black Creek Basin”.

However, as a result of the adoption of EO 109 in January 2000 by Governor Whitman, the SCMUA and the Township terminated any further work on the plan which incorporated inter-basin transfer of water, and established a policy that only wastewater plans incorporating groundwater recharge within the Black Creek Drainage Basin would be considered, in conformance with the intentions and requirements of EO 109. Such a policy would avoid any negative impacts of “depletive water use” which could have been caused by inter-basin transfer of water.

In view of this, the Water Balance Study performed by Killam Associates is not applicable to this adopted amendment, since it consisted of a wastewater plan which has been rejected by both SCMUA and the Township. Consequently, since this adopted amendment entails a wastewater plan consisting of a groundwater recharge within the Black Creek Drainage Basin, comments relative to the Water Balance Study are also not applicable.

Comment 20:

One commenter indicated that there is a large unsecured “dirt pile” up-slope of the Black Creek Marshes without hay bales or silt fences. (10)

Response:

The Township has referred this issue to the Sussex County Soil Conservation District. The District Manager indicated she will review this matter. However, this matter is not relevant to the this adopted amendment.

Comment 21:

One commenter indicated that a stretch of road frontage owned by Mountain Creek now contains a new parking area which was constructed in 2004 without a permit and encroaches on a small stream which flows to Black Creek. (10)

Response:

The Township has indicated that this is a new bus parking area. The site plan was submitted to the Vernon Township Planning Board in 2003, and was approved after a public hearing. This approval granted permission to increase this parking area by a small amount. The Township, through municipal inspections, verified that this parking area was constructed in conformance with the approvals granted by the Vernon Township Planning Board. The parking area is only slightly larger than that which previously existed. The stream adjacent to the parking area has no associated wetlands. A 50 foot setback has been consistently maintained. At the time of this approval, the Vernon Township Stream Corridor Ordinance was not in effect, nor were there any Department requirements to provide a greater setback than 50 feet to a Category Two water body. The small increase in impervious surface is offset by the planned landscaping to be performed as part of the approved site plan for the Applachian Hotel on previously existing impervious surfaces. Therefore, although a small increase in impervious surface was created during construction of the bus parking area, a greater amount of impervious cover is being removed from other existing areas.

Comment 22:

Several commenters indicated their opinion that the submissions in support of this adopted amendment did not comply with the requirements of E.O. 109. (10),(11)

Response:

After extensive review of all issues associated with the amendment, and as described in the EO 109 analysis contained in the proposal of the amendment and in response to comments above, the Department determined that this adopted amendment and supporting documentation complies with the requirements of E.O. 109.

Comment 23:

One commenter requested a thirty (30) day extension to the public comment period, and a second appears to be requesting an extension until all provisions of the ACA are completed. (10),(11)

Response:

The commenters on this amendment filed written and/or verbal comments expressing many issues that were well enunciated in their comments. In this instance, the Department determined that the issues were fully detailed in the written and/or verbal submissions and that an extension of the comment period would not be likely to raise issues or provide new information, data or findings that were not previously raised or provided during the development of the amendment or during the initial comment period. The Department believes that adequate opportunity for comment was provided to all commenters on this amendment without the necessity of an extension of the comment period.

The Department determined that this project specific adopted amendment satisfied the requirements of the Water Quality Management Planning rules at N.J.A.C. 7:15 except for the absence of ordinances in the Township that address stormwater management, and the absence of an updated Vernon Township WMP component of the Sussex County-Wide WMP. The Township indicated their desire to proceed with this site specific adopted amendment and since the Department may proceed with a site specific amendment to a wastewater management plan in the absence of an updated wastewater management plan where the wastewater management planning agency has entered into a binding commitment with the Department pursuant to N.J.A.C. 7:15-5.1(d)1, the Department determined that the deadlines specified in the executed ACA requirements are appropriate and that it is not necessary to require completion of the provisions of the executed ACA prior to approval of this adopted amendment.

Comment 24:

Eleven hundred forty one preprinted, signed postcards, opposing this adopted amendment were received and entered into the record. (30)

Response:

The preprinted opposition were of a general nature. Since specific objections, of technical and planning merit, to this adopted amendment, have already been addressed above, this comment is also deemed to be addressed.

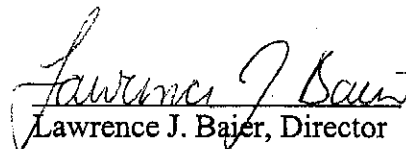
Comment 25:

Several commenters voiced support for this project specific adopted amendment. (4),(5),(8),(9),(12),(13),(15),(16),(17),(18),(19),(20),(21),(23),(24),(25),(27),(28),(29),(30)

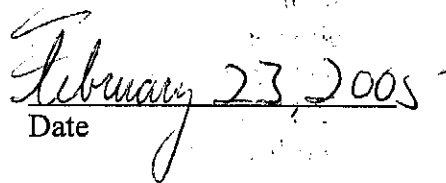
Response:

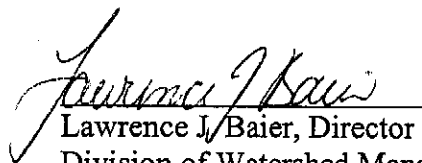
The support for this adopted amendment is acknowledged.

This amendment represents only one part of the permit process and other issues may need to be addressed prior to final permit issuance. Additional issues which may need to be addressed may include, but are not limited to, the following: antidegradation; effluent limitations; water quality analysis; exact locations and designs of future treatment works (pump stations, interceptors, sewers, outfalls, wastewater treatment plants); and development in wetlands, flood prone areas, designated Wild and Scenic River areas, or other environmentally sensitive areas which are subject to regulation under Federal or State statutes or rules.

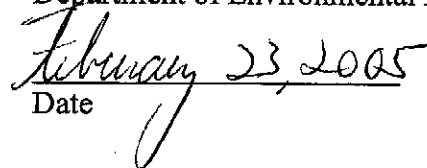


Lawrence J. Bajer, Director
Division of Watershed Management
Department of Environmental Protection


Date


Lawrence J. Baier, Director

Division of Watershed Management
Department of Environmental Protection


Date