



## STATEMENT OF JUSTIFICATION

### Orange Water and Sewer Authority Mason Farm Wastewater Treatment Plant Upgrade

The purpose of this document is to present information regarding the Orange Water and Sewer Authority's (OWASA) Mason Farm Wastewater Treatment Plant (WWTP) Upgrade project, supporting each of the four required findings required under Section 4.5 of the Town of Chapel Hill's Land Use Management Ordinance.

#### Background Information

OWASA proposes to upgrade and expand the existing Mason Farm WWTP from its currently permitted capacity of 12 million gallons per day (MGD) to a capacity of 14.5 MGD. The WWTP is located adjacent to, and discharges highly treated effluent into, Morgan Creek in southeastern Orange County, North Carolina, about 2.1 miles southeast of downtown Chapel Hill. The plant currently employs 22 people for plant operations, administration, and laboratory operations. The number of employees will not increase as a result of the proposed project.

OWASA is a regional public water and sewer utility established in 1977 to serve the Chapel Hill – Carrboro community and nearby areas. OWASA assumed ownership and maintenance responsibilities for the water and sewer systems that were previously owned and operated separately by the towns of Carrboro and Chapel Hill, and the University of North Carolina at Chapel Hill (UNC). OWASA currently provides service to more than 70,000 people through nearly 19,000 customer accounts. In 2001, OWASA prepared a Comprehensive Water and Sewer Master Plan which includes projected water and sewer demands through the Year 2050, and proposed major infrastructure improvements required to meet those demands.

Major components of the proposed project are as follows: a new influent pump station (referred to as the Morgan Creek pump station on the site plan); expanded headworks; expansion and improvements to the aeration basins; a new secondary clarifier; a new filter complex that will house a new effluent filter system and ultra-violet-disinfection system; the replacement or modification of the roofs on the existing digesters; and improvements to the on-site backup power system.

The majority of the contractor staging and storage area will be within the plant's property. However, an additional temporary construction easement is being request from the adjacent property owner, the UNC's Finley Golf Course. As shown on the site plan, there are two areas for use by the contractor outside of the property boundary. The first is located along the north property boundary, between the property line and the Duke Power Transmission Main right-of-way. Part of this easement will be used for the storage of pipe and other similar construction materials. The remainder of this area will be used for

a sediment trap for erosion control. This area is located within the floodplain but outside of the floodway.

The second area for the contractor is located northwest of the property near the access bridge across Morgan Creek. This area is located within the floodway but will be used exclusively for parking by the contractor's personnel. No materials or equipment will be stored in this area. This area is overgrown with grass and brush and contains no trees. This area will be mowed to allow for parking.

### **Required Findings**

The following findings are listed verbatim from Section 4.5.2 of the Chapel Hill Land Use Management Ordinance. Supporting project information follows each finding.

***Finding #1: That the use or development is located, designed, and proposed to be operated so as to maintain or promote the public health, safety, and general welfare.***

Public health, safety, and welfare are the highest priorities of OWASA and the plant operators. Public health, safety, and welfare are also the primary design criteria of the proposed project. The Mason Farm WWTP Upgrade has been designed and will be operated to meet or exceed the standards set by the plant's National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit defines the performance criteria under which the plant must operate such as maximum flowrate and effluent characteristics. The performance criteria are established and enforced by the North Carolina Department of Environment and Natural Resources (NCDENR). These performance criteria protect both the environment and public health by limiting the volume of pollutants entering streams and rivers and are based on sound scientific methods.

Among the unique features of the Mason Farm WWTP permit, is a *mass based* limit for nitrogen and phosphorus, which essentially means that the quantity of these materials leaving the plant post expansion will remain unchanged from current quantities even though the plant's permitted flow has been increase. It should be noted that the plant's phosphorus limit is already the most stringent in the Jordan Lake watershed.

OWASA is very sensitive to the needs of its customers and neighbors. OWASA has received complaints about odors in the plant vicinity which were echoed by citizens in the Concept Plan Review meetings of both the Community Design Commission on December 17, 2003 and the Town Council on January 12, 2004. OWASA remains committed to implement additional short and long term odor control measures. OWASA has prepared a report titled *Status Report on OWASA's Odor Abatement Program for the Wastewater Collection and Treatment System*, which is included as a supplement to this Special Use Permit (SUP) application. This report includes odor control measures that are part of this project as well as outside the scope of the proposed project. Additionally,

as part of OWASA's ongoing public education efforts, copies of this report have been distributed to all customers included in the notification list, which accompanied this application. Along with the report, OWASA extended an invitation for all customers to attend the February 12, 2004 OWASA Board Meeting to comment on odor issues.

Two components of this project have been specifically included to significantly reduce the frequency and intensity of nuisance odors from the plant. The first of these components is the replacement or modification of the digester roofs. Digesters are used in the plant to properly treat wastewater solids prior to recycling on local farm land. The current digester roofs are designed to move with the rising and falling of the fluid within the digesters. The up and down motion creates gaps between the roofs and the walls, which release odorous air. For the proposed project, two of the roofs will be replaced with fixed (i. e. non-moving) sealed roofs while the remaining digesters will have their existing lids fixed and sealed.

The second component of the proposed project that will address the odor issue is the scrubbing of air from the new influent pump station. Scrubbing is a process in which the odorous air is collected and forced through a packed bed media, where the air is chemically neutralized before being released to the atmosphere. The influent pump station is the point at which raw sewage is pumped into the plant for treatment. The pump station is referred to as the "Morgan Creek Pump Station" on the site plan. The air from the wet-well of the pump station will be forced by vacuum through a pipe to the scrubber, located near the biosolids storage area. The scrubber is a separate project that is currently under construction to treat air from the biosolids storage area. That facility is near completion and will begin treating air from the biosolids storage area by February 20, 2004. It should be noted that the scrubber has been oversized so that it has sufficient capacity to treat both odor sources. The combination of air scrubbing and modifications to the digesters should significantly reduce odors from the plant.

Additional odor control measures outside the scope for this project have or will be implemented. These improvements will be addressed by OWASA staff in the near future. OWASA has completed an odor control study to locate and manage odors within the wastewater treatment plant. Following completion of the proposed project, OWASA will retain services of a professional consulting engineering firm to conduct an objective odor analysis of the plant site to evaluate odor reduction measures resulting from this project and other planned measures.

This project will also implement the use of ultraviolet disinfection while eliminating the current chlorine based disinfection system. This will eliminate the potential discharge of chlorine into Morgan Creek. Additionally, this project will expand the plant's stand-by generator system, which will allow the plant to operate in the event of a power loss, thus improving reliability.

***Finding #2: That the use or development complies with all required regulations and standards of this chapter, including all applicable provisions of Article 3, 4, and 5 and the applicable specific standards contained in Section 6, and with all other applicable regulations.***

The proposed project is in general compliance with the required regulations of the Chapel Hill Land Use Management Ordinance. However, there are some aspects of the project and of the plant property that warrant detailed discussion.

The entire plant property, and consequently the entire proposed project, is located within the Resource Conservation District (RCD). Development in the RCD is restricted; however, the proposed project is permitted. Article 3.6.3 (e) of the Land Use Management Ordinance permits the construction of public utility facilities where there is a practical necessity to their location within the RCD and subsequent stream corridors; stream side zone, managed use zone, and upland zone. The stream side zone is defined as the area within 50-feet of the stream bank; the managed use zone is defined as the area within 50-feet of the stream side zone; and the upland zone is defined as being the area within 50-feet of the managed use zone or to the RCD boundary, whichever distance is greater. Since the entire plant is located within the RCD, the proposed project will require construction within all three of the stream corridors. The proposed upgrade must occur in close proximity to the plant because the new treatment units will hydraulically linked to the existing plant by pipe networks. It would be unrealistic from both an engineering and cost perspective to locate the new plant components away from the existing plant and outside of the RCD.

Per Article 3.6.3 of the Land Use Management Ordinance, there are dimensional regulations for development within the RCD in lieu of those presented in the General Use District, as presented in Article 3.8. The proposed project will require exemption from the floor area ratio and impervious surface area requirements of this Article. As stated later in this document, the proposed project will exceed the finished floor area of the General Use District; therefore, the project will also exceed the more stringent dimensional regulations of the RCD. The post development impervious surface area will be 368,000 square feet. This results in an impervious ratio of 36%, which exceeds the ratio of 20% in Article 3.6.3. As is discussed later in this document, much of this impervious area consists of open top tanks rather than paved surfaces or roofs.

Development within the RCD is allowed provided that the lowest finished floors of permanent structures are located 18-inches above the RCD Elevation. The RCD Elevation is defined as 3-feet above the floodplain elevation. For this site, the floodplain varies between 261-feet at the southeastern corner of the property to 265-feet at the southwestern corner of the property; therefore, the RCD elevation varies between 264-feet and 268-feet. The lowest finished floors of the Morgan Creek Pump Station Building (elevation 272-feet), the Headworks Electrical Building (elevation 272-feet), the Filter Complex (elevation 270-feet), and the Generator Building (269-feet) are in compliance with the requirements. The Switch Gear Building has a lower level floor that is located at elevation 260-feet and will require exemption from the finished floor



elevation requirement. It should be noted that this structure is protected from flooding by the earthen dike which surrounds part of the plant.

Grading activities are allowed within the RCD provided that there is no greater than one-half-foot of rise in the base flood elevation and no more than one foot per second increase in the flow velocity (Article 3.6.3 (g) (9), Land Use Management Ordinance). In April 2003, OWASA submitted a floodplain analysis for the proposed project to the Town of Chapel Hill's Stormwater Engineer. The analysis concluded that the project would not increase the flood elevation by more than 0.5 feet and that the velocity increase would be within the allowable limit. This report was reviewed by the Town's Stormwater Engineer and the proposed project was found to be in compliance with the relevant requirements of the Land Use Management Ordinance. Since the publication of that report, the site plan has been modified to remove all structures from the Federal Emergency Management Agency (FEMA) floodway. The floodplain analysis will be revised to reflect the changes in the site since the original submittal. Since the revisions to the site plan have moved the proposed development away from the floodway, it is anticipated that the revised site configuration will also comply with the requirements of the Article.

The proposed project is also located within the Watershed Protection District (WPD). Development within the WPD is allowed as long as a stream buffer is established per the requirements of Article 3.6.4 of the Land Use Management Ordinance. The width of the required buffer is dependent on whether the high or low density option is used. For this project, the low density option is applicable, and the required stream buffer width is 30-feet. In order to qualify as low density, a development's impervious surface area can be no greater than 24% of the total property area. In calculating the impervious surface area for an existing development, such as this project, the impervious area of an existing development constructed prior to July 1, 1993 is not required to be included in the calculation (Article 3.6.4 (c) (3), Land Use Management Ordinance). Given these conditions, the impervious percentage post construction of the proposed project is 12.8%.

No development is proposed within the stream buffer with the exception of the new effluent discharge pipe located near the proposed filter complex. The discharge pipe is allowed per Article 3.6.4 (f) (3) of the Land Use Management Ordinance, which states that water dependent structures are allowed where no practical alternative exists. Since the plant's effluent must be discharged to Morgan Creek, there is no alternative but to construct the discharge pipe as proposed.

There are several requirements within Article 3.8 of the Land Use Management Ordinance which require detailed discussion. The Article pertains to dimension requirements for developments. The proposed project is in general compliance with the Article, with the exception of the maximum floor area requirement which will be discussed in this section.

The plant property does not have any street frontage. The property is surrounded on all sides by lands owned by UNC and the North Carolina Botanical Garden. The nearest public road is Old Mason Farm Road, which is located several hundred feet from the



plant. The plant is accessed by a driveway pass through the UNC Finley Golf Course property. The property's configuration causes some complication with the calculation of Gross Land Area (GLA) and the required street frontage width. The GLA is calculated by added either a Credited Street Area or Credited Open Space Area to the raw property area. Since the property has no street frontage, the Street Area credit is zero. However, because the property is adjacent to an open space, managed by the North Carolina Botanical Garden, an Open Space credit can be included in the GLA. The maximum credit allowed is 10% of the raw property area. Therefore, the GLA for this project is the raw property area plus 10% as listed on the Project Fact Sheet. The required street frontage is 64-feet. Since the property has no street frontage, this requirement cannot be satisfied.

As shown on the Project Fact Sheet, the post development total floor area will exceed the maximum floor area allowed. The maximum allowed for this property is 79,717 square feet. The post development floor area is 80,680 square feet, which includes existing and proposed buildings. The applicant requests waiver from this requirement. The floor area at the plant has been minimized in the proposed project. Much of the floor space is not frequently occupied and is used to house equipment such as pumps, generators, and other equipment. This equipment is vital to the proper operation of the plant and the additional associated floor area is unavoidable.

The Land Use Management Ordinance does not list specific parking requirements for wastewater treatment plants. Existing parking at the plant's administration building is sufficient for plant employees, deliveries, and visitors. There are currently 22 lined parking spaces at the plant, two of which are designated as handicapped parking. There are additional unlined parking spaces on the paved area of the site near the Administration Building. The proposed project will not increase the number of employees at the plant, delivery vehicle frequency, or number of visitors to the plant. Therefore, the number of parking spaces will remain unchanged. Per Article 5.9.5 of the Land Use Management Ordinance, parking facilities designed to accommodate 5 or more vehicles shall provide areas as necessary for the parking of motorcycles, mopeds, and bicycles. There is no space available for the exclusive parking of motorcycles or mopeds; however, these vehicles may use existing parking spaces as needed. As part of the proposed project, a bicycle rack will be installed to accommodate bicyclist. The location of this area is being evaluated and will be included on the final plans for the project.

Article 5.3 of the Land Use Management Ordinance has several requirements that warrant further discussion. The requirement for erosion control has been satisfied by the sediment and erosion control plan, which has been submitted to NCDENR Land Quality Section for review and approval.

Article 5.3.2 pertains to construction on steep slopes. A steep slope plan has been prepared and is submitted along with the Land Development Application for this project. In particular, the Land Use Management Ordinance restricts construction activities on slopes steeper than 15%. The proposed project includes construction on such slopes.



The steep slopes in question are located along the engineered dike that protects the majority of the plant from flooding. The sections of steep slope that will be constructed upon will be replaced with buildings, retaining walls, or will be re-established and vegetated to pre-construction conditions.

The proposed project will require exemption from the stormwater volume and rate controls required in Article 5.4.6 of the Land Use Management Ordinance. It can be reasonably assumed that the post development runoff volume and peak flow will be greater than the pre development values due to the increase in impervious area. However, the discharge volume and rate control required in the Article cannot be provided for the proposed project due to a hydrologic feature unique to this site: open top tanks. The Mason Farm WWTP uses many process units that are open top tanks with a free water surface. The tanks are critical to the treatment process and occupy a significant percentage of the property area.

Rain falling into the open tanks does not become runoff in the same manner as other impervious surfaces such as driveways and parking lots. Wastewater is moved successively from tank to tank to receive treatment; after passing through all of the tanks, the treated wastewater is discharged from the plant. Rain falling on these tanks will be entrained into the plant's treatment process and will be eventually discharged along with the rest of the plant's effluent. The time that this rainfall is detained will vary widely depending on which process unit it falls into and on the plant flow rate. For example, the rain falling into the primary clarifiers, which are furthest from the plant's discharge pipe, will be retained longer than rain falling into the post aeration tank, which is closest to the plant's discharge pipe. The detention time is also highly dependent on the flowrate of the plant, which is not constant.

The proposed project will likely require exemption from the stormwater treatment requirements of Article 5.4.6. Every reasonable attempt will be made to treat stormwater runoff. However, there are some site characteristics that limit the available treatment options. Underground utilities, both sewer pipes and electrical conduit, are present near all of the existing and proposed process units and in some cases buried shallowly. These utilities severely limit the depth and area of Best Management Practice (BMP) devices such as detention ponds and infiltration devices. These underground utilities are especially limiting inside of the flood protection dike. Also, the areas inside the dike are drained by an underground storm sewer system. OWASA is evaluating the location of a new stormwater separator within the storm sewer system as part of the proposed project. This is a device which is installed within the collection system to remove grit and debris. While this device will provide stormwater treatment, it has not been determined if the separator can provide the 85% TSS removal required by the Article.

The areas outside of the flood protection dike are generally drained by dispersed flow to the north, east, and south. In order to treat this runoff, the storm flow would have to be concentrated and diverted into BMP's. This would alter the existing drainage patterns on site. As is the case with areas inside the flood protection dike, underground utilities limit the construction of BMP's near existing or proposed process units. The undeveloped



areas of the plant are located in low lying areas, specifically in the southeastern corner of the property. It should be noted that this is the location of the new filter complex. The level of the groundwater in this area would limit the effectiveness of an infiltration device. Also, during storm events, this area is often inundated with water. Stormwater quality impacts outside of the flood protection dike will be mitigated to the extent possible by level spreaders and existing stream buffers in this area.

While the use of BMP's may be difficult, the open top tanks on site do provide some inherent stormwater quality benefit. As previously stated, rain falling into the open tanks does not become runoff in the same manner as other impervious surfaces. For example, runoff from a parking lot collects pollutants from the ground surface and transports them to receiving streams. Rain falling into the open tanks becomes entrained with the treatment process. Therefore, this runoff does not flow over ground and therefore does not pick up surface pollutants or sediments.

The required landscape buffer width for the proposed project is 20 feet (Article 5.6, Land Use Management Ordinance). An existing landscape buffer is located along the fence line running approximately parallel to the northern property boundary. Some trees and bushes will need to be removed from this buffer during construction to accommodate an erosion control sediment trap and contractor access to a materials storage area north of the buffer. The vegetation removed will be replaced following construction, thus restoring the buffer. There are no other existing or planned landscaped buffers. The remainder of the site is screened from view by natural topography and existing vegetation. There are also natural wooded areas on the northeast, southeast, and southwest corners of the property consisting primarily of hardwood trees with some underbrush. Additional screening is provided by the wooded properties adjacent to the plant. To the south, the plant is bordered by a natural area managed by the North Carolina Botanical Garden. To the west the plant is bordered by an undeveloped parcel of land owned by UNC. Additional screening is provided on the west by the flood protection dike, which screens the lower portions of plant from view.

A landscape protection plan is included in this application. The vast majority of the wooded areas on the site will be preserved as will most of the specimen trees as defined by Article 5.7.3. However, the project will require the removal of three specimen trees: an 18-inch sycamore, a 32-inch sweet gum, and a 24-inch pine. There is a 30-inch oak shown on the site plan that is dead and will be removed. The proximity of the healthy trees to proposed structures or yard piping makes their preservation unfeasible. It should be noted that the proposed structures have been located to minimize the impact to specimen trees.

The original SUP for the plant was issued on April 13, 1981. There were eight special terms and conditions to this original permit. In summary, the permit required the following: 1.) that a detailed sign, lighting, and site plan with locations of landscaped areas be submitted to and approved by the Appearance Commission prior to issuance of a building permit; 2.) that as much significant planting as possible be retained on site; 3.) that a detailed landscaping and planting plan be submitted and approved within 60 days



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of the completion of construction of the proposed OWASA berm: 4.) that any and all planting which dies during the life of the Special Use Permit be replaced with planting of the same species and approximate size (when planted); 5.) that a pedestrian or non-motorized vehicle easement be dedicated as space permits, along the frontage of the OWASA property with Morgan Creek; 6.) that utilities lines be reviewed and approved by the Town Manager prior to construction of such improvements; 7.) that an erosion and sediment control plan be approved by Orange County prior to the start of any grading or construction; and 8.) that the site be provided with police and fire protection as approved by the Town Manager, perhaps by annexation.

OWASA is generally in compliance with the requirements of the existing Special Use Permit. There are two items in the permit that require further explanation. The landscaping on the site has been generally maintained since the issuance of the permit. However, some landscaping at the plant entrance has been removed or reduced in height for security reasons. The vegetation at the plant's entrance created a visual barrier for plant staff and security cameras.

OWASA has researched land records for the plant and can find no record of a dedicated easement for pedestrian or non-motorized vehicles along Morgan Creek. This was likely not included due to lack of suitable space on the property. Two sides of the plant property have Morgan Creek frontage. The plant's discharge pipe is located on the eastern property boundary. OWASA must maintain access to this point at all times; therefore, the eastern property boundary is unsuitable for an open public easement. The western property boundary consists of a sheet pile retaining wall and a steeply sloped, armored bank, which is part of OWASA's flood protection dike. This area is unsuitable for a pedestrian or non-motorized vehicle easement due to topography.

***Finding #3: That the use or development is located, designed, and proposed to be operated so as to maintain or enhance the value of contiguous property, or that the use or development is a public necessity.***

The upgrade of the Mason Farm WWTP is a public need and will provide environmental enhancements to the community. The proposed additional treatment capacity is needed to accommodate increased wastewater flows projected to occur within the OWASA service area.

In order to plan for growth, OWASA has developed water demand and wastewater flow projections through the year 2050 as part of the 2001 *Comprehensive Water and Sewer Master Plan*. Based on these flow projections, the WWTP's current permitted maximum month flow capacity of 12.0 MGD may be exceeded by the year 2006. Therefore, the expansion to 14.5 MGD needs to occur as soon as possible in order to keep up with the increasing wastewater flow rates. Without this project, the plant would not be able to accept additional wastewater flow past the year 2006. The expected time for construction



is approximately three years; therefore it is important that plant construction begin as soon as possible.

In addition to increasing the flow capacity of the plant, the project will also provide environmental benefits. Ultraviolet disinfection will replace the current chlorine disinfection system, which will eliminate the potential for chlorine to enter Morgan Creek. Effluent filters will be installed to further improve the quality of the discharge, and to help support the establishment of a reclaimed water system. Reclaimed water is a form of recycling in which highly treated wastewater is used for non-consumptive uses such as cooling process water and irrigation. Reclaimed water provides two significant benefits to the community; it reduces the fresh water withdrawn from reservoirs and decreases the volume of treated effluent discharged to streams. Other upgrade components will eliminate existing hydraulic bottlenecks, increase operational flexibility, and improve plant reliability. Of particular note is the installation of an expanded stand-by generator system that will allow the plant to operate without interruption in the event of a power outage.

Finally, the improvements are designed to readily accommodate further upgrades that may be needed to meet future, more stringent nutrient limits that may be forthcoming once the Jordan Lake Nutrient Management Strategy is developed and approved by the North Carolina Environmental Management Commission.

***Finding #4: That the use or development conforms with the general plans for the physical development of the Town as embodied in this chapter and in the Comprehensive Plan.***

The upgrade of the Mason Farm WWTP conforms to the general plans for the physical development of the Town as embodied in the Comprehensive Plan. The Comprehensive Plan is based on twelve major themes that form the general strategy for the Town's future. The proposed project enhances two of these themes directly, those themes being to "Provide quality community facilities and services" and to "Conserve and protect the natural setting of Chapel Hill (Section 2.0, Town of Chapel Hill Comprehensive Plan)."

One of the strategies for fulfilling the goal of providing quality community facilities is the Town's strategy to work with OWASA to provide safe, adequate water supplies and wastewater management for the community and the region (Section 11A-1, Town of Chapel Hill Comprehensive Plan). The proposed project will provide wastewater treatment for the OWASA service area, which includes Chapel Hill, Carrboro, and UNC.

The Town has also established a goal of enhancing the community's water resources. The upgrade of the Mason Farm WWTP will support this goal in two ways. First, the project will provide expanded wastewater treatment without increasing the nutrient loads to Morgan Creek. Secondly, the project will help to support a reclaimed water system.

Both of these benefits will support and enhance water quality in both Chapel Hill and the region.

The existing plant and the proposed project also provide or will provide several environmental enhancements. The enhanced nutrient removal from the plant effluent will provide cleaner effluent water to Morgan Creek that eventually flows to Jordan Lake, located in the Cape Fear watershed. This will provide environmental benefit at a regional level for the overall Cape Fear Basin. This enhanced quality of the plant effluent also provides the opportunity of a reclaimed water system for use in cooling water system, irrigation and other non-potable needs in the central campus portion of the OWASA service area.

The Mason Farm WWTP produces biosolids, a by product of the treatment process, that are classified by the U. S. Environmental Protection Agency as Class A. This designation means that the biosolids are pathogen free and can be used for agricultural purposes. This is a form of recycling that prevents the waste product from being land filled or disposed of in a less useful manner.

On a larger scale, OWASA provides wastewater treatment to the customers within its service area. This is accomplished by effective operation and maintenance of wastewater collection, treatment and recycling systems. Through the implementation of biosolids recycling and wastewater reuse, OWASA is providing creative and sustainable environmental benefits.

### **Status of Permits from Other Agencies**

As part of the regulatory requirements for the proposed project OWASA has obtained or is in the process of obtaining permits from several agencies outside of the Town of Chapel Hill's SUP. These permits are listed in this section along with a brief description and status information.

*Erosion and Sediment Control Plan Approval from the NCDENR Division of Land Quality.* OWASA has submitted the erosion and sediment control plan to the Division of Land Quality. Since OWASA is an entity with the power of eminent domain, review of its erosion control plan falls under the State rather than Orange County. It is anticipated that the plan will be approved in early to mid-February 2004.

*401/404 Wetlands Permit from the U. S. Army Corps of Engineers and the NCDENR 401/Wetlands Unit.* The proposed project will disturb a small portion of wetlands on the site. The project will also require the construction and maintenance of an outfall structure (i. e. the new effluent discharge pipe). Plans have been submitted and approved by both the Corps of Engineers and the 401/Wetlands Unit. The project will be covered under Nationwide Permits 7: Outfall Structures and Maintenance and 39: Commercial, Residential and Institutional Developments.

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*NPDES Permit from NCDENR NPDES Permitting Unit.* The NPDES permit provides the standards under which the plant must operate. The plant's current permit allows the plant to operate at a rate of 12 MGD. OWASA has applied for and received a modified permit for operation of the plant at 14.5 MGD. Design plans and specifications for the proposed project have been submitted to NCDENR for review and to check compliance with the modified permit. Following NCDENR approval of the plans and specifications, an Authorization to Construct will be issued by NCDENR. It is anticipated that the Authorization to Construct will be issued in early February 2004. Following completion of the proposed project, the plant will begin operating under the new permit.

*Environmental Assessment Approval from NCDENR.* For projects with potential environmental impacts such as the expansion of a wastewater treatment plant, an applicant is required to submit an Environmental Assessment (EA) before proceeding with further permitting. Upon approval of an EA, a Finding of No Significant Impact (FONSI) is issued. OWASA has submitted an EA to NCDENR and received a FONSI for the proposed project. A copy of the EA has been included in this SUP application.