



Section 8 - Regulatory Considerations

8.1 General

Wastewater collection system design, construction, and operation is affected by a number of different regulations. A body of rules, regulations, and guidance has been developed that shapes regulatory expectations for the Town, but also guides strategies for collection system improvement and master planning.

Regulations governing collection system management continue to evolve. Several current and pending regulations and requirements have the potential to affect the Town's facility planning alternatives. The existing and potential regulations of primary concern to the Wastewater Collection System Master Plan are as follows:

8.2 Sanitary Sewer Overflow (SSO) Regulations and "CMOM"

- U.S. Environmental Protection Agency (EPA) NPDES POTW standard permit condition amendments
 - Sanitary Sewer Overflow (SSO) January 2001 proposed draft rule, with its Capacity, Management, and Operations and Maintenance (CMOM) provisions
 - EPA Region 4 MOM expectations
- North Carolina 2T Rules
 - Sewer System Extensions (15A NCAC 2T.0300)
 - System-Wide Collection System Permitting (15A NCAC 2T.0400)

Phase II Stormwater Regulations

- EPA NPDES Stormwater Permitting
- North Carolina NPDES Stormwater Strategy

Local Programs for Sewer Systems

- North Carolina Non-Discharge Permitting Delegation

Analysis of the Town's current practices against this State and Federal regulatory framework was undertaken to facilitate system planning.

8.2.1 Sanitary Sewer Overflows (SSOs) and Capacity, Management, and Operations and Maintenance (CMOM)

Sanitary sewer overflows (SSOs) are a violation of Federal law under the 1972 Clean Water Act's prohibition on unpermitted discharges. General Federal requirements pertaining to collection



system management, under 40 CFR 122.41 and 122.42, have been reflected in standard permit conditions for Publicly-Owned Treatment Works (POTWs), for which the system regulated has been defined as including the collection system. Historically, violations and enforcement actions pursued against municipalities experiencing excessive and chronic SSOs typically relied on interpreting the general requirements for “proper operation and maintenance (O&M)” in 40 CFR 122.41. What measures and activities constituted “proper O&M” was often interpreted during administrative or consent orders, with resulting inconsistency and lack of clear expectations.

The introduction of raw wastewater into the environment as a result of SSOs has been demonstrated to be a significant threat to public health and the environment. For public health, environmental, and regulatory reasons, eliminating SSOs is a high priority for the Town of Cary, as it is for the State of North Carolina. The Town seeks not only to comply with the minimum requirements regulating its operations, but also to take measures to continue along a process of improved compliance so as to eliminate SSOs in the Town of Cary system to the maximum extent feasible.

EPA issued a draft SSO Rule in January 2001. According to the EPA website, there are currently no proposed rules for SSOs. However, EPA held four public listening sessions in the summer of 2010 on EPA’s efforts to initiate rulemaking to address SSOs and to resolve long-standing issues concerning peak flows. During the listening sessions, the EPA intended to seek stakeholder input to help EPA determine whether and how to modify the National Pollutant Discharge Elimination System (NPDES) regulations as they apply to municipal sanitary sewer collection systems and sanitary sewer overflows (SSOs).

Input was to be provided through both written comments and during the four public listening sessions. Written comments were due by August 2, 2010. As described in the Federal Register Notice, EPA was seeking input on the following questions:

- Should EPA clarify its standard permit conditions for SSO reporting, recordkeeping, and public notification?
- Should EPA develop a standard permit condition with requirements for capacity, management, and operations and maintenance programs based on asset management principles?
- Should EPA require permit coverage for municipal satellite collection systems?
- What is the appropriate role of NPDES permits in addressing unauthorized SSOs that are caused by exceptional circumstances?
- How should EPA address peak flows at POTW treatment plants?
- What are the costs and benefits of capacity, management, and operations and maintenance programs and asset management of sanitary sewers?

No information is currently available on the results of the public listening sessions. EPA is in the process of summarizing the public comments from the listening sessions and those submitted in writing during the comment period. The summaries will be made available upon completion. Based on the results of the listening sessions, a new proposed rule would be issued and made available for public comment before a final rule is promulgated. If a new Federal SSO rule is adopted, these requirements would likely be adopted by the State of North Carolina as part of the standard permit conditions.



8.2.2 Sanitary Sewer Overflow and CMOM Requirements

Under the January 2001 draft SSO Rule proposed by EPA, sewer systems that have an NPDES permit would be required to implement a CMOM program. The proposed CMOM regulations would require system agencies to report regularly on system efficiency, indicate the condition of a municipality's collection system and self-audit system capacity during both dry and wet weather. Reporting would also include overall system management activities, such as mapping, maintenance tracking, training and supervision, and providing operational efficiency data, as measured in spending and equipment performance. Although publishing the draft rule in the Federal Register has been delayed pending interagency review and approval, this delay does not remove the potential for enforcement actions by EPA regions leading to consent decrees to take action and eliminate SSOs.

EPA Region 4's Management, Operations, and Maintenance (MOM) Program is a pilot enforcement approach developed by EPA Region 4 and is implemented in cooperation with states in the region. The MOM program encourages all NPDES permit-holders and any associated satellite utilities to participate in a proactive approach to managing, operating, and maintaining their sewer system. Utilities that implement good MOM programs benefit by reducing the likelihood of Clean Water Act violations, extending the life of their infrastructure, and providing better customer service through steady rates and greater efficiency. The goal of the MOM Program is to bring 100 percent of the POTWs handling domestic wastewater in Region 4 into compliance with the "proper operation and maintenance" provision of their NPDES permits by 2011.

The Region 4 MOM Program addresses SSO issues in sewer systems (including satellites) by concentrating on high priority watersheds. Region 4 uses a Geographic Information System (GIS) to focus on watersheds categorized as having existing water quality problems or assessed as being vulnerable to stressors (e.g., coastal and shellfish harvesting areas). Based in part on recommendations made by states in the region, Region 4 selects at least one watershed in each state for each cycle of the MOM Program. Region 4 started the second cycle of its MOM Program in September 2003.

In the selected watersheds, the operators of all sewer systems are expected to provide a self-assessment report to the region. This report identifies improvements that can be made and the schedules necessary to make those improvements. Region 4 encourages participants to conduct the self-assessment within seven months of receiving the initial requests. To assist participants with the process, Region 4 provides checklists and other outreach information. Depending on the thoroughness of the self-assessment, Region 4 may conduct follow-up inspections and initiate further discussions regarding the evaluated programs. Where the permittee does not conduct an assessment, Region 4 conducts its own site inspection. Through voluntary participation in the program and by self-disclosing any needed improvements, participants may be eligible for a reduction in civil penalties while under a remediation schedule.

Region 4 expects participants to develop a plan that addresses the MOM requirements, which the region typically includes in a Letter of Violation (LOV) or an Administrative Order (AO). Region 4 completed the first round of LOV inspections and found that many MOM Program participants have made significant positive and productive efforts (e.g., increased staff, purchased maintenance equipment, and increased cleaning frequency) toward the development and implementation of their MOM Programs.



According to DWQ, EPA Region 4 is not anticipated to conduct additional LOV inspections in North Carolina. However, should additional investigations occur, there is a significant advantage to a utility that can demonstrate that all elements of a CMOM program are in place, including a capacity assurance program that is based on a sound master planning effort and results in a funded CIP. A utility that demonstrates the ability to identify and address SSO issues through funding of capital improvements and a continuous sewer assessment and infrastructure rehabilitation program has a strong defense against EPA or DWQ mandating these through an enforcement action, which typically will include a tight implementation schedule with little flexibility.

An analysis of Town of Cary practices has determined that the Town's current practices are in full compliance with current Federal and State requirements. This analysis confirms that the Town of Cary should have no unexpected regulatory challenges to which it must respond in its current facility planning process. Additionally, the Town is already undertaking activities consistent with most of the provisions in the proposed Federal measures that are not currently required by the State. A more detailed discussion of the State programs is provided below.

8.2.3 North Carolina DENR Wastewater Collection System Requirements

The State of North Carolina, Department of Environment and Natural Resources (DENR), Division of Water Quality (DWQ), regulates municipal wastewater collection systems via 15A NCAC 2T.0300 and .0400 of the North Carolina Administrative Code (2T Rules).

The 2T Rules for Wastes Not Discharged to Surface Waters, of which the collection system rules are a part, took effect on September 1, 2006. Sewer systems are mainly covered under 2T.0300. System-wide collection system permitting is covered under 2T.0400. The Pretreatment, Emergency Response & Collection System (PERCS) Unit of DWQ administers the 2T Rules for collection systems as a result of a reorganization of DWQ on September 1, 2004. Regulatory changes as a part of the 2T Rules, and implemented since the 2T Rules were promulgated, include new regulations for SSOs; FOG; operation and maintenance; minimum criteria for gravity sewer, pump station, and force main design and operation; and collection system ORC requirements. A system-wide collection system permit is required as a part of the 2T Rules. Specific elements of the 2T Rules for wastewater collection systems are discussed as follows.

Minimum design criteria for gravity sewers from the 2T Rules (15A NCAC 2T.0305) include minimum velocities; minimum pipe sizes; and minimum separations from storm sewers, reclaimed water lines and wetlands. Maximum distances between manholes and odor control for lines with long detention times are also required for gravity sewers. A list of selected items from the minimum design criteria is as follows:

- Minimum pipe size for public sewers of 8 inches.
- Minimum pipe size for private sewers of 6 inches.
- Minimum separations:
- Storm sewers – 24 inches vertical unless structural bridging provided
- Water mains – 18 inches vertical (water over sewer) or 10 feet horizontal
- Private wells – 100 feet (25 feet if ferrous pipe)
- Public wells – 100 feet (50 feet if ferrous pipe)



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- Reclaimed water lines – 18 inches vertical (reclaimed over sewer) or 2 feet horizontal
- Wetlands – 50 feet
- Minimum of 3 feet of cover or use of ferrous pipe
- Maximum distance between manholes of 425 feet
- Infiltration less than 100 gpd/in-mile of pipe
- Drop manholes for over 2.5 feet of invert separation
- A minimum of 2 feet protection from the 100-year flood for manholes
- Air release valves for high points along force mains where the vertical distance exceeds 10 feet

A list of selected requirements from the minimum design criteria or collection system permit for pump stations is as follows:

- No bypass or overflow lines except for valved piping and appurtenances intended for emergency pumping operation(s).
- Multiple pumps such that the peak flow or a flow 2.5 times the average flow can be pumped with the largest pump out of service.
- Screened vents for all wet wells
- High water audio and visual alarms (except for stations with an automatic polling feature)
- A minimum of 2 feet protection from the 100-year flood
- A sign clearly and conspicuously posted with the pump station identifier name and an emergency contact telephone number.
- Restricted access to the site and equipment
- Telemetry/auto-dialer or SCADA
- Power reliability

For pump stations, the 2T Rules require a permanent generator for pump stations with a capacity greater than or equal to 15,000 gpd, and a receptacle for a portable generator for pump stations with a capacity less than 15,000 gpd. Telemetry/autodialers are also required for all pump stations, in addition to audible and visual alarms, to provide remote notification of a problem condition, including power failure and high water level. Spare pumps are required to pump the peak flow, or multiple pumps must be able to pump the peak flow with the largest pump out of service. A contingency plan for pump failure must be maintained at each pump station.

The system-wide collection system permit required by the 2T Rules (15A NCAC 2T.0400) contains five sections: (1) performance standards, (2) operation and maintenance, (3) inspections, (4) recordkeeping and (5) general conditions. The focus is to become proactive and preventative in operating and maintaining the collection system, instead of simply reacting to problems. Therefore, there are conditions for grease control, planned reinvestment in the system through a formal Capital Improvement Plan, alarms for pump stations, spare parts, inspections, cleaning, mapping, observation and preventative maintenance, and everything needs to be documented through proper recordkeeping. Of the performance standards, the main condition which all



others support is the prohibition of sanitary sewer overflows (SSOs). SSOs are not forgiven unless the Permittee submits justification that the SSO was beyond its control. A sample permit which identifies additional requirements for collection systems not contained in the 2T Rules is provided on the DWQ website (<http://portal.ncdenr.org/web/wq/swp/ps/cs/apps>).

Eliminating SSOs is a high priority for the Town of Cary and continues to be a major emphasis of State regulators. As of June 1, 2007, Notices of Violations (NOVs) will be considered for any reportable SSO (spill of 1,000 gallons or more, or any spill that reaches surface waters). Notification of the spill by phone to a DWQ staff member (not fax or voicemail) at the DWQ Regional Office must be provided as soon as possible but no later than 24 hours after the spill (15A NCAC .0506(a)). A press release is also required for any reportable SSO, and a public notice is required for any spill of 15,000 gallons or more. An on-site evaluation for all SSOs must be conducted as soon as possible, but not more than two hours after the first knowledge of the SSO. Beginning December 1, 2007, many SSOs that result in a Notice of Violation (NOV) will bring civil penalties as well. Civil penalties can be up to \$25,000 per day per violation as long as the violation continues. The current program requires additional public notification of spills, including notification of downstream counties, for spills of 1,000,000 gallons or more. However, according to DWQ guidelines, there would be no enforcement if it can be proven that the incident was:

- Caused by severe natural conditions, or
- Caused by factors beyond the reasonable control of the owner (such as vandalism or a car accident)

The owner must submit written justification consisting of a completed written report using DWQ Form CC-SSO within five working days. DWQ will consider extension requests for submitting such reports on a case-by-case basis.

Operation and maintenance provisions of the collection system permit include preventive maintenance for pump stations, including housekeeping and preventive maintenance for valves, pumps, alarms, telemetry and auxiliary equipment. An operation and maintenance plan, including a defined pump station inspection frequency, a preventive maintenance schedule, a spare parts inventory and an overflow response plan, must be developed and implemented. For sewer lines, the full width of rights-of-way and easements are required to be accessible for personnel and equipment, and cleaning of 10 percent of gravity sewer lines is required each year. Removal of grease and roots and repair of manholes should be part of the operation and maintenance program. Operation and maintenance of pump stations should include development of and adherence to a routine pump station inspection and maintenance program. The program should include cleaning and removal of debris from the pump station and wet well, testing of emergency and standby equipment, and inspecting and exercising all valves. As noted above, establishment of an Overflow Response Action Plan is also required.

Inspections for collection systems must include pump stations, force mains and gravity sewer lines. A general observation of the entire collection system is required annually. High-priority lines, consisting of aerial lines, lines crossing waterways, lines contacting surface waters, siphons and lines parallel to stream banks that are subject to eroding in such a manner that may threaten the sewer line, must be inspected every six months and the inspections must be documented. Pump stations that are not connected to a telemetry system must be inspected every day, and pump stations connected to a telemetry system must be inspected at least once per week.



In terms of recordkeeping, the 2T Rules require records to be kept of routine operation and maintenance activities, including line cleaning, preventive maintenance and general observations. Records must be kept of SSOs, including those under the reportable quantity. Records are required to be maintained for three years. In addition, a collection system map must be developed and actively maintained for the lifetime of the collection system. For systems not mapped, a minimum of 10 percent of the collection system must be mapped each year. New lines must be added to the map within one year.

For Fats, Oil and Grease (FOG) or grease programs, the 2T Rules (15A NCAC 2T.0403) require that the program include at least bi-annual distribution of educational materials for both commercial and residential users, and the legal means to require grease interceptors for new construction and retrofits, if necessary, of grease interceptors at existing establishments. Grease education materials must be distributed more often if necessary to prevent grease-related SSOs. The grease education materials must include information presented in a concise manner on why grease is bad for the collection system. The distribution of educational materials must be documented. The program must also include legal means for inspections of the grease interceptors, enforcement for violators and control of grease entering the system from other public and private satellite sewer systems.

DWQ also imposes requirements for collection system operators under 15A NCAC, Chapter 8. Once a collection system receives a classification, an Operator in Responsible Charge (ORC) must be designated. The ORC must hold a certification equal to or higher than that of the collection system over which he or she is the ORC. One (or more) backup ORC(s) must also be designated, and the backup ORC can have a certification one grade lower than that of the collection system. The ORC or backup ORC must visit the site within 24 hours of knowledge of a bypass, spill or overflow of wastewater. The ORC must see that the collection system is operated and maintained efficiently. The ORC must also document operation and maintenance activities and all visits of the collection system in a daily log maintained on-site. The ORC must notify the collection system owner, in writing, of the need for any system repairs or any modifications that are needed to ensure the compliance of the system. He must be available to handle emergency situations and for consultation with the collection system owner or regulatory officials, and must provide access to the collection system by regulatory officials.

Finally, the collection system permit requires that a Capital Improvement Plan (CIP) be adopted and implemented to designate funding for reinvestment in wastewater collection system infrastructure. The CIP should address the short-term needs as well as long-term "master plan" concepts. The CIP should typically cover a three- to five-year period, and include a goal statement, a description of the project area, a description of the existing facilities, known deficiencies (over a reasonable period) and forecasted future needs. A cost analysis is integral to the CIP.

8.2.4 NPDES Stormwater Phase II

The Town of Cary is subject to the EPA NPDES "Stormwater Phase II" program, which requires municipalities meeting certain criteria to address stormwater quality. Phase II affects communities with populations under 100,000; Phase I affected communities with populations of 100,000 or more.



A description of the EPA NPDES Stormwater Phase II Program is as follows:

The NPDES Phase II Program

In 1972, the National Pollutant Discharge Elimination System program was established under the authority of the Clean Water Act. Phase I of the NPDES stormwater program was established in 1990. It required NPDES permit coverage for large or medium municipalities that had populations of 100,000 or more. In North Carolina, there are six Phase I communities.

Phase II of the NPDES Stormwater program was signed into law in December 1999. This regulation builds upon the existing Phase I program by requiring smaller communities, also known as small municipal separate storm sewer systems (MS4s), to be permitted.

Regulated small MS4s must apply for permit coverage by March 2003. Those communities permitted under Phase II are required to develop and implement a comprehensive stormwater management program that includes six minimum measures: (1) public education and outreach on stormwater impacts; (2) public involvement/participation; (3) illicit discharge detection and elimination; (4) construction site stormwater runoff control; (5) post-construction stormwater management for new development and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations.

- from DENR, Division of Water Quality website

The State of North Carolina has adopted the NPDES Stormwater Phase II Rules by reference to the EPA regulations (15A NCAC 2H.0126). The six minimum measures under NPDES Stormwater Phase II are required to be implemented by local governments subject to the Phase II Rules, including the Town of Cary.

The Town of Cary, like other designated Phase II communities in North Carolina, has submitted its permit application in accordance with the Phase II Rules and has implemented a Phase II Stormwater Program. Elements of the program are outlined on the Town's website.

While Phase II NPDES Stormwater is of special interest because it affects development activity in the Town of Cary, the primary NPDES Stormwater requirement that affects wastewater master planning is the construction activity erosion and sediment (E&S) control element. The "construction E&S" element of NPDES Stormwater Phase I affected Town sanitary sewer activities which disturbed five acres or more. Phase II lowered the acreage threshold for construction activities from five acres to one acre of disturbed area.

In the State of North Carolina, E&S plans for construction activities undertaken by municipalities are reviewed by the State, in accordance with 15A NCAC, Chapter 4. The land disturbance threshold for a grading plan to be reviewed by the State already stands at one acre; so, NPDES Stormwater Phase II would have no impact on current Town practices.



Of the other measures required under NPDES Stormwater Phase II, only the requirement for post-development stormwater controls, as described below, affects the Wastewater Collection System Master Plan, in that facility development is subject to post-construction stormwater controls. These controls include developing, implementing, and enforcing a program to address discharges of post-construction storm water runoff from new development and redevelopment areas. Applicable controls could include preventative actions such as protecting sensitive areas (e.g., wetlands) or the use of structural BMPs such as grassed swales or porous pavement. Town of Cary ordinances for stormwater management and soil erosion and sedimentation control are contained in the Town's Land Development Ordinance (LDO), Sections 7.3 and 7.4, respectively.

The Town has adopted other measures under the Water Supply Watershed Rules for the Swift Creek and Jordan Lake watersheds. In these watersheds, the Town's program meets the post-construction requirements from NPDES Stormwater Phase II. Under the Neuse River Basin Rules (15A NCAC 2B.0235), which affect most of the Town, only post-construction runoff controls for nitrogen are in place. Similar measures for the portion of the Town in the Cape Fear River Basin will be imposed under the new Jordan Lake Rules. Further measures have been adopted to meet the NPDES Stormwater Phase II requirement for post-construction runoff control (see LDO, Section 7.3). Post construction runoff control for specific watersheds, including Walnut Creek, Middle Creek and Crabtree Creek, is addressed in Section 7.3.7 of the LDO. Nitrogen reduction requirements and peak runoff control are addressed in Sections 7.3.2 and 7.3.3, respectively.

While there appears to be little to no impact from NPDES Stormwater Phase II on Town activities pertaining to its Wastewater Collection System Master Plan, the Town may choose to capitalize on Phase II/Neuse River Basin/Cape Fear River Basin strategies to achieve related water quality goals. For example, any component of the Town's public education program on water quality would address NPDES Stormwater Phase II goals. Since SSOs reach surface waters, any measures taken to reduce SSOs, similarly, would constitute an NPDES Stormwater Phase II/Neuse River Basin/Cape Fear River Basin activity. The Town's Fats, Oil and Grease (FOG) program, which is designed to address a major cause of overflows, also has potential environmental benefits addressed by all these regulations.

8.2.5 Local Programs for Sewer Systems

The North Carolina Department of Environment and Natural Resources (DENR) has provisions in its regulations to allow municipalities to apply to the Environmental Management Commission (EMC) for approval of programs for permitting construction, modification, and operation of public and private sewer systems in their utility service areas (15A NCAC 2T.0306). Permits issued by approved local programs serve in place of permits issued by DENR.

The Town of Cary has applied for and received delegated review authority for gravity sewer extensions, pump stations and force mains.

8.2.6 Planning Coordination

Efficient and effective delivery of wastewater collection services to meet the Town's future needs depends on a thorough understanding of the nature and characteristics of anticipated growth. Because of the Town's geographic location at the ridge of three watersheds, wastewater collection and treatment planning faces special engineering and cost challenges in meeting growth demands depending on the location, extent, and pace of growth. The area where



collection and treatment capacity is most feasible and available may not coincide with either market forces or the Town's preferred growth areas. The dynamic between infrastructure supply and demand requires focused analysis of facility planning alternatives prior to the development of future Capital Improvements Plans (CIPs). In addition, the locations of growth areas and their effect on future wastewater discharges affect the Town's ability to meet the terms of its Interbasin Transfer (IBT) certificate issued by DENR.

To this end, the Town's Engineering, Public Works and Utilities, and Planning Departments have encouraged and continue to promote good ongoing communication among departments for both near- and long-term planning concerns. Technical and policy communications pertaining to these short- and long-term issues are facilitated through good communications among staff as the need arises.

Three major types of growth and sewer demand issues are typically addressed jointly by the Planning, Public Works and Utilities, and Engineering Departments:

- Current private development projects, Plan and Development Review:
 - Flow projections
 - Service capacity downstream
 - Private installation of public infrastructure, including design and installation standards
- Public Works and Utilities Department projects, Plan and Development Review:
 - Town ordinances (stream buffers, erosion and sediment control, etc.)
- Long-term growth in relation to infrastructure capacity:
 - Geographic location and direction of growth
 - Timing and phasing of expected growth
 - Preferred development areas

Together, the Planning, Engineering, and Public Works and Utilities Departments have a number of linking functions that work together to ensure effective delivery of services. A summary of each department's responsibilities is as follows.

The Engineering Department is responsible for planning, design and construction of capital improvements for the Town of Cary, including street improvements, right-of-way acquisition, stormwater and utility system improvements, utility plant expansion, thoroughfare planning, and management of development contract and easement releases. The Engineering Department is also responsible for traffic impact analyses.

The Planning Department is responsible for:

- Land use and transportation planning, growth management, affordable housing, protection of open space, zoning administration and zoning enforcement,
- site inspections, and
- coordination of all development plan review



The Public Works and Utilities Department has a wide range of responsibilities, including water and wastewater treatment; solid waste collection; conservation programs; maintenance of Town streets, parks, buildings and vehicles; and master planning for delivery of water and wastewater services to the Town's customers.

Coordination among departments to address current projects and activities of joint concern is in place. As with any organization, the staff pursues continued vigilance to ensure that good communication and coordination is in order, especially among the rank-and-file staff in the various departments and in the training of new employees.

As the Town considers strategies to implement its long-term growth goals, continued coordination with Engineering Department staff ensures that the wastewater provisions necessary to meet these growth goals are also considered.

In January 2000, the Town of Cary adopted a Growth Management Plan, which emphasizes appropriate timing, phasing, and geographic direction of growth for provision of infrastructure, including water and sewer services. A review of the Plan's Implementation Table indicates that the items listed below warrant ongoing consideration by the relevant departments of the Town:

- Annexation – avoid “leap-frog” development
- Preferred growth areas – timing, phasing, and geographic direction of growth
- Development of a fiscal impact analysis model
- Investment of public funds in preferred growth areas
- Develop a more formal monitoring system to ensure that public investment decisions are consistent with adopted plans
- Pursue intergovernmental cooperative planning agreements to foster an area-wide approach to growth management

8.2.7 Interbasin Transfer Requirements

The Towns of Cary, Apex, and Morrisville and Wake County (RTP South) participated in a request for an Interbasin Transfer (IBT) Certificate from the North Carolina EMC. A Final Environmental Impact Statement (EIS) was submitted in August 2000 requesting an interbasin transfer of 27 MGD, which was an increase of 11 MGD over the existing 16 MGD IBT Certificate of the Towns of Cary and Apex. Based on public comment, the participants went to great lengths to reduce the amount of the proposed IBT, both individually and regionally pursuing options to reduce demand, implement water reuse, and return water to the Cape Fear River Basin.

The EMC granted the participants an IBT Certificate for a flow rate of 24 MGD on a maximum day basis. In addition, by January 1, 2011 any water used by the participants in the Neuse River Basin in excess of 16 MGD on an average annual basis (minus consumptive uses) must be returned to the Cape Fear River Basin.



The Cary/Apex/Morrisville/RTP South maximum day interbasin transfer from the Haw River Basin to the Neuse River Basin was predicted to exceed the certificate amount of 24 MGD before 2011. A wastewater flow transfer to the Durham County Triangle WWTP for discharge to the Cape Fear River Basin is serving as the near-term solution for keeping the maximum day IBT from exceeding 24 MGD. Construction of the Western Wake Regional Water Reclamation Facility, which will discharge to the Cape Fear River below Buckhorn Dam, is ongoing and is expected to be completed by 2014.

8.2.8 Summary of Regulatory Concerns

The Town of Cary has undertaken a range of integrated water quality strategies which, separately and as a whole, appear to bring the Town into compliance with current and anticipated Federal and State regulations. The good practices and approach to continual improvement the Town undertakes will help it address new regulatory initiatives, while delivering its core mission of wastewater services efficiently and effectively.