



Memorandum

To: Stormwater Task Force Members

From: Wake County & CDM Project Team

Date: September 17, 2007

Subject: PROPOSED Task Force Recommendations

Based on comments provided by the Task Force at Meetings #12 through #15, CDM and Wake County staffs have revised the PROPOSED Task Force recommendations and incorporated steps for implementation and cost/resources where appropriate. These proposed recommendations are provided as an attachment to this memorandum. Our meeting this coming Thursday, September 20th will be the final opportunity to comment on the recommendations as written. As such, we hope that you will make every effort to attend and provide your feedback. We plan to finalize these recommendations shortly after this coming meeting and prepare a draft report for your consumption at the October meeting.

Therefore, between now and our meeting this Thursday night, we respectfully request that you take the opportunity to review the recommendations and consider any final comments of support or alternative approaches that you may have. At the end of each two-page sheet on each recommendation (attached), a voting and comment box is provided. Please gather your thoughts and be prepared to fill out this section at Thursday's meeting. The voting results and comments will be incorporated into the final report.

Once again, we thank you for the time and consideration that you've given to this process and we hope to bring this project to a successful conclusion in the coming months!

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I. What is a potential Task Force recommendation for Hydrologic and Hydraulic Modeling in Wake County?

A hydrologic and hydraulic model of each 14-digit Hydrologic Unit Code (HUC) boundary within the County would be developed for the purpose of establishing changes in the 100-year floodplain (elevations and depth of flow), evaluating the service levels at critical stream crossings (rate and volume of flow), determining the erosion potential of local streams (volume and velocity of flow), and identifying capital improvement projects that will maximize the existing system's capacity and conveyance capabilities. Areas to model will be prioritized based on existing and future growth pressures, public health and safety hazard potential, and environmental impact potential. To begin the process, the Poplar Creek watershed is suggested for a pilot study (see attached map) as this area will experience development in the near future. Following the pilot study, lessons learned during the modeling will be reviewed by the County's Water Quality Committee, who will make suggestions regarding the modeling findings and potential applications. Also, these lessons will be applied to the modeling of other basins in the future. The following items outline the features of the proposed modeling effort:

Model Platform and Features - Existing modeling efforts within Wake County and its jurisdictions rely almost exclusively on HEC-HMS for hydrologic modeling and HEC-RAS for hydraulic modeling.

Data Collection - The models will include detailed field surveys augmented with existing County GIS and LIDAR information to record topographic data and stream crossing characteristics.

Modeling Scenarios - Each model will include an analysis of the following design storm events: 1-yr, 2-yr, 10-yr, 25-yr, and 100-yr, 24-hr design storms. The models will include existing and future, build-out conditions.

Model Calibration - Temporary rainfall and stream gages will be installed in each basin where existing monitoring devices are not available in order to collect storm event information to be used for calibration of the models.

Model Application - Potential model applications will be discussed and determined by the County's Water Quality committee

II. What is the expected outcome of this potential recommendation?

An asset management tool capable of identifying existing and future capital needs for stormwater. It will also provide the communities with a tool to assess the impacts of future projects and development as they relate to flooding (elevation and extent of floodplain), streambank erosion, and water quality conditions.

**Recommendation #1
Hydrologic and Hydraulic Modeling of the Stormwater System**

III. Proposed Implementation Activities and Resources

No.	Implementation Steps	Estimated Resources
1	Perform Pilot Study/Model of Poplar Creek a. collect all land-use and development plan information for watershed b. augment current City of Raleigh survey data with new data c. delineated watershed into 100-acre sub-basins d. perform hydrologic and hydraulic modeling e. generate future conditions floodplain map outside of FEMA limits f. identify existing and future capital needs within watershed	Estimated \$275,000 for development of model and facilitation of Water Quality committee meetings
2	Convene Water Quality Committee to review findings of pilot study	
3	Facilitate discussion with Water Quality Committee to determine alternative solutions for predicted impacts	
4	Determine future use and application of watershed models (using committee)	
5	Use Water Quality Committee to prepare policy decisions on modeling	

IV. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	No Opinion/ Don't Know <input type="checkbox"/>	Agree <input type="checkbox"/>	Strongly Agree <input type="checkbox"/>
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V. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged.)

I. What is a potential Task Force recommendation for Post-Construction Stormwater Runoff Controls?

The Task Force aims to control the increase in runoff generated from a developed site through the use of BMPs (Treatment Controls) and reduce the amount of runoff generated at the source (Source Controls). In particular, the Task Force aimed to control the impacts of flooding events (10-year and larger storms) in addition to the NPDES Phase II requirements for smaller, water quality storms (1-yr storm). The following is a summary of the Task Force recommendations for these two categories of controls.

- **Treatment Controls (i.e. structural BMPs)** – The Task Force members acknowledged that all jurisdictions in the County will soon be required by the NPDES Phase II stormwater program to implement a post-construction stormwater control ordinance to protect water quality (i.e. the 1-year storm). In addition, the Task Force agreed that adding flood protection measures would address some of the flooding concerns identified in the Task Force objective statements. As such, this suggestion would add an additional requirement for control of the 10-year, 24-hour design storm in addition to control of the 1-year, 24-hour design storm. The Task Force expressed a desire to develop a common ordinance for all jurisdictions.
- **Source Controls (i.e. impervious surface limits and LID practices)** – The Task Force wishes to promote and provide incentives for impervious surface limits, non-structural controls and LID practices. As a first step, ordinances for each jurisdiction should be reviewed to identify all requirements that impact the amount of impervious surface installed on properties. These requirements will then be compared with model ordinance language that allows for low impact development and other “smart growth” strategies.

A committee will be convened (e.g. Water Quality Committee) to review the results of these comparisons and develop an ordinance tailored to Wake County that maintains the aesthetic qualities of existing development in the County while also allowing for the flexibility of developers to implement designs that minimize the impacts of development on local streams. In particular, these ordinances will include potential changes to minimum street widths, minimum parking requirements, curb and gutter requirements, and minimum setback requirements.

II. What is the expected outcome of this potential recommendation?

A design standard that addresses multiple elements of the Task Force objectives, which includes concern for the generation of additional runoff volume from new development and issues related to flooding created from higher peak runoff rates. This recommendation also may result in changes to development ordinances regarding the roadway width, parking requirements, setbacks, curb & gutter requirements and more.

III. What is the expected outcome of this potential recommendation?

No.	Implementation Steps	Estimated Resources
1	Convene coordination meetings with Towns to participate in joint program	Cost estimate is contingent upon degree of participation of jurisdictions
2	Develop uniform draft ordinance with NPDES Phase II minimum water quality control and with additional requirement for control of 10-year storm (flood protection)	
3	Provide Staff to Review and Enforce Design and Maintenance	
4	Review existing ordinances county-wide to determine compatibility with LID practices	
5	Convene committee (Water Quality committee) to develop incentives for non-structural controls and LID practices and to suggest ordinance changes related to impervious surfaces	

IV. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree

 Disagree

 No Opinion/ Don't Know

 Agree

 Strongly Agree

V. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged).

I. What is a potential Task Force recommendation for enhancement of the S&E program county-wide?

The follow sections summarize the recommendations related to S&E standards and enforcement procedures.

Standards

1. All S&E programs in the County should implement a requirement that any lot smaller than one acre have installed a silt fence and construction entrance.
2. Establish a set of criteria to determine the risk associated with all permitted sites and assess this risk during the review process. Risk will be determined by such items as the soil conditions, slope of the site, size of disturbance and proximity to environmental resources. The level of risk will trigger more stringent requirements, which may include phased construction, limits on mass grading, increased inspection frequency and fines.

Enforcement

1. All sites requiring a permit should to be inspected by municipal staff at least twice per week. More inspections should be required on sites that rank high in risk, as defined above.
2. Perform a work load projection study to maximize efficiency of existing staff and inspections. The study should consider the stage of construction when determining inspection time-tables.
3. Maintenance logs should be required on all sites and enforcement staff will be directed to more pro-actively request these maintenance logs to ensure that required maintenance of S&E devices is being performed.
4. A policy to increase the amount and frequency of fines issued should be pursued as a deterrent to S&E ordinance violations. Egregious violations should be fined immediately upon identification.
5. Field staff should be cross trained on S&E and be encouraged to report violations observed in the field during other duties.

II. Proposed Implementation Activities and Resources

No.	Implementation Steps	Estimated Resources
1	Modify ordinance to include requirement for silt fence on all residential lots	For workload of 50 permits/inspector, estimated cost would be \$595,000/year for salary + benefits (7 staff) county-wide
2	Develop risk criteria for disturbed sites and enforcement criteria for "high-risk" sites	
3	Perform workload projection study to determine necessary FTEs to provide S&E services	
4	Provide additional staff to enforce high-risk approach	
5	Develop cross-training program to educate field staff to report S&E violations	

III. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree	<input type="checkbox"/>	Disagree	<input type="checkbox"/>	No Opinion/ Don't Know	<input type="checkbox"/>	Agree	<input type="checkbox"/>	Strongly Agree	<input type="checkbox"/>
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IV. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged).

Recommendation #4
County-wide Call Center for Stormwater Issues

Wake County Stormwater Management Task Force
PROPOSED Task Force Recommendations
Dated: September 20, 2007

I. What is a potential Task Force recommendation for implementation of a County-wide Stormwater Call Center?

The Task Force recommends the establishment of a one-stop call center for all stormwater issues in the County, including complaints, frequently asked questions, reports of violations (such as E&S control and illicit discharges) and other related information. Calls will be screened by trained operators and directed to appropriate personnel at each jurisdiction, as necessary. The call center will be expandable to include other environmental issues in addition to stormwater. The call center would serve all participating municipalities and be provided at a fee per an appropriate cost share model (i.e. population, jurisdiction size, calls per jurisdiction, etc.). The center would either be outsourced to a private firm or housed by a regional provider such as Wake County.

Services provided by the call center would include trained staff to answer frequently asked questions. Information provided by call center staff would be coordinated with the public education activities. If questions cannot be answered or services are required on-site, calls will be dispatched to the appropriate representative at each jurisdiction. As an alternative, trained staff may also be available to provide a screening level site visit to determine if additional technical service is required. All dispatched calls would be addressed within 48-hours. Call center operators would have software (GIS-based, such as IMAPS) to record, map and track all complaints received. The complaint tracking function could be used to identify “hot-spots” within the system or as a component of a risk-based maintenance strategy.

Before implementation of the call center, it is necessary to determine the potential call volume and resources needs. As such, it is recommended that all jurisdictions set-up a common system for tracking and documenting current calls. Calls will be logged and categorized by a common system and the County can act as a central clearinghouse to receive call logs on an annual basis. The County will compile all logs and create a GIS map of call locations to determine total calls and spatial distribution.

II. What is the expected outcome of this potential recommendation?

An easy-to-use, well publicized, one-stop call center responsible for receiving stormwater-related calls and complaints, responding to frequently asked questions, dispatching calls to appropriate personnel within each jurisdiction, and tracking all calls in a GIS database system. The call-center will improve response time to customers, provide an education component, and allow stormwater staff to devote more time to solving problems. The information compiled through the complaint tracking will also be valuable to other areas of the program, including H&H modeling and stormwater system maintenance.

III. Proposed Implementation Activities and Resources

No.	Implementation Steps	Estimated Resources
1	Develop common tracking procedures for current customer calls/complaints	Cost of call center is contingent upon estimation of complaints/call volumes as determined in Step #1 to the left.
2	Compile information on all stormwater-related calls county-wide to estimate anticipated call volume	
3	Develop policies and procedures manual for call center activities	
4	Implement call center	
5	Provide staffing for required service level	

IV. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree

 Disagree

 No Opinion/ Don't Know

 Agree

 Strongly Agree

V. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged).

Recommendation #5
Risk-Based Approach to Stormwater System Maintenance

Wake County Stormwater Management Task Force
PROPOSED Task Force Recommendations
Dated: September 20, 2007

I. What is the Task Force's recommendation for Stormwater System Maintenance?

The Task Force recommends a county-wide approach to stormwater system maintenance focused on the identification and routine maintenance of critical systems and high-priority areas to keep these systems functional, to restore flow capacity, and to protect these systems from environmental degradation. Existing information such as customer complaint records (i.e. coordinated with the call center), stormwater and street maintenance staff experience, drainage system inventory, and H&H modeling results will be used to identify and prioritize the critical drainage system features.

A meeting with local stormwater managers will be convened to develop the criteria to prioritize maintenance locations based on threat to public safety, threat of flooding, threat to the environment and the number of customers affected. A maintenance plan will be developed to include monthly inspection/maintenance of priority sites and inspection/maintenance of sites prior to every predicted 1" rainfall event. Once identified, critical sites may be cataloged and mapped within a GIS-system. Maintenance activities, system conditions, etc. may be logged into the system where queries can be performed to produce reports on maintenance activities.

In addition to the identification of critical jurisdictionally-owned stormwater infrastructure, an assessment of NCDOT infrastructure will also be performed. Once identified, the list of high-priority NCDOT facilities will be submitted to NCDOT for consideration when performing maintenance activities. The Task Force recommends two alternatives for addressing maintenance of the high-priority NCDOT stormwater facilities:

- *Alternative #1* - County/municipalities will pursue an agreement with NCDOT to perform routine maintenance of these critical facilities.
- *Alternative #2* - County/municipalities will pursue an agreement with NCDOT for local governments to assume the maintenance responsibilities at these locations in exchange for a reimbursement from NCDOT for the maintenance cost.

II. What is the expected outcome of this recommendation?

A risk-based approach to identify high-priority stormwater system infrastructure (including NCDOT-owned facilities) within the County that should be targeted for routine inspection and maintenance. The result will be a reduction in the frequency and severity of flooding that may result from a lack of maintenance for the most critical locations within each jurisdiction's drainage system. The database will also provide a list of high-risk locations for emergency management planning during larger storm events.

**Recommendation #5
Risk-Based Approach to Stormwater System Maintenance**

III. Proposed Implementation Activities and Resources

No.	Implementation Steps	Estimated Resources
1	Develop work plan of NCDOT-related maintenance issues and present to NCDOT	It has been anticipated that all activities will be accomplished with existing staff.
2	Develop risk-based protocol for maintenance priorities using local Stormwater Managers	
3	Develop computerized database of high-risk locations in each jurisdiction using modeling results, call logs, and field experience	
4	Develop maintenance plan for addressing high-risk sites	
5	Implement and perform maintenance procedures	

III. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree	<input type="checkbox"/>	Disagree	<input type="checkbox"/>	No Opinion/ Don't Know	<input type="checkbox"/>	Agree	<input type="checkbox"/>	Strongly Agree	<input type="checkbox"/>
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IV. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged).

I. What is a potential Task Force recommendation for collaboration on the implementation of the NPDES Phase II stormwater program?

The Task Force recommends that jurisdictions should collaborate on the implementation of the NPDES Phase II stormwater program. The collaborative program should be modeled after the Mecklenburg County model where the County provides the services to the jurisdictions on a voluntary basis and for a fee based on services provided. The jurisdictions that volunteer to participate in the program would enter into an inter-local agreement with the county that specifies the specific responsibilities of each jurisdiction and the method for reimbursement of costs associated with providing the service. The agreements would specify that the towns are responsible for protecting the quality of storm water runoff and surface waters within their jurisdictions to the extent required by applicable laws and regulations. However, on behalf of the towns, the county will fulfill the NPDES Phase II permit requirements for the towns and the county provided the Towns adopt and enforce the regulations necessary to support specific permit requirements, including but not limited to pollution control and post-construction ordinances. A common ordinance for all jurisdictions is supported by the Task Force.

A Stormwater Management Plan would be developed by the county and participating jurisdictions that meet the stipulated requirements of the regulations for all six minimum measures. The plan will promote a watershed planning framework between the county and the participating jurisdictions and will provide consistent, uniform implementation of the NPDES Phase II requirements throughout the participating jurisdictions and the unincorporated county. A corresponding staffing plan would be developed to determine the level of support necessary to implement the programs for participating jurisdictions. It is anticipated that a joint program would be able to take advantage of economies of scale for staffing, equipment and other program related costs, particularly when compared to the cost that smaller jurisdictions may incur in an effort to implement these programs individually.

Although a majority of jurisdictions in the county have already entered their first five-year permit cycle, staff with DWQ has indicated that programs may apply for modifications to their current permits, including the ability to apply for a joint permit with the county and other participating jurisdictions. This will reduce the cost and time associated with providing separate annual reports at the end of each completed year and will also provide an added level of uniformity to the programs.

II. What is the expected outcome of this potential recommendation?

Local governments, on a voluntary basis, can request that Wake County provide staff and resources related to any, and all, functions required by Phase II stormwater rules. Agreement for service would be renewable on an annual basis (similar to Charlotte-Mecklenburg model and represents an expansion of current practice regarding S&E). The primary outcome would be a cost-effective solution for compliance with elements of the NPDES Phase II program.

III. Proposed Implementation Activities and Resources

No.	Implementation Steps	Estimated Resources
1	Convene meeting with interested jurisdictions and develop interlocal agreements	EPA estimates range from \$1.33/capita to \$10.96/capita to implement all six minimum measures depending on degree of collaboration with adjacent jurisdictions
2	Develop uniform ordinance for all jurisdictions	
3	Develop five-year workplan for program activities with associated staffing plan	
4	Develop joint permit for State approval	
5	Provide enforcement and reporting activities	

IV. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree

 Disagree

 No Opinion/ Don't Know

 Agree

 Strongly Agree

V. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged).

I. What is a potential Task Force recommendation for Environmental Monitoring in Wake County?

The Task Force recognizes that the county's surface- and ground water resources function to meet a number of important benefits and uses for the community, including water supply, recreation, and habitat for wildlife, aquatic organisms and endangered species. Therefore, the Task Force has determined that there is a need to develop an Environmental Monitoring Program that can be used to establish baseline water quality conditions and more closely monitor changes in water resource conditions. It is intended that the Environmental Monitoring Program will be implemented and managed as a multi-jurisdictional project, involving local, state and federal governments, departments and agencies, respectively. This program will not replace or supersede monitoring that is currently performed in Wake County, but will supplement it by expanding the network of monitoring stations, enhancing data collection and reporting, and providing an inter-governmental approach (that includes citizen stakeholders) for jointly assessing monitoring-results and developing solutions. The Environmental Monitoring program will be implemented in three phases:

- **Program Definition** - Wake County will work with local, state and federal governments and agencies to review the current status of environmental monitoring being conducted in the County. At the conclusion, program enhancements will be identified, which may include, but not be limited to, monitoring location changes, location additions, parameter changes, data collection procedures, data collection frequency, data management, and accessibility of data through GIS- and web-based technologies.
- **Program Implementation** - Wake County will work with local, state and federal governments and agencies to implement the environmental monitoring network as defined in Program Definition phase. This phase will include the development of interlocal agreements between participating local governments as well as a determination of a cost share to support the program.
- **Program Reporting** - The local governments will work in a collaborative effort to collect and analyze the data collected from the environmental monitoring program, and prepare an annual reports summarizing the findings of the data analysis, reporting observed changes in environmental conditions, and offering explanatory factors for observed data trends. A committee of local government representatives (all jurisdictions in County) shall prepare the report. Once the annual report is complete, it will be submitted to the city/town/county manager from each local government.

II. What is the expected outcome of this potential recommendation?

A powerful management tool for evaluating current water quality conditions across the county and for monitoring the impacts of growth and development on the health and condition of our water resources in the future.

III. Proposed Implementation Activities and Resources

No.	Implementation Steps	Estimated Resources
1	Convene a series of meetings with all agencies supplying monitoring within Wake County to assess data gaps and identify program enhancements	Cost of monitoring plan is contingent upon outcome of meeting with local agencies.
2	Develop monitoring work plan that will include station locations, monitoring activities, and frequencies	
3	Develop interlocal agreements and cost share guidelines for participating jurisdictions	
4	Implement program enhancements per recommendations in the monitoring work plan	
5	Develop and implement procedures for a common reporting mechanism	

IV. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree	<input type="checkbox"/>	Disagree	<input type="checkbox"/>	No Opinion/ Don't Know	<input type="checkbox"/>	Agree	<input type="checkbox"/>	Strongly Agree	<input type="checkbox"/>
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V. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged).

I. What is a potential Task Force recommendation for educating the public on stormwater management issues?

Numerous studies show that simply providing information rarely results in the desired behavior change. A concept known as “community-based social marketing” provides a framework for understanding how to promote behaviors that are environmentally sustainable. It is recommended that the concepts of “social marketing” be applied to future, stormwater public education efforts and that these efforts should be coordinated on a county-wide basis in order to present a common and consistent message to the public.

The County will soon be pursuing the establishment of a new division under Environmental Services called the “Environmental Stewardship Division.” This division will develop and direct all environmental-related public education initiatives for the County and materials/services will be made available to other County jurisdictions. It is recommended that the Task Force recommendations regarding public education programs be coordinated with this new initiative.

As a first step, however, the Task Force recommended that a citizen survey on stormwater issues and service should be conducted to determine the current knowledge level of the public regarding stormwater. In lieu of this data, the Task Force members were provided the opportunity to vote on a variety of stormwater issues and programs that they deemed an education priority. The following sections summarize these voting results and can be used to set early priority targets for the program:

Public Education Tools for Municipal Audiences

1. Inter-department cross-training to identify, report, and address stormwater management concerns
2. Training for the inspection, installation, and maintenance of sediment and erosion control devices
3. Training for hazardous and non-hazardous materials management

Public Education Tools for Residential Audiences

1. Self-performed lawn care management education – fertilizer application, yard waste disposal, etc.
2. Drainage system signage and stenciling to increase awareness
3. Methods and benefits of reducing the volume of runoff from property

Public Education Tools for Non-Residential Audiences

1. Mandatory certifications for sediment and erosion control installers
2. Lawn care management practices for commercial landscape management companies
3. Strategies to reduce or control runoff volume from impervious surfaces

II. Proposed Implementation Activities and Resources

No.	Implementation Steps	Estimated Resources
1	Coordinate Task Force recommendations/suggestions with newly-formed County Environmental Stewardship Division	Cost for public education program will be determined following the formation of the County Environmental Stewardship Division
2	Convene a meeting with local jurisdictions and agencies to determine all local education programs for stormwater	
3	Develop and conduct a citizen survey to determine current knowledge level and deficiencies	
4	Convene a meeting of the Water Quality Committee to review survey data and other local programs to determine the focus areas for the new education program	
5	Develop materials and workshops to support desired education initiatives	

III. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree	<input type="checkbox"/>	Disagree	<input type="checkbox"/>	No Opinion/ Don't Know	<input type="checkbox"/>	Agree	<input type="checkbox"/>	Strongly Agree	<input type="checkbox"/>
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IV. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged).

Recommendation #9
Maintenance and Inspection of On-Site Wastewater Systems

Wake County Stormwater Management Task Force
PROPOSED Task Force Recommendations
Dated: September 20, 2007

I. What is a potential Task Force recommendation for maintenance and inspection of on-site wastewater systems?

Considering that there are an estimated 60,000 onsite wastewater systems in the County, it was acknowledged that these systems pose a potential threat to surface and groundwater quality in the County. As such, the Task Force acknowledged the need for an evaluation of the alternative maintenance practices and inspection procedures associated with onsite wastewater systems (i.e. septic tanks) to reduce illicit discharges.

As a first step, an initial evaluation of the current maintenance and inspection program should be performed that includes a comparison against other peer communities. A stakeholders group that represents interested parties in both the municipalities and the County should be convened to review the findings of the initial evaluation and determine an ultimate course of action for the maintenance and inspection program. In parallel to the development of revised maintenance and inspection procedures, a database and tracking system for all onsite wastewater systems in the County would be developed to identify all possible sources of illicit discharges.

Similar to other recommendations from the Task Force, it was suggested that inspection and maintenance activities should be prioritized based on an assessment of risk to environmental resources (both groundwater and surface water). Systems located near environmental resources may require a higher level of service than those that are lower risk facilities.

In addition to the inspection and maintenance procedures, the Task Force suggested that targeted public education materials should be developed and distributed to those that own a home with an on-site wastewater system. The materials should educate the owner on the components of the system, location of the system, and the required maintenance activities for the system.

II. What is the expected outcome of this potential recommendation?

Alternative maintenance practices and inspection procedures would be developed for onsite wastewater systems (i.e. septic tanks) with the goal of reducing, to the maximum extent practicable, illicit discharges to groundwater and streams from leaking/failing septic systems.

Recommendation #9
Maintenance and Inspection of On-Site Wastewater Systems

III. Proposed Implementation Activities and Resources

No.	Implementation Steps	Estimated Resources
1	Perform a review of local and peer community maintenance practices	Estimated \$140,000 to complete planning stages of program
2	Convene stakeholders group to review practices and select alternatives	
3	Develop maintenance plan for on-site wastewater systems	
4	Implement maintenance and inspection program with appropriate staff	Risk-Based (\$570K) vs Proactive (\$900K) Program

IV. Level of Support for Recommendation (Please mark an "X" in the box that expresses your level of agreement with this recommendation)

Strongly Disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	No Opinion/ Don't Know <input type="checkbox"/>	Agree <input type="checkbox"/>	Strongly Agree <input type="checkbox"/>
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V. Final Comments (Please provide comments in the space below regarding any support, suggestions or concerns you have for this recommendation. If you are in disagreement, alternative approaches or solutions are encouraged).
