

## ADMINISTRATIVE RECOMMENDATIONS

**Recommendation #1 (approved 3/24/05). A Surface Water Advisory Council (SWAC) should be formed to provide guidance and policy advice to the Governor and the Secretary of DNREC and oversight to potential stormwater utilities (see Financial Recommendations) regarding drainage, stormwater management, and flood control.**

The Task Force proposed that the SWAC be comprised with one representative each from the following: Governor's office, Senate, House, each county, Delaware Association of Conservation Districts, Delaware League of Local Governments, DNREC appointed environmental representative, American Council of Engineering Companies, and the Delaware Institute of Planning and Design.

The SWAC would direct a more local level (county, conservation district, municipality, or other entity as appropriate) utility or operating unit to develop standardized processes and procedures for identifying and prioritizing problems, develop watershed-based solutions, and prioritize projects. The SWAC would also oversee the quality of customer service and review annual localized work plans. While the SWAC would operate at the State level, implementation and operations would occur at the county or municipal level. The SWAC would hold planning roundtable discussions to coordinate activities. Areas of responsibility between the State and local entity would need to be clearly defined and coordinated.

Also, the existing Soil and Water Advisory Committee could be sunsetted once the SWAC is in place and operating.

This recommendation was made by the Governance, Finance, and Maintenance & Restoration Subcommittees.

**Recommendation #2 (approved 3/17/05). A central response unit coordinated by DNREC in conjunction with county or municipal utilities should be created for handling public calls related to drainage, stormwater, and flood control. A new process and response procedure for addressing citizen complaints related to stormwater facilities and flooding needs to be established. Citizens should be provided with a single point of contact.**

This recommendation was made by the Governance and Maintenance & Restoration Subcommittees.

**Recommendation #3 (approved 3/17/05). The State Department of Safety and Homeland Security and local emergency response agencies should review flooding emergencies and determine that adequate protocols exist to ensure seamless and effective communication, coordination, and response to endangered citizens and property, and that their respective responsibilities be clearly delineated.**

This recommendation was made by the Governance Subcommittee

**Recommendation #4 (approved 3/17/05).** A detailed implementation plan should be developed by DNREC for the Task Force's approved recommendations that include accountabilities and timelines for each recommendation, any staffing or other fiscal impact, and whether a recommendation requires policy, regulatory, or legislative action to implement. This implementation plan should be completed by April 30, 2005.

This recommendation was made by the Subcommittee Chairs.

## **FINANCIAL RECOMMENDATIONS**

**Recommendation #5A (approved 3/17/05).** Stormwater utilities operating at the county or local level should be formed as a funding vehicle for the purpose of providing a simplified and comprehensive approach to drainage and flooding problems throughout each county. The utility would be a mechanism to provide necessary funding for implementing improved surface water management.

**Recommendation #5B (approved 3/17/05).** A proposed stormwater utility fee should be utilized for the purpose of planning, maintenance, capital construction and administration. To minimize additional administrative costs associated with the utility, the fee should be set and collected at the county or municipal level, possibly utilizing the existing real estate tax or sewer billing process. The individual counties or municipalities should receive compensation for billing and collection costs. Funds and funding decisions should be kept at county or municipal level but associated annual work plans should be presented to the Surface Water Advisory Council (SWAC). Municipalities may elect not to join a county level utility but must establish their own utilities or other funding sources that meet the established statewide standards.

**Recommendation #5C (approved 3/17/05).** The fees would be established at a level appropriate to fund the needs identified without the use of general obligation or other special or exceptional (e.g., 21<sup>st</sup> Century) funding. The utility operating units should have the latitude to make modifications to its fee for credits and enhancements as appropriate subject to the approval of the SWAC. The county level units would establish cooperative agreements with municipal level units or local governments. Financial audits to be provided to the SWAC on an annual basis.

**Recommendation #5D (approved 3/17/05).** The Stormwater Utility fee should be levied on all property in the state recommended for inclusion by the SWAC. The fee should be assessed on residential customers using a flat rate fee structure for all residential properties of a specific nature (e.g., residential properties with similar zoning would be assessed identical rates). The fee will be levied on all developed non-residential properties using equivalent residential runoff units which are essentially a measure of impervious surface. A credit system should be established for developed non-residential utility customers that recognizes existing and/or planned on-site stormwater quantity/quality management practices. A Board of Appeals at the utility level or similar board should handle appeals.

These recommendations were made by the Governance and Finance Subcommittees.

**Recommendation #6 (approved 3/17/05). Stormwater utilities should have the ability to sell revenue bonds to leverage the collected fee to the extent practicable.**

This recommendation was made by the Finance Subcommittee.

**Recommendation #7 (approved 3/24/05). Urban, suburban, and defunct tax ditch organizations may be considered for inclusion into the county or municipal stormwater utility.**

This would minimize the duplication of efforts and provide adequate funding to allow these organizations to better address development pressures and environmental concerns. The SWAC or the county or municipal utility is suggested as the appropriate entity to set funding levels.

This recommendation was made by the Finance Subcommittee.

**Recommendation #8 (approved 3/17/05). First year funding, in the amount of \$980,000, should be provided by the General Assembly to pay for DNREC personnel (Program Manager, Water Ombudsperson, Administrative Support) and consulting services (utility planning, regulatory research, and to develop the scope of watershed planning and studies). This would also allow for the funding of the Dam Safety Program (see Regulatory and Legal Recommendations).**

This recommendation was made by the Subcommittee Chairs.

## **REGULATORY AND LEGAL RECOMMENDATIONS**

**Recommendation #9 (approved 3/17/05). State regulations should be updated to establish performance standards for sediment and stormwater practices, operations and maintenance, and appropriate bonding.**

Design and engineering standards at the State level should be strengthened through a revision to the Sediment and Stormwater Regulations. Minimum standards should address volume management, conveyance adequacy, pollutant loadings, floodplain management, strict standards for operation and maintenance of structures and management areas. No opting out of standards should be allowed unless pursuant to specific local land use regulations (i.e. re-development).

Minimum statewide design and construction standards for work in stormwater facilities, ditches, and natural streams should be established. Such design and construction standards should be consistent among those agencies (county or municipal level operating units, DNREC, conservation districts, and delegated agencies) tasked with sediment and stormwater responsibilities. Some variability may be required because of differences in soils, geology, hydrology, topography, land use, etc., across Delaware.

Coordinated and consistent Operation and Maintenance plans or guidelines, including standards for inspection, enforcement, maintenance, repair, reconstruction, retrofitting, ground-water

quality monitoring if appropriate, and anticipated costs, should be developed for each type of stormwater facility and that such plans should be based on the anticipated life expectancy of such facilities, perhaps up to 20 years. It is further recommended that individual and specific Operation and Maintenance plans be established early in the planning process for each approved stormwater facility and that such plans be provided to the responsible party(s) so that those responsible (county or municipal level operating unit, county, conservation district, maintenance/homeowner association, etc.) have a checklist of scheduled events. A management process must be in place to ensure that required action (repairs, ground-water quality monitoring, etc.) has taken place to address issues identified during inspections.

A clear definition of routine and major maintenance should be made. Property owners should be responsible for routine maintenance.

As-builts and periodic inspections are needed to assure that what is built is reflected in the plan. Post development data needs to be provided to DNREC in a format compatible with the State's data system.

This recommendation was made by the Governance and Maintenance & Restoration Subcommittees.

**Recommendation #10A (approved 3/17/05). The 1990 State Sediment and Stormwater Law should be updated to address 1) the establishment of criteria for on-site drainage design, lines and grades, open and closed channel drainage system capacity, 2) "Right to discharge" issues, 3) definition of off-site impacts, and 4) Operation & Maintenance requirements to assure implementation. It is also recommended that State Sediment and Stormwater regulations be updated to include requirements for stormwater recharge, runoff volumes, land use cover conditions, turbidity limits, adequate conveyance, and pollutant loads.**

**The current 5,000 square foot disturbance exemption should not be changed. A policy of mitigation, credit, or banking should be investigated within these regulations for on-site stormwater quality or water quantity requirements where such transfer of standards or requirements has been determined to be a more effective practice than on-site management of stormwater.**

This recommendation was made by the Land Use & Regulation Subcommittee.

**Recommendation #10B (approved 3/24/05). A quality improvement process should be implemented within the State Sediment and Stormwater Program, including all delegated agencies, for the purpose of improving the quality of sediment and stormwater plans submitted for review and approval. The improvement process should identify all current impediments to quality plan submittal and efficient review as well as specific measures to improve the process. The measurable outcome is a reduction in the number of plan submittals prior to approval with the goal of initial plan submittals meeting all applicable requirements and standards.**

This recommendation was made by DNREC.

**Recommendation #11 (approved 3/17/05).** The development of a Statewide Activity Approval (SAA) for use by New Castle County Special Services and the New Castle Conservation District for projects in New Castle County is already underway. The development and promulgation of additional Statewide Activity Approval “general permits” to allow remediation by other agencies in other areas of the State needing immediate mitigation should be developed. The SAA would provide relief from the need to file an individual permit application and receive individual permit authorization pursuant to the State's Subaqueous Lands Act (7 Del. C., Chapter 72) for each project site.

This recommendation was made by the Maintenance & Restoration Subcommittee.

**Recommendation #12 (approved 3/24/05).** The stormwater utilities, DNREC, designated agencies, and delegated agents should have the authority to enter onto private lands or waters for the purpose of surveys, assessments, and emergency repairs. However, entry except for emergency repairs will require a 48 hour notice and said agency would at all times be responsible for any and all damages which shall be done to the property of any such person or persons.

This recommendation was made by the Governance and Maintenance & Restoration Subcommittees.

**Recommendation #13 (approved 3/24/05).** The stormwater utilities should be authorized and empowered to acquire by gift, devise, purchase, exchange, or any other method of acquiring real property or any estate, interest, or right therein, provided that such acquisition shall not be made through the exercise of the power of eminent domain.

The goal is to protect these lands from development and/or degradation to enhance flood control, flood prevention, protect wetlands, enhance water quality, improve stream bank stabilization, and protect vegetation that will lessen sedimentation and erosion.

This recommendation was made by the Land Use & Regulation Subcommittee.

**Recommendation #14 (approved 3/24/05).** Right of entry for essential maintenance and repairs, in the form of recorded easements, should be a condition of approval if public funds are used or if the maintenance is to be assumed by a public entity (such as stormwater utilities). A 48 hour notice would be required.

This recommendation was made by the Maintenance & Restoration Subcommittee.

**Recommendation #15 (approved 3/24/05).** The 1990 Land Protection Act should be fully implemented and the State Resource Areas (SRAs) should be considered in the Preliminary Land Use Service (PLUS) process project review. State agencies should develop minimum natural resource protection levels to be implemented through county and municipal codes.

This recommendation was made by the Land Use & Regulation Subcommittee.

**Recommendation #16 (This recommendation was not acted upon on 3/24/05).** The timetable of State-wide implementation of the Source Water Protection program legislation should be accelerated so that current and future aquifer recharge can be preserved and enhanced.

This recommendation was made by the Land Use & Regulation Subcommittee.

**Recommendation #17 (approved 3/24/05). State funding for property buyouts on a reactive basis (after damage) should be legislated at the State level for consistency. The possession of flood insurance should be a prerequisite for buyouts which should also consider FEMA funding and processes. No stormwater utility fees should be used for buyouts.**

This recommendation was made by the Governance Subcommittee.

**Recommendation #18 (approved 3/24/05). The Dam Safety Program should be funded under the provisions as specified in the Dam Safety Law Title 7 Chapter 42. This support would allow for the development of the regulations and position the State to leverage Federal funds for dam safety related improvements and emergency planning.**

This recommendation was made by the Governance Subcommittee.

## **TECHNICAL RECOMMENDATIONS**

**Recommendation #19A (approved 3/24/05). Detailed watershed studies, managed by DNREC in consultation with the Surface Water Advisory Council and stormwater utilities, should be developed for highest priority watersheds in the State over the next five years with the goal of completing all watersheds within ten years.**

Each plan will include, at a minimum, hydrologic and flood modeling and shall determine carrying capacity of the watershed. The impact of a build-out plan for each watershed shall also be included. Livable Delaware community design principles, outlined in “Better Models for Development in Delaware” should be considered in the development of the watershed plans.

This recommendation was made by the Governance, Land Use & Regulation, and Maintenance & Restoration Subcommittees.

**Recommendation #19B (approved 3/24/05). As part of watershed planning, improved topographic and hydrologic data should be developed to support the accurate mapping of floodplains. Floodplain studies should be performed to accurately define the extent of flooding both horizontally and vertically. Priority criteria should be given to areas where floodplains have never been mapped and pose significant threats to human health, safety, and welfare; existing floodplain maps are inaccurate, existing floodplain maps were produced using insufficient data, and where at-risk development is likely to occur without accurate floodplain mapping.**

This recommendation was made by DNREC.

**Recommendation #20 (approved 3/24/05). As the watershed plans in each County are completed, they should include quantity and quality control recommendations. Land**

**development review and approvals on an individual site basis should be consistent with the watershed plan.**

This recommendation was made by the Land Use & Regulation Subcommittee.

**Recommendation #21 (approved 3/24/05). The development and utilization of “shared” stormwater facilities should be strongly encouraged to minimize costs, encourage environmental protection, and support ecosystems. Decisions should be made by teams of competent and qualified engineering, scientific, technical, and regulatory personnel (interdisciplinary teams).**

This recommendation was made by the Maintenance & Restoration Subcommittee.

**Recommendation #22 (approved 3/24/05). Conservation Design is defined as community design that encourages the preservation of open space and natural areas while enhancing the market value of land development (Arendt). Conservation Design should be implemented as a way to reduce reliance on structural stormwater management practices.**

Because Conservation Design is relatively new, maintenance costs associated with them are unknown at this time. Accordingly, estimated costs need to be determined for planning purposes. Local land use and zoning ordinances should be modified to allow and encourage Conservation Design. DNREC developed a document called “Conservation Design for Stormwater Management” that recommends less reliance on structural practices and greater use of the natural features of a site and open space to minimize stormwater impacts. If this concept is endorsed, standards, specifications, and guidelines should be reviewed to ensure statewide coordination and consistency. If Conservation Design utilizing nonstructural stormwater management approaches is widely used, the number of structural facilities will be reduced with an associated reduction in operation and maintenance costs for those facilities.

This recommendation was made by the Maintenance & Restoration Subcommittee.

**Recommendation #23 (approved 3/24/05). Stormwater management outreach and education, such as creation of materials related to “Green Technology,” Best Management Practices, and Conservation Design should be continued.**

Educational efforts provide the public with a greater understanding of the environmental importance of stormwater facilities. Program materials should be coordinated among State agencies, counties, and conservation districts. For example, the DNREC Sediment and Stormwater Program recently compiled a document entitled “Five Simple Steps to Maintaining and Enhancing Community Open Space and Stormwater Management Areas” that can be used statewide.

This recommendation was made by the Maintenance & Restoration Subcommittee.

**Recommendation #24 (approved 3/24/05). The concept of restoring stream channels to “stable” conditions should be promoted and incentives offered wherever possible to reduce future maintenance costs and improve water quality and habitat, and to ensure that proposed solutions will not contribute to additional stream channel instability.**

Stable channels provide the benefit of conveying their water and sediment through the watershed resulting in fewer “maintenance” problems that will require outside attention. Stable channels, while not unchanging, are those that maintain their general dimension (channel cross-sectional area), pattern (bird’s eye view meander pattern), and profile (slope) without aggrading (excessive sediment deposition and accumulation) or degrading (excessive down-cutting and erosion).

This recommendation was made by the Maintenance & Restoration Subcommittee.

**Recommendation #25 (approved 3/24/05). Aquifer recharge should be considered as part of the design, construction, operation, and maintenance of stormwater facilities.**

Recharge of surface water in developed areas with impervious surfaces will result in reduction of overland runoff (surface water volume reduction), improved surface and ground-water quality, and increased base flows of streams.

This recommendation was made by the Maintenance & Restoration Subcommittee.

**Recommendation #26 (approved 3/24/05). The use of public lands for retention of floodwaters, enhancing floodplains and stormwater retrofits and ensuring stream stability should be encouraged wherever possible. Land management practices on public lands should be conducted in a manner consistent with the objectives above. Educational opportunities should be provided to local, state, and federal land managers to ensure that public lands are managed to enhance stream stability and flood control capabilities.**

This recommendation was made by the Maintenance & Restoration Subcommittee.

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