

# **St. Jones Tributary Action Team Pollution Control Strategy**

## **Overall Recommendation**

The Team recommends that there be a fully funded staff position to coordinate watershed projects.

## **Open Space Recommendations**

### **I. BUFFERS**

- A. The Department should develop a St. Jones Watershed buffer overlay map to ensure buffers are in place throughout the watershed to improve water quality. This overlay map should be developed in cooperation with local municipalities and used to coordinate efforts among jurisdictions and must consider urban (developed) and rural (undeveloped) settings.
- B. A 100 foot vegetated or forested riparian buffer zone should be required within the watershed for all water bodies. However, this requirement should not apply to agricultural lands. Measurement should be from the edge of the bank of the water body landward.
- C. If a buffer cannot be placed within a project or an existing buffer area is reduced during development, the lack of the buffer should be mitigated. The Department should develop the criteria for compensation and a selection of alternatives which can be used as compensation. The criteria should consider both urban and rural settings and provide equivalent nutrient reductions (1:1 ratio).
- D. Vegetation within the buffer should be made up of “recommended plantings” of native species. However, the type of plantings should not be mandated. A minimum density of plantings is required to ensure water quality benefits.
- E. Buffers should be maintained in perpetuity and should be managed to maintain water quality benefits. Use of easements in this regard is encouraged.
- F. In all common areas, boundary signs should be installed to identify the buffer and its boundary. However, signs are not required on private property.
- G. The Team recommends that buffer compliance should be the responsibility of the Kent County Conservation District during its planning and review process. The Department should initiate discussions with the District about this recommendation. (However if a stormwater utility is implemented, as the Team recommends, buffer compliance could be linked into this effort.)

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## **Open Space Recommendations (continued)**

### **II. OPEN SPACE**

- A. Land maintained as passive or active open space under local ordinances or codes should be managed to minimize nutrient loading.
- B. Home Owners' Association members should be educated on caring for open space in their neighborhoods to minimize nutrient loading and encourage natural habitat.

### **III. EDUCATION**

- A. A comprehensive watershed assessment and protection program should be implemented state-wide to provide a framework for coordinating multiple watershed protection efforts. This program should promote the integration of local, state and federal water quality improvement efforts and improve public education and participation in all aspects of watershed protection.
- B. A comprehensive education plan to teach the public how their actions impact the St. Jones Watershed (and specifically water quality) should be implemented. Some suggestions include:
  - 1. Public service announcements
  - 2. Brochures distributed through real estate agents, retailers, and school children
  - 3. Face to face education with Home Owners Associations and other organizations
  - 4. Coordination with Master Gardeners' education
  - 5. Integration of education into the state and local permitting processes
  - 6. Education on purchasing of water conserving appliances
  - 7. Education of school children on water quality
  - 8. Education for farmers to recommend appropriate use of buffers on lands in production. (Possibly coordinate with Nutrient Management Commission)

## **St. Jones Tributary Action Team Pollution Control Strategy**

### **Wastewater Recommendations**

- I. Sewer Transmission Systems should be repaired to reduce infiltration and inflow during wet periods.
- II. Onsite Wastewater Treatment and Disposal Systems (OWTDSs) should be inspected and pumped out regularly to reduce nutrient loading of the groundwater. Compliance with current regulations should be promoted.
- III. Cesspools and seepage pits should be eliminated systematically as these wastewater systems discharge nutrients and bacteria directly into the groundwater. The septic inspection and maintenance program should help locate and eliminate them.
- IV. If it is physically and legally available (as defined by the regulations governing the design, installation and operation of OWTDSs), OWTDSs should be removed in growth zones and connected to Kent County Wastewater Treatment Facility. Through the inspection and maintenance program, failed systems should be identified for connection to sewer, if available, or replacement, if not.
- V. If an OWTDS fails, it will be identified through the inspection and maintenance program. To obtain a new permit, the system will be required to use the best available “new technology” to achieve required nutrient reduction targets for the watershed.

# **St. Jones Tributary Action Team Pollution Control Strategy**

## **Stormwater Recommendations**

### **I. GENERAL**

- A. A stormwater utility should be implemented to generate a stable source of funding for stormwater management within the watershed.
- B. Stormwater Best Management Practices (BMPs) should be designed to reduce nutrients according to TMDLs.
- C. Local municipalities, Kent County Conservation District and Kent County should meet to determine how to limit the addition of new impervious cover to less than 20% of the watershed to conserve water quality. During the review process, the use of pervious surfaces should be encouraged.
- D. Local municipalities and Kent County should adopt regulations to promote Low Impact Development (LID) in new construction and redevelopment. The team recommends the use of tax incentives where possible.
- E. A stormwater inventory should be conducted to identify areas where stormwater retrofits would effectively reduce sediment and nutrients.
- F. Since Home Owners Associations are critical for successful stormwater BMP maintenance, there should be a governmental agency charged with making sure the Associations are functional. In the Association by-laws, there should be a requirement for stormwater education.

### **II. EDUCATION**

- A. An education program for Home Owners Associations should be developed for stormwater BMP maintenance. Educational resources should be provided and ideally, face to face education that stresses the organizations' responsibility. Topics should include: proper use and application of fertilizer and use of salt and sand during periods of snow.
- B. The Smartyard Program should be implemented in the watershed to assist homeowners in planting native landscaping to conserve water and reduce fertilizer and pesticide use.
- C. Corporate environmental stewardship should be encouraged to provide corporations with the technical expertise to help them better manage and enhance their land through the use of native species and the restoration of natural habitat.
- D. The Department should coordinate efforts with non profit watershed organizations (e.g., St. Jones Greenway Commission, Silver Lake Commission, etc).

## **St. Jones Tributary Action Team Pollution Control Strategy**

### **Stormwater Recommendations (continued)**

- E. A comprehensive education program should be developed for the urban and suburban sector on issues of water quality and urban nutrients. This may include:
  - 1. Working with the University of Delaware to revise soil testing so they are more user friendly.
  - 2. Educating homeowners on the importance of cleaning up pet waste, water conservation, lawn care (and the use of fertilizers) and proper disposal of grass and yard waste.
  - 3. Working with the Delaware Nutrient Management Commission and the Master Gardeners to provide education and programs for homeowners on lawn and garden best management practices.

# St. Jones Tributary Action Team Pollution Control Strategy

## Agriculture Recommendations

### I. RECOMMENDED AGRICULTURE BEST MANAGEMENT PRACTICES

The Team recommends that Best Management Practices (BMPs) for agriculture be encouraged and supported. New funding sources should be sought and financial incentives should be increased. The following BMPs, in particular, should be considered for additional funding:

- A. **Cover crops** to protect soil when row crops are not being grown. This practice helps retain nitrogen in the soil for the next crop which reduces fertilizer costs to the farmer.
- B. **Grassed filter strips and grassed buffers** to trap sediments in surface runoff and take up excess nutrients.
- C. **Grassed waterways** to transport surface runoff away from cropland without causing erosion or flooding and protect and improve water quality.
- D. **Riparian forested buffers** to reduce nutrient losses from upland acres and to reduce sediment bound phosphorous from entering waterways.
- E. **Water control structures** to increase the water level in the field which allows for denitrification and reduces dependency on irrigation.
- F. **Pasture stream fencing** to reduce the bacterial and nutrient loads to a water body.
- G. The Team is aware that as of 2007 all lands (over 10 acres) that have nutrients applied must be in compliance with the Nutrient Management Act. The Nutrient Management Act requires all farms over 10 acres or with 8 animal units to establish a nutrient management plan, which includes the use of fertilizers and the fate of manure. Because **Nutrient Management Plans** reduce excess cropland nutrients, the Team strongly recommends that the Nutrient Management Commission ensure full compliance of the Nutrient Management Act.
- H. **Manure relocation** has removed significant amounts of excess manure from the Inland Bays and Nanticoke watersheds, consequently removing excess nutrients from those watersheds. Thus, the Team recommends that all excess manure (per the Nutrient Management Plan) be removed from the St Jones Watershed. If funds are lacking, the Team recommends that additional state and federal funds be applied to the manure relocation program.

# **St. Jones Tributary Action Team Pollution Control Strategy**

## **Agriculture Recommendations (continued)**

- I. Although it is difficult to quantify the nutrient reductions associated with **Structural BMPs** (such as manure structures, pads, sheds and composters) the Team recommends that these BMPs be as fully funded as possible because they insure proper management and storage of manure and dead animals so that they do not become an additional problem for the environment.

## **II. EDUCATION**

- A. Farmers should be educated on the above mentioned BMPs.
- B. The public should be educated on practices to discourage resident nuisance waterfowl.
- C. Farm land and natural resource area preservation should be encouraged and promoted. New funding sources should be sought and financial incentives should be increased. The public should receive education on current programs, including:
  1. Farmland Preservation Act
  2. Kent County Transfer Development Rights
  3. Non-profit environmental groups
  4. Easements and donations

## **III. OTHER**

- A. New funding sources should be sought and financial incentives should be increased for wildlife habitat and wetland restoration.
- B. The State should partner with the Army Corps of Engineers (and other appropriate parties) to pursue restoration of the St. Jones Watershed.