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Award Submission

WISE – Wetlands Interpretive Sanctuary for Education

Name:	Kenneth O. Drees
Title:	Special Programs Manager
Jurisdiction:	County of York, Virginia
Mailing Address:	224 Ballard Street, Yorktown, VA 23690
Phone:	(757) 890-4108
Fax:	(757) 890-4100
Email Address:	ken.drees@yorkcounty.gov

Wetlands Interpretive Sanctuary for Education (WISE)
County of York, Virginia

The Project – Wetlands Interpretive Sanctuary for Education (WISE)

Faced with the problems of replacing a wetlands area along Hampton Highway and a drainage issue in the local community of Lackey, the county investigated whether it could solve both issues by creating a wetlands area downstream from the drainage problem and adjacent to Charles Brown Park. The result was a project that provided environmental advantages, including stream restoration, wetlands creation and drainage improvements. The program promoted and required intergovernmental cooperation in order to address the situation.

Jurisdiction/History of the Situation

York County, with a population of approximately 63,000, lies in the eastern Virginia coastal plain on a peninsula formed by the James and York Rivers and the Chesapeake Bay. The County is bordered by the York River, James City County, Hampton, Newport News, Poquoson, and Williamsburg. The western-most part of the County consists almost entirely of Federal property, including the Yorktown Naval Weapons Station, Cheatham Annex, and Camp Peary. With 106 square miles, it is the third smallest county in the state.

With the building of the 31,000 square foot Tabb Library in 1999 at the intersection of Hampton Highway (VA Route 134) and Long Green Boulevard; a wetlands area was destroyed, creating an obligation under Section 404 of the Clean Water Act to either replace the wetlands area or fund a replacement in mitigation. The second part of the problem was a drainage problem in the local community of Lackey. A stream adjacent to Charles Brown Park was severely eroding in the vicinity of residential development in a neighborhood of low income families. A 1993 drainage study indicated high runoff velocities and flow rates that resulted in a degraded stream.

Description of the Project

Faced with these two problems, the County investigated whether or not they could solve both by creating a wetlands area downstream from the drainage problem and adjacent to Charles Brown Park. The County first had to obtain concurrence from the Army Corps of Engineers since projects replacing destroyed wetlands had to replace the wetlands on a two to one ratio, meaning twice the area of the destroyed wetlands had to be built in mitigation. It meant the County would have to acquire three acres of land, restore 1,100 feet of stream and improve drainage, design and construct the wetlands area, plant trees and shrubs, construct several bridges and a .5 mile footpath, along with accompanying improvements to make the area accessible and useful for educational purposes. A topographical survey was required, as was a hydrology study and groundwater monitoring. Also, a significant amount of clean-up was needed on the land to be acquired, including removal of a dilapidated structure, trash and debris. Non-native species also had to be eradicated.

The project was broken out into two phases with specific activities associated with each phase. Phase One consisted of property acquisition, engineering and design, conducting a topographical and tree survey, construction of the stream restoration and wetlands, and downstream drainage improvements. Stream restoration consisted of raising the stream basin, installing check dams, and returning the stream to its natural path (meandering, rather than straight). Wetlands creation consisted of developing a half acre of land with emergent wetlands (grassy plants), scrub/scrub wetlands (small trees/bushes less than 20' tall), and upland forested wetlands (trees over 20' tall).

Phase Two consisted of purchasing wetlands plants, trail construction materials, signage and interpretive signs, erosion control matting and trees for a riparian buffer. Phase Two also involved the construction of a nature trail and the planting and delineation of indigenous plants. Planning began, and in 2001 two parcels of land were purchased. In 2002, a drainage study and ground water monitoring was accomplished. Debris removal was begun and in 2003 the land was cleared and graded for the wetlands area. Plantings were done in 2004, and in 2005 trees were planted in the riparian buffer. Final activities, including trail mulching, installation of trail markers, development of a website and information brochure, were accomplished in 2006.

The U.S. Army Corps of Engineers initially worked with Environmental and Development Services Department of York County (EDS) to delineate the area for the wetlands. Then EDS managed design, inspection and monitoring of the stream restoration phase of the project and provided technical, construction and clerical support for the project. Community Services Department contributed to the development of educational programming, acquisition of volunteers, publicity initiatives and some project management. York County Master Gardeners were involved in landscaping and in identification and labeling of plants. Local Boy Scouts of America contributed to the manpower needed for creation of the .5 mile trail through the emergent wetlands. General Services maintains the park area adjacent to the wetlands and mulched the .5 mile trail.

Virginia Cooperative Extension provided technical guidance and support throughout the project. Community volunteers assisted in trail development as well as in planting trees and shrubs. The College of William & Mary Graduate Program in Public Policy provided a graduate student intern who was instrumental in completing aspects of the project associated with the information kiosk, trail markers, website and information brochure. Juvenile Services Division of York County Community Services provided youth to remove debris and alien species of plants, and to assist with trail mulching. York County Schools developed a curriculum for middle school children to leverage their SOL required lessons with the hand-on experience of growing and planting wetlands vegetation. Financial and Management Services tracked revenue and expenses associated with the entire project and provided input for numerous reports to managers and grantors. The Virginia Institute of Marine Science provided invaluable assistance and advice on appropriate plantings in the wetlands area and riparian buffer.

Cost of the Project

The project was financed through county funds, consisting of Lackey Drainage funds in the County's Capital Improvement Fund and funds that would have been paid to the Army Corps

of Engineers to meet the County's mitigation requirement; a $50,000 grant from the National Fish and Wildlife Foundation – primarily for design and construction costs; a $12,000 grant from the Virginia Department of Forestry for the creation of a riparian buffer (plantings along the streambank); and a $3,000 grant to the Master Gardeners for education/interpretive materials to be placed along the trail to identify plants.

Some aspects of the project were donated. Mid-Atlantic Realtors, a private partner, donated the information kiosk, built the foundation trail and constructed two foot bridges.

Results/Success of the Project

A new wetlands area was developed and built, including a .5 mile trail through emergent wetlands, forested wetlands and uplands; 1,100 linear feet of stream channel and stabilized banks was restored; conservation of 3.5 acres of forested riparian buffer in a conservation easement; and improved downstream drainage in a residential neighborhood including 300 feet of stabilized streambanks. Creation of the emergent wetlands provides additional water treatment and serves as a floodplain to further reduce a sedimentation problem. In addition, use of these properties places them in a conservation easement, guaranteeing a perpetual riparian buffer on the restored stream and a recreational area for the community. The wetlands interpretive education center also provides an opportunity for the local community, as well as York County citizens as a whole, to become involved in, and educated on, water quality issues and environmental preservation. The community services building at Charles Brown Park, adjacent to the wetlands, provides an excellent facility for traditional classroom style instruction regarding the Chesapeake Bay, wetland mitigation and preservation, watershed management, water quality and living resource needs.

Project funds were also used to build an information kiosk at the beginning of the interpretive trail, install concrete trail markers, provide decking over portions of the trail which were unsuitable for walking, develop a 14-page, full-color brochure on the wetlands area, and design a webpage (http://www.yorkcounty.gov/Default.aspx?alias=www.yorkcounty.gov/wise) on the wetlands area.

The project has had a highly positive impact on the local community. It has improved water quality, stream flow and living resources in the immediate project area. Putting land like this into conservation will reduce the population impact in the area and enhance the natural development of wildlife population. It also provides an immeasurable benefit by providing an educational resource for the immediate community of Lackey and the larger community of York County whereby citizens learn about environmental issues, watershed preservation and conservation. The County of York believes this project also serves to meet the goals of the Watershed Management Organization District by improving water quality through sediment and nutrient reduction and controlled land use.

Worthiness of an Award

This project promoted and required intergovernmental cooperation in order to address the

situation. The problem literally went from being a mitigation problem to solving several issues at once, while pulling the community together to collaboratively and positively impact the environment. The partnerships that were formed among these numerous groups/agencies and their timely participation were critical to the success of the project. No one group could have done it alone. The wetlands project has provided environmental protection, including stream restoration, wetlands creation and drainage improvements. The community has benefited through the creation of a passive recreation site, green space preservation, opportunity for civic involvement and community partnerships, and long-term educational benefits. This project succeeded because knowledgeable, passionate individuals who care about the environment from government, the community, business and education worked tirelessly to make a difference.

1 Attachment

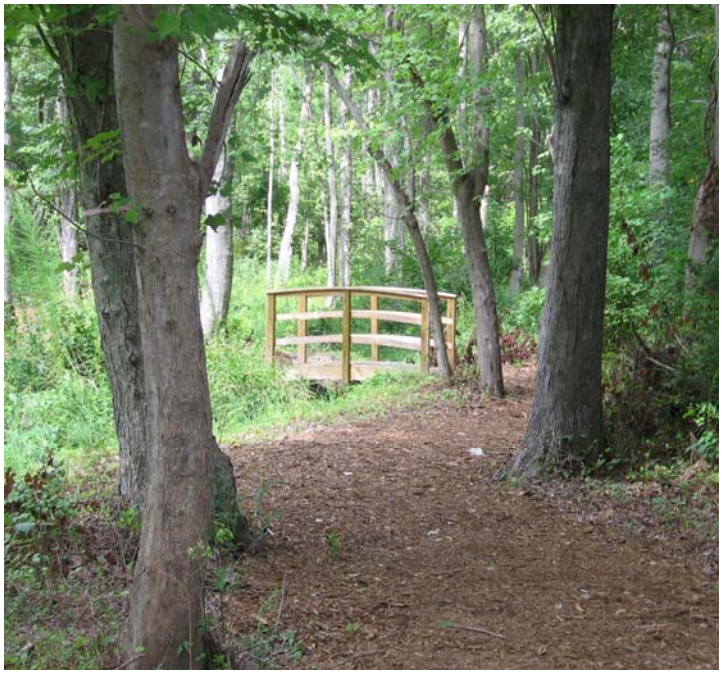
Wetlands Photos

Wetlands Photos

Community volunteers planting early in the project.

The wetlands as it appears today.

Attachment 1-1



Part of the wetlands trail with one of
The two bridges which were built over the stream.

One of nine trail markers adjacent to
The trail near the reparian buffer (streambank).

Attachment 1-2

Information kiosk near the beginning
Of the trail around the wetlands area.

Ribbon cutting ceremony for WISE in 2006.

Attachment 1-3