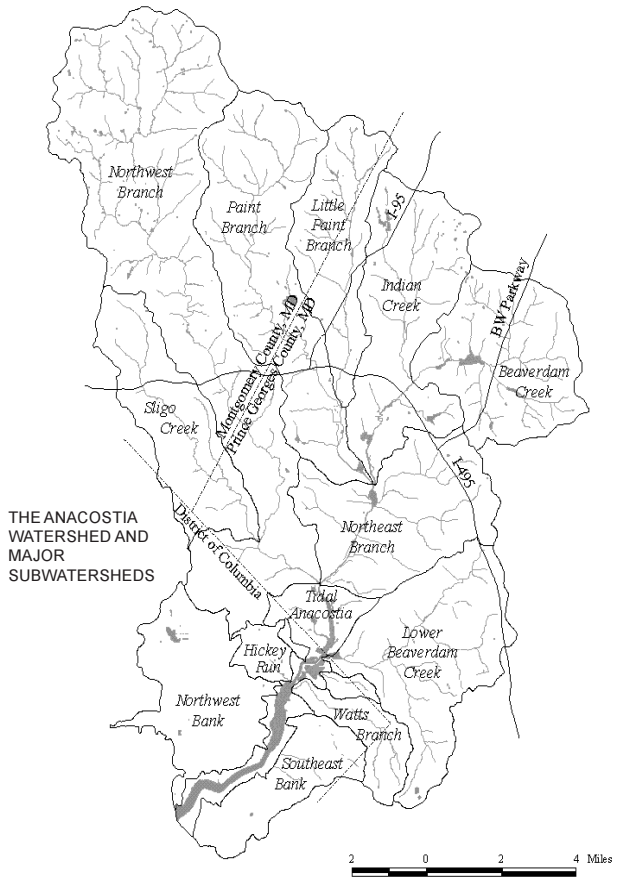
ANACOSTIA Currents

PUBLISHED BY THE ANACOSTIA WATERSHED RESTORATION COMMITTEE 2002

Dear Friends of the Anacostia Watershed:

CATHERINE RAPPE, 2002 AWRC CHAIR

This is an exciting time for the member governments and agencies of the Anacostia Watershed Restoration Committee (AWRC). The year began on a high note following the adoption by the leaders of the District of Columbia, Montgomery and Prince George's counties, and the State of Maryland of a new Anacostia Restoration Agreement last December. Between this landmark event and the release this fall of the 2001 Annual Report, the restoration effort has gained a new focus, as well as a comprehensive system for tracking restoration progress until 2010. The Annual Report, with its colorful and user friendly format, will also help to increase public interest and involvement in the restoration effort.



THE ANACOSTIA WATERSHED AND MAJOR SUBWATERSHEDS

In addition to fulfilling their AWRC-related obligations, the individual Anacostia jurisdictions are pursuing a variety of restoration and water quality enhancement projects throughout the watershed. The District of Columbia Water and Sewer Authority took a major step forward with the recent completion of its CSO Long Term Control Plan. Meanwhile, District planners and resource specialists are coordinating with other agencies and organizations to implement a number of stream restoration and Low Impact Development (LID) projects. Montgomery County continues its active role in design and implementing numerous stormwater management, stream restoration, wetland creation and reforestation projects in its portion of the Anacostia watershed. Prince George's County completed several stormwater retrofit and LID projects this year and recently secured a $1 million grant from EPA for LID demonstration projects throughout the watershed. At present, the Department of Environmental Resources staff is working to bring several million dollars in additional external funding for future LID and retrofit projects.

As the AWRC strives to improve interagency coordination, its citizen's arm, the Anacostia Watershed Citizens Advisory Committee (AWCAC) is working to improve communication and cooperation between government and Anacostia watershed residents through its outreach efforts and the recent publication of its first newsletter, *The Anacostia*

Networker. Subwatershed groups have also been hard at work this year. The Anacostia Watershed Society, the Concerned Citizens to Restore Indian Creek, the Friends of Sligo Creek, the Eyes of Paint Branch, and a number of fledgling groups are gaining membership, momentum, and influence in their efforts to protect and restore streams throughout the watershed.

While taking stock of our achievements, we must also recognize the need to do more. The 2001 Annual Report identified gaps in our water resources databases. We can begin to fill them by allocating funding for automated monitoring stations at key watershed locations. The Report also drew attention to the need to bring more watershed residents and private businesses into the restoration process. I believe we can do this as well. As AWRC Chair, I encourage you to join in, and to spread the word. By working together, we can restore the Anacostia watershed.

Sincerely,

Catherine Rappe
2001 AWRC Chair

The 2001 Anacostia Restoration Agreement-Setting Targets for a Restored Watershed

Since adopting the Six-Point Action Plan in 1991, the four signatory jurisdictions, the District of Columbia, Montgomery County, Prince George's County and the State of Maryland, together with the DC Water and Sewer Authority, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the National Park Service and the Maryland-National Capital Park and Planning Commission have made major contributions toward the goal of a restored river.

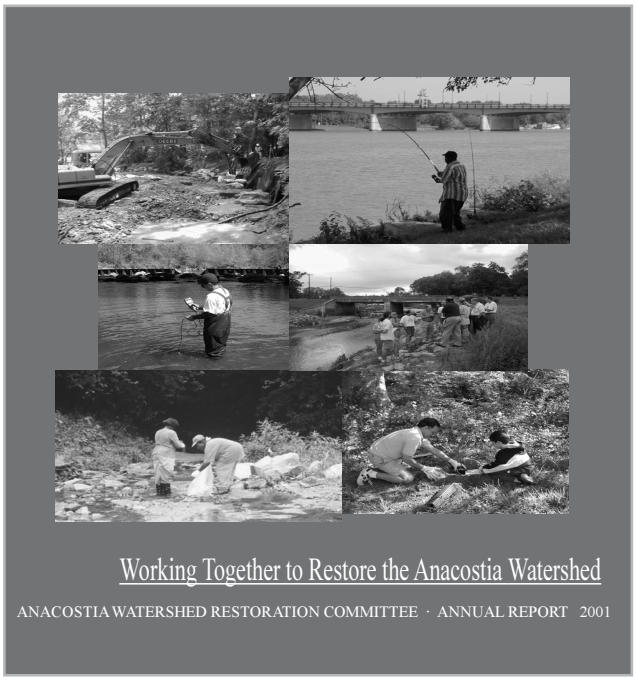
2001 RESTORATION PROGRESS GAUGE SHOWING 'GOOD' PROGRESS TOWARD GOAL 2

The May 10, 1999 Anacostia Summit and the December 3, 2001 Agreement focused and further strengthened the restoration partnership, and resulted in adoption of a suite of restoration long term targets. The targets were developed by the Metropolitan Washington Council of Governments (COG), in partnership with the AWRC as part of the Anacostia Watershed Restoration Indicators and Targets Project (I & T Project). Through a highly public process involving environmental and community groups and public and private businesses, the I & T Project yielded a suite of 50 restoration indicators, as well as their associated targets to be met by the year 2010. It also established frameworks for watershed-wide monitoring and restoration reporting to elected officials and the public, and is intended to encourage watershed-based planning, increase public involvement and support, and help set program and budget priorities.

According to Dr. Ted Graham, COG Water Resources Program Director, adoption of the I & T Project by the four Anacostia signatory jurisdictions has given the AWRC a collective focus and has resulted in a cohesive vision of where the watershed restoration program is and should be headed. It has also provided the individual jurisdictions with a means of defining their annual programs and will help restoration leaders to communicate their needs to local elected officials and outside funding agencies.

In an effort to simplify the annual reporting of restoration progress and to more effectively inform stakeholders and the public at large, the Anacostia Restoration Potential Workgroup (ARPW) was

convened to coordinate both the implementation and the reporting of the progress toward the 2010 targets. The ARPW and COG developed an annual reporting process that features a detailed annual report designed to provide Anacostia stakeholders with a timely and user-friendly appraisal of Anacostia watershed restoration progress and a two-page Anacostia watershed restoration progress summary sheet with dashboard-like gauges intended to convey annual and overall restoration progress 'at a glance' for each of the six goals.



PART OF THE I & T PROJECT, THE 2001 ANNUAL REPORT WILL HELP TO KEEP ANACOSTIA WATERSHED RESIDENTS BETTER INFORMED ABOUT THE RESTORATION

Ms. Linda Howard, Executive Director of the Summit Fund of Washington, which funded the project, remarked that the two-year I & T process was a challenging one. She added, however, that it was also enormously satisfying and that she hoped that the Annual Report would grab the attention of readers and inform and inspire those outside of the process.

The signatories will reconvene in the fall of 2003 and biennially thereafter to celebrate and assess restoration progress. In the meantime, the AWRC will review and assess both progress and the system by which it is measured, and will make adjustments to the indicators and targets, where warranted.

Teaming Up to Take Out the Trash

Among the recommendations in the recently completed Maryland Department of the Environment (MDE) Anacostia Watershed Trash Reduction Plan is the increased use of innovative technologies to remove trash from the Anacostia River and its tributaries and, more importantly, to prevent its entry in the first place. Consequently, the State of Maryland, Montgomery County, Prince George's County and the District of Columbia are considering a variety of trash collection systems for use throughout the Anacostia watershed.

One promising approach involves the use of in-line and end-of-pipe devices to capture trash conveyed by either separate or combined sewer and stormwater systems. To remove trash from water pumped over the floodway levee system and into the tidal river, the Prince George's County Department of Environmental Resources (PGDER), in partnership with MDE, recently installed an automated trash screening system at the Department of Public Works' Colmar Manor Waterfront Park Pumping Station.

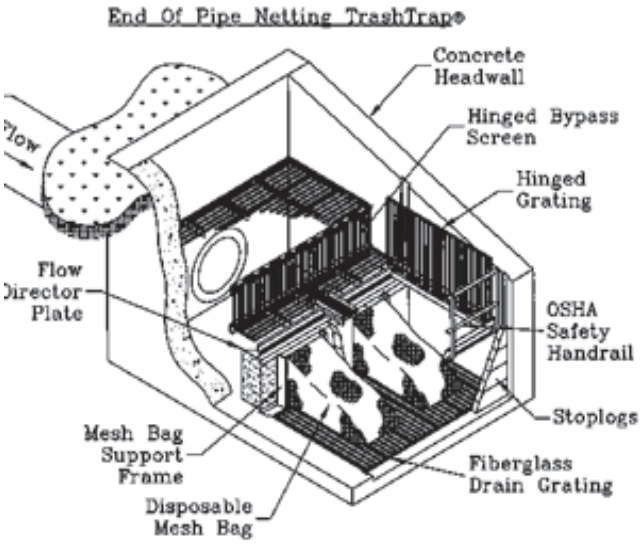
PGDER oversaw the installation process, which was completed last August following extensive modifications to the existing facility. According to Mr. Dan Rybak, PGDER Capital Projects Section Head, the facility features two automated trash screens at two inflow areas and is the first of its kind in the Anacostia watershed. He explained that the system is working as planned, but that extended dry weather conditions following the installation had resulted in limited flows and, therefore, in abnormally low trash levels. Although more complete trash removal data will be available only after a year of normal rainfall, the system has already removed between four to six tons of trash.

MDE TMDL Coordinator, Mr. Steve Bieber expressed enthusiasm for his agency's support for the project, which included a one-time allotment of $362,000, and indicated that this system may be the first of many in the watershed. Mr. Rybak confirmed this, noting that

THE RECENTLY INSTALLED AUTOMATED TRASH REMOVAL SYSTEM AT THE COLMAR MANOR PUMP STATION

his agency is considering installing trash removal systems at up to six additional Anacostia floodway pumping stations and that it is already at work on a similar automated system at a neighboring site near the Bladensburg Waterfront Park. Construction is scheduled for completion in November 2002 at a projected cost of $385,000.

Ms. Meg Andrews, a Planner with the Maryland Department of Transportation (MDOT), described yet another trash removal system planned for installation at a storm drain outfall in the Landover Knolls subdivision that drains approximately 70 acres of Prince George's County roadways and flows into Lower Beaverdam Creek. Unlike the pump station designs, this system would be affixed to the end of the outfall pipe and would utilize removable nets similar to those in use at the DC-WASA floating netting system at CSO 018. Work on this system is expected to be completed in the fall of 2002 with a $100,000 grant from MDOT. PGDER will assume operation and maintenance responsibilities.



A TYPICAL FRESH CREEKS END-OF-PIPE NETTING SYSTEM SUCH AS THAT PLANNED FOR LOWER BEAVERDAM CREEK

THE PLANNED NETTING SYSTEM WOULD REDUCE TRASH ACCUMULATIONS LIKE THIS ONE IN LOWER BEAVERDAM CREEK

Making the Grade: The AWRC/University of Maryland Partnership Agreement

Last year *Anacostia Currents* reported on efforts to improve environmental conditions on the University of Maryland's College Park (UMCP) campus. That goal and the UMCP/AWRC relationship were formalized through the adoption of the Partnership Agreement on March 13, 2002. In an interview for this issue, Dr. Bill Destler, University of Maryland Provost and Senior VP of Academic Affairs, remarked that he is pleased with the level of progress and that, despite initial delays, the timing of the agreement couldn't be better. His comment referred to the recent adoption of the campus' aggressive and environmentally sensitive facilities master plan for the next 10 years.

UNIVERSITY OF MARYLAND PRESIDENT CLAYTON MOTE AND AWRC REPRESENTATIVE CAMERON WIEGAND AFTER SIGNING THE UMCP/AWRC PARTNER-

According to Dr. Destler, University leaders are already making campus planning and construction decisions based on the facilities master plan that are consistent with the AWRC's restoration goals for the watershed. He added, however, that the University will need all the help it can get in its effort to improve environmental conditions on campus.

AWRC Chair, Ms. Catherine Rappe, commented that the Agreement provides a unique opportunity for a prominent landowner in the Anacostia Watershed to share in developing a better understanding of the effects of land use changes on water quality and habitat through supportive research. She suggested that this knowledge can then be applied to reduce water quality impacts from the campus activities, evaluated through more studies, and promoted as educational tools for students and the community. According to Ms. Rappe, the coordination between the University and the AWRC will serve as a model for local watershed groups, colleges, and universities.

STREAM BANK EROSION ALONG CAMPUS CREEK, ONE OF SEVERAL SITES SCHEDULED FOR RESTORATION ON THE COLLEGE PARK CAMPUS

A new AWRC/UMCP subcommittee held its first quarterly meetings in July of this year, and plans are underway to replace two asphalt lots with green space and an athletic field, respectively. As a major landowner in the Anacostia watershed, the University also expects to benefit from a $1 million grant from EPA for Low Impact Development demonstration projects. At present, campus leaders are working with PGDER staff to plan several bioretention 'rain garden' systems to reduce stormwater runoff into Paint Branch.

"We are already beginning to see some of the fruits of the general concepts outlined in the agreement," said Destler. He added that the University and the AWRC have many mutual interests and expressed his hope that the relationship will help guide the University through the process of creating a more sustainable infrastructure on campus over the long term.

A PLANNED LID PROJECT WILL REDUCE ENVIRONMENTAL IMPACTS FROM THIS UNIVERSITY OF MARYLAND PARKING AREA

Restoring Montgomery County Streams: Interagency Partnerships Provide a Major Boost

There is an increasing recognition among the AWRC's member agencies that a greater level of coordination can lead to more effective and more environmentally

friendly stream restoration projects in the Anacostia watershed. Nowhere is this more evident than in the recent completion of a series of projects in Montgomery County's Paint Branch, Little Paint Branch, Northwest Branch and Sligo Creek watersheds. At a cost of approximately $5 million, the completed cost-share projects represented eight out of a total of nine identified under Phase I of the U.S. Army Corps of Engineers (USACE) Anacostia Watershed Restoration.

A ONCE DEGRADED SECTION OF THE PAINT BRANCH BEFORE AND AFTER A COOPERATIVE RESTORATION EFFORT

In genuine partnership, USACE played the lead role in project engineering design and construction management, while the Montgomery County Department of Environmental Protection (MCDEP) provided technical assistance in engineering and aquatic ecology, as well as biological monitoring and the local financial match. The Maryland-National Capital Park and Planning Commission (M-NCPPC), as owner and steward of the project sites, was involved in many aspects of the project and provided technical assistance in aquatic ecology. The Maryland Department of Natural Resources and Metropolitan Washington Council of Governments also provided additional technical review assistance in aquatic ecology and stream restoration techniques.

In describing an effort to reduce erosion and enhance stream habitat conditions along a 2.25-mile stretch of the Paint Branch between Fairland Road and US Route 29, Mr. Dan Harper MCDEP Senior Engineer, reported that project crews relied on a variety of restoration techniques and materials including vegetative stream bank stabilization, riparian reforestation, imbricated rip-rap, root wads, and embedded logs and boulders. He also explained that rip-rap and boulders were arranged to create gaps for fish habitat.

Other projects have helped to reduce the impacts of stormwater runoff. One of these, at Snowden's Mill, involved the retrofit of the existing stormwater management ponds to reduce impacts to Paint Branch by improving the control of stormwater flows from 211 acres of residential development. The retrofit design also included the replacement of concrete channels with baseflow by-pass pipes to enhance water quality and reduce thermal impacts to this unique cold water resource and its naturally reproducing brown trout population. Another project, also in the Paint Branch watershed, decreased stormwater flows and thermal impacts by diverting stomwater flows from a 2,000-foot segment of the Gum Springs tributary. The reduction in stream temperatures during the summer

SNOWDENS MILL STORMWATER MANAGEMENT FACILITY

months will serve to better protect an important trout spawning and nursery area. Water quality in the Little Paint Branch watershed has similarly benefited from recent enhancements to the Tanglewood Stormwater Management Facility through the control of stormwater flows from a 54-acre residential development.

Two restoration projects have also improved stream conditions in the Northwest Branch watershed. The first project, located downstream of Old Randolph Road, relied on the use of stone sills to reestablish channel meanders in this overly wide section of the stream. After removing debris and reestablishing the appropriate stream geometry, crews used vegetative streambank stabilization techniques and riparian reforestation to reduce erosion and enhance habitat

A COMPLETED PAINT BRANCH FISH PASSAGE PROJECT AT MAYDALE NATURE CENTER

along the one-mile of channel segment. The second project stabilized eroding streambanks and outfalls and created amphibian habitat along a tributary near the end of Lockridge Drive.

While numerous projects completed since the late 1980's have greatly improved conditions in Sligo Creek, a recently completed project stabilized approximately 1,000 feet of streambank and will help reduce erosion caused by accelerated storm flows and enhance stream habitat. According to Mr. Dan Harper, all of these projects utilized low impact construction techniques including the use of either wooden mats or a thick layer of wood mulch on access paths and special, low ground pressure construction equipment designed to minimize impacts to tree roots and park infrastructure such as hiker-biker trails. Going one step further, mature trees were encased in wooden planks to protect them from damage by equipment.

Ms. Claire O'Neill, USACE Project Manager described the projects, which together are responsible for the restoration of nearly 4 miles of stream channel, and the addition of stormwater controls for 250 acres, as the product of real cooperation among federal, state, and county agencies. She added that it has been a wonderful opportunity to work in close collaboration with Montgomery County and explained that the Corps relied on local knowledge to a far greater extent than on any of its previous Anacostia projects. In her opinion, it proved to be a highly satisfying and productive way to work.

Montgomery County has completed a total of 22 restoration projects in the Anacostia watershed to date, and has 30 more projects under design. It should be noted that, for the majority of these projects, DEP assumed the lead role in both project engineering design and construction management. DEP staff also plan to begin work on Northwest Branch Phase II, Section 206 projects at 11 additional sites in 2003.

Bringing Buried District of Columbia Streams to Light?

Lower Anacostia Park and Fort Dupont represent critical green space within the District of Columbia's portion of the Anacostia watershed. To enhance these areas and the Anacostia tributaries that flow through them, the U.S. Army Corps of Engineers (USACE), in partnership with National Park Service (NPS) and the District of Columbia Department of Health/Environmental Health Administration (DC-DOH/EHA) is developing restoration plans for Pope Branch and the lower end of Anacostia Park and the Fort Dupont tributary.

Since it was diverted into pipes to accommodate development, the downstream end of Pope Branch has flowed beneath an open field in lower Anacostia Park.

UNDER THE CURRENT PLAN, LOWER POPE BRANCH, WHICH CURRENTLY FLOWS BENEATH THIS SECTION OF ANACOSTIA PARK, WILL ONCE AGAIN MEANDER THROUGH AN OPEN CHANNEL

This has effectively prevented movement by resident and migratory fishes between the tidal river and most of Pope Branch. Meanwhile, the upstream portion of the tributary has become severely degraded as a result of the combination of decades of uncontrolled stormwater runoff and intermittent leaks from the subwatershed's aging sewer line system. To reverse some of this development-related damage, USACE staff began work on a restoration feasibility study in early 2001 and are currently developing a restoration plan with input from DC-DOH/EHA, the National Park Service (NPS), and COG. The project will likely include the 'daylighting' (i.e., the removal from pipes) of approximately 1,200 feet of lower Pope Branch, the creation of wetlands and riparian buffers, and the stabilization of both the streambanks and channel in the upper sections of the creek. Construction on the project could be completed as early as September 2003 at a projected cost of approximately $3.5 million.

Mr. Stephen Syphax of NPS National Capital Parks-East expressed enthusiasm for stream daylighting projects on NPS land. He described one scenario under consideration in which lower Pope Branch would be rerouted into the lower end of the neighboring Fort Dupont tributary. This would eliminate the need to make major changes to existing Anacostia River Park infrastructure, while allowing for the creation of wetlands and providing fish and wildlife habitat without impacting the recreational uses of the park. Mr. Syphax added that the proposed project, which represents the first attempt to daylight an Anacostia stream, could serve as a model for other daylighting projects throughout the watershed.

The goal of the planned Fort Dupont restoration project is to restore in-stream habitat and flow conditions in the Fort Dupont tributary by redirecting stormwater flow in the headwaters and daylighting tidal portions of the stream as it enters the Anacostia River. Initial studies were completed by the U.S. Geological Survey (USGS) and COG. The USACE is responsible for final restoration designs and implementation, with project funding from USACE, USGS, and EPA. According to Mr. Steven Kopecky, USACE Project Manager, the Fort Dupont restoration project would daylight approximately 1,500 feet of piped stream channel, while enhancing fish habitat and adding significant forest cover. The project may also allow for the creation of a small amount of wetlands. Construction could begin as early as summer 2003, with an estimated completion cost of $3.5 - $4 million.

Another project, which is just getting underway, would restore the Fort Chaplin tributary by stabilizing the

CONCEPTUAL SITE PLAN FOR LOWER POPE BRANCH AT LOWER ANACOSTIA PARK

stream banks and reducing amount of sediment entering the stream. This project would be implemented after the restoration of Fort Dupont. The USACE is currently conducting a feasibility study of the stream to determine design options. Federal and District of Columbia funding would be used for the project.

When asked about the decision to restore these streams, Mr. Kopecky was quick to point out that they

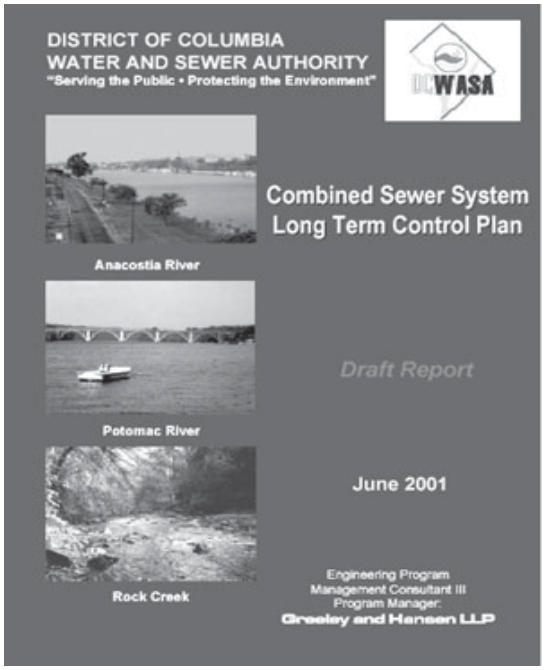
are among the best Anacostia tributaries in the District of Columbia and that their restoration will help to restore the ecological integrity of the Anacostia River.

The CSS Long Term Control Plan - Setting the Stage for a Cleaner Anacostia

The District of Columbia Water and Sewer Authority (WASA), which provides wastewater collection and wastewater treatment services for the District and portions of Maryland and Virginia has developed a Long Term Control Plan (LTCP) for its Combined Sewer System (CSS). The LTCP seeks to control Combined Sewer Overflows (CSO) and to improve the quality of the Anacostia and Potomac Rivers and Rock Creek in compliance with the District's National Pollutant Discharge Elimination System (NPDES) permit.

A draft version of the LTCP was released in June 2001, following a three-year study and an extensive public review process. It features detailed recommendations for the implementation of Low Impact Development-Retrofit (LID-R) projects at some WASA facilities and throughout the District. It also calls for the rehabilitation of pumping stations and the excavation of four large CSO storage tunnels with a combined capacity of approximately 127 million gallons to capture CSOs during rain events and hold it underground. During dry weather, the captured CSO would be pumped to Blue Plains for treatment.

The LTCP meets or exceeds EPA guidelines for both the number of overflow events and the percentage of combined sewage that is captured for treatment. It also provides for a significant improvement in water quality, while balancing these important benefits with rate payer affordability. Under the plan, there would be a 92 percent reduction in overall CSO volumes, and possibly a 97 percent reduction in the number of Anacostia CSO events (i.e., from the current average of 75 per year to 4 per year). The number of days that CSOs contribute to high bacteria levels in the Anacostia River would be reduced from about 92 to about 15 days per year. Of those 15 days, only eight are anticipated to occur during the spring-fall recreational use period. The estimated cost for the construction program is $1.05 billion, with implementation expected to take place over approximately 15 to 20 years. WASA is seeking significant federal support



THE DRAFT LONG TERM CONTROL PLAN WAS RELEASED FOR PUBLIC COMMENT AND REVIEW IN JUNE 2001

DC-WASA AND COG INSTALLED RAIN BARRELS LIKE THIS ONE AT A NUMBER OF RESIDENCES IN THE CSO PORTION OF THE WATERSHED

to assist it in implementing the LTCP.

Dr. Mohsin Siddique, WASA CSO Control Projects Program Manager, cautions that although CSO control will improve water quality, the river will still fall short of the Federal Clean Water Act 'fishable and swimmable' goal. The results of the extensive public review of the draft LTCP indicate that there is strong support for reducing CSO flows by up to 97%. This could be accomplished by enlarging the planned storage tunnels, but according to WASA staff the additional costs would be extremely high. The final LTCP is scheduled for release by the end of summer 2002.

In meeting the requirements of the LTCP, DC-WASA and the Council of Governments recently completed a year-long rooftop surface analysis and rain barrel demonstration project. The project's major objectives included the calculation of aggregate and individual surface areas of all rooftops in the CSO portion of the District of Columbia, the estimation of the volume of rooftop runoff resulting from a range of rainfall events, and an evaluation of rain barrels as a possible means of detaining runoff from the stormwater system and thus, reducing CSO flows.

The rooftop analysis identified a total combined rooftop area of approximately 2,898 acres in the CSO portion of the District of Columbia. Approximately 1,490 of these rooftop acres drain to the Anacostia River. The analysis also categorized rooftop types and yielded information useful in considering alternative means for managing runoff from rooftop areas, which account for a significant portion of impervious surface in the District.

While the cost effectiveness of rain barrels as an integral part of the LTCP stormwater volume control remains somewhat questionable due to the large number of barrels required, results from this study indicate that they can play a role in increasing awareness about both the CSO problem and the need for stormwater management in the city.

Sligo Creek: A Stream with Many New Friends

Now nearly two years old, the Friends of Sligo Creek (FOSC) has a seven member board of directors, 501(c)3 non-profit status, and a dedicated following of over 200 members and supporters. According to Ms. Sally Gagne, the group's president, FOSC members have chosen to focus on seven key issues in their work on the creek. These include litter, invasive plant removal, replanting native plants, bank erosion, outreach and education for improved stormwater management, water quality, and natural history/ecology.

FOSC members plan to complete a stream mapping project to identify serious cases of erosion, large stands of invasive plants, and other problems before the end of the year. The group is currently working with Ms. Carole Bergmann, M-NCPPC Forest Ecologist, to remove Japanese Knotweed and Kudzu from Sligo stream valley parks. It is also planning an annual Sweep the Creek stream clean up event to be held on September 14th. The event will mark the group's first attempt to remove all of the litter from Sligo Creek in one day, while also helping to raise awareness about the trash problem and watershed restoration needs.

In addition to working in and around the creek itself, FOSC members have become increasingly active in

SALLY GAGNE (LEFT) AND LAURA MOL REMOVE INVASIVE PLANTS DURING A RECENT FOSC EVENT ALONG SLIGO CREEK

environmental advocacy, and often attend city council and planning board meetings, teaming up with other groups to bring attention to such problems as invasive plants, park maintenance, and environmentally damaging road projects.

FRIENDS OF SLIGO CREEK GATHER TO LEARN ABOUT AND PROTECT THE STREAM

Ms. Gagne described the group's formation as a slow and energy intensive process, "Initially, a lot of energy went into determining what issues people have in common, but later it became possible to focus energies." One thing that has become clear to the group's leaders is that that people are most likely to get involved in or near their neighborhoods. As a result, the group now has stream stewards living in nearly every part of the watershed. These individuals are supported by other members with specific interests and areas of expertise. She explained that getting this coverage has not been easy, but that it's extremely important to try to get groups going in every subwatershed, and making that point at every watershed event is a good way to raise awareness that the need exists. "It can be very time consuming," she added, "but the rewards can be great."

Mr. Gary King, watershed resident and Student Conservation Association Regional Director, remarked that he is thrilled to be one of FOSC's seven-member board of directors. In his words, "The group already had a good vision for the watershed, but now, with an active board, growing membership, and 501(c)3 non-profit status, it is poised to pursue grants and to make a real difference."

The Friends of Sligo Creek meet once a month for most of the year at the Long Branch Community Center in Silver Spring. For additional information visit www.fosc.org.

Tackling the Toxics Problem

Historically, many industries were based along the banks of the Anacostia River. Over the years, hazardous substances from these industries and other human activities were either discharged directly or were washed into the river by rain. This has resulted in significant sedimentation and elevated concentrations of polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), lead and other trace elements, and pesticides in river sediments that pose serious risks to both humans and aquatic organisms. Today, these and other contaminants continue to enter the river through uncontrolled stormwater runoff and regular discharges from the District of Columbia's Combined Sewer System. Due in part to the extent of sediment contamination, the Anacostia River was designated as one of three Areas of Concern within the Chesapeake Bay Region by the Chesapeake Bay Program.

The need to identify and control the numerous sources of contamination throughout the watershed led to the formation, in 1999, of the Anacostia Watershed Toxics Alliance (AWTA), a public-private partnership with members from federal regulatory and resource agencies, state and local environmental agencies, industry, and academia. Since its inception, AWTA has worked on an increasingly close basis with the AWRC to address the problem of widespread sediment contamination in the tidal Anacostia River. More recently, AWTA and the AWRC

DREDGING OPERATIONS, WHILE NEEDED TO MAINTAIN CHANNEL DEPTH, CAN RELEASE LONG BURIED TOXICS FROM RIVER SEDIMENTS

began work on a contaminated sediment management strategy for the Anacostia River Watershed. The document, *Charting a Course Toward Restoration: A Contaminated Sediment Management Plan*, represents a critical first step toward addressing the toxics problem through implementation of a suite of potential source reduction and sediment remediation measures in a regionally supported, systematic, and fundable manner.

Consistent with EPA's eleven management principles for contaminated sediment management, the Management Plan seeks to identify and quantitatively assess risks from toxic contaminants in the Anacostia River, to reduce risks to levels that are safe for humans and aquatic life, and to build effective partnerships, encourage public input, and promote effective restoration of the entire Anacostia watershed. It features descriptions of the nature and extent of the toxics problem, a comprehensive toxics load reduction and sediment remediation approach for both Anacostia tributaries and the tidal river, and preliminary costs estimates for the various management alternatives.

The Management Plan also features the results of a baseline ecological and human health risk assessment. This was based upon existing data and information and was completed after AWTA's first year. Another study, completed in 2001, sought to fill data gaps, develop predictive hydrodynamic models of the river, perform risk assessments, and identify potential remedies to address identified risks. The final phase involves the design and implementation of remedial actions such as source control and wetland restoration to effect restoration of the river. It also seeks to recommend effective potential monitoring

MEASURES SUCH AS THE CONSTRUCTION OF A REACTIVE CAP SHOULD GREATLY REDUCE THE MOVEMENT OF TOXINS FROM RIVERBED SEDIMENTS INTO THE WATER COLUMN

REDUCING TOXICS WILL HELP TO ENHANCE RECREATIONAL OPPORTUNITIES AND IMPROVE BOTH FISH AND WILDLIFE HABITAT ALONG THE TIDAL RIVER

strategies, and to notify appropriate authorities of environmental conditions that are degrading river quality. Although sewer repairs, constructed sand filters, protective caps over former disposal sites, and the removal of contaminants and contaminated soil have already reduced toxics levels along many parts of the river shoreline, it will take significant expenditures over many years to return the Anacostia to a healthy condition. The total projected cost of monitoring and restoring the Anacostia River to its beneficial use as defined by the 2010 goals of the December 3, 2001 Anacostia Watershed Restoration Agreement is approximately $206 million. This amount will largely cover the remediation of hot spots, and will fund efforts to address contaminated outfalls and tributaries discharging into the river, as well as investigations to identify ongoing releases. It will also be used to enhance trash removal operations, to implement various stormwater management projects including LID, stream restoration, wetland creation, and riparian reforestation to reduce contaminant and sediment loadings to the river and its watershed, and to monitor the river to determine the effectiveness of the remediation efforts.

Both AWTA and AWRC members have contributed data and text for incorporation into the Management Plan and, to ensure high quality, both internal and external reviews have been conducted by a number of individuals and by groups such as the Anacostia Watershed Society (AWS). As envisioned, the 150-page Management Plan will be finalized and distributed to the general public by the fall of 2002. A follow up feasibility plan providing detailed, specific implementation measures and initiatives is also

planned. In commenting on the restoration partners' collective vision, AWTA representative Mr. Nick DiNardo remarked that, "Thanks to the combined efforts of AWRC and AWTA members and many others, the watershed is on its way to being restored to a valuable natural resource for the community."

Future Forests -Making the Anacostia a Little Greener

Planting trees along the Anacostia River and its tributaries can provide a variety of benefits to streams and local communities. In addition to their beauty, trees help to maintain stream channel width and structure, trap nutrients, provide food and habitat for wildlife, maintain cool stream temperatures, and keep neighborhoods cool. While forests once blanketed nearly the entire watershed, riparian and

VOLUNTEERS ASSIST ANACOSTIA AGENCIES IN A TREE PLANTING NEAR GUM SPRINGS (PAINT BRANCH)

upland forest cover is currently inadequate to maintain healthy communities in many Anacostia tributaries. In response, Goal 5 of the 2001 Anacostia Watershed Restoration Agreement calls for the expansion of forest cover to improve the ecological health of the watershed. Although Anacostia riparian forest buffer width criteria are still under development, Anacostia agencies and residents will have to plant an additional 12 miles (approximately 45 acres) of forested riparian buffers to achieve the recently adopted 2010 target. The AWRC and its Restoration Potential Workgroup are currently working to develop a Forest Management Protection Strategy for the watershed by the end of 2002. It is expected that the Plan will seek to identify, prioritize, and protect the larger remaining mature hardwood forest tracts and to expand "corridor" connections between upland and riparian forest areas to reduce habitat fragmentation in the watershed.

In the meantime, the AWRC's member agencies and affiliates, environmental groups and thousands of watershed residents have been busy planting thousands of native trees and shrubs in environmentally sensitive areas throughout the watershed. According to Dr. Anne Hairston-Strang, Maryland Department of Natural Resources (DNR) Forest Hydrologist, last November, MDDNR and COG, in partnership with the Beltsville Agricultural Research Center (BARC), planted approximately 1,000 trees and shrubs as part of a two-acre Little Paint Branch reforestation project. This project, along with smaller tree planting efforts along the Northeast Branch and Gum Springs in October and November, respectively, resulted in the reforestation of approximately three acres.

This spring, with assistance from BARC, MDDNR, and local volunteers, COG staff planted 1,360 trees and shrubs along both the Little Paint Branch mainstem and two smaller tributaries located on the Beltsville Agricultural Research Center. COG staff also augured a total of 606 holes for riparian and upland reforestation at Layhill Park on the Northwest Branch and near the Gum Springs tributary of Paint Branch. M-NCPPC Forest Ecologist Ms. Carole Bergmann, coordinated the Northwest Branch riparian reforestation project with COG. That site was one of six M-NCCPC planting sites this year. Since 1998, her agency has planted nearly 6,500 native trees and shrubs along or near Anacostia streams.

COG AND BELTSVILLE AGRICULTURAL RESEARCH CENTER STAFF AUGUR TREE HOLES NEAR LITTLE PAINT BRANCH

Anacostia Currents is published on behalf of the Anacostia Watershed Restoration Committee (AWRC) by the Metropolitan Washington Council of Governments (COG). Current AWRC members are:

District of Columbia
Jim Collier
Department of Health/Environmental Health Admin.
Mike Marcotte
Water and Sewer Authority

Montgomery County
Cameron Wiegand
Department of Environmental Protection

Prince George's County
Larry Coffman
Department of Environmental Resources

State of Maryland
Steve Bieber
Department of the Environment
Catherine Rappe
Department of Natural Resources

U.S. Army Corps of Engineers
Wes Coleman
Baltimore District, Planning Division

U.S. Environmental Protection Agency
Patricia Gleason
EPA Region III
Garrison Miller
EPA Region III

National Park Service
John Hale
National Capital Parks - East

Issues of *Anacostia Currents* are distributed free to members of the AWRC and to the public. For more information, please call or write to the Department of Environmental Programs at (202) 962-3200 or 777 N. Capitol St., N.E., Suite 300, Washington, D.C. 20002.
Visit our website at www.anacostia.net
This issue was written and designed by Peter Guillozet and John Galli.

Thanks for your help!

The success of the Anacostia watershed restoration has long depended upon the contributions of many. Since the very beginning, watershed residents have played an important role in bolstering the efforts of government agencies while also leaving their own distinctive mark on the restoration project. We wish to thank the following organizations for their valuable contributions.

Alliance for the Chesapeake Bay
Anacostia River Yacht Clubs Association
Anacostia Watershed Society
Audubon Naturalist Society
Chesapeake Bay Foundation
Citizens to Conserve and Restore Indian Creek
Concerned Citizens for a Cleaner County (Prince George's County)
Coalition for the Metropolitan Branch Trail
D.C. Cares
D.C. Environmental Education Consortium
Earth Conservation Corps
Eyes of Paint Branch
Friends of Northwest Branch
Friends of Sligo Creek
Greater Colesville Citizens Association
Greenpeace
Greenbelt Greens
Green Democrats
Hyattsville Organization for a Positive Environment
Izaak Walton League
Lower Beaverdam Task Force
Maryland Committee for a Better Environment
Montgomery County Conservation Corps
Pope Branch Citizens
Prince George's County Stream Teams
Seafarer's Yacht Club
Sierra Club/Sierra Student Coalition
Student Conservation Association
Summit Fund of Washington
Trout Unlimited (Potomac-Patuxent Chapter)

ANACOSTIA WATERSHED RESTORATION COMMITTEE
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E., Suite 300
Washington, D.C. 20002-4239