

South Platte River Program Notes

by
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South Platte River Program's 15-Year Anniversary

In 1986 the Colorado Legislature created a special revenue fund for the District for the maintenance and improvements of the South Platte River within its boundaries. Except for jurisdictions within Boulder County, because they are within the Boulder Creek watershed, all properties within the District contribute funds to support this program. In response, the District's Board adopted policies that established the way the program operates along functional lines. There are three primary sub-programs: (1) Maintenance, (2) Capital and (3) Co-operative.

Maintenance activities can be paid for 100% by the District and are divided into two categories: routine and restorative. Routine maintenance assists local jurisdictions with activities such as trash pickup within the river's channel and immediate overbanks, weed and noxious plant control, dead and invasive tree removal and replacement with native species, revegetation of the corridor with native species of grasses and shrubs, repair of minor erosion problems and other types of routine maintenance activities.

Restorative maintenance includes more structural efforts such as restoration and stabilization of trashed out or eroded banks, installation of low (i.e., boater and fish passage friendly) grade control structures when evidence shows a need for them, buttressing of utilities where the river channel has degraded and threatens their loss, repair of recreational trails that also serve as maintenance access, etc.

Capital projects help local governments with major river improvements and with the acquisition of the floodplain to preserve open spaces along the river. District will pay up to 75% of these project costs when funds are available.

The co-operative program helps private property owners with the river

restoration activities, similar to what the District does with restorative maintenance for local governments. It does require a minimum of a 25% match of the total project cost by the property owner, but will credit the owner for the value of a flowage and maintenance easement turned over to the District as part of the project.

Since the program's inception, most of the District resources have been spent on routine and restorative maintenance. In recent years, however, a few capital projects have required considerable attention and funding. They included the widening of the river's corridor adjacent to Elitch Gardens; the reconstruction of Confluence Park including a much-improved whitewater boating and fish passage/aquatic habitat facility; restored river banks and enhanced terrestrial and aquatic habitat through the Globeville neighborhood; and the currently on-going Corps of Engineers projects. The District could not have been involved with them without the initiative of our local government partners.

The last 15 years have been very productive and much has been accomplished. Although it is not possible to fully restore the river to what it was before urbanization occurred in this region, much has been done to improve its ecology and functions.

Maintenance Activities

Routine Maintenance

In 2001 the South Platte River routine maintenance included an equivalent of

- 9.1 miles of tree trimming and pruning along the river trail,
- 3.6 acres of string trimming at access ramps and rest areas,
- 78 miles of trail edge mowing, and
- 192 miles of trash and debris pickup and removal along the river.

A total of 170 truckloads of trash and debris were removed from the river and taken to landfills. We continue to study statistical data pertaining to trash and debris accumulation patterns gathered

over the past five years, and in 2002 we will further tailor our removal program to maximize results.

For the fifth consecutive year we participated in the Greenway Foundation's annual NIMBY Fest volunteer trash pickup, during which an additional 51 cubic yards of trash were removed. In addition, government personnel and volunteer groups picked up and removed trash from the river corridor throughout the year. Unfortunately, we do not have an estimate of the volume removed by them. Trash is also regularly removed from trash receptacles maintained by park personnel along recreational trails.

Routine maintenance continues to be the most cost effective program in terms of environmental enhancement and public service. Without it, the trash along and in the river would accumulate. Since its inception under the South Platte River Program, the Routine Maintenance Program now handles more than twice the number of trash pickups, trail mowings and invasive weed control activities than we did 15 years ago. At this level of activity we find the river corridor needs are addressed quite well.

Removal of Undesirable Plant Species.

In 2001 the Routine Maintenance Program continued to work with local government agencies to control infestations of non-native and undesirable tree species along the river. In the City of Brighton's Morgan Smith nature area we removed 100 Russian Olive trees and planted 200 shrubs and bushes. Working with the South Suburban Park and Recreation District and the City of Littleton, we removed 200 Russian Olives from the riverbanks in South Platte Park. In addition, we removed 160 Siberian Elms and Russian Olives in Denver County. The removal of invasive non-native trees provides the opportunity for native cottonwoods, box elders, willows, and others to become established. These natives in turn

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provide better habitat for wildlife native to this region. After removal of undesirable species, we replant these areas with the species mentioned above.

An area of growing concern is invasive noxious weeds. These weeds threaten habitat, decrease the value of infested lands and hamper public use. With the adoption of an integrated approach to noxious weed management, the Routine Maintenance Program is better equipped to deal with invasive weed species. Our methods include weed mowing, hand pulling and selective use of approved herbicides. Our relationship with various county weed managers allows us to coordinate our efforts in order to maximize the public benefit from our activities.

Restoration Maintenance

In 2001, the Restoration Maintenance Program had a busy year. In addition to typical stabilizing, rehabilitating, and revegetating riverbanks, the District continued to assist local governments with maintaining the recreation trail used by the District for maintenance access. This year, over 3000 feet of badly eroded riverbanks were restored and stabilized with buried riprap. The slopes were revegetated with native grass, shrubs, willows, and cottonwood trees. Over the years we have found this type of combined hard and soft treatment to be very successful in both urban and rural areas. In most instances there is little or no evidence of underlying riprap once the vegetation matures and it does add to the aquatic habitat diversity when it is under the water surface.

One project of special note involved a breached river levee in Adams County. On Saturday, May 5th, a flow of approximately 6,500 cubic feet per second breached a riverbank levee adjacent to a sand and gravel operation near 120th Avenue extended. The breach was first reported to the District on Monday morning. An assessment was made later that day and on Tuesday, a District restoration contractor was mobilized to repair the breach. Thanks to the watchful eye of river property

owners, and the ability for the District to hire on-call contractors, potentially major river degradation and bank erosion was prevented.

Unfortunately the over-bank side channel area downstream of the breach experienced severe vertical and lateral erosion resulting in the loss of wetlands and other valuable wildlife habitat features within and adjacent to conservation areas. The District is now working with property owners, Adams County Parks, Commerce City, U.S. Army Corps of Engineers, LaFarge/Mobile Premix Concrete Company, Denver Water Department and others to restore and stabilize the damaged areas.

In 2002 the program will include the following rehabilitative projects:

- Reconstruction of the Gardener's Diversion Dam just upstream of the York Street bridge in Adams County.
- Construction of a boulder grade control structure upstream of 120th Avenue.
- Construction of a boulder grade control structure at the Henderson flow gauge near 123rd Avenue.
- Extension of the river recreation/maintenance trail northward below 104th Avenue.
- Construction of a boulder grade control structure and old bridge pier removal at 16th Street in Denver.

Cooperative Projects with Private Property Owners

Cooperative projects are constructed on flowage and maintenance access easements dedicated to the District by private property owners adjacent to the river in exchange for river restoration work. To date almost 550 acres of these easements have been dedicated, resulting in over 22 bank stabilization and riparian revegetation projects on these properties since 1988. In most cases, the local park departments use these easements for the construction of recreation trails which double as river maintenance access. No new cooperative projects were constructed this year, however, work leading to the acceptance of three more easement dedications was completed. Aggregate Industries, Inc. and Asphalt

Specialties, Inc. have both expressed an interest to work with the District in order to fulfill their bank restoration and stabilization requirements for mining within the South Platte River 100-year floodplain in Adams County.

The McIntosh Farm Company would like to clean up and stabilize the eroded bank along their property. This property was recently protected by a conservation easement held by Adams County. This easement will ensure the farm's 245 acres can never be developed, while allowing the family to retain ownership and maintain its dairy operation. We hope to complete these bank rehabilitations during 2002.

Capital Improvement Projects

Upper Central Platte Valley Project

The U.S. Army Corps of Engineers has completed a Feasibility Study of a river restoration project for the Sun Valley and Zuni Reaches, 12th Avenue to upstream of 8th Avenue. These two reaches are immediately upstream of the Colfax Reach (I-25 to 12th Avenue). Work should begin on final design this fiscal year. The District is assisting Denver, who is the official local sponsor, to fund the local match and is hopeful the U.S. Congress approves funds for the 2/3 Federal share to construct this \$15,000,000 project.

At this time the Corps is busy completing the river restoration improvements to the Colfax Reach of the river. This \$4,000,000 project has widened the river corridor through the acquisition of additional right-of-way and the demolition of one small building. When completed, river bank slopes will be much flatter (i.e., 3H:1V) than the 1.5H:1V before work began, creating significantly more terrestrial wildlife habitat. In addition, features such as small flow diversion jetties will provide for an improved aquatic habitat. We will be completed by March, 2002. In addition to improved aquatic and terrestrial habitat, other benefits of the Corps projects will include an improved flood carrying capacity, a trail that will no longer have a street level crossing, an open confluence with Weir Gulch

(currently it is blocked by a railroad spur embankment and a culvert) and a much improved river access for the Sun Valley neighborhood residents. This project has moved at a rate not seen for Corps projects in the past. The Omaha team, and especially the project manager Patrick Addison, have to be congratulated for this. They have

exhibited a phenomenal ability to get this project under way, to include all aspects of local participation in its design and to help get the needed Corps funding and approvals.

Adams County Master Plan Update

This project, completed by CDM, to update the South Platte River Major

Drainageway Master Plan through Adams County, is now completed. Adams County, the cities of Brighton, Thornton, Commerce City, South Adams County Water and Sanitation District and the Denver Water Department were the local sponsors.

Stormwater Permit Activities

by

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On March 10, 2003, all of the cities, counties, and special districts in Colorado that operate what are defined by regulation as “small municipal separate storm sewer systems” (Small MS4s) will be required to submit permit applications for coverage under the Colorado Discharge Permit System. There are about 40 cities, towns, and counties in the state with less than 100,000 population located within Census-defined “Urbanized areas.” Many of these municipalities are located within the UDFCD. In addition, there are a number of special districts within these jurisdictions that have drainage responsibilities (*i.e.* metropolitan districts; drainage districts; water and sanitation districts; etc.) also defined as small MS4s. Collectively, these entities are referred to as “Phase II” of EPA’s municipal stormwater control program. The District assisted its member governments in 2001 to prepare for Phase II permit applications, and will continue to do so as the March 2003 deadline approaches.

Phase II Regulations. EPA published the federal regulations for Phase II on December 8, 1999. The six (6) management programs (called “minimum control measures”) that must be implemented by an MS4 are: (1) Public education and outreach; (2) Public involvement/participation; (3) Illicit discharge detection and elimination; (4) Construction site runoff control; (5) Post-construction runoff management in new development and redevelopment; and, (6) Pollution prevention/good housekeeping for municipal operations. The EPA regulations also included additional “guidance” that was recommended for consideration by municipalities when

developing a proposed program. The state’s Attorney General determined that if this guidance was included in the Colorado regulations, it would be mandatory rather than discretionary. So, the guidance provisions were not included in the Colorado Discharge Permit System Regulations (5 CCR 1002-61) for Phase II adopted on January 8, 2001.

Guidance Document. A Municipal Workgroup of the Colorado Stormwater Task Force, chaired by UDFCD with participation by many of its member governments, decided that a separate guidance document published by the state would be helpful for preparing permit applications. The guidance has been customized for Colorado and includes descriptions of potential management program elements and methodologies. About 50 volunteers from around the state began in February 2001 to write this document, and it was completed in November and is posted on the Water Quality Control Division’s (WQCD) website at: www.cdphe.state.co.us/wq/PermitsUnit/wqcdpmt.html

General Permit. The next activity that will take place during 2002 will be development of general permits. The state plans to use two of these for Phase II. The first will be completed by July for construction sites between 1 and 5 acres, defined as an industrial category of stormwater discharges (sites greater than 5 acres have been regulated since 1992). The second is for small MS4s, planned for completion by December 2002. Cities and counties within the District will want to pay attention to these general permits, and participate in their development if possible, because

they will affect the ultimate outcome of permit application submittal requirements and compliance issues. The District will participate, and sponsor a number of meetings among member governments during the year to discuss these general permits, elements of management programs and the “measurable goals” that must be proposed in the MS4 general permit applications.

Phase I Municipalities. The cities of Denver, Aurora, and Lakewood are classified as “Phase I” MS4s and were issued permits by the WQCD in 1996. Their permits were for a 5-year permit term and expired on April 30, 2001. The three cities submitted permit renewal applications in October 2000, but as of the current date have not yet been reissued permits for a second term. In accordance with state regulations, they continue implementation under previous permit conditions.

The Phase I cities have fully implemented all of their permit requirements. These include those generally described above for Phase II, as well as an industrial inspection program and monitoring requirements. Arapahoe County, although required to submit a Phase I application in July 1997, received notice this year it will instead be permitted under Phase II. The District has coordinated a regional water-quality monitoring program on behalf of Denver, Aurora, Lakewood, and Arapahoe County. Under a cooperative agreement with the U.S. Geological Survey, a total of five sites have been sampled during runoff events for four years. The program is intended to assess long-term trends, and will also provide data for watershed planning.