



Community Tree Planting in Southwest Fresno



Volunteers fan out to plant 74 trees at the stormwater basin at Teilman and Nielsen Avenues on a September Saturday morning.

Trees, trees and more trees. Seventy-four trees now ring the 14.5-acre stormwater basin at the Freeway 99/180 interchange in southwest Fresno. Thanks to community volunteers, Tree Fresno and District staff, all of those trees were in the ground within three hours on Saturday, September 13, 2008.

Approximately 40 people, nearly half of whom were District staff, family, or Board members, came out to beautify the basin site. Tree Fresno provided volunteer coordination, instruction in proper tree planting, and tools such as shovels, stake pounders and hammers.



The stormwater basin is next to the Teilman Education Center, which was represented by Principal Nick Hustedde and his sons, Sean, 7 years; and Connor, 4 years (l).

The tree planting project was jointly funded by a State of California Environmental Enhancement and Mitigation Program and the District. Two more community plantings like this are planned for spring, one a little further west on Freeway 180 and the other at Ashlan and Peach Avenues.



This young woman and her son saw the planting going on as they drove by and stopped to help.

This tree planting project marks the 10th tree planting partnership between the District and Tree Fresno, and is part of the District's continuing efforts to beautify the stormwater basins throughout Clovis and Fresno.

Green and Beautiful

This is how the basin looks (below), six weeks after the community tree planting and the seeding of turf. The appearance of the completed basin is comparable to basins at Herndon and Maroa, and at Ashlan and Hughes Avenues.



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Message from the General Manager



Bob Van Wyk

This time of year the District gears up for the coming rain season and begins the transition from the dry season to winter operations. This transition takes about two weeks, about 600 man-hours to accomplish and ensures that urban and rural facilities are ready for whatever the weather brings.

Valves which control the inflow and outflow of water to basins are lubricated and exercised. Valves that connect Fresno Irrigation District's (FID) canal system to District basins are closed to prevent water from entering the basin system, thus preserving capacity needed to capture stormwater. Valves are opened that allow gravity-driven movement of water from one basin to the next one downstream so that water can be moved from basins reaching capacity to those downstream that still have storage available.

During large, extended storm events, Operations staff

will enter into round-the-clock emergency operations and two to three shifts work to monitor storm events, flood events, pumps, turn pumps on and off, service pumps, respond to drainage concerns from citizens, and monitor water levels at the urban drainage basins and rural flood control facilities (dams and reservoirs).

Winter operations also involve coordinating stormwater discharges and emergency operations procedures with other agencies. District staff routinely work with FID, the cities of Fresno and Clovis, the County of Fresno and sometimes Caltrans. Whatever it takes to get the job done – it's different every time.

Part of the District's mission is to keep water away from homes and businesses, and to prevent unsafe street conditions. Only during storms is it evident that the flood control system is at work, though staff work year-round to build and maintain storm drainage and flood control systems that protect the homes and businesses of Clovis and Fresno.



Director's Perspective

The next few issues of Flood Line will feature articles by each of the seven members of the District's Board of Directors. Directors are appointed for four-year terms; four are appointed by the City of Fresno, two by the County of Fresno, and one is appointed by the City of Clovis.

It is hard to believe that the District celebrated its 50-year anniversary in May of 2006. FMFCD was created on June 5, 1956 as a result of citizen effort, with the goal to control flooding and manage the flood, storm, and surface and groundwater resources of Fresno. The service area later included Clovis and some foothill areas, and has grown from its original size of 56 square-miles to a territory of approximately 400 square-miles.

The District has invested close to \$300,000,000 building the local stormwater drainage system. This value represents the actual cost at the time of construction, and does not reflect the current value of the system to the community.

I believe the primary responsibility of the District is to safeguard and enhance this enormous investment that has contributed greatly to the economic vitality of the Fresno-Clovis metropolitan area by helping to provide basic infrastructure, including the planned local drainage facilities.

The District also strives to improve the quality of life in our area by working with other entities to provide more green space and recreational areas, such as baseball fields and playgrounds by utilizing some District facilities.

The District is also a leader in effective water conservation programs. It is extremely crucial to retain stormwater runoff for groundwater recharge. We need to work diligently to expand the system to increase its water conservation capabilities.

But it is obvious that none of the District's achievements could have been reached without a well-motivated, positive workforce to carry out the policies established by the Board.

Now that 50 years of dedicated service to the community are behind us, the District looks forward to continuing its mission to provide the highest level of service to the community and I am very proud of being part of this service.



*Director
Mike Rastegar
represents the
City of Fresno*



Engineering Firms Receive Industry Honor

Two local consulting engineer firms have received the American Society of Civil Engineers “Outstanding Civil Engineering Project for 2008” award for their work on the District's Fancher Creek Detention Basin Project. The Project, a 273-acre stormwater detention facility, is the first line of defense against damage to homes, businesses and farms from floodwaters that can overflow local waterways which run through heavily populated areas of Fresno.

BSK Associates handled geotechnical engineering and Blair, Church and Flynn Engineers handled civil design engineering. The basin was designed at a 30-day, 200-year storm protection level, which means the basin can handle storm runoff from major storms which have a 0.5% probability of occurring in any given year.

Criteria used to determine a project's worthiness for the award included its impact on society, special design issues, engineering complexity of the project, and whether



Resolutions of Appreciation - District Board Chairman Richard Welton presents resolutions of appreciation to Hugo Kevorkian of BSK Associates (l) and to David Mowry of Blair, Church & Flynn Engineers.

the project was completed on time and within budget. The ASCE determined the project met all criteria.

The District Board of Directors recognized this honor by giving an honor of its own, presentation of signed and framed resolutions of appreciation presented to BSK Associates and Blair, Church & Flynn Engineering (shown above).

Street Improvements Address Citizen Concerns



Getting the job done - Paul H. Garcia (standing, L) and City of Fresno Street Maintenance staff on Florence Ave.

In May of 2005, Mr. Paul H. Garcia, President of the Concerned Citizens of Calwa (CCC) neighborhood advocacy group, came before the Flood Control District's Board of Directors. He described the lack of curb and gutter and the poor condition of Florence Avenue in front of the stormwater basin across the street from Calwa Park.

Mr. Garcia told the Board the street had become a magnet for the illegal dumping of trash. He and the CCC believed street improvements would make the area look more finished and clean, and would discourage people from dumping their trash and old furniture.

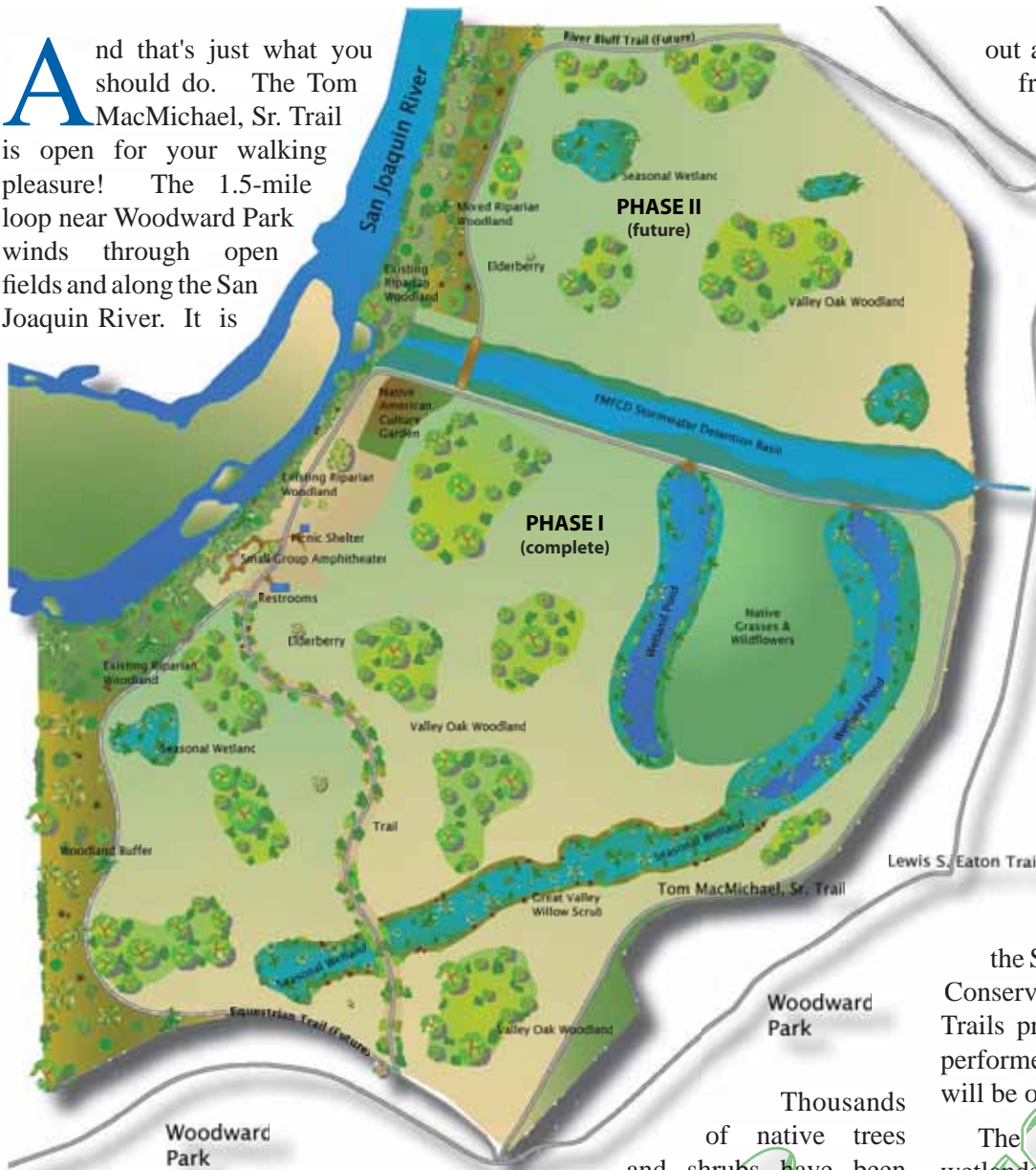
After hearing Mr. Garcia speak about the concerns of Calwa's citizens, the Board requested staff to coordinate with the City of Fresno. District staff contacted the City and was told of plans to reconstruct the street. The basin, on Florence between Cedar and Jackson Avenues, was within the City's reconstruction project area. Storm drain pipeline installation was already planned for the area, and was then timed to take place before the start of the City's reconstruction project.

The City has finished the curb, gutter and sidewalk, and street reconstruction is next. The District had already completed the pipeline to move stormwater from the street to the basin.

Since the CCC's request, the District has made a regular effort to keep the basin frontage on Florence Avenue clean. A District maintenance contractor cleans up the site once a month, and because of the substantial amount of trash illegally dumped in front of the basin, also performs a more thorough clean-up every other month. In addition, trash cans were placed in front of the basin to help encourage proper disposal of trash and alleviate the problem.

MacMichael Trail Was Made For Walking

And that's just what you should do. The Tom MacMichael, Sr. Trail is open for your walking pleasure! The 1.5-mile loop near Woodward Park winds through open fields and along the San Joaquin River. It is



out and enjoy the trail and benefit from a walk in the outdoors; visit often to see the plants grow and change through the seasons; and observe the many diverse birds—the migratory birds in the fall and spring, the overwintering birds, and the breeding birds in the spring and summer.”

Working Together

The MacMichael Trail is the result of teamwork between eight state and local agencies, including the San Joaquin River Conservancy, the California Department of Water Resources (DWR), and the District. Phase I is complete and encompasses the 100 acres south of the channel. The MacMichael Trail and the restroom are complete, and were funded by the Conservancy, a donor to the San Joaquin River Parkway and Conservation Trust, and a Recreational Trails program grant. The work was performed by the City of Fresno, and will be operated by City Parks.

part of the Jensen River Ranch Habitat Enhancement Project, a key element of the San Joaquin River Parkway.

A District stormwater channel bisects Jensen River Ranch and conveys runoff water from the surrounding neighborhood. Wetlands have been created using the runoff water by diverting it from the channel through the wetlands (oxbows) for natural filtering, and then back into the channel for release into the San Joaquin River. Interpretive signs explain how river water quality is protected by District programs.

Thousands of native trees and shrubs have been planted. Varieties include bush lupine, blue elderberries, California poppy, and purple owl's clover. The future groves of Valley Oaks and sycamores will be habitat for wildlife, including Cooper's Hawks, Scrub Jays and Nuttall's Woodpeckers.

Get Out On the Trail!

To get to the MacMichael Trail, you can walk there from the Lewis S. Eaton Trail, or you can enter from Woodward Park [see map].

Melinda Marks, Executive Officer of the San Joaquin River Conservancy, says, “I really encourage people to get

The storm drain tie-in, created wetlands, irrigation system and fencing were installed by DWR using funding from the Conservancy.

Planting was funded by a River Parkways grant from the California Resources Agency and performed by the Parkway Trust. The grant is funding ongoing plant monitoring and replacement of plants that don't survive. An outdoor classroom and picnic shelter will soon be constructed.

The design for Phase II, involving 67 acres north of the channel, is in progress. The work is being funded by the Conservancy and performed by DWR.

Classroom Resources Available

Environmental education resources are available to teachers of all grades, at no cost, through the District's Clean Stormwater program. Some materials meet California Department of Education standards while making a connection to local landmarks and water resources. They include:

Urban Water Cycle Poster

This 36"x48" poster was developed with the expertise of Fresno and Clovis teachers and meets 5th grade Earth Sciences standards. It uses local landmarks to illustrate the elements of the water cycle and provides several water cycle-related definitions.

Clean Stormwater Activity Book

This eight-page activity book can be used as a companion piece for the water cycle poster, or as an extra tool to use with an existing water cycle unit. It uses word search, code breaking, and multiple choice questions to teach pollution prevention. It is geared for 4th through 6th grades. Classroom sets will be delivered upon request.

Storm Drains 101

This five-minute video is made for students in the 7th-12th grades. It delivers rapid-fire stormwater pollution prevention facts, and teaches the basics of the urban drainage system. This engaging video explains why keeping stormwater runoff clean is important to us all. Learning about storm water – where it flows, how it becomes polluted, and how to prevent pollution – is fundamental to understanding and protecting our local water resources. Available in VHS or DVD format.

School Presentations

District staff are available to come to your school and put on a fun, interactive assembly or classroom presentation that teaches students about local water resources and ways they and their families can prevent pollution.

Watershed Maps and Photos

To complement classroom learning, District staff can provide teachers with aerial photographs and maps showing how stormwater is managed in their backyard – where it drains, and how it flows. Visual aids help students to connect what they've learned to real life conditions in our community.

The District's Clean Stormwater program was created in 1996, and its purpose is to effect public involvement and education to help increase awareness and change behaviors that contribute to water pollution. For details on these educational resources call Brandy Swisher at (559) 456-3292, or visit: www.fresnofloodcontrol.org

Erase the Waste Curriculum

This program, developed by the California Water Boards, provides a student-centered science investigation, focused on California's growing problem of polluted runoff. A complete web site, www.waterlessons.org, offers the following:

- Units of study aligned to California Content Standards and which support the Education and the Environment Initiative.
- Lesson plans for 4th-6th grades.
- Online teacher support.
- Lesson plan builder to make your own personalized lesson plans.



News Line

District Employee Named Pollution Prevention Advocate of the Year

Patrick Bryan, a twelve-year employee in the District's Environmental Resources Department,



was recognized by the Western Sustainability and Pollution Prevention Network (WSPPN) at its annual conference for his outstanding and effective work in teaching and promoting pollution prevention.

Patrick came to work for the District in 1996, just two years after issuance of its first National Pollutant Discharge Elimination System (NPDES) permit, and at the advent of the Clean Stormwater Program with its water quality and public education requirements.

Because he was there at the beginning, Patrick knows the program from all angles. He conducts business inspections, construction site inspections, school presentations, construction industry presentations, represents the District at public events and engages in interagency coordination. He has incorporated a personal interest in magic into his presentations and teaching style, and is able to show anyone simple ways they can prevent stormwater pollution. His commitment and creativity make him an extremely effective educator of students, business people and the general public.



Clean Stormwater Grant Applications Available!

Mini-grants are available to non-profit organizations and schools for projects focusing on environmental education and stewardship. Completed applications are due March 6, 2009. Visit www.fresnofloodcontrol.org for application and examples of past grant projects.

Copper & Cedar 'Family Fitness' Park Planned



Copper River Development, Inc. has proposed recreational development of a 23-acre stormwater basin near its Copper River Ranch housing development at Copper and Cedar Avenues. The design theme for the park is “family fitness” and features include a tot lot, exercise par course, a walking trail, open green space, and potential future sites for public movie screening, and soccer and baseball fields. The proposed park design will use approximately half of the basin’s 23 acres for recreation, operation of which will be a working partnership between Copper River, the City of Fresno, and the District.

The basin will continue its primary function as a stormwater retention site, provide groundwater recharge to our area's underground aquifer, and will become a City park like many other District basins that have been developed as recreation sites. This means the District will continue to maintain the basin’s equipment and operations related to stormwater capture and groundwater recharge, and the City assumes responsibility for all recreational features. The difference with this site is that the developer will subcontract from the City through the area's existing Community Facility District for all recreational site maintenance.

This site is envisioned as an award-winning recreation amenity for the citizens of Fresno. Developer Darius Assemi

explains, “Our goal is to create Healthy Lifestyle Parks within all our neighborhoods, which can be enjoyed by people of all ages and abilities. This park layout will raise the bar in terms of joint use basin design in our community.”

“We have been designing this project with the idea of innovative design, mutually beneficial coordination, and a substantial benefit to the community from the project's conception”, says Amber Adams, Engineering Manager for Quad Knopf, the planning and engineering firm in charge of the park project.

Surface water will be used for all landscape irrigation, and will come from multiple sources, including the Enterprise Canal. This saves millions of gallons of potable water each year. Surface water for irrigation may also be provided by pumping from another basin just across the intersection. “Dual use of this basin for groundwater recharge and recreation is especially compatible with the use of surface water for irrigation. Any excess irrigation applied to the recreation area will percolate and supplement the groundwater recharge program”, states Jerry Lakeman, District Engineer.

Pending final plan approval by the District Board and the City of Fresno, construction is expected to begin in 2010, and the park opening is planned for in 2011.

Bureau of Reclamation's Emergency Action Plan

Practice makes perfect, particularly in an emergency. When all agencies responding to an emergency are practiced and prepared for what needs to be done, they work seamlessly together. Each year the Bureau of Reclamation updates its Emergency Action Plans (EAP) for the facilities it is responsible for, and every three years it conducts “table top” exercises of the EAP with local, state, and federal agencies, and downstream first responders who are responsible for protecting the public.

The Bureau is responsible for major water projects in the 17 contiguous western states, including more than 500 dams, 348 reservoirs, and 58 hydroelectric power plants.

Friant Dam is under the Bureau's jurisdiction and was the site of a “table top” exercise over the summer. The Bureau of Reclamation invited all local agencies which would be affected by large releases from Friant Dam, to the exercise. To prepare for the exercise, they put together a design team to set up a mock emergency event.

Brent Sunamoto, Engineer with the District, attended this summer's series of meetings and explained, “The District was selected to be on the design team, so I participated in weekly design meetings at Friant Dam over about a two month period. The event was designed to be large enough to

Friant Dam is a concrete gravity dam completed in 1942, with a water storage capacity of 520,500 acre-feet.



require a lot of decisions to be made - where to divert water, where to evacuate, who to coordinate with, etc.”

“Following the “table top” exercises, the results of each agency's performance was discussed at a ‘hot-wash’ session. This evaluation and discussion was valuable in spotlighting breaks in communication or other areas that need improvement, and allows for discovery and correction of problems or inefficiencies before they become critical” added Peter Sanchez, District Operations Engineer.

For more information on the Bureau of Reclamation's emergency readiness programs, visit www.usbr.gov/emergency/.

Optimist Club's Youth in Government Day

The Optimist International organization in Fresno hosted its annual Youth in Government Day on November 13, 2008, sponsored by the Public Law Practice Group of the law firm of Baker, Manock & Jensen. This teen “job shadowing” program began in 1959 and is part of the larger Youth Appreciation program. It paired high school students from throughout Clovis and Fresno with adults who work in all facets of government. The morning was spent showing students first-hand what it takes to make local government run.

Each year the Optimist Club contacts all 19 high schools in Fresno and Clovis, and the schools' U.S. Government teachers select students to participate. The District was one of more than twenty state and local agencies and departments that participated. Others included State Assembly, Senate and Congressional representatives, Superior Court Judges, Fresno City Council members, Fresno County Supervisors, and Fresno Firefighters and Police officers.

District staff took three students on a tour of a handful of flood control and urban drainage facilities. The students

were shown how the Clovis and Fresno metropolitan areas are protected from flood waters originating in the foothills and from stormwater falling onto the cities.

The tour began at the District offices with an explanation of how the rural and urban systems work together and a look at the District's Operations Center, where stormwater basins are monitored and controlled by telemetry. Next, the students were shown the Big Dry Creek dam and reservoir, as well as storm drainage basins in Clovis and Fresno, both of which also serve as groundwater recharge and recreation sites. The flooding history of the Fresno area was explained and shown with photos of urban flooding in the 1950's, 1960's and the 1970's.

The day was concluded with a luncheon for all of the participating students and their governmental guides. Students got a chance to speak to the entire group and give their impressions of the day and talk about what they learned, and their “shadowees” got to comment, too. If your agency would like to be part of next year's Youth in Government Day, call John Smith at 432-5400 for details.

Close Up: Rick Lyons



Artistic and good at math - a rare and exotic creature, and Flood Control has one. His name is Rick Lyons and he came here in 2003 from Santa Cruz with his wife Janell, and he came with an interesting and varied background. Rick was educated in graphic design and drafting at San Jose State. His first job out of school was with a company called Aqua Media.

There, he drafted, designed and checked water purification systems. His last job before coming to the District was with a company called System Studies, where he worked for 20 years. That position involved the design and review of air pressurization systems for telephone cable facilities.

Rick and Janell looked at Fresno to relocate because it was centrally located between their parents. "Initially, we were impressed with the feel of Fresno, with the people and the sense of community. There's not a lot of 'me first' here. Families, schools and community seem to be the focus."

With his solid work history, he was looking for a place where he could stay and grow. During an interview with Alan Hofmann, District Assistant Engineer/Design Engineer, Rick found out that the District was looking for people who were interested in staying. Long-term employees were sought after and valued.

When Rick started as an Engineering Technician in the Engineering Development Review section in 2003, it was at the height of our area's building boom. He had to hit the ground running and experienced a steep learning curve. He says it was a challenging, but positive experience.

Mark Will, Engineer III, RCE and Rick's supervisor, describes what he brought to the department, "Rick came with a great willingness to learn the correct methods and procedures used by the Development Review department. He has produced an impressive volume of completed work that is still growing today. He is a valuable employee to the District, both in his interactions with co-workers and in his inter-agency representation of the District."

About the working environment at the District, Rick says, "When I started here, I was taken right in. That first day, I already felt like I'd been here for years. It was an adjustment to saying 'good morning' to everyone. It shouldn't have been, but it wasn't something I was used to from my last job. Very cool. And, the open door policy here is important to me. I know I can talk with any of the managers, all the way up to the District Engineer and the General Manager."

Rick says he is always amazed at how friendly and welcoming people are at FMFCD. This is important to him because he says we spend as much time with each other as we do with our families. Because of Rick's view on having a welcoming workplace, he does his best to provide that to his co-workers. Always patient, always professional, Rick is an asset to the District and to those who work around him.

OSO DE ORO PARK PAVILIONS - Planning a birthday party or other outdoor special occasion? Reserve, at no charge, a spot at the beautiful Sloan Johnson Oso de Oro Lake Park, located on Forkner south of Bullard Avenue. Reservations can be made up to six months in advance. Call 456-3292 for details.



Fresno Metropolitan Flood Control District
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Board of Directors

Richard Welton, Chairman • Kendall Groom, Vice-Chairman • Frank Franco • George Marcus • Roy Spina • Jennette Williams • Mike Rastegar

Need a Speaker?

If your community group is in the Fresno/Clovis area, contact Brandy Swisher, at brandys@fresnofloodcontrol.org or 456-3292, to arrange a presentation on flood control and urban drainage, water resource management or pollution prevention.