

FY2012 Annual Report

Watershed Protection Department



Watershed Protection Department FY 2011-12 Annual Report

The Drainage Utility was established by the Austin City Council in 1991 to manage and fund the ongoing maintenance and repair of the City's creeks, drainage systems and water quality programs. These programs are coordinated under the Watershed Protection Department (WPD), whose mission is to protect lives, property and the environment by reducing the impact of flood, erosion and water pollution. Below is a summary review of the Department's performance and accomplishments for the most recent fiscal year ended.

Financial Summary

Watershed protection activities are largely funded by the assessment of a drainage fee on both residential and non-residential properties. Revenue from the fee represented 97% of all revenue collected in the Drainage Utility Fund (DUF). The utility collected \$60.1 million in total revenue, which was \$209 thousand (<1%) more than budget. Total expenditures of \$61.1 million, which included \$28.3 million for program expenses, were \$2.3 million (4.4%) less than budget. Most of the savings came from contractual savings in various Department programs. The Department achieved 129% of its FY 2011-12 Capital Improvement Program (CIP) spending plan goal of \$43.2 million for a total of \$ \$55.9 million. The spending plan included many of the projects discussed in the accomplishments and performance measure highlights section below.

FY 2011-12 Accomplishments and Performance Measure Highlights

Field Operations Division (Infrastructure and Waterway Maintenance Program)

The Field Operations Division (FOD) is responsible for maintaining the storm water conveyance system, which consists of creeks and waterways, pipelines and structural controls. There are three main sections within the division: Field Operations Management (FOM), Storm Water Management (SWM), and Drainage Pipeline Management (DPM).

Field Operations Management

- Both erosion repair crews were utilized to stabilize 1,910 feet of stream channel and embankments, exceeding the goal of 1,500 feet. The intent is to have one supervisor for each fully operational crew; however budget constraints prohibited the approval of a new supervisor, so the two crews were managed by one supervisor. Even with this limitation, the two crews completed five projects and have two additional projects substantially completed.
- The Open Waterway Maintenance crews cleared five miles of creeks and channels as well as 1,383 bridges and culverts. These crews also responded to requests from the Flood Early Warning System (FEWS) Engineering Group to manually oversee the operation of the low water road crossing gates during storm events both during and after scheduled working hours. The Open Waterway crews have cut the excess vegetation within creeks and channels to ensure proper storm flow as well as assist with the management of vegetation on City-owned properties. The crews have adopted more sustainable vegetation management techniques, incorporating invasive species identification and control as part of their work. The service level associated with this work unit is expected to increase as the number of creek and conveyance channel miles increase with annexation of outlying areas and as more buyout properties are assigned to the Field Operations Division.

Storm Water Management

- The Pond Maintenance crews' (SWM) responsibilities include the heavy duty maintenance of all General Fund City-owned ponds. The increase in the number of ponds from annexations and new developments raised the pond inventory to approximately 840, representing an increase of one percent. The three pond crews spent a considerable amount of manpower working on older, inadequately functioning ponds at City

facilities and within annexed areas. As a result, the goal of maintaining 90% of the ponds in satisfactory operating condition was not met. However, the three pond crews were still able to ensure that 80% were operating satisfactorily at year's end. However, the ultimate goal of 100% will not be reached without another crew, particularly given the increase in "green" and low impact development (LID) storm water management best management practices (BMPs) being utilized and coming to the Section for maintenance.

- The Lady Bird Lake (LBL) Cleanup section removes floating litter and debris from the lake between Tom Miller and Longhorn Dams to meet community expectations for the visual and water quality conditions of this waterway. The crew works year-round, with particular resources focused on removing the litter and debris entering the lake from major storm events. The cleanup crew, with assistance from the Pond Maintenance crews, removed 234 tons of debris versus a goal of 200 tons. The LBL crew began implementing a lower level of vegetation maintenance along the shore-line in support of the request and recommendations from Environmental Resource Management (ERM) scientists. FOD will continue to work with ERM, the Parks and Recreation Department (PARC) and other stakeholders to modify the vegetation maintenance practices to best meet the expected service levels.

Drainage Pipeline Management

- The Storm Drain Cleaning crews are responsible for cleaning the approximately 900 miles or approximately 4,500,000 feet of pipelines that serve as the City's underground storm water collection system. The crews cleaned over 8,000 inlets and 61,099 feet of this pipeline, falling short of the FY 2011-12 goal of cleaning 75,000 feet of pipeline. This result was due to the time spent on cleaning newly annexed areas, which required substantially greater time and effort due to the lack of maintenance; and to the continued lack of consistent equipment utilization. The Vector trucks lost significant amounts of productive time due to the length of time spent in repair with the Fleet Department. In order to reach the long term goal of cleaning 100,000 feet of pipeline per year, a minimum of another crew and Vector truck are needed. In addition, the crews responded to 516 "311 Telephone System" calls during storm events.
- The Storm Drain Rehabilitation crews installed 5,729 feet of storm drain pipe, exceeding the yearly goal of 4,000 feet, and repaired 189 concrete drainage structures. This work was accomplished with two construction crews and three concrete crews, and although this section met performance goals the backlog of necessary repairs to drainage assets continues to increase. This increase in the backlog is caused by the continued deterioration and failure of the drainage assets as well as the increased labor resources necessary to complete priority projects (e.g. require both crews to complete). Two more construction crews are needed to achieve the long term goal of appropriate asset operation and maintenance, including a preventative maintenance program.

Watershed Policy and Planning Program

The purpose of the Watershed Policy and Planning Program is to provide direction and oversight of watershed policies, and to coordinate the integration of flood, erosion and water quality activities for City staff and policy makers so they have the information to design, prioritize and implement cost effective integrated solutions that include Capital Projects, Watershed Programs and Regulations.

- **Watershed Protection Ordinance.** In January 2011, City Council requested via resolution that WPD staff develop a new ordinance to improve creek and floodplain protection; prevent unsustainable public expense on drainage systems; simplify development regulations where possible; and minimize the impact on the ability to develop land. The effort is the first of its kind since the Comprehensive Watershed Ordinance was passed in 1986. Staff met with both external and internal stakeholders from August 2011 to April 2012 to discuss potential code changes that resulted from an analysis of current code deficiencies and needs prepared in 2011. From the input received in these meetings, staff worked with the Law Department to develop draft ordinance revisions. These revisions were presented to the stakeholder community in 2012, and will ultimately be presented to boards, commissions, and Council for adoption.
- **Water Treatment Plant #4 (WTP4) Environmental Commissioning** – WPD Policy staff continued this effort to ensure that sensitive environmental features in the area of the WTP4 project are protected from impacts from this project. Particular accomplishments in FY 2011-12 include:

- Improvement of the liner system at the Four Points shaft to reduce groundwater inflow that was impacting nearby groundwater levels. This was an adaptive, multi-department effort that successfully restored groundwater levels to pre-excavation levels.
- Groundwater monitoring associated with the project has created a body of scientific data that is providing a new and significantly better understanding of the structure and dynamics of the northern Edwards Aquifer in the Bull Creek area. This data provides critical information for monitoring for impacts from WTP4 and for sensitive species that live in the Bull Creek watershed.
- **Lake Austin Task Force** – In May 2012, Council created the Lake Austin Task Force (LATF) to review development and lake use issues in and near Lake Austin. WPD Policy staff are coordinating and assisting the 17 member Task Force. The LATF is holding bi-monthly meetings and must finish its work by June of 2013.
- **Imagine Austin Comprehensive Plan** – Since the adoption of Imagine Austin, WPD has taken a proactive role in addressing and tracking implementation of the plan. Imagine Austin organizes the various actions (projects, programs, regulations) needed to implement the vision and policies of the plan into eight Priority Programs. WPD staff will lead or co-lead the implementation teams for both the “Sustainably Manage Our Water Resources” and “Green Infrastructure” priority programs. In addition, WPD staff developed a tracking tool to summarize the main contacts and partners, current status, expected products, and anticipated resources for the items listed in the work plans of the eight Priority Programs. This tool was distributed by the Planning and Development Review Department (PDRD) as well as the Capital Planning Office (CPO) to the rest of the City departments to use as a template for tracking implementation. The information included in this tracking tool can help facilitate interdepartmental coordination, establish next steps for the teams, and help to populate the Annual Report on implementation status produced by PDRD. Staff can also utilize the tracking of anticipated resources as well as goals and metrics to align budget requests and performance measures with the implementation of the plan. For instance, CPO has already incorporated an evaluation of alignment with Priority Programs into the review of Capital Improvement Projects. An additional next step for WPD will be to formally incorporate the vision, approach, and priorities of Imagine Austin into the department’s Watershed Protection Master Plan.
- **Capital Appropriation Process** – Through development of the annual CIP plan, WPD implements a Capital Appropriation Process which insures that all CIP projects funded by the Drainage Utility Fund, the Urban Watershed Ordinance Fund, and the Regional Stormwater Management Fund undergo a review process by an intradepartmental cross mission team to identify, prioritize and develop responsible funding initiatives for CIP projects to address water quality, channel stability and stormwater conveyance needs. The process also includes preparation of annual and long range appropriation plans that reflect individual watershed mission priorities and insure opportunities for mission integration. Technical reviews are completed for CIP project submittals to identify the best solutions for watershed improvements that do not create adverse impacts to any WPD missions, and that maximize opportunities to address multiple mission needs.

Data Management

The Data Management section provides departmental information technology (IT) support. It is primarily responsible for coordinating and implementing technology across the Department through IT planning services, IT systems analysis, project management and geographic information systems (GIS) and database support. Its work is guided by an Information Management Plan which was completed in October 2006 and received executive team sign-off and CTM concurrence. The implementation of the Maximo Computerized Maintenance Management System (CMMS), continuance of the Drainage Infrastructure GIS (DIG) project as well as other significant projects such as the Floodplain Info System project currently account for the majority of staff time.

- Closed out a 4-year (\$4.5M) contract with an external consultant for the Drainage Infrastructure GIS (DIG) project to field data collect stormwater above-ground appurtenances, open channels and culverts. Approximately 113,000 assets were collected and 2,598 of 4,513 City-maintained manholes were inspected (58%).

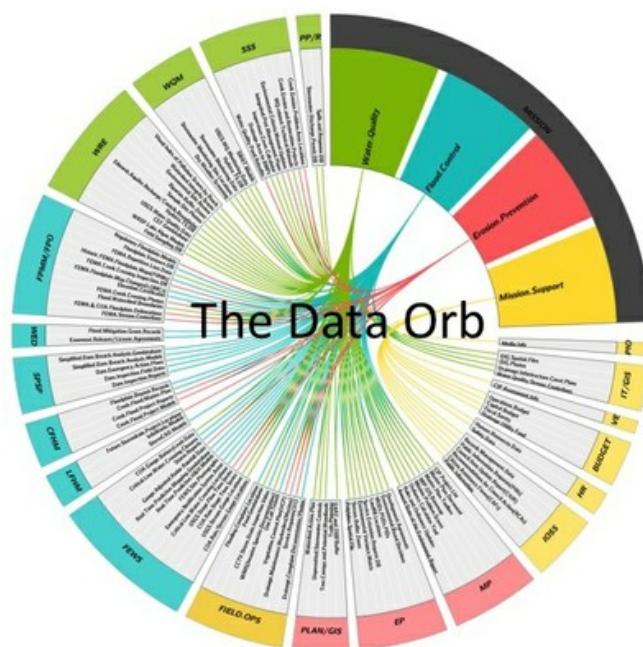
- Completed the FloodPro web GIS project which will allow the public to do automatic floodplain determination and submit requests for floodplain models for automatic download. Application went live internally and will be released publicly in FY 2012-13.
- Participated in the completion and publication of the biological resource GIS which delineates biological resource buffers, grasslands, karst points and polygons, rock outcrops, springs and wetland areas.
- Developed and began employing methodology for storing within GIS information from TV inspection of stormdrain systems. In addition, the TV Inspection Acquisition project successfully completed the purchase of a second TV inspection truck to increase in-house collection of data.

Data Team

The formation of a 14 member Data Team was initiated at the end of the FY 2010-11. The purpose of this team is to provide guidance for the acquisition, organization and dissemination of Watershed Protection's data. Preliminary objectives of the team include efforts to identify gaps, prioritize projects, and direct resources.

The Data Team's major accomplishment in FY 2011-12 was the completion of the Data Orb – an interactive tool that documents the department's datasets. The Orb interface allows browsing of the data and provides contact information on the owner of the data. The backend tables that fuel the Orb have extensive information on each dataset including a description, purpose, format, users, reason for collection, workgroup, and associated WPD mission.

In all, the team collected information on 199 datasets with 13 attributes for each dataset, comprising a total of 2,587 pieces of data about our data. The team has also filmed two 'SHEDtalks' videos that highlight the people and groups behind the data that is collected, and created an email for WPD employees to send requests, suggestions, recommendations to the Data Team at datateam@austintexas.gov.



Value Engineering

The purpose of the Value Engineering (VE) activity is to enhance the value of WPD projects using a systematic and function-based evaluation approach. The VE Team independently and systematically evaluates WPD's CIP scopes of work, preliminary engineering reports, CIP milestone plans and models, and CIP design standards and methodologies. Numerous recommendations were made over the course of FY 2011-12 resulting in improved individual CIP design plans or methodology, increased project value and function, potential reductions in project construction costs and future operations and maintenance costs as well as reductions in potential adverse impacts.

During the FY 2011-12, the VE team performed a total of 28 reviews, including CIP submittals, CIP management procedures and design criteria. Estimated total potential cost savings for the year was just under \$5M. Some of the special accomplishments include:

- Identified and summarized 14 general modeling, design and management issues which arose from various reviews over the course of the year. Convened a roundtable session with the WPD CIP managers to initiate further discussion of the issues.
- Worked with the MIP team to successfully integrate and streamline the MIP/VE Team review process.

- Worked with the Localized Flood Hazard Mitigation group to enhance its CIP ranking and prioritization process.
- Worked with the Green Infrastructure (GI) team to improve aspects of the Brentwood GI study scope.
- Worked with the Drainage Criteria Manual (DCM) Revision team to review and propose significant changes.
- Worked with the Drainage Infrastructure GIS (DIG) Steering Committee on various data collection and management issues.
- Worked with the Austin Water Utility to work out a draft Memorandum of Understanding (MOU) and an inter-departmental agreement to properly record and track CIP cost for shared city-wide projects.
- Proposed a standardized procedure for internal preliminary engineering studies which has been accepted by the Mission Integration and Prioritization (MIP) team and WPD project managers.
- Provided technical assistance and assessment on environmental issues related to the Water Treatment Plant 4 project and responded to management inquiries.
- Proposed an alternative flood water diversion to reduce or eliminate the persistent flooding issues in the Carson Creek watershed, resulting in a potentially cost-effective approach.

Watershed Engineering Division (Flood Hazard Mitigation Program)

The Watershed Engineering Division's (WED) mission is to protect the community by reducing the impacts of flooding. WED constructs projects to reduce existing flood hazards and maintains regulatory code and design criteria pertaining to new developments to protect the community from potential future flood hazards.

Localized Flood Hazard Mitigation

The purpose of the Localized Flood Hazard Mitigation (LFHM) activity is to reduce local flooding conditions (flooding away from the creeks) to protect lives and property. Improvement projects are planned, designed and constructed to reduce flood hazards for houses, commercial buildings, and roadways due to the inadequacy or lack of storm drain systems. The section also prepares and negotiates engineering services contracts with consultants to evaluate storm drain systems and design improvements where existing systems are found to be deficient; oversees the work of consultants in evaluating and designing storm drain systems; coordinates projects with residents who may be impacted by proposed storm drain improvements; coordinates with property owners and the Office of Real Estate regarding property rights needed to implement storm drain improvements; and identifies and participates in private-public partnerships or coordination with other City of Austin CIP projects. The LFHM program:

- Entered into two public-private partnerships:

For the **South Shore Public Utility District (PUD) Storm Drain Improvements** project, the Division negotiated with the developer to improve a main line consisting of approximately 1,300 linear feet of reinforced concrete pipe. By dividing the construction phases among in-house Field Operations crews and the developer, the City will save approximately \$1.28 million compared to constructing these improvements as separate capital improvement projects. In addition, after construction, the storm drain main will be in compliance with the City's Drainage Criteria Manual requirements. Based on the Mission Integration Program, the project also integrated a water quality feature between the outfall of the line and Lady Bird Lake. The project was expedited since it was a public-private partnership and was substantially completed in December 2012, considerably faster than a typical CIP project timeline. The adjacent photo shows Field Engineering Services staff, surveying the elevation of the storm drain pipe being installed by WPD FOD employees.



At **46th Street and Airport Boulevard**, the City entered into a Community Facilities Agreement with the developer to relocate the existing 30-inch storm drain line in conjunction with a proposed development. The City agreed to pay an amount not to exceed \$49,700, as compared to approximately \$250,000 that it would

have cost to design, permit and construct the upsized storm drain improvements as a separate CIP project. The developer completed the relocation in December 2012.

- Completed design, permitting, and construction phases for the Ridgelea streambank stabilization project, part of a larger storm drain improvement project. In coordination with the Austin Water Utility (AWU) and the Public Works Department (PWD), the project incorporated additional scope to upgrade most of the waterlines and roadways on the project. The second part of the project is expected to go to construction in FY 2012-13.



- Began construction of the Blarwood and Euclid/Wilson storm drain capital improvement projects. The adjacent image shows the Cherry Creek streambank improvements on the Blarwood storm drain improvement project that will help mitigate existing erosion issues and creek flooding impacts that would have been caused by the new improved storm drain system in the neighborhood. The project is helping to alleviate localized flooding conditions for approximately 52 properties in the neighborhood
- Continued to develop an improved flood problem area prioritization method and is currently evaluating flood problem areas with 2D modeling technology to identify the highest priorities for future CIP projects.
- Substantially completed the storm drain improvements of East 4th Street/Pedernales, Allandale, Rosedale, and Long Bow storm drain capital improvement projects.
- Negotiated preliminary engineering services for the Bull Creek Charring Cross storm drain improvements project, and worked with consultant in the evaluation of existing conditions and proposing alternatives for the improvements.
- Reviewed and commented on 10 submittal packages related to the planning and design of storm drain capital improvement projects.
- Reviewed and commented on 48 submittal packages related to the planning and design of storm drain improvements associated with City street reconstruction projects.
- Reviewed and commented on nine proposed annexation areas regarding the need for storm drain system improvements.

Creek Flood Hazard Mitigation

The Creek Flood Hazard Mitigation (CFHM) activity plans and executes projects to reduce creek flood hazard conditions and to protect lives and property. In addition, this section updates creek flood scores as new information becomes available to help identify those areas in Austin at the greatest risk of flooding. Improvement projects are planned, designed and constructed to reduce flood hazards for houses, commercial buildings and roadway crossings due to out-of-bank creek-overflows during extreme storm events. Project types include regional detention basins, flood walls/levees, bridges and culverts, buyout of floodplain properties and stream channel enlargement. This activity also provides review of drainage easement releases and license agreements. The CFHM program:

- Continued construction on the Waller Creek Tunnel project. The mile-long tunnel will capture and redirect flood waters south of 12th Street and safely carry them to an outlet lagoon on the shores of Lady Bird Lake. In doing so, the tunnel will take nearly 28 acres of downtown land out of the 100-year floodplain and create an environment suitable for redevelopment. The project will also include amenities such as a new public boathouse and stream bank restoration. As of the end of FY 2011-12, the contractor has tunneled over 3,000 linear feet and begun construction on the inlet and outlet. The project is scheduled for completion in 2014.

- Completed the upgrade of a low water crossing on Hoeke Lane near its intersection with Riverside Drive in the Carson Creek watershed through the replacement of three existing pipe culverts with sixteen box culverts. Hoeke Lane is the single point of access to a residential neighborhood and is used by AISD to transport students. A long length of this road overtopped even during minor storm events, and the low water crossing was one of the most frequently closed in Austin. After construction, the road is safely able to pass up to a 100-year design storm. In addition to the low water crossing upgrade, the project improved the Hoeke Lane roadway within the project limits and the low water crossing on the adjacent side street, Poston Road. It also addressed erosion in Carson Creek in the project vicinity and added a sidewalk for the residents of the area.
- Completed the replacement of 200 feet of concrete channel that runs between 1501 and 1503 Parkway Drive. The existing concrete bottom channel had failing mortared rock walls. Complaints had been received about the rapidly deteriorating channel since 2001. Also, the bank of Shoal Creek at the back of lot 1503 was failing and creekbank stabilization was installed.
- Completed the buyout of 15 mobile home pads from the Woodview Mobile Home Park. The buyout was partially funded by a FEMA grant.
- Completed seven buyouts in the Onion Creek area. This brings the total number of buyouts to 299 out of a total of 483 properties to be bought out in the project area. The buyouts are proceeding at a slower-than-expected pace due to the lack of federal funding for the project.
- Nearly completed the design of the upgrade of the David Moore low water crossing, with construction planned to occur in the summer of 2013.
- Began design of a flood mitigation project for the Little Walnut Creek area from Metric to Rutland. A potential bypass culvert is currently proposed.
- Completed or coordinated 168 reviews for easement releases, license agreements, and right-of-way vacations.



Stormwater Pond Safety

The purpose of the Stormwater Pond Safety (SPS) group is to manage the risk of dam, floodwall and levee failures by assuring that these structures meet or exceed state safety criteria. This section is also responsible for the safety inspection of these facilities, ensuring that adequate maintenance is performed and prioritizing and implementing needed upgrades or repairs to these facilities. The SPS group:

- Completed design of the Comburg dam modernization project.
- Began the design of the repair and upgrade of the Old Lampasas dam, which was damaged by Tropical Storm Hermine.
- Completed four Emergency Action Plans (EAPs) and completed 20 maintenance inspections on dams that currently have an EAP, to meet Texas Commission on Environmental Quality (TCEQ) requirements.
- Conducted engineering inspections on an additional 56 dams as well as on three floodwalls.

Regional Stormwater Management Program

The purpose of the Regional Stormwater Management Program (RSMP) is to provide opportunities for private/public partnership funding for regional drainage improvements as an alternative to private development providing on-site detention to mitigate flood hazard increase. The jointly funded projects reduce existing flood hazards and provide mitigation for new development. In addition, RSMP funding can be used for CIP projects that provide a regional detention or conveyance benefit within the watershed that funds are collected from.

- Collected approximately \$600,000 in RSMP fees.

- Completed four RSMP participation projects: Meridian/Silverado, Platinum Onion Creek, 2401 Longview and Pond Springs Road.

Floodplain Management

The purpose of the Floodplain Management activity is to protect the community from flood hazards by promoting sound floodplain management to citizens, the development community, and City staff. This is accomplished by creating and maintaining floodplain engineering models and maps, coordinating the City's participation in the National Flood Insurance Program and Community Rating System, providing floodplain information to the public, reviewing floodplain development applications, and educating the community about flood hazards.

- The group developed detailed hydrologic and hydraulic modeling for five watersheds, including Shoal Creek, Bull Creek, Carson Creek, Cottonmouth Creek, and Boggy Creek (including Tannehill Branch Creek and Fort Branch Creek). This effort was partially funded by a \$1.1 million Mapping Activity Statement 5 CTP grant from FEMA.
- Communicated with the public regarding floodplain information by responding to 672 requests. This information includes floodplain elevations, floodplain maps, floodplain models, and development assessment meetings.
- Reviewed approximately 820 development applications, including site plans, subdivisions, and residential building permit applications, to ensure compliance with the floodplain regulations. In addition to private developments, this included extensive review and coordination for the City's Waller Creek Tunnel, Lady Bird Lake Boardwalk, and 2nd Street Bridge projects.
- Served as technical advisor to the Upper Brushy Creek Water Control and Improvement District to ensure that their ongoing master plan and floodplain study meets the City of Austin's needs for regulation in the Rattan, Lake, South Brushy and Buttercup Creek watersheds.

Flood Early Warning System

The purpose of the Flood Early Warning System (FEWS) activity is to protect the community from flood hazards by providing warnings to the public and to the Office of Emergency Management.

- The FEWS intranet site for predictive floodplain mapping is fully operational. The group is currently mapping nine watersheds through this site (Shoal, Waller, Little Walnut, Buttermilk, Walnut, Lake (including Rattan), West Bouldin, lower Onion (including South Boggy, Marble, and Slaughter) and Williamson) and is completing other models to add to the site. This process will allow the group to predict the limits of flooding based on predictive rainfall depths, which will decrease response times for flood warnings and evacuations.
- Participated with the Communications and Technology Management Department and the Homeland Security and Emergency Management Department in the City Works Academy. FEWS and WPD PIO headed the group to create a mock Tropical Storm Hermine response. The City received many positive comments on the presentation.
- FEWS and the Computer and Technology Management Department received the 2012 Center for Digital Government Award for Best in Texas for the upgrades made to the FEWS within the past two years.

Environmental Resource Management Division (Water Quality Protection Program)

Pollution, Prevention and Reduction

The Pollution, Prevention and Reduction (PPR) Section responds to pollution incidents, evaluates and permits businesses and specific non-stormwater discharges, and provides technical environmental regulatory/remediation guidance for City departments, policy makers, the community and regulatory agencies to

reduce pollution in our creeks, lakes and aquifers and for compliance with City, State, and Federal stormwater regulations.

- **Urban Wildland Fire Planning, Response, and Recovery:** Following the wildfires in Oak Hill, Steiner Ranch, Spicewood, and Bastrop during the summer of 2011, PPR staff became involved as environmental experts, providing environmental guidance to concerned citizens, businesses, and other City departments. The City of Austin / Travis County Joint Wildland Fire Task Force was created to evaluate local wildfire concerns and develop strategies to address those concerns. PPR staff has played a major role on the Task Force since its beginning. PPR compiled and organized Task Force goals, objectives, and media messages into categories of prevention/preparedness, response and recovery. Staff completed the first edition of the WPD Wildfire Inventory and Response Plan. The plan identifies WPD's roles and responsibilities as well as expertise and resources that can be provided before, during, and after urban wildfire events. WPD's Plan was well received by the Task Force and was subsequently used as a model plan for other Task Force organizations. Staff created and distributed an Ancillary Wildland Fire Resource Survey to help identify potential ancillary wildfire expertise and resources from municipal and county entities in our region, outside of those typically provided by the primary public safety agencies. PPR and other WPD staff prepared environmental messages to be included in the Mayor's Wildfire Awareness Press Conference. PPR drafted a public education document that promotes a comprehensive suite of environmental Best Management Practices relevant to wildfire readiness and recovery activities. Staff performed a detailed review of the International Wildland Urban Interface Code with draft local amendments prepared by AFD. The proposed code contains provisions addressing fire spread potential, accessibility, defensible space requirements, flammability of building materials, and water supply. Staff identified potential conflicts with existing regulations and community values, collected remaining input from WPD, and submitted 13 pages of formal comments to AFD. Staff reviewed and commented on the Request for Proposal and draft specifications for a Community Wildfire Protection Plan. PPR and other WPD staff continue to monitor the environmental recovery of local 2011 wildfire sites (Oak Hill, Spicewood, Steiner Ranch, and Bastrop). PPR collaborates with AFD and other authorities and responds to citizen concerns regarding potential wildfire risks. PPR staff continues to attend wildland fire workshops and training events to stay abreast of the subject matter.
- **Coal Tar Ban Enforcement:** PPR staff evaluated 21 freshly sealed lots, resulting in the initiation of one new enforcement case for violation of the ban in north-central Austin. Staff completed legal action and mitigation on two properties (one was initiated last year and the other was the new violation from this year). Both cases went for deferred adjudication and resulted in the remediation of 130,000 square feet of exposed coal tar surface using encapsulation with two coats of asphalt based sealant. Staff lent expertise to Austin Independent School District (AISD); at AISD's request, inspecting 224 school parking lots and 31 school sport courts for compliance with the coal tar ban and assessing 104 samples for the presence of coal tar. The solvent test showed 93 AISD lots may have coal tar present. Of these, 12 had an estimated 50% or greater surface area of sealant remaining. All of the data was provided to AISD management and their consultant. Staff reviewed the findings and advised AISD on their Paved Surface Management Plan. Staff also trained AISD maintenance staff in lot inspection and the solvent screening process. Staff further assisted AISD in responding to coal-tar related inquiries from the Oak Hill Gazette. In addition to helping AISD, PPR staff shared Standard Operating Procedures for the solvent screening process with multiple entities around the U.S and answered a number of inquiries about the City's ban from other cities all across the country.
- **Barton Springs Salamander Spill Plan:** As part of compliance with the US Fish and Wildlife Service's Endangered Species Permit for the Barton Springs Salamander (Incidental Take Permit 10(a)(1)(B)), the City of Austin has developed and maintained a catastrophic spill plan for Barton Springs. The plan addresses spill prevention, containment, remediation, and salamander rescue procedures should a catastrophic event threaten the habitat. PPR staff trained a number of stakeholders on the plan throughout the Barton Springs Zone including: the area supervisors for the Texas Department of Transportation, city management personnel from Sunset Valley and San Marcos, fire, emergency response, and law enforcement personnel from the City of Austin, Hays County, Travis County, San Marcos and Manchaca, and two area pipeline companies, Koch Petroleum and Magellan. Staff participated in a tabletop exercise presented by Magellan that centered on a gasoline discharge into the Edwards Aquifer and included activation of the spill plan.

- **Source Water Assessment:** The Source Water Assessment and Management Program (SWAMP) was developed by the PPR section to more effectively resolve groundwater complaints received from citizens. In FY 2011-12, staff investigated and resolved 15 source water discharges resulting in the discovery and mitigation of two previously undetected sewer line leaks, a buried waterline break that had been active for at least six months, and one illicit subsurface swimming pool backwash discharge. The remaining discharges were shown to be associated with either rain events, groundwater sources, or a combination of the two.
- **Semi-Public Swimming Pool Compliance:** PPR staff are responsible for regulating potential discharges to storm sewer systems and waterways to protect Austin's water quality and related natural resources. City, State and Federal Rules list pollutants and pollutant levels that cannot be exceeded for discharges including those from swimming pool operations. PPR staff initiated a program in FY 2010-11 to inspect the estimated 656 semi-public pools within the city. During FY 2011-12, 60 pools were inspected, of which four were found to be illegally discharging to a waterway. All four were corrected; three were permanently re-plumbed to an approved area (2 to sanitary sewer and 1 to a vegetated area). The fourth pool was retrofitted so that the backwash discharged to a settling tank. PPR staff will continue to inspect approximately 60 semi-public pools each year to ensure compliance.
- **City Facility Compliance:** The City of Austin owns, maintains and manages many properties throughout the city and county. State and Federal stormwater management rules require the City of Austin to inspect specific activities that might be on these properties for compliance with those rules. Twenty-nine stormwater discharge inspections of City facilities were conducted (i.e. Austin Resource Recovery facilities, Fleet Service Centers, Austin Energy Power Plants, AWU facilities and PARD non-pool facilities) to verify compliance with stormwater regulations. No major violations were found at any of these facilities and all of the minor ones were corrected. An additional 40 City-owned parcels were visited for the first time to verify compliance. A few minor violations were found at the parcel visits and all were corrected. Four of the 40 city owned parcels visited for the first time were found to need SDPP permits. The four new SDPP permittable locations were all WTP4 locations. Staff initially obtained a property list of over 2,000 City-owned parcels from Real Estate Services and identified approximately 160 of the parcels as possibly having regulated activities. Forty parcels will be visited per year until all locations have been inspected. PPR staff also worked with PARD at the end of the pool season to sample and approve discharges of their pool water to area stormwater systems. Sample results are being used to evaluate compliance as well as potential for aquatic life impact.
- **Spills and Complaints Response Program:** Since 1986, the City of Austin has operated a 24-hour Pollution Hotline where citizens and agencies can report pollution events and emergency spills. Staff investigates the complaints to identify pollutants, their sources and the party at fault. Staff then determines what actions are required to achieve regulatory compliance, and oversees cleanup and remediation by the responsible party. In FY 2011-12, PPR staff responded to 1,001 incidents resulting in the removal of over 5 million gallons and 651 cubic yards of pollutants from the environment. Staff responded to several significant incidents including: a Christmas Day paddle boat fire in Lady Bird Lake; a tanker truck fire on SH130 where a fully loaded fuel tanker crashed and burst into flames damaging the roadway and contaminating soil in a drainage ditch; a hydraulic spill in Barton Springs pool; a tanker truck rollover on I35 near Slaughter Lane that necessitated the off-loading of 9,000 gallons of tanker fuel and the removal of almost 50 dump truck loads of contaminated soil; a 1.7 million gallon sewage spill into Marble Creek where an innovation by PPR staff allowed for the aeration of the contaminated section of creek and stopped what could have been a very large fish kill; and, finally, staff responded to a complaint of oil dripping into Lady Bird Lake from new railroad ties placed on the bridge. Staff interactions with the railroad company resulted in the creation of an easily replaceable device to catch and absorb the excess oil. The railroad company indicated that they plan to install this device on other bridges across the country where new ties have been installed.
- **East Austin Environmental Initiative (EAEI):** The EAEI is a program that works to help the East Austin community resolve environmental issues and problems by focusing the City's environmental protection resources. In 1993, City Council mandated the creation of the program because residents expressed concern that the City was not doing enough in East Austin to keep citizens informed about environmental issues and projects or how they could get involved. The EAEI functions as a single point-of-contact between the community and government agencies to facilitate and to ensure resolution to issues identified by the community. This year, the EAEI established new outreach collaborations with a number of governmental

and non-governmental groups, including Interfaith Action of Central Texas, the Austin Police Dept., and the City's Office of Sustainability. A survey was distributed to the program's focus area in an effort to obtain feedback and information from the community to help develop new strategies for responding to and addressing citizens' concerns. EAEI staff did an immense amount of education and outreach this year that included development and distribution of two newsletters containing a new Community Corner for citizens to speak out, presented the program to several entities (Austin River Watch, East Austin Rotary Club, University Hills Neighborhood Association, U.T. School of Architecture, Montopolis Neighborhood Association), and participated in several events (Green City Festival, Guadalupe-Saldana Subdivision Groundbreaking, Pet Wellness Fair, Go Green Conference, and the annual Pet Extravaganza at the East Austin shelter).

- **Rosewood Site Remediation Project:** The Rosewood project involves a City-owned property in the Homewood Heights neighborhood located behind 32 private residences and lots on Ridgeway Drive, Sol Wilson Avenue and Pandora Street. In 2007, after the City removed trash and debris from this area, evidence of an old dump site was found on the property. The remediation plan was completed, a contractor was procured, and the site plan development permits were obtained. One dilapidated structure was demolished on private property in order to achieve proper remediation. Construction started in late 2012. Citizen's inquiries were answered and a public meeting was scheduled.
- **TPDES Compliance:** As part of compliance with the TCEQ's Texas Pollutant Discharge Elimination System (TPDES) Municipal Separate Storm Sewer Systems (MS4) Permit, the City of Austin maintains a variety of city-wide pollution prevention programs. In FY 2011-12, staff continued the expansion and utilization of a three year plan for the anticipated audit by the EPA that is expected to occur within the next 1-2 years. Staff also continued the extensive review of the State Comptrollers list (40,000 businesses on the list) to assist with identifying certain businesses that are required to have a TPDES permit but failed to obtain permit coverage. The main industry focus for FY 2011-12 was salvage yards and concrete plants. PPR staff developed a tracking and monitoring flow chart for our TPDES inspection process and best management practices. PPR staff also completed a mail out for the permit renewal period for all (75) notice of intent (NOI) and no exposure certification (NEC) permit holders in February 2012. This is a very difficult process of re-obtaining all compliance documents and information from each facility in our jurisdiction. Compliance visits were made to 14 of these to review/audit their practices in comparison to what is in their written plans. There was one enforcement case in which full compliance was achieved.
- **Contaminated Groundwater Tracking Program:** In March 2008, City Council requested a study regarding quantity and quality of groundwater discharged from underground structures. The resolution included identifying potential areas of documented groundwater contamination that may impact existing or proposed developments with underground structures. PPR staff conducted extensive research in 2008 and produced a routinely updated data tracking system, as well as a map now used by plan review staff. This map assists them in determining when to refer sites with potential groundwater issues for our review. The pilot area in FY 2010-11 reached from Lady Bird Lake to 15th Street and I35 to Mopac. In FY 2011-12, PPR expanded the area from 15th Street up to 38th Street. Site visits in this area included identification of existing/historic facilities that already have underground structures that may be discharging contaminated groundwater to the City's stormwater conveyance system. Using a combination of aerial photography and extensive field verification, staff identified four facilities actively discharging groundwater from underground sump systems (25 to date). Further research is being done to check the proximity of these sump systems to historic groundwater contamination. In FY 2012-13, staff will initiate contact with any suspect businesses that may be discharging contaminated groundwater and provide assistance with mitigation of the problem.

Water Quality Education

The Water Quality Education Section provides educational materials and conducts outreach to the community on strategies to prevent water pollution and stream erosion. Key accomplishments include:

- **Events:**
 - Green City Festival – coordinated with a dozen city departments and facilitated the merging of that event with Earth Day.
 - Viva Streets - Created a rolling canoe and salamander masks which resulted in lots of publicity.

- National Groundwater Awareness Week (NGAW) – raised awareness with media interviews, additional promotion of the Austin Underground film series, and connected NGAW to an Austin Water Utility (AWU) guided hike of Water Quality Protection Land purchased by AWU..
- World Water Monitoring Day – brought together multiple non-profit and government entities to raise awareness about water monitoring and received a city proclamation.
- Let's Can It! - continued the anti-litter campaign with financial support from Austin Resource Recovery and promotional support from local non-profit organizations - Keep Austin Beautiful, The Trail Foundation, Colorado River Foundation, Austin Parks Foundation, and Austin Youth River Watch.
- Grow Green:
 - Won a Bronze Quill Award from the Austin Chapter of the International Association of Business Communicators for the Grow Green Tree Care During Drought Fact Sheet.
 - Distributed 146,950 Grow Green Fact Sheets plus 53,573 plant guides and had 75,282 hits on the webpage.
 - Hosted the Grow Green Landscape Professional Training series with more than 300 professionals attending at least one training.
 - Created a series of four do it yourself videos that were nominated for a Lone Star Emmy.
 - Coordinated Texas Native Plant week city events so there was at least one event per day. Developed the logo, which is now being used statewide.
- Storm Drain Marking – coordinated volunteer efforts that resulted in 1,548 storm drains being marked.
- Scoop the Poop – distributed 2,490,000 mutt mitts in partnership with PARD. Created interpretive signage for display in parks and partnered with animal focused non-profits on a grassroots advertising campaign.
- Youth Education - Watershed Protection Department's youth education program reaches all grade levels of students and provides teacher training through the Groundwater to Gulf Summer Institute and teacher-Led Earth Camp. In 2012, Keep Texas Beautiful (KTB) announced that the Watershed Protection Department's (WPD) Earth Camp program won the first place Off Campus youth education award. The award is one of twelve categories in the Keep Texas Beautiful Youth & Educator Awards and recognizes outstanding programs that encourage and demonstrate efforts to promote environmental education.
 - Earth Camp and Earth School - Reached 7,034 AISD fifth graders through Earth Camp and Earth School.
 - Clean Creek Campus – 2,663 students participated in two classes plus a service-learning project to re-enforce lessons learned in the classroom.
 - Hydrofiles – 261 high school students participated in inquiry-based investigations of Austin's watersheds by monitoring local creeks, evaluating water quality trends, and making informed decisions to improve water quality.
- Country Club Ichthyicide – 47 middle school students dove into a series of lessons to uncover the truth about a historical fish kill that occurred in Austin in 1979.
- Clean Creek Camp – Added a third session of the summer parent-child Clean Creek Camp to reach a total of 43 youth and 27 adults.



Earth Camp

Water Resources Evaluation

The Water Resource Evaluation (WRE) Section conducts water quality monitoring and assessments for use in the Department's master plan; regulatory and policy revisions; TPDES permit compliance; and the Texas Clean Rivers Program administered by LCRA. WRE plans and implements aquatic/riparian ecosystem restoration projects through staff, volunteer, and capital budget methods. The section also performs site plan reviews to identify critical environmental features and provides ongoing environmental technical assistance for major capital improvement projects. WRE reviews TCEQ, TPDES and Texas Land Application Permits (TLAP) with potential impacts on Austin water quality. Staff conduct U.S. Fish and Wildlife Service (USFWS) permit compliance monitoring and management activities required for the federally listed Barton Springs salamander (*Eurycea sosorum*) necessary for continued recreational use of Barton Springs Pool. WRE also conducts monitoring and management projects for the Austin Blind (*E. waterlooensis*) and Jollyville Plateau (*E. tonkawae*) Salamanders currently in the federal listing process. .

- Habitat Conservation Plan (HCP) and Environmental Assessment (EA) for Barton Springs Pool – Completed the HCP and EA for maintaining the federal authorization to keep the pool open for recreational uses. This project satisfied requirements for a new permit term from USFWS and the National Environmental Policy Act (NEPA) EA requirements for EPA. Documentation of all monitoring and projects conducted during the first 15 year permit term was used as basis for proposed permit conditions for the next 20 years. Staff responded to reviews from the BSP Scientific Advisory Committee, local and regional USFWS offices, and other stakeholders. Federal Register publication for formal public review is anticipated in January 2013 and issuance of the new permit should be well before the October 2013 expiration date of current permit.
- Grow Zones/Riparian Restoration – Launched new program of sustainable mowing practices for City owned properties to promote passive restoration of riparian ecosystems along Austin streams. Collaborated with Parks Department and WPD FOD to vastly improve maintenance procedures along creek channels under their purview. Set up a memorandum of understanding with PARD to continue these practices into normal operating procedures. Supported and educated neighborhood stakeholders and volunteers to promote this program.
- Texas Land Application Permits – Conducted intensive geological investigations on site of first TCEQ permit for irrigation disposal of treated wastewater over the Barton Springs Recharge Zone. Staff assisted the Law Department in settlement negotiations and ongoing contested case hearing including expert witness testimony. Also completed supporting investigations of tributaries potentially impacted by other TCEQ permitted facilities, indicating that current permit conditions are not adequate to protect water quality. Building body of scientific evidence to propose changes to TCEQ rules and guidance concerning TLAPs.
- TxDOT Coordination on US 290/SH 45 SW – Along with ATD, WPD obtained standing for the City as a “participating agency” in the NEPA environmental impact assessments for these critical highway projects. This will allow COA to have direct influence on the environmental features and alternatives associated with the projects as they progress. Each of these projects has been under development for many years, and this current status and process puts WPD in the best position yet to protect water quality.
- Davis/Deer Lane Improvements – Completed hydrogeological investigation for Public Works CIP project as required by the City/County BCP Endangered Species Act (ESA) permit with USFWS. Project included cave mapping, dye tracing, and water quality monitoring components. With a few modifications, the CIP project was allowed by USFWS to continue as designed.
- Barton Springs Bypass Repairs – Salamander biologists continued to oversee the aspects of the project that have potential to impact Barton Springs Salamander habitat. Staff provided project manager, consultants, and contractors specific guidance to maintain compliance with provisions of our USFWS permit, Biological Assessment, and Biological Opinion for the project. As construction proceeds, onsite oversight has been provided by our biologists continuously as required by USFWS and this will continue for the duration of the project.
- Bacteria Total Maximum Daily Load (TMDL) Development – Completed planning phase for upcoming TMDL project for four Austin streams with elevated bacteria levels indicating impairment of contact recreation designated uses as defined by TCEQ. At the City's request, TCEQ will complete the TMDL in Fall 2013

and concurrently develop an Implementation Plan outlining bacteria reduction strategies to meet the TMDL for these impaired streams.

- US Fish and Wildlife Service Endangered Species Rule Making: The USFWS in August 2012 proposed a rule to list as endangered species the Austin Blind Salamander, found in the Barton Springs Complex, and the Jollyville Plateau Salamander, found in springs in northwest Austin. City biologists provided data to the USFWS that was included in the proposed rule, and provided comments on the proposed rule during the federal public comment period. The final determination will be made in 2013.
- Jollyville Transmission Main – Staff geologists monitored the excavation of shafts through the Edwards formation to note and protect karst features potentially critical for water movement to nearby springs and which might be habitat for karst invertebrates. In addition, the three tunnel reaches currently under construction have been monitored weekly for conditions which might affect surface and/or ground water resources.

Stormwater Quality Evaluation

Stormwater Quality Evaluation (SQE) provides support for various other sections of WPD including education, planning and stormwater treatment by monitoring the quality and quantity of runoff from different land use types, evaluating the performance of different water quality controls and developing watershed scale water quality models to evaluate different development scenarios. Highlights of the year include:

- New monitoring stations were established to evaluate the effectiveness of the One Texas Center rain gardens (seven stations) and to support the work of the Green Infrastructure Team in the Brentwood neighborhood (two stations).
- SQE staff developed sub-hourly soil and water assessment tools (SWAT) models for several watershed and selected catchments to evaluate BMP algorithms and test development alternatives.
- SQE staff worked with the Lady Bird Johnson Wildflower Center to evaluate the effectiveness of green roofs from a water quantity perspective.



Brentwood Monitoring Station



↑
← OTC rain garden monitoring sites

Sustainable Stormwater Solutions

The Sustainable Stormwater Solutions Section focuses the Department's efforts on sustainable engineering solutions regulatory approaches, community education opportunities and maintenance practices that allow cost effective implementation of our WPD objectives. Three teams comprise the section: Green Infrastructure, Stream Restoration and Stormwater Treatment.

Green Infrastructure Team

In July 2011, the Watershed Protection Department formalized its commitment to Green Infrastructure by creating the Green Infrastructure Team. This team is a cross-disciplinary unit with members from each of

Watershed's functional units: water quality, stream restoration, flood mitigation, education, maintenance, policy and planning. The mission of the team is to: investigate the opportunities for using Green Stormwater Infrastructure (GSI) to reduce flooding and erosion, improve water quality and reduce the use of potable water for landscape irrigation; and create a blueprint for optimizing its use

In 2012, the GI Team expanded and consolidated Austin's previous green infrastructure efforts. In addition to City sponsored stormwater treatment retrofits, updated design criteria and outreach to homeowners and schools, the GI Team has undertaken the following:

- Creation of advanced computer simulation of the effects of large-scale, decentralized Green Stormwater Infrastructure to solve flood and water quality problems in the urban environment;
- Production of a Standard Operating Procedures Manual for Austin GI, informed by benchmarking other cities and Austin's experience;
- Revision of Environmental Criteria Manual 1.6.7 to provide state of the science design guidance for building GSI in compliance with City of Austin Land Development Code.
- Completion of two rain gardens on AISD campuses - Barbara Jordan Elementary and Gus Garcia Middle School
- Partnership with University of Texas Civil Engineering classes to teach rain garden design and professional client interaction
- Development of Green Infrastructure curriculum for AISD teachers

Stormwater Treatment and Stream Restoration

The purpose of the Stormwater Treatment Program is to reduce pollution in stormwater runoff and maintain or enhance baseflow in Austin streams. The Stream Restoration Program's objective is to create a stable stream system that decreases property loss from erosion and increases the beneficial uses of our waterways.

- Stormwater Treatment Construction Projects Completed: RioGrande @ 18th Rain Gardens (three) and Crestview Neighborhood Rain Gardens (three).



Rio Grande @ 18th Rain Gardens



Crestview Rain Garden

- Stream Restoration Design Projects Completed
 - Capital Improvement Design Projects - Completed design of the Shoal Creek Peninsula Restoration and Boggy Creek Greenbelt Restoration Projects. Construction for both projects is underway.
 - In-House Design Projects - Completed designs for the following in-house stream restoration projects: Little Walnut Creek Tributary at Colony Creek, Blunn Creek at Pecan Grove Emergency Stabilization, Slaughter Creek Tributary at Baurle Ranch Grade Control, Waller Creek at Chesterfield Bank Stabilization, Waller Creek at Dean Keeton Bank Stabilization, South Lakeshore Culvert Outfall Stabilization, Fort Clark Channel Rehabilitation, Will Bend Heritage Tree Bank Stabilization, East Bouldin Creek at Brinwood Bank Stabilization, Boggy Creek at E MLK Green Infrastructure Bank Protection, Boggy Creek at Walnut Stream Restoration.

- Stream Restoration Construction Projects Completed



East Bouldin Creek at Wilson St.
Culvert Outfall Bank Stabilization

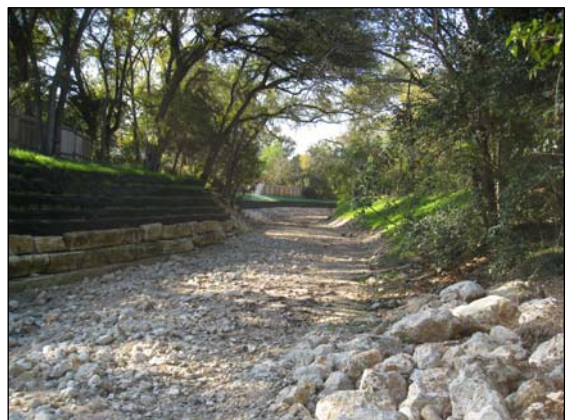


Waller Creek at Dean Keeton
Bank Stabilization



Colorado River at Tillery Street Stormdrain
Outfall Stabilization

Fort Branch Eleanor Street Channel



Support Services

There are a number of key sections within the Office of the Director which contribute to the success of the Department through the provision of important internal operational support services. These areas include, but are not limited to the following: Financial Management, Human Resources/Safety, Public Information, General Administration, and Recommendations for Council Action (RCA) support.

A couple of these areas' accomplishments are highlighted for this reporting year below:

Human Resources / Safety Office

The Human Resources (HR) group provides support to the Department in the areas of employee relations, workers' compensation, family medical leave, compensation, payroll, ADA, occupational safety and health, training and employment. Additionally, staff provides advice and counsel to employees and management in adherence to City policies and procedures, State, Federal and local laws governing human resources, safety and occupational health activities.

In FY 2011-12, WPD HR/Safety achieved the following:

WPD HR

- Completed City-wide market study (Phase 2 and Phase 3 combined). WPD had 154 employees affected and 42 titles included in the market study. The market study started in October 2011 and was rolled out in April 2012. During that period, HR had a total of six Field Ops site visits; three meetings to communicate the market study to the employees and three meetings to assist the employees in completing their Employee Work History Information Form (EWHF) online. HR collected and electronically entered the data throughout the months of December 2011 through January 2012. HR then reviewed all information on the EWHF to determine the correct salary zone for each employee and communicated the results of the market study to all affected employees in April 2012.
- Played a key role in the City of Austin and Travis County Community Job and Resource Expo. This event was to promote and bring awareness of job opportunities and services to the public.
- Recognized by corporate HR for achieving 100% compliance with the Federal Immigration (I-9) laws. WPD HR ensured all active WPD employees had supporting I-9 documents.
- Coordinated process to review Field Operations job descriptions. During this process HR conducted field visits and met with 77 Field Operations employees to complete EWHF, Personnel Action Forms, and Skills Assessment forms as part of the Field Operations Classification Study and Career progression Program. During the process job descriptions were revised to reflect accurate job duties and responsibilities.
- Conducted nine Brown Bag HR sessions for WPD/PDR managers

WPD Safety

- Basic Skills Training Program- The equipment training program grew with the addition of a dedicated shared training site at the Austin Water Utility Govalle training location. The basic skills training allows staff to provide field operations staff with learning opportunities in a controlled safe environment. Using this system has allowed us to dramatically increase the number of employees undergoing training with hands on equipment time prior to being assigned on the job training slots.
- Earth Camp- During this past year the Earth Camp section of ERM in conjunction with the safety section of HR, analyzed the job functions of the staff as well as the hazards faced by the students during Earth Camp activities. All full time employees, temps and volunteers attended Bloodborne Pathogen training and worked to rewrite the policies and procedures that needed upgrading including the loading and unloading of students from buses in high traffic areas at Barton Springs.
- Worked with the COA ROCIP program to establish clear communication between staff and administrators at the Water Treatment Plant 4 project during tunneling operations.

- Conducted thirty Safety Plus meetings for WPD staff and field operations.
- Monitored and Implemented National Incident Management System requirements for the Department as per the Office of Emergency Management and completed/submitted annual audit in September.
- Safety office staff served on the Continuity of Operations (COOP) development team. Assisted in the development of the Department COOP, which was finalized in November, 2011. Also participated in facilitating the table top scenario in April, 2012 and with an update to the COOP plan in September 2012..
- Developed personal protective equipment policy and procedures for the Planning and Development Review Department.
- Developed first COA Employee Safety Recognition Program following the guidelines developed by HRD and implemented.
- Participated in the development of the Field Operations Career Progression Program and the identification of the necessary learning and operational skills for inclusion in the educational requirements for advancement.
- Developed through research, observations and interviews, Vector Truck operating procedures for basin cleanout, debris removal and de-watering operations. Operating procedures impact the safety of the Vector Cleaning Crews and the public by providing a sequential method for conducting operations while working with high pressure hose lines thereby preventing hazardous energy releases.
- Provided employee office workspace ergonomic assessments to ensure proper workspace design aimed at preventing repetitive motion injuries to employees. The safety office provided follow up assessments to employees to monitor and measure the effectiveness of the solutions implemented.
- Participated in Barton Springs By-pass Tunnel Project; providing counsel regarding potential safety related issues and the impact on WPD employees and the public.
- Worked with ERM and Field Operations divisions to coordinate and participate in the safe completion of the first phase of the Lacrosse Cave clean-out project. The Lacrosse Cave has been identified for future use by Earthcamp as an educational resource.
- Coordinated and participated in a joint effort with ERM section Hydrogeologists to develop and implement safety related void inspection procedures as they pertain to ERM Hydrogeologists performing inspections of natural voids encountered by construction contractors.
- Conducted 100 inspections of WPD Field Operations job sites.
- Developed and provided customized HAZWOPER training to employees that provide response pertaining to the Barton Springs Catastrophic Spill Plan.
- Identified the need for and provided a series of Field Operations training sessions to include Temporary Traffic Control/Flagging, Trenching and Excavation and Confined Space classes aimed at developing competent persons that will be faced with associated hazards.
- Participated in bi-weekly ERM Team Lead meetings as well as quarterly employee meetings to present and discuss employee exposures and associated mitigation protocols.

Public Information Office

The Public Information Office (PIO) ensures that media and citizens receive accurate information in a timely manner about the Watershed Protection Department's flood and erosion control and water quality programs and initiatives. PIO also educates and encourages our external and internal customers to participate effectively in these programs through a variety of communications strategies and tools. These strategies and tools include working with the media to inform the public, the development and maintenance of internet and intranet sites, brochures, advertising, facilitating public meetings, etc. Watershed PIO also responds to Customer Assistance Forms (CAFs), Public Information Requests (PIRs), and handles Records Management.

During FY 2011-12, PIO had 273 media contacts for an advertising equivalency of \$744,220, had 478 Public Information Requests, and prepared 29 Customer Assistance Forms. All of these were 100% on time. The WPD Records Analyst reviewed 33 requests for disposition and approved recycling or shredding of 53.5 boxes and 13 file drawers.

The Flood Awareness Campaign incorporated media events throughout the year, including a Flood Awareness Week media campaign. Activities included the Turn Around – Don't Drown poster contest, a news conference demonstrating swift water rescues and a media tour of the Waller Creek Tunnel.

PIO also ran emergency and educational radio advertising on flood safety and "Save Yourself! Turn Around – Don't Drown" in English and Spanish, held a media briefing for the Barton Springs bypass tunnel, a ribbon cutting for the Waller Creek Boathouse and assisted with communications for the Watershed Protection Ordinance Update.

The group continued to provide assistance with the November 2006 Bond storm drain projects and Watershed Engineering initiatives, as well as facilitated 17 public meetings on topics ranging from the Barton Springs Habitat Conservation Plan to the restoration of Shoal Creek in Pease Park. Additional activities included presentations for CityWorks Academy and AustinCorps, several exhibits at events, monthly intranet features and updates, and continuing Watershed Moments to enhance internal communications.

PIO staff was also active in the Customer Care and Billing communications and the redesign of the City's Web site.

The WPD Records Management initiative has been recognized by the City Clerk's Office as a model for other City departments.