

MEMORANDUM

File 160.841

BOARD MEETING: February 22, 2012
AGENDA ITEM NO: 11

FROM: Daniel Rourke 
Environmental Resources Manager

SUBJECT: **Final Report on American Recovery and Reinvestment Act
(ARRA) Funded Projects**

Summary

In July 2009, the District submitted an application to the State Water Resources Control Board for \$3,892,600 in State grant funds to construct storm drain pipeline and irrigation retrofit projects in the City of Fresno. The irrigation retrofit projects converted basin irrigation from potable water to using water that is stored and available in the basin.

This application was approved in October of 2009. The funds originated from the federal American Recovery and Reinvestment Act and came with special requirements regarding project timelines, reporting, prevailing wages and the use of American-made hardware and supplies.

The District completed the project ahead of schedule and under budget, and has submitted a Final Project Certification report to the State to close out the project. State Water Resources Control Board staff visited the District in January, reviewed the project files, inspected certain project sites and found the project and associated documentation in order. Staff expects that the State Water Resources Control Board will release the 10% grant fund retention shortly, confirming that the District has met its obligations under the grant agreement. The retention still held by the State is \$148,612.

Recommendation

This item is for informational purposes only and no action is required of the Board of Directors unless specific direction is to be given to staff.

Discussion

In February 2009, the federal government announced the passage of the American Recovery and Reinvestment Act (ARRA). The Act was designed to quickly boost employment by providing funding for public infrastructure projects that had already been designed and had passed environmental review. ARRA monies were made available to California public agencies through the Clean Water State Revolving Fund (CWSRF), administered by the State Water Resources Control Board. The State Water Resources Control Board was tasked to solicit grant-worthy proposals and award Recovery Act funds as quickly as possible. The District had a number of storm drain pipeline projects already designed and a

board\memo\perm\2012-02-22-11



BOARD MEETING: February 22, 2012
AGENDA ITEM NO: 11

track record of successful implementation of CWSRF infrastructure loans. The District capitalized on an opportunity to capture \$3,892,600 in grant funds to match a District cash contribution of \$757,275.

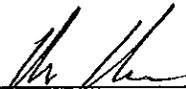
The project consisted of the construction of 19,500 feet of underground stormwater pipeline and the conversion of the irrigation systems of four landscaped District basins from potable municipal water to direct use of in-basin stormwater and recharge water.

The project provided permanent storm drain service to ten areas within the City of Fresno. Most of these areas do not produce tax revenue sufficient to fund the construction of new pipeline and were benefitted directly by the District's acquisition of ARRA funds. The addition of permanent storm drain service to these areas encourages investment by providing flood protection and reducing insurance costs for businesses.

The project included the installation of pumps, conduit, screens and electrical controllers in landscaped basins "RR1", "RR3" "EE" and "XX" to retrofit these facilities to draw in-basin water for irrigation in lieu of using costly municipal potable water. Total annual municipal water savings is approximately 85 acre-feet (27,800,000 gallons).

The project was done in seven phases, using five different local contractors. Federal Davis-Bacon prevailing wage and wage reporting requirements applied to all project contractors and subcontractors. The project generated 25,941 hours of local employment and \$887,832 in local payroll.

Approximately \$670,000 worth of supplies and hardware were purchased in the course of the project. Most of the expense came from the purchase of reinforced concrete pipe, steel inlet structures and pumps fabricated in California. The District met the Recovery Act's requirement that at least 95% of the supplies and hardware meet stringent 'Buy American' requirements. The total value of foreign sourced hardware and supplies was limited to about 2.4% of total project hardware cost.



Andrew Remus
Staff Analyst

DR/AR/nl



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

March 9, 2012

NOTICE OF CONSTRUCTION COMPLETION

Mr. Bob Van Wyk
General Manager
Fresno Metropolitan Flood
Control District
5469 East Olive
Fresno, CA 93727

Dear Mr. Van Wyk:

STATE REVOLVING FUND LOAN, FRESNO METROPOLITAN FLOOD CONTROL DISTRICT,
FRESNO STORMWATER COLLECTION TREATMENT AND SURFACE WATER RECYCLING
PROJECT, CONTRACT NO. 09-836-550, PROJECT NO. C-06-6350-110

Congratulations on the completion of your project.

I have processed your final Invoice Number 8, signed on March 2, 2012. Our records indicate that after paying the final invoice all funds have been expended.

In accordance with Article II, Section 2.11 (b) of your Finance Agreement, your agency is required to retain records a minimum of 6 years from the date of Project Completion for audit purposes.

If you have any questions, please contact Eva Kawada at (916) 341-5715 or ekawada@waterboards.ca.gov.

Sincerely,

Eva Kawada

Eva Kawada
Program Analyst

cc: Ms. Benita Walker
Account Technician III
Fresno Metropolitan Flood
Control District
5469 East Olive
Fresno, CA 93727

CHARLES R. HOPPIN, CHAIRMAN | THOMAS HOWARD, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (ARRA) INVOICE
 (Reference instructions on following page - Failure to follow instructions may result in non-payment of invoice)
THIS OFFICIAL INVOICE FORMAT MAY NOT BE MODIFIED

From: **Fresno Metropolitan Flood Control District**
 5469 East Olive
 Fresno, Ca. 93727
 (559) 456-3292

To: **Eva Kawada, Program Analyst**
 State Water Resources Control Board
 Division of Financial Assistance
 1001 I Street, 17th Floor
 Sacramento, CA 95814

ARRA FUNDS ONLY

③ Line Items

④ Financing Agreement Allotment

⑤ Previous Expenditures to Date (From previous invoice)

⑥ Current Expenditures ARRA Funds Only

⑦ Total Expenditures to Date

⑧ % of Line Item Budget Spent to Date + Allotment = %

⑨ Construction - Change Orders

⑩ Retention - 10%

TOTALS

⑪ FOR STATE USE ONLY

Date Reviewed by PA

Date to Accounting

⑫ RECIPIENT CERTIFICATION

I certify that the costs shown in column "5" have been incurred and that these costs have been paid or will be paid within 30 days of receipt of the funds requested hereby. If such costs have not been paid within 30 days, funds received under this request will be returned to the State Water Resources Control Board (SWRCB). I certify that all prior funds received from this loan/grant have been disbursed within 30 days of receipt or have been returned to the SWRCB.

I certify that all amounts on this invoice are for costs incurred for the Project and represent only costs directly related to the Project. Note: If entity chooses to add a surcharge, this surcharge must be supportable and documented by direct costs related to the Project. These records can be requested at any time for auditing purposes to ensure costs are justified and directly related to the Project.

I also certify that costs claimed are specific to the Financing Agreement and within the approved scope of work.

Signature of authorized representative: Boblan Wyke Title: General Manager-Secretary Date: March 2, 2012

STATE USE ONLY: APPROVAL FOR PAYMENT

Signature of Project Manager: [Signature] Title: Payments Analyst Date: 3/8/12

Signature of Reviewer: [Signature] Title: Payments Analyst Date: MAR 09 2012

Signature of Approval: [Signature] Title: Payments Analyst Date: MAR 09 2012

Comments: All Quarterly Reports have been submitted to date.

Andrew E. Remus

From: Bob Van Wyk
Sent: Monday, March 12, 2012 8:26 AM
To: Andrew E. Remus; Paul Merrill; Carol A. Gerking; Benita Walker; Jason Clarke
Subject: FW: Fresno Metropolitan Flood Control District, C-06-5340-110, Invoice #8 (Final)
Attachments: 6350-110 Invoice #8 (Final).pdf; 6350-110 invoice tracking.xls; 6350-110 NOC letter_3-9-12.pdf; Kawada, Eva.vcf

-----Original Message-----

From: Eva Kawada [mailto:EKawada@waterboards.ca.gov]
Sent: Friday, March 09, 2012 2:18 PM
To: Bob Van Wyk
Cc: Benita Walker; Conny Mitterhofer; Debra Latour; Kelly Valine; Mark Fong; Oksana Tuk; Susan Damian; Sandhya Samant
Subject: Fresno Metropolitan Flood Control District, C-06-5340-110, Invoice #8 (Final)

Mr. Van Wyk,

Congratulations on the completion of your project.

I have processed your Invoice No. 8 (Final) signed on March 2, 2012. You will be receiving your grant funds shortly. In order to assist you in determining how your payment was computed, we are attaching a completed copy of the Invoice Form, Invoice Tracking Template, and a copy of the Notice of Completion letter dated March 9, 2012. The original letter will be mailed to you.

Please let me know if you have any questions.

Eva Kawada
Program Analyst
(916) 341-5715
(916) 341-5296 (Fax)

E-mail address: ekawada@waterboards.ca.gov

Invoice Tracking Template

SRF Loan No. 06-6350-110
Agreement No.: 09-836-550
Grantee: Fresno Metro Flood Control District
Program: ARRA Urban Stormwater
Encumbrance FY: 09/10

Invoice No.	Billing Period	Personnel Services	Direct Project Expenses	Professional/ Consulting	Construction ARRA Principal Forgiveness (51620)	Construction Cap Grant Principal Forgiveness (51012)	Total
Line Item Allotments							
		\$0.00	\$0.00	\$0.00	\$121,136.60	\$3,771,463.40	\$3,892,600.00
1	2/1/10-2/28/10				\$53,773.00	\$0.00	\$53,773.00
2	4/1/10-4/30/10				\$0.00	\$807,245.23	\$807,245.23
3	5/1/10 - 5/31/10				\$0.00	\$1,283,805.09	\$1,283,805.09
4	6/1/10 - 7/30/10				\$67,363.60	\$855,290.42	\$922,654.02
5	8/1/10 - 9/3/10				\$0.00	\$266,609.56	\$266,609.56
6	9/4/10 - 12/31/10				\$0.00	\$169,253.10	\$169,253.10
7	1/1/11 - 3/31/11				\$0.00	\$240,647.76	\$240,647.76
8	4/1/11 - 6/30/11				\$0.00	\$148,612.24	\$148,612.24
9							\$0.00
10							\$0.00
11							\$0.00
12							\$0.00
Total Amount Spent		\$0.00	\$0.00	\$0.00	\$121,136.60	\$3,771,463.40	\$3,892,600.00

Allotment Remaining	\$0.00	\$0.00	\$0.00
----------------------------	--------	--------	--------

Invoice Tracking Template

SRF Loan No. 06-6350-110
Agreement No.: 09-836-550
Grantee: Fresno Metro Flood Control District
Program: ARRA Urban Stormwater
Encumbrance FY: 09/10

Invoice No.	Billing Period	Personnel Services	Direct Project Expenses	Professional/ Consulting	Construction	Total
Line Item Allotments						
		\$0.00	\$0.00	\$0.00	\$3,892,600.00	\$3,892,600.00
1	2/1/10-2/28/10				\$53,773.00	\$53,773.00
2	4/1/10-4/30/10				\$807,245.23	\$807,245.23
3	5/1/10 - 5/31/10				\$1,283,805.09	\$1,283,805.09
4	6/1/10 - 7/30/10				\$922,654.02	\$922,654.02
5	8/1/10 - 9/3/10				\$266,609.56	\$266,609.56
6	9/4/10 - 12/31/10				\$169,253.10	\$169,253.10
7					\$0.00	\$0.00
8					\$0.00	\$0.00
9					\$0.00	\$0.00
10					\$0.00	\$0.00
11					\$0.00	\$0.00
12					\$0.00	\$0.00
Total Amount Spent		\$0.00	\$0.00	\$0.00	\$3,503,340.00	\$3,503,340.00

Allotment Remaining	\$0.00	\$0.00	\$0.00	\$389,260.00
----------------------------	--------	--------	--------	--------------



Capital Improvement Projects a Priority in 2010/2011 Budget

The Fresno Metropolitan Flood Control District Board of Directors has adopted a \$32,545,365 budget, which includes \$15,307,940 for capital improvement projects. At 47% of the total budget, this year's capital projects budget continues a trend of aggressive capital project funding. "This fiscal year we are focusing on dedicating capital to three areas; 1) completion of the pipeline collection system in older areas of Fresno and Clovis, 2) construction of pump stations to facilitate discharge of stormwater from basins, and 3) conversion of irrigation systems to use surface water and to limit the use of potable water for irrigation of landscaped basins," explains Alan Hofmann, Assistant District Engineer/Design Engineer.

The remaining budget is divided among all operational and administrative expenditures.

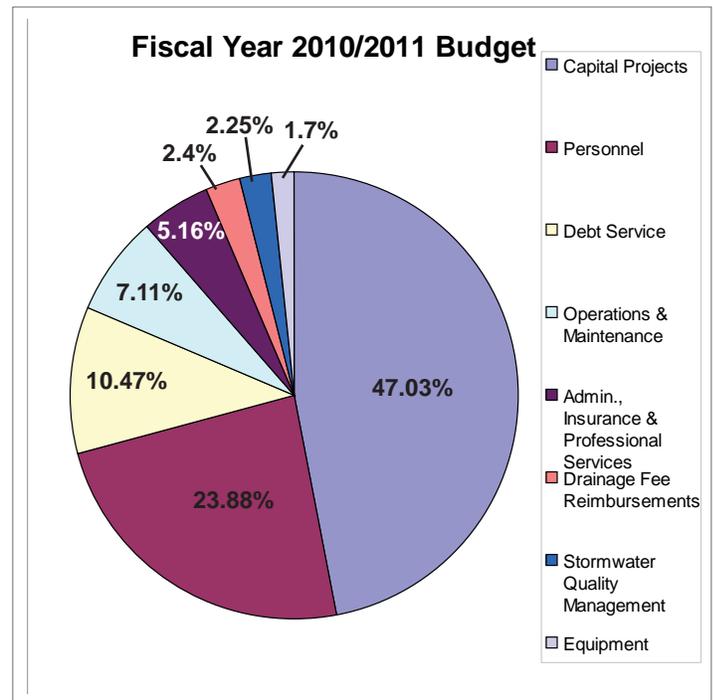
Completion of pipeline collection system

Older parts of town that will see pipeline construction over the next year include the Maple and Jensen Industrial Area, Clovis Avenue at Dakota, G Street from Monterey to Ventura and Kings Canyon west of Clovis Avenue.



Installing storm drain pipeline in Broadway Street downtown will keep stormwater from blocking businesses' front doors, eliminating seasonal flooding conditions that have existed for decades.

Portions of Clovis and Fresno were developed before a Master Plan drainage system was developed in the mid-1960s, and many of these older areas drained to the



sanitary sewer system. The District continues to construct pipelines that collect stormwater from these established neighborhoods and convey it to nearby stormwater basins.

Construction of pump stations

Pump stations are installed in stormwater basins to control water levels and retain storage capacity for forthcoming storm events. Funds are being set aside for pump stations at nine basins this fiscal year for a total cost of \$2,650,000.

'Budget' continued on page 3

Inside This Issue

Message from the General Manager	2	Students say "Thank You!" for San Joaquin River Field Trips	5
Long-time ARC Fresno Sponsors Honored	2	New Urban Wildlife Viewing Areas	6
Cover story continued	3	Annual Water Wise Plant Exchange	6
A Healthy Pulse for Fresno County - guest story	4	Volunteers Plant 70 Trees in Two Hours	7
Juvenile Diabetes Research Foundation Walk	5	Close up: Anthony Zaragoza	8

Message from the General Manager



Bob Van Wyk

The District's fiscal year began on July 1, and as illustrated in this issue's cover story, capital projects are a major focus of resources and activities for the coming year. Another important focus, tied to the capital program, is changes to the urban drainage system master plan to stay ahead of increases in urban densities in Clovis and Fresno. The Cities' urban planning reflects region-wide efforts to reduce urban sprawl and new developments are planning more houses per acre, narrower streets, and zero lot lines. Increased densities mean more land covered with houses, streets, driveways and sidewalks, producing more storm water runoff. Changes in system engineering are being evaluated with respect to pipeline size and basin capacity to ensure efficient conveyance and capture of increased stormwater runoff.

As the urban area continues to grow, maintenance needs of constructed pipelines and basin property grow. The urban storm drainage system is made up of roughly 600 miles of pipeline and 152 stormwater basins. In FY 2010/11, \$2.3 million is devoted to system maintenance.

Pollution prevention education is an ongoing effort and District staff educates and informs the general public, students, and businesses of their importance in keeping stormwater clean. Partnerships with other public agencies who have similar pollution prevention messages leverage taxpayer dollars.

As explained by this issue's guest writer, President/CEO Steve Geil of the Fresno County EDC (story on pg. 4), the District remains committed to economic development. The Board and staff of the Fresno Metropolitan Flood Control District look forward to a dynamic and productive year ahead.

Long-time Arc Fresno Sponsors Honored

In 1999 Fresno businessman Larry Willey, of Willey Tile, proposed that the District enter into a business-funded partnership with Arc Fresno. The District Board accepted the proposal and the PARC Foundation was born. Sponsoring businesses agreed to a 10-year sponsorship of \$5,000 per year to pay for Arc Fresno's clients' landscape and janitorial maintenance work at selected recreation basin sites. In 2000 sponsorships began.

Willey Tile, Johanson Transportation, Terry Tuell Concrete, Spencer Enterprises, Derrel's Mini Storage and Lyons Magnus are all original sponsors whose 10-year commitment has expired. These companies' generous support has helped adults with developmental disabilities find work and gain job experience while providing maintenance at park sites. Two sponsors whose commitment continues are Derrel's Mini Storage and Lyons Magnus.

The money the District saved every year on maintenance costs because of the sponsorships is deposited into the PARC fund for future park development. To date, \$84,000 has been used to help build Basin "S" Park at Ashlan and Minnewawa in Clovis. More park projects are to come.

Arc Fresno's Executive Director Lori Ramirez states, "We commend the sponsors for their 10-year commitment to improving our community's basins through the hard work and dedication of the adults with developmental disabilities who daily performed the landscape work. The sponsors



PARC Foundation founder and sponsor Larry Willey of Willey Tile (l), Arc Fresno crew members Rick Stewart, Donnie Vincent, Crew Supervisor Julio Perez, and Bernardo Luna (far right), Arc Fresno Executive Director Lori Ramirez, and PARC Foundation sponsor Terry Tuell of Terry Tuell Concrete.

played an important part in changing the lives of these individuals who might not have been given an opportunity to do a job, earn a paycheck and ultimately be contributing members of our community. "Our guys are also very appreciative the Fresno Flood Control District will keep us working on the basins and continue what the sponsors did for the past 10 years, giving the adults with disabilities a way to earn a paycheck."

In August, Arc Fresno and the District honored these committed long-time sponsors with plaques affixed to a Margaret Hudson sculpture at LARC Park at the Enrichment Center, and with framed resolutions of appreciation.

Budget

Continued from cover

Reclaimed water for irrigation

The District's preference for landscape irrigation systems at basins is use of surface water from the basins themselves or from nearby Fresno Irrigation District canals. When a reliable surface water supply is available, it is preferable to drawing groundwater from the municipal water supply.



This practice saves millions of gallons of potable water each year, and is in place at eight landscaped basins. The current budget will fund retrofit of four more basins.

More projects to come

Only a small amount of work remains to complete the District's American Recovery and Reinvestment Act (ARRA) projects. Fifteen projects were funded through the ARRA program. This work represents approximately \$4,654,475 of local economic activity, while improving storm drainage services.

Recently completed capital projects



Coordination with the City of Fresno

The City of Fresno notified the District it was planning a street improvement project on Divisadero Street at Fulton Street in downtown Fresno. The District then accelerated its plan to complete a new



segment of pipeline prior to City paving. This eliminated the disruption of newly laid asphalt applied by the City contractor. Such coordination saves taxpayer money and prolongs the life of the community's street improvements.

Meeting project challenges

Not every construction project is 'business as usual.' Some are found to be complex only during construction. Project AK-39, near Ashlan and 99 in west Fresno, included "jacking" (underground excavation) under both lanes of traffic of Highway 99 at Ashlan from the east side to the west side



to construct new pipeline for connection to existing downstream drainage service in an already developed area. The pipeline under the highway was the missing link.



Another major challenge happened in downtown Fresno at Fulton and Voorman when trenching for pipeline construction began and crews discovered that utility lines were in the trench path (shown left), rather than on the opposite side of the street as plan information had indicated. The job had to be revised in the field after project construction had started.

Other projects

Another capital project planned in 2010/2011 will improve Big Dry Creek Dam. Several urban storm drainage projects are also planned. They include design engineering and work such as constructing storm drainage pipelines under city streets. All of these projects are part of the District's responsibilities for water capture, storage, and disposal to beneficial uses.

A Healthy Pulse for Fresno County



Strategic Economic Development Partnerships

by **Steve Geil,**
President/CEO



The success of Economic Development Corporation serving Fresno County (EDC) services is only made possible through our many collaborative partners who find creative and impactful ways to serve the community. The Fresno Metropolitan Flood Control District (District) is one such partner. In October of 1999, the Board of Directors expanded the District's already active role in economic development by establishing an annual reserve that allows 50% of the budget to be allocated for economic development infrastructure. In addition to economic development through capital project funding, in October 2004, the District was one of more than 50 local agencies and organizations to sign the EDC's Strategic Alliance Agreement.

While the process to achieve economic vitality continues to vary from organization to organization, most business and community leaders agree that job retention and expansion are the pulse of a region. With jobs-creating development as the community focus, the long-standing partnership between the EDC and the District continues to enhance the stability and growth of Fresno County.

The EDC embraces the challenging role of regional leadership through coordination of local economic development resources. Success is measured through our core services, including the Business Expansion and Retention (BEAR Action Network), and Corporate Locations Departments.

In 2009, the BEAR Action Network was the California Association for Local Economic Development's grand prize winner for Economic Development Partnerships. Comprised of team members from the County of Fresno's Employment and Temporary Assistance department, the Fresno County Workforce Investment Board, State Center Community College District, various chambers of commerce, and city management teams across Fresno County, the BEAR meets one-on-one with local businesses or conducts workshops in order to connect companies with service providers based on need. Through the program, local businesses are assisted with anything from workforce recruitment to enterprise

zone vouchering to building expansions. Since the inception of the program, Fresno County has seen substantial increases in job creation, capital investment, and local tax base.

With a ready labor force, competitive educational institutions, affordable land, competitive leases, preeminent location, etc., Fresno County is an attractive region for outside investment. The Corporate Locations department nurtures relationships with brokers, developers, site selectors and businesses in order to promote Fresno County as the premier location to expand and grow core industries. Fresno County visibility is expanded through global marketing, one-on-one company missions, and trade shows. The EDC continues to see an increase in site visits especially from international clients, including companies from Spain, Canada, Israel, Australia, Singapore, etc. In the first three quarters of the FY 2009 – 2010, the EDC has sited 22 companies, facilitating over 1300 new jobs. Despite the economic downturn, Fresno County is well positioned for new opportunities.

In conjunction with attraction of new businesses, as well as business expansion and retention of existing businesses, the Strategic Initiatives Department manages industry clusters, which are groups of competing, collaborating, and interdependent businesses working in a common industry and concentrated in the Fresno County region. Clusters create a synergetic environment to strengthen and grow organizations by tackling common industry issues. The EDC provides leadership and support to 2 industry clusters, including Clean Energy, and Logistics & Distribution. In partnership with other vital community organizations, including the Regional Jobs Initiative, the EDC supports 10 other industry clusters, including Arts & Culture, Construction, Food Processing, Healthcare, Info Technology, Manufacturing, Public Sector, Software Development, Tourism, and Water Technology.

Through support of all other departments, the Marketing department is the creative force promoting Fresno County assets by engaging, educating, informing and communicating the benefits of growing businesses in Fresno County. This is accomplished through informative publications, website development, timely events, and other collateral. Over the last year, the EDC hosted global leaders including Chris Johns, President of Pacific Gas and Electric Company, Eli Ronen, Chairman of the Board for Mekorot and Anne Lauvergeon, CEO of Areva. For more information, visit the EDC online at www.fresnoedc.com.

With the EDC's mission to establish Fresno County as the premier location to grow core industries, we will continue to partner with and rely upon the District to promote jobs-creating development in Fresno County. Together, we will improve the economic health of our region!

Juvenile Diabetes Research Foundation Walk



Team Flood Control at the JDRF Foundation Walk at Woodward Park on Saturday, May 22nd.

This year marked the 14th year District employees participated in the annual Juvenile Diabetes Research Foundation (JDRF) fund raising walk. “District employees raised the amazing amount of \$2,778 this year, and a total of \$32,718 over the years,” explained Debbie Campbell, Development Services Manager.

Several staff members and their loved ones have been effected by diabetes. The effort diabetics must put in to managing the disease is critical to avoid the severe consequences that can occur later in life. JDRF is committed to finding a cure for diabetes and to providing useful life resources for diabetics and their families. To learn more about JDRF, visit www.jdrf.org/norcal.



Tiny walkers came to help, too! Michelle and dad Jared Affleck, GIS Analyst/Programmer (l). Project Manager Jason Clarke's daughter Ashlyn (r).

Students say 'Thank You!' for San Joaquin River field trips

Classes from Saroyan Elementary and Steinbeck Elementary went on District-funded mini-grant field trips to the San Joaquin River. The third and fifth grade students went on nature walks, examined river insects, and learned about wildlife and the importance of clean water. The field trips were an extension of this classroom study.



Steinbeck Elementary third-graders catching 'creepy crawlers'.

“Before our field trip, docents from the River Parkway came to the classrooms...teaching us about the food chain. We culminated our lessons on freshwater ecosystems by spending a day at the San Joaquin River; either Scout Island or Lost Lake. Without the financial support of the Fresno Metropolitan Flood Control District, our students could not have enjoyed this beautiful learning experience. We are

truly grateful”, said Mrs. Gammel, third grade teacher at Steinbeck Elementary.

Clean Stormwater grant applications are available each December, and due in March. Keep an eye out for a reminder later in the year.

Mrs. Jones from Saroyan Elementary shared thank you notes from her fifth-graders:



New Basin Wildlife Viewing Areas



The two wildlife viewing areas consist of viewing telescopes, bird identification interpretative signs and shade structures. The viewing areas encourage bird watching and wildlife education, and illustrate the benefits of stormwater basins to wildlife.

The State of California Department of Fish and Game awarded the District a public education grant in 2009 to increase public awareness of the connection between District stormwater basins and wildlife that inhabit them. One kind of tool used to build that awareness is wildlife viewing pavilions recently completed at two basins; one in Clovis and one in Fresno.

One viewing area is on the Enterprise Walking Trail in Clovis, west of Temperance and south of Teague (shown left) and the other is on the east side of the new Figarden Loop Park at Figarden Drive, north of Bullard Ave. Check them out for yourself and see what there is to see!

Annual Water Wise Plant Exchange

Saving water while enjoying a beautiful yard is easy to do. The best ways to accomplish that were demonstrated by local experts from the U.C. Cooperative Extension Master Gardeners of Fresno County at the annual Water Wise Plant Exchange held at the Fresno State Horticulture Greenhouses on May 8. Master Gardeners and other experts were on hand to answer questions about drought-resistant plants and water-efficient irrigation systems.

“The Plant Exchange offers a great opportunity for local agencies to demonstrate to gardeners that water-wise plant choices are not limited to cactus. There are many beautiful plants available that thrive in the Valley which use substantially little water,” explains Nora Laikam, Supervisor of Water Conservation for the City of Fresno.

This great event was co-sponsored by the Central Valley Water Awareness Committee (www.centralvalleywater.org) and its member agencies as part of May’s Water Awareness Month activities. The Fresno County Board of Supervisors, the City Councils of Clovis and Fresno, and the Flood Control District’s Board of Directors all proclaimed May as ‘Water Awareness Month.’

For a list of water-wise plants, water conservation

gardening tips and other water saving tips for inside and outside your home, visit www.fresnowater.org or call the City of Fresno Water Conservation Program at 621-5480.



Pam Lassley (right) of Kings River Water Association and Cristel Tufenkjian (right background) of Kings River Conservation District talk with an event participant. The Water Wise Plant Exchange is sponsored in part by the Central Valley Water Awareness Committee and its member agencies, including FMFCD, KRWA and KRCD.

Volunteers Plant 70 Trees in Two Hours!



Susan Anderson (center), District 2 Supervisor of the Fresno County Board of Supervisors starts work alongside a family of volunteers after opening the planting event with a few remarks.

Seventy trees planted on 18 acres in just over two hours! That's the power of the motivated volunteers who gave part of their Saturday on June 12th to help beautify the stormwater basin on Chestnut, just north of Alluvial Avenue. The top one-third of the basin site will be seeded with turf as well, and the result will look like the stormwater basins at Herndon and Maroa, and at McKinley and Weber Avenues.

Most of the day's volunteers were neighbors, many of whom live in the La Querencia Cohousing development



(shown below) to the south, and people who attend the nearby Fresno Betsuin Buddhist Temple and Unitarian Universalist Church, as well as volunteers from throughout the community and the Fresno



no Metropolitan Flood Control District.

Special thanks

The District gives special thanks to the Fresno Betsuin Buddhist Temple (right) for allowing use of their water supply during construction at the stormwater basin and to support the newly planted trees until the irrigation pump station was installed. And a big thank you to neighbor Jenny Martin (shown bottom left, wearing red) who not only worked to plant trees, but brought coffee and bagels for volunteers!



This tree planting event marks the 12th partnership between Tree Fresno and the District.



Ron Nishinaka, Tree Fresno Projects Director, demonstrates the proper planting of a tree to ensure its health.

Tree Fresno provides volunteer coordination, and tree planting instruction and supervision. Tree Fresno also supplies all equipment volunteers need for the day, such as shovels, stake pounders and hammers. The District provides the

project ready site, trees, irrigation, and maintenance. Tree varieties planted were Valley Oak, Southern Live Oak, Coastal Redwood, Chinese Pistache, Autumn Apple Ash, and Chinese Elm.

While this is the last stormwater basin planting planned for a while, Tree Fresno always has new projects. To find out what volunteer opportunities Tree Fresno has coming up next, visit www.treefresno.org.



District Director Roy Spina (l), General Manager Bob Van Wyk and Tree Fresno Executive Director Karen Maroot head back after a morning's hard work planting trees.



Fresno Metropolitan Flood Control District

5469 E. Olive Ave., Fresno CA 93727 • (559) 456-3292
www.fresnofloodcontrol.org

Board of Directors

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

Need a speaker?

If your agency, organization or community group is in the Fresno/Clovis area and you'd like a presentation on the flood control and urban storm drain system, water resource management or pollution prevention - contact Brandy Swisher at brandys@fresnofloodcontrol.org or (559) 456-3292.

Close Up: Anthony Zaragoza



Engineering intern Anthony Zaragoza has nearly completed his college studies and will earn his bachelor's degree in engineering from CSUF.

ic and his ability and eagerness to learn have earned him his continued employment. Anthony met District Engineer Jerry Lakeman while working at Sports Authority. Anthony told Jerry about his plan to be an engineer and Jerry gave him his business card with the invitation to call if he could help. Anthony enrolled in college and began his campaign to become an intern at Flood Control.

Jerry was impressed with Anthony's communication skills and willingness to provide customer service when representing the Sports Authority. "He listened and took extra care to satisfy the customer. His goal of becoming a civil engineer and ability to work with the public made me feel he would make a good student intern while completing his academic work. I thought those traits would serve the District well and provide him employment experience in his area of interest," said Jerry.

Our featured employee in this issue is presently an engineering student in his last year at Fresno State. Anthony has worked as an engineering intern in the District's Operations Department since January, 2006 when he began his college career.

Anthony's persistence got him in the door, but his work ethic and his ability and eagerness to learn have earned him his continued employment.

Anthony was first offered a six-month provisional intern position with the possibility of longer-term employment. Anthony has made the most of his internship and is growing professionally every day.

Brent Sunamoto, Anthony's supervisor, says of his time so far here at Flood Control, "Anthony has met every challenge that he's been given. He has a great attitude and is a great member of our team."

As explained by Anthony, "One of the best things about working at Flood Control is that I'm happy to come to work every day. It doesn't feel like just a job, it feels like a career. I work with great people, like Operations Engineer Peter Sanchez and Senior Engineer Brent Sunamoto and many others, and I like the family atmosphere here. When I first started I would ask questions of people who weren't necessarily in the department I work in, and all would stop what they were doing and walk me through how to get the answer I was looking for. Even if it took a phone call to the General Manager or the District Engineer, they answered the phone and were ready to help."

Anthony was born and raised here in Fresno, graduated from Roosevelt High School (Go, Roughriders!), and will soon graduate from Fresno State. He is husband to Sarah, his wife of four years, and daddy to two-year old Lilliana. They own their own home in Fresno.

Anthony gets along with his co-workers in and out of the office. He has participated in the District golf tournament, "The Hook and Slice Classic", played on the District softball team, and according to co-worker Rick Lyons, "is able to bring the heat with a 68 mph fastball."





ARRA-Funded Projects Completed Early



The last of the District's American Recovery and Reinvestment Act (ARRA)-funded capital improvement projects have been completed. The projects were finished in ten months instead of the two years allowed by the District's federal funding

brought needed drainage service to neighborhoods and commercial-industrial areas in southwest Fresno, northwest Fresno and south Clovis. The surface water irrigation systems recently became operational at four District stormwater basins, allowing the use of surface water within the basin to irrigate perimeter turf and trees in lieu of using valuable City potable water for irrigation.

In addition to the ARRA funds, the District contributed another \$760,000, totaling \$4.65 million dollars for these projects. The entire grant was used for capital projects and no funds were withheld for administrative costs. All administrative and engineering costs were absorbed by the District as in-kind expenses. This means that all of the \$4.65 million dedicated to these 15 capital projects went back into the local economy. In addition to the permanent facilities constructed, figures provided by the District's engineering and construction contractors show that actual hours worked were an equivalent of 10.4 full-time jobs held for one year.

agreement. As mentioned in past *Flood Line* stories, in November of 2009 the District was awarded \$3.89 million in ARRA money to fund the installation of 19,500 linear feet of storm drainage pipeline and four surface water irrigation systems. The storm drain improvements funded by ARRA

'ARRA Projects' continued on page 3

State's Central Valley Flood Protection Plan

In response to a series of destructive floods in 1986, 1997 and 1999, the 2006 levee breaks in the Sacramento Delta area and the resulting damages, the State of California began evaluating flood risks statewide. In an effort to reduce the risks of flooding from inadequately maintained levees or new development in flood-prone areas, the State's legislators passed a series of flood control bills. AB 70, 162, and 156, and SB 5 and 17 were signed by the Governor in 2007, and SB 1070 was signed in August of 2010. Collectively, the legislation directs the California Department of Water

Resources (DWR) to create the Central Valley Flood Protection Plan (CVFPP). Legislative requirements for improved flood protection vary depending upon location within the state.

Local jurisdictions are divided into three categories and levels of responsibility. Some changes are taking place statewide, there are additional responsibilities which apply to lands in the Sacramento-San Joaquin Valley, and still

'Flood Protection Plan' continued on page 2

Inside This Issue

Message from the General Manager	2	Clean Stormwater & San Joaquin River Field Trip Grant Applications Available!	5
Groundwater Recharge Update	3	Guest Story - Karen Smith-Marroot, Exec. Dir., Tree Fresno	6
Rain Season Readiness	4	Eagle Scouts and Bat Boxes	7
Workforce Connection Interns Train at Flood Control	4	Close up: Verlyn Neufeld, Construction Manager	8
Optimist Clubs' "Youth in Government Day"	5		

Message from the General Manager



Bob Van Wyk

The makeup of the Fresno Metropolitan Flood Control District's seven-member citizen Board of Directors is changing. Two long-time Directors are leaving; City of Fresno representative Frank Franco, whose 22 years of service make him the longest-serving Director in the Board's history; and County representative Richard Welton, who served for 13 years. Barbara Goodwin, retired Executive Director of the Fresno County Council of Governments, has been appointed to the Board as a representative of the City of Fresno, and Frank Fowler, retired Fresno County Deputy Public Works Director, has been appointed to represent the County of Fresno.

Mr. Franco and Mr. Welton brought to the Board the benefit of their professional experience, community

involvement, as well as personal connection and commitment to the Fresno/Clovis area. The length and quality of their service to the constituents of the District is admirable. Mr. Franco's background of social service and community advocacy brought a people-focused perspective to the Board, and Mr. Welton's long career in public works and engineering brought a valuable technical perspective to the Board's decisions. Each have left their mark on the District and we all wish them the very best in their future endeavors and in their continuing service and commitment to the community through their volunteerism.

Ms. Goodwin enjoyed a 35-year career with the Fresno COG, 14 of which she was Executive Director. Mr. Fowler is a Registered Civil Engineer with 34 years of public works experience, 33 of them with the County. The Flood Control Board and staff are pleased to welcome Ms. Goodwin and Mr. Fowler as new Directors.

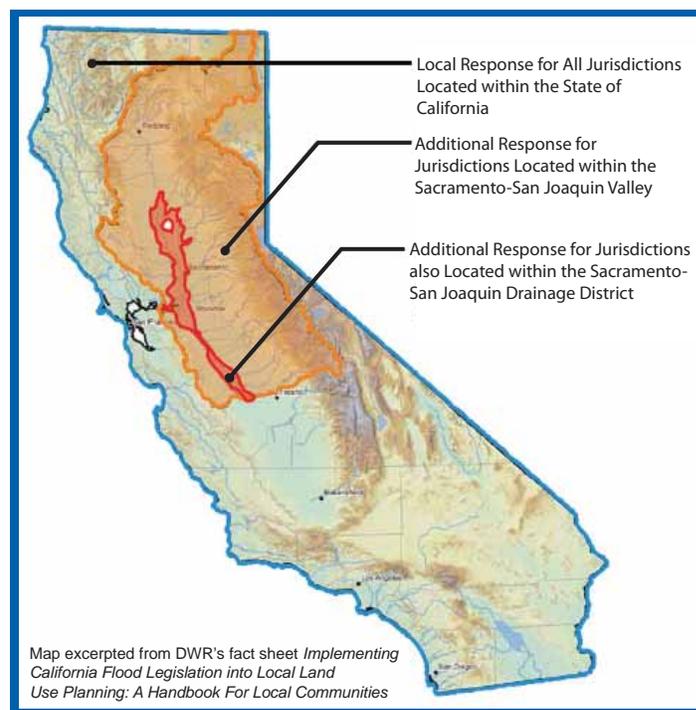
Flood Protection Plan

Continued from cover

others involving lands within the Sacramento-San Joaquin Drainage District. Web links to specifics on the new responsibilities and the jurisdiction map can be found on the District's web site, www.fresnofloodcontrol.org.

The Tulare Lake Basin, of which Fresno and Clovis are part, is subject only to the new statewide rules. These include review and improvement of municipalities' general plans affecting land use, water conservation and groundwater recharge, safety plans, and hazard mitigation plans. The boundary of the Tulare Lake Basin was defined in the most recently passed bill, SB 1070, and provided the boundary as identified DWR's Bulletin 160, published in 2009.

Coordination among the City of Fresno, the Kings River Conservation District, and the Flood Control District was essential in working with the State to accurately define which of the new flood protection requirements apply to the Tulare Lake Basin. "KRCD had sought and supported the clarification set forth by SB1070 to make clear the original intent of the legislature that the Kings River service area was not going to be subject to the more onerous provisions of the package of flood control bills signed in 2007," explains Dave Orth, General Manager of KRCD. And, as stated by Fresno Mayor Ashley Swearingen in the City of Fresno's September 24, 2010 edition of *A Message from the Mayor*,



Shown above are the boundaries of the three areas defined by the Central Valley Flood Protection Plan. The smaller the area, the greater the level of responsibility and reporting to the State.

"This legislation helps reduce regulatory burdens on the City and its public and private partners as we move ahead with planning and development projects. The bill, however, continues to ensure responsible and adequate flood protection for Fresno residents."

ARRA Projects

Continued from cover

Benefit to the Community

The practical result of these projects is to provide storm drainage service to several older areas of Fresno and Clovis. Some of these areas were developed before the District existed and were developed without benefit of a planned urban drainage system. Pipeline construction in some of these areas is a continuation of the work started in 2001 with the District's \$20 million State Infrastructure Bank Loan. These older neighborhoods are generally described as the Tower District and the South Van Ness Industrial Area. It is anticipated that their drainage systems will be completed within the next five years.

The surface water collected in four southwest Fresno stormwater management basins will be used to irrigate their turf and trees. These systems draw surface water from the basins themselves. In the limited time when the basins do not have enough surface water to serve the needs of the turf and trees, the system can be switched back to the municipal water



Contractors install a surface water irrigation system at District Basin RR-1, located at the Highway 99/Freeway 180 interchange.

supply. The use of surface water for irrigation of basin sites is an important element in community beautification, and it conserves our groundwater, which is the primary source of our drinking water. The recent installations are part of a growing inventory of landscaped basin sites irrigated with surface water. The return on investment using surface water takes five to seven years, resulting in reduced water utility bills. The savings will be several thousand dollars per year.

Groundwater Recharge Update



The City of Fresno, City of Clovis, Fresno Irrigation District (FID) and the Fresno Metropolitan Flood Control District all participate jointly in a groundwater recharge program to replenish the local aquifer. In 2010 the District used 74 stormwater basins like the one shown above to accept delivery of canal water. Other basins accepting water on a year-round basis are the Clovis Groundwater Recharge Facility, Fresno's Leaky Acres, Woodward Park, Fresno State, Copper River Country Club, Big Dry Creek Detention Basin, Chestnut Avenue Basin, and North Central and Kearney Basins.

The District is now documenting the volume of local storm runoff recharged in stormwater management basins in addition to the imported surface water. FID tracks and reports the volume of surface water imported and delivered

through its canal system. The volumes are totaled on an annual basis using FID's water season as of March 1st. In years with plentiful rainfall, more water is recharged from local stormwater capture and less is imported from the canal system. Water is imported primarily in the months of March through October and stormwater is captured from rainfall runoff from roughly November through February.

The total recharge in Fresno and Clovis from March through October, 2010 was 59,313 acre-feet. Included in this amount is 31,302 acre-feet recharged in stormwater basins. The imported water is from Kings River and San Joaquin River entitlements of the Cities of Fresno and Clovis. Water is sent to basins during these low-rainfall months, when there is greater capacity available to store and percolate the water through the soil and help replenish the underground aquifer. The Cities draw a majority of drinking water from the aquifer.

Stormwater runoff in the more than 150 stormwater basins also recharges the aquifer. A stormwater recharge model is used to estimate the amount of stormwater recharged. The 2008 estimated recharge was 19,518 acre feet, and was 20,545 acre feet in 2009. We are just entering this year's rain season, and those stormwater recharge estimates will be available in March, 2011.

Rain Season Readiness

Winter storms have already been visiting our part of the State. These storms have kept pace with historical averages for the area. However, the National Oceanic and Atmospheric Administration (NOAA) has predicted a La Niña weather pattern for this winter, which would typically suggest less than normal rainfall. Although La Niña is characterized as producing less than normal rainfall in Central California, NOAA has predicted equal chances of above or below average precipitation.

Regardless of expected rainfall, it is 'business as usual' at the District and Operations staff sticks to a specific criteria for reserve storage in stormwater management basins. The reserve storage in each basin changes month to month. Storage capacity in basins is increased by moving water from one basin to another, or by moving water out of the basin into Fresno Irrigation District's (FID) canal system. The reserve storage criteria allows the community to retain and recharge much of the water captured, but necessitates vigilance in maintaining

a storage reserve. Seventy-one permanent pumps stations in Fresno and Clovis have the capability to move stormwater. For basins without pump stations, the District uses 16 portable pumps to move water when necessary. These pumps and basin water levels are monitored frequently.



Organized, mobilized and ready to go - The District's Telemetry and Field Technicians prepare District facilities and equipment in advance of the rain season to ensure that stormwater is moved off of our community's streets and stored safely in the more than 150 stormwater retention basins throughout Clovis and Fresno.

Storm season operations is another area of responsibility in which inter-agency coordination is essential. Close communication with FID staff is important. The District's busiest time of year, the rainy season, is FID's off-season when they are not

using the canals for irrigation supply purposes, but use this time to complete construction projects and canal maintenance. An unexpected release of water by the District could interfere with their work. Also very important is teamwork with City of Clovis, City of Fresno, and County of Fresno street crews on keeping storm drain inlets free of leaves and debris. Preventing obstruction of inlets allows stormwater to drain quickly from streets to avoid localized flooding and traffic hazards. ♦

Workforce Connection Interns Train at FMFCD

The District's first Facilities Department interns have completed seven-week internships through the Workforce Connection program of the Fresno Regional Workforce Investment Board. This federally-funded program pays for 100% of internships, which are between 160 and 240 hours. Participating agencies and companies can get a range of help, from interns, to temporary help, to full-time employees. Employers can take advantage of a 50% subsidy of on-the-job training, and those located within the Enterprise Zone receive tax credits of up to \$35,000 per employee over the course of five years.

The interns worked alongside District Facilities Technicians. Intern Gilbert Holguin worked with Tony Barlow and Adam Johnson to learn how to properly set up, operate and maintain portable pumps, and operate control

valves used in moving water out of and between stormwater basins during the rain season. Intern Edward Johnson trained with Fernando Tapia and Ryan Schiebelhut to learn how to operate, maintain and repair irrigation systems. Both interns have also earned their certificates of completion from the Water Technician Program at Fresno City College.

Clients enrolled in the Workforce Connection program are dislocated workers, underemployed, or working full time for a low wage. All attend workshops on building résumés, interviewing, and networking, and undergo a skills assessment. Workforce Connection provides free training to prepare people to secure and keep good jobs. If you would like more information on what the Workforce Connection can do for your company, call Workforce Connection at 230-3600 and ask for a Business Account Specialist. ♦

Optimist Clubs' "Youth in Government Day"

Each year the Fresno area Optimists Clubs are among more than 2,000 Optimist Clubs worldwide that participate in Youth in Government Day. Students are matched with volunteer government officials who introduce their branches of government to students through tours, conversation and observation.

This year's Youth in Government Day was sponsored by the Public Agency Practice Group of Baker Manock and Jensen. The District was honored to be part of the day's events and hosted three high school seniors for the day. Patrick Monreal, Nathan Croutch, and Galen Crozier (l-r above and right) were the students who chose to learn about the Fresno Metropolitan Flood Control District. General Manager Bob Van Wyk provided foundational background and program information, and then the students were given a tour of the District's Board chambers, its storm Operations Center and flood control equipment, and taken to Big Dry Creek Dam and Reservoir in northeast Clovis to see what flood control looks like up close and personal.

These three young men asked lots of great questions about the agency's functions, are intelligent and were a pleasure to meet. We wish them the best in their continuing studies and in their bright futures.



L-R: High school seniors Patrick Monreal and Nathan Croutch from Buchanan and Galen Crozier from S.O.U.L. (School of Unlimited Learning charter school) learn about Big Dry Creek Reservoir with Staff Analyst Andrew Remus (above), and talk with District General Manager Bob Van Wyk (below).



Clean Stormwater and San Joaquin River Field Trip Grant Applications Available!



Third graders from Steinbeck Elementary examine river life while on a District Clean Stormwater Grant-sponsored field trip.

Applications for the District's Clean Stormwater and San Joaquin River Field Trip grant programs are now available for download from www.fresnofloodcontrol.org. The Clean Stormwater Grant program was created in 1995 and provides up to \$2,000

to help fund environmental stewardship and education projects within the Fresno/Clovis area. Eligible applicants include schools, environmental organizations, neighborhood improvement groups and other not-for-profit groups.

The San Joaquin River Field Trip Grants are for fifth grade classes within Clovis and Fresno and pay for bus transportation and docent-led field trips to Scout Island or Lost Lake on the San Joaquin River. The grants also include pre-field trip classroom presentations to help prepare students to get the most out of the coming field trips.

Applications are available at www.fresnofloodcontrol.org and must be e-mailed or delivered to the District by Friday, March 4, 2011 at 5:00 p.m. Notification of awards will be made by March 31. In 2010 the District's Board of Directors awarded more than \$36,000 in grants to schools and local groups. Visit the web site to read about past grant projects.

Our Urban Forest - It's all about commitment



Project partners and volunteers, and Rooty the Tree Fresno mascot, at the November 6 basin planting event at Cedar & Copper Avenues. L-R: Bob Moinie, Bob Van Wyk and Neda Shakeri of FMFCD, Jeff Roberts and Darius Assemi of Granville Homes - sponsor of the irrigation system, Nora Laikam of City of Fresno's Water Conservation Division, Karen Smith-Maroot of Tree Fresno, and Amber Adams of Quad Knopf - grant writer for project tree funding.



Guest writer:
Karen Smith-Maroot
Executive Director, Tree Fresno

Tree Fresno is celebrating its twenty fifth year and has nearly as many years of work in collaboration with the Fresno Metropolitan Flood Control District. The relationship with FMFCD began in 1989 with the planting of 131 trees in the ponding basin just north of Hoover High School, and now 14 ponding basins later and over 1,000 trees planted directly with FMFCD, we at Tree Fresno take pause in gratitude for the ongoing efforts by FMFCD to make our many ponding basins greener!

If you have not experienced a “ponding basin” planting you are truly missing out. Most recently, Tree Fresno planted 81 trees at ponding basin DE, on Copper and Cedar Avenues. This lovely day in early November was special as we planted our 38,000th tree. So what does it take to reach such a number?

It takes commitment combined with twenty five years of strong partnerships, hundreds of thousands of volunteer hours, and funds from too many to mention. This and more has allowed Tree Fresno to reach this milestone! The trees in our community belong to us, ALL of us!

As I glance through the photos of all past ponding basin plantings, and drive by basins planted over fifteen years ago with now mature trees, the thought that resonates the most is the ongoing steadfast commitment to our community that has been made by the Fresno Metropolitan Flood Control District. As if building a state of the art storm drainage system were not enough!

FMFCD has consistently demonstrated a far greater commitment to this community by ensuring that basin by basin we make Fresno a greener place. The benefits of trees are not only economical and environmental, but psychological as well. The day we planted the 38,000th tree in ponding basin DE, a unique species of birds showed up for the planting, these bird looked on as we planted 84 trees, they flew back and forth between the fence surrounding the new basin and perched themselves on the branches of the new trees, giddy with excitement as they anticipated their new homes!

Looking ahead, what will ponding basin DE become in the next 5, 10, 20 years? The birds are keenly aware of what the trees will provide, as are the staff and leadership of FMFCD, Tree Fresno, and the many other partners at the planting. So, as you drive by our local ponding basins, especially those with lush green trees, take pause for the ongoing commitment that FMFCD has made towards the care and upkeep of one of our cities' most valuable resources, TREES! A BIG THANK YOU from Tree Fresno to FMFCD and staff for your ongoing commitment to building and maintaining our Urban Forest!

- Karen Smith-Maroot

Stormwater basins planted in partnership with Tree Fresno:

<u>Basin Location</u>	<u>Year Planted</u>	<u># of Trees</u>
• Bullard & First	1989	131
• Barstow & Forkner	1992,	149
(Sloan Johnson	1994	97
Oso de Oro Lake Park)		
• Tulare & Fowler	2000	29
• Holland & Palm	2002	28
• Ashlan & Hughes	2003	51
• Herndon & Maroa	2003	79
• McKinley & Hughes	2004	74
• Huntington & Willow	2004	124
• Shepherd & Chestnut	2007	73
• Freeway 180 & Highway 99	2008	74
• Ashlan & Peach	2009	79
• Alluvial & Chestnut	2010	70
• Copper & Cedar	2010	84

TOTAL 1,142

Eagle Scouts and Bat Boxes



Charlie Wilkins, initiator of the bat box project (at right in photo on the left) and his volunteer team install bat boxes at District basin sites.

What is delicious, nutritious and available for consumption in great quantities if you're willing to catch them? Why, mosquitoes and midges of course! If you asked a little brown bat, that is what it would tell you. Charlie Wilkins also knows that, and as an Eagle Scout candidate, he saw bats' appetites and potential reduction in mosquito and midge populations as a great community service project.

Charlie approached the District with an idea to place bat nesting boxes on various District properties. He explained that the nesting boxes will provide habitat for bats that will help to reduce mosquito and midge populations in and around basin properties. In discussions with Mr. Wilkins, staff recommended several locations that would provide good test sites to see if the bats will occupy the boxes. On August 1, 2010 Charlie and his team installed eight bat nesting boxes at four District stormwater basins:

- Basin "DK", north of Woodward Park, near the San Joaquin River,
- Basin "I", on Bullard west of Fruit Avenue,
- Basin "O", just north of Hoover High School at First and Bullard Avenues, and
- Fancher Creek Basin, at McKinley and McCall Avenues.

About bats...

Bats are primary predators of night-flying insects, including many of the most damaging agricultural pests and mosquitoes. A single little brown bat can eat up to 1,000 mosquito-sized insects in a single hour. Each night female bats can eat the equivalent of their entire body weight in insects. Many insects avoid areas where they hear bats.



Little brown bats are common to this area of California, and are one of the most common bats in the U.S. They are 3-5" long and weigh between 1/16- and 1/2-oz.

A single-chamber bat house like those shown above can shelter approximately 50 bats. Bat houses can be installed at any time of the year, but they are more likely to be used during their first summer if installed before the bats return in spring. It may take up to a year for the boxes to be populated. Bat boxes placed on poles and buildings are more likely to attract bats, and a properly designed bat box will have an 80% occupancy rate. The four boxes will be checked for use by bats, and if this test project is successful, more bat boxes may be installed at other sites.



Fresno Metropolitan Flood Control District

5469 E. Olive Ave., Fresno CA 93727 • (559) 456-3292
www.fresnofloodcontrol.org

Board of Directors

- Kendall Groom, Chairman • Roy Spina, Vice-Chairman
- George Marcus • Jennette Williams • Mike Rastegar
- Barbara Goodwin • Frank Fowler

Need a speaker?

If your agency, organization or community group is in the Fresno/Clovis area and you'd like a presentation on the flood control and urban storm drain system, water resource management or pollution prevention - contact Brandy Swisher at brandys@fresnofloodcontrol.org or (559) 456-3292.

Close Up: Verlyn Neufeld



Construction Manager Verlyn Neufeld has just begun his 21st year with the District. He came to us as Construction Inspector in December, 1989. Prior to that Verlyn worked at Clovis engineering firm Blair, Church & Flynn, which does consulting work for the District. His job there was to inspect District projects, so he was already familiar with the work he would later do. He was promoted to Facilities Manager in 1999, and was promoted again to Construction Manager in 2008 upon the retirement of 33-year Construction Manager Jerry Isler.

Of the transition from Jerry Isler to Verlyn, Peter Sanchez, Operations Engineer and his supervisor, explained, "It has been a very smooth transition from Jerry to Verlyn. Verlyn's varied background prepared him well for the Construction Manager position and he has continued with the thorough and detail-oriented performance we've come to expect."

Verlyn's responsibilities include managing a staff of two Construction Inspectors and one construction management intern. He oversees construction of all District storm drainage pipeline projects and pump station installations, including the recent ARRA work (see cover), as well as District-required drainage work completed by residential and commercial developers to ready new developments to hook into the District's community-wide urban drainage system.

Verlyn's early professional experience was with the City of Delano's Planning Department. The size of the agency allowed Verlyn to cross train and learn drafting, engineering and building inspection. His formal education included technical drawing and drafting, and architecture, as well as industrial technology, construction management, and some engineering. Verlyn earned his bachelor's degree in Industrial Technology with an emphasis on architecture with a construction option from CSU, Fresno.

He is a native Fresno son, and he and his family lived for a short time in Oklahoma and then Los Angeles before moving back to Fresno when Verlyn was 11 years old. Being a Fresno native who has public works experience allows Verlyn to see both the positives and the need for change in our community, and he explains, "I see FMFCD as helping to make those changes. I see the infrastructure work FMFCD has done downtown as helping to bring downtown back to life and save the older areas of town that have been left behind." He believes that downtown revitalization draws attention to the many fine old buildings and increases the chances of them being renovated and put to new uses.

Away from work, Verlyn enjoys classic automobiles, riding his motorcycle and working on remodeling projects at his home in Clovis.





DWR approves \$2.2 million grant for storm drainage project

The California Department of Water Resources (DWR) has approved \$2.2 million in grant funding for a \$4.4 million storm drainage improvement project in southeast Fresno. The money comes from the Disaster Preparedness and Flood Protection Bond Act of 2006, also known as Proposition 1E.

The project is a continuation of work done upstream at the Fancher Creek Detention Basin. Channel improvements and significant excavation at that 270-acre site resulted in revisions to the FEMA flood map for the area and the removal of 650 parcels from flood zone designation, relieving them of flood insurance requirements. The Fancher Creek Flood Control Improvements Project will provide adequate storm

drain capacity for underserved neighborhoods, eliminate direct stormwater discharges to Fancher Creek, increase groundwater recharge capacity in the existing stormwater basin, and provide surface water irrigation facilities for future planned development.

The total project cost is \$4,432,000, which includes \$2,658,000 of future expenses. Of the future expenses, the DWR grant will fund \$2,216,000 and the District will fund \$442,000. Local match credit of \$1,774,000 was given for work already done to excavate and rebuild the channel at the Fancher Creek Detention Basin.

*'DWR grant awarded'
continued on page 3*

Inner city infrastructure focus - 10 years later

In 2001, concentrated work started on completing and upgrading the urban storm drain systems in the Tower District and the South Van Ness Industrial areas. They were developed before 1960, prior to creation of a community-wide storm drainage plan. In 2000, the District secured a \$20 million State Infrastructure Bank loan to construct planned pipeline and related facilities to serve those areas, and committed roughly \$4.2 million of its capital projects funding to the infrastructure work. Work has continued since that 2001 kick-off, one project after another.

What was done and why

The goal was to reduce decades-long rain season flooding that interfered with livability, travel and commerce, and

made the areas less attractive to businesses. The District, with the support of other local government service providers and community groups, obtained the \$20,000,000 loan from the State to upgrade the existing infrastructure to help in local efforts toward economic revitalization.



1969 - Shields and Lorna
(west of Hughes), facing southwest

*'Inner city infrastructure'
continued on page 3*

Inside This Issue

Message from the General Manager	2	Economic development benefits all	7
Project and field trip grants awarded	4	Land exchange with Fresno Unified for new Southwest Fresno Middle School	7
Winter pollution prevention public service announcements	4	Close up: Barbara Goodwin	8
Oso de Oro Park improvements completed	5		
Guest story: Fresno Irrigation District	6		

Message from the General Manager



Bob Van Wyk

The Board of Directors recently approved membership of the District in the Upper Kings Basin Integrated Water Management Authority (Authority) and in doing so extended its ongoing effort to manage water resources in a manner that provides for the beneficial use of water within the District. In joining the Authority, the District will participate in partnership with 18 member agencies and 31 interested parties that are responsible for water supply, water distribution, groundwater management, fisheries, and environmental resource management. The Authority covers a geographic area extending from Fresno south past Armona, from east of Orange Cove, to San Joaquin on the west. The Flood Control District will be represented on the governing board of the Authority by District Board Chairman Roy Spina. Director Buzz Burleson, District Engineer Jerry Lakeman, and I will be alternates.

The State Department of Water Resources (DWR) has

divided the state into 49 geographic units to develop resource management tools to improve water supply and use. Each unit throughout the state is known as an Authority and many have Integrated Regional Water Management Plans recognized and adopted by the State. An area Authority's recommendation is required to submit Integrated Regional Water Management (IRWM) grant projects for funding consideration.

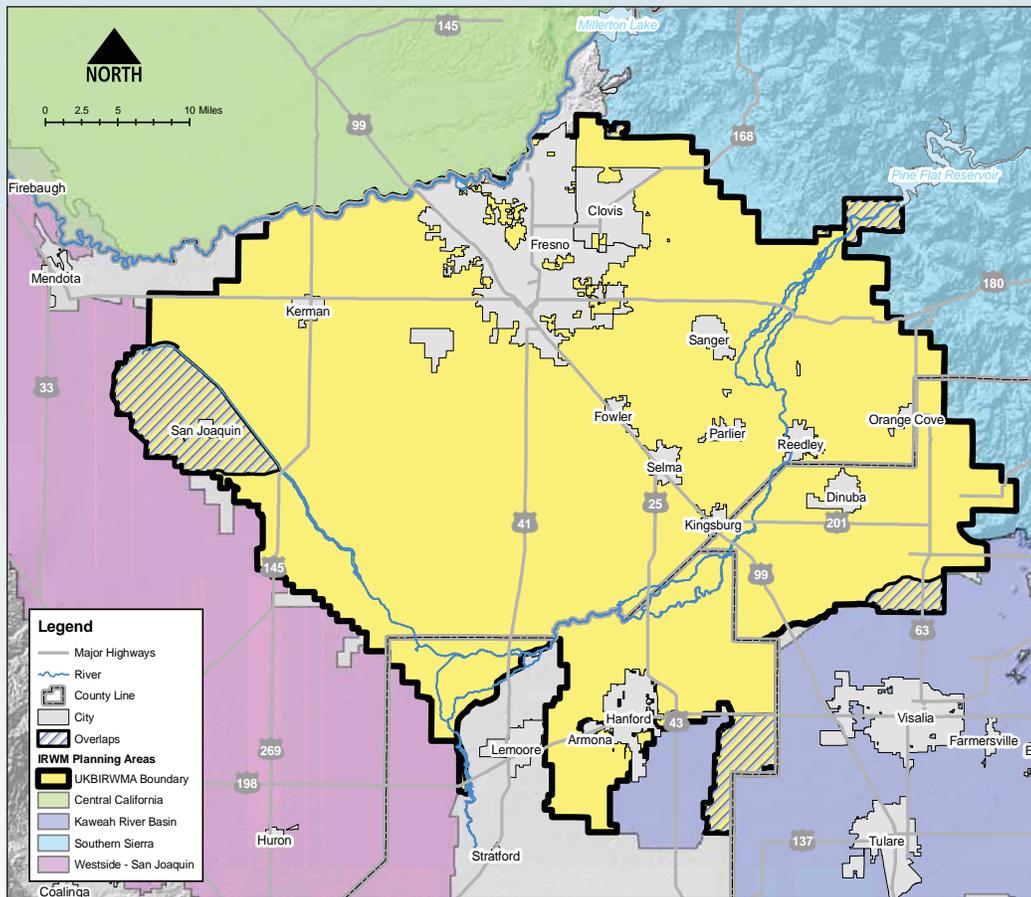
The IRWM concept requires local entities to work together rather than compete with each other for grant funds. IRWM is described on DWR's website as, "...a collaborative effort to manage all aspects of water resources in a region. IRWM crosses jurisdictional, watershed, and political boundaries; involves multiple agencies, stakeholders, individuals, and groups..." and seeks mutually beneficial solutions to water issues.

Participation in the Authority will offer many opportunities for the District as we look to leverage local monies with state bond funding to provide flood protection in our community. An example of such an opportunity is the \$2.2 million grant described on the cover page of

this newsletter. Without the support of the Authority, the project could not have been submitted to DWR for funding consideration.

Participation will also present an opportunity for the District Board and staff to share information, exchange ideas, and coordinate long-term planning efforts to address water supply, flood protection and water quality challenges in the future. Learn more about the Authority at www.krcd.org/water/ukbirwma.

I commend the Board for taking this step as I believe the effort will provide our community with needed solutions to water issues in the future.



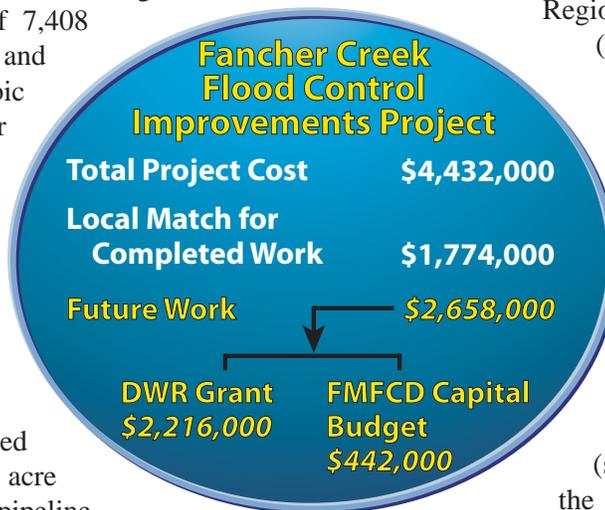
Upper Kings Basin Integrated Regional Water Management Authority's service area map
(posted at www.krcd.org/water/ukbirwma)

DWR grant awarded

Continued from cover

Work to be done

Work to be funded by the Prop. 1E grant includes removal of three direct stormwater discharges to Fancher Creek, construction of 7,408 linear feet of storm drain pipeline, and excavation of another 79,400 cubic yards of dirt from the stormwater basin at Sunnyside Avenue, south of Belmont Avenue increasing its depth from 16 to 30 feet. This will boost storage capacity and increase annual recharge capability. At present, average annual groundwater recharge is 540 acre feet of surface water. Following excavation the expected annual recharge total will be 1,280 acre feet. A pump station and internal pipeline will be constructed in the basin, and the top one-third of the basin perimeter will be landscaped with turf and trees. The irrigation system to support the landscaping will draw water from the basin instead of using potable water. Stormwater stored in the basin will also be pumped to a



private development for non-potable water uses. Nearby drainage areas “Y” and “W” were previously updated to meet current design standards and are funded with this grant.

Support of the project area’s Integrated Regional Water Management Authority was required by DWR for project eligibility. The Upper Kings Basin Integrated Regional Water Management Authority (UKBIRWMA) reviewed and agreed to approve submittal of the project application. The City of Fresno acted as the lead agency on the application, as the District was not a member of UKBIRWMA at the time. The District has since become a member agency, but without the City of Fresno’s support and advocacy for the project the grant may not have been possible (see opposite page - Message from the General Manager). Without the Prop. 1E grant award from DWR, these improvements would have been years away from being completed due to budget limitations.

Inner city infrastructure

Continued from cover

Seven stormwater basins had already been excavated to serve the roughly 10 square-mile area, but curb inlets and pipelines were needed to carry stormwater from streets to the basins and between basins, and a few pump stations were needed to move water between basins in high-volume storm seasons and during basin maintenance. In total, system completion required 11.4 miles of pipeline to serve the Tower District and Roeding Business Park area (called Drainage Area “RR”*), and 13.6 miles of pipeline to serve the South Van Ness Industrial area (Drainage Area “II”*).

Continued leverage of local funds

In 2009, the District secured an additional \$2.3 million in Federal American Recovery and Reinvestment Act (ARRA) funding for the same drainage areas (\$3.9 million in total was granted to District projects by ARRA) to continue needed infrastructure improvements. The District contributed

*The Fresno-Clovis area is divided into 162 drainage areas of roughly one square mile, each with an alpha-numeric name.

\$100,860 in additional construction funds to the “II” and “RR” projects. The District also contributed the design, construction staking and inspection.

Projects yet to complete

There is roughly \$2.7 million in project costs left to complete the two drainage systems - \$800,000 in “RR” and \$1.9 million in “II”. It is anticipated that work on the last of the planned projects for Drainage Areas “II” and “RR” will be completed over the next 10 years. Project “II-109”, the latest in the series of construction projects, is a \$455,000 pipeline construction project scheduled to start in June of 2012. Pipe sizes range from 18” to 30”, and will pass under four different railroad crossings. “The project will provide permanent storm drain service to the California and East Avenue area, along with the Monterey and O Street area, both industrial areas,” explained Jason Clarke, Capital Projects Manager.

Work continues to systematically design and build remaining Master-Planned pipelines, basins, drain inlets, and basin pump stations throughout Fresno and Clovis.

Project and field trip grants awarded

At its December meeting, the District Board of Directors awarded a total of \$35,000 in Clean Stormwater Grants to 13 schools and community groups and 15 San Joaquin River Field Trip Grants to elementary schools. Up to \$2,000 was available for community environmental grants. The river field trip grants cover the cost of transportation to Scout Island and Lost Lake, plus decent fees.

Clean Stormwater projects funded

Thirteen Clean Stormwater Grants were awarded to:

- CART
- Center for Land-Based Learning
- Center for Multicultural Cooperation
- Clovis West High School
- Fresno High School
- HandsOn Central California
- Harvest Elementary/Central USD
- Liberty Elementary/Clovis USD
- Pinedale Elementary/FUSD
- Quail Lake Environmental Charter School/Sanger USD
- RiverTree Volunteers
- San Joaquin Valley Leadership Forum

San Joaquin River Field Trips

The 15 San Joaquin River field trips to Lost Lake or Scout Island were awarded to:

- Bullard TALENT
- Dailey Charter School/
- Eaton Elementary/Fresno USD
- Houghton-Kearney/Central USD
- Jefferson Elementary/Clovis USD
- Jefferson Elementary/Fresno USD
- Lincoln Elementary/Clovis USD
- Our Lady of Victory/Fresno
- Polk Elementary/Central USD
- Pyle Elementary/Fresno USD
- Quail Lake Charter School/Fresno
- St. Anthony's/Fresno
- Valley Arts and Science Academy/Fresno USD
- West Fresno Elementary/Washington Union SD
- West Park Elementary/West Park SD

Hands-on learning

Everybody learns better when they get to do what they're learning about. That's the idea behind funding service projects and field trips for elementary school students. Grant applications for 2012 will be available in September at www.fresnofloodcontrol.org.

Winter pollution prevention public service announcements

“Keep pollution from happening.” That is the core message of the multi-agency public service announcements wrapping up their run on television and radio. The winter PSA campaign is part of the District's ongoing public education effort to change the way people view their role in keeping stormwater and their community clean. The Fresno/Clovis metropolitan area is subject to federal Clean Water Act stormwater rules that require stormwater pollution prevention.

The District is the storm drainage and flood control agency serving our community, and is the lead agency of a multi-agency group subject to the National Pollutant Discharge Elimination System (NPDES) permit aimed at reducing stormwater pollution. As co-permittees, the Cities of Fresno and Clovis, along with Fresno County and Fresno State, all implement and promote stormwater pollution prevention practices.

The easiest way to keep stormwater clean is to not get it dirty

This is a simple idea, but it is true. Stormwater running off of yards, parking lots, and streets travels through gutters,

to pipelines, to stormwater basins throughout Fresno and Clovis. This journey gives stormwater plenty of chances to pick up hitch-hiking pollutants. Once people know how their behavior can pollute stormwater, they can replace those behaviors with pollution-preventing behaviors. Here are easy ways we all can prevent stormwater pollution:

- Automotive fluids - fix leaks and clean up drips and spills, and recycle motor oil.
- Garden and household chemicals - use less toxic garden and home products when possible, don't apply yard chemicals when rain is forecast, read the label directions before using any pesticide, herbicide or cleaning product.

For the past four years, the NPDES co-permittee agencies have worked together under the umbrella of the Partners for a Clean Community to pool resources for more cost-efficient public outreach. The Partners are: City of Clovis, City of Fresno, County of Fresno, California State University Fresno, Caltrans, and the District. Caltrans operates under its own permit, but partners with the District and its co-permittees in conducting public outreach in Fresno and Clovis.

Oso de Oro Park improvements completed



New and improved Sloan Johnson Oso de Oro Lake Park - Brand new big kids' play structure funded by a grant from the Fansler Foundation and two shade structures funded by a grant from First 5 Fresno County.

The District is pleased to announce that work begun this summer to repair and improve Sloan Johnson Oso de Oro Lake Park has been completed. Among the most visible changes are the new big kids' play equipment installed to replace a 15-year old structure that had reached the end of its projected life, and the addition of two large shade structures over the swings. These major improvements were funded by grants from local organizations.

Replacing the play equipment was made possible by a grant from the Fansler Foundation, one of the original donors during the park's construction. The shade structures were part of a larger county-wide initiative by First 5 Fresno County to provide shade for children, which also funded structures at three other District basin parks. A new foundation of soft, rubber play matting was laid under the big kids' play structure. It serves to cushion falls and is wheelchair-friendly.

Two picnic tables were added on the south side of the park near the new play equipment and shade structures, the tunnel and fort were refurbished, a new sidewalk was installed around the raised physical therapy platform, a fresh sign was installed near the park entrance, two new barbecues were added at the south picnic pavilion, and the wrought iron fencing around the stream and park perimeter was painted.

The District's Board of Directors has adopted resolutions of appreciation to recognize the generous support of the Fansler Foundation and First 5 Fresno County through their respective community grant programs. The Fansler Foundation's grant jump-started work that would otherwise have started much later, and the First 5 Fresno County grants provided shade structures that otherwise would not have been purchased.



Inter-agency teamwork critical during storms



Guest writer:
Gary R. Serrato
General Manager



My first year with the Fresno Irrigation District (FID) began in January of 1986. That year still stands as one of the wettest years on record in the Kings River watershed at 187 percent of an average hydrological year. Flood control was something that was historically performed by FID and the Fresno Metropolitan Flood Control District (FMFCD). The agencies worked together to collect and dispose of flood waters within an intricate matrix of pipelines and canals within the service area. FID's responsibility in flood control efforts is to convey storm waters that were collected from the eastside watersheds and the metropolitan areas of Fresno and Clovis through its irrigation facilities and to safely dispose of them on the westside of the District.

One day in January of 1986, the eastside watersheds received nearly six inches of rainfall within a 24 hour period on a watershed that was already saturated. The eastside creeks, which included Fancher, Dry, Dog, Holland and Pup creeks, were producing volumes of waters that were easily overtaxing the capacities of the FID canals. To provide you an idea of the magnitude of water within the FID system, Fancher Creek alone was producing 500 cubic feet per second.

FID and FMFCD employees worked diligently for a 36 hour period, many with little to no sleep, to ensure that the runoff was managed to prevent flooding and to minimize damage as much as possible. Unfortunately the volume of water that was produced that night had entirely inundated the FID conveyance system and it was impossible to prevent flooding as water was flowing in every canal within the FID system. The protocol was to allow flooding in the rural areas at locations that would create the least amount of damage to crops and structures and to reduce flooding within the metropolitan area.

Both agencies did a remarkable job that night. That effort required a tremendous amount of cooperation which included the gathering and sharing of information. Information was gathered by stationing employees at key locations throughout the rural and metropolitan areas all through the night and the following day. Vital information required gathering flow and elevation readings in the canals and flood control ponding basins on a continual basis. The information was then relayed to the FID Watermaster and the FMFCD Operations

Engineer who then made decisions to divert waters into and within the FID system when conveyance capacity became available, or to turn pumps on or off when water collected in ponding basins had created capacity or became full.

New technology, major infrastructure improvement within the metropolitan area, and the construction of major facilities such as Fancher Creek Dam, Fancher Creek Detention Basin, Red Bank Detention Basin, increasing the storage capacity of Dry Creek and the implementation of telemetry systems within the FID and FMFCD systems that provide information instantaneously have substantially improved the management of storm waters. The benefits of the improvements are made evident by the minimal amount of flooding problems that have occurred in this area during the most recent wet years.



Canal and stormwater basin working to manage flood water - Water from Basin "S" at Ashlan Avenue, east of Peach Avenue, is pumped into the Gould Canal to create more capacity in preparation for a coming storm.

The managing and capturing of the runoff water supply in this semi-arid region is still a significant challenge and will still need the expansion and increase of our ability to recapture and recharge all waters produced in this area.

Long before my "initiation" in 1986 and for many years into the future, the management of flood water to prevent both flooding and damage has been and will continue to be the joint and cooperative goal of both agencies. Our efforts must also include the reuse of these same waters to the extent possible.

- Gary Serrato

Economic development benefits all

“Coming together is a beginning. Keeping together is progress. Working together is success.” - Henry Ford. The Economic Development Corporation serving Fresno County knows that, and it knows that nothing in the life of a community happens in a vacuum. There are connections and ripple effects that must be considered in any action, or inaction. EDC is recognized by its many partners as the catalyst and hub of new and expanded business activity. One of EDC’s strengths is its understanding of the function of local government as partners in making a community ready for business attraction and growth.

When business owners are considering a new location or expanding their existing location the EDC frequently plays the role of business and community advocate. EDC serves as the clearinghouse for resources and information the businesses owners can rely on in helping them make an

informed decision on location. EDC can advocate for both the community and for the business because they know with the right match everybody wins.

Steve Geil’s retirement

EDC recently celebrated its 30th anniversary, and shortly after that President/CEO Steve Geil announced his retirement. Since then people from all over the community have expressed their deep appreciation for his dynamism and commitment to facilitating economic growth within Fresno County. Bob Van Wyk, District General Manager, explains the District’s perspective, “We look forward to our continued work with EDC and with Steve in his future private endeavors.” The District became a partner in 1999 and has worked with EDC to assure smart growth and development.

Land exchange with Fresno Unified for new Southwest Fresno Middle School

On November 2, 2011, the Board of Trustees of Fresno Unified School District (FUSD) authorized a project to expand and entirely rebuild Carver Academy Middle School. Carver Academy, currently on an 8.45-acre school site, will expand north to Church Avenue and east to include the upper floor of adjacent stormwater Basin “II₁”, also known as Carver Park. Carver Park is presently developed for recreation use. In 2010, FUSD contacted FMFCD to request relocation of 4.55 acres of the upper floor/park portion of Basin “II₁”. The District determined that partial basin relocation would work. FUSD will acquire 4.55 acres of Basin “II₁” from the District as part of its total 14.1-acre expansion and replace the District facilities.

According to a September 29, 2011 story in the Fresno Bee, “Preliminary plans call for the district [FUSD] to level Carver Academy and build a larger, two-story campus on 22 acres.” To get the other 14.1 acres to create a contiguous property, FUSD needed to work with owners of 38 surrounding residential properties, a store, a church, as well as the Fresno Metropolitan Flood Control District and City of Fresno Parks Department on land exchanges or purchases.

FUSD will purchase a 6.2-acre replacement basin property southeast of the intersection of Grove Avenue and Clara Avenue. The replacement basin will connect to the lower floor of the existing basin and will allow FMFCD to



operate both basins together and independently, providing operational flexibility. Improvements FUSD will complete as part of the land exchange include excavation of the replacement basin to provide comparable storage, basin landscaping, and curb and gutter along Clara Street.



Fresno Metropolitan Flood Control District

5469 E. Olive Ave., Fresno CA 93727 • (559) 456-3292
www.fresnofloodcontrol.org

Board of Directors

- Roy Spina, Chairman • Jennette Williams, Vice-Chairwoman
- Kendall Groom • Mike Rastegar • Barbara Goodwin
- Frank Fowler • James E. "Buzz" Burleson, Jr.

Need a speaker?

If your agency, organization or community group is in the Fresno/Clovis area and you'd like a presentation on the flood control and urban storm drain system, water resource management or pollution prevention - contact Brandy Swisher at brandys@fresnofloodcontrol.org or (559) 456-3292.

Close Up: Barbara Goodwin



It was just over a year ago that Barbara Goodwin was appointed by the City of Fresno to the Fresno Metropolitan Flood Control District Board of Directors. It has been a busy year with a steep learning curve, and she has proved to be a valuable addition to the Board. Her background and experience in transportation, infrastructure, and legislative issues brings an important perspective to the work of the District.

Mrs. Goodwin joined the Board two years into her retirement from the Fresno County Council of Governments, where she served 35 years, 14 as Executive Director. During her tenure there, her involvement in regional transportation issues was extensive and wide-ranging, including both the passage and renewal of the Measure C 20-year transportation 1/2-cent sales tax, participation on the San Joaquin Valley Regional Policy Council, appointment by Governor Schwarzenegger to the Partnership for the San Joaquin Valley, and advocacy for the Central Valley at the federal

and state levels through "One Voice" lobbying efforts.

Of her experience on the District Board so far, she says, "I am honored to serve on this Board, as the members' individual expertise and knowledge is impressive, and it's apparent they are committed to community service. The staff is also great to work with - thorough, thoughtful and very professional. I'm particularly pleased with the way the District handles its primary mission of flood control and protection of the public while being environmentally and community friendly in the way it integrates the flood basins. I think the public truly forgets the amount of flooding we used to experience." General Manager Bob Van Wyk stated, "Mrs. Goodwin's experience working with multiple local government entities brings a refreshing perspective to the District. Her common sense approach to crafting solutions and protecting public resources is much appreciated."

In addition to her achievements during her career with Fresno COG, Mrs. Goodwin has been active in serving the community through leadership roles on the board of the Boys & Girls Clubs of Fresno County, and through past membership in Rotary Club of Fresno. In 2001, the Fresno Business Council recognized Mrs. Goodwin as that year's recipient of the Excellence in Public Service Award.

