



Stormwater Update 2014

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Historic Data

- Average annual rainfall – 9.69”
- Average annual rainfall from July – September 5.07”
- Rainfall recorded August 1, 2006 – 2.84”
- Average rainfall August 2006 – 6.85”
- Average annual rainfall up to September 2014 – 7.36”

Data

- 22 storm events from April 2014 - September 2014
- **Central 08/12/2014**
 - Max. recorded rainfall 2”
- **Northeast 08/27/2014**
 - Max. recorded rainfall 2.02”
- **East 09/18/2014**
 - Max. recorded rainfall 3”
- **Northeast 09/21/2014 and 09/22/2014**
 - Max. recorded rainfall 6.5”



August 12, 2014
Colfax & Euclid



September 18-19
Courtesy KTSM website
I-10 - Monica Garcia



September 18-19
Courtesy KTSM
Album Park



September 18-19
Courtesy KTSM
Alum Park



September 18-19
Pico Norte Pond

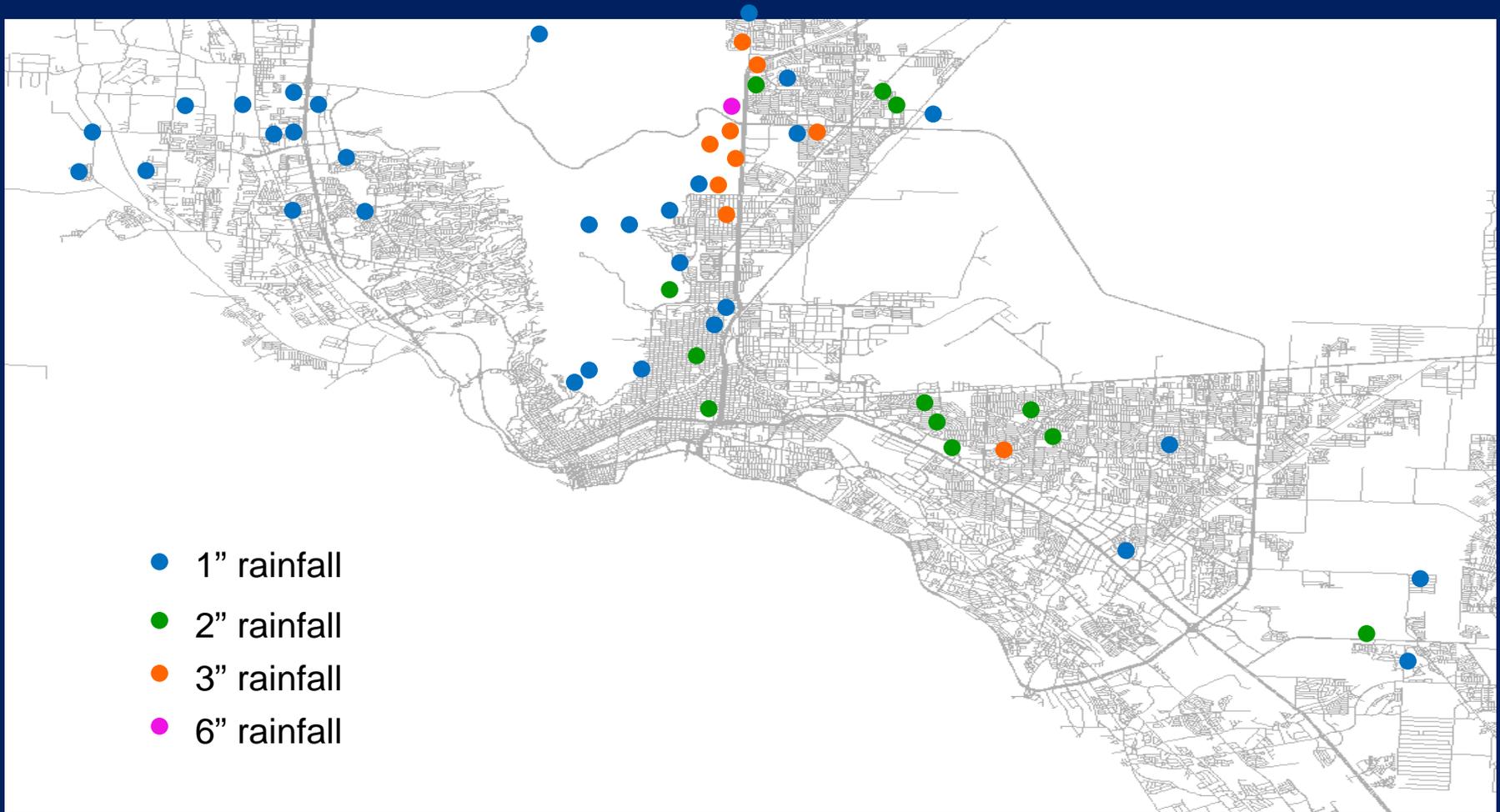


September 18-19
Pico Norte Pond - Bywood

FIRM Map – Pico Norte Area



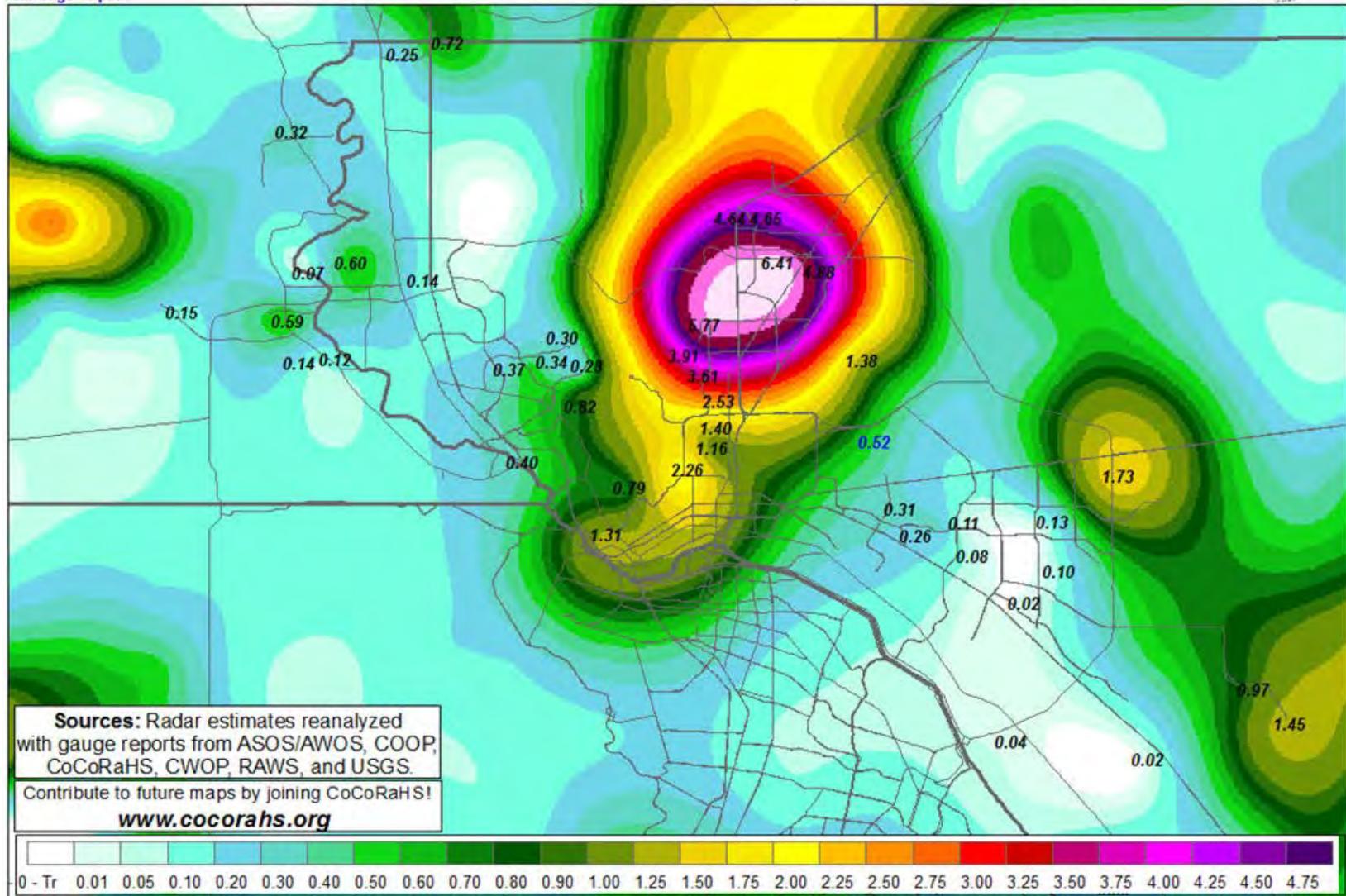
2014 Rainfall 1" and Above





Storm Total Rainfall

El Paso, TX Flood Event – September 22, 2014





September 22
Diana & Railroad



September 22
Courtesy KTSM
Denise Moore



September 22
Diana & Railroad



September 22
Diana & Julian



September 22
Hercules between Mt. Ranier & Railroad



September 22
Hercules between Mt. Ranier & Railroad



September 22
Hollings & Hondo Pass

September 22
Hollings & Hondo Pass



Stormwater Update 2014

Operations Report

Stormwater Operations Work

April 2014 to present

- USACE Inspections
- Clearing of inlets
- Cleaning of drains and channels
- Cleaning of ponding areas
- Weed Control
- Erosion Control
- Service Requests
- Vector Units
- Sandbag Distribution

Stormwater Operations Benchmarks

Performance Chambers	Inventoried Stormwater Total Assets	FY 2011-2012 Projected	Fiscal Year to Date	% Year to Date
Acres of ponds cleaned	904	650	258	28.5%
Acres of dams cleaned	2,430	1,200	57	2.3%
Miles of channels cleaned	74	30	24	32.4%
Miles of Agricultural drains cleaned	42.7	30	8	18.7%
Miles of storm drains cleaned	145.6	30	3	2.1%
Storm drain inlets cleaned each	6,094	800	62	1%
Acres of herbicide placed	N/A	1,000	119	
Vactor & Portable Pump Water Extractions (vactor loads)	N/A	N/A	520	

Stormwater Operations Work (April 1 – Sept. 30)

	Channels	Dams	Inlets	Ponds	Service Requests
Westside/ Upper Valley	9	2	4	8	40
Central	7	1	43	7	93
Northeast	25	3	0	24	45
Eastside/ Mission Valley	33	9	7	102	103
TOTAL	74	15	54	141	281

Stormwater Operations Work Sandbags



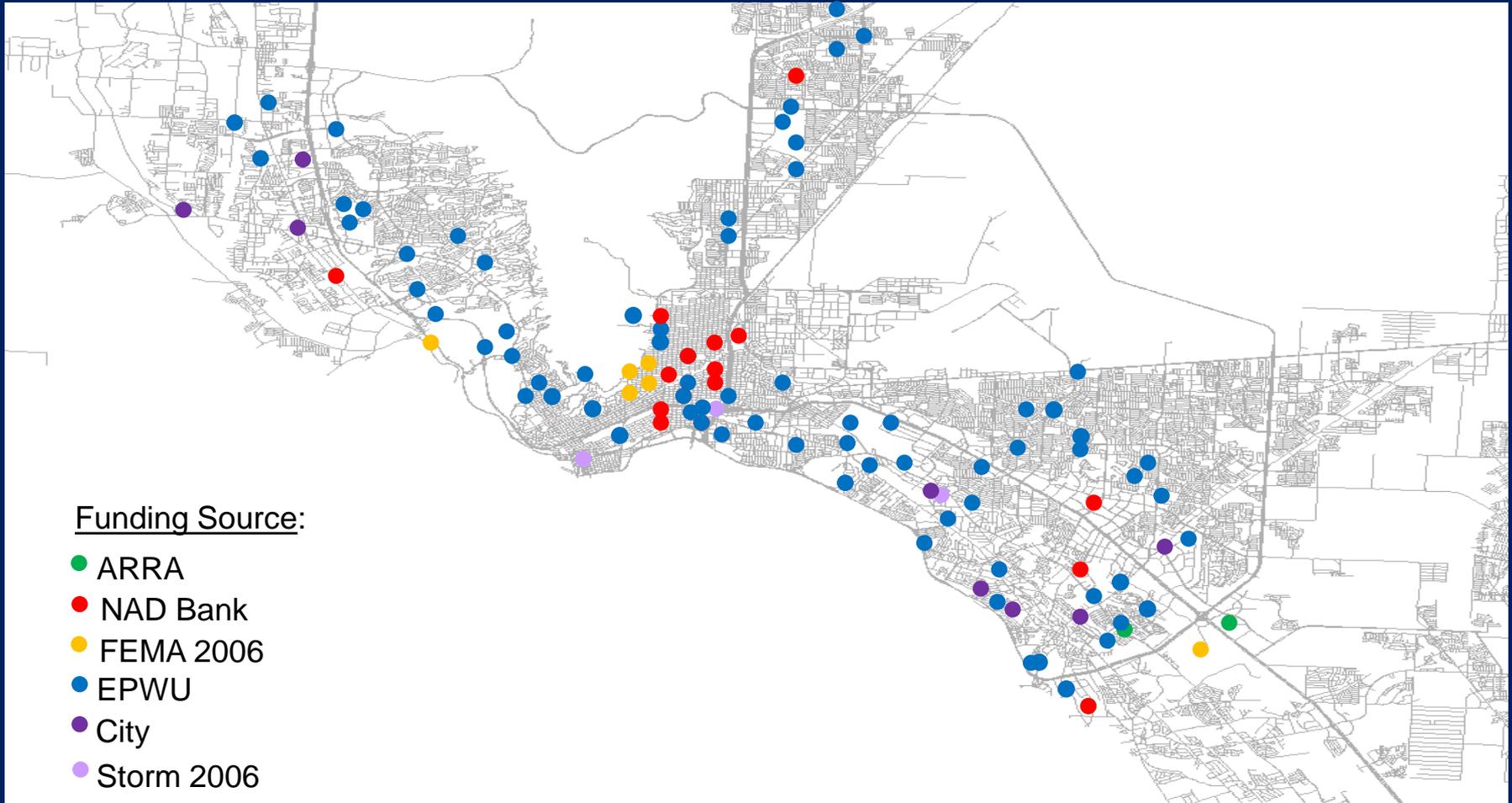
- 127,500 sandbags filled
- 120,000 sandbags distributed
- Stocking up to have 100,000 available



Stormwater Update 2014

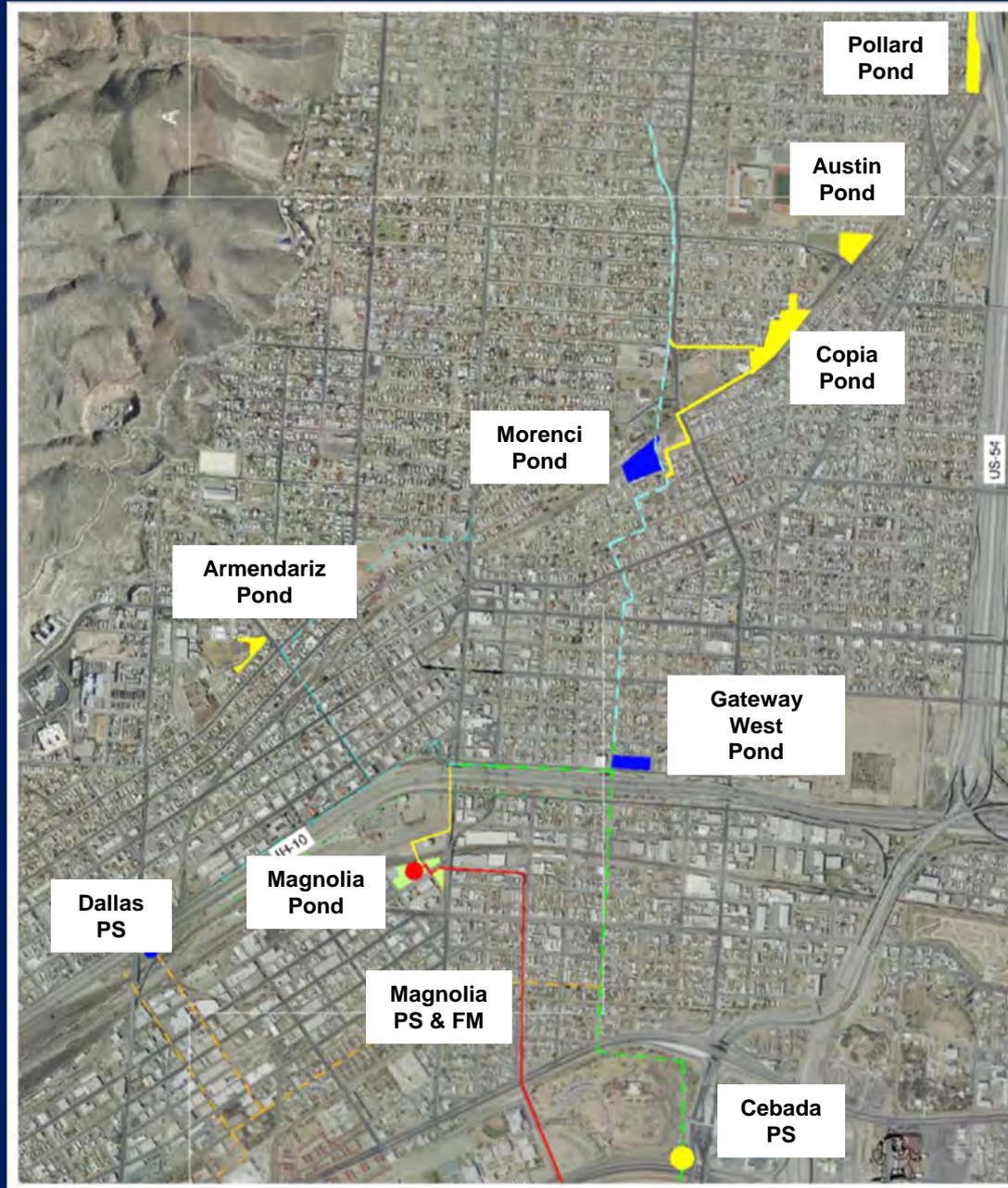
Capital Projects Report

Conceptual Location – Completed Stormwater Projects Citywide



Stormwater Projects – Central System

- Design
- Construction
- Complete



Stormwater Master Plan Completed Projects

Watershed	System	CIP Project	Status	Total Cost
Central	Government Hills	Government Hills Channel Improvements	Completed	\$464,000
Central	Government Hills	Van Buren Dam - Rehab	Completed	\$1,815,000
Central	Government Hills	Pershing Dam Spillway Modifications	Completed	\$169,000
Central	Cebada	Cebada Conduit Clearing of Utilities	Completed	\$1,503,000
Central	Cebada	Gateway West Pond	Completed	\$962,000
East	Lomaland Basin	Lee Trevino Conveyance Improvements Phase 1	Completed	\$2,215,000
East	Lomaland Basin	Lee Trevino Conveyance Improvements Phase 2	Completed	\$1,455,000
East	Americas 10 Basin	RV Channel Spillway	Completed	\$830,000
Mission Valley	Mesa Drain Downstream	Mesa Drain Improvements	Completed	\$2,917,000
Mission Valley	Mesa Drain Downstream	Featherlake II Basin	Completed	\$1,026,000
Mission Valley	Basin G	Basin G Excavation	Completed	\$440,000
Mission Valley	Basin G	Basin G System Improvements	Completed	\$2,161,000

Stormwater Master Plan Completed Projects

Watershed	System	CIP Project	Status	Total Cost
Northeast	Northeast Ponding	Northeast Channel 2 (EPWU \$4.7M; City \$5M)	Completed	\$4,705,000
Northwest	Doniphan Ditch	Doniphan Ditch	Completed	\$716,000
Northeast	Range Dam	Electric Ditch - Fairbanks Improvements	Completed	\$1,074,000
Central	Cebada	Morenci Pond	Completed	\$800,000
Central	Dallas	Dallas Conduit Improvements	Completed	\$195,000
Northwest	Montoya Drain	Montoya Culvert Crossings (Country Club)	Under Construction	\$560,000
Northwest	Keystone Dam	Resler Canyon Outfall Reconstruction	Under Construction	\$418,000

Total Cost: \$24,425,000

Stormwater Master Plan Projects (In Construction)

Watershed	System	CIP Project	Status	Estimated Total Cost
Central	Cebada	Cebada (Piedras-Magnolia) Force Main	Under Construction	\$13,300,000
Central	Cebada	Cebada (Piedras-Magnolia) Pump Station	Under Construction	\$8,300,000
Northeast	Fort Bliss Sump	Johnson Basin	Under Construction	\$853,000

Total Cost: \$22,453,000

Stormwater Master Plan Projects (In Design)

Watershed	System	CIP Project	Status	Estimated Total Cost
Central	Government Hills	Austin Pond	Under Design	\$2,800,000
Central	Government Hills	Pollard Pond	Under Design	\$800,000
Central	Cebada	Copia Pond	Under Design	\$1,300,000
Central	Cebada	Armendariz Pond	Under Design	\$820,000
East	Pico Norte	Pico Norte	Under Design	\$1,300,000
Mission Valley	Mesa Drain Downstream	Mesa Drain Improvements	Under Design	\$3,900,000
West Central	West Central	Flow Path 20	Under Design	\$10,360,000
West Central	West Central	Gran Teton Basin	Under Design	\$1,200,000
West Central	West Central	Palisades Open Space Flood Control	Under Design	\$1,550,000
Northwest	Doniphan Ditch	Doniphan Ditch	Under Design	\$1,000,000
Central	Cebada	Gateway West Pond Expansion	Land Acquisition	\$9,350,000
Northwest	West	Angel Pond	Under Design	\$800,000

Estimated Total Cost: \$35,180,000

Stormwater Master Plan Future Projects

Watershed	System	CIP Project	Scope	Estimated Construction Costs
Central	Cebada	Gateway West Pump Station	New pump station within Gateway West pond.	\$7,900,000
Central	Magnolia	Dam No. 7	Increase dam crest or improve spillway (TBD)	\$638,000
Central	Magnolia	Dam No. 9	Replace principal spillway on Dam No 9	\$383,000
East	Eastwood Dam	Eastwood (Pending Report from URS H&H Analysis)	Currently being analyzed for TCEQ high risk dam.	\$500,000
Northeast	Fort Bliss Sump	Tobin Drain	Expansion of facility- Alps to Hondo Pass	\$9,693,000
Northwest	Doniphan Ditch	Doniphan 1 (PS-13)	Reconstruction Doniphan Pump Station 1	\$10,000,000
Northwest	Oxidation System	Spring Crest	Construct a basin to limit flow to channel	\$883,000
Central	Dallas	Dallas / Rio Grande	Add capacity to Dallas System	\$11,500,000
Mission Valley	Mesa Drain Downstream	Mesa Drain Improvements	Improvements to the Mesa Drain	\$8,000,000
West Central	Canterbury Channel	Canterbury	Construct a debris basin.	\$479,000

Stormwater Master Plan Future Projects

Watershed	System	CIP Project	Scope	Estimated Construction Costs
East	Pico Norte	Sam Snead	Improve Storm drain system to Pico Norte Pond	\$9,250,000
East	Jesuit Basin	Lee Trevino @ Rojas, Gateway West, Kaiser Rd.	Add pipes to capture flows-Kaiser at Gateway West	\$8,212,000
Northeast	Fort Bliss Sump	Northgate Underground Retention Basin	Retention for flows in the Threadgill/Tobin Drain	\$6,000,000
Northwest	Doniphan Ditch	Doniphan 2 (PS-14)	Reconstruction Doniphan Pump Station 2	\$10,000,000
Northeast	Fort Bliss Sump	North Gate	Installation of pipes to flow to Northgate Dam.	\$939,000
East	Jesuit Basin	Cedar Oak - Lee Trevino System Basin	Addition of a new detention pond	\$5,424,000
Mission Valley	Playa Drain	Playa Drain @ Yarbrough	Removal of structures at Yarbrough and Playa Drain.	\$500,000
Northeast	Northeast Ponding System	Western Channel	Concrete lining of unlined channel	\$5,000,000
Mission Valley	Playa Drain	Vocational / Riverside	Install a new pump station and culverts.	\$13,290,000

Stormwater Master Plan Future Projects

Watershed	System	CIP Project	Scope	Estimated Construction Costs
Northwest	Montoya Drain	White Spur @ River Bend Culverts	Increase capacity White Spur Drain @ River Bend.	\$309,000
Northwest	Oxidation System	Silver Springs Dam / Diversion Dam	Construct detention basin or dam	\$8,979,000
East	Americas	Socorro Athletic Complex (SAC) 1	Add detention/sediment basin.	\$7,363,000
East	Americas	Socorro Athletic Complex (SAC) 2	Add detention/sediment basin.	\$5,925,000
Mission Valley	Playa Drain	Basin C / Shawver Park	Install a new pump station (160 cfs total capacity)	\$13,709,000

Estimated Total Cost: \$144,876,000

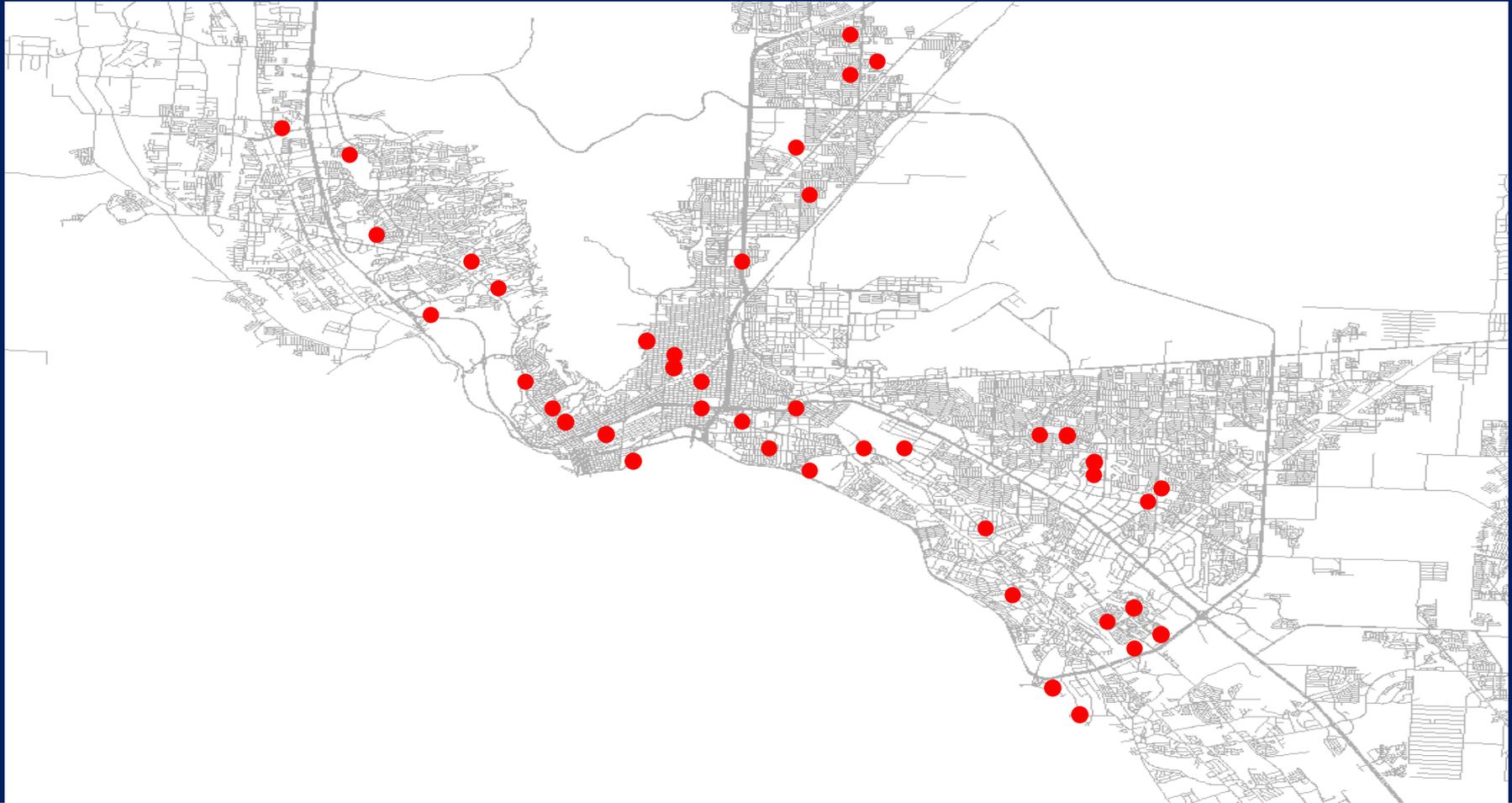
Open Space Projects

	OSAB Stormwater Priority List	Status
1	Palisades	Completed
2	Wildwood Arroyo	Completed
3	Feather Lake II	Completed
4	ASARCO	Completed
5	Various properties	In Negotiations

Localized Flooding Projects

- 53 projects completed citywide
- Total \$3.8 million
- Large projects include:
 - Mesa Dam Slope Stabilization
 - Belvidere Channel Improvements
 - Pellicano Pond Improvements
 - Copper Queen Pond Improvements
 - O’Keefe Conduit Repair
 - Resler Canyon Outfall
 - Dallas Conduit Repairs
 - Lisbon Street Drainage Improvements
 - Hillside Drainage Improvements

Conceptual Location – Localized Flooding Projects





Stormwater Update 2014

Financial Report

Stormwater Utility Finances

- Collecting approximately \$16 million annually from stormwater fees
- Originally, fees were budgeted to be approximately \$22 million a year, but rates were lowered
- Over \$650 million in projects identified in Stormwater Master Plan
- 10% of revenue must be set aside for open space/park pond projects

2014-15 Stormwater Utility Funding

\$16.0 M	Annual Income
\$6.5 M	O & M
\$1.6 M	10% Open Space
\$6.1 M	Debt
\$1.8 M	For CIP

Accountability

- Stormwater rates adopted at PSB meeting open to the public
- Input received at 5 follow up community meetings
- Additional input received at special PSB meeting
- PSB responded by reducing rates

Stormwater Fees Reduced

- June 7, 2008- Across the board **37% rate cut** to all residential and non residential accounts
- Reduced rate **Planned for 3 years**
- **10% additional credit** for non residential customers with onsite retention ponds required by city ordinance
- **Social service agencies** and nonprofit organizations **pay 25%** of the non residential fee, **10% in March 2009**
- **School districts pay 25%** of the non residential fee, **10% in March 2009**

Stormwater Fees Reduced

- In 2011, School Districts, County and Housing Authority Exempted by Texas Legislature

2011 Additional Reductions (Estimated)	
HACEP	\$ 317,000 / yr
EP County	\$ 120,000 / yr
School Districts	\$ 1,434,000 / yr
Non-Profit & Churches	\$ 480,000 / yr
TOTAL	\$ 2,351,000 / yr

Current Stormwater Charge for Residential

Residential Category	
Small	\$1.49
Typical	\$2.97
Large	\$5.94
AVERAGE	\$2.99

Existing Financial Plan

- Average residential Stormwater fee - \$2.99
- Increase existing fee by 8%
- Additional \$33 MM in bonds
- Prioritize out of \$144 MM in need

Making Future Projects a Reality

- Raise rates over 4 yr period
 - Residential Rate: \$2.99 - \$4.87
- Additional \$160 MM in 4 yr period
- Additional \$132 MM in bonds
- Address \$144 MM in need for future projects



Stormwater Update 2014

Public Awareness

FLOODING? BE SAFE!

Turn Around Don't Drown



Turn Around Don't Drown Campaign from
National Weather Service

**Do you really know
how deep and fast
the water is?**

**FLOODING AHEAD
TURN AROUND
DON'T DROWN**

**Turn Around
Don't Drown®**

For important, life-saving information please visit
<http://tadd.weather.gov>



National Weather Service



U.S. Department
of Transportation
Federal Highway
Administration



American Association of
Motor Vehicle Administrators



FLASH
RESEARCH CENTER FOR STATE POLICES



Stormwater

El Paso Water Utilities Campaign



Flash Floods Can Kill in a Flash.
Keep Alert. Keep Clear.

   epwu.org

030640

 CLEAR CHANNEL



Storm Drains Can Be Deadly.
Keep Alert. Keep Clear.



epwu.org

Campaign Elements

(June – September of 2015)

- Billboards
- Radio
- Social Media
- Media Relations



September 29
Pico Norte Pond



September 29
Pico Norte Pond