### OWRB'S LOAN PROGAMS TO FINANCE STORMWATER & FLOODPLAIN PROJECTS



City of Tulsa's Central Library Rain Garden



#### **OWRB ASSISTANCE AVAILABLE**

Two grant and three loan programs for water and wastewater infrastructure

- Emergency and Emergency Drought Grants
- Rural Economic Action Plan Grants
- Financial Assistance Loan Program
- Drinking Water State Revolving Fund
- Clean Water State Revolving Fund



#### Financial Assistance Program Loan and Grant Recipient Status



#### Funding as of September 2, 2016

#### Funding Totals by County



#### Funding Totals by Program

Clean Water Loans	\$1.35 Billion
FAP Loans	\$959 Million
Drinking Water Loans	\$1.04 Billion
REAP Grants	\$58 Million
Emergency Grants	\$34 Million
Drought Grants	\$1.5 Million
Water for 2060 Grants	\$1.5 Million
TOTAL	\$3.44 Billion
TOTAL SAVINGS	\$1 Billion





#### OKLAHOMA CWSRF PROGRAM



- CWSRF is a Loan Program subsidized by a grant from EPA intended to implement the Clean Water Act
  - Traditional projects mostly wastewater
  - However, there is a lot of flexibility to fund non-traditional projects
- OWRB administers the OK CWSRF program and provides interest rates at 60% of AAA Market rate
- Repayment can be a pledge of water/sewer revenues, sales tax, stormwater fees, etc



#### **CWSRF ELIGIBILITY**

- Eligible Entities for CWSRF Funding
  - Counties, towns, municipalities
  - Public Works Authorities
  - School Districts
  - Rural water, sewer, irrigation districts
  - Water conservation districts
- Cannot provide funding to private entities directly
  - Systems can provide loan to private entities through Passthough loans





### **ELIGIBLE PROJECTS**

Projects that achieve or maintain compliance with the CWA.

- Engineering/technical planning/design
- Wastewater treatment & collection
- Stormwater
- Water reuse and conservation
- Water/energy efficiency and environmentally innovative projects including AMR projects
- Watershed management/nonpoint source



### LOAN TERMS & REQUIREMENTS

- Interest rate 40% below AAA rate
- Up to 30 Years
  - Based on the useful life of the infrastructure
- Draw as you spend during construction
  - Repayment commencing w/in 1-yr of project completion
- No reserve
- 1.25x debt coverage ratio



# **CWSRF RATES AS OF SEPTEMBER 9<sup>TH</sup>, 2016**

Loan Term	CWSRF Rates
5 yrs	1.60%
10 yrs	1.79%
15 yrs	1.95%
20 yrs	2.06%
30 yrs	2.19%



#### LOAN TERMS & REQUIREMENTS

- Projects must follow the Oklahoma Competitive Bidding Act
- DBE and SAM
- AIS, Davis Bacon, FSP and Environmental required for <u>only</u> Publicly Owned Treatment Works (POTW) construction type projects
  - Waived for some Green Infrastructure or Low Impact Development type projects if they can be considered 319 NPS type projects



#### **ADDITIONAL SUBSIDY**





### ADDITIONAL SUBSIDY cont.

#### • Subsidy targeted towards:

- <u>Category 1</u> Indirect potable reuse studies to reduce demand on POTW (\$200,000)
- <u>Category 2</u> Engineering, Planning & Design and Construction for Water Reuse (\$439,750)
- <u>Category 3</u> Green Infrastructure (\$439,750)
- <u>Category 4</u> Any other GPR project (Green Infrastructure, Water Efficiency, Energy Efficiency, or Environmentally Innovative Project)
  - Cat. 1-3 project have not been identified by the end of 2<sup>nd</sup> Quarter (Dec. 31<sup>st</sup>) then any remaining proceeds can be used for Cat. 4 eligible projects



### **CWSRF PROCESS FOR RECEIVING FUNDING**

- 1. Request to be placed on Project Priority List (PPL)
  - Includes a letter and questionnaire (packet available on website <u>www.owrb.ok.gov/cwsrf</u>)
  - Accepting requests for SFY 17 now
- 2. Submit Planning Documents and P&S and Financial Application (L1 or L2) for review/approval
- 3. Submit Environmental Documents to OWRB
- 4. Board Approval
- 5. Loan Closing







#### ENGINEERING

- Engineering Report
- Technical Memo for planning projects
- Plans and Specs
- Bidding
  - Pre-bid Conference
- Bid Document Review and Approval
- Contract Document Review and Approval
- Pre-Construction Conference
- Construction
  - Inspection, change order, pay requests, budget revisions
- Project Close Out







### ENVIRONMENTAL





- No review necessary for planning projects
- Categorical Exclusion
  - Projects which do not individually, cumulative, or in conjunction have significant effect on the quality of human life
  - Evaluated for each project individually
- Environmental Information Document
  - Description and analysis of the of the project/study area
  - Includes needs, alternatives, impacts analysis
  - Mitigation
  - Crosscutter coordination
  - Public participation efforts





# Financial Assistance Loan Program (FAP)



- Water/Wastewater/Sewer/Stormwater
- Financial Application
- Engineering
- No AIS requirement
- No Davis Bacon requirement
- No NEPA (still have to coordinate with Federal Action Agencies based on MS4 Permit requirements for stormwater projects)
- Not as low an interest rate as CWSRF
- A great program and worth consideration if wanting to move more quickly to construction



# OKLAHOMA WATER CONSERVATION GRANT PROGRAM

 Created through passage of HB 3135

City of Guymon: \$5,603

• OWRB made available \$35,000

 Fire Station One Xeriscape Project
 Sustainable Stillwater: \$6,064
 Sparrow Hawk Village: \$6,939

 Ough
 Sustainable Stillwater: \$6,064
 Sustainable Stillwater: \$6,064

 Sustainable Stillwater Recycling Initiative
 Sustainable Stawnee: \$4,450

 Water Conservation Education Program
 City of Tahlequah: \$4,944

 Rainwater Harvesting Model
 Jefferson Elementary School PTA (Norman): \$7,000

 Water Conservation and Outdoor Classroom Project
 State Conservation and Outdoor Classroom Project

 6 project selected by a panel of state and federal water experts



#### **GREEN INFRASTRUCTURE**

- Green infrastructure uses vegetation, soils, and natural process to manage water and create healthier urban environments.
  - Can be an effective approach to addressing the water quality impacts of wet weather events by reducing polluted stormwater discharges and sewer overflows





### LOW IMPACT DEVELOPMENT (LID)

- LID is an innovative stormwater management approach to land development that works with the nature.
  - Preserving and recreating natural landscape features
  - Minimize effective imperviousness to create functional site drainage.





# WHAT CAN WE FUND ?

- Eligible Green Infrastructure/LID Practices
  - Permeable/porous pavements
  - Green roofs
  - Street Trees/Urban Forestry
    - Expansion of Tree boxes
  - Vegetated swales
  - Vegetated median strips
  - Cistern and rain barrels
  - Land conservation and reforestation
  - Eliminate curbs/gutters
  - Rain Gardens
  - And many more...









#### OKLAHOMA WATER RESOURCES BOARD THE FLOOD CURRENT NEW'SLETTER OF THE OKLAHOMA FLOODPLAIN MANAGEMENT

#### In this issue:

- November 2015 Changes to the National Flood Insurance Program "Virtual Brown Bag" Webinars from FEMA Region 6
- Elevation Certificate & Nonresidential Floodproofing Certificate Renewed Clean Water State Revolving Fund Call for
- Precipitation Tools & Reports from the HDSC 2 The Voice December 2015 Newsletter Upcoming Events

#### November 2015 Changes to the National Flood Insurance Program

Two recent acts passed by Congress prompted changes to the National Flood Insurance Program (NFIP) that took effect November 1, 2015, including new nonresidential categories, new guidance for determining a primary residence, revised rate tables for certain structures built after the Flood Insurance Rate Map date, and revised Increased Cost of Compliance rates. Many of these changes are a result of the implementation of the Homeowner Flood Insurance Affordability Act of 2014 and the continued implementation of Biggert-Waters 2012. The Federal Emergency Management Agency (FEMA) has provided an online video tutorial that summarizes these changes and also explains new modifications to the underwriting forms, Floodproofing Certificate, and the endorsement and cancellation refund rules

#### "Virtual Brown Bag" Webinars from FEMA Region 6

Remember to sign up to participate in the "Virtual Brown Bag" webinars from FEMA Region 6. This new online series helps communities create useful GIS products with the flood risk products delivered during a Risk MAP study. Visit https://r6virtualbrownbag.eventbrite.com for details and registration.

Elevation Certificate & Nonresidential Floodproofing Certificate Renewed The Office of Management and Budget has cleared its review of the revised FEMA Elevation Certificate and the Nonresidential Floodproofing Certificate, effective through November 30, 2018. FEMA will offer its usual 12-month transition period for the use of the new forms, during which time the previous forms may still be used. CRS communities are encouraged to use the fillable form. Note that FEMA's Residential Basement Floodproofing certificate is on a separate renewal cycle; that form is valid through November 2016.

#### Clean Water State Revolving Fund **Call for Projects**

The OWRB is currently identifying eligible wastewater projects and other pollution control/water quality activities for possible funding through the Clean Water State Revolving Fund (CWSRF) during state fiscal years 2017-2021. Eligible projects include the following:

- · traditional and low impact development stormwater system and best management practices, · water control structures;
- · wetland protection and restoration
- stormwater/watershed/water/energy management planning · capital improvement and asset management planning; sediment and infiltration basins:
- · filter strips;
- aquifer recharge · acquisition of land,
- · floodwater pumping systems;
- · levies/dvkes/berms to protect treatment works streamback stabilization and restoration;
- street sweepers; and · water monitoring equipment including sensors, meters, and
- gauges.
- Projects with recycling and water reuse components and projects that mitigate stormwater runoff using green methods will be awarded additional ranking points and if funds are available may be eligible for subsidization in the form of principal forgiveness. Interested entities should download and submit a Programmatic Application Packet from www.owrb.ok.gov/CWSRF by March 1, 2016. Completed documents can be emailed to Lindy Clay at lindy clay@owrb ok.gov or faxed to her attention at 405 530.8898

WWW. OWRE.OK.GOV + 3800 NORTH CLASSEN ELVD. OKLAHOMA CITY, OK 73118 + 405.530.8800 + FAX 405.530.8900

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- aquifer recharge;
- acquisition of land;
- floodwater pumping systems;
- levies/dykes/berms to protect treatment works;
- streambank stabilization and restoration;
- street sweepers; and
- water monitoring equipment including sensors, meters, and gauges.

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WOTH CONTRACTOR - 2000 NORTH CLASSES BLAD. ORLANDOLA CITL ON 72118 - 465-570-8909 - 252 49

- Electronic Media
  - Email blast
  - Twitter
- Presentations
  - ORWA
  - OFMA Spring Workshop
  - Arbor Week Kick-Off
  - Funding Agency Coordinating Team (FACT)
  - OFMA Annual Conference











Development and Initial Implementation of Public Education Programs:

- Water quality related signage
  - Storm drain inlet marking
  - Fishable/Swimmable/Supply
  - Illegal dumping
- Bill inserts
- Creation of BMP/LID Guide
- Incentive Programs

OKLAHOMA FLOODPLAIN MANAGERS ASSOCIATION

#### Turn Around Don't Drown Signs Available

Request a Turn Around Don't Drown sign from OFMA today!





"Over half of all flood-related drownings occur when a vehicle is driven into floodwater." — Center for Disease Control and Prevention

TADD Sign POC:

Beth Wilhelm beth.wilhelm@owrb.ok.gov

Charles O'Malley charles.omalley@owrb.ok.gov

> P.O. BOX 8101 Tulsa, OK 74101-8101 www.okflood.org

Protect your citizens and emergency management personnel from this unnecessary risk!

Request your **Turn Around Don't Drown** sign today!

OFMA O KLAHO MARAGERE ASSOCIATIO



# OK CWSRF GI/LID STORMWATER PROJECTS

- Bixby, OK Rain Garden/Roundabout at 148<sup>th</sup> & Riverview: Funded in 2011 in conjunction with a sewer improvement project
  - Oblique geometry of the intersection created hazards for safe traffic flow
  - Runoff resulted in localized flooding and weakening of the road base which undermined the pavement surface
- Solution
  - Bio-retention facility to treat storm water runoff
  - Permeable pavers to reduce runoff volumes



### BIXBY, OKLAHOMA – BIO-RETENTION ROUNDABOUT





#### **AS OF MAY, 2015...**









 Project used native material to assist in the restoration of the stream channel







 Willow tree stem cuttings used to help stabilize bank, start new growth and bind soil on toe slope















# TMUA – CONSERVATION EASEMENTS CWSRF FLOODPLAIN/STORMWATER

- Source Water Protection:
  - Taste and odor issue for Tulsa residents
  - Cost-effective alternative solution and overall WQ improvements
  - TMUA & Land Legacy Pass through loan for \$1.2 Million
  - Perpetual whole-farm protection from development via BMPs
  - 2,400 acres protected using the CREP, EPA 319 and CWSRF programs





### **GARNETT REG. DETENTION POND**

- Owasso Public Works Authority
  - 70-acre/feet pond near East 96<sup>th</sup> Street North and North Garnett Road along an unnamed Trib. of Ranch Creek
  - Existing pond bank is often overtopped and may not hold water in the future





### **GARNETT REG. DETENTION POND**

- Project Purpose:
  - Redesigning of the existing structure to handle additional stormwaters from upstream area,
  - To provide regulation of stormwater for downstream areas
  - Provide a wetland habitat area in a urbanized environment.





### **PROJECT DETAILS**





- Construct 2-acre pond
- Re-establishment of wetland
- 700 LF of 15-ft embankment
- 2 6ft x 4ft concrete spillways
- 1,200 LF of access trails
- Re-est of 866 LF streambank



#### **PROJECT DETAILS**



 150-ft of auxiliary spillway



### HASKELL DRAINAGE DITCH

- Muskogee Municipal Authority
  - Haskell Drainage Channel had experienced extensive bank erosion and deposition
  - Sanitary sewer line had washed out and needed repair
  - Localized flooding had occurred in the area





### HASKEL DRAINAGE DITCH

- Project Purpose:
  - Restore channel to its original design capacity to handle stormwater from upstream area
  - Stabilize the existing banks
  - Provide flood protection to the area







### **PROJECT DETAILS**





- Re-est of 1,100 LF of streambank
- Maintain 300 LF with rip rap
- Stabilize 800 LF with Articulated Concrete Block mat
- Will backfill with sediment and plant grass to re-vegetate streambank



#### HASKELL DRAINAGE CHANNEL





#### HASKELL DRAINAGE CHANNEL

#### **Before**





After



#### **PROJECT OUTCOMES**





#### **EQUIPMENT PURCHASES**



#### Considered Capital Projects:

- Vaccuum Truck
- Street Sweeper
- Floodwater Barriers
- Vegetation
- Mulching/Seeding of exposed land
- Irrigation:
  - Moisture/Rain
     Sensing Controllers



### **INFRASTRUCTURE MAPPING**

- OWRB Pilot Project mapped 6 systems
- Targeted small systems that were issued NOV's and CO's for SSO's and small systems that experience high water loss
- Will start up with the next round of system in the next month.
- Entities can use the product to help manage their systems.





#### **2015-16 Pilot Project** Water Infrastructure Mapping



- The OWRB is collecting data on water, wastewater, storm water, and water reuse infrastructure for 7-10 communities serving populations under 3,300 people.
- Data will be made available to each system via a secure interactive map viewer developed by the Center for Spatial
- The map viewer will incorporate system data from the Oklahoma Department of Commerce GeoCIP program.
- A public viewer, hosted on the OWRB's website, will show pipeline locations and service areas; it will be general in nature and will not include sensitive infrastructure data.
- This pilot project is funded through the OWRB's Financial Assistance Division.



- Floodplains
- Garber-Wellington



#### **ECOREGIONS OF OKLAHOMA**

#### **Omernik Level III Ecoregions**

High Plains
Southwestern Tablelands
Central Great Plains
Flint Hills
East Central Texas Plains
South Central Plains
Ouachita Mountains
Arkansas Valley
Boston Mountains
Ozark Highlands
Central Irregular Plains





#### **OKLAHOMA'S CLIMATE DIVERSITY**



#### WATERSHED MANAGEMENT PLANS

- Total/Integrated Water Resources Management Plan likely to result in a capital project
  - "Cat. 4 Environmentally Innovative"
    - Source Water Protection Activities
    - Water Allocation
    - Surface Water Permitting
    - Land Management with in the Watershed
    - Stormwater (SWP3, FEMA CRS Rating, Outreach, Master Plan)
    - Water Audits
    - Water Meters
    - Water Reuse
    - Water Quality Monitoring







#### **RESOURCES & TOOLS**

- OK Advantages Assessment & Scoring for Infrastructure Solutions (OASIS)
  - Helps communities quantify the environmental, social and economic benefits of their wastewater infrastructure investment
    - It can be difficult for decision makers to articulate the importance of investing in unseen infrastructure.

nome rage	Assistance Request	Project Details	Background Questions	Output Statements	Log
Name of Applicant: Population:	Ø         Oklahoma City (OCN           Ø         540.000	VUT) -	Edit Applicant Information		
Select Application:	South WTP & Sewe	Rehab 👻	Add New Edit Name	Delete Selected	
Contact Person for	this Application: 🜒				
Prefix Mr. Email: mayor	First Name: Mic @okc.gov	k Las	t Name: Cornett Phone: (405) 297-2424	Suffix	Add/Edit
Submission Complete:	<ul> <li>Date Com</li> <li>Updated:</li> </ul>	pleted/Last 🛛 🕘	4/4/2011 📷 S	ave	
Type(s) of Project(s	a) to be Funded: 🛛 🌒				
	Project Categories		Number Selected	Add	l / Delete
Wastew	rater Treatment Plant	0	1		+×
Sewer S	System	0	1		+×
Stormw	Stormwater Management		0		
Nonpoli	nt Source Pollution Control	W	0		**



### **RESOURCES & TOOLS**

#### Rate Comparison Tool

#### • Compares OWRB Financing Programs to Market Rates

Rate Co	on	iparison Tool				
Loan Program		CWSRF -				
Community Name:		Town A				
Amount of Loan	\$	1000000 .00				
Term of Loan		20 years (30 or 1	less)	State of Oklahoma		
Market Rate 4.5 %		OWRB Rate 2.20	%	OWKB	Rate Comparison for:	
	Τ			WATER RESOURCES BOARD the water agency	Iown A	
		Submit Help		INPUT		4.500/
				Market Rate		4.50%
				Term		2.20%
				Amount		\$1 000 000 00
						01,000,000.00
				Payments @ Market Rates		
				Annual Loan Payment		\$76,354.76
				Semi-annual Loan Payment		\$38,177.38
				Monthly Loan Payment		\$6,362.90
				Payments @ OWRB Rates		
				Annual Loan Payment OWRB		\$62,074.21
				Semi-annual Loan Payment		\$31,037.11
				Monthly Loan Payment		\$5,172.85
				Annual Savings with OWRB		\$14,280.54



# BENEFITS OF USING THE CWSRF PROGRAM

- Access to funds for planning projects
- Meet MS4 permit requirements
- Provide long term savings
- Ability to phase projects
- Use CWSRF funds as match
- CRS rating
- Drought resilient







U.S. Drought Monitor Oklahoma

#### September 27, 2016 (Released Thursday, Sep. 29, 2016) Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	57.82	42.18	19.04	3.05	0.00	0.00
Last Week 9/20/2016	55.17	44.83	13.24	2.39	0.00	0.00
3 Month s Ago 628/2016	77.65	22.35	5.86	0.00	0.00	0.00
Start of Calendar Year 12292015	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 929/2015	52.60	47.40	16.79	6.37	0.97	0.00
One Year Ago 9/29/2015	52.60	47.40	16.79	6.37	0.97	0.00

#### Intensity:

D0 Abnommally Dry D3 Extreme Drought D1 Moderate Drought D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

#### Author:

Chris Fenimore NCEI/NESDIS/NOAA



#### http://droughtmonitor.unl.edu/













# FOR MORE INFORMATION:

Oklahoma Water Resources Board Financial Assistance Division 405.530.8800 www.owrb.ok.gov/CWSRF

> Kathy Koon, Project Officer kathy.koon@owrb.ok.gov



