$\Sigma LA + \Sigma WLA + MOS = TMDL$ Compliance

Presented by: Ben Burns
Public Work – Capital Project Manager

CITY OF PRESCOTT
Everybody's Hometown

May 3, 2016

Federal Clean Water Act Section 303

- Under Section 303(d) of the Clean Water Act (CWA), Arizona is required (biennially) to develop and have the U.S. EPA approve lists of impaired waters (i.e., those not meeting water quality standards) in the state.

- The law mandates that the Arizona Department of Environmental Quality (ADEQ) establish priority rankings for waters on the lists and develop a **TMDL** for these waters.

What is a TMDL?

- Total Maximum Daily Load

- Essentially it's a Water Quality Improvement Plan

- A value of the maximum amount of a pollutant that a water body can receive while still meeting a water quality standard.

- TMDL defines the **reduction** of a target pollutant in discharges from a regulated entity necessary for the water body to meet the water quality standard

CITY OF PRESCOTT
Everybody's Hometown

So, what is a TMDL?

$$\Sigma LA + \Sigma WLA + MOS = TMDL$$

- the sum of the load allocations (LAs)
  - Nonpoint sources
- the sum of the waste-load allocations (WLAs)
  - Point sources
- Margin of Safety (MOS)

General TMDL Process

- TMDL calculated

- Load reductions determined

- Implementation Plan

- Draft TMDL Report issued for a 30 day public comment period

- TMDL published in the AAR for a 45 day public comment period

- Letter requesting EPA Approval

CITY OF PRESCOTT
Everybody's Hometown

City of Prescott Named in Two TMDLs

- Watson Lake Reservoir (Feb 2015)
- Upper Granite Creek Watershed (Oct 2015)

ADEQ
Arizona Department of Environmental Quality

Douglas A. Ducey, Governor
Henry R. Darwin, Director

Watson Lake TMDL:
Total Nitrogen, DO, pH
& Total Phosphorus Targets

Arizona Department of Environmental Quality
Supported by NAU, UofA, and Tetra Tech, Inc.

Final - February 2015
Open File Report OFR-14-03

ADEQ
Arizona Department of Environmental Quality

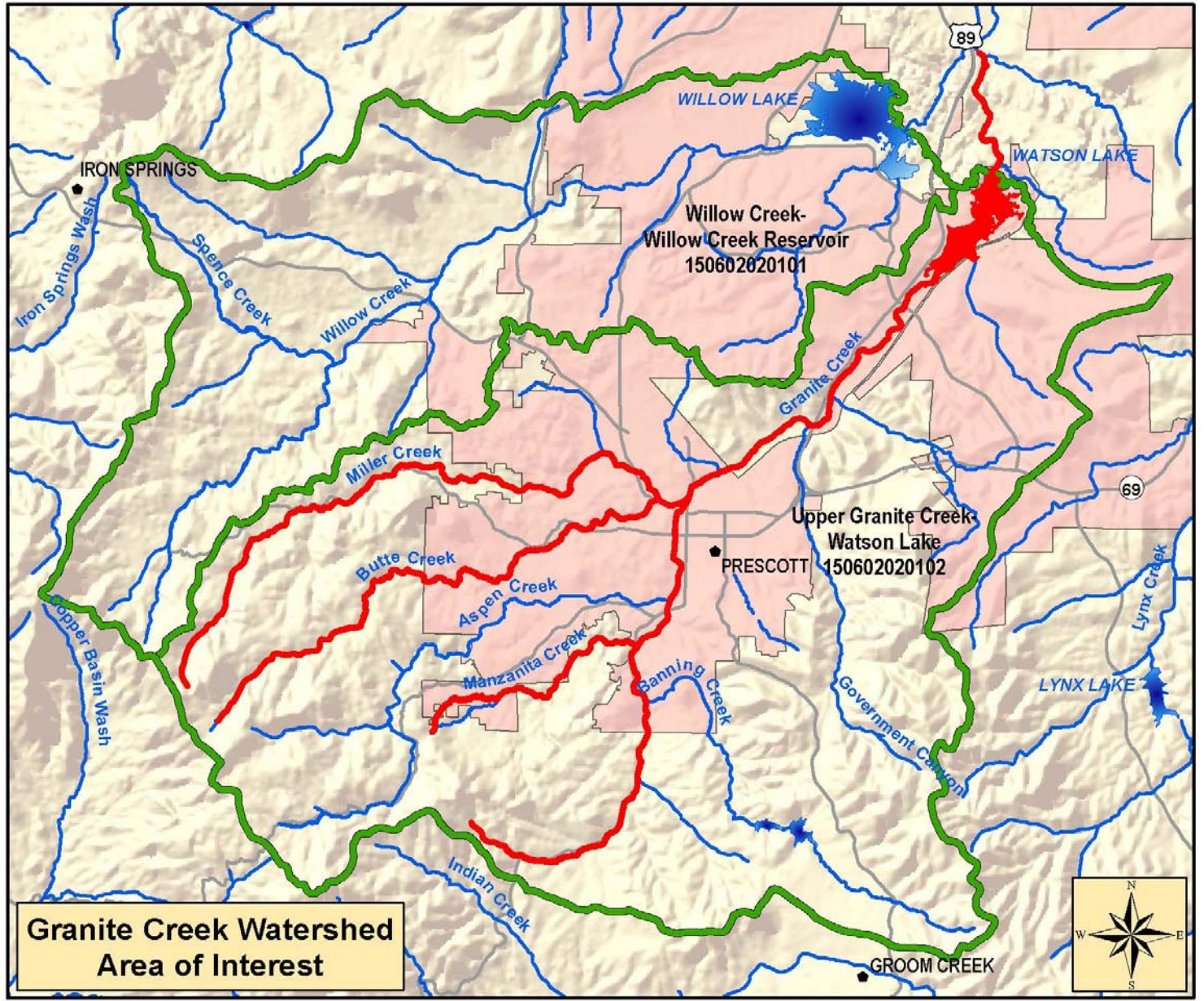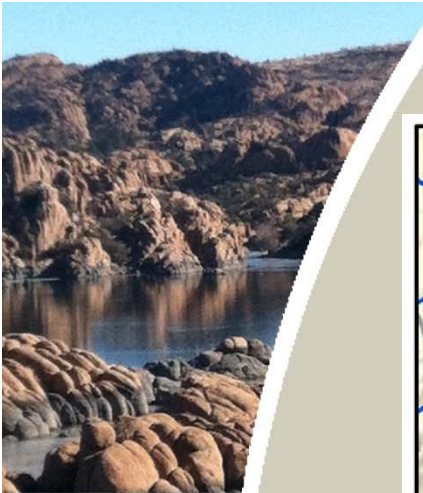Douglas A. Ducey, Governor
Misael Cabrera, Director

Draft Final
Upper Granite Creek Watershed *E. coli* TMDL

October 2015

Open File Report 14-08

CITY OF PRESCOTT
Everybody's Hometown

Granite Creek Watershed
Area of Interest

Impaired Water Bodies in the Granite Creek Watershed

Active regulatory efforts include:

<u>Watson Lake Reservoir</u> - listed for Total Nitrogen, pH, Dissolved Oxygen, and Total Phosphorus impairments

<u>Upper Granite Creek</u> (headwaters to Willow Creek) - listed for Dissolved Oxygen and *E.coli* impairments

- Miller Creek
- Butte Creek
- Manzanita Creek

CITY OF PRESCOTT
Everybody's Hometown

Challenges for TMDL Compliance

- TMDL Science – Make sure you understand it.
  - Hire a consultant before the TMDL is issued.

- Public and Political understanding
  - Try to insure elected officials and the public understand what the TMDL is.

- Respond to the TMDL
  - Make sure your concerns are documented and included in the Final Draft.

CITY OF PRESCOTT
Everybody's Hometown

TMDL Funding Sources

- Water Quality Improvement Grant Program

- Water Quality Assurance Revolving Fund

- Water Protection Fund Grants

- Aquifer Protection Fee

- Sewer Department CIP budget

- Street Department CIP budget

CITY OF PRESCOTT
Everybody's Hometown

Actions for Compliance

- Environmental Coordinator – 2013

- Professional Services Contract for Water Quality Improvements – 2013

- Professional Services Contract for Water Quality Regulatory Compliance (Action Plan) & Lake / Watershed Models – 2015

- Purchase camera van for sewer main condition documentation in the creek system – 2015

- Cured in Place Pipe Program – 2015

- SCADA Installation and Integration – 2016

- Job Order Contracting for Utilities – 2017

- On going Capital Projects

CITY OF PRESCOTT
Everybody's Hometown

11

Developed Action Plan

Watson Lake Reservoir TMDL

Watson Lake Reservoir Water Quality Data Monitoring Plan (6.1)

- Data Review & Gap Analysis
- WQDMP Development
- WQDMP Implementation
- Ongoing data analysis

Watson Lake Reservoir Model (6.4)

- Data Review & Gap Analysis
- Model Selection
- Alternative Practices Simulation

Watson Lake Reservoir Management Plan (6.5)

- Activity and BMP Integration & Evaluation
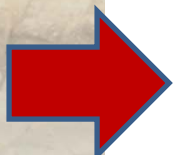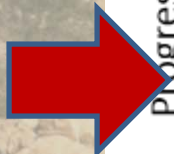- Cost Estimate
- Schedule

Upper Granite Creek TMDL

Upper Granite Creek Watershed Model (6.2)

- Data Review & Collection
- Watershed Delineation
- Model Calibration
- Alternative Analysis
- Evaluation

Watershed Pollutant Reduction Plan (6.3)

- BMP Identification & Evaluation
- Summarize Model Findings
- Cost Estimate
- Schedule

Progression

WQDMP – Water Quality Development Master Plan
BMP – Best Management Practices

CITY OF PRESCOTT
Everybody's Hometown

12

Questions?