Managing Drought and Planning for the Future in Guymon

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2014 Governor’s Water Conference
Oklahoma City | October 22, 2014
Multi-Pronged Approach to Reliably Meeting Water Needs in Guymon

- Managing current and future droughts
- Building on State and Regional plans
- Partnering with regional water users
- Actively participating in Water for 2060
- Developing local implementation plans
- Aggressively pursuing water reuse in our community
Panhandle Demands by Water Use Sector

- Crop Irrigation, 85.2%
- Livestock, 4.2%
- Self Supplied Industry, 5.4%
- Public Supplied (M&I), 2.7%
- Self Supplied Residential, 0.4%
- Oil and Gas, 2.0%
Panhandle Population Growth by County

- Cimarron: +16%
- Texas: +123%
- Beaver: +8%
## Water Supply for Guymon: Increasing Population → Increasing Demand

<table>
<thead>
<tr>
<th></th>
<th>Today</th>
<th>In 2060</th>
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<tbody>
<tr>
<td><strong>Potable Water Demand</strong></td>
<td>5,150 AFY (2013) 4.6 mgd avg.</td>
<td>11,000–14,000 AFY 10.0–12.6 mgd avg.</td>
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<tr>
<td><strong>Number of Wells (even if no decline in gpm/well)</strong></td>
<td>18</td>
<td>39–50 wells</td>
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<tr>
<td><strong>Add’l wells needed (avg. #/year)</strong></td>
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<td>0.44–0.67 new wells per year</td>
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<td><strong>Avg. cost of new wells (in 2014 $)</strong></td>
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<td>$180,000–$270,000/year</td>
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*Efficiency and reuse makes sense for Guymon!*
Guymon’s Drought Management Plan

**STAGE 3**
**Water Emergency**
- Storage <50% or Demand >10 mgd for 3 days or pressure <40 psi
- Provide for human health and fire protection
- Ban on all outdoor water use

**STAGE 2**
**Water Warning**
- Storage ~50% or Weekly demand >8.5 mgd
- Reduce weekly demands 10%
- Education, mandatory odd/even watering, water waste and time-of-day irrigation prohibition

**STAGE 1**
**Water Watch**
- Storage <75% or Weekly demand >8 mgd
- Education and voluntary odd/even watering
Guymon is Leveraging State and Regional Resources to Develop Detailed Local Plans

**STATE: OCWP 2012**
- Water supply data
- Water quality data
- Demand projections
- Projected shortages

**REGIONAL: PRWP 2012**
- Validated projections for Panhandle
- Conservation for crop irrigation
- Conservation for public water supply
- Economic analyses & implementation plan

Guymon Water Reuse Feasibility Study
Guymon is Actively Participating in Water for 2060 Initiatives

March 11
Water for 2060 Public Meeting in Goodwell

August 7
Water for 2060 Advisory Council Panhandle Tour
  - Crop irrigation
  - Livestock operations
  - High Plains biodiesel
  - WWTP and municipal reuse sites
Potential Reuse Opportunities in Guymon

- Nonpotable
  - CROP IRRIGATION
  - INDUSTRY

- Potable
  - Indirect Potable Reuse: Augment Surface Water Sources
  - Indirect Potable Reuse: Augment Groundwater Sources
  - Direct Potable Reuse
Detailed Assessment of Nonpotable Reuse Options will Support Guymon’s Decisions

Discharge via Permit
- Treatment and water quality = ?
- Sunset Lake or Beaver River Alluvium

Category 2 Reuse
- Coagulation, filtration, chlorine
- Retreat after surface storage

Category 3 Reuse
- No public access when irrigating
- Secondary mechanical treatment

Swap for Additional Crop Irrigation Water or Industrial Use; Regional Fire Protection?

Technical, Permitting, and Funding Implementation Plan
Potential Southwest Guymon Discharge and Reuse Sites

- Sunset Lake
- Sunset Hills GC
- Upstream Discharge
- Tigers Football Field
- Oklahoma Park
Potential Innovative Uses for Recycled Water in Guymon

• Every drop is valuable!
• Currently discharging about 1.2 mgd; rarely flows more than \( \frac{1}{2} \) mile downstream

• Innovative uses being considered
  – Biodiesel Plant
  – Regional Fire Protection
  – Potable Water Supply Augmentation
Collaborative Process → Implementable Reuse Plan

1. Initiation
   - Project Kickoff
   - Supply Quality and Quantity Evaluation

2. Options
   - Identify Discharge and Reuse Options
   - ODEQ/OWRB Workshop

3. Evaluation
   - Treatment, Storage, Distribution Sizing and Costing
   - Alternatives Workshop

4. Outreach
   - Funding Options Assessment
   - Public Meeting

5. Plan
   - Guymon Water Reuse Feasibility Study
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