

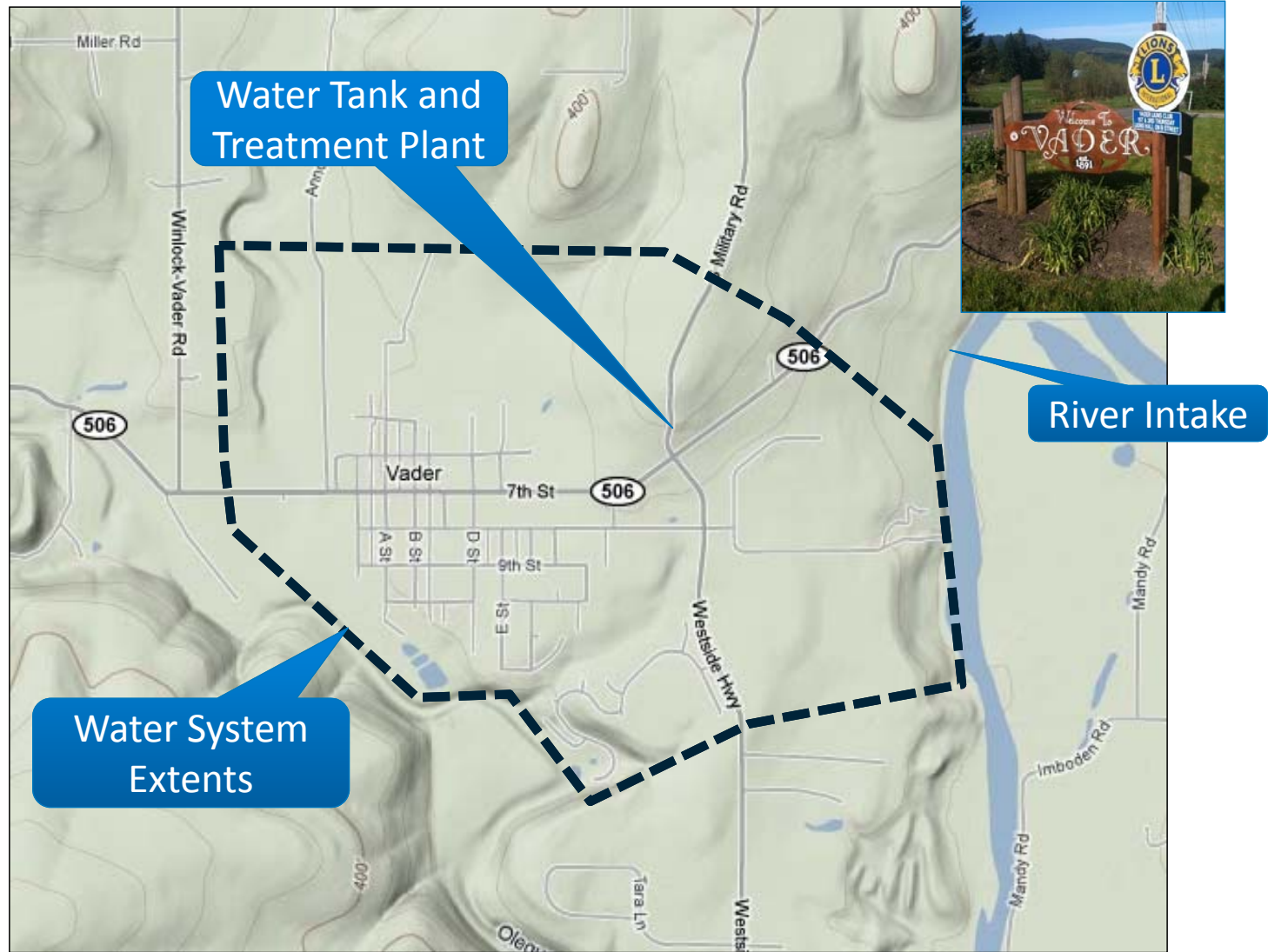


Improving Water System Reliability and Safety for a Small City

Presented by:
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(WA)



Water System Overview



Water System Concerns

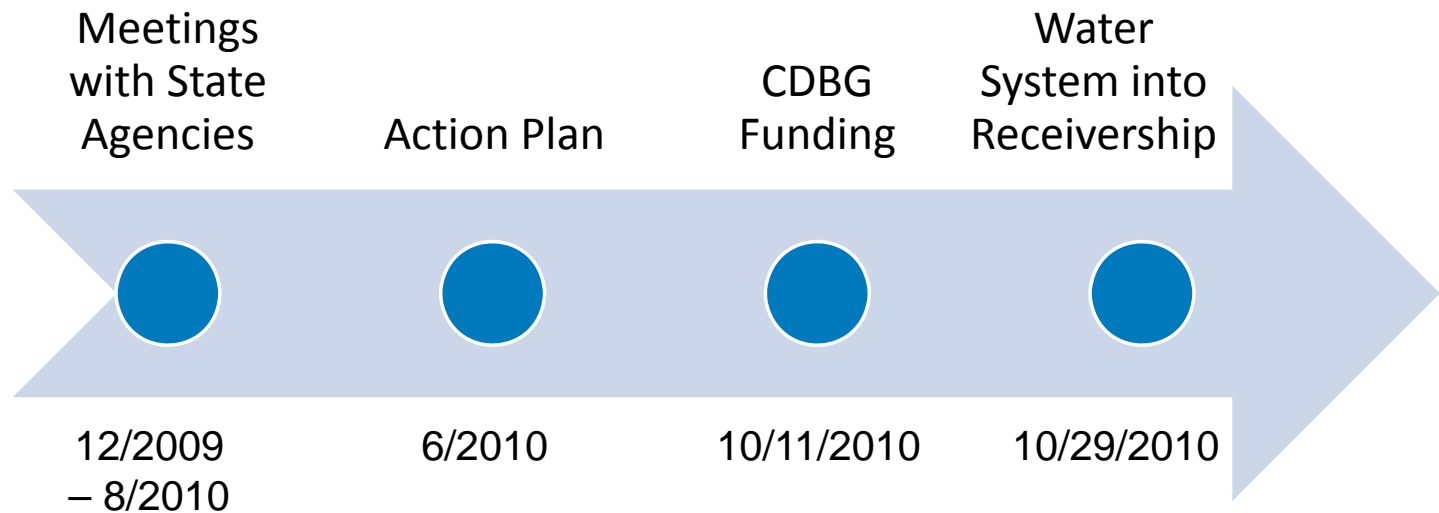
- Public health threat
- Boil water advisories
 - 17 breaks and 10 advisories from 2006 to 2010
- High unaccounted for water
- Concern over financial viability

Water Loss

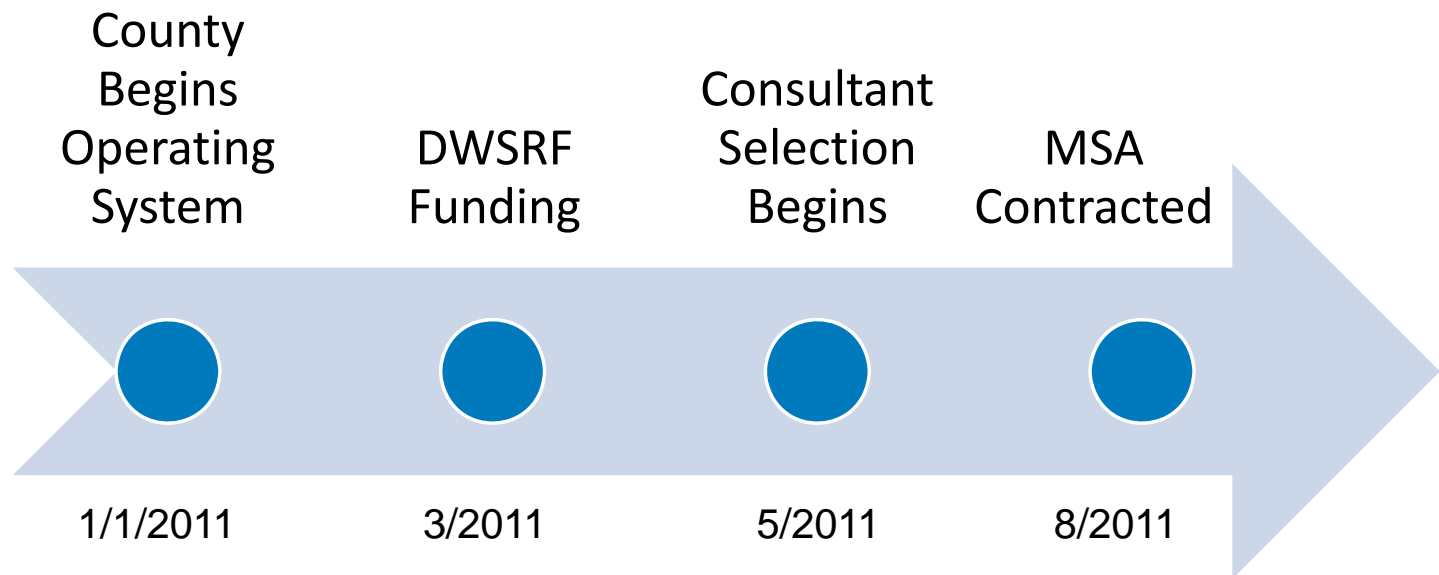
Year	Total Production (gpd)	Total Consumption (gpd)	Unaccounted for Water (gpd)	Percent Unaccounted for Water
2000	84,244	56,078	28,165	33.43
2001	99,584	52,111	47,473	47.67
2002	96,437	52,010	44,428	46.07
2003	103,275	55,327	47,948	46.43
2004	85,306	56,326	28,980	33.97
2005	98,350	61,571	36,779	37.40
Average	94,533	55,571	38,962	40.83

Source: 2010 Vader Water System Action Plan

Timeline



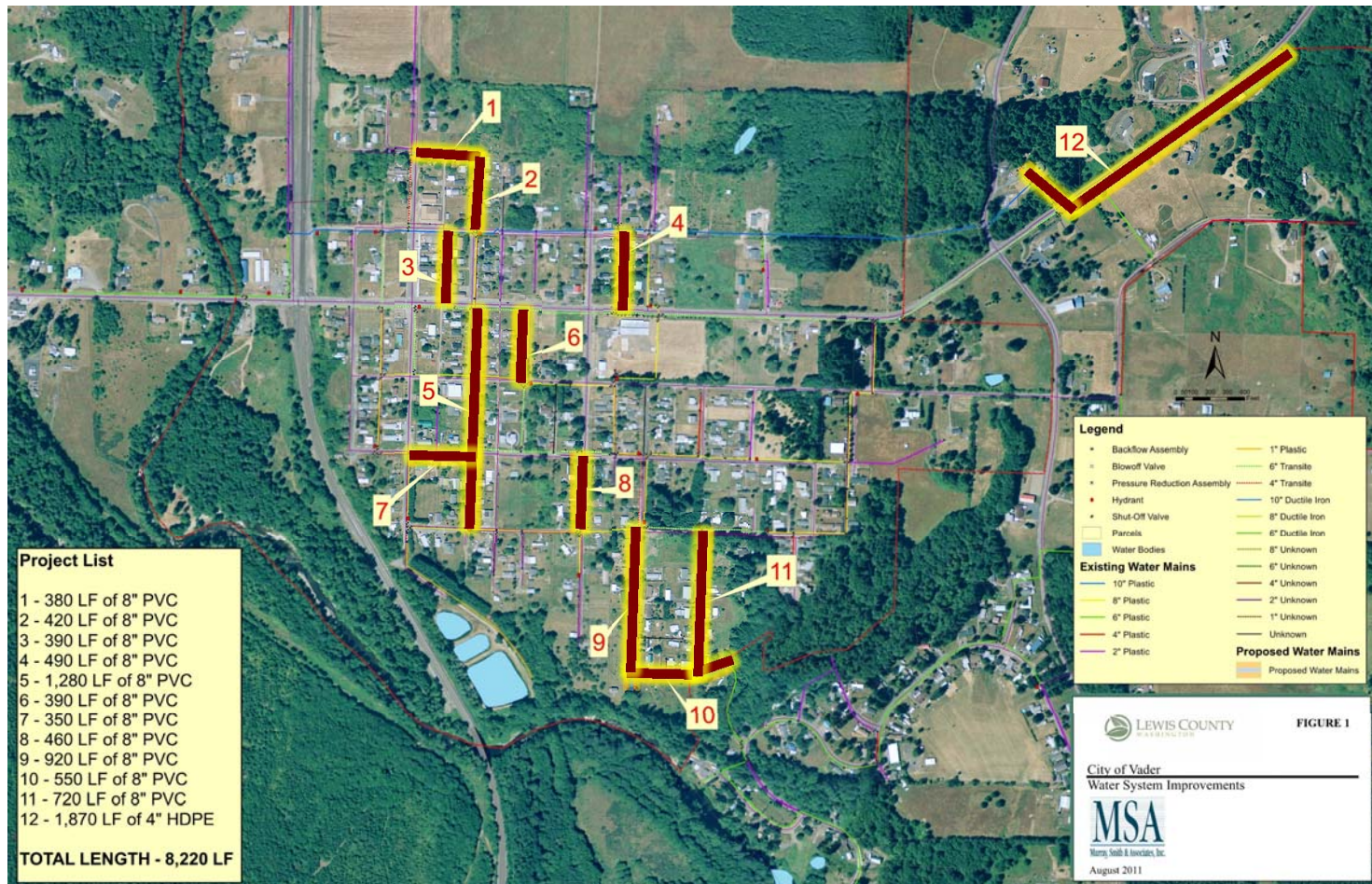
Timeline



Required Improvements

- Replace most water mains
- Replace water meters
- Add isolation valves

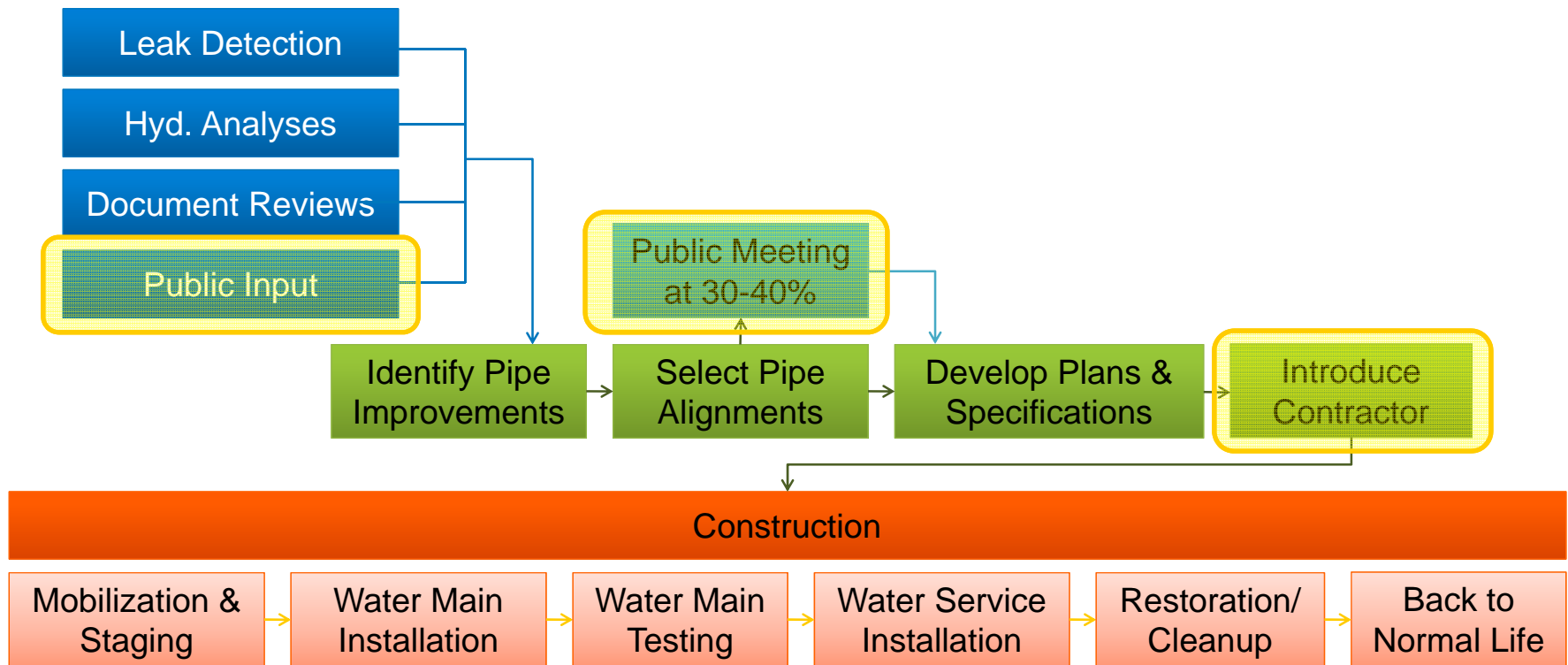
Selected Improvements



Improvement Prioritization

- Budget to complete roughly 1/3 of improvements
- Prioritization criteria
 - Age
 - Material
 - Available fire flows
 - Customers served

Work Plan



Improvements

Reliability/Operations

- Water meter/service line replacements
- Isolation valves
- Sample stations
- Air/Vac assemblies

Safety

- Fire hydrants
- Water main replacements

Vader Take Aways

Increase system knowledge

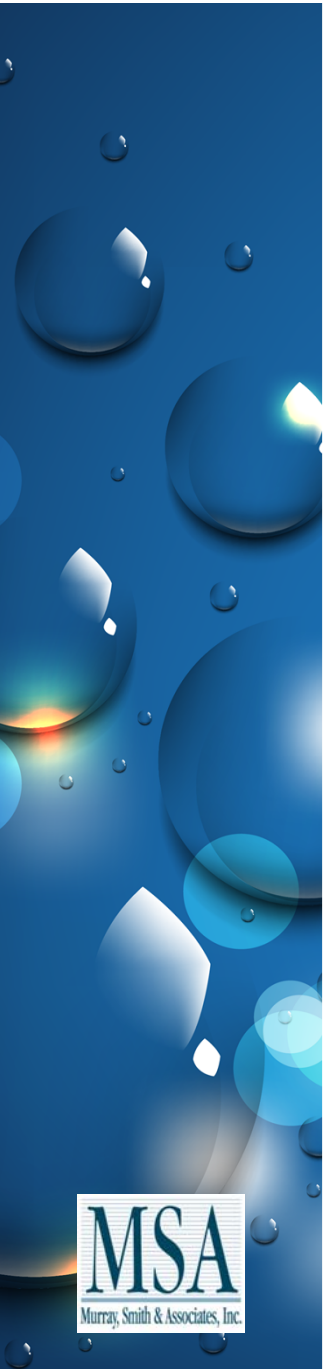
Design for operations

Prioritize Improvements

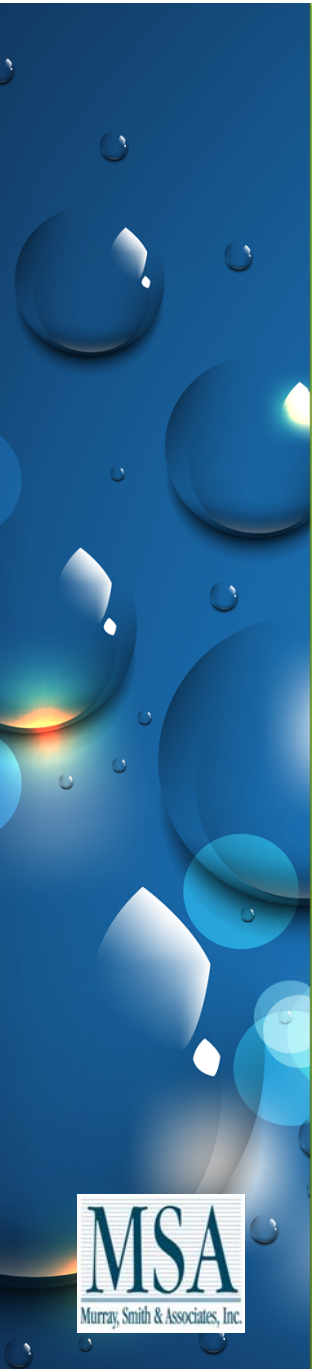
Minimize restoration costs



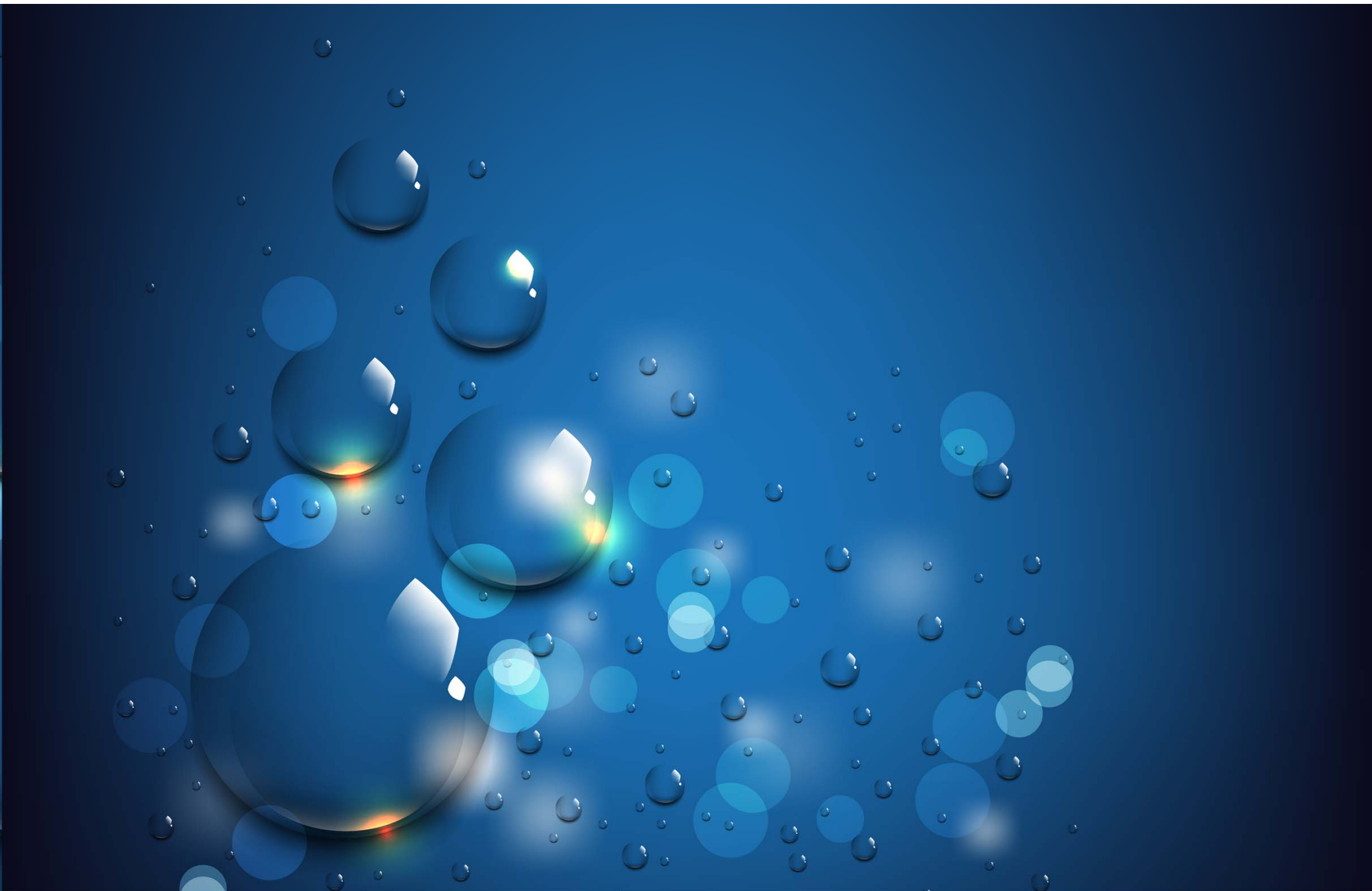
Questions?



MSA
Murray, Smith & Associates, Inc.



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Funding and System Needs

Funding Name	Funding Agency	Amount
Community Development Block Grant	State Dept. of Commerce	\$613,000
Drinking Water State Revolving Fund	State Dept. of Health	\$714,675

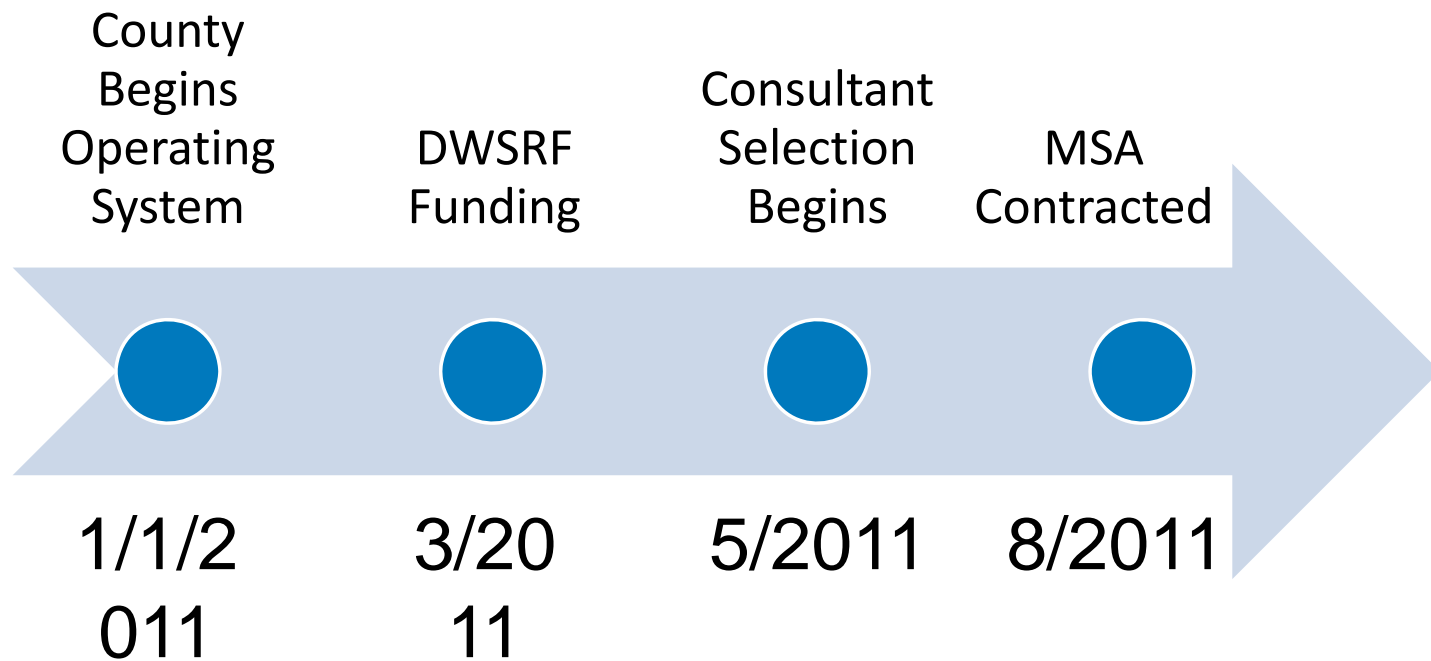
Changes in Operations

- Full time staff assigned
- System mapping and inventory
- Increased rates
 - From ~\$20/month to ~\$40/month
- Obtained green operating permit in August 2011

Increased Communications

- Newsletter
- Community Meetings
- Reverse 911
- Water System Website
- Toll free number
- Multiple City Council meetings

Timeline



Design Team Introduction

- August 2011
- Introduction at City meeting
- Background and status update
- Solicit input on known issues

Preliminary Design Meeting

- November 2011
- Town meeting with preliminary alignments shown
- Input on what we may not see in survey, etc.
- Multiple staff and opportunity for input

Complete Bid Documents

- Incorporate public comments and input
- Continue development of plans and specifications
- Next public meeting after contractor selected

Preconstruction Meeting

- Emphasis on past efforts of resource limited city staff
- Discuss next steps of construction
- Identify staff contacts

Construction Phase

- Reverse 911 for water main shutdown information
- Regular interactions with customers
- Toll free phone number available

Early Operations Issues

- **April 22, 2011 Water Main Break**
 - 6:15 AM to 10:30 PM
 - Public Works Director on site during repairs
 - 65-foot long repair, 4 pipe materials

