

Master Planning on a Budget

Presented By:

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Overview

- What is a master plan
- Key elements of a master plan
- Ideas for streamlining your planning process
- Questions

What is a Master Plan?

- “A plan giving overall guidance”
- “A comprehensive long-term strategy”
- “A plan giving comprehensive guidance or instruction”

What is a Master Plan?

- A Master Plan can be:
 - A plan for achieving a goal
 - An agreement between parties
 - Government, Regulatory Agencies, Rate Payers, Engineers, Public
 - A big picture look
 - A long term roadmap

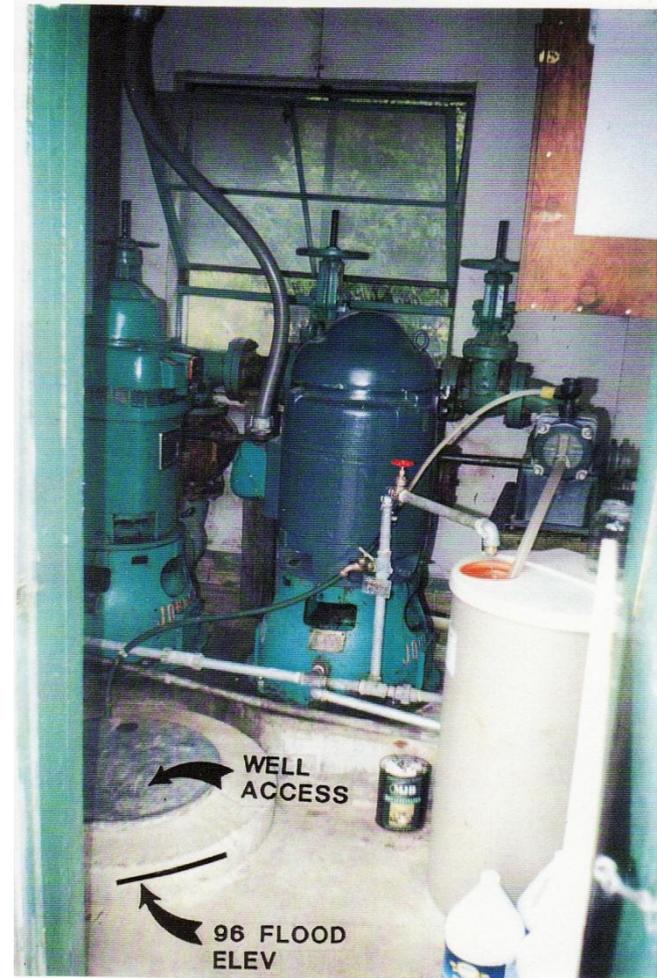
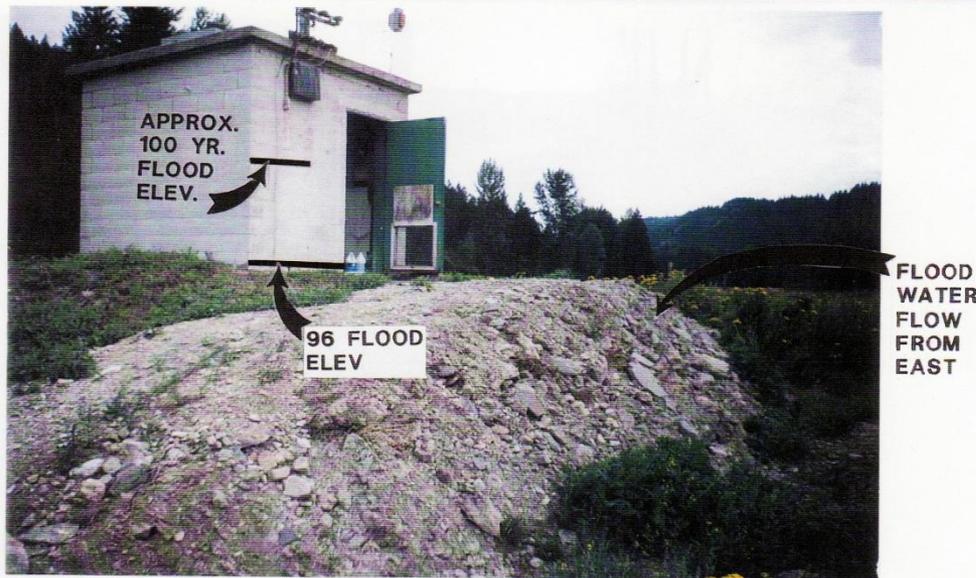
Who Needs to Master Plan?

- Municipalities
- Water Districts
- Companies
- Facilities



Why Plan at All?

- Major infrastructure improvements



Why Plan at all?



Why Plan at All?

- Financial planning
 - Rates
 - System Development Charges
- Training, transitions
 - Communicate institutional knowledge
- Operation and maintenance
 - Compile into one document

Why Plan at All?

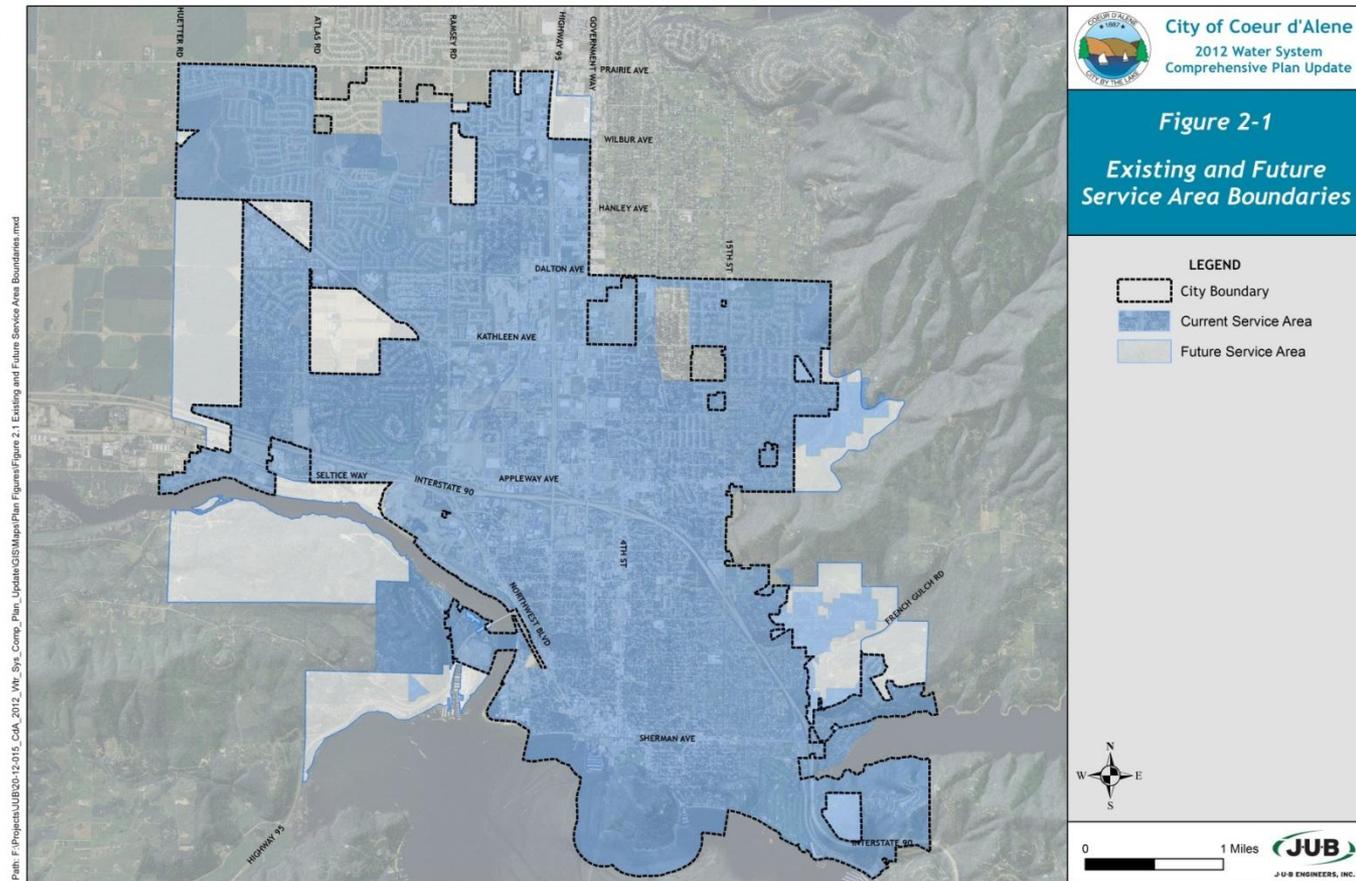
- Required by regulating agencies
 - Dependent on location and size
- Required by funding agencies
- Required for procurement of additional water rights

Key Elements

- Develop review criteria
 - Input from system management and operators
- Critical goals and project drivers
 - Development
 - System constraints
 - Potential future service area
 - Public perceptions and politics
- Identify problem areas and opportunities with system staff

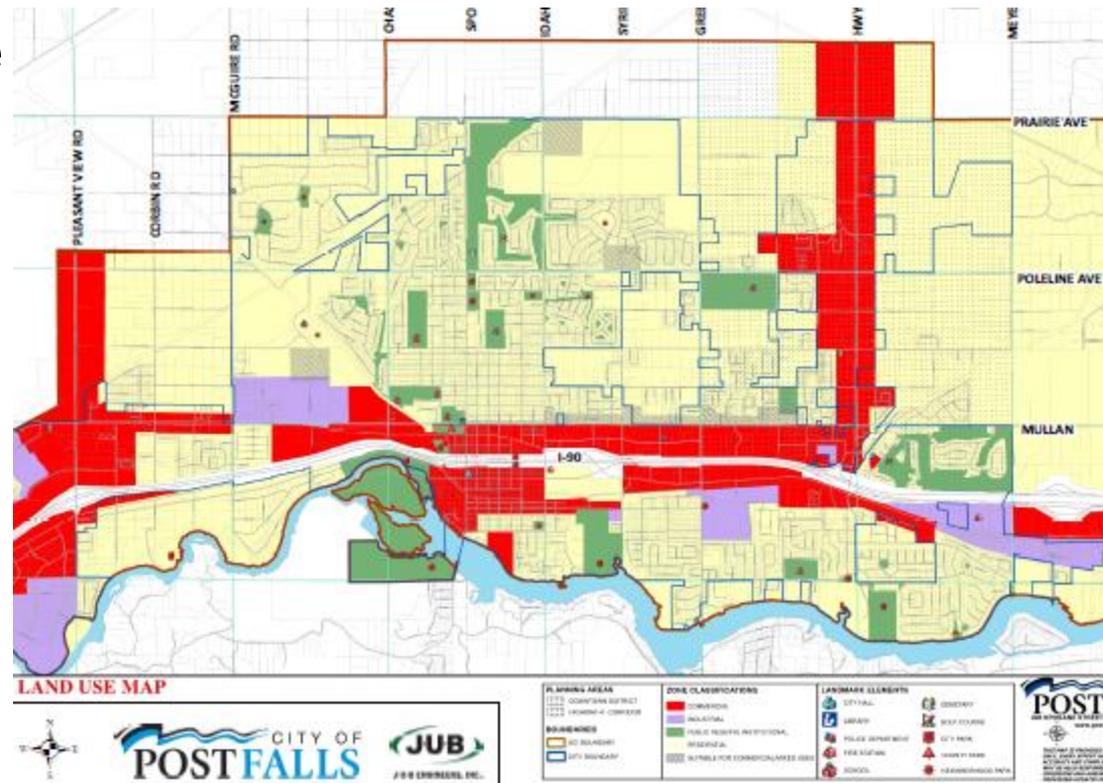
Planning Area

- Define future planning area
 - Limitations
 - Realistic
 - Attainable



Population Projections

- Need to consider
 - Future land use
 - Expansions
 - Isolated areas
 - Seasonal shifts

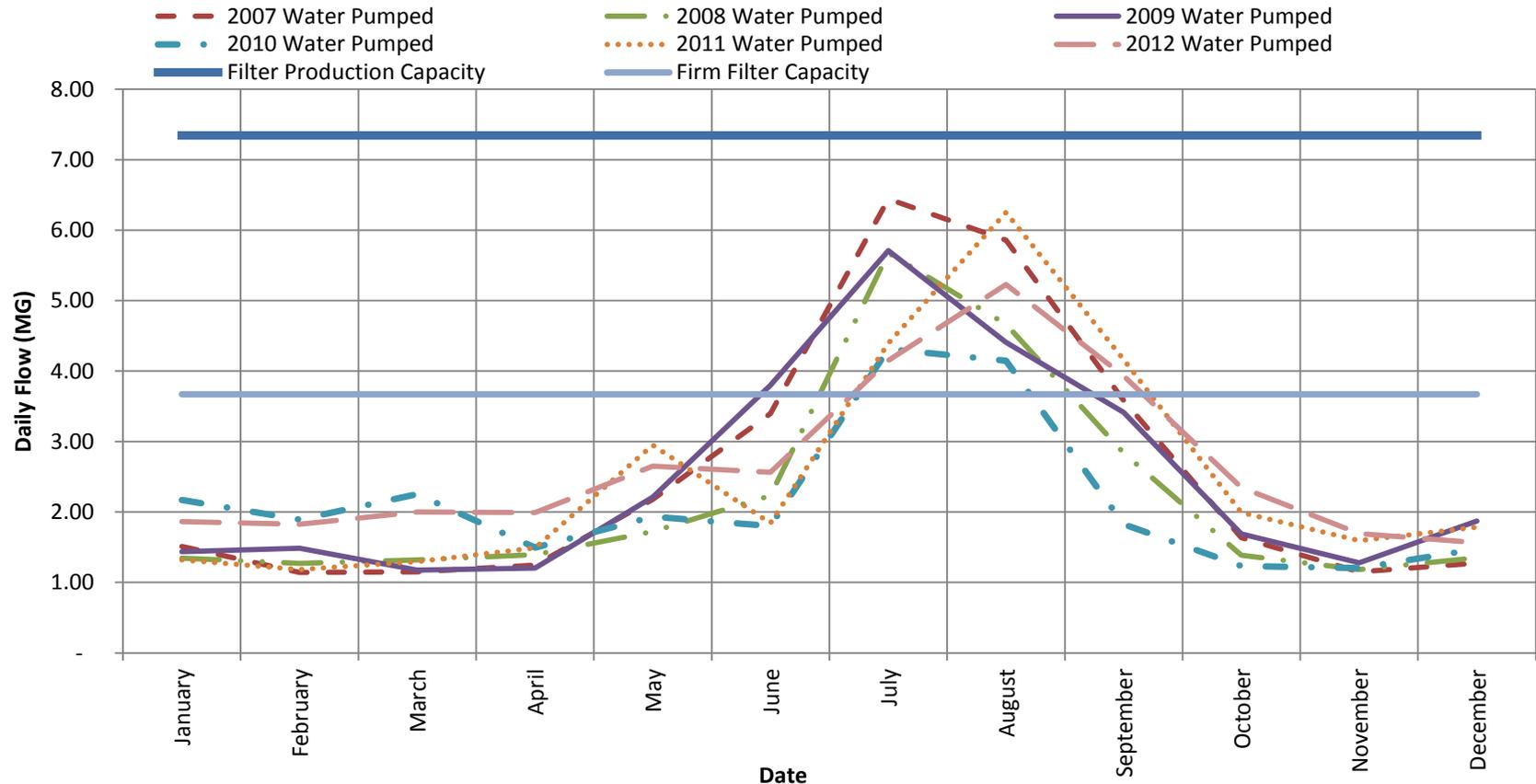


System Demands and Capacity

- Evaluate current supply availability and demands
- Develop system capacity
 - Specific to zone and system component
- Demand forecasting considerations
 - Conservation measures
 - Rate changes

Understanding System Capacity

Monthly Pumping: 2006 - 2011

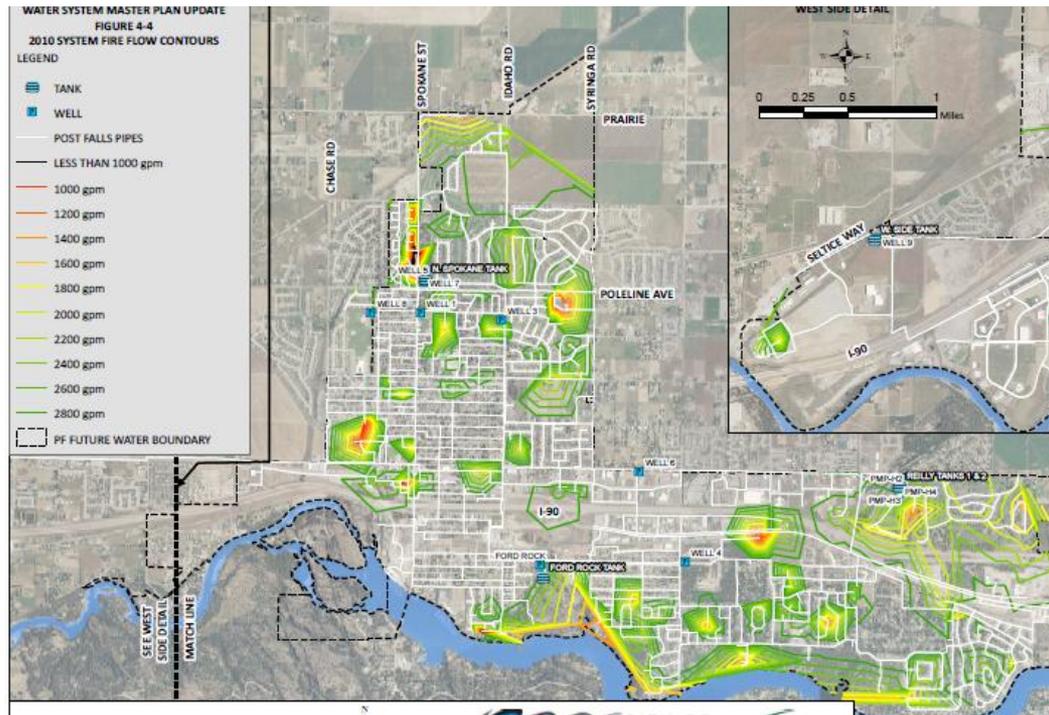


Major Project Components

- System mapping
 - GIS with consistent data
 - Pipe size, material, age
- Hydraulic Modeling
 - Necessary?
 - Topography
 - Distributed sources vs. single source
 - Ability to import GIS data
 - Compatibility with meter data
 - Field data collection by operations staff

System Evaluation

- Hydraulic model



Develop Solutions to Meet Needs

- Develop realistic criteria
- Expand the existing system or build new?
- Leave room for expansion
- Consider O&M implications

Evaluation of Alternatives

- Regulatory Considerations
 - Environmental Impacts
 - Safety Impacts
 - Future Regulations

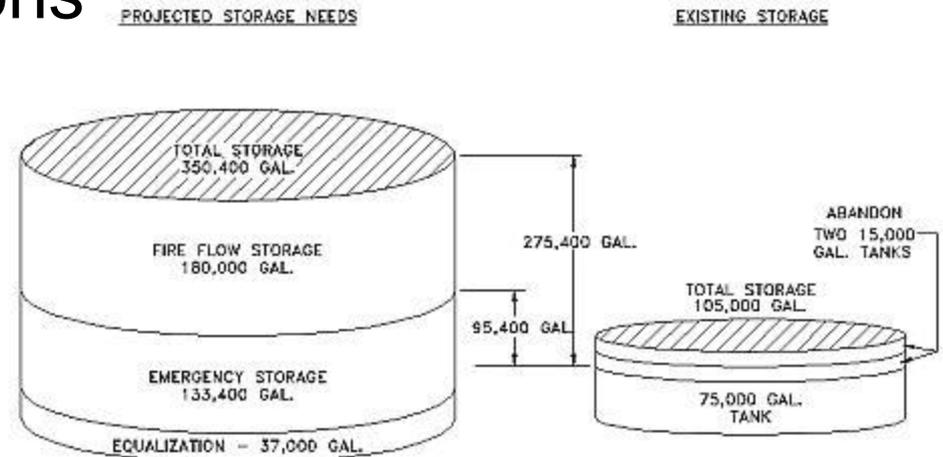
Evaluation of Alternatives

- Technical Considerations

- Evaluate potential solutions
- Process alternatives
- Site limitations
- O&M

- Financial Considerations

- Capital cost
- O&M cost
- Cost effectiveness and lifecycle costs



Economic Evaluation

- How much detail?
- Rate and Fees or more?
- Bring capital costs to present value for comparison
- Consider differences in O&M
- Balance system needs and funds

Financial Analysis

- Financial
 - Use existing data where you can
 - Development, pre-fund or cash flow
 - Funding options – format matters
- Detailed Rate Study or Cash Flow Analysis
 - What rate should be?
 - How do rates need to be globally adjusted to meet cash flow requirements?
 - Will increase trigger a public hearing requirement?

Capital Improvement Plan

- Programmatic schedule
 - Balance costs and schedules
 - Regulatory requirements
 - Funding requirements and timelines

Summary

- Understanding what you are planning for and why
- Establishing your key goals up front
- Streamlining your planning process

Questions?

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Lifecycle Considerations

- Planning periods
 - Storage – 30 to 50 years
 - Supply – 30 to 50 years
 - Treatment – 15 to 25 years
 - Distribution – 50 to 100 years
- Phase Projects
 - I 10 to 15 years - Size main components
 - II 20 to 30 years - Expandability
 - III Beyond - Future Provisions