

Water and Sewer Utilities Optimization

Public Works and Utilities

October 6, 2015



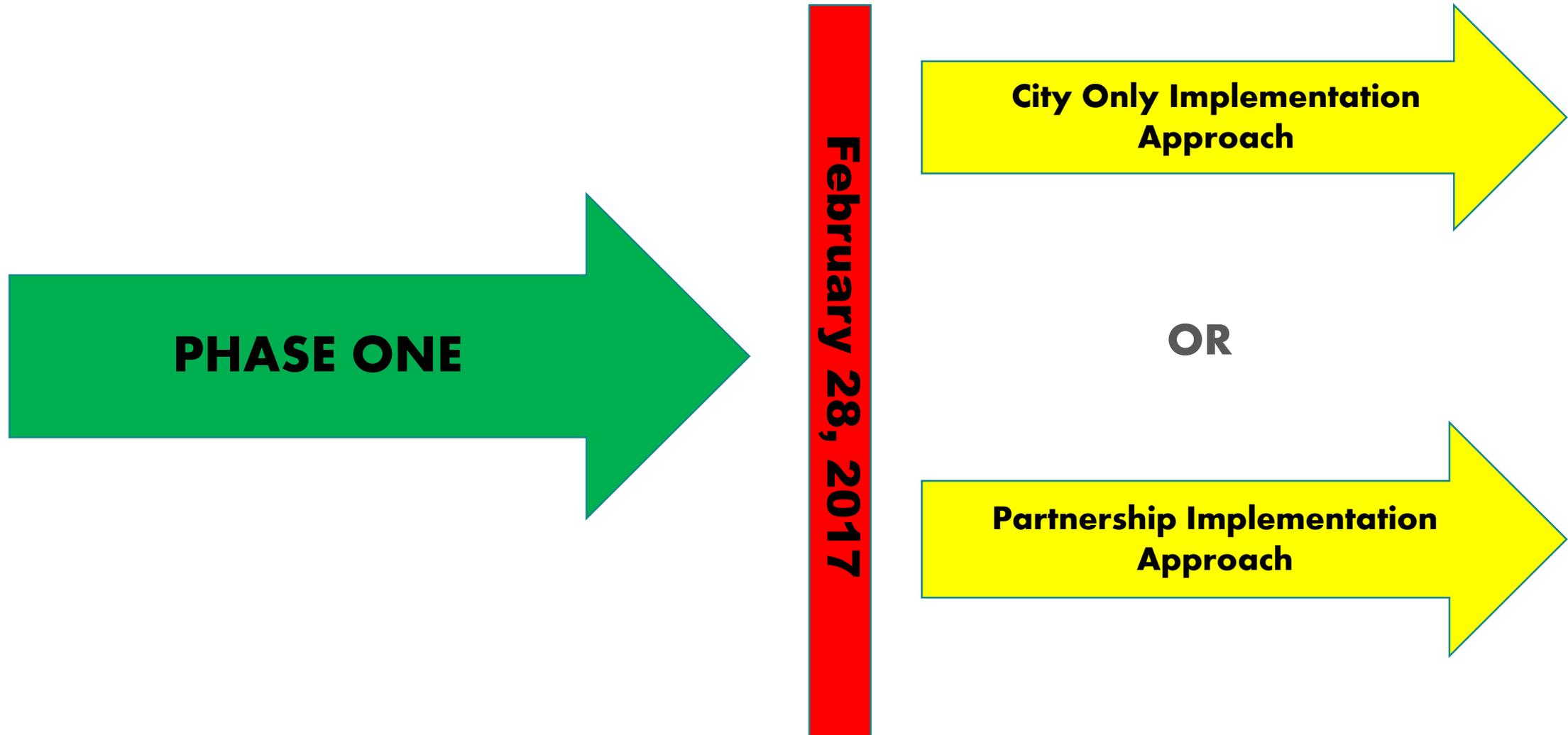
Project Purpose

- Provide assistance to the City that will improve the risk, asset and staffing management of the Water and Sewer Utilities
 - *A risk analysis to ensure appropriate timing of capital projects.*
 - *An asset management analysis that emphasizes proactive maintenance.*
 - *A staffing analysis that leads to optimal staff capacity and expertise.*

Project Approach

- Phased approach to ensure that a satisfactory work product is provided during Phase 1 and that certain metrics are achieved before entering Phase 2.
 - This pilot phase will allow the City to determine if the model should be continued to a 2nd phase.
- Firm must demonstrate an economic benefit to the City
 - Capital projects
 - Operations and maintenance costs
 - New revenue

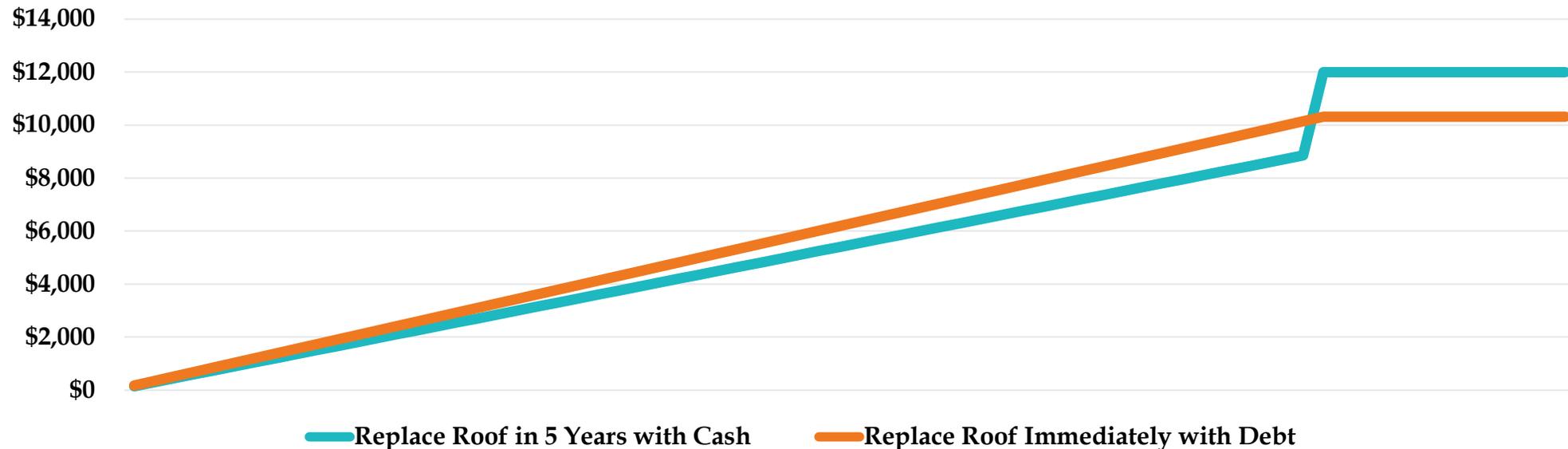
Phased Approach



Household Example

- \$200 left every month after \$1,000 mortgage and all expenses are paid
- Need to fix a leaking roof that continually causes water damage

Should debt be used to replace roof immediately or should money be saved until new roof can be paid in cash?



Selection Criteria

Proposals were evaluated based on the following criteria:

- *Approach to the Project*
- *Ability to Conduct the Work*
- *Proposed Project Cost & Timeline*
- *Credentials and Expertise of Project Staff*
- *Reliability and Reasonableness of Assumptions*

Selection Committee

- The Selection Committee included City staff, a City Council member and members from the Water Utility Advisory Committee who possessed financial, policy, or technical expertise.

Short Listing

- Seven firms proposed and three firms were eliminated during short listing.
 - *The method of data analysis and/or approach did not meet selection criteria.*
 - *Proposed alternative funding was shallow or otherwise unreasonable.*
 - *The proposed relationship between the City and the firm was unclear, undefined, or otherwise questionable.*

Interviews

AECOM

CH2M Hill

iMG

Veolia

Firm Selection

- CH2M Hill received the most #1 rankings
- Original proposed cost \$2,696,878
- Current proposed cost \$1,721,800

Contract Negotiations

- In order to arrive at \$1,721,800 the following changes were made to the original proposal
 - Increased contract term from 12 months to 16 months
 - Eliminated kickoff, community and staff workshop
 - Number of vertical assets receiving on-site assessment reduced to 500 from 1,000
 - Reduced the number of Business Case Evaluations to 5
 - Agreed to the addition of a City-employed Utility Asset Manager

Contract Details

- “By Engineer (CH2M Hill) providing these professional services, there is not a desire by the City to sell the City’s assets or privatize the utility.”

Contract Details

- “The Study Report, model(s), presentation materials, and any other work produced under this Agreement which may be copyrighted shall become the property of the City upon completion, and there shall be no restriction or limitation on the further use of said works by the City. The parties hereto intend the City to have copyright ownership in the works produced hereunder, as “works made for hire” under the provisions of United States copyright laws.”
- Project Completion Date: February 28, 2017

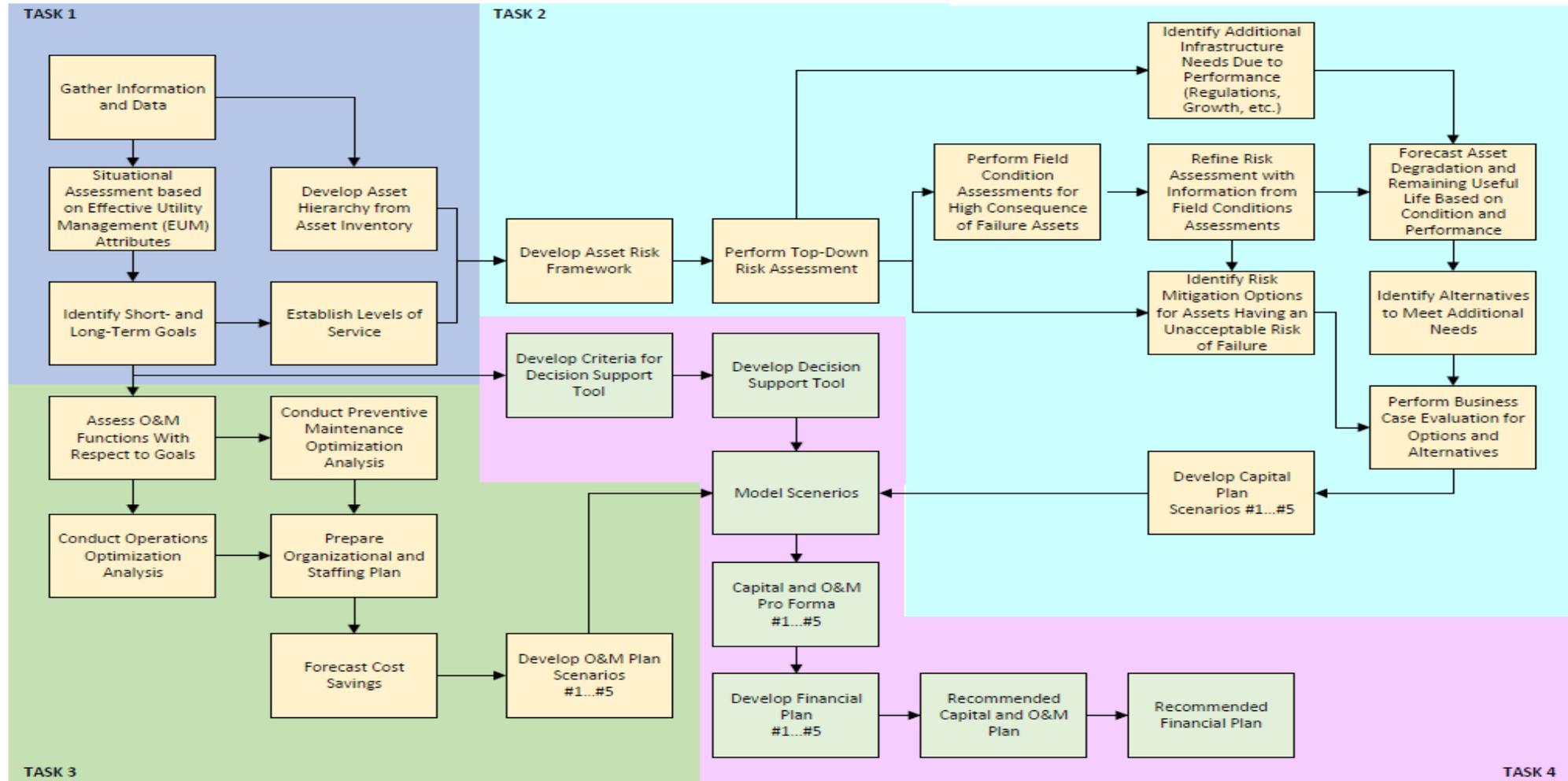
Utility Asset Manager

- Proposal process reinforced need for an Asset Manager
 - Previously identified in the CMOM, which was prepared in response to the KDHE Consent Agreement
 - Identified in iMG's White Paper
 - A needed resource for proper utility asset management; crucial to the planning and implementation of the Asset Management Model as well as continued asset management oversight.

Utility Asset Manager

- Would conduct approximately 1,700 hours of work in conjunction with CH2MHill staff, resulting in the reduced scope and cost
 - Identify performance criteria and future needs
 - Basic hydraulic modeling – linear, vertical; water, wastewater
 - Identify assets requiring performance enhancements
 - Develop asset hierarchy
 - Prepare inventory for horizontal and vertical assets

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CH2M Hill

- Local Involvement and Experience
- Expertise and Resources
- Asset Management Background
- Project Approach

Table Rock Capital

- Alternative Capital Financing
- Relationship between Risk and Return on Investment
- Development of Economic Analysis

Next Steps

- City staff available to meet with
 - Interested District Advisory Boards
 - Peace and Social Justice Center
 - SEIU
 - Other interested parties
- Return on November 3 for Council consideration

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Public Works & Utilities

Serving You, In Many Ways, Every Day



Scope of Services

- Program Visioning and Foundation for Risk Assessment
- Risk Based Comprehensive Asset Management for Capital Planning
- Operations and Maintenance Planning
- Program Direction

Program Visioning and Foundation for Risk Assessment

- Gather information and data
- Develop asset hierarchy
- Identify short and long term goals
- Establish levels of service

Risk Based Comprehensive Asset Management & Capital Planning

- Develop Asset Risk Framework
- Perform Top-Down Assessment
- Perform Field Condition Assessments for High Risk of Failure Assets
- Risk Assessment
- Forecast Asset Degradation

Risk Based Comprehensive Asset Management & Capital Planning

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- Identify Risk Mitigation Options
- Identify Alternatives through Business Case Evaluations
- Develop Capital Plan Scenarios

Operation and Maintenance Planning

- Assess O&M Functions
- Conduct Operations Optimization Analysis
- Conduct Prevention Maintenance Optimization Analysis
- Prepare Organizational and Staff Plan Analysis
- Forecast Cost Savings
- Develop O&M Plan Scenarios

Program Direction

- Develop Decision Support Tool
- Model Scenarios
- Capital and O&M Pro Forma Scenarios
- Develop Financial Plan
- Recommendations and Reporting