O&M Funding and the Co-Trustee Water Rate Study

Mark Lorie, Abt Associates

3M PFC Settlement, Work Group Meetings

October 2020

Purpose and overview

Overview:

- Background on the rate study purpose and limitations
- Rate study and summary of results
- Implications for O&M funding durations in the recommended options
- Steps to finalize and disseminate

Background on the water rate study

- The Settlement fund is limited but O&M and recapitalization costs for water treatment and water system will occur indefinitely
- Communities will bear some O&M costs early in Conceptual Plan implementation and, potentially, additional O&M when Settlement dollars are gone
- Work groups, local government representatives and members of the public have expressed concern about long-term community costs
- The rate study aims to estimate how the projects in the Conceptual Plan might affect community costs, water rates and typical household water bills in the future

How household costs increase over time

- The Settlement will cover treatment O&M costs for a set duration (approximately 21, 35, or 40 years in the Recommended Options)
- The Consent Order will cover treatment O&M costs for wells with an advisory (HI>=1), after the Settlement is depleted
- Costs not covered by either the Settlement or the Consent Order are assumed to be covered by communities by increasing their water rates, passing the cost on to customers (residents and businesses)
- Costs that are covered by the Settlement and/or the Consent Order will not affect rates or household costs for water

How household costs increase with Phases of Conceptual Plan Implementation

| Not part of water rates or household bills | Initial capital costs for PFAS-eligible projects (Settlement eligible) | O&M costs for all new treatment facilities (Settlement eligible) | O&M/Recap treatment facilities where HI>=1 (Consent Order) |
|--|--|--|---|
| bills | | Recap. New Distr. | Recap for treatment on wells with HI<1 O&M for treatment on wells with HI<1 Recap. New Distr. |
| | | Infrastructure O&M New Distr. Infrastructure | Infrastructure O&M New Distr. Infrastructure |
| | Ineligible Costs | Ineligible Costs | Ineligible Costs |
| Current Rates | Current Rates | Current Rates | Current Rates |
| Now | Phase 0: Projects are built | Phase 1: O&M eligible costs covered by the Settlement | Phase 2: Settlement runs out, Consent Order covers some O&M |

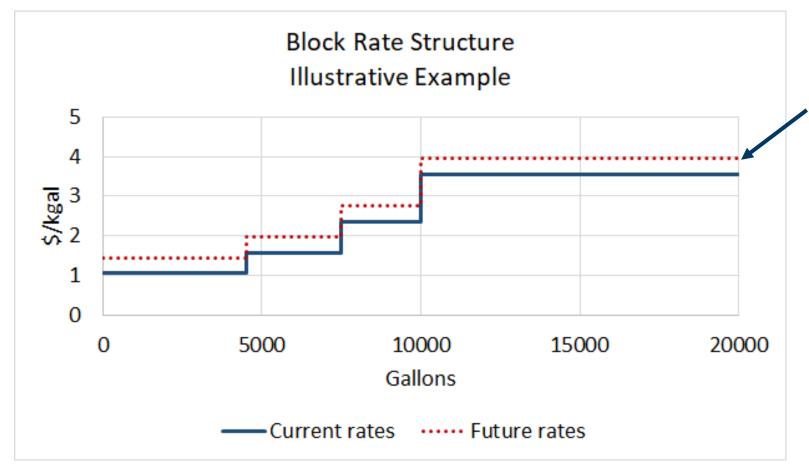
Summary of approach

- Start with existing rates and rate structures, gathered from community websites and other sources
 - For West Lakeland we use average annualized well maintenance cost (\$540) as baseline household water cost and we assume a uniform water rate for the future
 - Communities that will stay on private wells are not included in the rate study
- Meetings with each community to go over inputs and assumptions, including:
 - Whether new rates have already been adopted (but not yet published on websites)
 - Current and projected future water use and connections
 - Interest rate and term on financed capital expenses

Summary of approach (cont.)

- Estimate the total cost that would be covered by rates during each phase of the Conceptual Plan, using cost estimates from the Plan
- Convert to a unit cost based on future consumption (i.e., \$ per 1000 gallons)
- Add incremental unit cost to existing rates to estimate future rates
- Calculate mean annual household water bill using seasonal water use profile and revised rates
- Compare revised annual water bill to median household income for each community

Illustration of study results: increase in rates



If we find new unit costs total \$0.40 per 1000 gallons, then we add that amount to each block in the rate

Caveats about this rate study

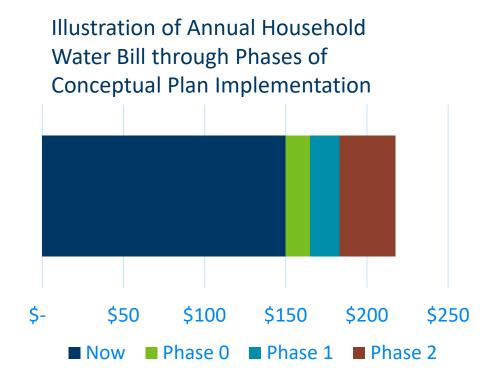
- The approach provides a reasonable estimate of how much rates would need to increase to offset the future costs of projects in the Conceptual Plan
- The method is not as detailed as typical financial rate-setting studies conducted by most communities
- The study does not contemplate changes to rate structures, which many communities might consider as costs and customers change
- Interpret results as a reasonable high-level estimate of potential increases in rates and household bills that can inform Co-Trustee decisions about the Conceptual Plan

A few additional caveats for private wells

- All three recommended options involve connecting homes that are currently on private wells and a new public water system for West Lakeland
- For homes on private wells, the estimate of average annualized cost to maintain and recapitalize the well (\$540) represents their baseline household cost for water
- All of West Lakeland is currently on private wells as a result there are no current or baseline water rates to use
- The study assumes a uniform water rate would be implemented for West Lakeland
- The rate is calculated based on future revenue requirement for O&M

Expected results: household water bills

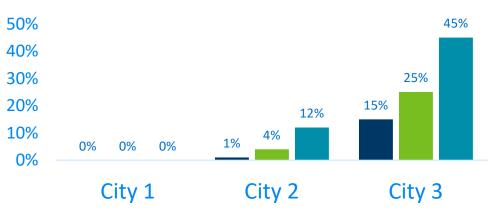
- Using median household consumption for each community and future estimated rates, we will calculate median household annual water bill
- Will show median water bill today, and in each phase of Conceptual Plan implementation as estimated rates increase
- Will show a similar result for median user in the commercial sector and a water bill for a typical large water user (e.g., large industrial or business)



Expected results: percent increase in bills

- Results will include percent increase in household bills compared to today for each phase of Conceptual Plan implementation
- Phase 0: Some communities have substantial ineligible costs, some have none
- Phase 1: Some communities will get extensive new distribution infrastructure and the O&M will be covered by rates; some will have no new distribution infrastructure
- Phase 2: Some communities will receive treatment at wells with HI<1 and the maintenance will have to be covered by rates; some communities have only wells where HI>1 and the Consent Order will cover maintenance

Illustration of Percent Increases in Bills by Phase, Compared to Today

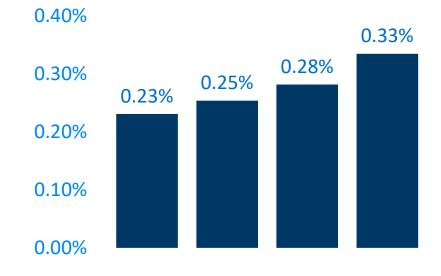


■ Phase 0 ■ Phase 1 ■ Phase 2

Expected results: household water bills compared to income

- Comparing household water bills to median household income (MHI) provides an indicator for evaluating affordability
- Results will show annual household water bill as a percent of MHI for each community and for each phase of Conceptual Plan implementation

Annual Household Water Bill through Phases of Conceptual Plan Implementation as Percentage of Median Household Income



Finalizing the rate study

- Updating the models and results with latest costs and inputs from communities during 1:1 meetings in August
- Results will be shared via email and/or special briefing for work groups before the November meetings
- Report summarizing the entire study and results
- Will develop community-specific fact sheets summarizing inputs, assumptions and results for each community

Questions on the water rate study

 Before we move on to O&M costs and durations within the recommended options, are there further questions or comments about the rate study methods and expected results?

O&M coverage in the recommended options

- O&M for POETS for at least 100 years is a priority and that duration does not vary across the options, but the dollar amount does because the number of POETS varies
- O&M dollar amount and duration for PWSs does vary across the options
- Duration assumes 3.5% interest and 3% inflation on annual O&M costs

| | Option 1 - preferred | Option 2 | Option 3 |
|----------------------|----------------------------|------------------------------|----------------------------|
| O&M for POETS | \$19 M for over <i>100</i> | \$23.9 M for over <i>100</i> | \$19 M for over <i>100</i> |
| | <i>years</i> | <i>years</i> | years |
| O&M for | \$147 M - around <i>40</i> | \$131 M - around <i>35</i> | \$161 M - around <i>21</i> |
| Public water systems | <i>years</i> | <i>years</i> | <i>years</i> |

O&M funding durations: Comparing the cost for water

- Annualized household costs for private wells:
 - \$540 for operations and annualized maintenance and recapitalization (this amount would vary with use, but this is a reasonable average)
 - Annual cost for media change-out on POETS: \$1000
 - Total cost for water for a private well would be roughly \$1540
- Annual household costs for water when connected to a public water system is typically about \$100 to \$400 across the East Metro Area
 - Using current water rates and median household water use; varies by community
 - Rates will increase, but typical household bills will very likely still be much less than \$1540 per year

Poll question

 The cost to maintain a private well and POETS is substantially higher than the typical household water bill for those on a public water system. This was the main factor for the Co-Trustees to recommend that the Settlement cover 100 years of O&M for POETS, and 40 years for public water systems (for Option 1). Do you agree that this is the right way to address this issue?

Answer using the poll function on the right side of your screen