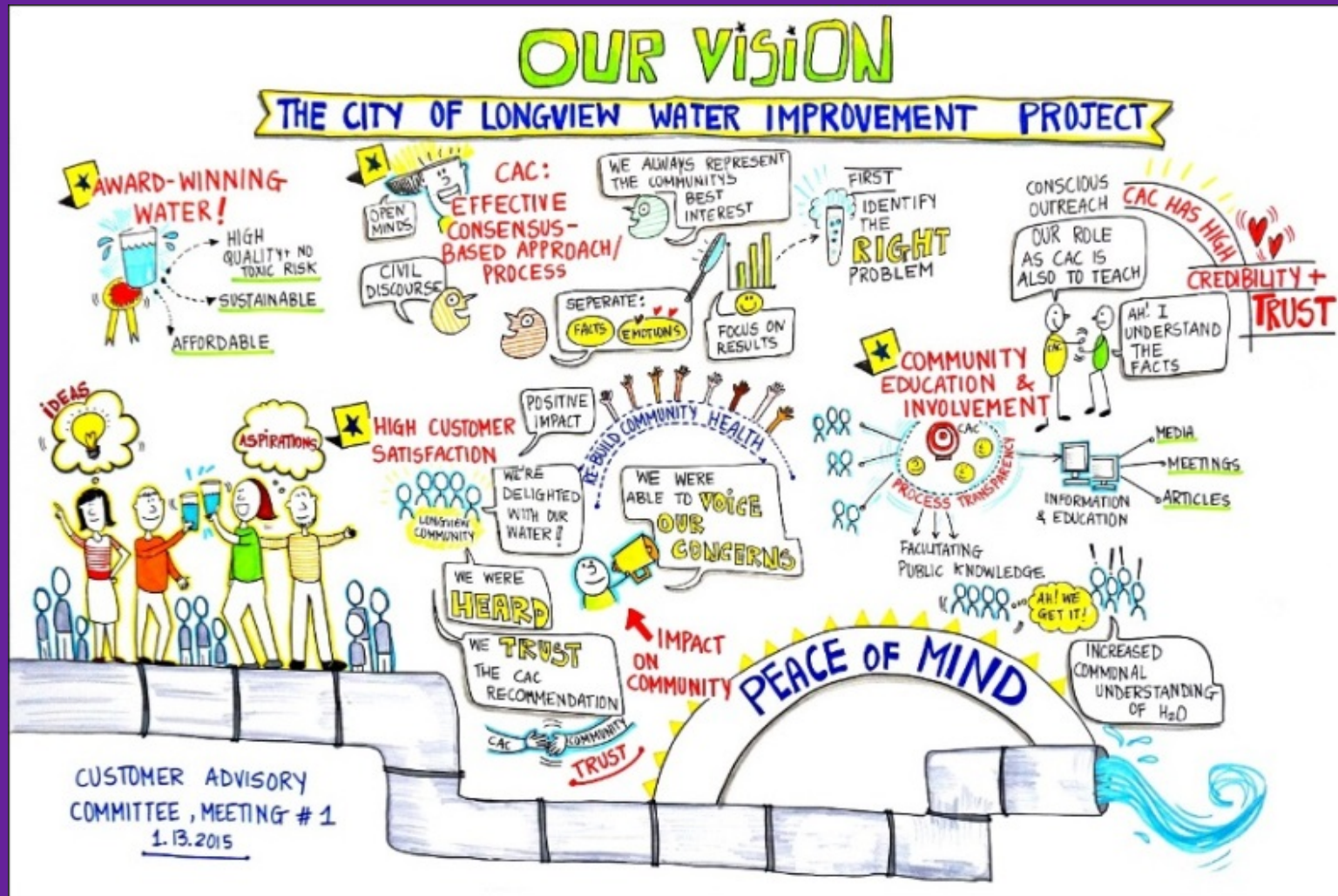


Water Supply Improvement Study – Phase II



October 8, 2015

Water Supply Improvement Study – Phase II

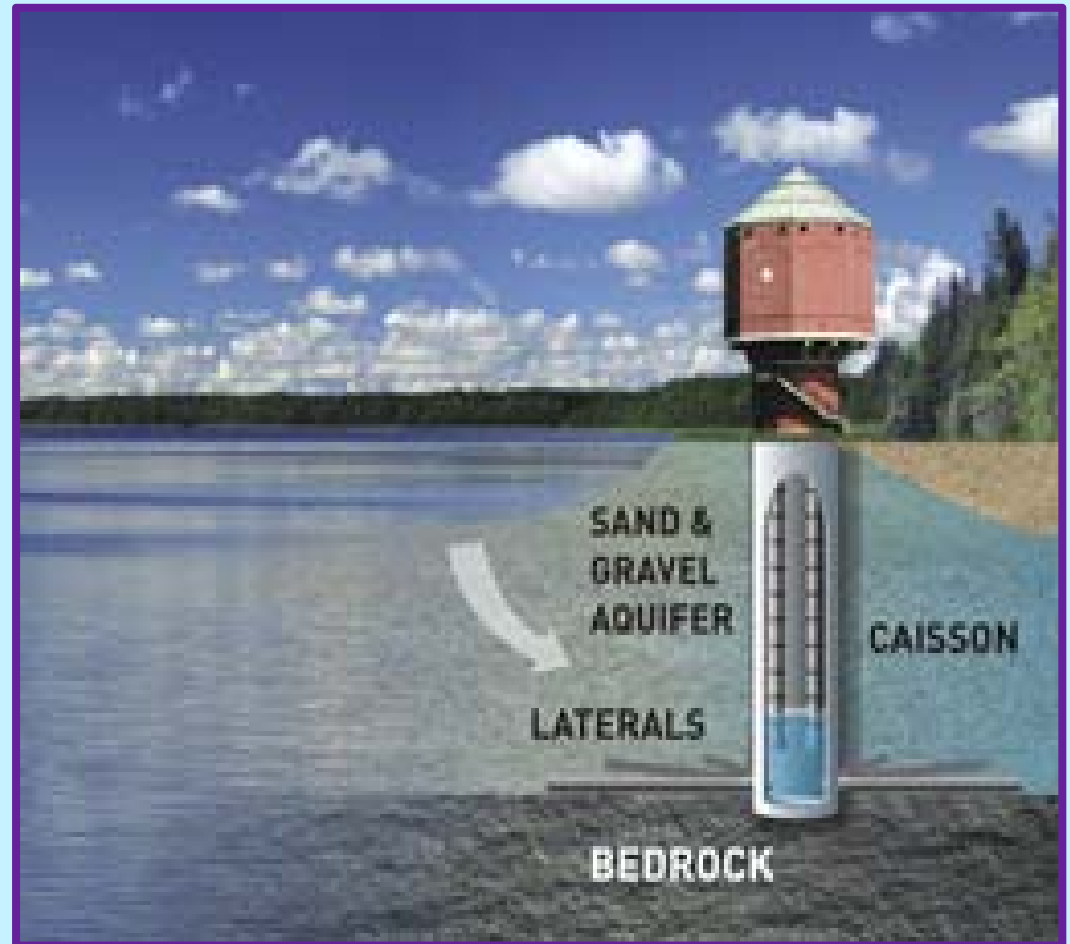
AGENDA

1. Background
2. Exploratory Site Investigation
3. Detailed Aquifer Testing
4. Engineering & Conceptual Design
5. Community Involvement
6. Project Schedule
7. Project Costs
8. Optional Tasks
9. Discussion

Background

CAC recommendation:

- Develop new Cowlitz River source utilizing Ranney Collector wells



Ranney Well Collector system

Background

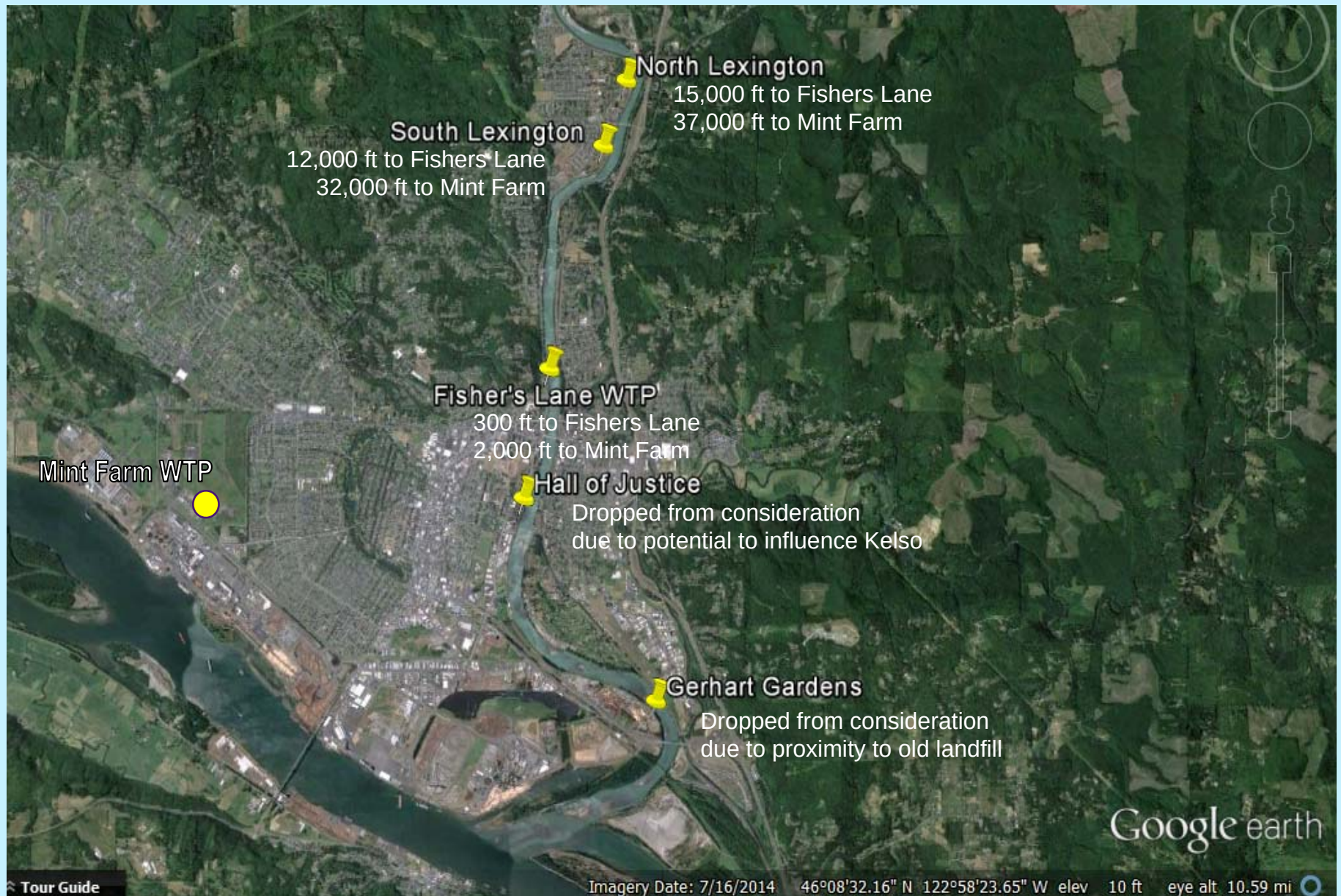
Project Concepts:

- Multiple treatment options based on water quality and classification
- Costs to implement range from \$29.5 M to 55.1 M (assumes North Lexington)
- 3-7 years to implement depending on treatment selection and ability to demonstrate riverbank filtration credit



Ranney Well Collector system

Exploratory Site Investigation



Exploratory Site Investigation

- Objectives

- Determine fatal flaws, basic hydrogeology and general water quality
- Identify one preferred site for further evaluation

- Scope of Work

- Drill small diameter test well
- Conduct short duration, low rate pump test
- Water quality sampling (primary and secondary IOC's and select analytes)



Ranney Feasibility Study

Site 1 – North Lexington



Ranney Feasibility Study

Site 2 – South Lexington



Site 3 – Fishers Lane RWTP



Detailed Aquifer Testing

- Objective
 - Determine specific aquifer properties and treatment requirements at preferred site
- Scope of Work
 - Drill larger diameter test well
 - Drill three observation wells
 - Conduct drawdown test and observe aquifer response
 - Conduct higher rate, longer duration pump test
 - Water quality sampling (Tier 1, 2, 3 parameters and extended analyte list)



Engineering & Conceptual Design

- Objective
 - Provide refined project concept and cost estimating
- Scope of Work
 - Report 1: Exploratory well drilling and preliminary WQ data
 - Report 2: Aquifer pump testing and detailed WQ data
 - Report 3: Concept level facility description and cost estimate
 - Water supply recommendation(s)
 - Preliminary collector well design
 - Pumping systems
 - Conveyance option(s)
 - Treatment requirements

Community Involvement

- Reconvene CAC to provide community checkpoints
 - Meeting 1: Review results of exploratory investigations
 - Meeting 2: Review results of detailed aquifer and water quality testing
- Maintain project website: www.longviewwater.org
- Distribute email notifications to stakeholder list
- Create project fact sheet
- Public Open House

Optional Task

- Additional Detailed Aquifer Testing (Second Site)
 - May be recommended if results of first aquifer test are unfavorable

Project Costs

- Base Fee - \$327,550
- Optional Task \$119,150

Project Schedule

- Major milestones:

- Execute contract amendment..... Oct-2015
- Drill exploratory test wells..... Nov-2015
- CAC Meeting #1..... Jan-2016
- City Council update..... Jan-2016
- Begin detailed aquifer testing..... Feb-2016
- CAC Meeting #2..... Apr-2016
- Public Open House..... May-2016
- Joint City Council / BHWSD Workshop..... May-2016

Recommendation:

- Authorize contract amendment for CH2M to conduct the Water Supply Review Phase II feasibility study