

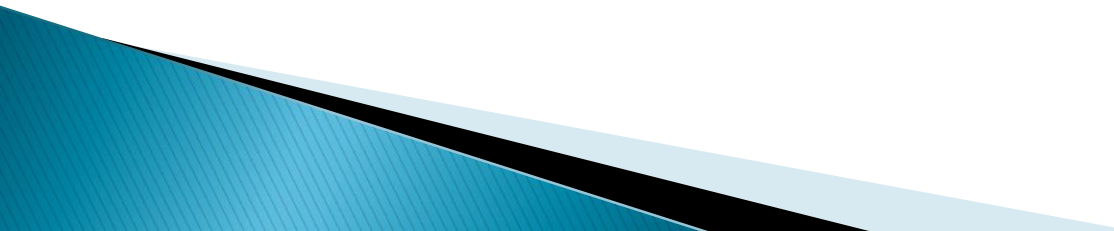
Tulare Lake Basin Disadvantaged Community Water Study: Individual Households Solutions Pilot Project

Pilot Stakeholder Advisory Group

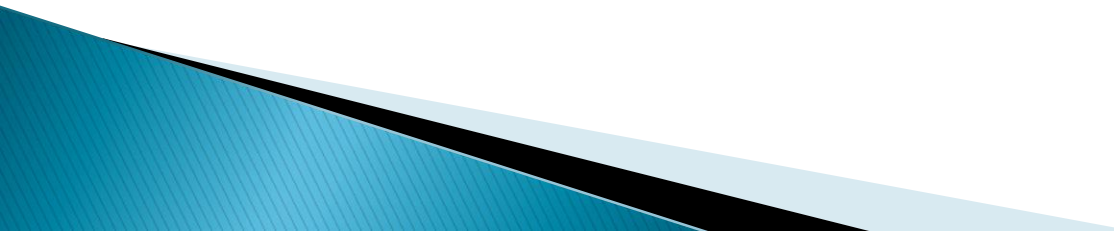
December 5, 2013



Goal of Meeting

1. Provide an overview of the Draft Individual Household Solutions Pilot Project Report
 2. Obtain Feedback and Recommendations from the PSAG Members
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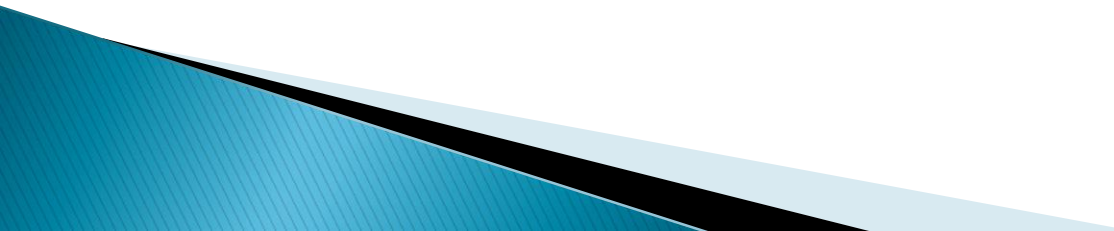
Tulare Lake Basin (TLB) Study: Goals and Objectives

- ❑ Evaluate Water and Wastewater Needs of Disadvantaged Communities within the TLB
 - ❑ Develop List of Priority Issues and Potential Solutions through a Stakeholder Process
 - ❑ Develop a plan that provides DACs safe, clean and affordable potable water supply and effective and affordable wastewater treatment and disposal options (Replicable models for our region and beyond)
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Summary of where we are

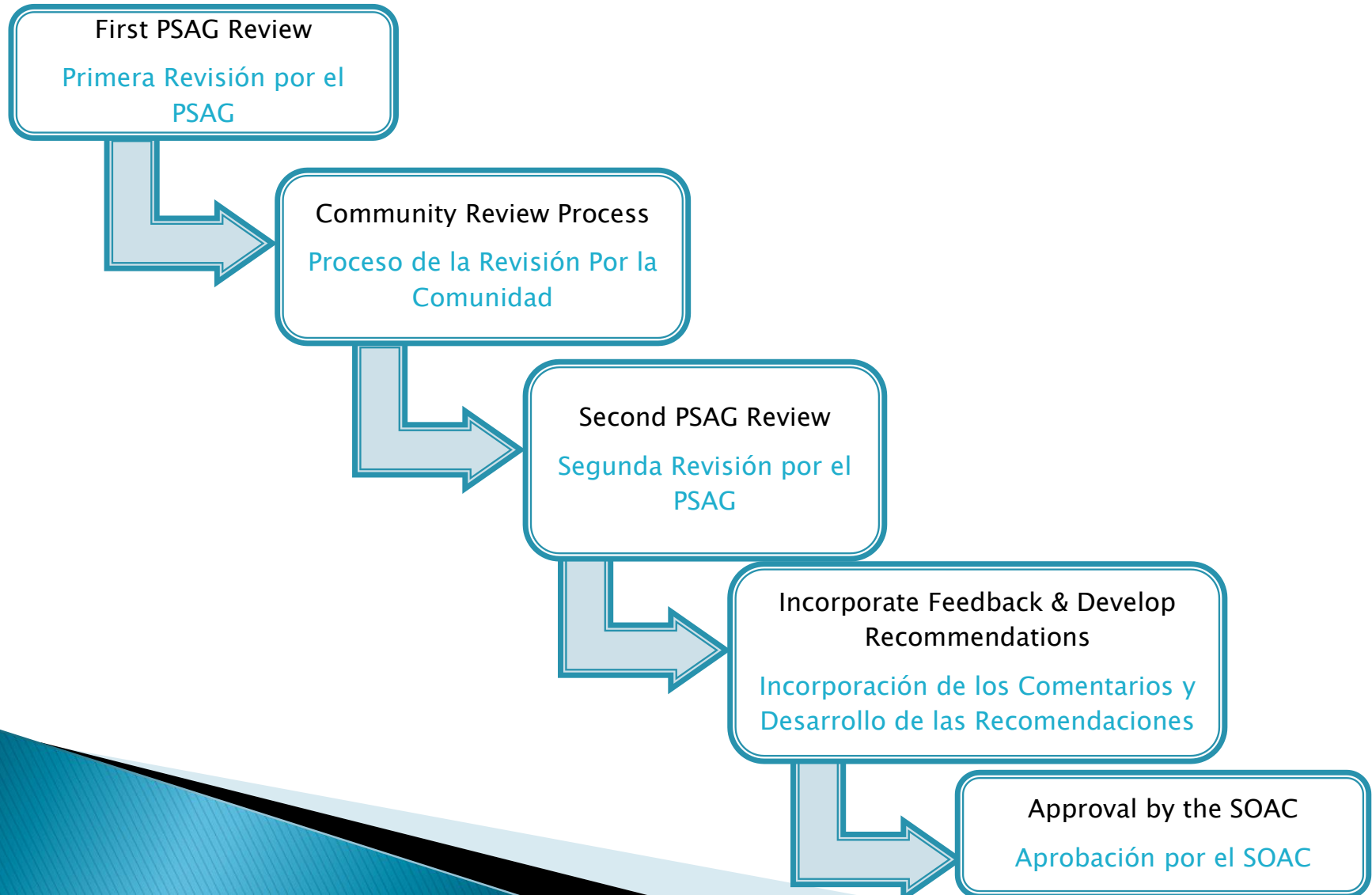
- ▶ SOAC reviewed and approved 4 pilot projects:
 - 1. Non-Infrastructure / Management
 - 2. Technical Solutions
 - 3. New Sources Development
 - 4. Individual Household Systems

Individual Households Solutions Pilot: Purpose and Objective

- ▶ Identify water and wastewater solutions for individual households and/or rural subdivisions that have up to 15 or possibly more connections
 - ▶ Identify opportunities for collective solutions
 - ▶ Identify costs (including Operation and Maintenance) and evaluate affordability
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Stakeholder and Community Review Process

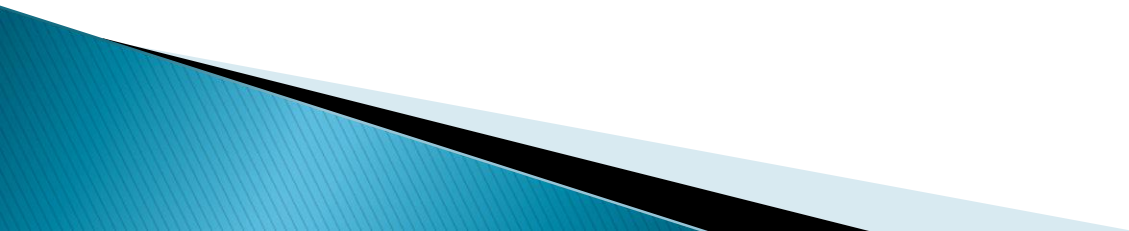
Proceso de Revisión por Las Partes Interesadas Y Comunidad




Role of the (Pilot Stakeholder Advisory Group) PSAG

Provide feedback and guidance during the PSAG Review Process to help ensure solutions are realistic, accurate and useful

Build momentum for the implementation of the pilot and solutions



Overview of the Draft Individual Households Solutions Pilot Report

- ▶ Introduction
 - ▶ Description of Problems
 - ▶ Solutions
 - ▶ Implementation
 - Summary of Flow charts & How to Use
 - Cost considerations
 - Funding opportunities
 - Obstacles and Recommendations
 - ▶ Appendix A Solution Charts
 - Helps individual(s) identify possible solutions to their challenges and includes a series of self-guided questions (Roadmap)
 - ▶ Appendix B Solution Sets
 - Description of Solutions
- 

Individual Households Solutions: Description of Problem

- ▶ Water Quality
- ▶ Water Quantity and its Delivery
- ▶ Wastewater Treatment and Disposal



Water Quality Challenges: 5 Categories

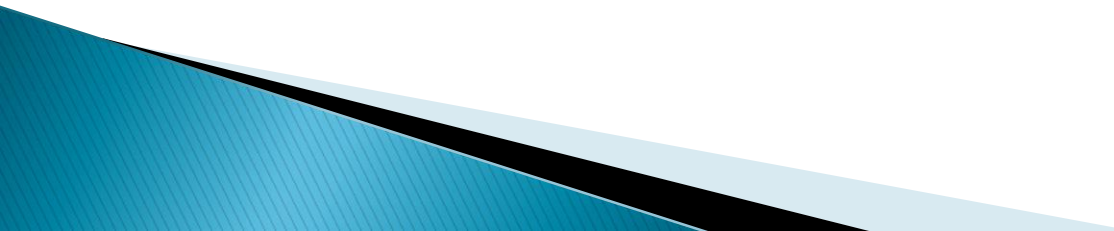
- ▶ **Bacteriological**
 - Fecal Coliform
 - E. Coli
- ▶ **Nutrients**
 - Nitrates
- ▶ **Inorganics**
 - Arsenic, Copper or Hexavalent Chromium
- ▶ **Organics**
 - DBCP, Perchlorate and Pesticides
- ▶ **General Water Quality**
 - Other water quality concerns, e.g. hardness

Water Quantity

- ▶ Delivery System, Plumbing Deficiencies and Well Deficiencies.



Wastewater & Treatment Disposal Challenges

- ▶ Infiltration by old wells or inadequate plumbing
 - ▶ Poor performing systems
 - ▶ Inadequate construction or not enough distance between well and leach fields
 - ▶ Old and deteriorating systems
- 

Description of Solutions: Water Quality

▶ Well Improvements

- Disinfection
- Repairs
- Modifications or
- New Well


▶ Water Quality Solutions

- Address Causative Factors
- Point-of-Entry (POU) Device
- Point-of-Entry (PUE) Device
- New Well Supply

▶ Community Based Water Solutions

- Water Well Improvement (for a shared well)
- Well Head Treatment (for a shared well)
- New Community Water Source
- Alternative Water Sources

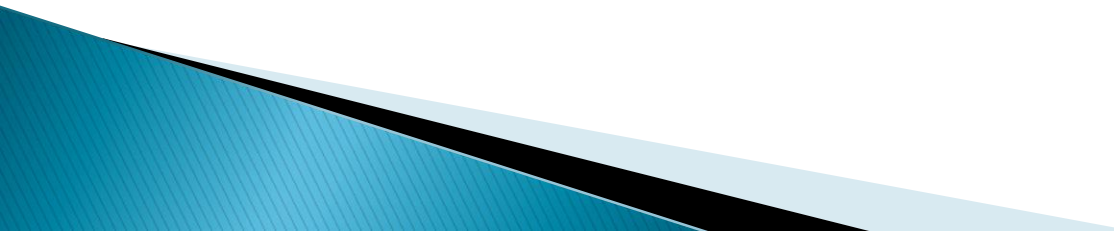
Description of Solutions: Water Quantity and Delivery

- ▶ Well Improvements Solutions
 - Repairs
 - Modifications
 - New Well
 - ▶ Household Improvements
 - Plumbing Improvements
 - ▶ Water Delivery Improvements
 - Well Improvements
 - Water Demand Considerations
 - Water Delivery System Improvements (distribution and storage)
- 

Description of Solutions: Wastewater Treatment and Disposal

- ▶ Individual Wastewater System Improvements
 - Repairs
 - Enhancements
 - Expansions
 - New Treatment Systems
 - New Disposal Systems
 - Community Based Treatment
- ▶ Individual Wastewater System Maintenance Activities
 - Implement/follow proper individual systems use limitation
 - Implement/follow proper maintenance
 - Others
- ▶ Community Based Wastewater Systems
 - Existing wastewater systems
 - New Systems
 - Others

Implementation:

- ▶ Evaluation of Potential Solutions
 - ▶ Cost Considerations
 - ▶ Funding Opportunities & Resources
 - ▶ Obstacles and Recommendations
- 

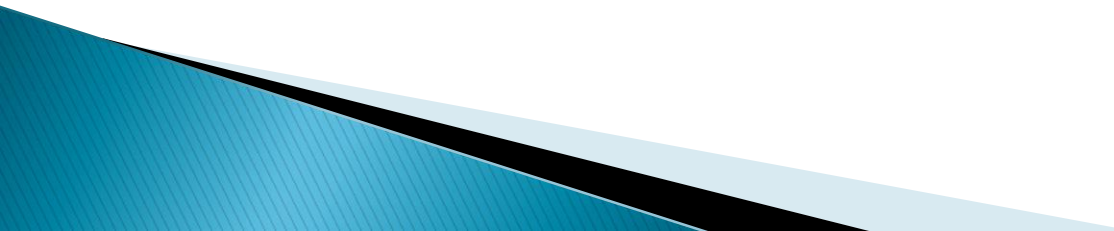
Implementation (Roadmap):

- ▶ Appendix A: Solutions Charts
 - Self Guided Questions
- ▶ Appendix B: Solution Sets
 - Description of Solutions

Reviewer Feedback Session



Key Questions

- ▶ Are there relevant challenges/solutions that are not identified?
 - ▶ What do you think of the solution charts? Are they useful? How can they be improved?
 - ▶ Are there additional specific resources or funding opportunities that should be identified in the report?
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Solution Sets:



Next Steps and Deadline to Provide Comments:

- ▶ Final Comments due on December 19, 2013
 - Dennis Keller of Keller/ Wegley Engineering via email; kelweg1@aol.com or via phone by calling (559) 732-7938
 - ▶ Community Review Process
 - Jan. & Feb. 2013
 - Monson, Easton, Orange Center, Others(?)
 - ▶ Updated Report available for review
 - TBD
 - ▶ PSAG Meeting #2
 - TBD
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