



# Project Update and Septic System Decommissioning & Reuse Plan for the Los Osos Wastewater Project

**BOARD OF SUPERVISORS**

OCTOBER 20, 2015

**Mission Statement:** Public Works will be a valued community partner enhancing quality of life for our fellow county residents

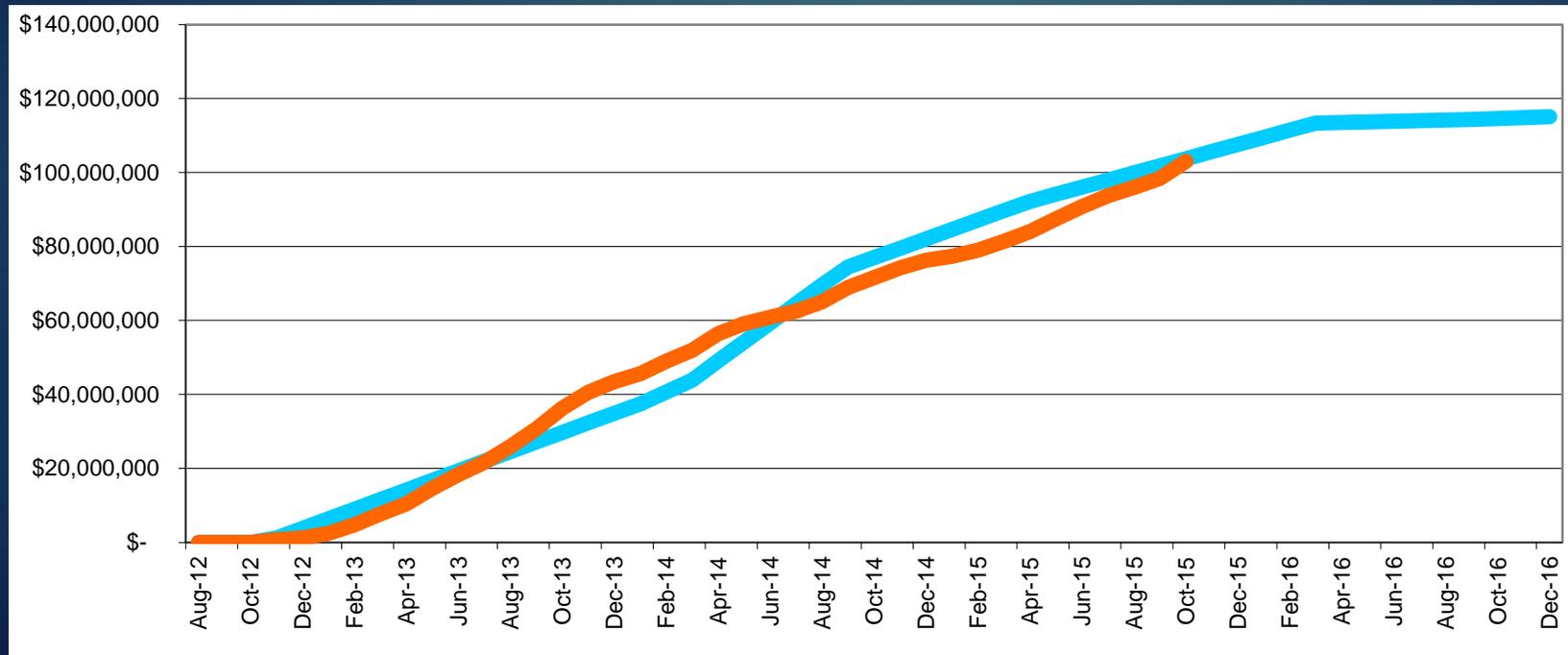


# Construction Progress



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- Collection Pipelines – 100% complete
- Pump Stations – 100% complete
- Water Recycling Facility – 75% complete



# Road Improvements



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# Water Recycling Facility



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# Water Recycling Facility



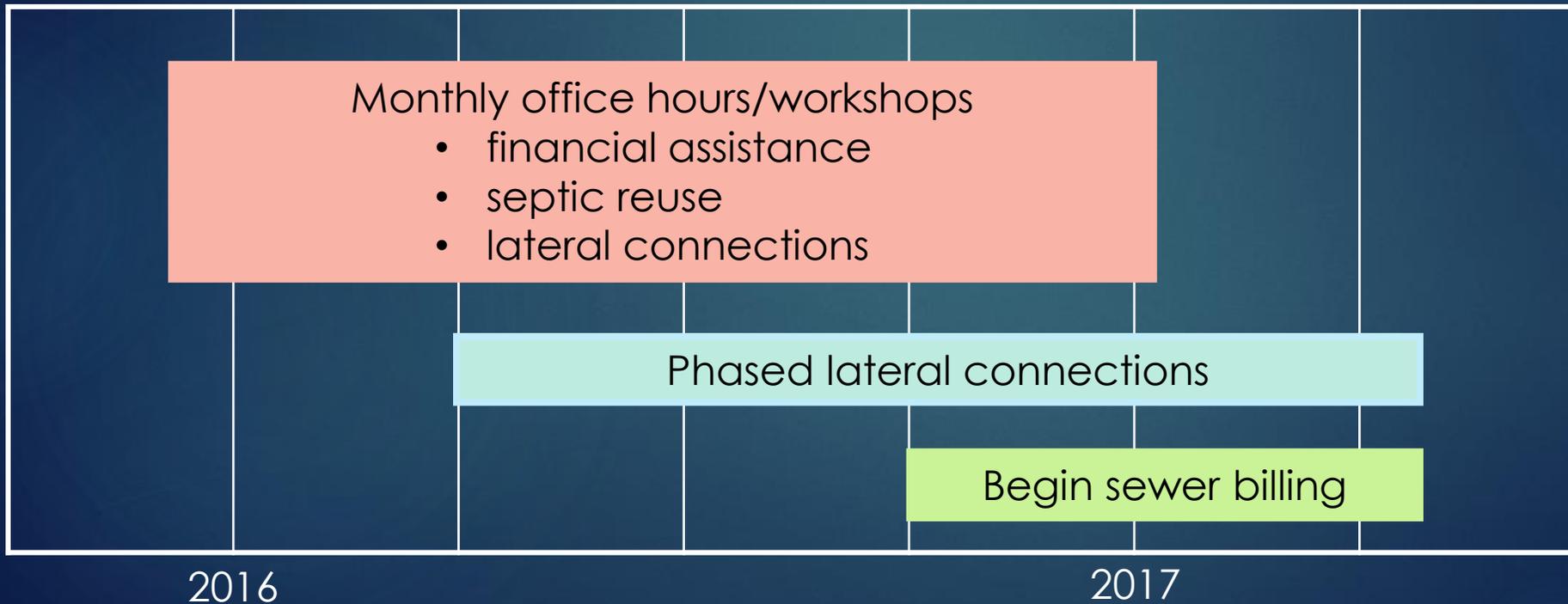
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# Public Outreach and Lateral Connections



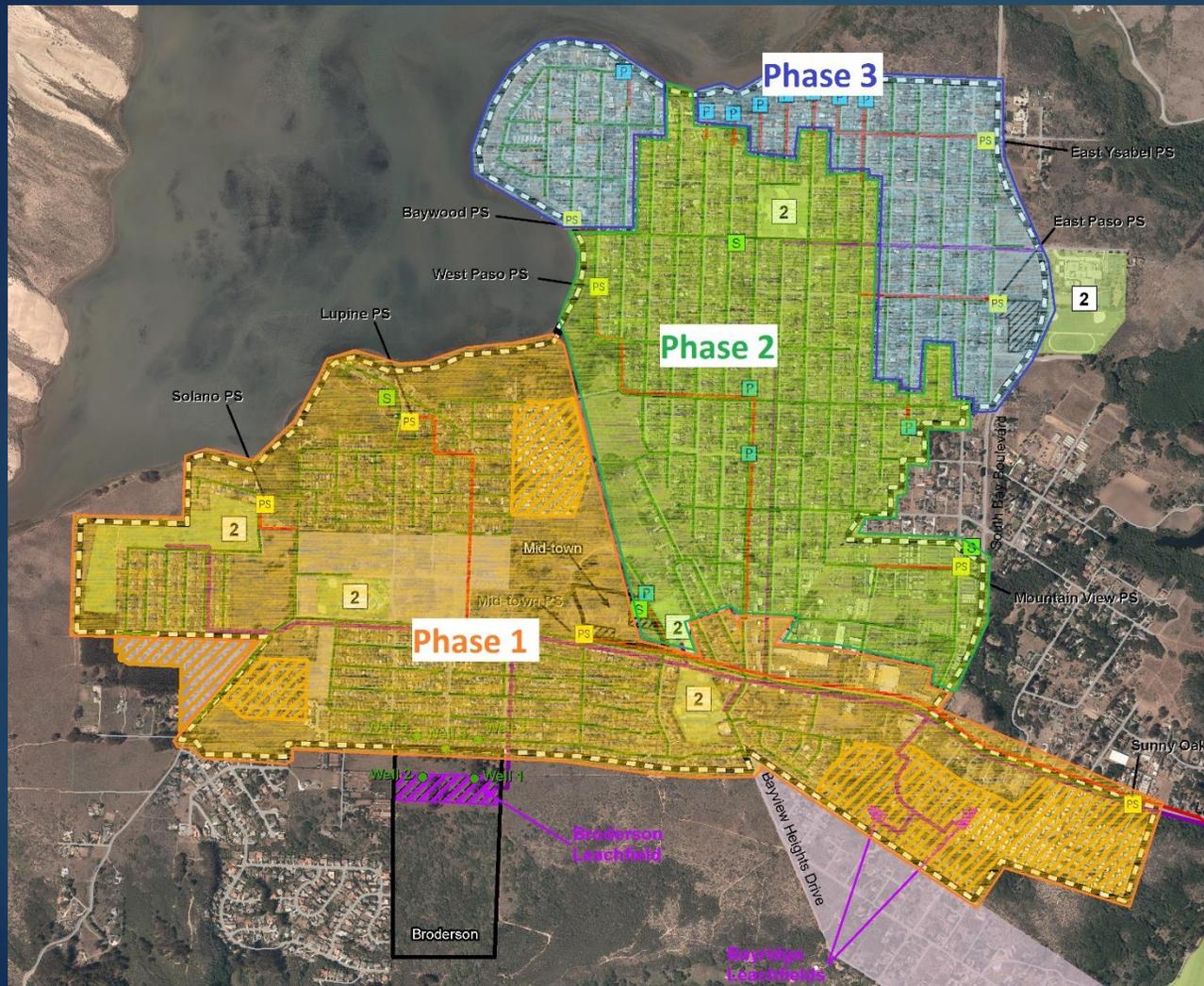
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# Lateral Connection Phases



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# Septic System Reuse



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## WORKING TOGETHER

SLO County Public Works

SLO County Planning and Building

SLO County Environmental Health

Central Coast Green Building Council  
(formerly SLO Green Build)



# Los Osos Wastewater Project Coastal Development Permit



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## Conditions #2 and #88

Evaluate existing septic systems for possible on-site reuse including filtration and percolation of stormwater



# Tasks related to Septic System Decommissioning and Reuse Plan

- Research the potential for reuse of septic system components
- Develop a suite of feasible alternatives
- Prepare minimum standards for reuse
- Adopt update to plumbing code
- Prepare public education materials and conduct outreach



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# On-Lot Lateral Connection



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- Phased connections through town begin April 2016
- Property owners must connect **within 6 months** of receiving notice
- All work on property is the responsibility of the property owner



# On-Lot Lateral Connection



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## Connection Process

1. Install new lateral
  - from house to right-of-way
  - connect to sewer stub-out
2. Abandon (or convert) the septic system **within 90 days** after connecting new lateral to sewer collection system



# Septic System Abandonment



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**Pump out the septage**



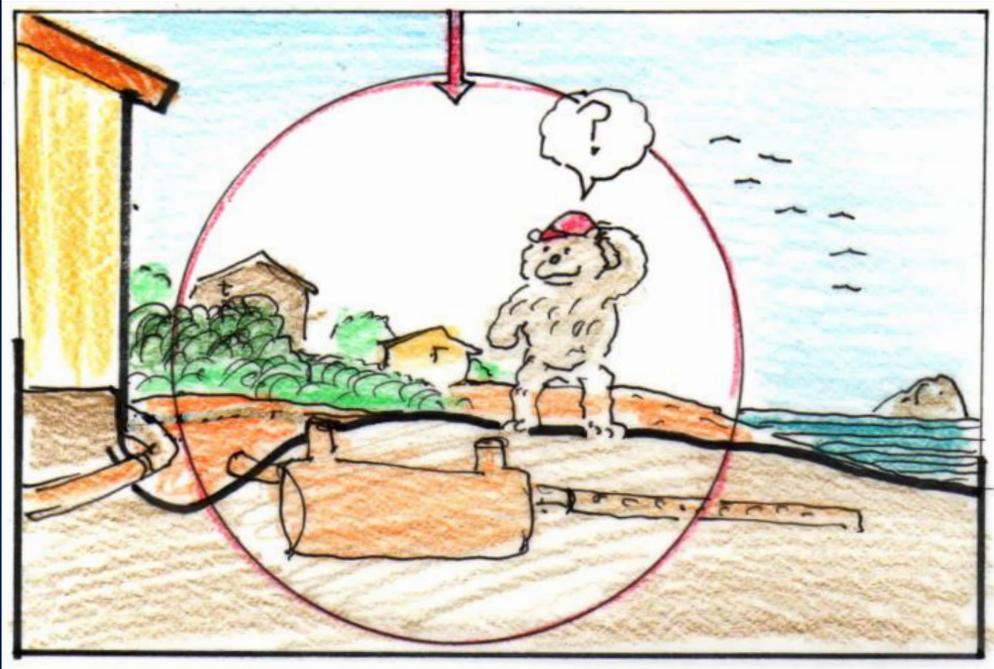
**Crush, backfill  
or completely remove**



# Potential Benefits



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- Groundwater Recharge
- Runoff Reduction
- Water Conservation
- Water Quality Improvement



# Research of potential reuse



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www.KeysNet.com

Keys Sunday

Sunday, August 29, 2010 3

HOME

## Cistern conversion makes sense, saves cents

*Take advantage of sewer installation to cut water bills*

By MICHAEL WELBER  
Keys Sunday contributor

Keys residents who have connected to one of the new sewer systems have a terrific opportunity to save money on their water and sewer bills. They can do so by converting their unused septic tank into a cistern. Not only does the cost of doing this come close to the cost of conventional tank abandonment, but using the water that will collect in what becomes a cistern will reduce the owner's water bill and, therefore, their sewer bill.

After connecting to the sewer, whether in Marathon or elsewhere, all residents are required to have the old tank pumped out. It's at this point that people have a choice: They can either pay a contractor \$450 to punch a hole in the bottom of the empty tank and fill it with gravel or, for about the same amount of money, convert the tank to a cistern.

Doing the latter makes a lot of sense. Anyone who is handy can do much of the work themselves. Those who are less handy, like me, can hire someone. Either way,



CONTRIBUTED PHOTO

Department of Health Environmental Specialist Leslie Grabowski tests the Welbers' new cistern.

it's all perfectly legal. The Florida Department of Health now allows anyone who wants to use a septic tank as cistern to do so as long as it is properly sanitized. The water can't be used for human consumption, but it's fine for washing cars and boats or for watering gardens and landscaping.

Before you begin work, you're required to obtain a permit from the Department of Health. It charges a \$50 fee for the permit and then another \$50 for a mandatory water test.

The first step in the process is to spray the sides of the pumped-out tank with a mixture of chlo-

rine and water and then pressure-wash the tank. Then connect a pipe from the downspout of the home's gutters to the tank. If you don't have gutters, you'll need to install them, and the installer can connect the tank at that time. We were fortunate to already have gutters, and the company that



The shallow-well pump has been placed well above flood level on this stilted home. It's also wired with a ground fault circuit interrupter switch.

installed them connected one of the downspouts to the tank. It is a good idea to install a piece of 1/8-inch mesh screen material at a suitable location in the path from the gutter to the cistern. This will catch any debris that is flushed from the roof during a rainstorm.

Next, install a candy cane-style PVC pipe to the other end of the tank to provide a place where any overflow can run out of the tank. You'll need to cut a hole in the cement lid of the septic tank to do

See SEPTIC / 8

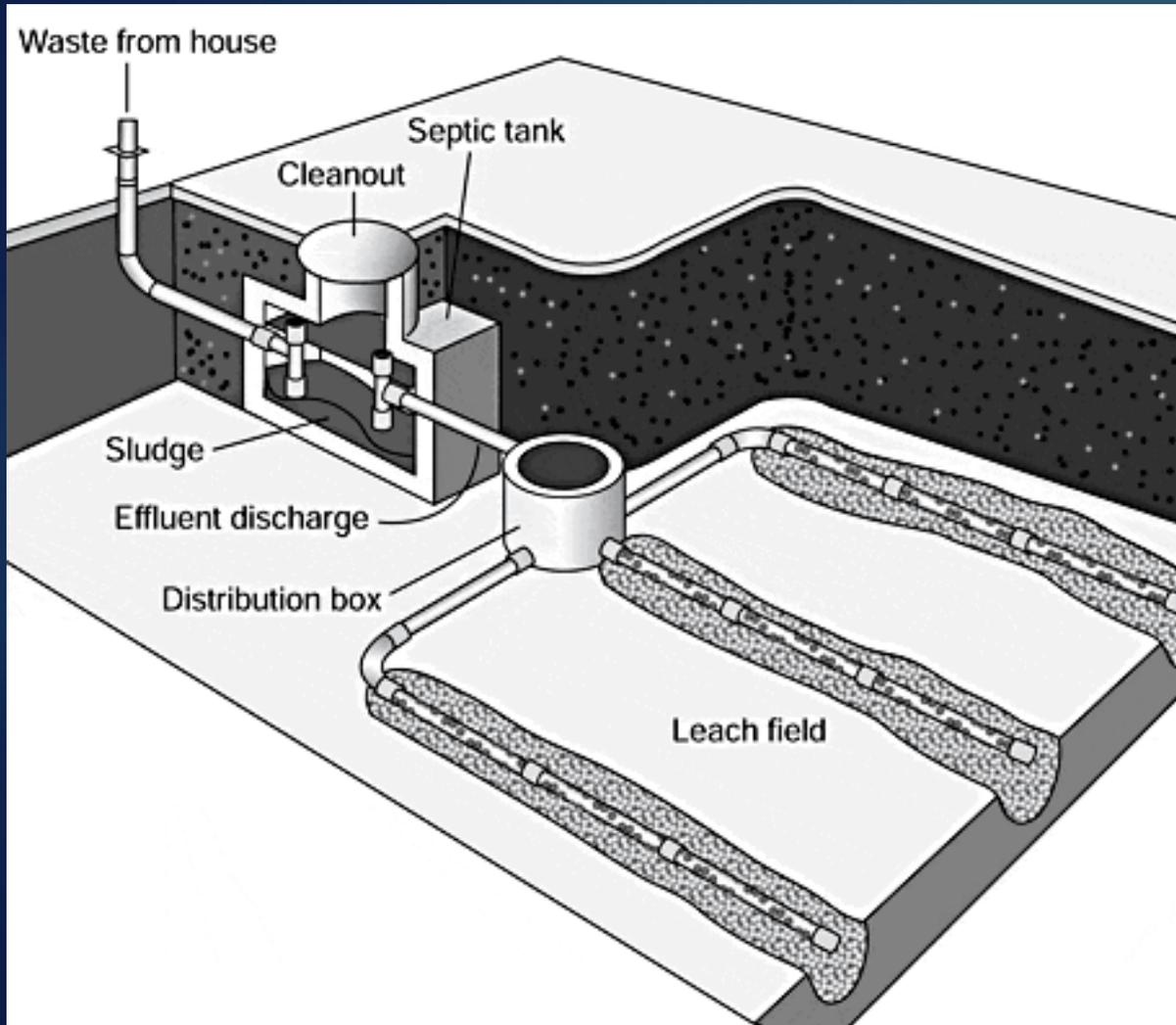
# Florida state law allows for septic tanks to be converted into rainwater cisterns



# Septic System Components



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- Septic Tank (concrete, fiberglass or plastic)
- Distribution box
- Leachfield



# Plumbing Code Updated



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## County Building and Construction Ordinance

### **Title 19 Section 19.07.027 Septic Tank Abandonment**

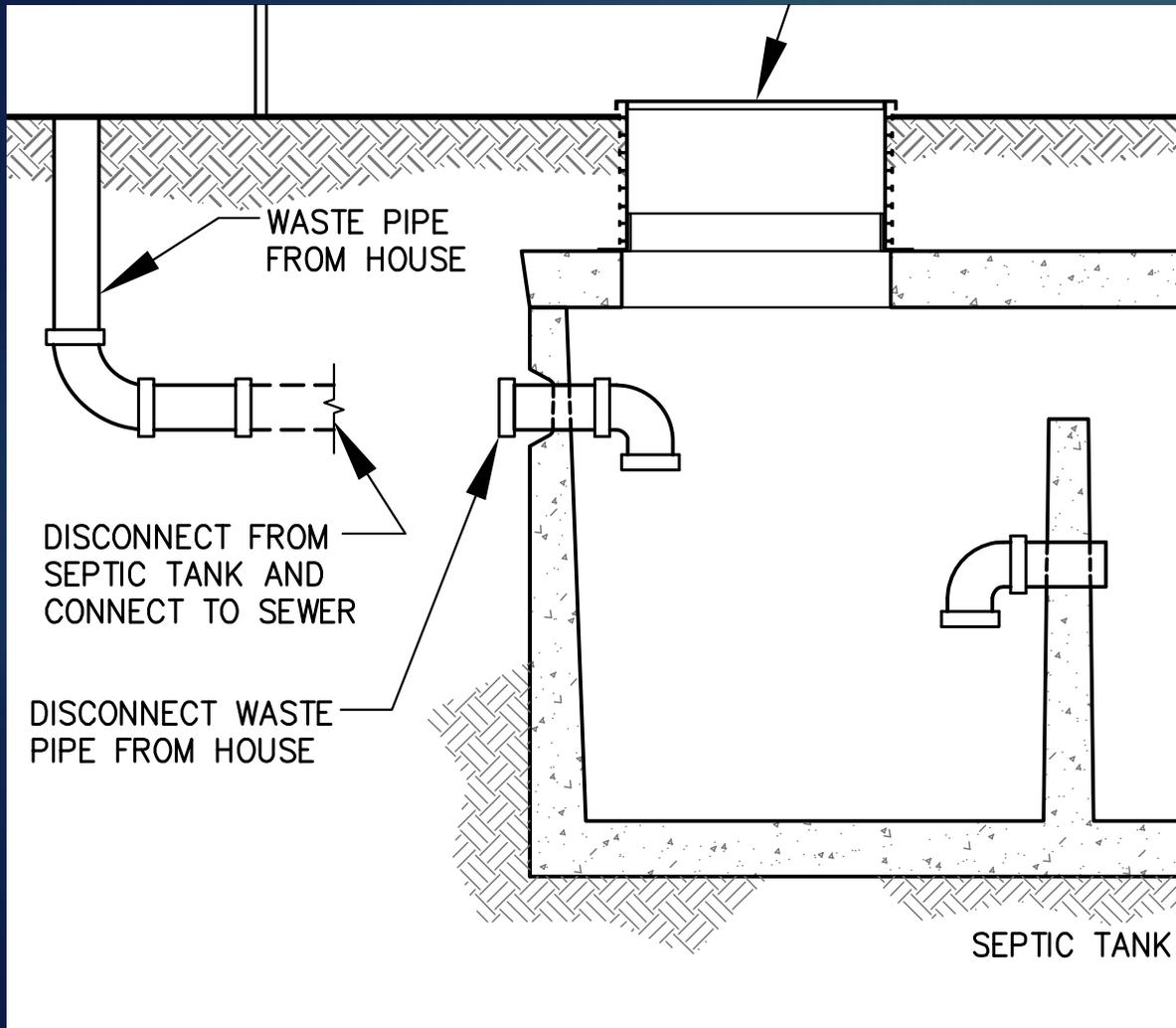
Updated to allow septic tanks  
to be repurposed for other uses



# Septic System Reuse



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## STEP 1

Convert the septic system

- Pumping out the tank
- Disinfecting the tank

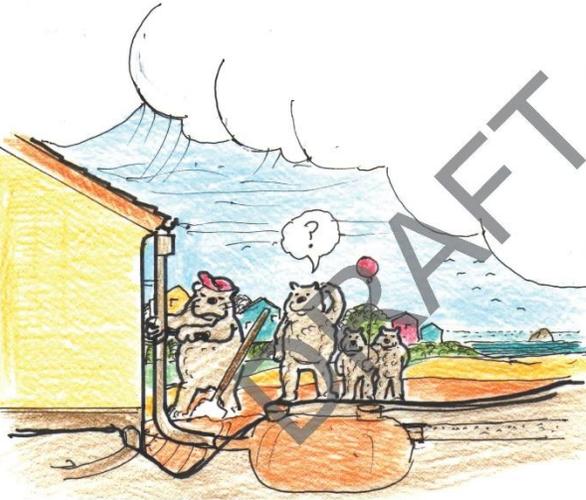


# Septic System Reuse



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## Use That Tank!



Contents:

<b>WHY?</b> <i>A Brief History of Los Osos' Water</i>	1-2
<b>WHAT?</b> <i>Options For Reusing Your Septic System</i>	3
<b>HOW?</b> <i>Ways to Design &amp; Implement Your System</i>	10
<b>WHEN?</b> <i>Timing &amp; Sequence for the Reuse Process</i>	13
<b>HOW MUCH?</b> <i>Analyzing the Economics of Your Options</i>	15
<b>WHO?</b> <i>Information &amp; Consultation Resources</i>	back cover

**Beneficial Reuse of Your Septic Tank and Disposal Field**

For the Community of Los Osos, California

## STEP 2

Reusing any components of the converted septic system

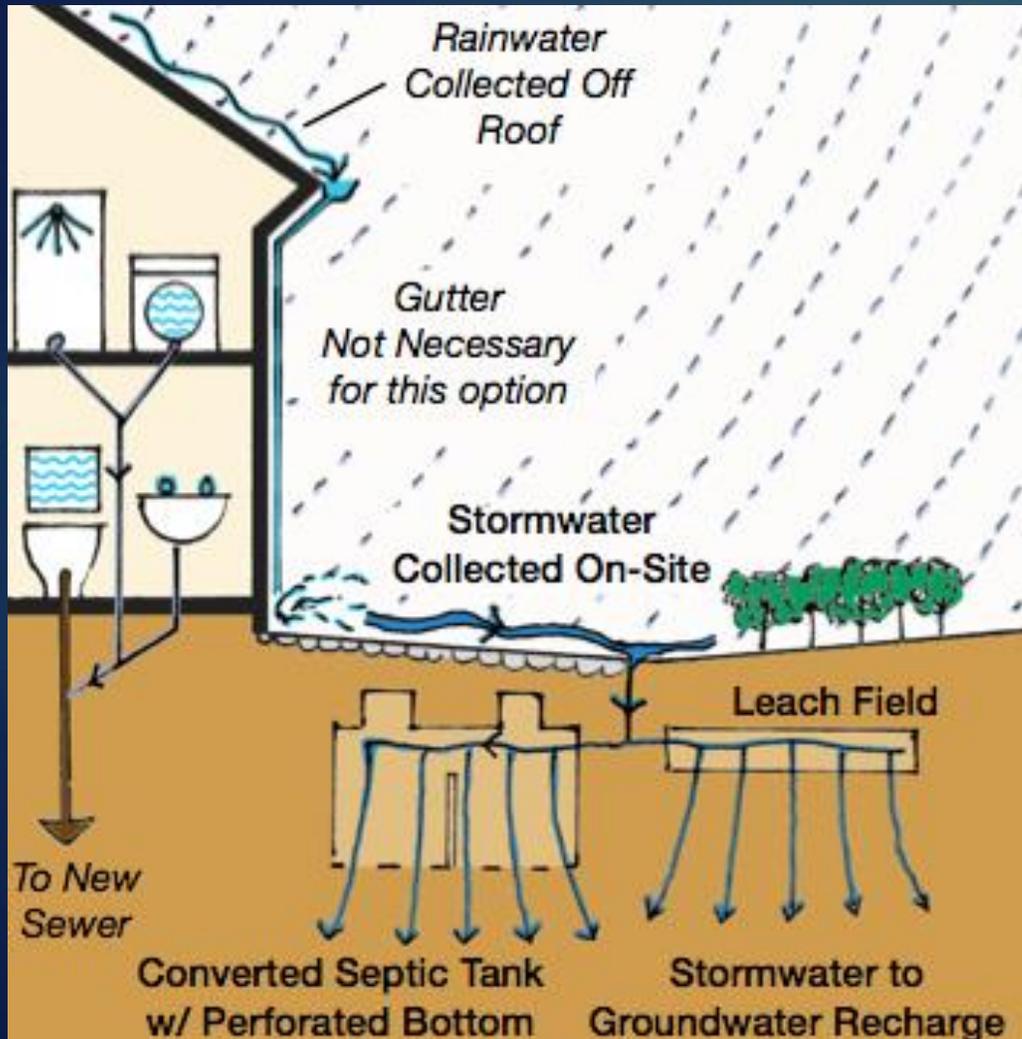
- Tank
- Disposal field



# Reuse Alternatives



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## STORMWATER INFILTRATOR

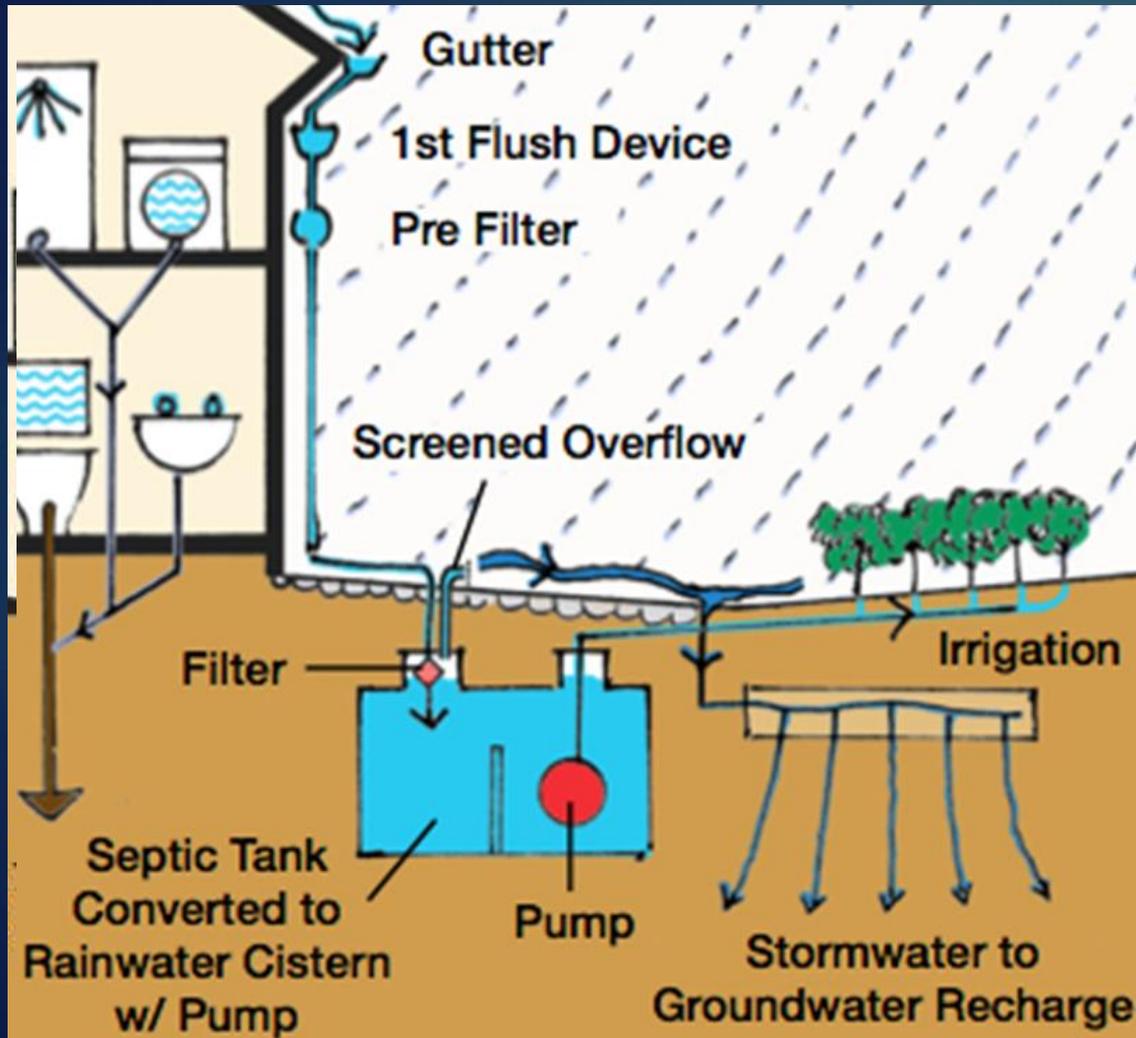
- Divert stormwater into tank and/or disposal field
- Maximize infiltration with perforations (weep holes) in tank bottom



# Reuse Alternatives



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## RAINWATER CAPTURE FOR IRRIGATION

- Rainwater collection
- Pump for landscape irrigation
- Requires additional permitting



# Reuse Alternatives



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## Appropriate Technology Guides

Application of appropriate technologies as described in these guides can improve our connection to water and maintenance of a healthy hydrologic cycle throughout San Luis Obispo and Santa Barbara Counties. **Printed copies of the guides are available for purchase (shipping included). Digital copies are available for free (but donations are welcome).**

San Luis Obispo - Coalition of Appropriate Technology's Guide to

### Harvesting the Rain

Full Sun Low Light Rainwater Catchment System  
The San Luis Obispo Coalition of Appropriate Technology's Guide to Harvesting the Rain

The Coalition of Appropriate Technology (CAT) is a non-profit organization that provides technical assistance and training to homeowners and businesses in San Luis Obispo and Santa Barbara Counties. The guide includes information on rainwater harvesting systems, storage, and use.

#### Storage and Use

For San Luis Obispo and Santa Barbara County

Suggested donation: \$10.00

Harvesting the Rain - Storage and Use (PRINT)  
\$13.00

San Luis Obispo County Homeowner's Guide to

### Rainwater Management

Low Impact Development

San Luis Obispo County Homeowner's Guide to Rainwater Management

This guide provides information on rainwater management techniques, including rainwater harvesting, infiltration, and low impact development. It includes photos of various rainwater management systems and a list of resources.

#### Low Impact Development

For

Suggested donation: \$10.00

Rain Management for Low Impact Developm...  
\$13.00

### SAN LUIS OBISPO GUIDE TO THE USE OF GRAYWATER

Graywater Reuse

This guide provides information on graywater reuse systems, including rainwater harvesting, infiltration, and low impact development. It includes photos of various graywater reuse systems and a list of resources.

SLO Service - Green Building uses a certified third-party water reclamation system serving San Luis Obispo, CA. Visit [www.slo.org](http://www.slo.org) for more information.

Suggested donation: \$10.00

Guide to the Use of Greywater (SOLD OUT)

## Other alternatives:

- Rainwater use for toilet flushing
- Treated graywater
- Combination of alternatives

[www.slogreenbuild.org](http://www.slogreenbuild.org)





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# Potential Water Savings

**Typical indoor & outdoor  
water use per household** **245 GPD**

Low-flow & fixing leaks 33 GPD

Irrigation with reused water 57 GPD

Flushing toilets w/rainwater 37 GPD

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**POTABLE WATER SAVED** **127 GPD**  
**(more than half of a typical household)**

GPD = gallons per day



# Site Assessment



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- EVALUATE YOUR EXISTING SEPTIC SYSTEM
  - Is the tank in good condition?
  - Is the septic system in the front or back yard?
- EVALUATE YOUR SITE
  - Are you located in a high groundwater area?
  - Do you have a lot of landscaping?
- WORK WITH A PROFESSIONAL
  - Develop a plan for your situation and resources
  - Landscape designer, general builder, plumber, etc.



# Next Steps thru April 2016



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- Download draft guide from website:  
[www.slocounty.ca.gov/PW/LOWWP.htm](http://www.slocounty.ca.gov/PW/LOWWP.htm)
- Begin on your plan and work with a professional designer/contractor  
[www.arcsa.org](http://www.arcsa.org)
- Upcoming workshops

