STAFF REPORT

TO: **HONORABLE MAYOR AND CITY COUNCIL**

FROM: **GREG RAY, PUBLIC WORKS DIRECTOR/CITY ENGINEER**

SUBJECT: **DISCUSSION REGARDING PARTICIPATION IN A REGIONAL PROJECT FOR RECYCLED WATER**

BACKGROUND

At the November 30, 2015 City Council meeting staff will present a report on the condition of the City's water supply sources and recommendations for consideration of additional water supplies in order to provide a long term sustainable and reliable water supply to the City.

At the October 19, 2015 City Council meeting Ben Fine, the City of Pismo Beach Director of Public Works, presented the results of a grant-funded Recycled Water Facilities Planning Study (see Attachment 1). The City of Pismo Beach City Council also sent a letter to the City of Grover Beach City Council requesting the Council to authorize staff to work collaboratively with the City of Pismo Beach and other interested agencies in the development of a regional recycled water project and a governance system for a regional groundwater sustainability program.

DISCUSSION

As a result of long term drought the City's water supplies are at record low levels. Based on long term predictions it is unlikely the City's supplies will fully recover in the near future. Both of the City's supply sources rely on rainfall within the local watershed. If drought conditions continue or become the new norm, the City will need additional supplies in order to provide long term sustainability and in order to respond to short term supply emergencies.

Council has identified desalination, recycled water and water conservation as possible projects to provide additional supply. There are currently two recycled water supply projects being evaluated. They include the Pismo Beach Recycled Water Project and the "scalping plant" project being considered by the South San Luis Obispo County Sanitation District (SSLOCSD). A "scalping plant" is a water treatment facility that intercepts wastewater prior to it reaching the primary treatment facility. As these projects move forward more information on the feasibility, cost, benefits to the City's water supply and need for some form of governance structure will become available. At this point, both projects have the potential to provide significant benefits to the region including diversifying water supply portfolios, reducing reliance on surface water imports, eliminating the discharge of treated wastewater to the ocean and reducing conflicts between regional water purveyors. But, whether or not the City will ultimately participate will depend on the outcome of additional studies.

APPROVED FOR FORWARDING

ROBERT PERRAULT
CITY MANAGER

Please Review for the Possibility of a Potential Conflict of Interest:

- ☑ **None Identified by Staff**
- ☐ **Bright**
- ☐ **Shoals**
- ☐ **Nicolls**
- ☐ **Lee**
- ☐ **Shah**

Meeting Date: November 30, 2015

Agenda Item No. 3

At this time staff is recommending Council authorize staff to formally express interest in these projects and authorize staff to work collaboratively with other participating agencies in the development of one or more regional recycled water projects.

ALTERNATIVES

The Council has the following alternatives to consider:

1. Formally express interest in the two recycled water projects identified by staff and authorize staff to work collaboratively with other participating agencies in the development of one or more regional recycled water projects; or
2. Provide staff with additional direction.

RECOMMENDATION

It is recommended that the Council authorize staff to formally express interest in the City of Pismo Beach and SSLOCSD recycled water facilities and to work collaboratively with other participating agencies in the development of one or more regional recycled water projects.

FISCAL IMPACT

There are no immediate financial impacts associated with the recommended action. Currently there are insufficient funds available in the City's Water Enterprise Fund to allow significant participation in any of the regional water supply projects being studied. It is imperative that the City develop a source of funding in order to participate in any of the projects identified above. The City or all of the agencies included in the Northern Cities Management Area together may be eligible for grant funding to offset some of the costs of developing these projects but it is also likely the City will need to develop a significant capital reserve fund in the City's Water Enterprise Fund.

At present, the Water Fund reserves are dwindling as a result of increased costs for water conservation, reduced water sales and implementation of water system upgrades. Council has authorized staff to undertake a rate study to determine if water rates are appropriate for anticipated costs in the Water Fund. Staff is recommending the study include development of short and long term water supplies as well as anticipated effects of additional water conservation actions.

PUBLIC NOTIFICATION

The agenda was posted in accordance with the Brown Act.

ATTACHMENTS

1. City of Pismo Beach Presentation on the Pismo Beach Recycled Water Facilities Planning Study

Regional Groundwater Sustainability Project

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Acknowledgements

- Pismo Beach City Council
  - Shelly Higginbotham, Mayor
  - Ed Waage, Mayor Pro Tem
  - Erik Howell
  - Mary Ann Reiss
  - Sheila Blake
- Pismo Beach Staff
  - James R. Lewis, City Manager
  - Benjamin A. Fine, P.E., Director of Public Works
  - Eric Eldridge, P.E.
  - Chad Stoehr, P.E.
  - Carolyn Johnson
  - Kristin Bennet
  - Madeline Musgrove
  - Russell Fleming, Wastewater System Supervisor

Slide 2

Acknowledgements

- Arroyo Grande Staff
  - Teresa McClish
  - Shane Taylor
- Grover Beach Staff
  - Gregory Ray, P.E.
- WSC
  - Jeffery Szytel, P.E.
  - Laine Carlson, P.E.
  - Daniel Heimel, P.E.
  - Spencer Waterman
  - Kaylie Ashton, E.I.T.

Slide 3

Acknowledgements

- Carollo Engineers
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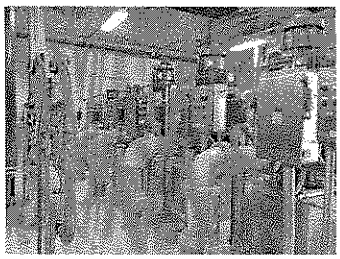
  - Elis Garvey, P.E.
- Cleath-Harris Geologists, Inc.
  - Timothy Cleath, P.G.
- Fugro Consultants, Inc.
  - Paul Sorensen, P.G.

Slide 4

Recycled Water

- Water Recycling Facilities Planning Grant – 8/2012
- Council Appropriated matching funds – 11/19/2013
- Project Kickoff – December 2013
- Accepted by City Council – **April 21, 2015**
- Alternatives Looked at:
  - Secondary 23 – Irrigation
  - Disinfected Tertiary
  - FAT Coastal Injection
  - FAT Inland Injection



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Chapters of RWFPS

1. Introduction
2. Water Supplies and Characteristics
3. Wastewater Characteristics and Facilities
4. Treatment Requirements
5. Recycled Water Market/Opportunities
6. Planning and Design Assumptions
7. Project Alternatives Analysis
8. Recommended Facilities Project Plan
9. Implementation Plan
10. Construction Financing Plan
11. References

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Introduction

- What are the goals for Recycled Water?
  - Offset some potable water uses
  - Diversify the City's Water Supply Portfolio
  - Provide a new source of recharge to SMGB
  - Relieve increased water demand
  - Develop a viable RW project in a timely manner to facilitate regional use of RW in the South County
- Service Area Population
- Related Initiatives

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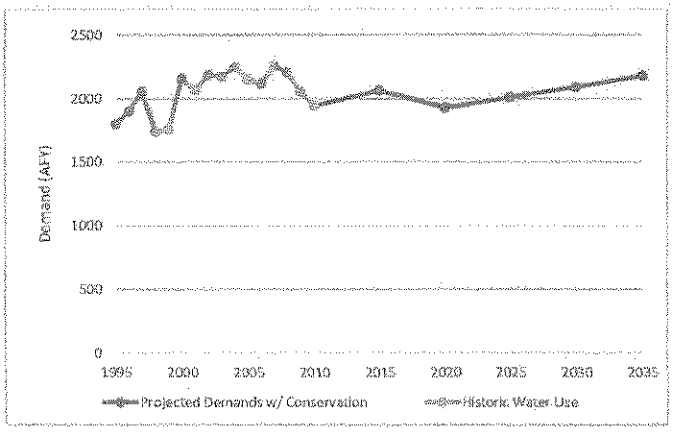
Water Supply Characteristics

- Water Use Trends



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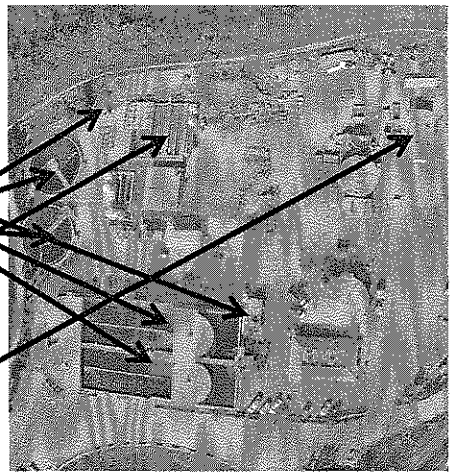
Wastewater Plant Characteristics

- Existing Facilities
  - Barscreen
  - Oxidation ditch
  - Secondary Clarifier
  - Chlorination
  - Dechlorination
  - Ocean Outfall
  - Biosolids Treatment



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Wastewater Plant Characteristics

- Existing Flows

Flow/ Years	2009	2010	2011	2012	2013	Average
MGD	1.13	1.08	1.09	1.08	1.06	1.09
AFY	1,265	1,209	1,220	1,209	1,187	1,209

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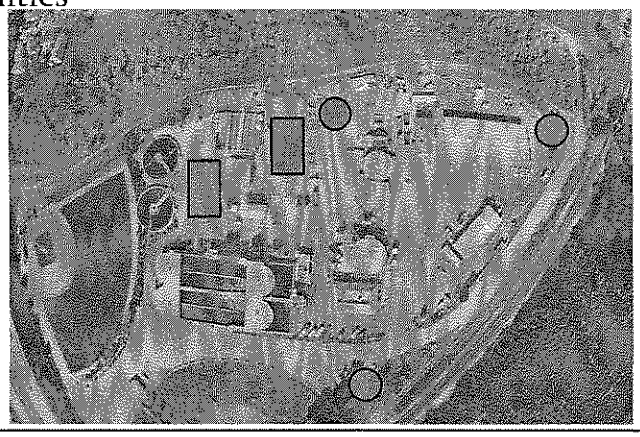
Ch 3 – Wastewater Plant Characteristics

- Future Facilities



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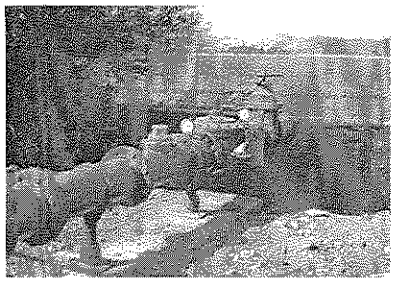
Recycled Water Market

- Secondary-23
  - James Way Slopes
  - Caltrans Median
  - Annual Demand – 16.65 AFY
- Disinfected Tertiary (top 6 users) (purple pipe)
  - Palisades Park
  - Caltrans
  - Baycliff Condos
  - Shell Beach Elementary School
  - Judkins Middle School
  - The Cliffs
  - 63 AFY (214 AFY City Wide)



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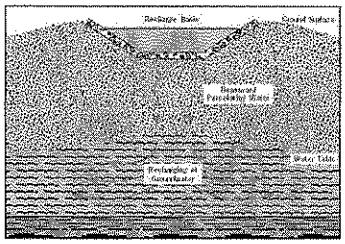
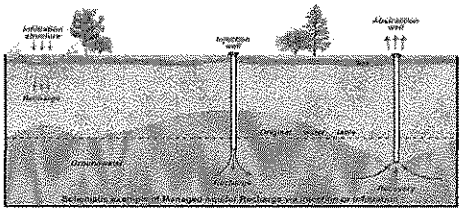
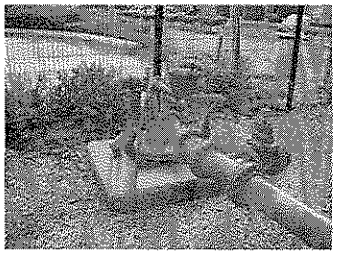
Recycled Water Market

- Groundwater Recharge
  - Surface Spreading
  - Subsurface Injection







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Alternative Analysis

- Alternative 1 – Secondary 23

Alternative	AFY	Distribution		Treatment		$/AF
		Capital Cost	Annual O&M	Capital Cost	Annual O&M	
1	16.6	$4,963,000	$44,100	$0	$0	$15,900

- Market
  - James Way Slope and Caltrans Median

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Alternative Analysis

- Alternative 2 – Disinfected Tertiary

Alternative	AFY	Distribution		Treatment		$/AF
		Capital Cost	Annual O&M	Capital Cost	Annual O&M	
2	214	$19,445,000	$205,500	$1,234,000	$30,000	$5,400

- Market
  - Various Landscape Areas throughout the City

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Alternative Analysis

- Alternative 3a – Direct Ground Water Injection Coastal Wells

Alternative	AFY	Distribution		Treatment		$/AF
		Capital Cost	Annual O&M	Capital Cost	Annual O&M	
3a	930	$11,911,000	$96,000	$15,134,000	$502,000	$1,900

- Market
  - All water users
  - Potentially regional partners

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Alternative Analysis

- Alternative 3b – Direct Ground Water Injection Inland Wells

Alternative	AFY	Distribution		Treatment		$/AF
		Capital Cost	Annual O&M	Capital Cost	Annual O&M	
3b	930	$14,574,000	$126,000	$15,134,000	$502,000	$2,100

- Market
  - All water users
  - Potentially regional partners

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Alternative Analysis

- Non Recycled Water Supply Alternatives

Supply	Source	$/AF
Surface	Lopez Lake Spillway Raise	$1,293
Ocean Water	South San Luis Obispo County Desal	$2,937
Potable Water	NCSD SWP Supply Analysis	~$2,500

- No Project Alternative

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Comparison of Options

Alternative	AFY	Distribution		Treatment		$/AF
		Capital Cost	Annual O&M	Capital Cost	Annual O&M	
1	16.6	$4,963,000	$44,100	$0	$0	$15,900
2	214	$19,445,000	$205,500	$1,234,000	$30,000	$5,400
3a	930	$11,911,000	$96,000	$15,134,000	$502,000	$1,900
3b	930	$14,574,000	$126,000	$15,134,000	$502,000	$2,100

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Implementation Plan

- Groundwater Model
- Test Injection Well
- Water Quality Sampling for RO Process Design
- Permitting – WQCB
- Infrastructure Permits
- Salt and Nutrient Management Plan
- Environmental Documentation (CEQA)
- Permitting – CDP/Appealable
- Coordination and Governance
- Public Outreach

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Implementation

2015	2016	2017	2018
Agreements			
Funding			
Design			
Permitting			
Construction			

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Project Update

- Arroyo Grande – June 23, 2015
- Oceano – May 13, 2015
- RFP Environmental – Pismo Council to consider award
- RFP Engineering – Closes October 30, 2015

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Project Participation

- Staff is Seeking the Grover Beach City Council to
  - Direct/authorize staff with work collaboratively on a governance system for a regional ground water sustainable program

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