1. Opening Remarks by Moderator (C.J. Butcher, General Manager)

2. Verbal Presentation by Legal Counsel of Redwine and Sherrill, Gil Granito Regarding the Legal Process Regarding Activation of Sanitation Powers–Measure B.


4. Presentation by Joe Reichenberger, PE, District Engineer Concerning Alternatives for Groundwater Pollution Control in the Beaumont Cherry Valley Area.

5. Presentation by Sudhir Pardiwala of Raftelis Financial Consultants Inc. Regarding Cost to Sewer Cherry Valley.


7. Questions and Answers.
Water Quality Impacts from On-Site Waste Disposal Systems in the Cherry Valley Community of Interest

Item 3
Problem Statement

- High nitrate levels found at Beaumont Cherry Valley Water District wells 16 and 21 in 2005
- These wells are located in the Cherry Valley Community of Interest (CVCOI)
- The CVCOI relies exclusively on on-site waste disposal systems (OSWDS) to dispose of their wastewater
- The San Timoteo Watershed Management Authority Project Committee No. 1 initiated a study to determine the source of the high nitrate levels

Problem Statement

- The drinking water standard for nitrate is:
  - 10 mg/L when expressed as elemental nitrogen (N)
  - 45 mg/L when expressed as nitrate (NO₃)
- In this presentation, we will use 10 mg/L standard
- The nitrate standard has been established to protect infants from "blue baby syndrome" which can lead to death.
Nitrate Source Study
- Reviewed the literature regarding groundwater nitrate contamination from OSWDS
- Analyzed the density of OSWDS in the CVCOI
- Conducted a tracer study to precisely identify sources of nitrate in groundwater

Review of Literature Regarding Nitrate Contamination by OSWDS
- OSWDS are frequently sources of nitrate contamination of groundwater.
- The average nitrate concentration found in the soil below a leach field from 34 study sites across North America was 43 mg/l (NO3-N) - four times greater than the drinking water standard

Tracer Study
- Sampled nine wells with elevated nitrites in CVCOI
- Blind samples sent to laboratories
- Analyzed for nitrogen isotopes and pharmaceuticals and personal care products (PPCPs)
- Nitrogen isotope samples analyzed by:
  - Lawrence Livermore National Laboratory
  - University of California at Davis
  - Woods Hole Oceanographic Institute
- PPCPs analyzed by MWH Laboratories

Study Results
- Nitrogen isotope results indicate nitrate from OSWDS has reached groundwater
- Pharmaceuticals detected:
  - Sulfamethoxazole – antibiotic registered for human and veterinary uses (three wells)
  - Acetaminophen – Tylenol (one well)
  - Ibufrofen – Advil/Motrin (three wells)
  - Hormones – estradiol, progesterone, testosterone – naturally produced in mammals, contraceptives, hormone replacement therapy drugs (four wells)
Conclusion of Study

- Tracer study (nitrogen isotopes and pharmaceuticals) indicated discharge from septic systems is contaminating groundwater
- Onsite waste disposal systems are the source of elevated nitrate levels in the Cherry Valley Community of Interest
- Conclusion has been accepted by the Regional Water Quality Control Board
  - RWQCB raised the awareness of CVCOI as a higher priority funding recommendation for SRF due to threat to human health
  - RWQCB is rethinking its policies on OSWDS due to the results of this investigation

Conclusion of Study

- The CVCOI OSWDS are situated in the forebay of the Beaumont Basin – left unmitigated, they have the potential to contaminate the entire Beaumont Basin

Model Simulation of the No Sewer System Alternative in the Cherry Valley Community of Interest
Alternatives for Groundwater Pollution Control in the Beaumont-Cherry Valley Area
Item 4
Beaumont Management Zone
Water Quality Improvement Program

Presentation of Alternatives

Town Hall Meetings
City of Beaumont 8/23/07
Cherry Valley Grange 8/30/07

4 Basic Alternatives
1. Sewer the Cherry Valley Community of Interest and convey wastewater to various locations for treatment and reuse
2. Install Advance On-site or STEP/STEG system
3. Provide Wellhead Nitrate Treatment with brine disposal in the SARI line
4. Do Nothing – allow continued pollution of the Beaumont Basin

Alternative 1 – Sewering a Portion of the CVOI

Sewered Portion of Cherry Valley

Wastewater Treatment Alternatives

Typical On-site Work
Alternative 2A - Advanced Septic Tank and Reuse System

- Each septic tank would be converted to an advanced system with drip irrigation reuse system.
- Would require formation of an on-site wastewater management district.
- Public Agency (County or BCWCD).
- Costs:
  - Annual operating permits.
  - Annual inspections.
  - On-site monitoring contract.
  - Pump out (5-years).
  - Electrical power costs.
  - Pump replacement (5-year intervals).

Alternative 2B - STEP/STEG System

- STEP - Septic Tank Effluent Pump System
  - Owner replaces septic tank (probably leaking if old) with new tank.
  - Pump is installed to pump effluent to a public sewer.
  - Can be pressurized or gravity flow or both.
  - Smaller diameter and possibly shallower sewers.
- Would require formation of an on-site wastewater management district.
- Public Agency (County or BCWCD).
- Costs: Annual operating permits, annual inspections, on-site monitoring contract, pump out (5-years), electrical power costs, pump replacement (5-year intervals).

Alternative Grinder Pump System

- Would require formation of an on-site wastewater management district.
- Public Agency (County or BCWCD).
- Costs: Annual operating permits, annual inspections, on-site monitoring contract, electrical power costs, pump replacement (5-year intervals).

Not evaluated in report. Vendor stated not competitive with sewers.

Alternative 2B - STEP System

Alternative 3 - Wellhead Nitrate Treatment

- Each of the wells which become contaminated will need ion exchange nitrate removal treatment.
- Works like your water softener (uses salt) and reduces nitrate instead of hardness (Calcium & Magnesium).
- Requires regeneration and disposal of the reject water (brine) with nitrates.
- Inland wastewater treatment plants will not accept this brine.
- Must discharge to a brine line (SAR1 line).
- Extend from Colton current terminus.
- Buy capacity in the pipeline.
- Very high operating costs.
- Will be paid by everyone in District.
Alternative 3 -- Wellhead Nitrate Treatment

Typical at each well

Alternative 4 -- Do Nothing

- Would not be allowed by Regional Board as Basin Water Quality Objectives would be violated
- Regional Board would put a Cease and Desist on existing on-site systems and preclude use of such systems:
  - Sewer it
  - Advance septic tank system possible
  - Truck it away each day (maybe)
- Impact on Property Values??

* This was done at Los Osos and other communities

Alternative 4 -- Do Nothing (Cont’d)

- Beaumont Basin could not be used for water supply
  - Affects Yucaipa, Banning, Calimesa too
- Recharge of imported water would be fruitless – don’t put good water on top of bad
  - Force construction of a water treatment plant
- Could never retrieve it unless wellhead treatment provided
  - See Alternative 3 for impacts
- Just postponing the inevitable

Cost Comparison

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Description</th>
<th>Unfinished Capital Cost (Million)</th>
<th>Annual Operations and Maintenance Cost (Million)</th>
<th>Money Pronounced (Million)</th>
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<tbody>
<tr>
<td>1A</td>
<td>Co-Beaumont</td>
<td>$2,150,000</td>
<td>$110,000</td>
<td>$240,000</td>
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<td>Co-Banning</td>
<td>$2,000,000</td>
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<td>1C</td>
<td>Co-Yucaipa-Beaumont</td>
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Present Value is based on 30 years at 3.4% interest.
Wellhead treatment service only is weeks 1A, 1B, 1C, 1D, 1E.

3
Cost to Sewer Cherry Valley
Item 5
Costs to Consumers for Alternative 1C2: Woodhouse Road

August 23, 2007

For the Preferred Woodhouse Road Alternative

- Capital Costs: $33.6 million
- Funding of this cost under the State Revolving Fund Loan Program:
  - Repayment Term: 20 years
  - Interest Rate: 2.8%
  - Annual Debt Payment: $2.16 million

For the Preferred Woodhouse Road Alternative

Annual Operating Cost: $473,000

This pays for collection, transportation, treatment and discharge of the wastewater

Users In the Cherry Valley Service Area

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Developed Parcels</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1,965</td>
<td>7,504</td>
</tr>
<tr>
<td>2010</td>
<td>2,906</td>
<td>8,024</td>
</tr>
<tr>
<td>2015</td>
<td>2,906</td>
<td>8,024</td>
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<tr>
<td>2020</td>
<td>3,188</td>
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<td>2025</td>
<td>3,188</td>
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<tr>
<td>2030</td>
<td>3,299</td>
<td>8,824</td>
</tr>
</tbody>
</table>

Assume a very small growth rate consistent with historic growth.

CVCOI Service Fee Components

Monthly fee has two cost components:
- Operations & Maintenance for sewer system
- Capital through Loan Repayment (amortized)

There are
- no other connection fees
- no other assessments, and
- no liens on property

Service Fee Components

- O&M - approximately $20/month for:
  - Collecting, treating and discharging sewage
  - Maintaining the system
  - Will vary over time due to changes in costs of labor, chemicals, power and number of users
- This compares favorably to the current service charge of $21.25 in the City of Beaumont
Service Fee Components

- Loan Repayment – approximately $92/month for 20 years for:
  - Sewer mains, treatment plant
  - On-site work for construction of:
    - Lateral in the street
    - Pump-out of septic tank
    - Abandonment of septic tank
    - Connection to the sewer system

Will remain constant over 20-year period or reduce as new customers come on line

Payment Options

- O&M will be paid monthly
- Capital cost can either be paid:
  - Up-front in the amount of $15,390
  - Or, monthly in the amount of approximately $92 for 20 years

Payment Options

- Option 1: Total O&M and Capital in Monthly Payments of approximately $112
- Option 2: Upfront payment of $15,390 and then O&M monthly payments of approximately $20

Effect on Other Customers

- Customers in the Beaumont Cherry Valley Water District receiving sewer service from a public agency will NOT pay for any part of this project

Effect on Various Consumers

- Potential customers who own a parcel of land within the sewer service area but with no building on the land will pay nothing now.
- When vacant property is developed, customer will pay the full sewer connection fee in effect at the time and the monthly O&M service charge in effect

Effect on Various Consumers

- All other customers will be charged on the basis of how much sewage is generated in comparison to a single-family residence subject to a minimum fee of the single family residence*

* Subject to Board rules and regulations