FILL ‘ER UP!
Drought Relief Through Recycled Water Fill Stations

2015 AWWA CA-VN Section Fall Conference
October 28, 2015

Cheryl Muñoz – San Francisco Public Utilities Commission
Rhodora Biagtan – Dublin San Ramon Services District
Joint Powers Authority, 50+ members

7 Committees, 3 Info-Share Groups
- Permits
- Laboratory
- Air Regulation
- Biosolids
- Pollution Prevention
- Collection Systems
- Recycled Water

Mission

Through leadership, service and advocacy for its members, BACWA provides a regional voice for the clean water community’s role in stewardship of the San Francisco Bay environment.
Target Audience
Survey Categories

Facility Information
- Hydrants?
- Facility at Plant?
- Quality
- Type of Conn.
- Fill Restrictions
- Access

Permit
- Training
- Area Use Signs
- Vehicle Signs
- Vehicle Inspection

Fees
- Water
- Connection Device
- Signage
- Permit
• Outreach:
  • BACWA announced survey in its monthly newsletter
  • BACWA Executive Director emailed a letter to recipients encouraging participation
  • BACWA Recycled Water Committee Support
• Survey Monkey
• Survey e-mailed to 100 recipients
• Received 52 responses
Survey Results

- More fill facilities at treatment plant
  - 14 agencies with fill at treatment plant
  - 7 agencies with fill along distribution system
  - 1 agency with facilities at plant and along distribution
  - (2 additional agencies - June 2015 update)
- Permit requirements vary between programs
- Fee varies between programs
  - About half of the agencies charge for water
  - $5.00 per truck load to $5.00 per 1,000 gallons
<table>
<thead>
<tr>
<th>Recycled Water Fill Facilities:</th>
<th>Treatment Plant</th>
<th>Distribution System</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can water be used outside of this agency's service area?</td>
<td>Yes</td>
<td></td>
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</tbody>
</table>

### Hydrant Fill Facilities

- **Location:** Dublin, CA - see website for locations
- **Number of Fill Facilities:** 10+
- **Connection Device:** Construction Meter
- **Quality:** Disinfected Tertiary
- **Quantity Limitations per Trip:** No Minimum
- **Truck Size Limits:** None
- **Truck Weight Limits:** None
- **Maximum up to truck limit**
- **Other Restrictions:** Permit plus $1,000 refundable deposit for meter required.

### Fill Facilities at Treatment Plant

- **Location:** DSRSD Wastewater Treatment Plant
  7399 Johnson Drive, Pleasanton
- **Quality:** Disinfected Tertiary
- **Type of Connection:** Overhead and Large Hose Bib
- **Quantity Limitations per Trip:** No Minimum
- **Hours:** 24 hrs/day, 7 days/wk*
- **Maximum up to truck limit**
- **Appointment Required:** No
- **Quantity Limitations per Day:** No Minimum
  No Maximum
- **Truck Size Limits:** None
- **Truck Weight Limits:** None
- **Additional Access Information:** *After business hours truck drivers must use special gate access code to enter the plant. The access code is valid only during hours specified in the permit.*

### Training

- **Required:** Yes
- **Duration:** 15 min
- **Who:** Truck Owner and Driver
- **Frequency:** Once
- **Schedule:** By Appointment
- **Location:** Recycled Water Plant
- **Length of time to become authorized truck hauler:** 1 business day

### Signage

- **Area Use Signage Required:** No
- **Vehicle Signage Required:** Yes
- **Signs Provided by Water Agency:** N/A
- **Signs Provided by Water Agency:** Yes

### Vehicle Inspection

- **Required:** No
- **Inspection Location:**
- **Re-inspection Required:**
- **How to schedule:**

### Fees

- **Water:**
  - Hydrant- check with DSRSD
  - Training: No Charge
  - Permit: Hydrant- No permit fee;
  - Plant- $10/truck load
  - Treatment Plant- $73/year
- **Connection Device:**
  - Hydrant access- $1,000 deposit for construction meter; Treatment Plant- No connection device charge
- **Vehicle Signage:**
  - N/A
- **Other:**
  - No Charge

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If using a hydrant, check with DSRSD for current fees.

permits:

hydrant- No permit fee;

plant:

- $10/truck load

- Treatment Plant- $73/year

connection device:

- Hydrant access- $1,000 deposit for construction meter; Treatment Plant- No connection device charge

vehicle signage:

- N/A

other:

- No Charge
### Recycled Water Fill Facilities
- **Treatment Plant**: Yes
- **Distribution System**: Yes
- **Location**: Dublin, CA - see website for locations
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- **Additional Access Information**: Obtain permit and meter at 7051 Dublin Blvd, Dublin.

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## Facility Information

| **Location:** DSRSD Wastewater Treatment Plant  
7399 Johnson Drive, Pleasanton |
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<td><strong>Quality:</strong> Disinfected Tertiary</td>
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<tr>
<td><strong>Type of Connection:</strong> Overhead &amp; Large Hose Bib</td>
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</table>
| **Quantity Limitations per Trip:** No Minimum  
Maximum up to truck limit |
| **Hours:** 24 hrs/day, 7 days/wk* |
| **Appointment Required:** No |
| **Quantity Limitations per Day:** No Minimum  
No Maximum |
| **Truck Size Limits:** None |
| **Truck Weight Limits:** None |
| **Additional Access Information:** *After business hours truck drivers must use special gate access code to enter the plant. The access code is valid only during hours specified in the permit.* |

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**DSRSD Commercial Truck Fill at Treatment Plant**
## Permit Requirements

<table>
<thead>
<tr>
<th>Training</th>
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<tbody>
<tr>
<td><strong>Required:</strong></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td><strong>Duration:</strong></td>
<td>15 min</td>
<td></td>
</tr>
<tr>
<td><strong>Who:</strong></td>
<td>Truck Owner and Driver</td>
<td></td>
</tr>
<tr>
<td><strong>Frequency:</strong></td>
<td>Once</td>
<td></td>
</tr>
<tr>
<td><strong>Schedule:</strong></td>
<td>By Appointment</td>
<td></td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>Recycled Water Plant</td>
<td></td>
</tr>
<tr>
<td>Length of time to become authorized truck hauler</td>
<td>1 business day</td>
<td></td>
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<table>
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<tr>
<th>Signage</th>
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<tbody>
<tr>
<td><strong>Area Use Signage Required:</strong></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Vehicle Signage Required:</strong></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td><strong>Signs Provided by Water Agency:</strong></td>
<td>N/A</td>
<td></td>
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<td>Yes</td>
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<table>
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<tr>
<th>Vehicle Inspection</th>
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<th></th>
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<tbody>
<tr>
<td><strong>Required:</strong></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Inspection Location:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Duration:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Re-inspection Required:</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>How to schedule:</strong></td>
<td></td>
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</table>
# Fees

<table>
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<tr>
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<tbody>
<tr>
<td><strong>Water:</strong></td>
<td></td>
</tr>
<tr>
<td>Hydrant: check with DSRSD</td>
<td>No Charge</td>
</tr>
<tr>
<td>for current fee;</td>
<td></td>
</tr>
<tr>
<td>Plant: $10/truck load</td>
<td>Treatment Plant: $73/year</td>
</tr>
<tr>
<td><strong>Connection Device:</strong></td>
<td></td>
</tr>
<tr>
<td>Hydrant access: $1,000</td>
<td>No connection device charge</td>
</tr>
<tr>
<td>deposit for construction</td>
<td></td>
</tr>
<tr>
<td>meter; Treatment Plant-</td>
<td></td>
</tr>
<tr>
<td><strong>Use Area Signage:</strong></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Vehicle Signage:</strong></td>
<td>No Charge</td>
</tr>
<tr>
<td><strong>Other:</strong></td>
<td></td>
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</tbody>
</table>
Residential Facilities

- Alameda County
  - Dublin
  - Livermore
  - Pleasanton

- Contra Costa County
  - Concord
  - Oakley/Bethel Island
  - San Ramon

- San Mateo County
  - Palo Alto
  - Redwood City
  - North Coast County WD

- Sonoma County
  - Sonoma
  - Healdsburg

- Sacramento County
  - Sacramento Regional County Sanitation District
Future New Facilities?

- Funding
- Treatment Requirements
- Lack of Space

*If the drought continues, maybe.....*
Find the Guide at...

www.bacwa.org
FILL’ER UP

DROUGHT RELIEF
through Recycled Water Fill Stations
About DSRSD

- Collect and treat wastewater
- Distribute potable and recycled water
- Treat wastewater by contract

Map Legend:
- DSRSD Wastewater Treatment Plant
- DSRSD Water Only Service Area
- DSRSD Wastewater Only Service Area
- DSRSD Wastewater Treatment Under Contract
- DSRSD Water & Wastewater Service Area
- Alameda Contra Costa County Divide Line
- Existing DSRSD Boundary
- Camp Parks RFTA Boundary
Potable Water Restrictions

- DSRSD declared an updated State of Community Drought Emergency May 5, 2014
- Overall conservation goal of 25%
  - 5% inside
  - 50-60% outside
- Use of potable water:
  - Prohibited for construction purposes
  - Limited for irrigation purposes
- 2015: DSRSD to reduce water use by 12%
Commercial Fill Station

- Operational since 2007
- Required all potable water construction meters returned to District
- Required use of recycled water for construction and surface washing activities
- Commercial fill station has increased by 99%
- Typical loads 2,000-4,000 gallons
- $10/load for recycled water
- PIN gives drivers access 24/7
Commercial Recycled Water Fill Station

► Commercial Fill Station
  – 100 Users
  – 2014: Distributed 16.9 MG
    (52 AF)
  – Distributed 23.91 MG since Jan 1, 2015

► Recycled Water Hydrants
  – 17 fire hydrants throughout City of Dublin & Dougherty Valley
  – 64 Users
  – Distributed 45 MG
DSRSD’s Drought Response Action Plan included conceptual program offering free recycled water to residents:

- To conserve potable water; and
- Mitigate residents concerns about maintaining landscaping over the summer

Program hurdles:

- Regulatory approval
- Public acceptance and participation
- Safeguarding health and safety at the fill station and customers’ homes
Regulatory Approvals

- **State Water Resources Control Board**
  - User Agreement with instructions
  - Training program
  - Recycled water stickers for customer’s containers

- **Regional Water Quality Control Board**
  - DDW submittal and approval
  - Allowed under General Order 96-011
  - Report requested after the first month

Small container stickers 3.5” X 5”

Large container stickers 4” X 8”
Residential User Monitoring

- Must submit signed user agreement and receive training prior to first use
- Obtain a Wallet Card
  - Verifies resident has completed training and user agreement
- Each visit wallet cards must be shown to attendants
- Attendants will scan bar code on back of wallet card and enter amount to be collected in bar code scanner
Staffing Needed

- Hire and train attendants (temporary employees)
- Hired a lead attendant to handle day-to-day activities
  - Create schedules & provide direction to attendants
- Use District personnel to staff the facility if needed
Residential Recycled Water Fill Station

- Recycled water is free
- Minimum 1 gallon and Maximum 300 gallons per trip (2200+ lbs)
- Multiple trips per day allowed
- Open to Bay Area residents
Regional Wastewater Treatment Plant

- Open daily
- New sign-ups during the first hour weekdays, last hour on weekends
- 33 fill stations
- Mix of back-in & drive through for trailers: 600 - 1200 visitors per day
Dublin
Residential Recycled Water Fill Station

- Opened June 24, 2015
- 8 back-in stations
  - Trailers not allowed (limited parking lot space)
  - Open Monday, Wednesday, Friday
  - 150 - 450 visitors per day
Lessons Learned

- Three hose bibs were not enough... now there are 41 stations
- Provide a mix of “back-in” and “drive through” fill stations for trailers
- Need shut off valves on the end of hoses
- Things break, repairs are common
- Shed is needed for storage of materials and shelter
- Residents need to keep hands on hoses while filling containers.
  Pressure fluctuates in service line
  - Residents have been hit with hoses and sprayed with recycled water
Lessons Learned

- Signage is crucial
  - Traffic control is needed when busy
    - Average between 600 - 1200 customer trips/day
    - Participants do speed around holding basins
    - Some people are not good drivers
    - Residents need a clear route through the plant

- Remind residents to check vehicle manual for maximum load capacity
  - Residents have been pulled over by police for over weight loads. We are developing a handout with guidelines approved by the Pleasanton Police.
Program Results

By the end of 2014:
- DSRSD distributed over 2.30 MG of recycled water to residents via milk jugs, buckets, and totes
- 495 residential participants

Now over 3,500 residential participants
- Average 91,000 gallons collected per day
- Since January 2015, over 26 MG
Unexpected Benefits of the Residential Fill Station

- Users have become comfortable with recycled water. They love it, they want it, they are no longer afraid of it.
- Media loved the program (local, state, national, and even international reporters)
- Users and the media are now better educated about recycled water and its role in creating sustainable communities

“Recycled Water Keeps this Garden Green” signs given to residential users to post in their yard.
What Customers Say

“Everyone who comes here is pretty happy about it. It’s a fantastic program that’s for the future. They keep adding stations as it gets more popular - making it as convenient as possible. I love the program. I hope more people do it.”

“We started with 5 gallon water jugs, moved up to a 55 gallon drum and now we’ve got the 275 gallon tote. Our yard is really green. We’re really glad this program has been offered.”

“It’s an awesome service and everyone is so nice. It does help. More agencies need to do this or it’s just water that gets dumped into the Bay.”

“When I walk my dog by the creek, you’re going to find a lot more bacteria in the creek than in this recycled water.”
Other Agencies

- City of Livermore
- Central Contra Costa Sanitary District
- City of Brentwood
- Delta Diablo
- City of Roseville
- Others:
  - Novato
  - Healdsburg
  - Fresno
  - Scotts Valley
  - LA County Sanitation District
  - Las Virgenes
Acknowledgments

DSRSD Board of Directors:
- Georgean Vonheeder-Leopold
- Ed Duarte
- Pat Howard
- Richard Halket
- Dawn Benson

DSRSD Staff:
- Bert Michalczyk, General Manager
- Dan Gallagher, Operations Manager/Drought Coordinator
- Levi Fuller, Wastewater Treatment Plant Operations Supervisor
- Dan Lopez, Mechanical Maintenance Supervisor
- Shawn Quinlan, Mechanic II
- Steven Delight, Senior Civil Engineer
- Stefanie Olson, Clean Water Programs Specialist
- Florence Khaw, Environmental Compliance Inspector II

DSRSD Staff (Continued):
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- Renee Olsen, Community Affairs Specialist II
- Joyce Chang, Graphic Designer
- Lori Martin, Administrative Assistant II
- Louanne Ivy, Administrative Analyst II
- Simone Grashuis, Human Resources Tech
- Ann Cigliuti, Environmental Compliance Inspector II
- Kapil Mohan, Environmental Compliance Inspector II

State Water Resources Control Board, Department of Drinking Water for San Francisco District
- Robert Brownwood, District Engineer/Senior Sanitary Engineer
- Vladimir Rakhamimov, Associate Sanitary Engineer

San Francisco Bay Area Regional Water Quality Control Board
- Blair Allen, Water Resources Control Engineer
Questions?

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