Recycled Water Construction, Connections & Community Outreach

WateReuse Association
Northern California Chapter Meeting
Friday, February 24, 2017

Ben Glickstein
East Bay Municipal Utility District
San Ramon Valley Construction

- Phase 2: Summer 2015 to Summer 2016.

- Project elements
  - Bishop Ranch businesses
  - Bus routing
  - Plating/temporary restoration for public events
  - Laterals and paving moratorium
Construction Activity
San Ramon Valley Customers

- Cross-connection testing
- Quality/ safety
  - Worker health
  - Salt tolerance of plants
  - Irrigation components
Some Salt-Tolerant Plants

Trees
- Artocarpus altilis (ginkgo tree)
- Betula alba (silver birch)
- Pinus radiata (Radiata pine)
- Eucalyptus globulus (Bluegum)
- Pinus radiata (Radiata pine)
- Pitsaya x eriantha (Bloodwood, London plane)
- Durotis ophioglossa (Territorial pine)
- Durotis leucophylla (Tallowwood)
- Sequoia sempervirens (Redwood, tallowwood)
- Washingtonia filifera (California fan palm)

Shrubs
- Atriplex hortensis (Weeping willow)
- Atriplex undulata (White willow)
- Atriplex humifusa (Pasture willow)
- Elaeagnus angustifolia (Russian olive)
- Euonymus fortunei (Chinese holly)
- Euonymus alata (Japanese spindle)
- Cotoneaster xanthocarpus (Orange-leaved spindle)
- Ceanothus IX marmalade (Orange-leaved Ceanothus)
- Berberis thunbergii (Oregon grape)
- Staphylea rustica (Wild rose)

Grasses
- Bromus ciliatus (Brome grass)
- Poa annua (Annual grass)
- Dactylis glomerata (Fescue)
- Bromus capillaris (Thin bluegrass)
- Agrostis capillaris (Smooth bluegrass)
- Festuca arundinacea (Fescue)
- Alopecurus aequalis ( Timothy grass)
- Carex stricta (Sedge)
- Carex flava (Yellow sedge)

Vines
- Jasminum officinale (Pink jasmine)

Table A.2. Salt tolerance of evergreen shrubs and trees, and roses.

<table>
<thead>
<tr>
<th>Shrubs</th>
<th>Trees</th>
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<tbody>
<tr>
<td>Holly oak</td>
<td>(Quercus ilex)</td>
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<tr>
<td>Rhus typhina</td>
<td>(Rhus typhina)</td>
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<tr>
<td>Tamarix ramosissima</td>
<td>(Tamarix ramosissima)</td>
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<tr>
<td>Quercus ilicifolia</td>
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<td>Quercus macrocarpa</td>
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<td>Quercus agrifolia</td>
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<td>Quercus rubra</td>
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<td>Quercus alba</td>
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<td>Quercus suber</td>
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<td>Quercus ilex</td>
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<td>Quercus cerris</td>
<td>(Quercus cerris)</td>
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<tr>
<td>Quercus robur</td>
<td>(Quercus robur)</td>
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</tbody>
</table>

* Suitable for future development potential
** Plants are recommended for use in future projects
Media Coverage

- Mercury News & KTVU
- Follow-ups on 2015 construction start stories

San Ramon: Recycled water starts flowing in Central Park

SAN RAMON — After tapping into a 16-inch-wide underground pipe of highly treated wastewater last week, San Ramon’s 42.8-acre Central Park went from being watered by pristine, fresh Sierra snowmelt to highly treated sewage effluent.

The water, reclaimed from residents served by the Dublin San Ramon Services District at its plant in Pleasanton, is being piped to the park and other major public spaces in San Ramon and Dublin thanks to new lines installed by the East Bay Municipal Utilities District. The project, begun last summer at a cost of $9.9 million, is expected to save as much fresh water as would be used by 2,500 homes in the area annually.
Emeryville Construction

- Phase 1A: Summer 2015 to Summer 2016.
- Project elements:
  - Busy commercial area
  - Creek crossing
  - Holiday moratorium
  - Construction contract delay
Construction Activity
Recycled Water for Construction

- EBMUD provides recycled water for commercial use at our West Oakland fill station
- It was a priority to ensure that our contractor used the nearby fill station for construction uses
Emeryville Customers

• Cross-connection challenges
  – Hotels: full shut-down test is challenging
  – Considering possible alternate cross-connection tests
New Development

• As construction progresses, development also continues.

• EBMUD retrofits existing customers, but not new customers

• Cases:
  – City Center Bishop Ranch
  – Emeryville developments
  – Station House development

Bishop Ranch City Center under development in San Ramon
Lessons Learned

Construction

- Coordinate with transit, HOAs, developments to provide for unique needs.
- Use recycled water for construction if feasible.
- Identify existing customers and possible new developments along project alignment.

Customer Communication

- Always include mention of recycled water’s benefits to the customer and the district.
- Communicate early about recycled water service, including cross-connection and self-monitoring requirements.
- Answer questions about recycled water quality promptly and thoroughly to avoid concern and misinformation.
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Office of Water Recycling

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