Fallbrook Plant Nurseries
Recycled Water Distribution System Expansion

June 6, 2017

FPUD Recycled Customers

- Goodearth Nursery
- Silverthorne Nursery
- ColorSpot Nursery (Recently Expanded Service)
- Olive Hill Nursery
- Olive Hill Greenhouses (Recently Added)
- Roseland Nursery (Recently Added)
- Premier Color Nursery
- Fallbrook Sports Park
- Fallbrook Youth Baseball
- Fallbrook High School
- Peppertree Park HOA
- Mission Road Median
- Fallbrook Airpark
- Mission Oaks HOA
- California Department of Transportation (Caltrans)
- Orange Grove Energy
FPUD Historical Recycled Usage

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWTP Influent Flow (AF)</td>
<td>172</td>
<td>156</td>
<td>168</td>
<td>156</td>
<td>167</td>
<td>156</td>
<td>158</td>
<td>161</td>
<td>158</td>
<td>151</td>
<td>152</td>
<td>150</td>
<td>183</td>
</tr>
<tr>
<td>Recycled Water Sales (AF)</td>
<td>33</td>
<td>30</td>
<td>40</td>
<td>56</td>
<td>70</td>
<td>72</td>
<td>78</td>
<td>80</td>
<td>78</td>
<td>76</td>
<td>68</td>
<td>60</td>
<td>26</td>
</tr>
<tr>
<td>% Monthly Sales of Total Sales</td>
<td>4.9%</td>
<td>4.5%</td>
<td>6.1%</td>
<td>8.5%</td>
<td>10.6%</td>
<td>11.0%</td>
<td>11.9%</td>
<td>12.1%</td>
<td>11.8%</td>
<td>9.2%</td>
<td>5.5%</td>
<td>3.9%</td>
<td></td>
</tr>
<tr>
<td>Unused Recycled Water (AF)</td>
<td>142</td>
<td>126</td>
<td>127</td>
<td>109</td>
<td>97</td>
<td>85</td>
<td>82</td>
<td>79</td>
<td>73</td>
<td>91</td>
<td>120</td>
<td>137</td>
<td>1258</td>
</tr>
<tr>
<td>% Recycled Usage</td>
<td>19%</td>
<td>19%</td>
<td>24%</td>
<td>36%</td>
<td>42%</td>
<td>46%</td>
<td>49%</td>
<td>50%</td>
<td>52%</td>
<td>40%</td>
<td>23%</td>
<td>16%</td>
<td>34%</td>
</tr>
</tbody>
</table>
Summary of Project

- Installed 10,200 ft of 12-inch PVC Pipe.
- Staff Support for Retrofit, Design and Construct 4 New Nursery RW Meters.
- Installed 3 New Nursery Meters.
Goals of Project

• Reduce Potable Water Demands
  – Convert Large Users to Recycled Water
    • Commercial Nursery Operations
  – Reduce Imported Water Purchases
    • Decrease Net Diversions from Bay-Delta
  – Contribute to 20x2020 Goals

• Local Supply Development
  – Increase Recycled Water Usage & Sales
  – Reduce Vulnerabilities
Goals of Project

- Environmental Benefits
  - Reduce Net Production of Green House Gases.
    - Avoid Social Costs of GHG Emissions
  - Reduce Discharge to Ocean Outfall
  - Reduce Need for Fertilizer

- Reduce Costs for Agriculture Users.
  - Access to Non-Interruptible Water Source
  - Reduced Water Costs for Agricultural Users by 14.5% from M&I Water costs.
  - Decrease Need for Fertilizer

FPUD Projected Recycled Usage

<table>
<thead>
<tr>
<th></th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWTP Influent Flow (AF)</td>
<td>172</td>
<td>167</td>
<td>158</td>
<td>156</td>
<td>167</td>
<td>167</td>
<td>158</td>
<td>1518</td>
</tr>
<tr>
<td>Current Recycled Water Sales (AF)</td>
<td>32</td>
<td>39</td>
<td>59</td>
<td>69</td>
<td>61</td>
<td>65</td>
<td>44</td>
<td>557</td>
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<tr>
<td>Project Additional Usage (AF)</td>
<td>32</td>
<td>29</td>
<td>39</td>
<td>69</td>
<td>70</td>
<td>70</td>
<td>77</td>
<td>642</td>
</tr>
<tr>
<td>Total Projected Sales (AF)</td>
<td>63</td>
<td>55</td>
<td>79</td>
<td>127</td>
<td>130</td>
<td>145</td>
<td>138</td>
<td>1199</td>
</tr>
<tr>
<td>Maximum Potential Usage Maximum Month - 95%</td>
<td>70</td>
<td>59</td>
<td>87</td>
<td>129</td>
<td>131</td>
<td>152</td>
<td>134</td>
<td>101</td>
</tr>
<tr>
<td>Unused Recycled Water (Ocean Disposal) (AF)</td>
<td>303</td>
<td>98</td>
<td>81</td>
<td>27</td>
<td>35</td>
<td>27</td>
<td>8</td>
<td>108</td>
</tr>
<tr>
<td>% Maximum Recycled Usage</td>
<td><strong>40%</strong></td>
<td><strong>37%</strong></td>
<td><strong>52%</strong></td>
<td><strong>83%</strong></td>
<td><strong>76%</strong></td>
<td><strong>83%</strong></td>
<td><strong>85%</strong></td>
<td><strong>95%</strong></td>
</tr>
</tbody>
</table>
Results of Project

- All Pipe and appurtenances are installed.
- Meters are installed.
- Project Monitoring Report for Goals
  - Will provide measurements with respect to Project Goals.
  - Will be reported on an annual basis for 5 years.

Future Planning
Lessons for Other Project Sponsors

• Providing Recycled Permitting Assistance

• Benefits for TSAWR Customers

Questions