Capital Improvement Plan (CIP) Water Supply

Tracey Lehmann, P.E.
Director of Development
Impact Fee Components

- Water Supply
- Water Delivery
  - System Development
- Water Delivery
  - Flow
- Wastewater Collection
- Wastewater Treatment
Water Supply Service Area

- Service area unchanged since 2014
Water Supply CIP Based on 2017 Water Management Plan

Existing Supplies:

- Edwards
- Aquifer Storage & Recovery
- Local Carrizo
- Regional Carrizo (through SSLGC)
- Trinity
- GBRA (Canyon Lake)
- Desalination
- Canyon Regional Water Authority
- Medina System Surface Water

CIP - 2019-2028:

- Vista Ridge
Impact Fee Calculation

Calculated Impact Fee = \frac{\text{Cost of Eligible CIP}}{\text{Added EDUs}}

- LUAP provides number of added EDUs
- CIP provides cost of eligible capital improvements
  - Extensions and expansions
  - Facilities and wellfields
- Study period for LUAP and CIP is 10 years
  - How many EDUs are expected to be added in 10-year study period? \textbf{141,770}
  - What is the cost of the capacity that is required to serve these added EDUs?
Water Supply Equity Value

Existing water supply system value is $1,118,491,949

- Valuation method is Original Cost (OC)
- Value is not depreciated
- Value excludes infrastructure (tanks, wells, etc.) for Edwards water (already included in System Development CIP)
Allocation of Water Supply Equity to Impact Fee

Allocation is based on annual demand

- 1 acre foot (AF) = 325,851 gallons
- 1 EDU = 290 gallons/day
- 1 AF/year = 3.08 EDUs
- 1 EDU = 0.3248 AF/year

- 2018 population is 1,851,348; 2028 population is 2,190,178
- 774,623 cumulative EDUs in 2018; 916,392 cumulative EDUs in 2028
- Annual Demand (AD) = Cumulative EDUs * 0.3248 AF/EDU
- 2018 AD = 774,623 EDUs * 0.3248 $\frac{AF}{EDU}$ = 251,629 AF
- 2028 AD = 916,392 EDUs * 0.3248 $\frac{AF}{EDU}$ = 297,682 AF
Allocation of Water Supply Equity to Impact Fee

Water supplies for impact fee study based on average available supplies assuming a drought of record occurs between 2019 and 2028

- $2018 \text{ AD } = 251,629 \text{ AF}$
- $2018 \text{ Capacity } = 281,495 \text{ AF}$

Unused portion of Water Supply assets is allocated to impact fee calculation

- $\text{Allocation} = \frac{2018 \text{ Capacity} - 2018 \text{ AD}}{2018 \text{ Capacity}}$
- $\text{Allocation} = \frac{281,495 \text{ AF} - 251,629 \text{ AF}}{281,495 \text{ AF}} = 10.6\%$
Water Supply CIP Value

Water Supply 2019 to 2028 CIP is Approximately $1,130,000,000

• Central Water Integration Infrastructure within SAWS: $200 million
• Pipeline, Pump Stations, Wellfield to SAWS: $930 million
Allocation of Water Supply CIP to Impact Fee

Water supplies for impact fee study based on average available supplies assuming a drought of record occurs between 2019 and 2028

- 2018 Capacity = 281,495 AF
- 2028 AD = 297,682 AF
- 2028 Capacity = 281,495 AF + 50,000 AF = 331,495 AF

Capacity required to serve 2028 AD:

- Allocation = \( \frac{2028 \text{ AD} - 2018 \text{ Capacity}}{2028 \text{ Capacity} - 2018 \text{ Capacity}} \)
- Allocation = \( \frac{297,682 \text{ AF} - 281,495 \text{ AF}}{331,495 \text{ AF} - 281,495 \text{ AF}} = 32.4\% \)
## Water Supply CIP – Eligible Value

<table>
<thead>
<tr>
<th>Description</th>
<th>Total Cost</th>
<th>Eligible %</th>
<th>Eligible Cost*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Assets</td>
<td>$1,118,491,949</td>
<td>10.6%</td>
<td>$118,560,147</td>
</tr>
<tr>
<td>CIP Projects</td>
<td>$1,130,000,000</td>
<td>32.4%</td>
<td>$366,120,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$2,248,491,949</strong></td>
<td><strong>21.6%</strong></td>
<td><strong>$484,680,147</strong></td>
</tr>
</tbody>
</table>

* Costs shown do not include financing charges
Water Supply CIP
Vista Ridge Water Supply Project
Water Supply CIP
Central Water Integration Project
<table>
<thead>
<tr>
<th></th>
<th>Edwards</th>
<th>Local</th>
<th>Trinity</th>
<th>GBRA</th>
<th>CRWA</th>
<th>Medina Plant</th>
<th>Desal</th>
<th>Reg Carrioz</th>
<th>SSLGC</th>
<th>ASR</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>220,702</td>
<td>9,900</td>
<td>16,100</td>
<td>8,524</td>
<td>6,300</td>
<td>13,000</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>211,934</td>
<td>9,900</td>
<td>16,100</td>
<td>8,286</td>
<td>6,300</td>
<td>10,000</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>194,152</td>
<td>9,900</td>
<td>16,100</td>
<td>8,048</td>
<td>6,300</td>
<td>1,500</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>177,545</td>
<td>9,900</td>
<td>4,000</td>
<td>7,810</td>
<td>6,300</td>
<td>0</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>162,773</td>
<td>9,900</td>
<td>4,000</td>
<td>7,561</td>
<td>6,300</td>
<td>0</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>136,579</td>
<td>9,900</td>
<td>4,000</td>
<td>7,333</td>
<td>6,800</td>
<td>0</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td>25,609</td>
</tr>
<tr>
<td>2025</td>
<td>112,507</td>
<td>9,900</td>
<td>4,000</td>
<td>7,095</td>
<td>6,800</td>
<td>0</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2026</td>
<td>165,404</td>
<td>9,900</td>
<td>4,000</td>
<td>6,857</td>
<td>6,800</td>
<td>0</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2027</td>
<td>261,128</td>
<td>9,900</td>
<td>16,100</td>
<td>6,619</td>
<td>6,800</td>
<td>13,000</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2028</td>
<td>281,146</td>
<td>9,900</td>
<td>16,100</td>
<td>6,381</td>
<td>6,800</td>
<td>13,000</td>
<td>13,440</td>
<td>11,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>192,387</strong></td>
<td><strong>9,900</strong></td>
<td><strong>10,050</strong></td>
<td><strong>7,451</strong></td>
<td><strong>6,550</strong></td>
<td><strong>5,050</strong></td>
<td><strong>13,440</strong></td>
<td><strong>11,057</strong></td>
<td><em>25,609</em></td>
<td><strong>281,495</strong></td>
<td></td>
</tr>
</tbody>
</table>