Adapting to Change: Utility Systems and Declining Flows

January 16, 2018
Our objective is to leverage utility experiences to inform water use efficiency (WUE) policy

- Californians successfully responded to the call to reduce water use during the recent drought.
- Significant reduction in water demands revealed some impacts from declining flows.
- Observations offer a preview into the potential impact of establishing permanent indoor water use targets at or below the thresholds achieved during the emergency conservation mandate.
CUWA supports a holistic approach to addressing California’s water supply challenges

Understanding how WUE strategies affect the interconnected water supply system is critical to optimizing future water management.
Research reveals declining flows have impacts on the interconnected urban water cycle.
CUWA is working with collaborative partners to better understand these impacts
The high-level survey provided nearly 300 representative viewpoints
Many utilities are feeling the impacts and working to adapt

- Tuolumne Utilities District
- Alameda County Water District
- Santa Clara Valley Water District
- LA Department of Water and Power/City of LA, Bureau of Sanitation
- Victor Valley Reclamation Authority
- Orange County Water District/Orange County Sanitation District
- San Diego County Water Authority

Legend:

- Water
- Wastewater
- Recycled Water
- N/A for Utility

- Agencies that observed impacts
- Agencies with no impact
Nearly half of survey respondents have experienced impacts of declining flows.
Impacts from declining flows experienced in all elements of the urban water cycle

- **Drinking Water Distribution**
  Water quality, flushing, and nitrification

- **Wastewater Conveyance**
  Odor production, corrosion, blockages, and O&M work orders

- **Recycled Water**
  Influent water quality, recycled water production, effluent water quality, ability to offset potable use

- **Wastewater Treatment**
  Influent water quality, permit requirements
The survey provided insights into the most significant impacts within each type of system.

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<td>Impacts on Wastewater Conveyance Systems</td>
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<td>Impacts on Wastewater Treatment Plants</td>
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<td>Impacts on Recycled Water Projects</td>
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Of the impacted water system respondents, **49% reported operational challenges** in water distribution systems due to low flows.

Of the impacted wastewater conveyance respondents, **50% indicated increased solids deposition, odor problems, and O&M challenges.**

Of the impacted wastewater treatment respondents, **68% indicated changes in wastewater influent quality.**

Of the impacted recycled water respondents, **70% indicated a decrease in recycled water production.**
Questions?

The white paper and policy principles is available for download at the CUWA website (www.cuwa.org).