Drinking Water Treatment and Distribution Overview

- Clarification: Point-of-use (at the tap) and point-of-entry (supply to the house). Didn't make a recommendation for POU, at the source, since it cannot be regulated.
- A potential costs infrastructure survey is updated every 4 year; flooding and degradation of source water, difficult to track water quality of sources and anti-degradation; conservation and metering AB 2572 (urban water use efficiency) meters not read; treatment residuals disposal – adds costs, issue of small DAC with arsenic issue they need to treat for costs of disposal add additional burden
- Should there be a table about anticipated needs? There are families in California that do not have potable water. What is the state of safe drinking water supplies?
- Need a paragraph about water supply sources – public water systems, privately owned, groundwater, bottle water, investor owned. What's the total of the drinking water supply covered by this strategy?
- Create a box or graph of other types of water systems, they have their own issues. Definition of public water system includes investor-owned. FDA regulates bottled water as a food item.

Facilitator action item: Check in with PUC (on investor owned), 2020 group, and Tribal committee, for discussion – at regional context – about drinking water systems.

Drinking Water Treatment in California

- page 1, last sentence: summarizing alternative technologies, what do new advances include?
- page 2, table 1 lists about 1,500 public water supply system – is that the right number? There are about 6,000 water treatment plants, 1500 wastewater treatment plants. What percentage of drinking water supply is provided by public water systems?
- Water treatment – water recovery/water efficiency is important (amount of water obtained v. wastewater); important for RO (50% waste)
- page 3, MCLs: What about other MCLs? State can create standards separate from federal standards
- page 3, reverse osmosis is really used for brackish water, use general term for membrane (MF, UF, nanotreatment) treatment. What's the landscape of drinking treatment? Give examples of systems (San Diego box)

Drinking Water Distribution in California

- Include Bay area example of interties for emergency water supplies
- page 5: There are certain mixing issues about mixing of desalted water; another issue is leakage or unaccounted water, some cities are working on this issue. Perhaps create link, mentioning source control programs

Costs of Drinking Water Treatment and Distribution

- Are there estimates of costs for water (percentage of annual income)?
- Discussion of doubling of water costs in terms of MHI needs to be quantified. If doubling from 1% to 2%, that may not be significant. If water costs double from 20% to 40% of MHI, that is significant.
- Average costs of water going up about 3-4% per year; costs for disadvantaged communities can be significant. Perhaps show cost ranges per household – are there examples for different costs? Scale issues: examples of what size system has what costs.
- Include energy costs – make up about 1/3rd of O & M costs

- page 6: MWD's costs – costs of treated water, costs to individual member agencies; this is a bit untypical, might want to also provide an example from Northern California (SCVWD)? Do costs represent dollar numbers – or are they adjusted for inflation?

Major Issues Facing Drinking Water Treatment and Distribution

- 1st sentence: Support for improvement comes from additional groups (environmental and community groups)
- Need a more compelling argument for recommendation for more dependable funding programs. Expand on the statements of the undervalued nature of water. Create a more realistic pressing argument for water investment needs. Things have not been priced correctly and market signals encourages use that complicate drinking water (e.g. prescriptions and pharmaceutical use). Make those who are responsible for helping to create the problems assist in finding solutions. Then you are touching on the fundamental problems in the area. E.g. Market signals such as expediting pharmaceutical approvals. May ask pharmaceutical sector to help create solutions. Highlight that there are inadequate continuous funding streams.
- Additional background information on issues might be helpful to move up front (e.g. accomplishments on water security)
- Call out efficient use of water (conservation); links to urban water use efficiency; create link to source control programs
- Deterioration of infrastructure is a regionalization issue (may not be cost efficient for local upgrades, if regionalized – might be); create a new topic on regionalization, separate from deterioration of infrastructure.
- Page 7, desalted water costs are a relative thing. A general statement that this is more expensive is not always true. E.g. Desal of brackish water in southern Ca. is less expensive than transporting water from the north and then treating prior to distribution. Inland Empire has some numbers on this. Provide link to deal RMS (about 17 seawater desal plants are under way)

Recommendations for Drinking Water Treatment and Distribution

- Page 12, are there any in-home water treatment devices or bottled water supplies that prevent exposure to emerging contaminants?
- Recommendations #2, 5, 8 – who does “California” refer to? Every water user? State government?
- Don't see a corresponding recommendation for the issue of work force. Perhaps potential partnerships with EDD, that type of thing.
- Add new recommendation to support research and funding into new technologies (e.g. Prop 50 and desal develoment), agency (e.g. CEC) R & D programs - some state-sponsored programs; organized and directed approach to supporting new technologies
- Add new recommendation for energy-efficient practices for water treatment

Participants

Mark Bartson, Ca. DPH
Rebecca Kanegawa, MWH
Betsy Lichti, Ca. DPH
Rik Rasmussen, SWRCB
Keith Wallace, MWH
Betty Yee, Region 5 Water Board

<u>DWR and Facilitation Staff</u>
Megan Fidell, DWR
Tom Filler, DWR
Kamyar Guivetchi, DWR
Lew Moeller, DWR
Lisa Beutler, CCP
Judie Talbot, CCP