

“What If” Conditions to Consider with MCDS Exercise

As part of the intent to help “explore the decision space” and the associated application within the MCDS model, we have constructed the following “What If” contexts for the Committee’s consideration:

Forward Osmosis (Trevi Systems). The technical feasibility and reliability of Forward Osmosis (FO) is an important unresolved issue. For membrane treatment systems (such as deployed for most desal, water reuse and other advanced water treatment applications), FO potentially is an attractive alternative to the Reverse Osmosis (RO) membrane systems that currently are prevalent in municipal-scale treatment systems. FO is much potentially less energy intensive than RO-based processes, alleviating one of the large concerns about some water supply alternatives that rely on membrane processes. If FO systems are found to be reliable and effective over the long term at large-scale applications, then several supply options would require a lot less energy and have a far smaller carbon footprint than would be the case with RO. However, FO is in the field test stage, and so we assume here that its practical ability to provide reliable long-term service is unknown. In contrast, RO is widely used and has a long, proven track record.

1. How does this affect your thinking about this Alt? Compared to other Alts?
2. How would this situation affect how you think about portfolios? Adaptive management?
3. How would this play out in applying the MCDS model?

Potable Reuse. The State of California is poised to issue regulations (by 2016) enabling and governing Direct Potable Reuse (DPR), such that it will be safe and reasonably cost-effective. However, until the regulations are finalized and in place, it is uncertain whether this alternative will be a viable or cost-effective option for Santa Cruz. There also is the real potential for significant public acceptance barriers to DPR, or even indirect potable reuse (IPR) in Santa Cruz.

1. How does this affect your thinking about this Alt? Compared to other Alts?
2. How would this situation affect how you think about portfolios? Adaptive management?
3. How would this play out in applying the MCDS model?