Meet Steve Kotz

Steve has more than ten years of experience in planning roles with the South Australian Water Corporation (SA Water), a water utility wholly owned by the Government of South Australia. He has also worked with the utility in long term planning for major infrastructure, giving consideration to how the utility balances economic, environmental, and social sustainability commitments for customers.

Before working with SA Water Steve was with South Australia's Department for Environment, Water & Natural Resources looking at the hydrology of urban water systems and southern Fleurieu Peninsula hydrology. He also worked on the first South Australian water security strategy, Water Proofing Adelaide, a blueprint for the management, conservation, and development of Adelaide's water resources and a precursor to the South Australian Government's Water for Good plan.

In his current role as Manager of Metropolitan Water Security Steve manages risks and opportunities relating to the utility's water resource portfolio which includes ten reservoirs, three major offtakes from the River Murray, and the Adelaide Desalination Plant.

Q: Where were you living toward the end of the Millennium Drought (specifically 2006-2009)?

A: Melrose Park, South Australia.
Google map link

Q: What kinds of work did your role involve during the end of the Millennium Drought (specifically 2006-2009)?

A: During the drought I was part of team who supported a number of infrastructure projects including wastewater and stormwater reuse and new regional treatment plants.

Much of the planning undertaken at this time was to ensure the water supply could continue during the dry times, but also ensure it could continue to support our customers beyond the drought. Managing the demand side was critical and involved the evaluation of impacts across a range of demand management measures, such as water restrictions of varying severity and water rebate programs.

I was also involved in investigating infrastructure, which highlighted the need to have good quality data on hand to inform the best possible decisions. Unfortunately this is not always obvious until it's too late—during the drought, in addition to making the most of the data we had at that time, a considerable effort was made to collect new data and use indicator data. In the absence of data we used expert judgement. Our infrastructure investigations included:

- Optimal location of the proposed desalination plant and concept designs for distributing the water throughout the networks.
- Accessing water stored below normal offtake levels in reservoirs (dead water) and lowering the River Murray offtakes.
- Alternative water supply sources including local groundwater sources.
- Assessing the potential for additional storages in the local water catchments (primarily to store pumped water from the River Murray).
- Optimising existing infrastructure to minimise water losses.

- Conceptual design for pipelines for landholders who lost access to their normal supplies from the River Murray during the drought.

From a personal development perspective this was a great time to be part of an organisation that achieved a lot to support our community. It also gave me an opportunity to learn from the strong leadership and depth of experience that surrounded me. This mixture of expertise and leadership helped us to respond to the drought conditions as they unfolded.

Q: Could you share a short personal story or experience that sticks out in your mind from the drought?

A: One of the experiences that sticks with me is of my daughter. Born in 2006, she was a true child of the drought. Her excitement at seeing and playing in pop-up sprinklers for the first time after restrictions were finally eased was incredible. Playing under a sprinkler was a childhood norm for us, yet a complete unknown for many years for our children!

Q: How did the drought affect you the most?

A: As a water security planner we spend a lot of energy interpreting the information we have available to develop great solutions for customers however, not often do people in my role have the opportunity to tell our customers in detail why we have chosen a particular solution, or hear their ideas directly.

During the drought I had the opportunity to hear from irrigation and dairy farmers who had lost access to their normal water supplies. Our supply solution would make the difference between their families' businesses existing in 12 months' time or shutting down; however for the plan to work it still had to be affordable for everyone. This work was intense because of the impacts and that affected me emotionally.

It's hard to get people excited about it, but I'd be more persuasive about the value of good quality data.

Good quality data is critical to ensure water security decisions can incorporate the need to design around risks, variability, uncertainty, quality, and timing.

Q: Do you think people's attitudes to water management changed because of the drought?

A: At the moment (September 2016) many parts of South Australia are recovering from widespread flooding, so water scarcity isn't front of mind. However, most people who experienced the drought learned practices that have helped keep water use down, and have changed attitudes towards water conservation and water use habits forever.

The attitude change has the benefit of prolonging the life and value of the investments we made during the drought, but at the same time it makes it harder to further reduce demand if we ever need to in future.

Q: What are the top three things you believe government leaders can do to prepare for drought?

A: Firstly, the Millennium Drought highlighted that history is not necessarily a great tool for understanding the future; any planning needs to take into a range of scenarios including potential growth rates in demand (and the factors behind them) and climate variations relevant to your situation.

Secondly, in preparation for drought it's important we learn from experience. Our drought highlighted the critical need to have the best quality data to inform decisions. Ours is a good case study to support the need to collect data, as well as the need to manage it, to support all business decisions in the future.

Thirdly, if good quality data is on hand, combined with the knowledge and expertise of staff, you have powerful planning tools for any situation—ultimately resulting in better outcomes for your customers.

Q: Do you have any advice you'd like to share with Canadians about water management?

A: It's important all options are on the table to begin with. You can't rule out options early just because they may not have been the right solution in the past. It's important to reassess and re-evaluate all of your options as situations change and continue to evolve.

Thank you Steve for kindly sharing your insights with the people of Alberta!