American Water Resources Association
2009 ANNUAL WATER RESOURCES CONFERENCE
November 9-12, 2009
Seattle, WA

Thursday, Nov. 12
8:30 AM – 10:00 AM
SESSION 60: The Tualatin Basin Water Supply Project, Oregon

Moderator – Bill Swanson
MWH Americas Inc., Sacramento, CA

Panelists

Kevin Hanway, Water Director, City of Hillsboro, OR
Bartholomew "Mac" Martin, Clean Water Services, Hillsboro, OR
Bill Swanson, MWH Americas, Inc., Sacramento, CA
Ryan Murdock, MWH Americas, Inc., Sacramento, CA

Overview. The Tualatin River Basin in the western Portland metropolitan area is home to some of the fastest growing communities in Oregon. The nearly 500,000 residents in and around 13 communities rely heavily upon their local environment to provide safe and dependable water supply while ensuring the long-term health and vitality of the region. Projections for the next 50 years reveal a need for significant additional water supplies to serve municipal and industrial demands while preserving and enhancing the ecosystem functions and values of the watershed.

The Tualatin Basin Water Supply Project (TBWSP) is a collaborative effort among local agencies to comprehensively address these needs. Project partners include the regional waste water utility (Clean Water Services), three municipal water providers (Tualatin Valley Water District, City of Hillsboro, and City of Beaverton) and the owner of Hagg Lake (U.S. Bureau of Reclamation), the only large water supply reservoir within the Tualatin River Basin.

Project Formulation and Issue Resolution. A wide range of regional water supply options, including additional storage, conveyance, and exchanges were evaluated for their ability to meet the long-term water needs in the Tualatin River Basin. The evaluations revealed that increasing reservoir storage capacity alone would not meet future needs. The partners selected a project involving the enlargement of Hagg Lake storage capacity, pumping surplus water from a downstream location to supplement reservoir storage, a raw water delivery pipeline, and expanded water treatment capacity. The project also would include transferring ownership of Hagg Lake and related facilities and lands from the federal government to local ownership.

The TBWSP will involve modifications to the configuration of and operation of the existing Hagg Lake project. Water contractors not involved in the project expansion needed confidence that future project operations would preserve the reliability of their existing water supplies. In response to these concerns, a detailed assessment and presentation tool was developed to simulate and visualize the effects of daily operating decisions, particularly decisions on pumping and releases, on water supply allocations and project operations. This customized model and interface provided transparency and clarity, and allowed all parties to better understand that accounting practices could be implemented to preserve existing project benefits and protect new user investments in the expanded project.

Implementation. Successful implementation of the TBWSP will require flexibility, adaptive management, strong strategies for resolving anticipated challenges, and preserving a continued, strong partnership. Title transfer of Scoggins Dam will require formation of a new governmental entity to own and operate the existing and expanded project. In light of new seismic design criteria, project alternatives and associated cost estimates are being re-evaluated. TBWSP partners will continue to emphasize strategies that provide the greatest implementation flexibility as project demands develop over the next few decades.