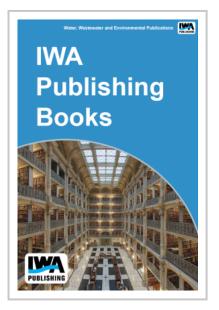


## Impact of Surface Storage on Reclaimed Water: Seasonal and Long Term

The objectives of this project were to develop (1) a better understanding of the effects of storage on reclaimed water quality, (2) a methodology to help understand/predict water quality changes during storage, and (3) effective management tools for minimizing water quality problems. The research team reviewed approximately 120 published articles, conducted a gray literature survey to analyze the impact of surface storage on reclaimed water quality. The team also evaluated federal guidelines for reclaimed water and developed a brief update on what individual states are doing.

It was determined that state and federal water quality objectives can be met at the treatment site. However, because of the seasonal nature of reclaimed water use, water often must be stored in open reservoirs, where



changes occur that can affect water quality. The nature of these changes was evaluated, including physical, chemical, and biological processes.

The research team evaluated several reservoir management strategies to improve water quality, and reviewed water quality models to assess their applicability for open reclaimed water storage reservoirs. It also developed procedures to evaluate and select management strategies and reservoir water, along with matrices to distill the information learned in the study into a useful format for risk assessors and water quality managers. These tools will enable users to readily equate their specific storage reservoirs to representative examples, and to identify actions most applicable to their specific reclaimed water systems.

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