Business-As-Usual Flows & Changing Constraints

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Business-As-Usual Flows Under Changing Constraints

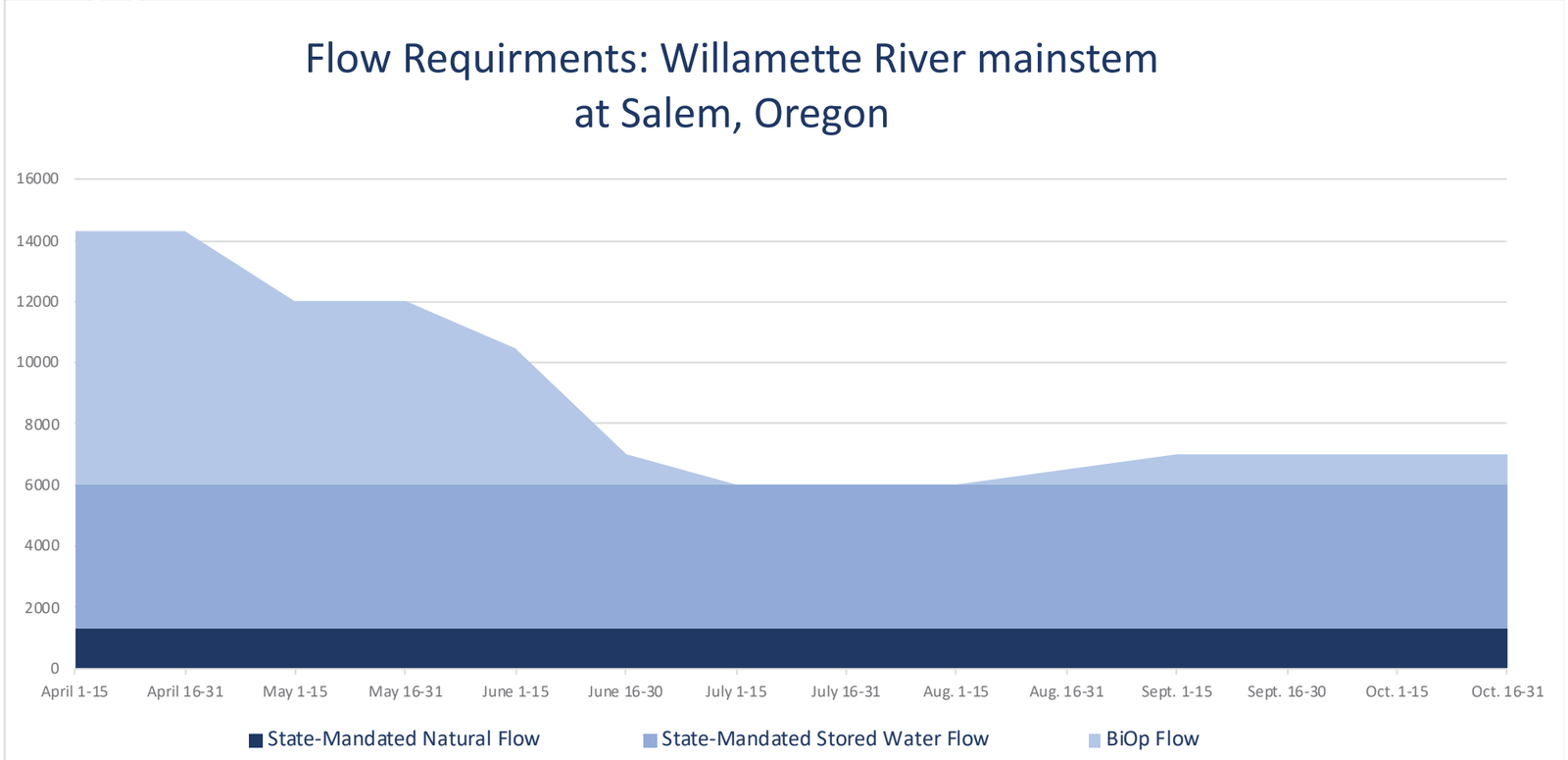
The business-as-usual (**BAU**) streamflow scenario models future flows under the constraints of a changing climate, growing population, etc. assuming existing reservoir rule curves, existing water rights, existing allocation of stored water to irrigation, and existing minimum flow targets.

Modeling of BAU in this manner allows for identifying instances in which BAU is likely to be insufficient to meet municipal, agricultural, industrial, and/or ecological flow requirements, with an eye toward modeling non-BAU scenarios that are more likely to meet or more closely approximate these flows. The INFEWS team is currently working on updating the water rights data utilized by the model so it most closely reflects the water rights data in the Oregon Water Resources Department's Water Rights Information System (WRIS). A non-BAU scenario that will likely be modeled is flows under the U.S. Army Corps of Engineers proposed stored water reallocation, comparing future flows under BAU with flows under the proposed reallocation.

Mainstem & Tributary Minimum Flows

One aspect of both BAU and non-BAU flow modeling is identifying when target mainstem (Albany & Salem) and tributary flows have been met and when they have not been met in the past, and when they will likely be met and not be met under future constraints. Non-BAU modeling will look at the ability of alternative operational and/or legal and policy scenarios to meet or approximate flow targets.

The hydrograph that appears below is an example of one aspect of minimum flows at one mainstem location (Salem, which is the most downstream of the target minimum flow locations). This hydrograph looks in particular at state-mandated minimum perennial flows as a component of the Salem minimum flow target. The model allows for similar exploration of the likelihood of fulfillment of municipal, agricultural, and industrial water rights in a constrained future under BAU and non-BAU scenarios.



This project is supported by the National Science Foundation under Grant No. 1740082.