

Editorial | Insight

Worried about water

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The Fresh Water Initiative would protect the state's watersheds with the growth of urban areas.

Water, water everywhere and, thankfully, there is more than a drop to drink. Statewide, 449 million gallons of fresh water are being pumped out of the ground every day.

But a coalition of experts who each deal with water resource management in a different way — from government agencies, academia, business and nonprofits — has decided it's time to ensure that continues to be the case.

Water use is high in part because of tourism, experts say, and a lot of it is not used efficiently. There's year-round irrigation not needed in less temperate climates. Wastewater gets treated and dumped into the ocean — the equivalent of eight supertankers a day.

The Hawaii Community Foundation convened a blue-ribbon panel dubbed the Fresh Water Council, comprising Hawaii experts representing farming, landowner, scientific and environ- mental interests. as well as the government agencies running interference among them.

It is funding the council's work for a three-year period that began in January to take steps toward safeguarding a sustainable fresh-water resource for the state. "No net loss" from Hawaii's existing aquifer system is the overarching goal.

Over the past nearly two years of preliminary meetings, that council has reached a consensus position: The islands' fresh water supply is under threat. Despite the fact that agricultural plantations with their large-scale water use have been shuttered, water shortages can be expected if nothing is done.

The combined effects of several factors make this a real concern: climate change, development and population increase, aging water-supply infrastructure, increased runoff from developed lands and insufficient protection of forested areas that guard and help to recharge aquifers.

As a result, the panel concluded that the state must achieve water security by 2030. The imperative, through conservation or tapping new sources, is to find 100 million gallons a day of additional, reliable fresh water supply.

That's the goal of what's been dubbed Wai Maoli: Hawai'i Fresh Water Initiative, and a legislative strategy is part of the plan. Several bills already have made it through the hopper this past session (see story below).

If the notion of a statewide initiative with a target date, and even its name sound reminiscent of the long-established Hawaii Clean Energy Initiative (HCEI), that was entirely intentional. It developed over the course of discussions, said Josh Stanbro, the Hawaii Community Foundation's program director for strategies, initiatives and networks, and part of a group speaking recently about the initiative to the Honolulu Star-Advertiser editorial board.

"What communally the group articulated a few times was, 'We want to do the same thing for water that's been done on the energy front," Stanbro said. "And it's tough, because people don't pay as much for water, they don't see that sky-high bill every month come in. It's underground, you don't see it until you turn the tap."

The goal also is not codified as a statutory mandate, as is the HCEI energy target. The hope is that an overarching law won't be required, especially after the cautionary tale from California. The recent drought there drew down a drastic state response of 25

percent mandatory water use cuts and resulted in economic damage to the state topping \$50 billion.

The intent of the Fresh Water Council is to find enough common ground around the critical nature of water security to accomplish the goal without the force of a mandate.

Tim Johns, who chairs the council, is chief consumer officer of the Hawaii Medical Service Association. But his expertise on this issue derives from three years as director of protection with The Nature Conservancy of Hawaii and, in 1998, seven months as head of the state Commission on Water Resource Management, responsible for administering and implementing the state Water Code.

Various agencies each have water resource management as its mission, Johns said, but the job won't get done until all of them come out of their separate "silos" to work collaboratively. These include the Honolulu Board of Water Supply and its neighbor island counterparts; the U.S. Geological Survey and the state water commission.

"There are multiple roles that the different agencies and players can play," he said. "If you think about the ground rules and how those agencies operate, sometimes it doesn't necessarily lend itself to consensus building. It's set up in a lot of ways to have conflict, and then resolve conflict in a way that's a contested case hearing, or litigation.

"I think the thinking behind this group and the reason I wanted to join it is because it provided another model for policy making, long-term decisionmaking," Johns added.

The initiative favors actions that follow three pathways toward water security. Recharging the aquifer through better land management should yield 30 percent of the additional fresh water, with another 30 percent anticipated from water reuse, involving scattered water treatment and retention facilities.

Conservation efforts that will save more than 40 million gallons daily by 2030 is seen as producing the remaining 40 percent.

There are numbers attached to these activities, as well:

- >> Water reuse is to be increased by 125 percent by 2030, roughly 30 million gallons per day. Lowering barriers to water reuse in residential, industrial and agricultural developments is seen as key. This means increasing reuse of so-called "gray water" after it's run through washing machines, showers or sinks, for example. Currently only 13 percent of wastewater is reused in Hawaii.
- >> The mission of improving aquifer recharge is to actively protect 25 percent of the state's watershed forest by 2030, a goal that will be enabled through various partnerships that can work to preserve up to 211,000 acres. Recharge also is enhanced by increasing storm-water capture, preserving reservoir systems and policies that, for instance, encourage retention basins.
- >> The council will promote practices and policies leading to a 15 percent drop in per

capita water use by the target date, as well. Promoting leak-detection systems, improving agricul- tural water efficiency and reducing the use of potable water on landscaping areas are among the methods proposed.

Officials acknowledged that agencies do pursue similar strategies of water management, but making the work collaborative will compound the benefits because it will be coordinated, Johns said.

"That's why we had the players we had at the table," he said. "The idea was to survey the universe, see where the gaps are. ... You're going to serve as a catalyst in some areas, support others. But it was never to be duplicative."

"The challenge is so daunting," said Barry Usagawa, program administrator for the Board of Water Supply's Water Resources Division. "We're just one of the users. There are other users of the aquifer, and surface water as well ... agriculture, military and other private users.

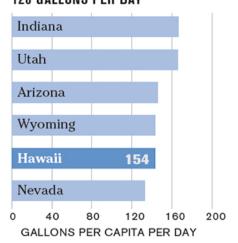
"While we have a conservation program and watershed program, it really needs to be collaborative," Usagawa added. "That's why it's appealing to have a statewide goal. We'd be consistent across the state."

CONSERVE

Among the states, Hawaii ranks among the highest in terms of per-capita use of water. The council's goal is to reduce that number by 15 percent by 2030, with incentives for using non-potable water for landscaping, leak detection systems, more efficient agricultural methods and education and new technologies.

Goal: 40 million gallons saved per day.

STATES THAT USE MORE THAN 120 GALLONS PER DAY



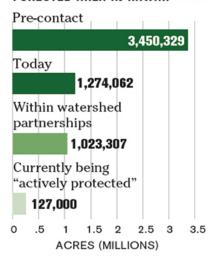
Source: Wai Maoli: Hawaii Water Initiative

RECHARGE

Recharging the state's watersheds, located in forested areas that have shrunk over the years, would require increasing the amount of protected forests, as well as increasing storm water capture and protecting reservoirs.

Goal: 30 million gallons saved per day.

FORESTED AREA IN HAWAII



REUSE

Recovering and recycling wastewate could allow water otherwise dumped i the ocean to be repurposed for agricultural irrigatic industrial uses or landscaping.

Goal: 30 million gallons saved per d

WASTEWATER REUSE In Hawaii in 2013



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