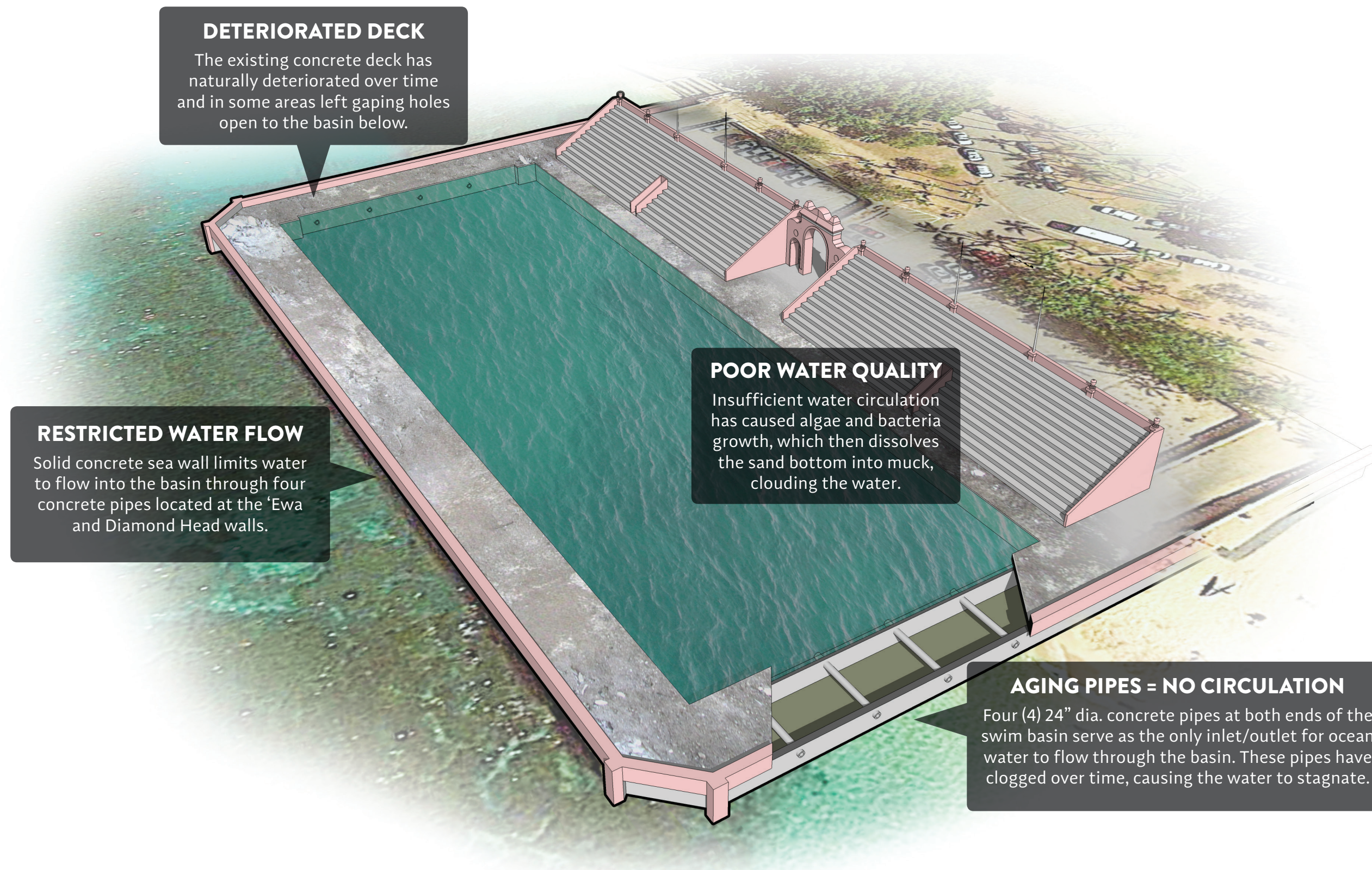




DETERIORATED DECK

The existing concrete deck has naturally deteriorated over time and in some areas left gaping holes open to the basin below.

RESTRICTED WATER FLOW

Solid concrete sea wall limits water to flow into the basin through four concrete pipes located at the 'Ewa and Diamond Head walls.

POOR WATER QUALITY

Insufficient water circulation has caused algae and bacteria growth, which then dissolves the sand bottom into muck, clouding the water.

AGING PIPES = NO CIRCULATION

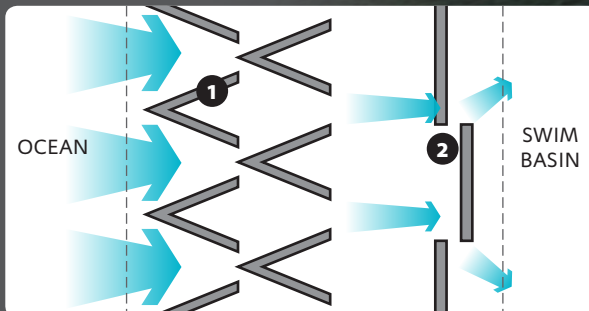
Four (4) 24" dia. concrete pipes at both ends of the swim basin serve as the only inlet/outlet for ocean water to flow through the basin. These pipes have clogged over time, causing the water to stagnate.

MODERNIZED DECK

The existing deck will be re-built with a new high-performance concrete that offers better strength and durability.

MORE WATER IN

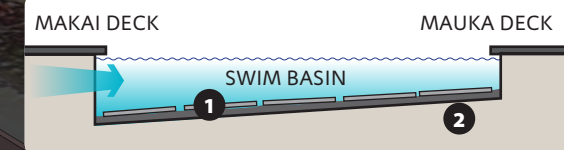
Staggered rows of new concrete chevrons and walls allows ocean wave energy to fully replace water in the swim basin an estimated six times per day. As a result, water quality in the Natatorium will be akin to ambient coastal waters.



1. Angle and positioning of the concrete chevrons will allow water to flow into the swim basin and restrict water flowing out.
2. For safety, inlet openings between the concrete walls to be a maximum of 6 inches. Although not necessary, screens can be considered for added safety.

KEEP IT CLEAR, KEEP IT SAFE

To ensure safety, the swim basin will be dredged and new high-performance concrete slabs placed over gravel at the bottom of the basin. This will prevent build-up of organic matter and permit lifeguards to see the bottom at all times.



1. Modern high-performing concrete slabs over gravel
2. Re-grade basin bottom creating a shallow end to make entry more accessible for children, elderly, and handicapped.

Steel grates provide access below the deck

MORE WATER OUT

Openings at both Diamond Head and 'Ewa corners improve circulation. Openings to be covered with metal screens for safety. Locating the outflow nearer to the intake will help to preserve the shoreline at Kaimana Beach



National Trust for
Historic Preservation



WAIKĪKĪ WAR MEMORIAL NATATORIUM SWIM BASIN REHABILITATION CONCEPT

ILLUSTRATIVE RENDERING BASED ON PRELIMINARY ENGINEERING BY HANS KROCK, PH.D., P.E., FOR THE NATIONAL TRUST FOR HISTORIC PRESERVATION
OCTOBER 2016

DESIGN
CONCEPT

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