Change on the Ground in 2019

**Connects**
People to Estuaries

- 1 million+ Acres of natural classrooms & living laboratories with
- 29 Interpretive Centers

**Prepares**
the Next Generation

- 93,916 Students take learning out of the abstract & into the outdoors
- 4,784 Teachers are trained in the estuary & supported in the classroom
- ESTUARY SCIENCE
- LOCAL DATA
- LAB WORK
- FIELD INVESTIGATION
- SKILLS BUILT
  - Observation
  - Asking research questions
  - Problem solving
  - Data driven decision making

**Improves**
the Environment

- 13,704 Citizens are trained & inspired to protect their coasts & estuaries
- 29 Research Reserve Educators lead programs that foster coastal stewardship in communities in 23 states

**Volunteer Actions**

- Protect wildlife
- Monitor water quality
- Plant native species
- Clean up the coasts

Creating value through education
25,934 volunteer hours = $640,310*

*Value of a volunteer hour is calculated at $24.69 based on data from the Independent Sector.

coast.noaa.gov/estuaries
HE‘EIA Research Reserve
Education is Change on the Ground

Learning by Doing
Ma ka hana ka ‘ike - the learning is in the doing. At He‘eia National Estuarine Research Reserve, students from Kindergarten through graduate school learn about wetland restoration, Hawaiian aquaculture systems, coral reef ecology, and more in the most authentic way possible--by doing it themselves. Whether they come for a few hours or participate in a months-long summer internship, all visiting students participate in the hands-on work of restoration of the estuary and research into the best ways to manage He‘eia's unique ecosystems.

Students and volunteers contribute countless hours moving rocks, clearing weeds, and planting native plants, but they often cite the most difficult tasks as the most memorable and rewarding. This year one of the educators at the Reserve created a way for even the smallest hands to participate. By purchasing miniature buckets he was able to allow enthusiastic preschoolers to help move rocks to rebuild the 800-year old fishpond wall. The result? In the words of one proud preschooler, "I helped build this with my mom."

Teachers on the Estuaries... Online
The Reserve's professional development program for teachers got started with a bang this year, kicking off a year-long series. Fifteen educators from local elementary schools and non-profit outdoor education organizations came together for two full days to learn about the He‘eia watershed and experiential learning through traditional Hawaiian observation practices, night reef exploration, and a watershed-wide scavenger hunt. Then came the pandemic. Without missing a beat, the next two trainings took place online. Having already formed a tightly knit learning community, it wasn’t hard for the classroom teachers and place-based educators to come up with ways to collaborate even under stay at home orders. In the coming weeks, the Reserve will support this innovative group in producing a diverse array of distance learning resources for local students, from virtual field trips to cooking shows using ingredients from the Reserve.

"I’ve already applied some of what I learned in the professional development. I’m excited for the growth to come."
Kanaloa Bishop
Education Specialist
Paepae o He‘eia

An amazing experience... What a wonderful start to an adventure of cultural immersion. I vow to do my best to honor and perpetuate Hawaiian values in my classroom and in my life."
Elizabeth S.
Science Teacher
‘Āhuimanu Elementary

Hawaii’s He‘eia Reserve is one of 29 sites in the National Estuarine Research Reserve System. Each site is a state federal partnership that combines research, monitoring, and education to advance the understanding and management of estuarine environments.