

KIDS for the BAY

A Project of Earth Island Institute
1771 Alcatraz Avenue, Berkeley, CA 94703
kidsforthebay.org
Mandi Billinge, Executive Director/Founder

June 23, 2026

Maureen Parkes
Staff for Fish and Wildlife Committee
Contra Costa County Fish and Wildlife Committee
30 Muir Road
Martinez, CA 94553

Dear Maureen,

KIDS for the BAY has completed all activities and expenditures of grant funds for the grant awarded in 2025 to support our Watershed Action Program (WAP) in under-resourced schools in Contra Costa County. Thanks to funding from the Contra Costa County Fish and Wildlife Committee (CCCFW), students, teachers, and parent/guardian chaperones have enjoyed exploring, learning about and cleaning up local creek, bay and delta habitats.

I hope you will enjoy reading our program highlights. I have enclosed our final narrative report, along with the following attachments:

- The receipts spreadsheet (invoice) and a combined pdf document with the field trip bus invoices for the 2025-2026 school year
- A photo document of watershed lessons, field trips and Action Project highlights.

If you have any questions about the enclosed report, photo document or invoices, please feel free to contact me.

Thank you for supporting engaging, hands-on learning experiences at local watershed habitats for our KIDS for the BAY students, teachers and families, and the improvement of wildlife habitats in Contra Costa County.

Sincerely,

Mandi Billinge
Executive Director / Founder

Everyone is an Environmentalist!

KIDS for the BAY

Final Report to Contra Costa County Fish and Wildlife Committee
June 2026

KIDS for the BAY is pleased to share the following highlights from our Watershed Action Program (WAP) in Contra Costa County schools during the 2025-2026 school year. The program engaged **297 students, their family members, and eleven teachers** from under-resourced schools how to care for and learn from their local watershed. Students cleaned up trash pollution from their school neighborhoods and from wildlife habitats, and prevented this pollution from entering the watershed through storm drains. Students also learned about the scientific principles of fish and wildlife conservation, and helped to improve the health of fish and wildlife habitats in Contra Costa County through a variety of Environmental Action Projects.

Our young Environmentalists accomplished the following projects:

- **Two hundred ninety-seven KftB student leaders** created and shared informational posters, videos and environmental pledges at special presentation events to teach their families and school communities about the importance of protecting the local watershed and the San Francisco Bay to keep these environments clean and healthy. They also made and distributed green pesticides, and led safe bay and delta fish cooking presentations to teach their families and peer students how to reduce intake of toxins and protect their health.
- KftB students cleaned up **87.5 gallons of trash from their local watershed environments, including school campuses and neighborhoods, local parks, creek, bay and delta habitats.**
- KftB student environmentalists **completed 664 environmental stewardship hours**, cleaning up and protecting the environment we all share, and educating others about protecting the environment.

Participating Schools in the 2025-2026 School Year

School Name	City	Teacher Name/ Grade Level	Number of Students	Action Project	Field Trip Location
Lupine Hills Elementary School	Hercules	Olivia Benavidez <i>Fifth Grade</i>	26	Waste Reduction Assembly	Keller Beach
		Jennifer Inglish <i>Fifth Grade</i>	30		
Harding Elementary School	El Cerrito	Sarah Chang <i>Fifth Grade</i>	29	Creek Restoration	Berkeley Marina
		Matthew Jones <i>Fifth Grade</i>	30	Ocean Acidification	
Foothill Elementary School	Pittsburg	Andrea Llamas <i>Fifth Grade</i>	26	Safe Delta Cooking & Fishing	Martinez Marina
		Rosa Mana-Ramirez <i>Fifth Grade</i>	30		

Belshaw Elementary School	Antioch	James Andrews <i>Third Grade</i>	35	Safe Delta Cooking & Fishing	Big Break Regional Shoreline
		Aimee Macomber <i>Third Grade</i>	35		
Dover Elementary School	San Pablo	Anne McCarthy <i>Third & Fourth Grade</i>	15	Walking Field Trip	Keller Beach
		Imelda Lopez <i>Third Grade</i>	20		
		Lorena Melero <i>Third Grade</i>	21		

Highlights from Watershed Lessons

Watershed Scavenger Hunt

After engaging in hands-on, hands-on learning experiences in the classroom to help them understand what a watershed is and how watersheds connect land and resources, students at Foothill Elementary in Pittsburg couldn't wait to explore the watershed environment on their school campus. They participated in a scavenger hunt to discover biotic and abiotic elements of their local watershed. Using their senses, observation skills and curiosity, students worked together to explore and record observations about their surroundings. "We found worms, ants and butterflies! We think our watershed is healthy because animals have a place to live and grow," said Santiago. They showed an increased awareness of the watershed environment, including the presence of storm drains and potential signs of pollution. After gathering evidence about the health of the watershed environment, students shared their findings. "Our watershed is both healthy and unhealthy, as it has a lot of plastic pollution, but also lots of trees and insects, which are signs the watershed is healthy," said Neymar.

Bay and Estuary Studies

Belshaw Elementary students were now ready to apply their theoretical understanding of our local watershed to build three-dimensional models of the San Francisco Bay estuary watershed. The young scientists carefully constructed model representations of real-life bridges and islands with clay. After adding their clay landmarks to their models, one student from each group assumed the role of Zoologist and placed small, model animals into the appropriate estuary habitats. "This is a sea star, and it lives in the Pacific Ocean!" said Justice. After completing their models, students poured yellow-dyed freshwater into the rivers and blue-dyed saltwater into the ocean, and observed how the different types of water mixed together. This activity helped students discover the brackish water composition of the San Francisco Bay estuary. "What is the special name we use for water that is a mix of saltwater and freshwater?" asked KftB Educator Libby Kirk. "Brackish water!" responded the class. "In our model, the brackish water started to form right by the Richmond Bridge," observed Harmony.

Students added drops of red food dye, representing pollution, into each of their models. The young Environmentalists gently shook their tubs from side to side to simulate real-life winds and tides. "The pollution is spreading around the bay so quickly!" observed Camilo. "Our animals can't escape from the pollution!" said Emiliano. "The color of the water changed from yellow, green, and blue to all brown," shared Ligsar. When Ms. Libby asked the class, "Do you think this happens in real life? Does pollution move around or does it stay in one place?" Amanda answered, "In real life, pollution can move around the whole watershed!"

Reducing Trash and Waste in the Watershed

Focusing specifically on non-point source pollution, including trash pollution and oil from automobile traffic, students at Harding Elementary in El Cerrito studied the path of stormwater through their watershed. The young Environmentalists examined the critical role the storm drain system plays in transporting stormwater and pollutants. They learned how the system operates by channeling rain and contaminants from streets, to creeks, the bay and subsequently to the vast Pacific Ocean. "Storm drains are helpful when our streets flood, but they also carry trash and other types of pollution!" said Daniela. The students discovered that, unlike the sanitary sewer system, water in the storm drain system does not get cleaned at a treatment

center before entering our natural waterways. All the young Environmentalists agreed that preventing pollution from entering the watershed environment at the source is a much better option than cleaning it up after the fact.

“Why is pollution harmful?” asked Ms. Libby. “We shouldn’t litter because trash pollution can get into the storm drains when it rains, and that polluted water ends up in the bay!” Kayla noted. “Sometimes animals think plastic is food, and they eat it. Eating plastic can make the animals sick, and they might die,” shared Fantasia. “Plastic pollution also breaks down into microplastics! Because they are small, microplastics can get into our bodies really easily. It’s important to learn about sad things like plastic pollution. If we don’t know about a problem, how can we ever find a solution?” said London.

School Campus Trash Cleanup

After discussing the problem of plastic pollution and investigating its harmful impacts on wildlife, the young Environmentalists from Dover Elementary in San Pablo capitalized on their motivation to take immediate action to protect watershed health and biodiversity by participating in a local watershed cleanup. The young Environmentalists made initial predictions of the types and amounts of pollution they would encounter. “I think we will find a lot of trash on the schoolyard because everyone eats their lunch and the snack wrappers blow away in the wind,” predicted Christina. Students worked in groups to catalog and collect the litter they found. With buckets and tongs in hand, the young Environmentalists raced across the park in all directions, calling out exciting trash finds, or pointing out trash hotspots. “There is so much trash all over the soccer field! I even found trash inside the soccer goals!” observed Max. “The storm drains are caked with plastic. I see chip bags and wrappers down there! We need to clean up litter before it gets into the storm drain, or else it will travel to other habitats and pollute our water!” said Nyla. They were proud to decrease the amount of trash pollution entering our aquatic ecosystems. “I’m so shocked we found 178 pieces of trash and collected all of that in a short amount of time!” said Ava.

Investigating Bay Organisms and Adaptations

After learning about the importance of waste reduction and taking action to clean up the watershed, students couldn’t wait to learn more about the organisms and ecosystems that depend on a clean and healthy San Francisco Bay. To warm up their investigation skills, the young scientists at Belshaw Elementary in Antioch explored samples of bull kelp rehydrated in water and dried nori seaweed. “The sliminess of the kelp reminds me of aloe vera,” said Princess. “I can’t tear the kelp, but the nori feels really fragile,” observed Tae. “The nori seaweed smells like salt, and it looks like green paper,” observed Valentina. “The bull kelp smells like the ocean!” said Camilo. Students deepened their understanding of bull kelp anatomy and adaptations by doing some fun Ploga (play-yoga) movements to represent seaweed adaptations, including holdfast, floats and blades.

Students at Foothill Elementary in Pittsburg used their senses and observational skills to investigate real striped bass fish and Dungeness crab specimens from the San Francisco Bay. “The striped bass have camouflage and good defense! They have sharp dorsal fins,” observed Sayde. The class made complex connections between how bay organisms’ unique adaptations can determine their place in the food web and their relationships with other organisms. “Striped bass are predators because they have sharp teeth for catching and eating prey. They are also prey, because they have defensive adaptations like spiky dorsal fins!” said Sukhpreet. “I think people are part of food webs, too, because we eat fish from the San Francisco Bay!” said Natalia.

Assessing Watershed Health

Direct engagement with the environment and participation in hands-on science activities in the classroom and in the outdoors gave the young Environmentalists at Belshaw Elementary in Antioch the skillset to translate their observations into meaningful evaluations. As watershed detectives, students explored their school campus once again, categorizing features of the environment as healthy, unhealthy, or both, and making arguments to support their claims. “I think the trees that are all around us are indicators of a healthy watershed. Trees can provide a habitat for other animals to live,” said Vanessa. “The plastic bottles and chip wrappers that we found are all indicators of an unhealthy watershed!” said Maynor. After sharing their observations, the class agreed that the large amounts of plastic trash pollution on their school campus was the most prominent indicator of poor watershed health.

Back in the classroom, Ms. Libby asked the Belshaw Elementary students to work in their table groups to brainstorm actions to reduce the amount of plastic trash pollution in their watershed and address its harmful impacts. “We can reduce the amount of plastic water bottles that we use by bringing reusable water bottles to school!” said Amanda. “I think we should throw away

our snack wrappers properly. We need to make sure they go into the trash instead of on the ground,” said Jayshon. We can boycott plastic because plastic pollution hurts fish and other wildlife!” added Justice.

Highlights from Environmental Action Projects

Environmental Action Projects provide students and teachers with the opportunity to become leaders in their schools and families and have a positive impact on the health of their watershed.

Safe Bay-Delta Fishing and Cooking: Pittsburg Students Serve Up Science

Is the fish we catch from the San Francisco Bay-Delta safe to eat? Students from Foothill Elementary in Pittsburg led a Safe Bay-Delta Fishing and Cooking Demonstration for their families to address the problem of toxic bioaccumulation in bay food webs. In a cooking show-style presentation, students cooked rockfish tostadas and taught their families how to safely choose and prepare fish caught from the bay-delta to limit the intake of toxins. “When pollution gets into a food chain, it travels up the food chain. The concentration of toxins increases as it goes up the food chain. Since we humans are at the top of food chains, it is really important we are aware of which fish are safe to eat!” said Mia. This demonstration is especially relevant for students and families in Pittsburg, a community where the delta is a source of food for many families. “I think the parents liked our presentation a lot. I’m glad we got to teach them what we’ve learned,” said Natalia. [Read the Full Story on our Blog Page!](#)

Schoolwide Waste Reduction Assembly

After a few weeks of diligent rehearsals, young Environmental Leaders at Lupine Hills in Hercules couldn’t wait to perform a Waste Reduction Assembly to educate their peers, parents/guardians, and younger students about plastic pollution and waste reduction! “I’m really excited, but also a little bit nervous,” Simran shared. News Anchor Colin kicked off the assembly with a loud and confident voice that caught the audience’s attention. The audience was eager to learn about how waste reduction can keep their watershed healthy. Zoe, playing a sea turtle, taught the audience how plastic pollution can be mistaken for food by marine animals. Holding up a plastic bag mistaken for a jelly fish she exclaimed, “Plastic bags don’t taste very good, that’s for sure.” Next, the young Environmentalists taught the audience about the 5 R’s (Refuse, Reuse, Reduce, Rot, and Recycle). Students provided helpful tools and waste-reduction practices to prevent pollution from entering our environment at the source. Julissa held up her poster depicting the waste-reduction method, Rot, and said, “Rot means compost. When you put food scraps into the compost instead of the trash, they rot and become rich soil to grow new foods, which also reduces landfill and ocean waste.”

Students reflected on their performance. “This assembly wasn’t only for us. It’s good that we can be leaders and show the little kids how to keep the environment clean and safe, and how to care for the Earth,” said Vihan. Colin’s Mom shared, “My son is a natural born actor and this program has given him an outlet to shine. He’s playing the News Anchor, and he’s so excited he has a big speaking part. We practiced all week and he even wanted to get a suit to wear for the role. He’s such a comedian, and you can tell he loves to perform. He has really enjoyed his KIDS for the BAY program, he comes home and tells me all about what he is learning.” The Waste Reduction Assembly not only gives students the opportunity to spread environmental awareness, but allows our young Environmentalists to practice their speaking skills, build their confidence, and become Environmental Leaders in their communities.

Healthy Atmosphere, Healthy Ocean: Studying the Impacts of Ocean Acidification

Students at Piedmont Elementary School in Oakland completed an Ocean Acidification Action Project to learn about the impacts of acidification on marine organisms, and how to prevent ocean acidification by conserving energy and reducing carbon dioxide pollution. Through applied, hands-on science, the young Environmentalists discovered firsthand the importance of keeping our oceans healthy, and the consequences of our reliance on energy from fossil fuels. This Action Project empowered our young scientists to take action to protect the delicate balance of the marine food web and make behavior changes to reduce their carbon footprints. To begin, our Oakland Environmentalists launched into important discussions about what our ocean and marine food webs provide for us, and the many ways humans and wildlife depend on the ocean for survival. “Salmon migrate to freshwaters to breed, and then return to the ocean. Our impact on the ocean would affect the salmon population, which would affect woodland creatures, like bears. If we keep our oceans healthy, we also keep other ecosystems healthy,” said Amiyah.

Students learned that CO₂ can be absorbed into the ocean, making it more acidic. “When the ocean is more acidic, it dissolves calcium carbonate (CaCO₃), the special material that organisms need to build their shells,” explained Ms. Neda. “Can you think of any marine animals that have a hard shell?” Remembering what she had learned about animal adaptations in her previous

KftB lesson, Tia replied, “Crabs and other animals need shells for shelter and protection!” “If CO₂ pollution changes what the ocean is like, animals can’t build their shells, and this makes it harder for them to survive,” concluded Cristiyonna. Students examined a diagram depicting food chain relationships between bay/ocean organisms, including plankton, oysters, red rock crabs and pacific halibut. “Which animals in this food chain will be affected by ocean acidification?” asked Ms. Neda. “The red rock crab, the dungeness crab, the limpet and the oysters,” Liya shared. “What would happen if these organisms disappeared from our food chain?” asked Ms. Neda. “It’s a chain reaction. If something is wrong with the crabs and snails, it will affect the whole food chain,” shared Brielle.

Students built a Tiny Ocean to observe the process of ocean acidification with their own eyes! First, students observed a diagram depicting the pH scale and discussed the difference between an acid and a base. Next, students took turns adding drops of Bromothymol blue to a plastic cup with a pipette. “If it turns yellow, it’s acidic and if it turns blue, it’s basic,” explained Orlando. Students added baking soda to a small paper cup taped to the rim of the larger, plastic cup containing the bromothymol solution. Before proceeding to the next step of the experiment, students predicted what would happen. “I think mixing vinegar and baking soda will make carbon dioxide,” predicted De’Niyah. “If the water turns yellow, it means there is too much acid in our Tiny Ocean!” suggested Lily.

Students carefully poured vinegar into the small paper cup, where it mixed with the baking soda and began to emit carbon dioxide gas. “Our water has tiny specks of green on the surface,” said Liya. “I wonder if our water will turn green faster if we swirl the solution,” pondered Karl. He tested this hypothesis by gently swirling the contents in the plastic cup. “We were right! At first, there were a few green spots on the surface of the water, but after we swirled the cup, the whole solution turned green!” said Karl. “Where is the change taking place?” asked Ms. Neda. “The surface, sides and edges,” observed Clover. “The surface and the top layers of the ocean will get acidic first!” concluded De’Niyah.

In this exciting, hands-on experiment, our young Environmentalists learned about the importance of reducing carbon dioxide pollution to keep our fish and wildlife healthy, and observed the rippling impacts that ocean acidification can have on entire marine food webs and the communities and ecosystems that depend on them. [Read the Full Story on Our Blog Page!](#)

Highlights from Field Trips

Bird Watching at Big Break Regional Shoreline

Students from Belshaw Elementary School in Antioch couldn’t wait to investigate the local wildlife at Big Break Regional Shoreline! Students used binoculars and KftB Bird Guides to identify and observe the bird species that live, hunt and reproduce in this special delta habitat. Our young scientists carefully looked for characteristics such as unique markings, beak shape, wing shape, and feet color, to help them identify local birds. “We saw a Caspian Tern!” exclaimed Samantha. “We saw Clark’s grebes, great egrets, and black-necked stilts!” added Niyati. Tay spotted a large heron wading in the marshy shallows of the San Joaquin River. “That’s a great blue heron! I think he is hunting for fish!” he exclaimed.

Investigating Plankton at Martinez Marina

Students at Foothill Elementary in Pittsburg explored and cleaned up the delta habitat at Martinez Marina. After learning that they would be using field microscopes to study and observe plankton like scientists, students shared what they learned about plankton in their previous KftB lessons. “There are different kinds of plankton. Some plankton make their own food using photosynthesis!” shared Max. “I know there are some plankton that eat other organisms,” added Brayden. Plankton make oxygen that we breathe. All wildlife need plankton to survive,” said Sofia. Students examined slides containing a few drops of water from a sample collected from the Carquinez Strait. “I see a bunch of tiny little animals moving around. It’s amazing that one drop of water can hold so much life!” exclaimed Khalil. Using their observational skills, the young scientists made notes in their field journals and sketched the different types of phytoplankton and zooplankton they found. They were thrilled to meet the special microorganisms that make up the foundations of the ecosystems we depend on! “I see a barnacle nauplius!” said Andrea. “We found two barnacle nauplii and a crab larva! These plankton are the larval stage of adult organisms!” said Sebastian. “Most of the plankton we found were zooplankton,” concluded Ricardo.

Discovering the Rocky Shore Habitat at Keller Beach

Students from Dover Elementary couldn’t wait to explore the intertidal rocky shoreline habitat at Keller Beach. The young Environmentalists predicted the types of organisms they would find in this special habitat. “I think we will see crabs and barnacles,” said Aiden. “I think I will find lots of blue mussels,” shared Cristiano. “I think we will see seagulls, seaweed and

humans!” shared Maria. KftB students reviewed the different organisms they might encounter on the rocky shore. “Mussels are bivalves, which means they have two halves!” Omar said. Students learned that oysters, mussels, clams and snails produce pearls as a defense mechanism against irritants that get into their shells.

Students used their rock radars to identify rocks small enough to lift. They discovered a variety of rocky shore organisms, including green shore crabs, bent-nosed clams and beach hoppers. “I have never held a crab! It is so tickly,” exclaimed Joan. “I see something! Look, it’s so small. I think it’s a beach hopper,” observed Bleslie. Students discussed the unique adaptations that rocky shore organisms use to help them survive in this special aquatic habitat. “Crabs shed their exoskeletons to help them grow! The exoskeletons look paler than the living crabs,” observed Cruz. There were lots of different types of seaweed growing on the rocks. The sea lettuce is really slippery!” said Lionel. “I found green and purple shore crabs, and lots of crab exoskeletons!” remarked Jimena. After carefully handling and investigating the rocky shore organisms, the young Environmentalists returned the organisms safely back to the exact place they were found. They discussed the unique adaptations that rocky shore organisms use to help them survive in this special aquatic habitat. “Crabs shed their exoskeletons to help them grow! The exoskeletons look paler than the living crabs,” observed Joseph. “The mussels have adapted to hold on tight to the rocks when the strong tides come,” said Nathan, gesturing towards the part of the shore where he had discovered a bed of blue mussels.

Outcomes

The 2025-2026 WAP in El Cerrito, Hercules, Antioch and Pittsburg had the following outcomes:

- **Two hundred ninety-seven students** increased their knowledge of watershed science in the classroom and in the field and became stewards of their local watershed
- **Two hundred ninety-seven parents/family members** increased their understanding of their watershed environment and learned how to reduce stormwater pollution through take-home interviews and making environmental pledges with their student Environmentalists
- **Eleven partner teachers** increased their confidence in using the local watershed as an educational resource and in empowering students to become environmental stewards
- The WAP was integrated into the curricula and culture of **four partner schools** and engaged school principals, teachers, students, and their families in environmental science education and stewardship.

This program met two requirements of California Fish and Game Code Section 13103:

- *Section 13103a.* The WAP planned curriculum provided 241 students with an opportunity to learn about the scientific principles of fish and wildlife conservation.
- *Section 13103e.* Through trash cleanups on field trips and Environmental Action and stewardship projects, eight classes of students improved the health of fish and wildlife habitats in Contra Costa County.



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Everyone Is an Environmentalist!

Watershed Action Program

Contra Costa County Fish &
Wildlife Commission



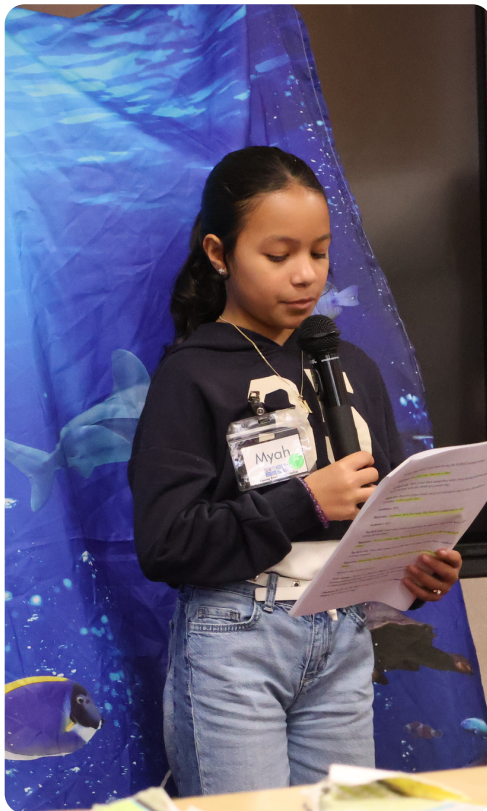


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This table MUST be completed with your grant reimbursement request. Please submit as an Excel spreadsheet. Tape receipts to paper and number each page in the upper right hand corner.

Grantee Name: **KIDS for the BAY, a Project of Earth Island Institute**

Name of Project: **Watershed Action Program**

Contact Name Phone and Email if there are questions about this: **Mandi Billinge, mandi@kidsforthebay.org**

Date Submitted: June 23, 2026

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not to exceed 8,400