



# Fish & Wildlife *News*



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(COURTNEY CELLEY/  
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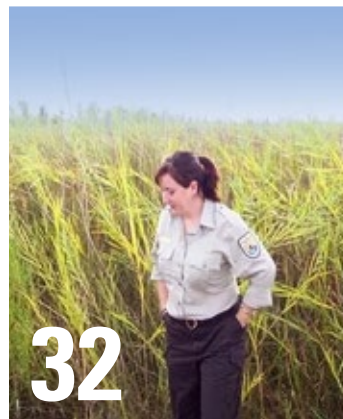
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Martha Williams,  
Director

# Service Mission Leads to Environmental Justice

The mission of the U.S. Fish and Wildlife Service is “working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.”

For many people, the wildlife conservation portion of our mission statement is of primary importance. Given that we are the only agency in the federal government whose primary responsibility is the conservation and management of fish, wildlife, plants and their habitats, that is understandable.

However, the words “for the continuing benefit of the American people” are just as important.

We know that nature, and access to our treasured outdoor resources, are essential to the health, well-being, and prosperity of families and communities across America.

Unfortunately, access to the benefits of engaging with and spending time in the natural world is not spread equally.

Environmental justice is about ensuring equitable access of all people to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices. It also requires the meaningful involvement of all people.

Federal agencies, including the U.S. Fish and Wildlife Service, are prioritizing environmental justice efforts to proactively engage communities. Fulfilling our mission means instilling the principles of environmental justice into our work in order to consider and meet the needs of present and future generations. We can, and often already do, just that: We conserve wildlife while addressing impacts for the betterment of all people. Read through many of the stories in this magazine. From Alaska to Florida and spots in between, we are doing strong conservation work that also supports communities with environmental justice concerns.

“Support” is a key word in that sentence. We must ask local communities what they need and how we can help them achieve it.

Every day we struggle with conservation challenges where failure would mean the extinction of a species, and we often come up with new ideas to save them. We must apply that kind of innovative thinking to environmental justice.

I think of Darrell Kundargi, who was named the Service’s 2024 Diversity and Inclusion Champion. In a profile (p. 57), Darrell explains that he sees it “as my responsibility to uphold the Service’s value of innovation to find a way to connect [a community priority] to the refuge purpose and to our agency’s mission.”

What Darrell explains in theory, you can read about Valle de Oro National Wildlife Refuge doing in practice (p. 12).

The Mountain View neighborhood in Albuquerque, New Mexico, deals with elevated rates of cancer and respiratory conditions and needs air quality data. Through the community- and partner-initiated Environmental Justice Air Monitoring Network initiative, Valle de Oro is supporting this need.

The refuge will also use the data to protect wildlife, plants, staff, and visitors.

There is much more about how we are working toward environmental justice in this issue of *Fish & Wildlife News*, and other stories that didn’t make the magazine.

We released the vision of the U.S. Fish and Wildlife Service earlier in 2024, which makes clear our support for environmental justice: We envision a future where people and nature thrive in an interconnected way and where every community feels part of and committed to the natural world around us.

The Service is restoring and protecting a healthy environment where all people live, play, work, learn, and grow. It’s a matter of justice and a fundamental duty that we uphold.

We aren’t there yet, but as you can see, we are working toward it. □

## Informed Mitigation Hatches a Win for Condors

Situated along the foothills of the Sierra Nevada and Tehachapi mountains in California, the Tehachapi Wind Resource Area is the largest producer of wind power in the state. Along with all those turbines comes the risk of avian mortalities, including the potential loss of endangered California condors.

Staff and managers at our Palm Springs Fish and Wildlife Office reached out to the companies operating in the Tehachapi Wind Resource Area to find a path forward to address potential incidental take of condors while providing the operators with regulatory certainty. Under section 10 of the Endangered Species Act, non-federal landowners can receive a permit to take a threatened or endangered species while conducting otherwise lawful activities.

The first company to move forward with an incidental take permit request for California condors was Avangrid Renewables, which operates the Manzana Wind Power project. We and Avangrid put a lot of effort into designing the risk minimization and mitigation programs, including the development of a population viability analysis with a team of researchers to inform the amount of mitigation needed. In 2021, we issued an incidental take permit for Avangrid’s Manzana Wind Power Project, covering the take of up to two free-flying California condors and two associated eggs or chicks over the 30-year permit term. The mitigation program included funding for a full-time

employee at the Oregon Zoo for the captive rearing of six condors for release into the wild to offset the permitted take over the 30 years and monitoring to ensure plan compliance over the life of the permit.

The mitigation funding provided by Avangrid supported the Oregon Zoo’s captive breeding program in producing a total of 10 condors for release into the wild in 2022 and 2023 and two juvenile birds that will likely be at a releasable stage this coming fall. Assuming the number of condor mortalities at the project remains at (or below) the permitted amount over the next 27 years, then the anticipated take has been fully offset. The additional six captive reared birds are a net conservation benefit for condors above the mitigation requirement. Avangrid celebrated the successful partnership in a May 2024 news release.

“We are really pleased that all has gone to plan, and we appreciate everyone working on condor recovery that contributed to this effort,” says Peter Sanzenbacher, a biologist with our Palm Springs office and one of the leads for the permit process for the Manzana Wind Power project.

To date, there are no reports of condors killed at the Manzana Wind Power project (or any other wind project). The risk minimization program also continues to go according to plan. In 2023, the carcass management system reported one dead sheep in the permit area that was removed promptly by the rancher to avoid the risk



of condors feeding in proximity to turbines. Additionally, technology, used to establish a geofence, and a field observer have detected condors near the project, resulting in curtailment events when wind turbines were essentially stopped for a short time to reduce/eliminate the risk of a condor colliding with an operational turbine.

Now that Avangrid has completed their mitigation, the Los Angeles Department of Water and Power has taken up funding of the

full-time employee at the Oregon Zoo to assist with the condor captive breeding program for the next three years as mitigation for the condor incidental take permit that was issued in November 2023, for the operation of their Pine Tree Wind Farm.

Developing the mitigation strategy took time and effort; however, the extensive internal and external outreach and trust-building, including support from Kern County, resulted in a scientifically sound analysis of project impacts and appropriate mitigation. Building on this foundation for the Manzana Wind Power project, we issued a condor incidental take permit in June 2023 to the 24 wind energy companies that make up the Wind Energy Condor Action Team, further helping us shape a comprehensive plan for ensuring long-term conservation of condors is compatible with wind energy in the Tehachapi Wind Resource Area. □

JANE HENDRON, Office of Communications, Pacific Southwest Region



Avangrid’s Manzana Wind Power project in Kern County, California.  
(PHOTO BY MANZANA WIND, LLC)

## 100th Mexican Wolf Pup Fostered Into the Wild

Partners in Mexican wolf recovery have fostered the 100th pup into the wild, marking a major milestone.

The 100th pup and two of its siblings were fostered from the Living Desert Zoo & Gardens State Park in Carlsbad, New Mexico, into a wild den in Arizona on April 25, 2024.

This event kicked off the ninth year of Mexican wolf fostering. A record 27 Mexican wolf pups were fostered into wild dens this spring. Fostering is a proven method used by the Mexican Wolf Interagency Field Team to increase genetic diversity in the wild Mexican wolf population.

Fostering begins with selective breeding by the Saving Animals From Extinction (SAFE) program to produce genetically diverse pups for release into the wild. Within 14 days of whelping (being born), the SAFE-born pups are transported and mixed with similarly aged wild pups in the dens of wild Mexican wolf packs. Once all the pups are placed back into the wild den, the breeding female will spend the next several weeks caring for both the wild and SAFE-born pups. With the help of her pack mates, the pups will be raised with the skills and knowledge needed for a life in the wild.

Allison Greenleaf, biologist with the Mexican Wolf Recovery Program, was at both the first Mexican wolf fostering in 2014 and the 100th this year. "It's pretty neat to be a part of this major moment," says Greenleaf.



(Left) The 100th foster Mexican wolf pup is given a health check before being loaded into a carrier and transported to the wild as part of annual Mexican wolf fostering efforts. (PHOTO BY AISLINN MAESTAS/USFWS)

(Below) Biologists with the Mexican Wolf Interagency Field Team mix together captive-born and wild-born pups as part of annual foster events. (PHOTO BY MEXICAN WOLF INTERAGENCY FIELD TEAM)

The pups were fostered into a pack where the breeding male is a foster. Fostering has proven successful, with a minimum of 18 pups surviving to 2 years of age (from 83 fosters released between 2016 and 2022). The 2022 Mexican Wolf Recovery Plan calls for 22 released wolves to survive to breeding age to achieve recovery.

All wild and captive Mexican wolves in the United States and Mexico are descended from only seven founding individuals. The captive population of Mexican wolves has more genetic diversity than is currently represented in the wild. While the wild population has shown a healthy growth trajectory for more than a decade, continued releases from captivity are necessary to bolster the genetic health of the population. □

AISLINN MAESTAS, Office of Communications, Southwest Region



## The 1,000th Fish: Palisade High School's Endangered Fish Hatchery Releases Endangered Razorback Sucker into the Colorado River

On May 3, 2024, in collaboration with the Upper Colorado River Endangered Fish Recovery Program and the Palisade High School Endangered Fish Hatchery, we marked a very special day. For the fourth consecutive year, students, partners, and the community of Palisade, Colorado, released endangered razorback sucker into the fish's native habitat—the Colorado River. But what makes this batch of 350 fish so special? They were student-raised from the spawning to the release.

"It does take a village to raise a fish," world-renowned wildlife biologist and conservationist Jeff Corwin said at the event.

Added Anna Munoz, Mountain-Prairie Region Deputy Regional Director, "We can't support the future of conservation without the students that are surrounding me today."

Palisade High School Endangered Fish Hatchery provides students with hands-on learning on a wide array of aquaculture and fisheries science techniques and topics revolving around the conservation of Upper Colorado River fish.

The project began in 2015 when Palisade High School partnered with the Service and the Upper Colorado River Endangered Fish Recovery Program to plan and create the Palisade High School Endangered Fish Hatchery. This collaboration is unique since it is one of a small handful of endangered fish hatcheries in the United States operated by high school students and potentially the only non-salmonid



endangered fish partnership of its kind.

After three years of our employees spawning fish to deliver to the school, students got involved from the very beginning. Palisade High School Endangered Fish Hatchery technicians visited Ouray National Fish Hatchery to learn how to spawn razorbacks and have had a nearly 100% survival rate.

The razorback sucker has been hurt by the introduction of non-native sport fish that prey upon juvenile suckers.

(PHOTO BY USFWS)

The razorback sucker is an endangered species found only in the warm-water portions of the Colorado River basin. The fish made its way into the river and its tributaries 3 million to 5 million years ago. It's one of the largest



sucker species in North America, growing up to 3 feet in length. In 1979, the razorback sucker was protected as endangered under Colorado law, and by 1991, it was protected as federally endangered. Today, we and many partners (including Palisade High School) work together to restore self-sustaining populations through propagation and stocking.

### Release the Razorback

May 3 arrived, and it was time to release the hundreds of razorback sucker into the Colorado River, giving them a kiss goodbye and good luck. Before the festivities began, Corwin shared some remarks:

"I am so incredibly proud of the students at Palisade High School and their commitment, day in and day out, to environmental stewardship. No species is greater than another and saving this incredible fish is as important as saving a California condor, a bald eagle, an American alligator. And what I love about this program is that it provides significance to students where they get to immerse themselves in this life-changing experience. We have students here today that will become the next environmental leaders for years to come, and that's because of this incredible program." »

Two Palisade High School Endangered Fish Hatchery technicians kiss razorback sucker goodbye before releasing them into the Colorado River.

(PHOTO BY MIKAELA OLES/USFWS)

*Continued from previous page.*

Hundreds of partners and community members surrounded the boat launch eager to kiss a fish and send it on its journey. Each fish released from the Palisade High hatchery is given a PIT tag and an ID so that Ouray National Fish Hatchery can help track this batch's whereabouts and survival rate. Razorbacks from previous batches have been found in natural spawning areas, so it's possible they are reproducing and increasing wild populations to this day.

**The 1,000th Fish**

"Our goal for the program is to get these fish to a point where their population is at a state of sustainability," said Pat Steele, Palisade High School teacher and leader of the on-campus hatchery. "Today with the Palisade High School Endangered Fish Hatchery's 1,000th fish, we're a little bit closer to achieving that goal."

Steele released the 1,000th razorback sucker, named Steele. While it was bittersweet, releasing Steele marks history for the students and community of Palisade High. Good luck and swim on, Steele! □

MIKAELA OLES, Office of Communications, Mountain-Prairie Region.

**Taking Stock of Our Progress for Lake Trout**

The 95-foot Spencer F. Baird is once again docked at homeport after finishing over two months of distributing nearly 3 million lake trout into lakes Michigan and Huron, so it's a good time to take stock of the largest freshwater fishery restoration effort in the world.

Everyone involved—from five national fish hatcheries, three fish and wildlife conservation offices, the Midwest Fishery Center, the Baird crew, and our two sea lamprey control stations — is bringing us closer to our recovery goals year upon year. Together with our partners, we're helping the native top predator of the Great Lakes recover from a double whammy of decades past when it was devastated by overharvest and non-native sea lamprey.

Because of our partnerships, lake trout were restored in Lake Superior in the 1990s, and we're now seeing increasing numbers of wild fish in lakes Huron and Michigan, especially over the last 15 years. In Lake Huron, we were able to reduce hatchery stocking by more than 60% five years ago due to this wild-fish population. In Lake Michigan, we're seeing more evidence of natural reproduction especially in Illinois waters and the mid-lake reef, where large numbers of lake trout historically gathered during spawning. We're also working to restore lake trout in lakes Ontario and Erie.

We often refer to our efforts as "lake trout distribution," and for good reason. In the Midwest



Region, distribution entails loading up large trucks with tens of thousands of fish at a time from hatcheries and transporting them up to 10 hours away to reach ports where the Baird is docked for loading. The Baird in turn sails more than 2,000 miles out of five ports each year to unload its precious cargo.

But there's more to lake trout restoration than "distribution." Hatcheries are creating brood stock and rearing all those trout year-round. While stocking happens in late spring, it's fall season when crews from the Green Bay Fish and Wildlife Conservation Office visit all the hatcheries to mass-mark each fingerling with a fin clip and coded-wire tag to enable ongoing monitoring. Year-round, fish and wildlife conservation offices work with the U.S. Geological Survey and state and Tribal partners to analyze data collected from

Making a total of about 25 trips per year, anywhere from three to six transport tankers are used at a time carrying 100,000-140,000 fish per trip. (PHOTO BY USFWS)

tagged fish. This analysis helps assess our progress and guides decisions our partners make about harvest regulations and how many and where to stock lake trout in the future.

Together, we're all contributing to positive momentum in the restoration of this hallmark Great Lakes fishery. □

JANET LEBSON, Office of Communications, Midwest Region, and CHUCK BRONTE, Green Bay Fish and Wildlife Conservation Office, Midwest Region



The Great Lakes lake trout recreational fishery is worth more than \$7 billion annually and supports more than 75,000 jobs. (PHOTO BY USFWS)

## Division of International Conservation Designated as Evidence Champion



Our Division of International Conservation (DIC), within International Affairs, provides critical technical and financial support for wildlife conservation around the world. In June, DIC became the first government office globally designated an “Evidence Champion.”

The Evidence Champion program, administered by the U.K.-based Conservation Evidence project, recognizes agencies and organizations that demonstrate commitment to using evidence and scientific data to inform their conservation strategies. The Conservation Evidence project is a free online resource that summarizes scientific evidence on the effectiveness of various biodiversity conservation

From left, Shannon Rivera, Matt Muir, Daphne Carlson, and Tatiana Hendrix representing IA's Division of International Conservation.

(PHOTO BY USFWS)

interventions. Founded by Professor Bill Sutherland at the University of Cambridge, the project aims to strengthen the effectiveness of conservation actions by providing easy access to recent and relevant knowledge.

Elsa Haubold, then-acting Assistant Director of International Affairs, welcomes the news. “This recognition underscores DIC’s commitment to incorporating scientific data into conservation practices and

championing evidence and evaluation activities within the agency. As the first government office to earn this designation, DIC sets a new standard for conservation effectiveness for government agencies, nongovernmental organizations, and academic institutions.”

Daphne Carlson, head of DIC, adds: “Our designation as an Evidence Champion marks a significant milestone in our mission to protect the world’s diverse wildlife and their habitats. By promoting and supporting evidence-based practice in our efforts and partnerships, we are leading by example and encouraging our peers worldwide to embed evidence in conservation efforts.”

DIC protects and restores priority species and their habitats worldwide by providing technical and financial assistance to implementing partners through the Multinational Species Conservation Funds, regional grant programs, and the Combating Wildlife Trafficking Program. Since 1990, when DIC awarded its first grant to support forest elephant conservation in Africa, staff has recognized the importance of using the best available data and scientific evidence to make empirically supported decisions and build on lessons learned around the world to improve conservation outcomes. In other words, DIC has a long history of directing limited resources toward conservation strategies that we know will work.

“We feel confident that our evidence-based approach will enhance accountability across our programs, shape our conservation decisions, and garner greater support for species conservation,” Carlson says. “By focusing on learning, we are continually trying to understand what works in conservation. We are dedicated to fostering transparency and efficacy in our efforts to expand our evidence base, supported by the incredible dedication of our partners on the ground who are tirelessly protecting the world’s most important wildlife.”

Through its commitment to scientific research and international collaboration, DIC is protecting wildlife and habitats, and ensuring that these efforts are grounded in solid evidence. This pioneering approach promises a future where conservation actions are more effective, impactful, and sustainable, safeguarding our planet’s biodiversity for generations to come. □



## ENVIRONMENTAL JUSTICE

## A (Green) Space of Our Own: Bowie State Works to Broaden Access to Woodlands

Footsteps of students rushing to class echo across concrete, the purring engines of cars fill campus parking lots, and year after year, vast lecture halls buzz with questions volleyed forth by eager minds. These are some of the sights and sounds of university life for students at Bowie State University, the oldest Historically Black University in Maryland and one of the 10 oldest Historically Black Colleges and Universities in the country, located in the heart of Prince George's County.

But just across from the parking lot at the north end of campus, the noise and the pace of university life falls away—giving rise instead to the soft hum of life that can only be found in an old growth forest. Mere feet from the university entrance, hundreds of forested acres stretch into an expansive landscape sprawling with wetlands, trails, and portions of the Patuxent River. For those seeking a respite from the campus grind, this green space is seemingly the perfect location.

Unfortunately, despite its proximity to campus and its potential to offer a space for recreation and exploration, the 86 acres of land within the university's boundaries are relatively unknown to the majority of students on campus.

"A very small percentage of our student population have even been back there," says Jabari Walker, sustainability coordinator



at Bowie State." Of the students that have gone there...they love it. They want to see students use it more and to see more people go there."

In 2023, Walker partnered with Jenny McGarvey, capacity building initiative director for the Alliance for the Chesapeake Bay, to develop a proposal for transforming these forgotten woodlands into a community space for recreation, learning, and encouraging green career paths for students of color at the HBCU.

"I like to think of our guiding light in our partnership with Bowie State goes back to the 2020 Green 2.0 report," McGarvey says, reflecting on the partnership. "It assessed representation of people of color in environmental nonprofits around the United States. Across the board, environmental nonprofits have the lowest representation of people of color in the United States."

With support from a Chesapeake Watershed Investments for Landscape Defense (WILD)

Professor Anne Wiley offers an ecology lesson to students as they explore the Bowie State University grounds. (PHOTO BY EMMA GREGORY/ALLIANCE FOR CHESAPEAKE BAY)

grant funded by our Science Applications Program and the National Fish and Wildlife Foundation, Bowie State will develop a natural resources master plan for the 86 acres of woodlands and wetlands on campus as well as the adjacent Uhler Natural Resource Management Area owned by Maryland Park Service, and create opportunities for student involvement through paid-positions and faculty training.

This project is a part of recent efforts to increase environmental engagement within the Bowie State community, including hiring staff members to address sustainability concerns on campus, facilitating guided tours of green spaces, and creating connections with environmental organizations around Prince George's County through the Central Maryland Climate Career

Expo, piloted by Walker. With support from this network of partners, Bowie State seeks to engage students through internships and entry level jobs, guided field experiences, and course integration.

In a similar vein, neighbor Patuxent Research Refuge has fostered a collaborative relationship with Bowie State. Partnering with Bowie's biology department, the refuge offers learning opportunities and paid internships for students to work with refuge staff. It also supported the creation of Bowie State's Outdoor Club for students to enjoy kayaking, hunting, and other recreational experiences.

Over the past few years, these transformative connections have blossomed between Bowie State and community partners such as Maryland Park Service, the Alliance for the Chesapeake Bay, and Patuxent Research Refuge. These connections have created a deeper sense of community and empowerment. With funding from Chesapeake WILD, the future is bright.

"We are hoping this project will be the foundation for Bowie State students to have a space to live and work and play," McGarvey says, adding, "It is going to be a jewel for the campus and for the state of Maryland." □

KIARA KAMARA, Science Applications, Northeast Region

*Kamara was a RAY Fellow, and August 2024 marked the end of a two-year fellowship with the Service.*

ENVIRONMENTAL JUSTICE

## Restoring the 'Lifeblood' of Prince of Wales Island

Sockeye salmon are the "lifeflood" of Prince of Wales Island, says Quinn Aboudara, who calls the island home. Aboudara is also the Natural Resources coordinator with Shaan Seet Incorporated and the field coordinator for the Klawock Indigenous Stewards Forest Partnership. "The sockeye runs historically have been some of the strongest in the world," Aboudara says.

The reliable presence of sockeye, Aboudara says, led Indigenous peoples to settle in the Klawock Lake watershed. Thousands of sockeye return to the lake to breed, and the fish continues to be an important resource to the community. But the sockeye numbers have been dropping.

"As a child, when I was old enough to start fishing on the beach scene, we could make a single set on sockeye salmon and catch 200 sockeye in a single set," Aboudara says. "Nowadays, you can go all day and maybe catch 20."

We are privileged to support many community leaders with 2020's Klawock Lake Sockeye Salmon Action Plan, which contains a list of restoration projects that will "promote healthy and sustainable sockeye salmon populations in Klawock Lake for local communities."

But the work isn't just about salmon, says Andy Stevens, a fish and wildlife biologist who is the Habitat Restoration Program lead

for Southeast Alaska. "Restoring salmon runs is certainly a primary focus of this work as fish are culturally important and a backbone in many of these communities." But it's really an "All Hands, All Lands" approach to recovery, he says.

The goals are to "improve wildlife habitat, promote healthy functioning streams and watersheds, increase access to natural products for local communities, and promote local job creation."

To achieve these, "we are working to help increase local capacity to do restoration work and support land co-stewardship," Stevens says, "by providing training on things like fish passage, stream, and habitat assessments. We also provide technical assistance, tools, and funding to support this work."

An FY24-25 National Fish Passage project with \$4 million in funding from the Bipartisan Infrastructure Law will help "continue supporting fish passage restoration, training, and assessment work across the region," Stevens says. The grantee is the Southeast Alaska Watershed Coalition, which has been a leader in supporting the work of community forest partnerships across Southeast Alaska.

The grant project will restore fish passage to 15.5 miles of high-quality habitat by addressing barriers at Tribal-owned and non-federal lands across Southeast Alaska.

Much of the training and restoration work, especially in the Klawock Lake area, revolve around trees, which may not be what one thinks of when it comes



to water-dwelling salmon, but "fish love wood," Stevens says.

Trees provide nutrients, food, shade, and more. A big tree trunk falling into a stream can provide a pool in which to rest or shelter.

Many of the streams of the Klawock area are "over-widened, habitatless areas of stream," Stevens says, akin to a lane in a bowling alley.

"Klawock Lake was one of the most heavily logged watersheds on Prince of Wales Island," Aboudara adds.

"It's been exciting," Stevens says, "to see our partners getting out on the ground and documenting new fish passage issues that we are now working on together to address."

(Top) Wade Hulstine, Jon Carle, Quinn Aboudara, of the Klawock Indigenous Stewards Forest Partnership, and the Service's Andy Stevens and Tim Ericson in a stream in the Klawock Lake Watershed during a stream and culvert assessment training. (PHOTO BY USFWS)

(Below) Sockeye salmon migrating. (PHOTO BY RYAN HAGERTY/USFWS)

Aboudara talks about the restoration work: "It's just really satisfying to go with the help of a chainsaw and power winches, hand winches, and some good old fashioned hard work. You're pulling these trees and this wood into the stream, and you're making really nice habitat feature at the end of the day."

The crews Aboudara works with "grew up watching the declines. We watched the forests get »

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cut down. We watched the salmon declining. But that's what really leads our work is we think about the way we grew up. And what we believe is important for us, our connection with to fish, and we want our children, our grandchildren, and their grandchildren. We want this lifestyle to be able to be practiced for the rest of time."

Stevens says, "It's been a rewarding experience to be a part of this work and to see the passion that our partners have for ensuring that these natural resources persist into the future for the next generations."

This article is based in part on an episode of our award-winning podcast Fish of the Week! [Listen here.](#) □

MATT TROTT, Office of Communications, Headquarters

Stevens says, "Working with the Tribal forest partnerships like the Klawock Indigenous Stewards Forest Partnership is one of the primary focuses of our habitat restoration program in Southeast Alaska." Some of our partners in Southeast Alaska:

Klawock Indigenous Stewards Forest Partnership, the Ketchikan Indian Community, Metlakatla Indian Community, Yakutat Tlingit Tribe, Keex Kwáan Community Forest Partnership, Kootznawoo Inc., Prince of Wales Tribal Conservation District, and Hoonah Native Forest Partnership

## ENVIRONMENTAL JUSTICE

### Finding Purpose Along the Detroit River

Knowing where you are can help you get to where you want to go, and both are elements of finding your voice. We see national wildlife refuges as the perfect place to find yourself and your voice. Refuges are welcoming places for everyone to make connections, and so many of them are close to home for you to safely explore. A special partnership is empowering a group of young people to develop their love for Detroit River International Wildlife Refuge, find their voice, and share with everyone why they are passionate about the nature that's in their own backyard.

Meet Lisa Bryant, the first community engagement coordinator for Detroit River International Wildlife Refuge. She brought together the leaders of Life on Purpose Detroit, LLC—a Detroit-based organization that coaches youth, adults, and job seekers more broadly—with Grow Detroit's Young Talent, a citywide summer jobs program that trains and employs young adults between the ages of 14 and 24, to give the refuge a digital makeover.

About 20 high school students devoted 120 hours in summer 2023 to learn all about North America's only international wildlife refuge and one of the crown jewels of the Urban Wildlife Conservation Program. The refuge is located along the lower Detroit River and western shoreline of Lake Erie—just 20 miles south of Detroit, Michigan, and 50 miles



north of Toledo, Ohio. In 2001, the refuge was established by Congress as a result of efforts by U.S. and Canadian politicians, conservation leaders, and local communities to build a sustainable future for the Detroit River and western Lake Erie ecosystems.

"Our students had the privilege of working closely with the refuge's rangers, soaking up invaluable knowledge in a short span of time. Their dedication was awe-inspiring, attending class every single day for six weeks, brimming with enthusiasm for the opportunity to collaborate with the wildlife refuge," creator of Life on Purpose Detroit Doris Hage says of the 2023 work.

After an intensive deep dive into what makes the refuge so special—from the native plants and animals that define it to the long-running cultural history that overlays it—the students were immersed in lessons about digital marketing and entrepreneurship. Then came the fun part, a friendly competition as two marketing teams went head-to-head developing a mock marketing plan for the refuge. The dexterity

Students take notes before a planned scavenger hunt at the refuge.

(PHOTO BY USFWS)

with which the participants learned about social media, the importance and dangers of artificial intelligence, and how to tie those aspects into promoting the refuge impressed everyone.

When thinking back on the experience, Bryant says she was surprised at how the students took on the project with such ease, noting that, "None of the participants had any previous experience with marketing, let alone even knew the refuge existed. This program totally changed their perspective of their abilities and what life after high school can really be."

Hage says the experiential learning was "Nothing short of life-changing, not only for our youth but for the communities they return to. Their extraordinary efforts garnered recognition from Grow Detroit's Young Talent and the city of Detroit, which featured them as a standout program of »

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the summer. Our heartfelt gratitude goes out to Lisa and the newfound family at the refuge.”

Life on Purpose Detroit was back at the refuge in summer 2024.

The students have been working to capture the refuge’s Orange Trail to upload to headset computers for patients at Children’s Hospital of Michigan. Bryant says, “Bringing nature to those who have the desire and need it the most.”

Reflecting on the final days of the 2023 internship, Bryant remembers that at the end of what had been several intense days of hard work, the students brought her to tears. Together the students recounted the first day at the refuge when Bryant shared her welcoming presentation as well as her own origin story.

“My story inspired them and made them realize the only obstacle is their own limitations,” she says. “They saw themselves in me, likewise, I saw myself in them. I am blessed to have witnessed their amazing transformation. For that, I am eternally grateful.” □

TINA SHAW, Office of Communications, Midwest Region

ENVIRONMENTAL JUSTICE

**Bipartisan Infrastructure Law Funding Supports Communities in the Delaware River Watershed Facing Environmental Justice Concerns**

Though an instinctual disdain unites Philadelphians and New Yorkers for New Jersey, they are often divided by opinions on slang, fashion, and whether a bacon, egg, and cheese is better than a cheesesteak. But an indisputable commonality between the two urban hubs is that they rely on the Delaware River watershed as a source of clean drinking water.

More than 15 million people — roughly 5% of the U.S. population — depend on the river and the resources it provides.

The Delaware is the longest un-dammed river in the United States east of the Mississippi, running 330 miles from the Catskill Mountains in upstate New York, down along the borders of New York, Pennsylvania, New Jersey, and Delaware, before emptying into Delaware Bay. Along the way, in many communities, the river and its tributaries provide opportunities for residents and visitors to live, work, and play. Some, unfortunately, have fewer opportunities than others.

Along with being one of the most densely populated areas of the country, the area is also home to many historically underserved communities and communities facing environmental justice



concerns, including pollution, underinvestment in infrastructure, lack of green space, and disproportionate impact from climate change.

A future project will expand the Schuylkill River Trail to connect Southwest Philadelphia with Center City. (PHOTO BY I12NMD, CC BY-SA 4.0)

**Funding a Fairer Future**

In 2016, Congress passed the Delaware River Basin Conservation Act, establishing the Delaware Watershed Conservation Fund to support projects to reduce flooding, protect drinking water, improve habitats, and create ways for people to get outside and enjoy nature. The fund gives partners and area residents a seat at the table in planning and implementing impactful conservation and restoration efforts.

In 2023, by engaging with community members and listening to their concerns, 72% of the funds awarded went to projects in the communities that need them the most. Six of those projects were funded by the Bipartisan Infrastructure Law, which directed \$26 million

to the Delaware Watershed Conservation Fund in 2021 to invest in green infrastructure projects over five years.

**Projects Signal Progress**

For many residents in Southwest Philadelphia, access to the scenic Schuylkill River is at best a distant memory. This tributary to the Delaware was inaccessible for many residents for a long time due to heavy industrial use. Now, thanks to funding from the Delaware Watershed Conservation Fund and the Bipartisan Infrastructure Law, 16 acres of habitat will be restored for the benefit of wildlife and residents. The newly restored area, along 1,500 feet of the river, will serve as an ecotourism draw and connect Southwest Philly with Center »

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City, reducing community isolation and contributing to a positive community identity.

In Darby Township, Pennsylvania, residents face the fear of floodwaters with every major storm. An upcoming project there aims to reconnect the floodplain, reduce sediment, and alleviate some of the flooding concerns, all while improving water quality. Reinforcing the riverbanks by planting native shrubs, flowers, and trees should also have other benefits for the community's residents who have disproportionately high incidences of asthma, according to the Climate and Economic Justice Screening Tool. Trees and other plants filter the air, decreasing the risk of respiratory illnesses.

### The Work Continues

Through projects like these that conserve natural resources while providing benefit to historically disenfranchised communities, we're upholding a commitment to confront longstanding inequities in access to nature and the benefits of conservation. Without doing so, we risk failing to meet our mission: conserving the nature of America for all people.

Thanks in part to funding from the Bipartisan Infrastructure Law, the Service — just like the Delaware — will continue moving forward toward a more equitable future supporting fish, wildlife, and people. □

JALYN WILLIAMS, Office of Communications, Northeast Region

## ENVIRONMENTAL JUSTICE

### Co-Stewardship of Waubay National Wildlife Refuge in South Dakota Turns 1

We know that Indigenous peoples have been stewarding the land and its wildlife since time immemorial. So, it makes sense to work together on conservation. Indeed, Service Director Martha Williams has said, "When the Service and Indigenous peoples work together on stewarding our lands and waters, along with the fish and wildlife that inhabit them, our longstanding relationships are strengthened, and resources are better stewarded." This cooperation is essential when the land we manage is within or adjacent to federally recognized Tribal lands or traditional territories.

Such is the case with Waubay National Wildlife Refuge in South Dakota. The refuge comprises forest, grassland, and wetland habitats that provide food and cover for more than 245 bird species and other wildlife. Indigenous people lived, hunted waterfowl and other game, and gathered edible and medicinal plants there for thousands of years.

Turning 1 year old on September 5, 2024, a Memorandum of Understanding (MOU) between the Sisseton-Wahpeton Oyate and the Service is increasing Tribal involvement in protecting, managing, and restoring culturally significant wildlife and plant species on the refuge. It also promotes culturally aware educational opportunities for Tribal members, students, and visitors to the refuge.



"Change only happens when we're working together," the Sisseton-Wahpeton Oyate Tribal Chairman J. Garret Renville said at the signing ceremony. Darell DeCoteau, Dakotah cultural dean of students of the Enemy Swim Day School, reflected on the historic moment, describing the refuge as a safe place to heal.

At the MOU signing, Matt Hogan, Regional Director of the Service's Mountain-Prairie Region, recalled: "We came together to seek a path forward on protecting sacred sites on the refuge, and we ended up forming a partnership that goes even further than that. Today commemorates a momentous effort to unite the conservation efforts of the Service with the Indigenous peoples of this land and reflects a shared vision for conservation, stewardship, and respect to cultural preservation."

In her opening remarks, Cynthia Martinez, Assistant Director of the National Refuge System, shared "Indigenous peoples have been connected to this land for thousands of years, and it is only fitting that our conservation efforts align with the Traditional

Enemy Swim Day School students and teachers use traditional drums. (PHOTO BY LINDSEY WICKRE/USFWS)

Knowledge of our Indigenous partners and neighbors."

Waubay National Wildlife Refuge was established in 1935 as a refuge and breeding ground for migratory birds and other wildlife. The Sisseton-Wahpeton Oyate, comprising the Isanti or Santee Dakota (Sioux) people, called the area that is now Waubay National Wildlife Refuge "Wabe" (WAH beh) — a waterfowl nesting place. Waterfowl, including ducks and geese, use the small wetlands as breeding habitat and a place to raise their young, while the grasslands provide food and nesting cover.

"One of the pillars of this MOU is to provide a foundation for the next generations to build upon and grow an appreciation of the natural world. Our children will build upon the legacy of conservation of the natural world that they will inherit," Hogan said one year ago. »

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“Since that historic day in September 2023, Service staff at Waubay NWR continue to work with Sisseton-Wahpeton Oyate on implementation of the co-stewardship agreement through enhanced educational opportunities with new interpretive signs incorporating Dakota language, joint habitat management efforts emphasizing enhancement and restoration of culturally significant native plants, and the continued protection of culturally significant sites on Waubay NWR,” says Bradley Johnson, refuge manager at Waubay National Wildlife Refuge.

“The implementation of the co-stewardship agreement has enhanced the Service’s efforts to work cooperatively with the Sisseton-Wahpeton Oyate,” Johnson adds, “and we look forward to the continued these efforts into the future.” □

CHRISTINA STONE, Office of Communications, Mountain-Prairie Region

ENVIRONMENTAL JUSTICE

## Valle de Oro National Wildlife Refuge Joins Community in Environmental Justice Air Monitoring Network

In the Mountain View neighborhood in Albuquerque, New Mexico, there has been a long-standing need for air quality data to validate lived experiences of elevated rates of cancer and respiratory conditions in the community. In a collaborative project initiated by community and partner organizations, Valle de Oro National Wildlife Refuge is working to address this need through the Environmental Justice Air Monitoring Network (EJ Air) initiative.

Valle de Oro was established in 2012 through a community desire to preserve and restore local green spaces and prevent further industrial development. Located on ancestral homelands of the Tiwa Pueblo People, the present-day Mountain View neighborhood is a low-income community disproportionately impacted by Albuquerque’s heavy industry. From its inception, Valle de Oro has prioritized environmental justice concerns raised by the community. A cornerstone supporting its mission was the development of the refuge’s Environmental and Economic Justice Strategic Plan, the first and only such plan in the refuge system. The plan was initiated and evolved through a community-based participatory research project directed by Los Jardines Institute, Friends of Valle de Oro, and the refuge.

The plan has six goals, including institutionalizing environmental justice, engaging the community in collaborative management,



and serving as a model for other public land sites.

A priority of the plan, EJ Air is part of a growing hope within the community to address its history of environmental injustice.

The EJ Air project is a multiyear effort with three goals: (1) to establish an air monitoring network to accurately and representatively measure pollutants of concern; (2) to engage community in the processes of planning, installing, and maintaining this network; and (3) to provide data to the public in a relevant and digestible way. In 2022, Valle de Oro secured a one-time award from the Bureau of Indian Affairs.

EJ Air’s Rose Thunderchief (project coordinator, top left), Théo Keeley-LeClaire (technical specialist, top middle), and Alex Preston (data quality analyst, top right) host a DIY Air Filter workshop at the 2024 Environmental Justice Days event at Valle de Oro National Wildlife Refuge. (PHOTO BY USFWS)

A portion of the funding was transferred to the Pueblo of Isleta Environment Department to seed its sovereign Tribal air monitoring program, and the remainder was used to fund the project in Mountain View.

The EJ Air team is currently planning an initial deployment of 12 air quality sensors »

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throughout Mountain View and the South Valley. They will measure particulate matter (PM)—pollution for which Albuquerque received a failing grade from the American Lung Association in 2024. PM is elevated in the Mountain View neighborhood due to diesel and traffic emissions; cement, asphalt, and recycling operations; and fugitive dust from industrial rubble piles. Coupled with wind sensors, the air quality sensors will allow the team to estimate which areas have elevated concentrations of PM and identify sites to perform more extensive monitoring. Valle de Oro will use the data to protect the health of wildlife, plants, staff, and visitors. The project team has also begun to pilot an interactive outdoor education curriculum in collaboration with Bosque Ecosystem Monitoring Program to educate local youth about air quality and environmental justice.

EJ Air staff is supported by a steering committee including the Mountain View neighborhood organizations, Pueblo of Isleta, Los Jardines Institute, Ancestral Lands Conservation Corps, Valle de Oro National Wildlife Refuge, Friends of Valle de Oro, and Bosque Ecosystem Monitoring Program.

As we embark on this work, EJ Air, Valle de Oro, and all of our partners seek to build a rich dialogue with community and local institutions to chart a path toward cleaner, healthier air for all. This community is committed to address the injustices of the past and today. Valle de Oro and its partners are proud to stand together working to a better future. □

Petrochemical storage tanks stand in the neighborhood behind wetlands at Valle de Oro National Wildlife Refuge.

(PHOTO BY THÉO KEELEY-LECLAIRE)

## Mountain View's history of environmental injustice

In the 1950s, the local acequia (irrigation water supply) was contaminated by the aviation industry, now part of the South Valley Superfund Site.

In the 1970s, Albuquerque re-zoned the neighborhood agricultural area for heavy industry, which resident and Mountain View Neighborhood Association board member Lauro Silva considers environmental racism for targeting an unincorporated community of color.

In 1979, a baby almost died of methemoglobinemia (blue baby syndrome) after drinking groundwater containing over 20 times the legal limit of nitrates. This groundwater contamination spurred decades of community organizing.

In the early 2000s, South Valley Partners for Environmental Justice trained community environmental health educators called “promotores” to document toxic spills and identify air pollution sources.


Most recently, a community coalition developed a Health Equity and Environmental Impacts regulation that would provide a mechanism for denying additional air permits in communities overburdened by air pollution. The local Air Quality Control Board adopted a modified version of the rule in December 2023. The Mountain View Coalition, unconvinced the modified version is adequate, filed a Title VI civil rights complaint against Albuquerque in June 2024. Los Jardines Institute has filed a similar Title VI complaint.



# ENVIRONMENTAL JUSTICE







**ENVIRONMENTAL JUSTICE** means simply that all people have a right to just treatment and meaningful engagement in activities that affect human health and the environment where they live, work, play, learn, and pray. It means that economic status or race should not be a factor when deciding where to build a pollinator garden and where to put a factory.

As we more clearly merge environmental justice with our standard conservation work, some may wonder whether we have the capacity for both. The truth is we are already doing great work to further both conservation and environmental justice. Take a read: »

# PERSPECTIVE

## From the EYES of Others

*By* KIM LAMBERT



Environmental injustices are fundamentally rooted in people living on borrowed time, and many have already run out of time.

Simply put, saving lives should dictate a path forward that urgently reduces the destructive harms inflicted daily upon communities with little to no hope. Time consumed talking, making plans and processes, understanding definitions, and holding endless meetings are not the investments environmental justice (EJ) communities need.

With no shortage of meetings, plans, and processes, things seem to be improving and/or help seems to be arriving. But EJ advocates/communities wonder how much investments spent in these areas are turning into deliverables their communities can see for the betterment of their lives. In April 2023, the White House released an updated EJ definition that includes input from the public, and now is time to act on it.

Before Executive Order 12898 (1994) and additional orders steering the federal government to address and help eradicate environmental injustices, 1991's Principles of Environmental Justice, a defining document created by grassroots organizations, offered a way to help those most in need. Even before that, in April 1968, the night before the assassination of Dr. Martin Luther King, Jr. he told a group of striking sanitation workers in Memphis, Tennessee: "We've got to give ourselves to this struggle until the end ..." He believed exposing the need for economic equality and social justice would resonate nationally if not worldwide. The 1960s sounded the alarm about the public health dangers for communities of color, urban areas, rural areas, and economically impoverished Native American reservations. Through no fault of their own, frontline communities have been marginalized, disinvested, and disempowered. Now in 2024, can you hear them? Do you know them?



Today, we already know what important indicators show, that the impacts of climate change, mounting harms from pollution, health crises, inequities, socioeconomic issues, and more are leaving people sick and worse. Saving lives is the most important mission on this planet. The U.S. Fish and Wildlife Service is responsible for conserving, protecting, and enhancing fish and wildlife and their habitats for the continuing benefit of the American people. If we do our job right, our conservation will do more than ensure a future for wildlife. It will save our fellow humans.

Meetings, plans, and processes have a purpose, so take what is already known through science, data collections, reports, and more importantly community-driven problem-solving partnerships and act. Communities' outcries are painful.

Even after 60+ years, outcries for life are growing. Take inspiration from those executing solutions past and present. Anything less can slow down our progress. □

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KIM LAMBERT, Environmental Justice Coordinator,  
U.S. Fish and Wildlife Service

# ECHOES OF THE UNSEEN: A TRIBUTE

At 6 a.m. on July 25, 2024, Dr. Mustafa Santiago Ali, the executive vice president for the National Wildlife Federation, received a call from the White House's Federal Chief Environmental Justice Officer asking him to speak at that day's first-ever White House Environmental Justice Summit. A speaker's flight had been canceled. Dr. Ali meditated and prayed, asking ancestors to guide these words he wrote shortly after and presented at the summit.

In the smoke of the sacrifice,  
where burnt promises mix with breath,  
our stories are etched on forgotten walls,  
the soil remembers our names like a whispered prayer.

We — the dust-stirred, the silence-beckoned —  
rose from crumbling corners,  
where asphalt dreams melted beneath  
the weight of industry's indifference.

**Hazel M. Johnson,**

whose hands cradled the poison beneath,  
a mother to the air we could barely breathe,  
her legacy sewn in every hopeful sigh of children.

**Dana Alston,** who danced with fury  
to the tune of toxic whispers,  
fighting shadows that only she could see,  
turning whispers to roars, erasing doubt with action.

**Damu Smith's** voice,  
a river of fury and truth,  
cutting through the veil of bureaucratic fog,  
a beacon to those who still shiver in darkened alleyways.

**Jean Gauna,**

a force of wild, untamed resilience,  
whose words gathered like storms  
to crash upon walls of apathy and cold steel.

**Jean Sindab,** who understood that  
justice tastes of bitter roots and sweet freedom,  
whose toil was a rhythm, a heartbeat  
drumming through the hollow chambers of broken promises.

**Bunyan Bryant's** eyes held  
the entire sky of struggle,  
who turned the winds of dissent  
into a hurricane of change, stirring the forgotten.

**Cecil Corbin-Mark**, irreplaceable architect,  
dedicated his life to dismantling  
the systemic chains that bound  
justice in shackles of inequality.

**Luke Cole**, fearless sentinel,  
whose fight was etched in the grit of frontline struggles,  
championed the voices lost to the clamor of neglect,  
a warrior for the lands and lives betrayed.

**Connie Tucker**, whose fire  
blazed from Black Panther roots to green,  
brought the strength of revolution's pulse  
to the environmental struggle, reshaping destinies.

**Wilma Mankiller**, whose wisdom  
ensured our bond with Mother Nature endured,  
reminded us that justice is an earth-bound oath,  
interwoven with the cycles of life and land.

And the silent, unwavering torchbearers,  
those federal allies like **Clarice Gaylord**,  
whose voices stitched threads of solidarity  
through the jagged fabric of systemic inertia.

**Willie Taylor**,  
whose name is a promise,  
an oath that the unseen will not falter,  
their shadows merging with the light of courage.

**Kim Lambert**,  
whose pen and voice mapped  
the landscape of our rights  
in the ink of resistance, fierce and clear.

**Bob Knox**,  
a stalwart sentinel in the storm,  
his presence a quiet but unyielding force,  
a testament to the power of steadfast unity.

**Charles Lee**,  
whose research and policy craft  
wove scientific rigor with advocacy,  
illuminating paths through the thickets of systemic neglect.

Together we were the whispers,  
now the roar,  
a symphony of resilience  
carved in the debris of neglect.

Remember us not as ghosts  
in the fading corridors of struggle,  
but as architects of tomorrow's dawn,  
a legion of voices, unbroken and resolute.

Tell our stories,  
each breath of resistance,  
each step towards justice,  
so the future can know  
that we did not just survive,  
we fought, we loved, we triumphed.

# PLANTING THE SEEDS OF SANCTUARY

Funding from the Service's Delaware program helps faith communities make space for pollinators in Wilmington, Delaware.

By JULIETTE FERNANDEZ

On a cool fall Delaware morning, glints of light stipple the bronze leaves at the base of the Bethel AME Church. Congregants gather at its steps to raise their voices, kneel beside each other, join hands, and help their community by helping pollinators.

The morning chill will succumb to 90-degree heat generated by the sun reflecting off the thirsty pavement surrounding them. Yet, one patch, one small green patch of earth, reminds them that this place was different once. The planet was different once.

Wilmington, Delaware, has experienced climate change through severe heat waves and extreme flooding, in some cases after only modest rainstorms. Urbanization and expanses of pavement have left little room for nature beyond the rivers. Or have they?

Thanks to a partnership led by the National Wildlife Federation and supported by the Service's Delaware Watershed Conservation Fund, 21 faith-based organizations now have pollinator gardens, a peppering of green across the city welcoming people and wildlife. (Read more about the environmental justice work of the Delaware Watershed Conservation Fund, p. 10)

### It Takes a Congregation

Many Wilmington neighborhoods experience significant environmental justice concerns, from lack of shade trees and accessible green space to devastating floods. The Delaware Watershed Conservation Fund supports grants for projects that restore fish and wildlife habitats, reduce flooding and runoff, improve water quality, and enhance safe

recreational access in the Delaware watershed. What's more, nature-based solutions supported by the fund have shown significant cross-cutting benefits for communities without the resources to make the changes they need.

The National Wildlife Federation's Sacred Ground program was ready to bring green spaces and wildlife habitats to the communities that needed them most. With help from area partners, faith-based communities received virtual and on-site workshops, technical support, and

resources to create pollinator gardens on their land. Once complete, the spaces that offer food, water, and habitat for wildlife—including native plants for pollinators—gain a Sacred Ground certification.

The Sacred Grounds program builds community awareness about native plant options, wildlife benefits, and ways to support the bigger environmental picture.

“Very suburban lawns can still support a high richness of pollinators,” says Clare Maffei, our pollinator conservation coordinator. “A native bee can travel about the length of a football field. With urbanization, habitats have become fragmented, but by putting together a strip of gardens at churches, it can inspire others to plant their back yard, too, bridging the gap.” >>



(Previous page) Community members work on a pollinator garden. (PHOTO BY NATIONAL WILDLIFE FEDERATION)

(Right) Pollinator habitat in bloom at Grace Church.

(PHOTO BY NATIONAL WILDLIFE FEDERATION)

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Together, they began turning back time by planting seeds of climate resilience, one pollinator garden at a time.

### Seeds of Sanctuary

A 15-minute walk from the Bethel Church is another small pocket of grass nestled beside the faith-based Dickerson Education Center. A periodic dumping ground, the parcel begged for transformation. Guided by community leaders, the neighborhood sought help to create a garden.

The Sacred Grounds partnership was there.

Together, they gloved up and began cleaning the litter and sowing new seeds of sanctuary. At the end of the planting, bearing soiled knees and tired backs, they left with pride that they had built a beautiful space. Their space.

For the project partners, working with faith groups is intentional. Their established structures bring foundations of unity and care for fellow beings. “Often there is a through line between their faith and a call to care for the Earth,” says Lindsey Walker, manager of education and conservation for the National Wildlife Federation. “We have such a responsibility to support community members doing this kind of work, and there are so many ways environmental work connects with other goals and needs of community members.”

The congregants are finding value regardless of what calls them together that day. Some may be climate crusaders, while others may enjoy the opening of a new flower and a visit from a bird.



“Everybody loves a butterfly,” Maffei says. “Pollinator gardens are wonderful gateways to looking at nature more closely.”

Twenty-one Wilmington gardens later, the community has transformed into a mosaic of Sacred Grounds. With tree stumps for seating and seasonal decorations, the Education Center’s garden continues to beckon the community back into this space.

Perhaps not everyone will be pollinator experts by the end of the planting, and truly, that’s not the goal. Everybody comes with unique and valuable connections to nature. Through this program, they will leave with more. “Every time we plant a garden, someone comes to me and tells me about a connection they have from childhood to the natural world,” Walker says, “You can see them connecting with that again, and it’s such a positive moment.”

And so, they plant.

Community members plant the pollinator garden at Dickerson Education Center. (PHOTO BY NATIONAL WILDLIFE FEDERATION)

### Faith in Nature

Climate change is a global issue, but great cathedrals are built one brick at a time. The fund supports nature-based solutions big and small, cultivating ecosystem health, climate change remedies, and environmental justice.

“Pollinator gardens may not solve the greater climate crisis or flooding issues,” Walker says. “But small habitat patches can have a big impact for pollinators, and they give people some agency over climate challenges that feel impossible to solve.”

Environmental justice ensures everyone has equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices. >>





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Since 2021, the Delaware Watershed Conservation Fund has guided all grant applicants on meaningful community engagement to address racial and economic disparities in access to nature and conservation outcomes. In 2023, 72% of projects directly engaged communities with environmental justice concerns, and 89% impacted these communities positively.

“Life deserves to live,” Maffei says. “We are public servants, and if we are only investing in large infrastructure where nobody is living, we aren’t serving our public. Green spaces pull toxins from the soil and reduce heat. It is our responsibility to invest in urban green spaces because they literally save lives.”

A year since the planting, on that one small patch of green earth, a new community member arrived. A monarch caterpillar made its home—in the form of a gilded green chrysalis—in the small pocket of flowers nestled beside the faith-based Dickerson Education Center. □

JULIETTE FERNANDEZ, Office of Communications,  
Northeast Region

Community members join a site-preparation workshop for a pollinator garden at their church. (PHOTO BY NATIONAL WILDLIFE FEDERATION)

# A PATHWAY BEYOND THE SAWGRASS

**Students in a Florida  
Everglades community  
find inspiration at  
Conservation Ranger  
Camp.**

*By* ALI CROWLEY

The students at  
Conservation Ranger  
Camp already had a deep  
experience with nature,  
especially through fishing.

(PHOTO BY EDEN TAYLOR/NATIONAL  
WILDLIFE REFUGE ASSOCIATION)



In the Florida Everglades, water moves slowly through the sawgrass, and the imperceptible slope of the land makes it seem like the Everglades go on forever. If you were to stand enveloped by this sea of razor-sharp sawgrass, with no high ground to see a pathway forward, it would be easy to imagine feeling confined in unending Everglades.

Some of the northern Everglades have been drained away, shedding its sawgrass for sugarcane. The sugarcane fields' agricultural burnings create ashfalls, which scatter down on the nearby communities already struggling with isolation and the environmental risks that come from living in a place where the difference between water and land is mere inches.

One such place is Belle Glade, the largest town in the Glades community and home to the Crossroads Academy for teens. Despite this landscape, the students have a sense of purpose, direction, and an aim for careers in the future, in part inspired by their experiences at the first ever Conservation Ranger Camp, offered in partnership with Arthur R. Marshall Loxahatchee National Wildlife Refuge, the National Wildlife Refuge Association (NWRA), and Standfirm Outreach.

Arthur R. Marshall Loxahatchee National Wildlife Refuge, which protects the northern end of the Everglades, first began the work on this over a year ago, when a partnership between the refuge, NWRA, and Standfirm Outreach came together with an idea to support the students of the Glades and help them blaze a pathway forward. The idea ultimately became the Conservation Ranger Camp but started by asking students the simple question, "What are you interested in?"

This community already has a strong connection with the outdoors—they are defined by it. The students had a deep experience with nature, especially through fishing, and their days and days deep in the Everglades sawgrass. The Conservation Ranger Camp was co-designed with the interests of the students in mind to cover a vast array

of careers and activities in hopes of there being something for everyone, including an opportunity to work with a videographer documenting the experience.

The largest and first barrier was distance: how to get the students beyond the boundaries of their community and see the refuge and the possibilities it could hold. NWRA secured a grant to charter a bus to take them the long road around the marsh and bring them to the refuge.

This five-day camp was jam-packed with activities and experts, inspiring the students to see how their passions could lead to careers. Students met with Service wildlife inspectors who came up from Miami, staff from the Florida Fish and Wildlife Conservation Commission, refuge staff, and others. They learned about the science of habitat management from our biologists sampling for invasive tree frogs, processing a wildlife crime scene, and the importance of fire and prescribed burns in the Everglades, even getting to try on a wildlands firefighter's safety gear used on the job. They also practiced water quality testing with a National Park Service hydrologist. To broaden experiences >>

Young people learn archery at the first ever Conservation Ranger Camp. (PHOTO BY EDEN TAYLOR/NATIONAL WILDLIFE REFUGE ASSOCIATION)





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even further; refuge staff took the students for a day to explore and learn about Florida's coastal ecosystems at Nathaniel P. Reed Hobe Sound National Wildlife Refuge.

At the end of the week, the students left with a certificate marking their accomplishments in the camp, a swag bag including binoculars, field guides, and fishing gear, and most notably a \$500 scholarship to bring to their future. This life-changing experience could have been accomplished only by the commitment of refuge staff, grants and resources

secured by Liz Figueroa at NWRA, and the passion and dedication of the people at Standfirm Outreach organization, including founder and community leader Gertavian Blake.

Supervisory park ranger Jennifer Brown describes this partnership and process as "groundbreaking." She adds that this type of program requires "someone with the will to make that partnership."

Rae Milmore, the urban and community engagement specialist describes it as "so rewarding to see." Milmore has been working toward programs like this since she was a student, beginning with the

Service as a Directorate Fellow intern, leading a barrier analysis first identifying the Glades and Crossroads Academy as a priority community for refuge engagement.

By the end of the week-long Conservation Ranger Camp, students were engaged and inspired, asking questions about careers, and talking of college and internships. One student even told refuge staff, "I'm going to be your co-worker soon." This fall, the Conservation Ranger Camp students will come together again for a special screening of the video documentary about the camp, which they helped to make such a remarkable experience. The screening will welcome the students, their >>



Arthur R. Marshall Loxahatchee National Wildlife Refuge protects the northern end of the Everglades.

(PHOTO BY EDEN TAYLOR/NATIONAL WILDLIFE REFUGE ASSOCIATION)

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friends and families, and the Glades community at large to watch the students discover their pathway forward to future careers, unconfined by the sawgrass. □

ALI CROWLEY, Office of Communications, Headquarters

## Rachel Carson's Interconnectedness of All Living Things Is Environmental Justice

The southern tip of the Outer Banks is Beaufort, North Carolina, named Fishtown in the 1600s, a quaint, beautiful coastal town with gorgeous views. It features the smell of salty air, the sounds of waves crashing the shorelines, and the seasonal school of whales coming through the Beaufort Inlet, a channel leading south to the Atlantic Ocean. A peaceful, slow pace of life with Bahamian and West Indian-style homes runs through Beaufort, which has more than 150 historic homes on the National Historic Places.

"It's easy to fall in love with my hometown. Everyone greets everyone. It's just our Southern charm and hospitality," says Kim Lambert, our environmental justice coordinator.

Famed conservationist Rachel Carson did fall in love with Beaufort.

Lambert continues her story: "As a child, unbeknown to me at the time, was Rachel Carson—her work and research took her to the U.S. Fishery Laboratory in Beaufort, established in 1899. It was in Beaufort that Rachel Carson worked on her first book, *Under the Sea-Wind*. The landscape there literally drips with rich wildlife, species, fish, and history—the perfect scenario for her studies."

It was the perfect scenario for childhood, too. "As a child, I had no desire to visit other places," Lambert says. "Why? When you live in a paradise, an oasis of pure joy. Summers were the best, daily returning home only for meals and exploring these precious gifts bestowed to us. Exhausted at day's end, I would go to our backyard small pond to watch the seahorses and other species nested in a



Rachel Carson and Bob Hines conduct marine biology research in Florida.

(PHOTO BY USFWS)

beautiful habitat. Polly, our Emden goose, was well-fed to ensure no pond-dweller was attacked."

While not as simple as feeding a goose, Carson saw the need to protect all—wildlife and people—key to environmental justice.

In 1962's *Silent Spring*, she wrote clearly about the need for environmental protections from the indiscriminate use of DDT, a powerful pesticide that can have long-ranging health effects on both wildlife and humans. Her book is credited with launching the modern environmental movement. The Environmental Protection Agency was established in 1970.

Today, visitors to Beaufort can catch the Rachel Carson ferry to walk the sandy and marshy paths she did. She wanted the natural beauty to continue for the benefit of species and mankind. "A courageous woman who took on the chemical industry and raised questions about humankind's impact on nature—I wish our pathways would have crossed," says Lambert. □

# BRINGING SOME GREEN TO SOUTHWEST PHILLY

A decade of dedication  
leads to Cecil Street Garden.

*By* JALYN WILLIAMS





Turning an abandoned southwest Philly lot into a thriving community garden may not seem like much. But considering the social and environmental injustices of America's history, it is quite the achievement.

Initiatives to add parks, gardens, and more natural landscaping to urban areas bring the green back to communities of color. And, thanks to the dedicated assistance of John Heinz National Wildlife Refuge at Tinicum and many other partners, one predominantly Black southwest Philadelphia neighborhood is much greener with its community garden.

### A Disconnect Linked to Discrimination

Discriminatory and racist policies such as redlining, forced migration, and economic segregation have had profound effects on human settlement patterns in the United States. The legacies of these exclusionary practices persist in many forms, including lower participation in outdoor recreation by people of color, with many feeling unwelcome or in danger while in nature. People of color are also underrepresented in hiring at natural resource agencies and are less likely to visit national wildlife refuges and other public lands.

A 2017 study conducted by Conservation Science Partners and commissioned by the Hispanic Access Foundation and the Center for American Progress revealed that 68% of Black or African American people lived in nature-deprived areas.

### From Eyesore to Eden

The Cecil Street Garden was nothing more than an unmaintained lot riddled with invasive plants and abandoned houses that underscored the neglect of the property. At the corner of Cecil Street and Kingsessing Avenue, it's in a ZIP code that has a 74% Black population.

Victoria Chambliss, endearingly called Ms. Vicki by those who know her, is a longtime resident of Southwest Philly who envisioned turning the vacant lot into something more back in 2014. Facing challenges from the city to get the garden started, Ms. Vicki was driven by her motto "I'm gonna do it anyway."

She enlisted the help of Empowered Community Development Corporation, an organization committed to "Building Southwest From the Inside Out" through beautification, education, and community cohesion. Ms. Vicki eventually became a board member.

After Cecil Street residents petitioned the city to remove the abandoned houses on the lot, Empowered CDC leased the property. On Martin Luther King Jr. Day 2016, volunteers stripped and cleaned the lot in preparation for renovation. Ms. Vicki prepared a big pot of her famous chicken noodle soup to feed all the volunteers.

"That's what I'm good for. I can't give you money, but I can feed you," she said.

Over the next eight years, the community and partners continued to plan, design, and build a garden that features perennial native plants such as wildflowers and fruiting plants like strawberries and blueberries. Heinz Refuge provided staff and materials to build the garden, hold outdoor recreation programs, and plant the native vegetation. From the garden's first iteration in 2016 to planning the garden's layout at meetings held in Ms. Vicki's dining room in 2020 to constructing the trellis at the garden's center in 2023, the community stood steadfast in its goal to green the neighborhood. >>

The product of years of hard work, the Cecil Street Garden was officially completed in August 2023.

(PHOTO BY ROBIN IRIZARRY/AUDUBON)



Partners from Empowered CDC, Thomas Jefferson University, Audubon Mid-Atlantic, and John Heinz National Wildlife Refuge at Tinicum meet in Ms. Vicki's dining room to discuss future design plans for Cecil Street Garden. (PHOTO BY LAMAR GORE/USFWS)

*Continued from previous page.*

### Dedicating the Dedication

More than 30 people attended the October 7, 2023, ribbon cutting, moderated by Val Gay, executive director of Empowered CDC. Speakers included Ms. Vicki, U.S. Rep. Mary Gay Scanlon, John Heinz National Wildlife Refuge at Tinicum manager Lamar Gore, and State Rep. Regina Young.

Young founded Empowered CDC and came out to show support for the garden she helped acquire.

Young praised Gore for his community involvement. "It's people like Lamar who are really intentional and persistent in engagement at a higher level. With [the

refuge] at the helm, [the partners] are intentionally seeking to transform Southwest in a meaningful way."

The road to achieving the project was arduous but rewarding, said Gore.

"The plan was to take the vision of the community and try to bring it to life... We knew that we were kind of pushing against the city to try to get the approval to actually build [the garden], and so for me it was, 'Let's make sure we keep programming it, so the community doesn't think we're walking away.'"

Ms. Vicki already sees the impacts of the garden on the community: a man who eats and reads there every morning, kids who sat and mingled in the wake of a nearby shooting, a couple who have lunch together in the garden every day.

"I really feel truly blessed that I was able to get this done. What [Empowered CDC] does is bring stability to a neighborhood. What we want to do is make sure that our young people know that they got some place to come. We don't want them to say, 'I don't have anywhere to go' or 'Nobody cares'. You can come here and reflect and feel good about yourself and not have to go another route. It's not about anything but being safe. "

### A Greener Future

Audubon Mid-Atlantic is partnering with Thomas Jefferson University, the National Wildlife Federation, Heinz Refuge, and others to create additional natural areas throughout the city to green more neighborhoods and increase habitat for pollinator species. Funding for these projects is provided in part by the Delaware Watershed Conservation Fund, which provides grants to help partners identify, plan, and implement projects in the watershed to enhance safe recreational access for the public.

The community will appoint two to four young people to serve as Cecil Street Garden ambassadors. They will be trained to maintain the park and learn more about the wildlife in the garden as a means to continue the park's legacy beyond those who created it.

And Ms. Vicki has a loftier goal in mind following the garden's completion: >>



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“My goal is to have this [kind of space] in every neighborhood that has a vacant lot because when you sit here, I don’t care if it’s a whole lot of traffic going on, people talking and hollering and screaming—you sit in here, you become so comfortable,” she said.

Cecil Street Garden now serves as a space for gathering in the serenity of nature and as a display of how partnerships can empower a community. □

JALYN WILLIAMS, Office of Communications,  
Northeast Region

## Helping Hands

This project was made possible by the dedication of countless partners and volunteers, including John Heinz National Wildlife Refuge at Tinicum and their youth crews through MobilizeGreen and Student Conservation Association; Empowered CDC; Audubon Mid-Atlantic; Thomas Jefferson University; Philadelphia Carpenter’s Union Local 158; Block Gives Back; National Wildlife Federation; National Fish and Wildlife Foundation; and Fortress Arts.

(Top) Volunteers, community members, and members of the Philadelphia Carpenter’s Union Local 158 built the garden’s features such as the table tops and benches on this hot summer day in 2023.

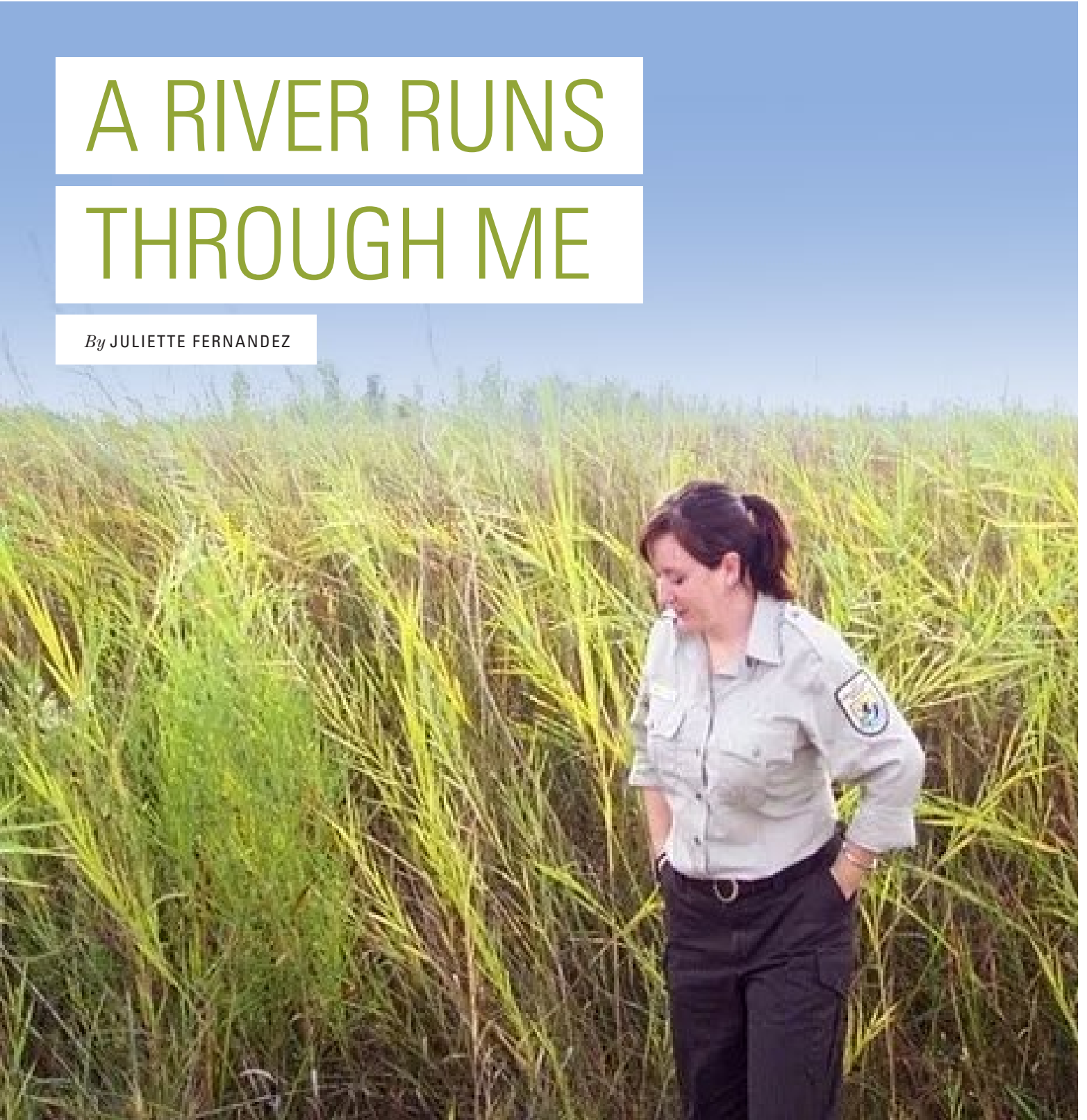
(PHOTO BY LAMAR GORE/USFWS)

(Bottom) At the October 7, 2023, ribbon cutting, key players in the project’s completion posed for a photo before cutting the ribbon to dedicate Cecil Street Garden. (PHOTO BY JALYN WILLIAMS/USFWS)



# A RIVER RUNS THROUGH ME

*By* JULIETTE FERNANDEZ



Growing up on the international border of Arizona and Mexico, when presidential words of amnesty for immigrants were floated, my school tripled in size. Spanish was the predominant language, Ranchera music played in the grocery stores, and parking lots would cave in from the underground drug tunnels that connected Mexico to outlets in the U.S. I thought this was standard in America.

This is my culture. *This* is where I come from and why environmental justice is important to me. I would love to learn about you. I am here.

### From the Tap

From any high point in my hometown of Nogales, you can see the border fence separating the two countries and the river that flowed from Mexico to the United States, often dry or in a tyrannical flash flood. The border fence changed over the years from a small chain link fence to what now is commonly referred to as “the border wall.” My grandma and great aunt lived in pink and purple adobe houses not far from the shadow of it.

My [great aunt](#) and I would walk around, fill the bird feeders, water the plants, and look at bugs. Black clouds from the tire fires in nearby Mexico would float overhead while we were gathering leaves to make tea. We’d take breaks and she would make me my favorite dish of cornmeal, water, and honey, boiled to a soft mush. A few glasses of tap water later, we would walk again. When I would spend the night, we would say our prayers in Spanish before bed to the sound of gunshots ringing out from the Mexican side of the fence. On holidays, many more would ring out, shooting into the sky in celebration. She was my first wildlife refuge, and I was peaceful there.

### Healthy Rivers

For many, we found [security in nature](#). A high school teacher taught us about overpopulation, climate change, healthy rivers, and endangered species. Not all were interested, but I was curious. We planted shade trees in the community and he took us electroshocking in the White Mountains of Arizona each summer to save the at-risk Apache trout. None of us assumed a college degree was in the cards, but a job working in nature became my goal.

In the year 2000, the movie *Erin Brockovich* came out and my sister said we were the “Mexican version” of that movie. She said the water in our town was cancer-laden and high rates of lupus and rare types of cancer were found in those who lived near the arroyo behind my great uncle’s house. At the time, it didn’t register to me. “How strange,” I thought. “My town?”

### The Return

Fast forward, I was hired by the Service and eventually moved back to a refuge only 30 minutes from Nogales. I went to the classrooms of the elementary school I attended and told them that my job was possible. I changed the refuge’s annual bluegrass festival to mariachis and Indigenous Mexican dancers. We were on the border after all. I brought the students out to walk the trails, breathe the air, and feel the shade of the trees cooling the path. For many, it was their first outing that far from home.

Eventually, I became the refuge supervisor over Arizona and New Mexico, and moved to Albuquerque, New Mexico, not too different from home. “Environmental justice” became a common duo of words at Valle de Oro National Wildlife Refuge, the urban wildlife refuge in Albuquerque. They were filtering industrial runoff through the refuge before it returned to the river and into the drinking water of the community. The concept surprised me and pulled a heart string, but it didn’t quite register as to why.

### A River Parallel

Not long ago, we moved to the Pacific Northwest. As I drove into Washington state, parallel to the vast Columbia River, parasailers wove gracefully in every color and waterfalls sprung from the mountain sides. About every fourth car carried a kayak on the roof, dogs wore booties to protect their feet from the heat, and entire families rode their bikes on the sidewalks. This place was so foreign to me with its crisp, clear air and communal outdoor recreation.

“How strange,” I thought. “This new town.”

As a new project leader, I was happy to learn that every staff conversation centered around providing the community equitable access to the green spaces on and off refuge.

I reached out to the [Latino organizations](#) in the area to say, “Here is where I came from and why reaching out is important to me. I would love to learn about you. I am here.” Now annually, I present at their leadership conference about my path and how they can do it, too. This year I’m their keynote speaker on climate change and environmental justice. A topic they picked.

We reached out to dementia organizations, [Tribal](#) partners, organizations that support [people from Black and Brown](#) communities, people with accessibility concerns, refugee support groups, teachers, and young >>

(Previous page) Fernandez inspecting fields at Imperial National Wildlife Refuge. (PHOTO BY USFWS)

*Continued from previous page.*

families. Our agenda was only: “Tell us what matters to you. We are here.” The organizations spoke and we are building it.

### What’s in a Name?

Words such as “underserved,” “disadvantaged,” and “historically excluded” have quickly become part of the national vernacular. I’ve heard people use the words “environmental justice communities” and reference published articles of what each culture likes or needs. “How strange,” I thought. “There is a playbook for cultures? Are there environmental justice communities?” Categorization felt awkward. I’ve always befriended other living beings as organically as breathing. I’ve done it because my heart ached if I didn’t.

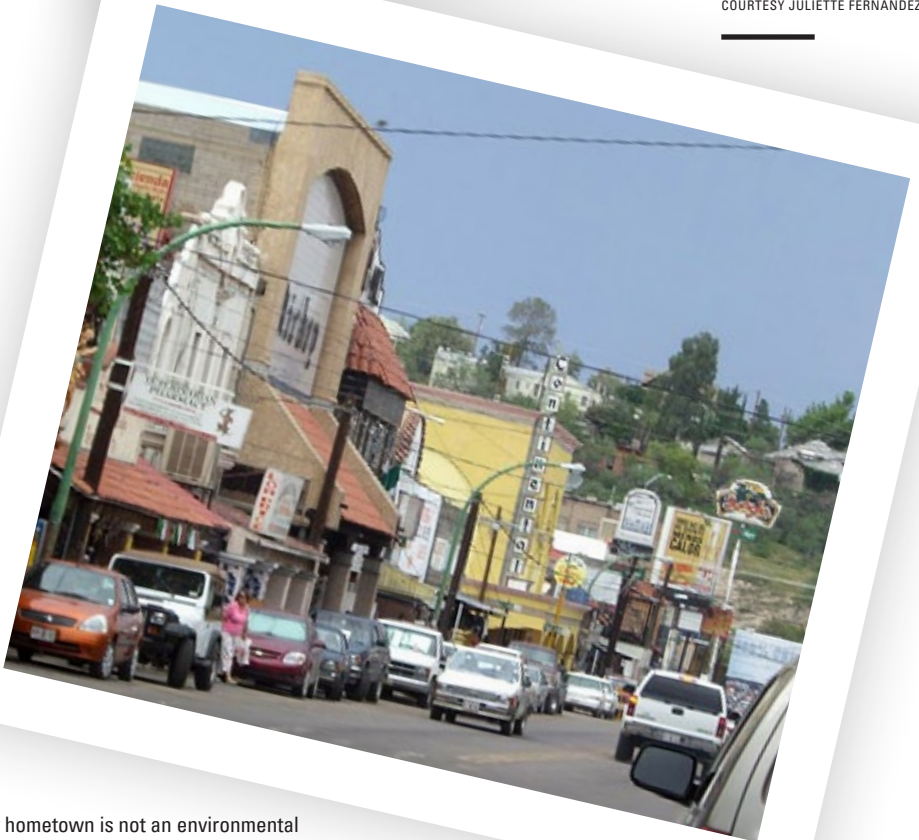
It haunted me a bit and I typed the name of my little border town in the socioeconomic and environmental justice apps that someone had shared with me.

- 99th percentile across the U.S. households where no one over age 14 speaks English well.
- 94th percentile where income is less than or equal to twice the federal poverty level.
- 97th percentile projected risk from wildfire from fire fuels, weather, humans, and fire movement in 30 years.
- 68% high school graduates
- \$36,600 median household income
- 47% with full time employment

I remembered my sister’s *Erin Brockovich* comment and began to read. On both sides of the international border, health impacts were expanding. Air contamination from garbage fires and vehicle emissions from cars waiting to cross the border were causing upper respiratory tract infections, severe >>



Juliette Fernandez at Buenos Aires National Wildlife Refuge. (PHOTO COURTESY JULIETTE FERNANDEZ)



Her hometown is not an environmental justice community but rather a community of people facing environmental justice concerns. (PHOTO COURTESY OF JULIETTE FERNANDEZ)

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asthma, and premature death among elderly people with heart or lung conditions. I read that the river between the two countries was filled with runoff from Mexican factories, including disproportionate levels of E.coli and arsenic, and that the rate of lupus in my town is up to seven times higher than the U.S. average. I learned that the costs to treat lupus can be unattainable for people without the income to afford it. I read that studies were trying to understand the cause of the unusual lupus rates but were yet unsolved, and the community felt at a loss for change without the resources to make it themselves.

I think this is when I had a revelation.

“To the world outside of my town,” I wondered, “were we an environmental justice community? Were we underserved, disadvantaged, and historically excluded? Have we been defined, categorized, and shelved?”

I’ve decided. No. We are not defined by those things. We are not an environmental justice community; we are cornmeal mush, tea leaves, and Spanish prayers. We are people first, vibrant, and humble. We are a community of people facing environmental justice concerns.

### **In Drought and in Rain**

When I think back to Valle de Oro National Wildlife Refuge, cleaning the water with green infrastructure and how it didn’t quite register why it pulled my heart string, I see it clearly now. I see the faces from my hometown in each drop from the tap, in the runoff and the rivers, in drought and in rain.

We, in the Service, can make a change. You can make a change. Through shade trees and filtration through the refuge. Through mentorship and friendship. [Through education and support](#), and not because we need supporters. I implore us to put down the playbook and start with our heart. We

can go in to our communities and say, “I am here,” and be part of a change that matters to them. We can start with being people first, celebrating all of our cultures. We may come from different languages or spices on our tongues, but we are people first.

I come from a world I didn’t know was poisoned because the people were beautiful. Now I understand why healthy land for healthy people matters to me.

This is where I come from and why environmental justice is important to me. I would love to learn about you.

I am here. □

JULIETTE FERNANDEZ, National Wildlife Refuge System, Pacific Region

Fernandez and her aunt at Buenos Aires National Wildlife Refuge. (PHOTO COURTESY JULIETTE FERNANDEZ)



# comeback

Coastal  
restoration  
project gives  
threatened  
coastal plant  
another  
chance.

*By* DR. JOANNE  
CASTAGNA



Back in 2000, Dag Madara, a geographer with the U.S. Army Corps of Engineers, New York District, was walking on Monmouth Beach in New Jersey, the location of the agency's Atlantic Coast of New Jersey Sandy Hook to Barnegat Inlet Beach Erosion Control Project.

He was monitoring the federally threatened piping plover as one of several environmental conservation measures performed by the Army Corps on all coastal restoration projects to help protect and minimize impacts to at-risk wildlife.

While there, he spotted what looked like spinach sprouting out of the sand by his foot.

"My colleagues taught me how to search for and identify various endangered wildlife in the area, but I wasn't expecting to find this!" he says.

Madara had rediscovered the federally threatened coastal plant seaside amaranth, which hadn't been seen in the region for almost a century.

Since his discovery, the plant's population has grown tremendously in the region. The return of seaside amaranth is attributed to the success of the Army Corps project and its conservation measures.

As we often do, we have partnered with the Army Corps on the New Jersey project.

At-risk wildlife, such as seaside amaranth, can play a vital role in coastal resiliency and ecosystem health.

Seaside amaranth's branches grow along the ground, holding the sand in place, which makes the coast more resistant to coastal storms.

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(Previous page) Several years ago, when the project was experiencing the successful return of the American oystercatcher, a monitor associated this in part to the crew's bird knowledge.

(PHOTO BY GARRY TUCKER/USFWS)

This annual flowering plant has red stems and thick, waxy, greenish-red leaves that are somewhat reminiscent of spinach. It's native to beaches along the Atlantic Coast of the United States—from South Carolina to Massachusetts. However, over the years, the species has vanished in most of these states, including New Jersey.

Before Madara spotted the plant in 2000, the last time it was seen in the area was in 1913.

Its population decline has been attributed to several factors including coastal development, beach driving and foot traffic, competition with other plant species, beach stabilization projects without best management practices, sea level rise, and natural disasters such as tropical storms and nor'easters that can inundate or wash away plants from beaches.

## World's Biggest Beach-Fill Project

The Army Corps' successful Atlantic Coast of New Jersey Sandy Hook to Barnegat Inlet Beach Erosion Control Project began in 1994. Among other things, it increased habitat and provided protection for seaside amaranth.

The project encompasses 21 miles of the Monmouth County, New Jersey, shoreline. The highly populated stretch of coast has experienced extensive erosion due to old hard structures, including a seawall, and frequent storms including Superstorm Sandy in 2012.

An eroded coast puts the shoreline community at risk for flooding from storms, so replenishing eroded sand and increasing the size of the beach helps protect the community.

To replenish the lost sand and increase the height and width of the beach berm, >>

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A U.S. Army Corps of Engineers project is credited with bringing seaside amaranth back to Monmouth Beach in New Jersey. (PHOTO BY DALE SUITER/USFWS)



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sand was dredged from the ocean and pumped onto the shore and distributed around. A berm is the flat area of the beach between the landward shore and the ocean where beach goers typically sunbathe.

An enlarged beach acts as a buffer, protecting the buildings and infrastructure behind the beach from the storm surges and flood damage.

In 2012, 18 miles of the 21-mile project was completed. Then Superstorm Sandy devastated the region, removing 5 million cubic yards of sand from the shore, enough sand to fill New Jersey's MetLife Stadium.

With funding from the Hurricane Sandy Disaster Relief Appropriation Act of 2013, the Army Corps replenished 8 million cubic yards of sand to the 18 miles of the project and completed the remaining three miles.

Since then, the agency has performed periodic sand replenishment to ensure that the beach provides continued protection from storms and hurricanes.

“This continued renourishment will help protect local communities, prevent damages from hurricanes and nor'easters, and benefit the economy,” Jason Shea, project manager, New York District, U.S. Army Corps of Engineers, says of the project, the world's biggest beach-fill project in terms of sand volume.

Recently, the Army Corps started a study to re-assess the project and to see if additional measures can make the project even stronger and more resilient.

The work on this project is helping to protect not just seabeach amaranth but also migratory birds including the piping plover, the state endangered least tern, and the state special concern species the American oystercatcher.



Offshore measures benefit marine species including sea turtles and whales.

The Army Corps protects these species with monitoring, public education, environmental windows, and symbolic beach fencing. >>

Dag Madara rediscovered the federally threatened coastal plant seabeach amaranth, which hadn't been seen in the region for almost a century. (PHOTO

COURTESY DAG MADARA)



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## Monitoring

If Madara hadn't been monitoring the beach in 2000, seabeach amaranth wouldn't have been rediscovered. Monitors also observed the return of the American oystercatcher.

Offshore monitoring ensures endangered sea turtles, as well as whales, dolphins, and seals, are not harmed during the sand dredging and placement process.

## Public Education

Using beach signs to educate the public on ways they can avoid or minimize potential impacts to wildlife and ecological communities on the project site is good for the plants and animals.

It's also good for the project. For example, an educated beach visitor may be more tolerant of any inconveniences, such as temporary beach closings, that are associated with protected beach areas.

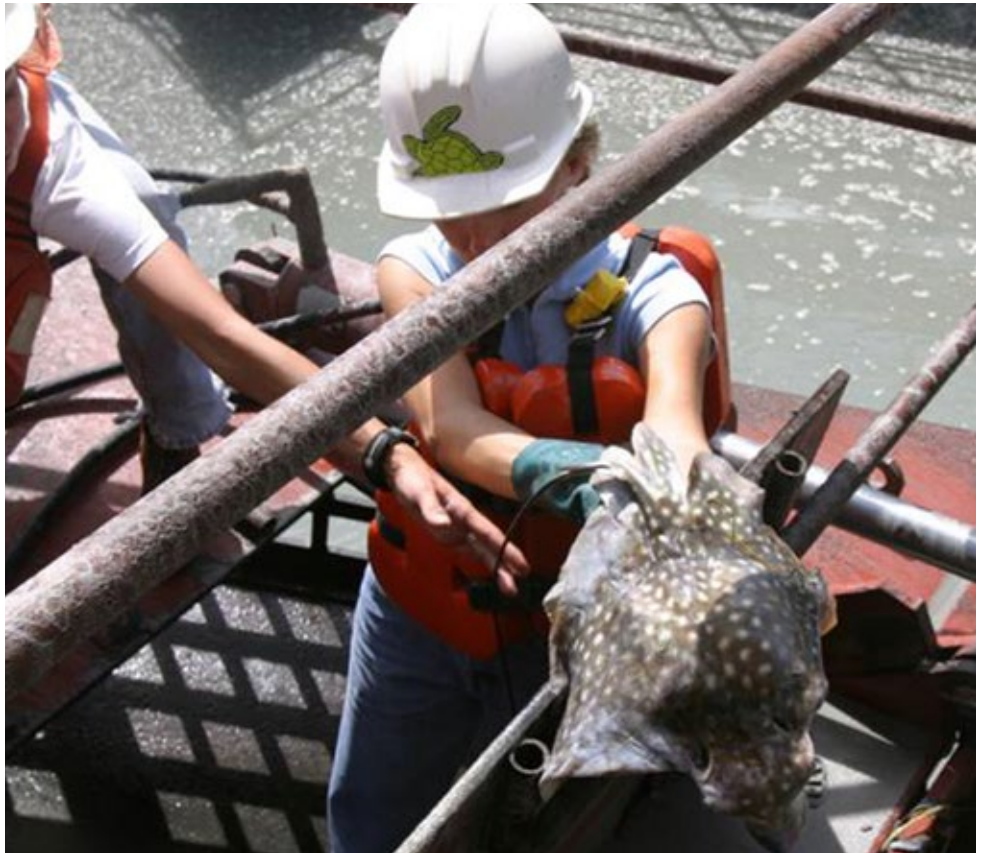
Such signs can also engage the crew.

On this project, the crew purchased binoculars and bird books after their interest was sparked in the American oystercatcher. They also made notes about their bird observations that they provided to the monitors.

## Environmental Windows

Environmental windows are months out of the year when construction on a project is halted to protect at-risk species.

Piping plovers nest on the shore between March 15 and August 15, so sand placement may occur during this time only in portions of the project where piping plovers are determined not to be nesting.



Offshore monitoring ensures endangered sea turtles, as well as whales, dolphins, seals, and other wildlife, are not harmed during the sand dredging and placement process. (PHOTO BY ERDC)

## Symbolic Beach Fencing

Placing symbolic (post and string) beach fencing delineates areas used by wildlife and alerts the public to the presence of a protected area.

According to Katherine Pijanowski, biologist with New York District, U.S. Army Corps of Engineers, "In the case with plants, placing fencing around protected species also prevents the project crew from inadvertently" running over or burying it."

Fencing provides multiple benefits, adds Peter Wepler, chief of the Environmental Analysis Branch, Planning Division, New York District, U.S. Army Corps of Engineers. "For example, when you fence off an area for breeding migratory birds, this also provides a protected habitat for seabeach amaranth and other rare coastal plants they co-habitat with. It's a win-win for multiple species."

Fencing installed on a beach in Long Beach Township, New Jersey, for example, resulted in a 300% increase in seabeach amaranth.

## Success

Pijanowski says building beaches back provides ample space and opportunities for plants to grow and for birds to rest, forage, and nest.

Before building up the beach in New Jersey, there was barely a habitat for plants and other wildlife to thrive.

A larger beach also draws more people to the shore. To balance the needs of the public, tourism, local communities, and imperiled species, the Army Corps funded the development of Beach Management Plans.

This shows how people and wildlife that make the coast their home truly do rely on each other for survival.

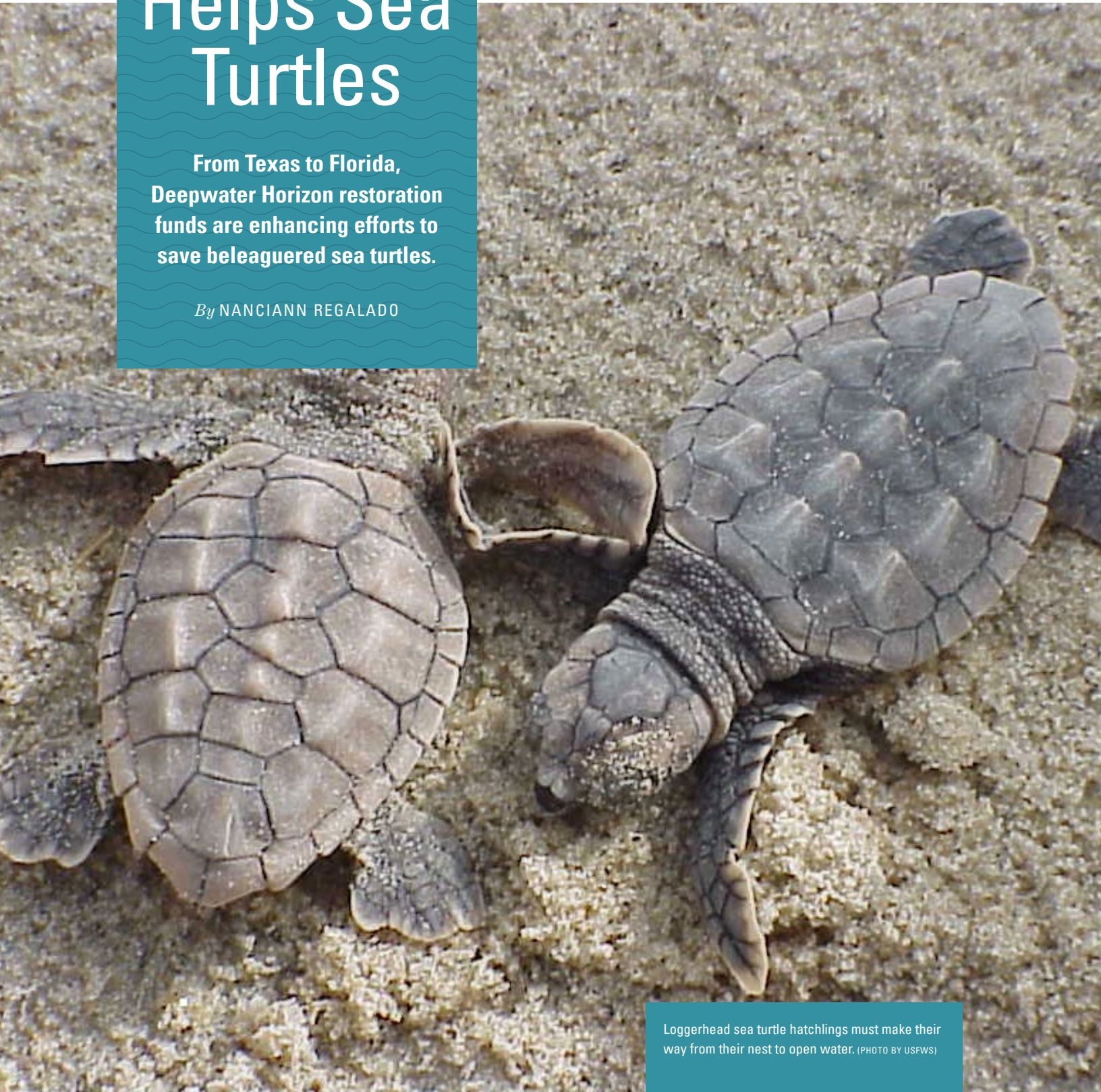
If Madara took a walk on the beach today, he would be sure to find the plant again by his feet, its branches firmly gripping the sand, strengthening the coast from today's stronger and more frequent storms. □

DR. JOANNE CASTAGNA, U.S. Army Corps of Engineers, New York District. She can be reached at [joanne.castagna@usace.army.mil](mailto:joanne.castagna@usace.army.mil).

# Oil Spill Funding Helps Sea Turtles

From Texas to Florida,  
Deepwater Horizon restoration  
funds are enhancing efforts to  
save beleaguered sea turtles.

*By* NANJIANN REGALADO



Loggerhead sea turtle hatchlings must make their way from their nest to open water. (PHOTO BY USFWS)

The unprecedented amount of oil released in the 2010 Deepwater Horizon oil spill in the Gulf of Mexico injured or killed more sea turtles than any other spill off the coast of the United States.

Wildlife biologists determined five species were injured by the spill and response activities: loggerheads, green, Kemp's ridley, hawksbill, and leatherback sea turtles. With this assessment, they estimated the damages BP should pay to compensate for the effects of those injuries. As a result of a settlement agreement, BP agreed to provide approximately \$212 million over 15 years to help restore sea turtles in the Gulf of Mexico.

Shortly after the spill, some 50 miles off the coast of Louisiana, biologists began working to help sea turtles. A close look at where sea turtles go and what they do revealed how biologists could help them rebound from the spill.

Sea turtles are migratory species and spend most of their lives in open water. In the Gulf, they range widely along the Gulf's northern edge, in the west, along the coast of Texas. Some also migrate

around the Florida Keys and nest along Florida's east coast. Some range farther south, along the coast of Mexico. They feed on sea grasses, small invertebrates, crustaceans, mollusks, and jellyfish. Female sea turtles nest on the sandy beaches that border their range.

To be effective, restoration strategies must address harmful conditions in sea turtle habitats—open water, foraging areas, and nesting beaches—that threaten populations. They also need to consider threats faced by individual sea turtles, such as capture and death in fishing nets and collision with boats.

Since the oil spill, biologists representing all the state and local governments responsible for restoring the Gulf, as well as federal agencies, have worked to define restoration strategies and projects.

One approach is to use funding to

supplement successful activities already underway, such as the Sea Turtle Stranding and Salvage Network activities across the Gulf. Coordinated by NOAA Fisheries, these networks rely on local organizations to respond to stranded turtles, collect scientific data, transport sick and injured turtles to rehabilitation facilities, and help educate the public about sea turtle conservation.

NOAA Fisheries also leads numerous projects aimed at reducing vehicle strikes and bycatch through public education efforts and engaging fishers in the use of bycatch reduction devices and techniques. Bycatch refers to the unintentional capture of non-target fish or wildlife by commercial and recreational fishers in gillnets and trawl nets, and on fishing lines. These projects help cut sea turtle deaths in open water. Reducing marine debris eaten by and entangling sea turtles is another way to help sea turtles. >>

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At Archie Carr National Wildlife Refuge, sea turtle hatchlings have dug their way out of their nests—the dark depressions in the sand. (PHOTO BY ALEXANDER ARROW/USFWS)



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The Department of the Interior is leading projects that enhance nesting success and hatchling survival on beaches across the region. In the three eastern Gulf states, one project is replacing the artificial outdoor lighting near beaches that disorient nesting females and disrupts hatchlings' trek to open water. The new lights are low wattage and emit only long wavelengths of 560 nm or longer (amber, orange, or red). The Service and Florida Fish and Wildlife Commission have also partnered to produce a certified wildlife lighting program that guides local governments, communities, and property owners in the selection of more wildlife friendly lighting in the vicinity of nesting beaches.

We have used land acquisitions from willing sellers to protect sea turtle beach nesting habitat from disturbance or destruction. Beaches that support a high density of nests are some of the most important to conserve.

One example of the successful use of this strategy was the acquisition of parcels in areas adjacent to Archie Carr National Wildlife Refuge, an area that contains some of the most significant habitat for loggerhead and green sea turtle nesting in the world. For years, we have worked with Florida agencies and The Conservation Fund to acquire habitat and reduce gaps between nesting beaches. Deepwater Horizon funds, including those contributed by the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund, were used to acquire the most recent additions to the refuge. □

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NANCIANN REGALADO, Office of Communications,  
Southeast Region

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(Clockwise from top) 1. Tracks made by a disoriented female sea turtle searching for a place to lay her eggs.

(PHOTO BY LIZ GROSS/ALABAMA SHARE THE BEACH) 2. Deepwater Horizon settlement funds been used to install sea turtle friendly lighting in coastal Florida, Alabama, and Mississippi. (PHOTO BY DIANNE INGRAM/USFWS) 3. On the beach, a female green sea turtle leaves telltale tracks after laying eggs. (PHOTO BY BLAIR WITHERINGTON)





This sign greets visitors at the entrance to Archie Carr National Wildlife Refuge.

(PHOTO BY ALEXANDER ARROW/USFWS)



### 'The Turtle Man'

Dr. Archibald Fairly Carr Jr. was a research professor of zoology at the University of Florida when he published his classic *Handbook on Turtles* (1952) and his life's focus on sea turtles was well underway. His next renowned book, *The Windward Road* (1956) "was a call to arms resulting in global efforts to conserve sea turtles from extinction," according to the University of Florida's Archie Carr Center for Sea Turtle Research. By 1959, his alerts had continued to raise public awareness of threats to the marine animals and the Sea Turtle Conservancy, the first nonprofit organization dedicated to studying and protecting sea turtles from extinction, was created. Carr served as its director from 1959 until his death in 1987.

Known as "the Turtle Man," Carr researched the life of sea turtles and the challenges they face, leading to the creation of other nonprofits and research centers. He helped further our understanding of sea turtle foraging, and migratory and nesting practices. As a zoologist familiar with sea turtles, he was skeptical of a widely held belief that a small and rarely seen type of sea turtle was a sterile hybrid of two more common sea turtle species. It was only after a mass nesting event (called an arribada) was filmed on a beach in Mexico, that Carr was instrumental in confirming that the small and most imperiled Kemp's ridley sea turtle was a bona-fide species in great need of protection. Upon viewing the film of the nesting sea turtles, he reportedly said:

*There it was, the arribada as the Mexicans call it—the arrival—the incredible culmination of the ridley mystery. Out there, suddenly in clear view, was a solid mile of ridleys.*

In 1989, Congress approved legislation to create Archie Carr National Wildlife Refuge, and it was established in 1991. National wildlife refuges are rarely named after an individual, but with the support of many, Carr's legacy lives on today.



# MUSEUM OBJECTS COME TO LIFE

In this series we highlight the "Treasures of the Service" from the museum collections of the U.S. Fish & Wildlife Service Museum and Archives, the Service's National Fish and Aquatic Conservation Archives, the National Wildlife Property Repository, and the collection at DeSoto National Wildlife Refuge, containing over 250,000 artifacts excavated from the 1865 wreck of the Steamboat Bertrand.

## Test Kitchen

Called the Test Kitchen, a Service initiative in the 1950s and '60s promoted public consumption of fish and shellfish. Various ways of preparing seafood were conceived and tested in the Service's Test Kitchen in College Park, Maryland. The various recipes (as well as information on purchasing and preparing seafood) were then published as the "Test Kitchen Series." The series was produced from 1950 to 1965 and consisted of 15 issues, including "Fish Cookery for One Hundred" (no. 1), "Basic Fish Cookery" (no. 2), "Fish Recipes for School Lunches" (no. 5), and "How to Cook Clams" (no. 8). In addition, the Service also published seafood recipes in national periodicals, such as *Better Homes and Gardens*, and *Ladies' Home Journal*.

(ANDY WHITE, U.S. FISH & WILDLIFE SERVICE MUSEUM AND ARCHIVES) (PHOTO BY REX GARY SCHMIDT)



## So-fish-ticated Watercolor



An exciting addition has been donated to the National Fish & Aquatic Conservation Archives. From 1948 to 1981, Bob Hines served as the National Wildlife Artist for the Service. This is a watercolor painting of an Arctic grayling, which was likely a trial painting to the final version included in *Alaska's Animals and Fishes* by Frank Dufresne

and illustrated by Hines. Hines had never seen an Arctic grayling when he painted them, but after the book was published he went on a safari to Alaska with the Outdoor Writers Association in 1947, which was led by Dufresne. The backside of this painting has a handwritten note from Hines giving the painting to Ken Crawford, a fellow participant on the Alaska safari. Arctic graylings are members of the salmon family and the only type of grayling in North America. (APRIL GREGORY, CURATOR, NATIONAL FISH & AQUATIC CONSERVATION ARCHIVES)

## Sorting Eggs

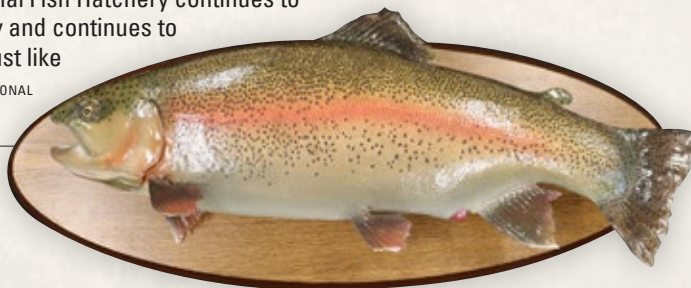


This photo, from the former Cape Vincent National Fish Hatchery in Cape Vincent, New York, is known as a cyanotype. Developed in the mid-1800s, cyanotypes were originally used to reproduce notes and for plant specimens. This cyanotype highlights one of the various activities done by hatchery workers. The men are picking out, by hand, the eggs that hadn't been fertilized from the ones that had. It is a very important task when raising fish because dead and nonviable fish eggs are susceptible to saprophytes (ubiquitous water molds) that can rapidly proliferate over an entire incubation tray causing mortality to good eggs. Today, unfertilized eggs can be sorted by machines, though eggs from more sensitive or rare species are still picked out by hand. (TAYLA BAHR, MUSEUM TECHNICIAN, NATIONAL FISH & AQUATIC CONSERVATION ARCHIVES)

## The Mother of Many

This fish mount, nicknamed Arleen, comes from Ennis National Fish Hatchery in Ennis, Montana. It's an Arlee strain rainbow trout broodstock that weighed 18 pounds. This beautiful trout lived 8 years and was vital to the hatchery. She produced over 12,000 eggs and about 10,000 fingerlings. Her offspring were stocked to support recreational fishing not just in Montana but around 26 states. Ennis National Fish Hatchery continues to operate as a broodstock hatchery and continues to raise rainbow trout broodstock, just like

Arleen. (TAYLA BAHR, MUSEUM TECHNICIAN, NATIONAL FISH & AQUATIC CONSERVATION ARCHIVES)

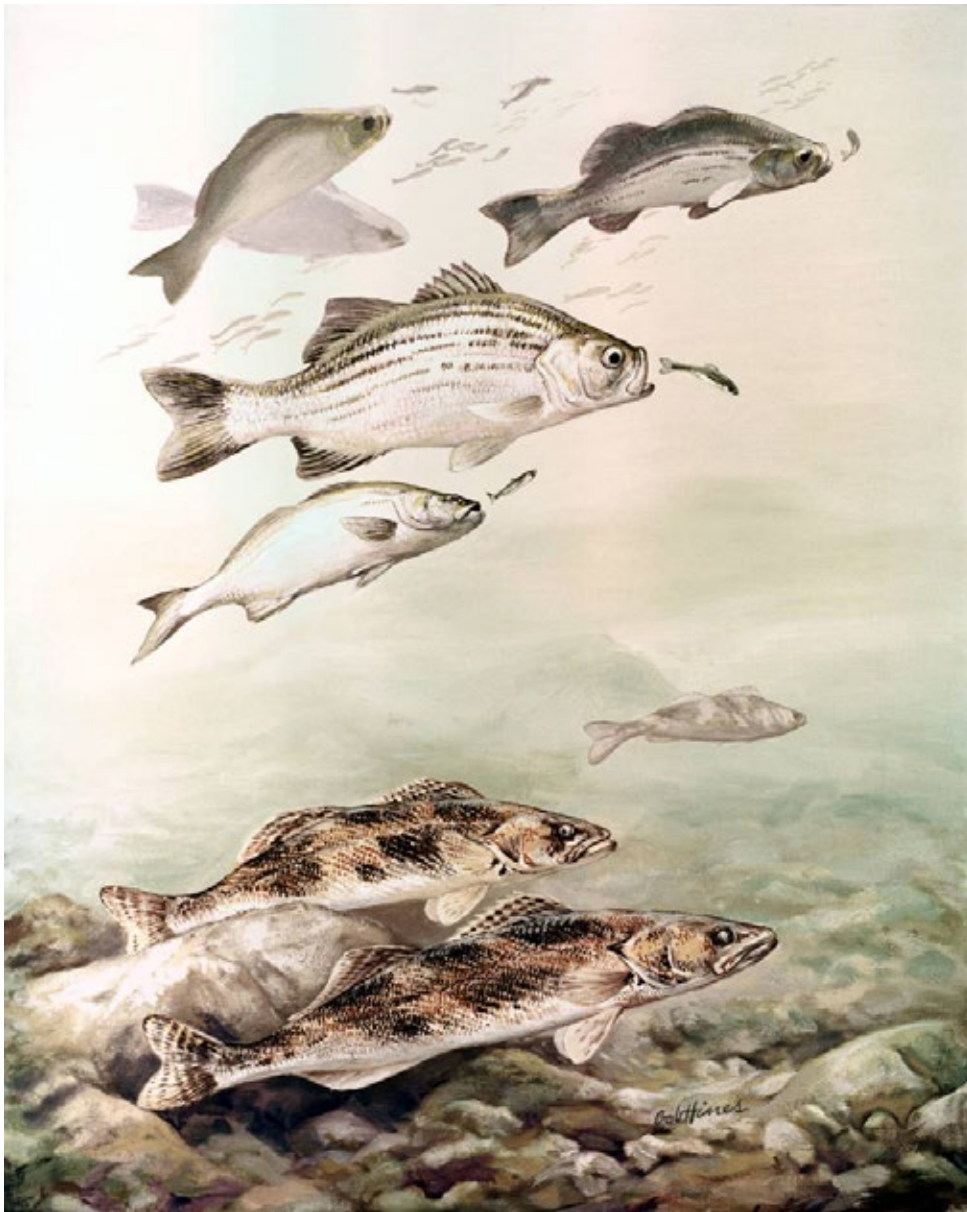




# Sounds of Summer Past

## Creel Surveys Reveal Mountains of Information for Fishery Managers

By CRAIG SPRINGER



National Wildlife Artist Bob Hines, who had a 31-year career with the Service, drew this illustration of white bass (top) and sauger.

It is curious how sounds evoke memories. The shrilling of cicadas in the pinyon-juniper woods behind my New Mexico home transports through the decades to another May afternoon and a younger self aboard a 15-foot jon boat, a creel clerk for the Ohio Division of Wildlife. I would spend days roving over a reservoir, conducting in-person interviews of anglers in boats and onshore, gathering information on what they caught, how far they drove, hours they spent fishing, and how many fish they kept in the creel. Catch rates and preferences were useful baseline and trend data for a sauger and white bass fishery.

That spring day the air was still, stocky and thick like stew. The buzz of bugs floated onto the tranquil water, coming to my ears gentle as a feather, sporadic like waves rising and falling and lightly lapping onto a shoal. Cicadas droned incessantly from the maples and hickories on the hillsides rimming the lake. If sound had color, theirs would be featureless and monochromatic. The thumb-sized bugs were serious about their future. They looked to breed and die in a matter of days. Their offspring would repeat the noisy ritual in 17 years.

Coming upon a pair of anglers aboard a boat with a glittery hull, I killed my burring outboard and walked forward. My boat came to rest. Standing on the bow, I watched the water surface between us turn into a froth in a flurry of feeding fish. A school of white bass made a boil feeding on luckless gizzard shad. The anglers dropped curly tail jigs into the frenzy and took part in the food chain, lifting out slabs of white bass gleaming like sterling silver.

White bass are great fish both on the end of a line and in the skillet. A freshly angled fish looks like polished chrome with a slight bluish-olive tinge somewhat akin to the well-worn bluing of an old shotgun barrel. >>



*Continued from previous page.*

Only mere miles from where my memory takes me, Constantine Rafinesque captured a white bass from the Ohio River on an epic sojourn in 1818. The Turkish-born Kentucky polymath professor of natural sciences, economics, and archeology published *Ichthyologia Ohioensis* in 1820 and called the fish the “golden-eye perch.” He caught the fish from the Falls of the Ohio near Louisville. The cataract is gone, as are the natural long-distant runs of white bass, waylaid now by locks and dams.

But white bass are not uncommon. Using Sport Fish Restoration dollars derived from taxes paid by tackle manufacturers and taxes levied on motorboat fuel, state fish and wildlife agencies manage naturally occurring populations from northeast Texas to Michigan’s upper peninsula. Biologists have stocked white bass in reservoirs where the waters are clear and deep, both within their native range of the Mississippi, Ohio, and Great Lakes basins, and into isolated lakes in the West. Sight-feeders like white bass do well in clearer waters where smaller fish are their favored fare.

I spent eight months on the reservoir and interviewed thousands of anglers from all walks of life. Sport Fish Restoration dollars supported it all: my salary, the jon boat, the fuel, paper forms, and clipboard, and for the senior biologists and statisticians to analyze the biological and demographic data to inform future fishing regulations and stocking regimes.

Those southern Ohio cicadas have since twice gone through their 17-year-long life cycle. Despite the many summers that have slipped downstream, I vividly recall the bass boil and the two anglers I interviewed after they hauled in several slabs of white bass. They were delighted to participate in the survey—and contribute to fisheries management. □

To learn more about Sport Fish Restoration, [visit Partner with a Payer](#).

CRAIG SPRINGER, Office of Conservation Investment, Headquarters



### Happy 60th Anniversary

A wilderness is recognized as an area “untrammelled by man, where man himself is a member of the natural community, a wanderer who visits but does not remain and whose travels leave only trails.” The Wilderness Act celebrates its 60th anniversary on Sept. 3, 2024. This is Mollie Beattie Wilderness in Arctic National Wildlife Refuge.

(PHOTO BY DUSTY VAUGHN/USFWS)



## transitions

### Headquarters



**Dr. Hila Levy** has been named Assistant Director for International Affairs.

Before joining the Service, Levy concurrently served as Assistant Director for ocean, polar, and natural security in the White House Office of Science and Technology Policy and as Director for science, technology, and workforce strategy on the National Security Council where she coordinated interagency policy recommendations for the president. In her roles at the White House, she contributed to national strategy and foreign policy development, including the 2022 National Security Strategy and multiple National Security Memoranda on ocean, polar, environmental, and workforce matters. She represented the United States at bilateral and multinational security dialogues and negotiations.

As the Assistant Director for International Affairs, Levy leads our domestic and international efforts to protect, restore, and enhance wildlife and their habitats with a focus on international species.

Her distinguished career includes parallel military and civilian careers, and she has worked in national security, international relations, science, and environmental management on every continent. She served as an Air Force intelligence and foreign area officer overseas in the Pacific and in Europe, most recently in Special Operations Command, before serving on the Joint Staff as the Arctic and Maritime Policy Advisor.

Levy is a published scientific researcher, polar and marine ecologist, virologist, and geneticist, specialized in Antarctica; educator; translator in six languages; and climate security advocate. She received a Bachelor of Science in biology with minors in Arabic, French, and Spanish as the top graduate of the U.S. Air Force Academy.

She holds a master's in philosophy in military strategy from the School of Advanced Air and Space Studies and another in environmental planning and management from Johns Hopkins University. She also holds a Master of Studies in historical research, a Master of Science in biology with distinction, and a Doctor of Philosophy in zoology from the University of Oxford, where she was the first Rhodes Scholar from Puerto Rico.

In her free time, she enjoys travel, cooking, running, and sharing adventures in nature with her three children. □



**Lesli Gray** has been named Assistant Director for the Office of Communications.

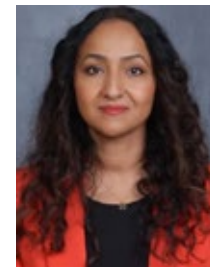
Gray served as acting Assistant Director for OC since December 2023.

With over 25 years of experience at the field, regional, and Headquarters levels in communications, legislative affairs, and leadership, Gray brings a wealth of expertise to help connect our mission to the American public.

Over the course of her career with the Service, she has shown leadership, dedication, and skill connecting our work to diverse audiences. For the past several years, she served as the Assistant Regional Director in OC for the Southwest Region where she led a talented team in public affairs, digital media, congressional relations, and Tribal relations.

Before that, Gray led outreach and congressional efforts for Texas and Oklahoma. She has also served as the Chief of the Division of Congressional and Legislative Affairs in Headquarters, has held leadership roles in several NGOs, and worked as a committee staffer in the House of Representatives.

Gray holds a master's degree in legislative affairs from the George Washington University and bachelor's degrees in business and marketing from George Mason University. She and her husband have a son and daughter and two dogs. In her free time, she enjoys playing pickleball, cooking, and exploring the outdoors. □



**Soha Mahgoub** (SUE-ah ma-JOOb) has been chosen as Assistant Director for Information Resources

and Technology Management (IRTM)/Associate Chief Information Officer (ACIO).

Mahgoub comes to the Service from the Department of Homeland Security, where she was serving as the Program Manager, Infrastructure Security Division. As the Assistant Director/ACIO, Mahgoub delivers information management and technology across the Service to address the ever-evolving needs of the agency.

Mahgoub comes to the Service with 23 years of information technology experience with federal, commercial, and international organizations. She has successfully managed multimillion-dollar, complex IT programs and demonstrated her ability to deliver mission-critical results and effectively lead teams. Her experience includes managing IT infrastructures, big data, cloud, cybersecurity, and software/application development. »

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She has held several key positions at DHS, including serving as the acting associate director and CIO within the DHS Office of Health Affairs and acting deputy chief data officer and associate chief of Engineering, DHS Cybersecurity Infrastructure Security Agency. While at DHS, she oversaw several mission-critical programs and led several diverse teams of contractors and federal personnel, managing budget/acquisition programs, cloud initiatives, data acumen, and program management.

Mahgoub grew up in Sudan before moving with her family to the United States in her early 20s. She has a background in architecture as well as electrical engineering and speaks two additional languages, Arabic and Nubian. Soha holds an M.S. in telecommunications and computers and a B.S. in electrical engineering from George Washington University. When she is not at work, she enjoys spending time with family, walking and hiking outdoors, and taking road trips. □

## Midwest Region



**Jim Hodgson** (seen with Deputy Regional Director Chuck Traxler (right)) has retired from his role with the Office of Conservation Investment, formerly Wildlife and Sport Fish Restoration, after a career in natural resources, including more than 15 years with the Service.

“I would like to thank Jim,” says Deputy Regional Director Chuck Traxler, “for all his work in Federal Aid, Wildlife and Sport Fish Restoration, and Office of Conservation Investment. Jim has made a significant impact, which allowed the program grow into a powerhouse for conservation and helped set us up for future success.”

In Hodgson’s role as Assistant Regional Director, he hired and supervised dozens of staff across the eight-state Midwest region and guided the distribution of billions of dollars to state, Tribal, and partner efforts. Through these efforts, programs were able to provide additional resources and help a wide range of people enjoy better experiences in the outdoors.

“There are many highlights from my time with the Service,” Hodgson says, “but I’m particularly proud of acquiring land, protecting lands, and ensuring the appropriate use

of conservation dollars. I will always be grateful to the hunters, anglers, boaters, and others who support those efforts. I’m also proud of the cutting-edge research that included collaborating with Tribes and other important partners.”

Hodgson is well known by co-workers, partners, and other colleagues for his tireless passion for conservation and leaves a legacy of accomplishments that will boost the Office of Conservation Investment’s goals in the coming years and decades. Prior to joining our agency, Hodgson was the Upper Mississippi River Basin coordinator for Minnesota and worked as a water quality specialist for over 23 years.

“During the past 15 years, Jim has been a dedicated and passionate advocate for conservation and improving partnerships between our agency and state fish and wildlife agencies,” says Kyle Daly, Deputy Assistant Regional Director. “The future of the Office of Conservation Investment is bright and much of that can be attributed to Jim’s leadership and foresight. He’ll be missed at work, but I’m sure he’ll enjoy his well-deserved time recreating during retirement in the places he has helped conserve.”

Hodgson has fond memories of working on projects related to Canada lynx, walleye management, invasive carp issues, chronic wasting disease, and the relocation of elk in Missouri. □

## honors

### Pacific Region



**Bridget Moran** (third from left) learned in early 2024 she’d been awarded the Service’s prestigious Meritorious Service award. She says that when the award was announced at a Pacific Region meeting, she “was immediately humbled.”

“Some of my key mentors received that award, so to be considered in a group that were doing things like they were is just really humbling,” Moran says.

Moran won the award—one of the highest distinctions awarded by the Service and bestowed only once in a person’s career—for her work leading the development and implementation of the Deschutes Basin Habitat Conservation Plan (HCP).

The citation read: “Against the backdrop of the deep divisions that often accompany Western water issues, Bridget worked tirelessly to partner with local irrigation districts, farmers and conservation groups to develop the Deschutes HCP.

“Over a decade in the making, the HCP provides certainty for irrigators as well as providing conservation measures for the Oregon spotted frog and other (federally threatened) »

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species. In the first two years of implementing the HCP, Central Oregon experienced historic drought. Bridget coordinated with the Permittees to ensure conservation measures were implemented to the maximum extent practicable, while navigating complex legal, social and political issues to keep the plan on track.

“Bridget is a creative problem solver and a highly skilled communicator whose diplomacy and frankness have earned the genuine trust of partners in the Deschutes Basin. Over the past year, the Deschutes HCP has garnered national attention as a model of collaboration to address a seemingly intractable issue, and Bridget has worked collaboratively with all members of the various Deschutes Basin stakeholders groups to share the lessons learned, and to educate them on the needs of species in the basin and the relationship between water-management objectives and actions and the life history needs of fish and wildlife.”

Moran is field supervisor at the Bend Field Office. □

JAN PETERSON, for the U.S. Fish and Wildlife Service



When you ask **Damien Miller** what he loves most about his work in the Willamette Valley, he says it's

working with dedicated staff, partners, and landowners to conserve, restore, and protect conservation lands and wildlife habitat.

The Willamette Valley is the green, beating heart of Oregon. From Portland south to Eugene, 70% of Oregon's population lives in the valley and it is home to agriculture, recreation, and conservation.

The Willamette Valley National Wildlife Refuge Complex is at the center of conservation efforts, consisting of, from north to south, Baskett Slough, Ankeny, and William L. Finley refuges. They provide a place for wildlife and plants, and they are also recovering endangered species, protecting the clean water sources on which people of the valley rely, and providing inclusive opportunities for all people to enjoy their natural world.

Miller has been the person responsible for overseeing those refuges for the past 12 years, working with Tribes, communities, partners, and neighbors to conserve the heart of Oregon. He has been recognized by the Department of the Interior with its highest career honor, the Distinguished Service Award.

The citation read: “Mr. Miller is a leader in conserving Trust resources and engaging communities on behalf of recognized the U.S. Fish & Wildlife Service, the Department of the Interior, and the National Wildlife Refuge System. Mr. Miller's collaborative work with the Service and our partners on endangered species recovery within the Willamette Valley contributed to delisting four species including the endemic Oregon chub, the first fish species to be recovered in U.S. history.

“Mr. Miller spearheaded a lengthy land protection planning effort involving multiple partners including the Confederated Tribes of the Grand Ronde, that culminated with the establishment of the Willamette Valley Conservation Area. His efforts will ultimately protect an additional 22,650 acres of important oak and prairie habitat (of which less than 10% remains) for the American people. Mr. Miller's leadership and creativity in fostering multiple conservation partnerships both on refuge system lands and beyond the boundaries using the Partners for Fish and Wildlife and Visitor Services programs has been essential to not only the ESA recovery and land protection efforts, but also connecting people with nature. These partnerships include collaborating with the Natural Resource Conservation Service and Oregon Department of Fish & Wildlife to restore prairie and wetland habitats on nearly 15,000 acres of private land.

“Mr. Miller also partnered with a nonprofit environmental organization to design and build the multimillion-dollar Ankeny

Hill Nature Center at Ankeny National Wildlife Refuge. Through this ongoing partnership, he created an education center and community anchor that is advancing our mutual conservation mission. Mr. Miller also provided leadership in establishing a bilingual outdoor education program enables the Service to directly engage Spanish-speaking communities in the Willamette Valley. Using innovative and exciting educational programming, Mr. Miller nurtured this pioneering effort that is connecting people with nature and establishing the Service as a community asset to the diverse cultures in the area. For his outstanding contributions to species recovery, sustaining partnerships, and expanding land protection and community engagement for the Service and the Nation, Damien Miller is granted the highest honor of the Department of the Interior, the Distinguished Service Award.”

Miller says, “I've been with the Service for 22 years and am rewarded each day with the knowledge that I'm making a positive difference in a mission that I truly believe in. When I first heard about my nomination for this award, it was really hard to believe and incredibly humbling. I count my blessing each day for such a great job, a great team, amazing partnerships, and such meaningful work, and I never expected recognition for it. To be nominated by my colleagues and recognized nationally with such a prestigious award fills me with gratitude, appreciation, and is an incredible honor.” □

MEGAN NAGEL, Office of Communications, Pacific Region

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**Jason Holm** learned leadership in the U.S. Army, crisis communications with the U.S. Navy, and put it all

together with the Service. Serving as Assistant Regional Director for the Office of Communications in the Pacific and Midwest regions, his first two rules in a media crisis are: 1) tell the truth, tell it first, tell it always; and 2) stay laser focused on the goal of serving the American public.

Holm has been awarded the Distinguished Service Award by the Department of the Interior for his 33 years of public service, including nearly 18 years with us. The Distinguished Service Award is the Department's highest honorary recognition, presented to employees for outstanding contributions made during an eminent career with the Department or exceptional contributions to public service.

"Mr. Jason D. Holm is recognized throughout the U.S. Fish and Wildlife Service and the Department of the Interior as a leader in communications. His relentless commitment to the FWS mission, his staff, and the American people has resulted in an exemplary career with FWS spanning more than 17 years," the award states. "Through his fundamental belief that we are public servants first, Mr. Holm has focused on developing diverse teams in the Pacific and Midwest regions that reflect the

communities in which bureau employees live and work and include unique cultural and Indigenous voices. He empowers staff to develop innovative, strategic, and inclusive communications practices, which ensure FWS delivers information furthering its conservation mission where, when, and in ways that the information is most helpful to the American people."

Pacific Regional Director Hugh Morrison has worked with Holm over the past 14 years and nominated him for the award.

"Jason has been a trusted colleague for a long time," Morrison says. "Whether it's a crisis or day-to-day operations of the Pacific Region, I can rely on Jason to provide well-reasoned advice that is bold, insightful, and has a unique Jason-esque flair. He is always there for me, his peers, the staff, and the public. He embodies the Distinguished Service Award, and has been an outstanding co-worker and public servant."

Holm has long championed the need to be transparent with the public, as well as making sure his teams are reflective of the audiences they serve. He also focuses on encouraging his public affairs staff to tell the Service's story to the public in a variety of ways, because not everyone has the same perspective and experience.

"It is a surprise and quite humbling to receive this recognition," says Holm. "It wouldn't be possible without 33 years of great mentors, forgiving bosses, and immensely talented teams." □

BRENT LAWRENCE, Office of Communications, Pacific Region



The Willamette Valley is home to over 70% of Oregon's population, including the most diverse and

fastest growing cities. For over 10 years, **Samantha Bartling** has been working with the community to create welcoming and inclusive experiences for the Willamette Valley National Wildlife Refuge Complex. The three refuges that comprise the complex are William L. Finley near Corvallis, and Ankeny and Baskett Slough near the state capital, Salem. Established to prevent the potential extinction of dusky Canada geese and to protect native wildlife and plants, the refuges are strongholds for the rich wildlife and natural landscapes that define the valley.

In recognition of her work to create inclusive and welcoming opportunities for communities to engage with nature on their terms, Bartling received the Secretary of the Interior's Diversity Award. The award recognizes employees who have provided exemplary service and/or have made significant contributions to the Department in its efforts to increase diversity at all levels.

"My first job was working in Alaska and closely with Native villages," Bartling says. "I was given a Yup'ik name and the whole experience changed me and my life. From there, my dream of being a refuge manager

shifted, and I wanted to be a leader/manager that worked with the community to care for the refuge and along the way it has shifted some more. I want to help create and support a team of people who are empowered to be themselves and to do the work they love in the creative and special ways they are inspired and moved to do so. When wildlife thrives, people thrive. We need each other and it's a beautiful circle. Twenty years ago I wrote 'Making space(s) for wildlife y TODOS' on a piece of paper with smelly markers – and a version of that poster has hung on my office wall ever since. It's a professional and personal touchstone and north star for me. It's my mission to make space(s) for wildlife and to make space(s) for everyone."

MEGAN NAGEL, Office of Communications, Pacific Region

## Pacific Southwest Region



In May, we recognized employees for their achievements in advancing diversity, equity, inclusion,

and accessibility (DEIA) in the Service. The Awards Program recognizes exceptional leadership and accomplishments by employees in creating a diverse and welcoming work culture, where everyone feels empowered to be and do their best in meeting the Service's mission. »

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**Leilani Takano** was recognized as the 2024 Diversity and Inclusion Leadership Champion. Takano models engagement and the importance of diversity, inclusion, and equity work as a leader in our Ventura Fish and Wildlife Office, within the Pacific Southwest Region, and the Service. She sets the example of a humble and compassionate colleague and fosters an environment where all voices are heard and respected. Takano prioritizes engagement by facilitating discussions with her team and leadership to cultivate an inclusive, supportive, and welcoming workplace. She empowers all staff to create and host lunch-and-learn sessions on topics important to achieving a diverse workforce. Takano also encourages others to participate in outreach events with underserved communities and local area schools.

Takano is active in the Department of the Interior chapter of the Federal Asian Pacific American Council. Over the past two years, she has helped to develop a pilot mentorship program to reinforce recruitment and hiring as well as retention, and to ensure support and success of mentees. This program is an intentional pairing of a late-career mentor with a new-career mentee within the FAPAC community. The mentorship program developed a survey to identify barriers for Asian and Pacific Islander employees in the Department as well as ideas on how to address them. Takano helped use the survey to plan how to identify qualities and qualifications needed for successful mentors.

Takano has a strong success record for not only mentoring and supervising but ensuring interns are hired either within the agency or another conservation resource agency. She has incorporated several available paths for internship opportunities within the office to reach a diverse applicant pool, accomplish important conservation work, and successfully recruit or convert interns to full-time staff. She has enabled transformative experiences with the agency for underrepresented groups through the Hispanic Access Foundation, Pathways, Science in the Service/Public Land Corps, Directorate Fellows Program (DFP), and the Kendra Chan Conservation Fellowship (a collaboration with the Ecological Society of America and DFP). Takano's commitment to candidates with underrepresented backgrounds has allowed the Ventura Office to better represent the communities we serve. Even after each internship's conclusion, Takano maintains contact to keep the interns informed of placement opportunities and champions prioritizing the hiring of all former interns. Takano serves as a wonderful example of leadership in diversity and inclusion.

Takano leads and serves with equanimity and kindness. She is valued, respected, and admired by many—from student interns to late-career co-workers.

The region's **Darrell Kundargi** (featured on p. 57) was named the 2024 Diversity and Inclusion Champion-Individual. □

## Southeast Region



Earlier this year, Shannon A. Estenoz, Assistant Secretary for Fish and Wildlife and Parks, presented a Department of the Interior Meritorious Service Award to **Holly Blalock-Herod** (seen with her husband, former Service employee Jeff Herod) for her leadership in the Spill Response and Natural Resource Damage Assessment and Restoration (NRDAR) Program for the Service.

The award's citation recognizes Blalock-Herod's contributions in "developing and implementing national policy, best management practices, and fiscal and operational integrity" in the program. Some of the accomplishments listed include acting as a leader in the response to the catastrophic 2010 Deepwater Horizon oil spill, as she helped guide the Service's spill response logistics, personnel management, and environmental compliance. She ensured federal partners used the best available science to avoid and minimize impacts to species protected under the Endangered Species Act, Migratory Bird Treaty Act, and Marine Mammal Protection Act during NRDAR restoration. Her attention to Service species goals ensured environmental compliance and inclusion of conservation measures for those species.

Blalock-Herod's path to this level of achievement was long, varied, and productive. In 2001, she took a full-time permanent position with the Service as a fisheries biologist in the Panama City Field Office. The education she received while earning her Bachelor of Science and Master of Science degrees at Murray State University and the University of Florida, respectively, and her experience as a student in the Student Career Experience Program, prepared her well for this position.

As her career progressed, Blalock-Herod consistently sought out new areas of interest and unique experiences. Through her 23 years with the Service, she has worked at three additional field offices (in Florida, California, and Hawai'i), the Southeast Regional Office in Atlanta, Georgia, and at Headquarters in Falls Church, Virginia

Blalock-Herod says she learned that a great way to achieve our conservation goals is to "clone ourselves" and "work through others, lead them from behind."

One of the pivotal points in her career occurred when project leader Gail Carmody, suggested Blalock-Herod look into some communication training. For Blalock-Herod, that experience, when combined with working with Pacific Islanders, taught her to focus more on how to speak with different people, including those who differ culturally from her, and how different people might receive the messages she is sending. »

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Speaking of her role as a responder to the Deepwater Horizon oil spill in 2010, Blalock-Herod describes that job as quite eye-opening. “I learned I can work well under pressure, and I can make decisions quickly, even if I know I don’t have all the information I would like. I like to be deliberate, but I have confidence now that I can work in a high-pressure environment and that I’ll do well.” □

NANCIANN REGALADO, Office of Communications, Southeast Region

## Service-wide

We have featured content from the Pacific Region and elsewhere on employees who were recognized at the Department of the Interior 2023-2024 DOI Honor Awards Convocation. These Service employees were also honored:

### Distinguished Service Award

The highest honorary recognition an employee can receive within the Department. It is granted for an outstanding contribution to science, outstanding skill, or ability in the performance of duty, outstanding contribution made during an eminent career in the Department, or any other exceptional contribution to the public service.

- Gregory Scott Austin
- Debra T. Bills
- Kenneth S. Clough
- Tammy J. Fairbanks

- Gregory W. Gerlich (Posthumous)
- Rebekah T. Giddings-Wietz
- Rosemarie S. Gnam
- Edward Joseph Grace
- Jacquelyn B. Hall
- Richard A. Johnston
- Scott D. Knight
- Kevin J. Kritz (Posthumous)
- Cindy Loban
- Edwin E. Muniz
- David L. Wedan

### Valor Award

This award is presented to Interior employees who have demonstrated unusual courage involving a high degree of personal risk in the face of danger.

- Israel Aledo
- Dylan O. Jennison
- Gregory T. Mullin

### Exemplary Act Award

The Exemplary Act Award is an honorary recognition granted to employees or private citizens who attempt to save the life of a Departmental employee serving in the line of duty or the life of any other person while on property owned by or entrusted to the Department when risk to their own lives is not in jeopardy.

- Brett A. Bowser
- Jared P. Brierley
- Kurt W. Campbell
- Tyler Christianson
- Brad Kohn
- Andrew Messner
- Nathan A. Tillinghast

### Secretary’s Diversity Award

The Secretary’s Diversity Award recognizes and honors employees or groups of employees of the Department who have provided exemplary service and/or have made significant contributions to the Department in its efforts to increase diversity at all levels.

#### JA0 Hiring Team (Group)

- Sarah J. Carney
- Monica A. Cordova
- Jacquelyn B. Hall
- Erin L. Pilitowski
- Pamela A. Sirotzky

#### Infrastructure Team (Group)

- Naomi Fireman
- Robert L. Miller

### Ally Engagement & Enrichment Week Change Agents

During 2023, team members, known as Diversity Change Agents with multiple bureaus and offices, played a vital role in planning and executing the Department’ Ally Engagement and Enrichment Week, held Aug. 7–11, 2023, with a theme of “Widening Our Lens.” The event supported the Department’s Diversity, Equity, Inclusion, and Accessibility (DEIA) strategic goal priorities for safe workplaces, professional development, and DEIA training and learning.

- **Erin Cole**, Change Agent for the Service

### Environmental Achievement Award (Cultural Resources Protection Category)

This award recognizes Department employees and teams and cooperators (contractors or outside partners) who have attained exceptional

environmental achievements. Award recipients in the following categories are recognized: Climate Champion, Greening the Fleet, Environmental Justice, and Cultural Resources Protection.

- **Eldon Brown** (Cultural Resources Protection Category)

### Meritorious Service Award

Established in 1948, the Meritorious Service Award is the second highest honor award a career employee can receive for an important contribution to science or management, superior service in administration or in the execution of duties, or initiative in devising new and improved work methods and procedures.

- Matthew D. Baun
- Richard O. Bennett
- Anne Hecht
- Samantha Elizabeth
- Johnson Gibbs
- Chris Jussila
- Wayne F. Kasworm
- Alan L. Lagemann
- Catherine J. Nigg
- Kathleen A. Patnode
- Roger A. Tabor
- Graham Taylor
- Melvin L. Tobin □

Our digital strategists and additional communications employees have been recognized for efforts to mark the Endangered Species Act’s 50th anniversary with two Webby Awards—Best Social Campaign and the People’s Voice for Best Social Campaign, which is awarded by the voting public. Known as the “Oscars” of the »

*Continued from previous page.*

internet, the Webby Awards are presented by the International Academy of Digital Arts and Sciences.

“We are deeply honored to have received not just one but two 2024 Webby awards for our social media campaign that celebrated the 50th anniversary of the Endangered Species Act,” says Nancy Monroe, our division chief of Marketing Communications. “This recognition is a tribute to the passion and dedication of our social media team, who have worked tirelessly to engage the public in our Service’s efforts, and to raise awareness about the importance of protecting endangered species.”

Working with Tribes, partners, and other federal agencies, we set out with two simple goals for our ESA 50th social campaign—increase our social media audience’s knowledge and awareness of the ESA and increase support for threatened and endangered species.

By incorporating humor, entertainment, fun facts, and beautiful art, we took a heavy topic and made it relatable and understandable. Our social media audience responded positively by making many ESA 50th campaign social posts some of our most liked and highest engaged of the year. Over the course of 2023, we generated over 175 campaign social media posts, that reached over 7.2 million people.

### Creative Employees Brought the Buzz

Partner messaging was one aspect of the successful ESA 50th social campaign, but internal creativity was another. So many talented communications professionals worked tirelessly to strategize and plan, to create stories, graphics, GIFs, and beautiful pieces of art to help promote this historic law.

To commemorate the anniversary, we also released a [series of posters](#) that were rolled out on our social media accounts. These gorgeous posters featured portraits of eight federally listed species that have been put on the road to recovery due to this important law. The portraits were painted by Cal Robinson, a public affairs specialist in our Sacramento Fish and Wildlife Office.

“These awards are a testament to the talent and personal investment that our larger digital group brings to the table every single day,” says social media manager Bryson Jones. “Not only have we involved the American public in the importance of the ESA, but we’ve brought many into the fold of the greater mission of the U.S. Fish and Wildlife Service. A special thanks to all of our digital strategists and communications professionals and all their hard work on this award-winning social media campaign.”

The Webby Awards-winning team consists of **Erin Huggins, Rebecca Fabbri, Abra Zobel, Toshio Suzuki, Mason Wheatley, Nicole Vidal, Mallory Fisher, Courtney Celley, Cortney Solum, Tewosret Vaughn, Katrina Liebich, Mikaela Oles, Lisa Hupp, Holly Richards, Ashleyann Perez,**

**Cal Robinson, Matt Trott, Laura MacLean, Kris Pacheco, Leah Riley, Bryson Jones, and Nancy Monroe.**

Our social media team also won a Golden Post Award for best LinkedIn presence, a bronze Shorty Award in Government & Politics for the ESA50 campaign, and a U.S. Agency Awards shortlist honor for best social media campaign for the ESA50 campaign. □

**The Women’s+ Employee Resource Group Core Development and Launch Team** has been honored as the 2024 Diversity and Inclusion Group Champion. The team is **Ann Froschauer, Melissa Mata, Rachael Pierce, Maureen Walsh, Nicole Alt, Sierra Franks, Ashley McConnell, Kim Turner, and Heather McPherron.**

empowered to be and do their best in meeting the Service’s mission.

The Women’s+ Employee Resource Group (ERG) Core Development and Launch Team worked tirelessly to obtain Departmental approval for official ERG status (achieved in February 2023). The Core Team, a group of women from across the Service, convened to enhance the ongoing work of informal regional women’s centered groups, recognizing a need for a formal ERG focused on women and women-centered issues for all Service employees.

While a labor of love, standing up this new ERG was a substantial lift for team members on top of an already full workload. The Core Team developed bylaws, vision, mission, and a SharePoint site. They invited Service employees (current membership is 349 and growing), organized nomina-



In May, we recognized employees for their achievements in advancing diversity, equity, inclusion, and accessibility (DEIA) in the Service. The Awards Program recognizes exceptional leadership and accomplishments by employees in creating a diverse and welcoming work culture, where everyone feels

tions and elections for officers, engaged leadership sponsors, and scheduled regular meetings for the ERG membership. The Core Team worked to create a culture that welcomes, supports, empowers, promotes, includes, and increases the visibility of all women in all programs within the Service. »

The Core Team led positive and sustainable change by advocating with Service leadership for member participation in ERGs, which resulted in updated guidance from JAO Human Capital to clarify intent and support for participation in ERGs and other diversity, equity, inclusion, and accessibility initiatives. This has expanded opportunities for people to find a sense of community and develop a support network within the Service, which can be challenging for women and minorities.

The Core Team deserves recognition for their dedication to diversity, equity, inclusion, and accessibility initiatives. The Women's+ ERG Teams chat channels include career opportunities, and fosters communication between members about opportunities to connect with a support network to help highlight career opportunities. While this may not be traditional recruitment and hiring, this avenue supports members in identifying career growth opportunities and retaining women in the Service. The ERG fosters an inclusive and collaborative environment that inspires people to work toward a common goal to achieve success. For example, the Advocacy Committee continues to work with leadership to address systemic gender bias and discrimination. □

Recovery champions are staff and partners whose work is advancing the recovery of endangered and threatened species of plants and animals. The 2023 recovery champions are:

### Pacific Region

- **Mary Linders**—Washington Department of Fish and Wildlife
- **Sustainability in Prisons Project**

Over the last 13 years, Sustainability in Prisons Project partners have worked with incarcerated technicians to rear more than 48,000 Taylor's checkerspot caterpillars, grown more than 2 million butterfly resource and prairie plant plugs, and produced seeds for prairie restoration projects. The combination of outstanding butterfly survival rates achieved in correctional facilities through the project, captive rearing efforts, and successful plantings has likely prevented extirpation of Taylor's checkerspot from the heart of its range in Washington's South Puget Sound prairies and led to the establishment of several important reintroduced populations of the species. Partners have not only worked to save this endangered butterfly but also transformed human lives by helping individuals gain skills and perspectives that will be carried into the future. Linders has provided a bridge between wild Taylor's checkerspot populations and the captive rearing program in correctional facilities, leading to successful reintroductions and important conservation outcomes. Her innovations in monitoring species survival, analysis of habitat for reintroduction, and input for restoration

planning, have anchored recovery efforts in the realities of on-the-ground conditions.

### Southwest Region

- **Zachary Beard**—Arizona Game and Fish Department
- **Stephanie Coleman**—U.S. Forest Service
- **Daniel Dauwalter**—Trout Unlimited
- **Ryan Follmuth**—Arizona Game and Fish Department
- **Tim Gatewood**—White Mountain Apache Tribe Game and Fish Department
- **Ryan Gordon**—Service
- **Zachary Jackson**—Service
- **Stuart Leon**—White Mountain Apache Tribe Game and Fish Department
- **Kristy Manuel**—Service
- **Matthew Rustin**—Service

Members of the Apache Trout Recovery Implementation Team successfully managed the species, which led to meeting recovery goals for the threatened fish and signing the in-perpetuity Apache Trout Cooperative Management Plan. Recovery actions carried out by team members have included population reintroductions and augmentations, non-native trout eradication and control, removal of fish passage barriers where appropriate, construction of non-native trout barriers to protect Apache trout populations, and meadow restoration projects. Together, these efforts have resulted in 30 genetically pure self-sustaining populations of Apache trout—up from just 17 relic populations. In August 2023, the Service published a proposed rule to delist the Apache Trout due to recovery.

### Midwest Region

- **Jenna Haag**—Service
- **Brandon Iddings**—Iowa Soybean Association
- **Heidi Keuler**—Service
- **Kristen Lundh**—Service
- **Louise Mauldin**—Service
- **Darrick Weissenfluh**—Service
- **Karen Wilke**—The Nature Conservancy of Iowa
- **Brad Woodson**—Practical Farmers of Iowa
- **Grace Yi**—Practical Farmers of Iowa

The Iowa Topeka Shiner Recovery Partnership has significantly improved the status of the fish through oxbow habitat restoration projects. Together, partners have completed more than 70 targeted oxbow restorations in Iowa since 2019, with more than 40 additional projects currently in various stages of completion. This partnership has connected people across sectors through work with willing farmers, private landowners, local, state, and federal agencies, and partner organizations. Through in-person field days, virtual events, webinars, and outreach materials, partners have shared lessons learned and reached thousands of people to foster widespread awareness and support for Topeka shiner recovery. As a result of these efforts, the Service recommended changing the status of the fish from endangered to threatened in the species' most recent five-year status review. »



### Southeast Region

▪ **Christy Hand**—South Carolina Department of Natural Resources

For nearly a decade, Hand has been at the forefront of conservation and recovery efforts for the federally threatened eastern black rail, conducting cutting-edge research, designing and implementing comprehensive monitoring programs, informing habitat restoration initiatives, and increasing public awareness among many other activities. Hand's research on the breeding ecology and molt phenology of the rail in South Carolina has filled critical knowledge gaps for the subspecies and developed methodologies that are now the standard of research. As aptly noted by the Atlantic Coast Joint Venture, "Addressing the many data gaps needed to conserve this rapidly declining species is no small task, and Hand has provided crucial information to guide the species' recovery."

### Northeast Region

▪ **Lori Erb**—Mid-Atlantic Center for Herpetology and Conservation

▪ **Kathy Gipe**—Pennsylvania Fish and Boat Commission

▪ **Bill Pitts**—New Jersey Department of Environmental Protection

▪ **Noelle Rayman-Metcalf**—Service

▪ **Nate Nazdrowicz**—Delaware Department of Natural Resources and Environment Control

▪ **Beth Schlimm**—Maryland Department of Natural Resources

▪ **Scott Smith**—Maryland Department of Natural Resources (Retired)

▪ **Julie Thompson-Slacum**—Service

▪ **Chris Urban**—Pennsylvania Fish and Boat Commission

▪ **Brian Zarate**—New Jersey Department of Environmental Protection

Over the past 10 years, members of the Bog Turtle Recovery Team have made great strides in moving the species toward recovery. The team's focus on collaboration and partnerships has resulted in significant habitat restoration and land protection, most notably the permanent protection of 102 extant populations throughout the federally threatened turtle's northern range. A conservation plan developed by the team in 2019 will guide conservation initiatives over the next several years and help the Service and its partners prioritize additional sites for protection. Additionally, team members have supported the mission of the Collaborative to Combat the Illegal Trade in Turtles by working with law enforcement to solve cases, reducing risk to turtles from the global threat of illicit trade, and identifying source wetlands where poached bog turtles—if found—may be released.

### Mountain-Prairie Region

▪ **Tom Pitts**—Engineering and Planning Consultants

Pitts has been a leader in the recovery of the four listed Colorado River fishes—the Colorado pikeminnow, humpback chub, razorback sucker, and bonytail. Early in his career, Pitts was instrumental in the development of the Upper Colorado River Endangered Fish Recovery Program and the San Juan River Basin Recovery Implementation

Program. His vision helped create some of the most enduring and productive recovery partnerships to date, bringing together federal and state agencies, Tribes, water and power users, and environmental groups. For more than 30 years, these programs have advanced recovery of these species while supporting water development in western states. Additionally, these programs have effectively managed wetlands to support wild recruitment of razorback sucker, re-established Colorado pikeminnow in the San Juan River, and removed invasive non-native species from more than 900 miles of river annually.

### Alaska Region

▪ **Ryan Wilson**—Service

Wilson has made significant contributions to polar bear conservation in both national and international forums. Wilson's collaborative work with a diverse group of partners has addressed significant knowledge gaps and informed priority conservation, regulatory, and co-management actions for polar bears in Alaska. With more than 35 peer-reviewed publications on polar bears, Wilson has helped advanced our understanding of these animals, their habitats, and the many influences upon them. This work has also led to the development of a novel and robust tool to estimate and mitigate the potential effects of human activities on denning polar bears, assess the risk of offshore spills to bears in the Chukchi Sea, and inform conservation planning efforts associated with the Polar Bear Conservation Management Plan.

### Pacific Southwest Region

▪ **Adam Backlin**—U.S. Geological Survey

▪ **Robert Fisher**—U.S. Geological Survey

▪ **Elizabeth Gallegos**—U.S. Geological Survey

▪ **Bradford Hollingsworth**—San Diego Natural History Museum

▪ **Susan North**—The Nature Conservancy of California

▪ **Anny Peralta**—Fauna del Noroeste A.C.

▪ **Frank Santana**—City of San Diego

▪ **Jorge Valdez-Villavicencio**—Fauna del Noroeste A.C.

▪ **Charles and Judy Wheatley**—Wheatley Ranch

▪ **Clark Winchell**—Service

California red-legged frog recovery partners have moved the species closer to recovery, most notably through their efforts to re-establish the frog in the southern-most portion of its range where it had disappeared decades earlier. Over the years, these individuals have demonstrated extraordinary vision, leadership, and collaboration in developing a bi-national plan for reintroducing the species, which includes transporting egg masses from Baja California, Mexico, to sites in Riverside and San Diego counties, California. Efforts to work with landowners to identify suitable habitat for releases, along with management and monitoring of the species, exemplify the Service's mission of working with others to conserve species and their habitats for the benefit of the American people. □

*in memoriam*

**Headquarters**

Fishery biologist **Bennie Williams**, who died in March, had a goal, as he said in his LinkedIn profile: “the cultivation of natural resource stewardship in America.” Mr. Williams’ (seen in 2004 with Dr. Mamie Parker, the Assistant Director of Fisheries at that time, on the National Mall where he was leading a fishing event for urban youth) 20-plus years with the Service, which included work as social media coordinator for Fish and Aquatic Conservation, show that. As does his earlier work as a fishery biologist with the D.C. Department of Environment and the Maryland Department of Natural Resources.

His obituary says, “He loved encouraging people, and especially those of color, to get involved in the sciences and enjoy the outdoors.”

Mr. Williams’ excitement for fish and helping young people leaped off the screen during an online interview he sat for last year to engage young Black students. “Follow your passion, young people,” he said, even if others don’t understand, as was the case when Mr. Williams headed to graduate school at the University of Alaska at Fairbanks. But, he said, he “had a love of fish ... [and Alaska] was fishing heaven.”



In 2008, the American Recreation Coalition recognized Mr. Williams with its Legends Award for “extraordinary individual effort and great personal sacrifice to expand participation of urban youth in recreational fishing and to connect children—especially under-served and special needs youth—to nature through the use of innovative programs.”

And he spent years on management plans to ensure that fish remain plentiful.

His obituary also points to something many of Mr. Williams’ co-workers will recognize. “However, knowledge of fish wasn’t the only thing Bennie acquired throughout his life. From his beginning until his end, Bennie collected friendships.”

Count Jarrad Kosa, national coordinator of Fish and Wildlife Conservation Offices, as one of them.

“Bennie was a great friend with a shared passion for fishing, youth education, and science fiction. We worked together on interjurisdictional fish issues, diversity efforts, and promoting recreational fishing,” Kosa says. “Bennie leaves a legacy in all of these areas.”

Darika Cease, branch chief of Budget and Performance Workforce for National Wildlife Refuge System, was another.

“Bennie Williams was a beacon of kindness and wisdom, always open for heartfelt discussions about life, work, and family. I deeply admired his unwavering commitment to his parents and cherished the fond memories he shared with me weekly for years,” Cease says. “Bennie wore his heart on his sleeve and, despite facing his own challenges, consistently expressed a profound appreciation for life. His positive spirit and genuine warmth left an indelible mark on all who knew him.” □

MATT TROTT, Office of Communications, Headquarters

# Examining the Intersection Between Justice and Conservation

By MIGUELINA PORTORREAL GARCIA

The personal philosophy of Darrell Kundargi, a hydrologist with the Service, is that “our work approaches justice when we center the needs of the least powerful.”

He was born in Connecticut after his parents immigrated to the States from the Philippines and India. At the age of 2, he and his family moved to Sacramento, California. He now lives in Albuquerque, New Mexico, with his partner and children.

Kundargi received the Service’s 2024 Diversity and Inclusion Champion Award for work to center the voices and needs of people on the margins of the Service. As the co-lead for the Service’s Black, Indigenous and People of Color (BIPOC) Employee Resource Group, he has contributed to a significant cultural shift by co-creating joy and liberation with BIPOC staff and allies. Kundargi is also on the steering committee of the Environmental Justice Community of Practice. As a hydrologist, he is addressing the intersection of environmental justice and water among the Pacific Southwest Region’s refugees and communities.

## *How would you describe your path to the Service?*

My path has been non-traditional. During my undergrad degree in environmental studies, I was often the only person of color in the classroom. I struggled with that. That struggle led me to take a lot of classes in ethnic studies, women’s studies, and queer theory. This was foundational



Jorge Garcia and Darrell Kundargi pose. Garcia is the Executive Director for the Center for Social Sustainable Systems in Albuquerque, New Mexico. The group works on water and land advocacy in the South Valley of Albuquerque and is guided by the philosophy *Agua es Sagrada* (Water is Sacred). (PHOTO COURTESY DARRELL KUNDARGI)

because it shifted my focus to ways of knowing that are broader than environmental sciences. After college, I worked at a national domestic violence nonprofit. This was transformational because most of the staff and senior leadership were queer women of color. As a 22-year-old man in this space, I had a lot of patriarchy to unlearn.

Following this, I was a community organizer in San Francisco. I ran a teen dating violence prevention program with BIPOC youth. I worked with the youth to harness their culture and build alternatives to patriarchy. This work made it clear that the community knows what it needs. If you provide the resources they need and hold space for their input and creativity, amazing things happen.

I started to burn out doing this work and wanted to get back to working on the land. I decided to change careers, got a master’s in water resources, and was hired by the Service in 2006 as a field hydrologist. I’ve been with the Service for 18 years. For the first 14 years, there wasn’t space for my passion for social justice because it wasn’t a part of conservation. The George Floyd uprising in 2020 changed all that. Until then, I had been one of the few, if not the only, person of color in the room. During the pandemic, virtual meetings gave me the chance to talk with BIPOC staff all over the country. We had a lot of conversations about the racism we experienced during our careers.

One thing we had in common was having to bear racist workplace experiences in isolation because our majority White workplaces couldn’t understand what we were going through. Or worse, sharing our experiences led to hostility and retribution. These long, and often painful, talks broke the isolation imposed upon us. Conforming myself to fit into this agency had taken a toll on me and many others. Creating spaces of healing and support with other people of color alleviated the burden so many of us kept inside in order to survive. Through this grassroots work with BIPOC employees, my career started to change in ways that I had never imagined. It’s no coincidence that Black women colleagues (I’m looking at you, Gwen Kolb, Shannon Smith, Charisa Morris, and Debra Bills) were instrumental in helping me see how to bridge this artificial gap between social justice and conservation. That’s because I believe Black women have been at the forefront of just about every important social change movement in this country. >>

*Continued from previous page.*

***How have your personal experiences influenced how you approach your work?***

If we were to look at a Venn diagram, environmental justice and employee justice would be nearly overlapping circles. The 2020 uprising forced the world to recognize that there's an entire set of people and experiences that have been ignored for decades and beyond. Similarly, the uprising forced our agency to reckon with the lived experiences of BIPOC employees and of the communities that conservation has excluded. The way I approach my work is informed by my identity and personal experiences. Because I experience the world differently than the cultural center of the Service, my identity allows me to bring a different flavor to the work I do. I have to walk through the world as a dark-skinned, Asian-American, cis-gendered hetero man who is the son of immigrants. At the same time, I have to understand the world through the lens of White cultural norms and the North American Conservation Model. By nature, employees with marginalized identities bring so much to the table because of how we must navigate the world around us just to survive.

Working as a community organizer, 100% influences how I do my work. I understand first-hand the joys and challenges faced by people working in community organizations. I bring this knowledge when I meet with community organizations and representatives from Tribal Nations. I'll tell them straight up that I know they're busy with their own priorities, many of which are literally life and death issues. I let them know I'm there to center their priorities in my work. That is such an important message to share and to back up with action. One of the phrases I commonly hear in the Service is that we'll support community issues that align with our mission. But, if a community priority is maternal/child health, I will absolutely lose trust if I say, "I can't help you, that's not a conservation issue." In this example, I see it as my responsibility to uphold the



Service's value of innovation to find a way to connect maternal/child health to the refuge purpose and to our agency's mission. I see it as all of our responsibility to broaden our definition of conservation to include the needs of communities who have been systemically excluded from conservation.

That's why environmental justice resonates so deeply with me. It's an environmental movement created by BIPOC that centers the needs of the marginalized and oppressed. It redefines the environment away from the historic idea of protected places far from people to the places where people live. It brings joy to my heart to see the Service recognizing that there are different ways of understanding conservation. This is reflected in the way environmental justice is now a priority for the Service. It's reflected in the way we now value co-stewardship with Tribal Nations and Indigenous perspectives. It's reflected in my own personal philosophy: Our work approaches justice when we center the needs of the least powerful.

Gwen Kolb (sitting) was one of Darrell Kundargi's mentors and best friends in the Service. Before retirement, Kolb was the project leader for the New Mexico Partners for Fish and Wildlife. She was the second Black person to run a state Partners Program, and the first Black woman to hold that position. (PHOTO COURTESY DARRELL KUNDARGI)

***What advice do you have for others who want to push environmental justice forward?***

Centering environmental justice is not a set of instructions that I can give. It's how I look at any issue that comes across my desk. I always ask myself the question, "What is the intersection of justice and this particular conservation issue?" The answer is always there. If I don't see it immediately, I assume that I need to learn more through research, asking colleagues, and most importantly, by talking to the community. Other questions I ask myself to find the intersection with environmental justice are, "Who's not at the table?" "Who's benefiting?" "Who's been >>

*Continued from previous page.*

harmful in the past?” and “Who’s being harmed today?”

Conservation deals with resources of value. If you go far enough back in history, there’s almost certainly a terrible crime associated with that resource of value. The result of that crime manifests itself today. This is certainly true of the water resources that are the focus of my work. Who owns water and who doesn’t wasn’t a matter of chance. There was purpose behind who has water and who doesn’t, and it affects communities today. These are historical issues with a modern reality. I often hear others express concern because they can’t change issues of the past. Systemic injustices still exist, and you can make an impact today.

Another crucially important consideration to advancing environmental justice is ensuring that justice exists in all aspects of our work, both internally and externally. For instance, if we’re going to bring other voices to a meeting about a conservation issue, we need to first assess if we have an equitable table where all voices will be equally honored. Have the people at the table done the work necessary to allow other voices to have an equal seat at the table? If the answer is no, then there’s internal work that needs to be done, either beforehand or in parallel. There is no secret I can give you. It’s your own work as an individual and within your program. It’s our work as an agency. □

MIGUELINA PORTORREAL GARCIA, Office of Communications, Pacific Southwest Region



### Take a Look

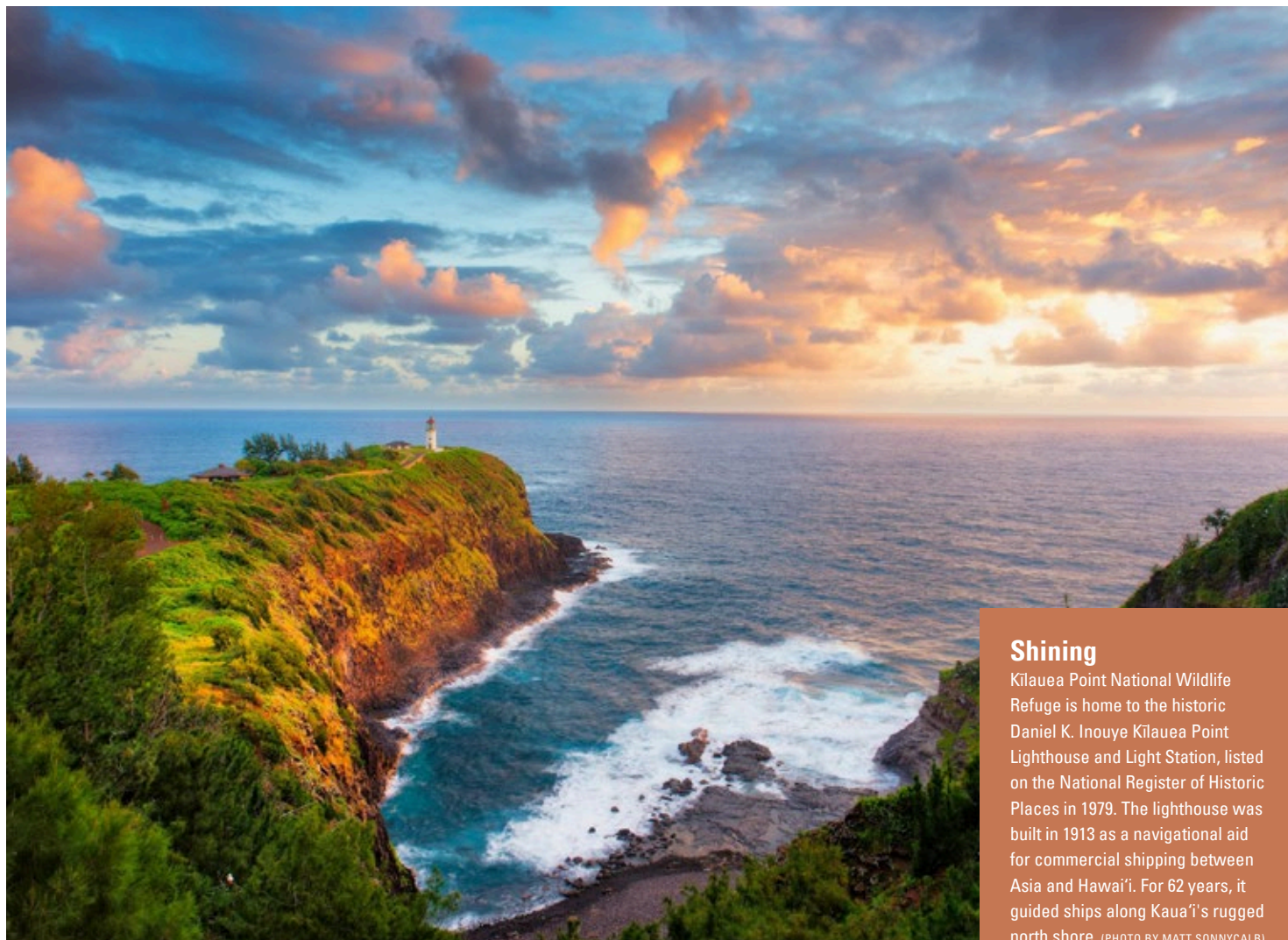
A green jay at Laguna Atascosa National Wildlife Refuge, 30 miles northeast of Brownsville, Texas. Laguna Atascosa is a top bird-watching destination with more recorded species of birds than any other refuge in the National Wildlife Refuge System.

(PHOTO BY MIKE CARLO/USFWS)

# Fish & Wildlife News

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## parting shot



### Shining

Kīlauea Point National Wildlife Refuge is home to the historic Daniel K. Inouye Kīlauea Point Lighthouse and Light Station, listed on the National Register of Historic Places in 1979. The lighthouse was built in 1913 as a navigational aid for commercial shipping between Asia and Hawai'i. For 62 years, it guided ships along Kaua'i's rugged north shore. (PHOTO BY MATT SONNYCALB)

(SHARETHEEXPERIENCE)

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