

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

BPA SUSTAINABILITY REPORT FY 2018



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Photo provided by Rich Hatfield, Xerces Society

BPA takes a triple-bottom-line approach to sustainability, looking at our operations through an environmental, social and economic lens. These three pillars are deeply connected to each other. BPA strives to minimize its impact on the Earth's climate and ecosystems, to achieve a diverse and inclusive workforce and to be a valuable partner to the communities we serve.

LETTER FROM THE CAO

Sustainability is a priority at BPA. Our work in fiscal year 2018 demonstrated that.

Most notably, BPA adopted the 2018–2023 Strategic Plan, which describes how BPA will maintain its role as an engine of economic prosperity and environmental sustainability in the Northwest. The efforts of our Sustainability Program directly support our strategic goals, from strengthening financial health to meeting our transmission customer needs more efficiently and responsively. You’ll see examples of this throughout the report.

The efforts outlined in this report have been essential to advancing the goals outlined in BPA’s 2018–2023 Strategic Plan. Key examples include:

- Investing in dozens of energy and water efficiency projects at our facilities (p. 4), which reduce our ecological footprint while saving the agency and our ratepayers hundreds of thousands of dollars each year.
- Implementing vegetation management (p. 6) practices that protect the environment while increasing the reliability of our transmission operations.
- Exploring innovative alternatives, including the South of Allston redispatch pilot (p. 11), for managing our transmission system flexibly, reliably, efficiently and without undue impact on the environment or the region.
- Advancing energy efficiency services, such as our Energy Smart Industrial and Energy Smart Reserved Power programs (p. 14), to reduce energy consumption and serve the long-term needs of our customers at the least cost.



Many other projects also came to fruition over the course of the year. BPA won four awards for environmental performance and implemented dozens of projects that will reduce both the costs and the environmental impacts of our operations. We also continued to cultivate our workforce and strengthen the communities in which we operate. These sustainability efforts set the agency up for long-term success, and I am proud of the dedicated staff across BPA who made them happen.

BPA will continue its path toward sustainability, supporting the agency’s strategic goals while providing many other valuable benefits to the people and natural resources of the Northwest.

A handwritten signature in black ink, reading "John L. Hairston".

John L. Hairston
Chief Administrative Officer



OUR OPERATIONS

RECOGNITION, ENGAGEMENT, EFFICIENCY

Awards

FY 2018 was an award-winning year for sustainability at BPA. The agency received a regional purchasing award from the Environmental Protection Agency for a 16 percent reduction in paper purchases since FY 2017. BPA also earned a national EPA award for materials management, recognizing the agency's 92 percent waste recovery rate — one of the highest rates among federal facilities throughout the United States. Finally, both the Department of Energy and the EPA recognized three innovative pilot projects that introduced xeriscaping techniques to BPA substations, saving the agency over 2 million gallons of water in a single year.

Lighting and water projects

BPA's Workplace Services group is committed to making agency facilities as efficient as possible. Not only is it the responsible thing to do, but it also saves the agency — and its ratepayers — millions of dollars in operating expenses each year. In FY 2018, the energy management team completed 32 lighting projects that saved 1.4 million kilowatt-hours of electricity, leading to an annual savings of nearly \$500,000 in utility costs.

Some specific successes include:

- LED upgrades at the Longview Maintenance Headquarters reduced electricity consumption by 88,000 kilowatt-hours in a single year. This represents annual savings of 20 percent.
- Several sites, including Chemawa Maintenance Headquarters and Nektipe Maintenance Headquarters, went through retrocommissioning processes to optimize building systems, such as HVAC and operational controls.
- Installed controls on the electric heat tape system, which is used to keep snow build-up from damaging the roof, at the Idaho Falls Maintenance Headquarters. These controls have saved over 165,000 kWh — more than \$14,300 in utility costs — over the course of the year.



Xeriscaping team members receive a National Materials Management Award from EPA.

OUR OPERATIONS

“The Utility Management Program strives to make BPA facilities as efficient as possible,” says energy management engineer Jennifer Hollenbeck. “Reducing energy and water consumption lowers our utility bills, increases the life expectancy and reliability of our systems, and generally makes our agency a better place to work.”

Engaging the workforce

BPA’s workforce had many opportunities to celebrate sustainability over the course of the year:

- The **Earth Month** series of events in April included a panel led by the U.S. Forest Service on the Eagle Creek Fire, two volunteer days of service, and two e-waste events that collected a combined 15,814 pounds of electronics for recycling.
- **Pollinator Week** in June showcased the importance of pollinators and their habitat and educated the workforce about the management practices BPA uses to improve pollinator habitat along its rights-of-way and at substations.
- Two **Transportation-Sustainability Fairs**, one at BPA’s Portland headquarters and one at the Ross Complex in Vancouver, Washington, connected BPA’s workforce to sustainable options at home, work and the commute in between.

Investment in a linear chopper

BPA uses a type of high-capacity conductor that combines strands of steel and aluminum to reliably and efficiently deliver power throughout its service area. In previous years, when this conductor was damaged or reached the end of its life, BPA sold it to recycling companies. But the cable was costly to store and transport, and uncoiling the reels of cable by hand caused safety concerns for the crews.

In 2016, BPA’s Investment Recovery Center began exploring alternative options for safe, environmentally sound and cost-effective disposal of excess cable. In 2018, these efforts bore fruit with the purchase of a mobile linear chopper that separates the aluminum strands from the steel while cutting it into marketable scrap.

Within six months, the IRC recovered over 600,000 pounds of material with a scrap revenue of over \$650,000.

“The purchase of the linear chopper allows BPA to maintain its position as a sustainability leader, while increasing recovery revenue in a safer and more efficient way than before,” said Property Disposal Officer Kevin Kertzman. “I’m proud of the hard work from our chopping crew and the positive returns they have achieved so far. We are looking forward to future opportunities and additional recovery revenue gains for BPA.”



The Investment Recovery Center’s linear chopper and the results of its use, chopped aluminum (right).



OUR ENVIRONMENT

Photo provided by Joe Bettis

COMMITMENT, STEWARDSHIP, INNOVATION

The power of sustainability through EFW

The Environment, Fish and Wildlife organization adds value to the electricity BPA sells by providing a power product that includes fish production through hatcheries, enhanced habitat for fish and wildlife, and a legacy of cleaner air and water for generations to come. Protecting and enhancing our region's natural resources is a worthwhile goal in its own right, but it is also a legal requirement for BPA. Specifically, EFW's actions allow the Power and Transmission business lines to operate by providing environmental compliance and mitigating for the effects of the construction and operation of the federal hydroelectric dams in the Columbia River.

Hydro operations and structural enhancements at the dams for fish are important parts of BPA's mitigation strategy. BPA works closely with the U.S. Army Corps of Engineers and Bureau of Reclamation to help fish travel through and over the dams. Approximately 96 percent of spring-migrating and 93 percent of summer-migrating juvenile fish now safely travel past the eight dams on the lower Columbia and Snake rivers. BPA and its federal partners also work with numerous states, tribes and stakeholders across the region to implement habitat, hatchery, research, monitoring and other projects for fish and wildlife.

The EFW commitment to BPA's economic sustainability

In addition to providing environmental sustainability and compliance with numerous laws, EFW is working to ensure BPA's long-term economic sustainability by supporting the agency's financial objectives. EFW is evaluating and prioritizing expenditures in alignment with the BPA 2018–2023 Strategic Plan as it begins to use a biological investment portfolio approach. The organization plans to increase project performance and cost-effectiveness while reducing funding for projects with insufficient mitigation value or where the mitigation objective has been met. This will help BPA maintain competitiveness in a challenging energy marketplace.

Right-of-way stewardship

In 2014, BPA became the first power marketing administration to receive accreditation from the Right-of-Way Stewardship Council. The stewardship program strives to promote vegetation management practices that maintain healthy plant communities along utility rights-of-way without excessive use of pesticides. BPA is managing plant communities with appropriate, environmentally-conscious control

OUR ENVIRONMENT

methods through a practice known as integrated vegetation management. This has decreased maintenance costs, increased reliability (a common cause of power outages is overgrown vegetation) and maintained healthy plant and animal communities along the agency's 15,000 circuit miles of transmission lines.

In FY 2018 BPA renewed its right-of-way stewardship accreditation and celebrated the following achievements:

- Successful roll-out of a vegetation management and geospatial information system to better plan and track vegetation management treatments in the field.

Setting a river free

The Crooked River Floodplain Restoration Project is an excellent example of success in tributary habitat restoration. This project addressed the impacts of historic dredge mining to benefit Snake River steelhead in Idaho. For almost 100 years, the Crooked River in north-central Idaho's Nez Perce-Clearwater National Forest has been trapped in a tangle of turns caused by dredge pilings. The miners excavated the streambed in search of gold and dumped gravel in 10-foot tall piles throughout the river's floodplain. That destroyed prime spawning and rearing habitat for salmon and steelhead, and buried habitat for wildlife. This habitat restoration project is removing



BPA's Vegetation Management team conducting a field training.

- A collaboration with the U.S. Fish and Wildlife Service to develop best management practices for the protection of the threatened Oregon spotted frog along BPA rights-of-way.
- Continued partnership with Portland's Forest Park to control invasive species and promote pollinator habitat.
- Development and execution of specialized training to educate BPA's vegetation-clearing contractors on identification and preservation of pollinator habitat.



Crooked River Restoration Project, near Elk City, Idaho.

OUR ENVIRONMENT



Crooked River Restoration Project, near Elk City, Idaho.

Melvin Sampson, center, and members of the Yakama Nation and Yakama Nation Fisheries break ground on the Melvin R. Sampson hatchery complex in Ellensburg.

the piles of mine tailings, which have blocked the stream's natural migration pattern throughout its floodplain for decades.

The project removed 170,000 cubic yards of dredge mine tailing piles and restored 2 miles of floodplain connectivity. This project was in partnership with the Nez Perce Tribe and the U.S. Forest Service, the latter of which provided 65 percent of the funding. The project received the Richard L. Wallace Native Fish Conservationist of the Year Award from the Idaho Chapter of the American Fisheries Society.

Wildlife are using the newly restored floodplain, and this section of the river is now high-quality habitat for chinook salmon and steelhead. As each year passes, the natural processes of the stream, the floodplain and the river valley will continue to improve.

New hatchery brings innovation and fish

This year, the Confederated Tribes and Bands of the Yakama Nation broke ground on the Melvin R. Sampson Hatchery, funded by BPA through the Columbia Basin Fish Accords, in Kittitas County, Washington. The hatchery is now under construction and is expected to rear up to 700,000 coho salmon. It will use a well system to reuse 75 percent of its water, and circular tanks (rather than classic rectangular tanks) will help the fish become stronger swimmers.

For over a century, Northwest hatcheries have supported fish populations and allowed for continued fishing opportunities that provide economic, social and cultural benefits in the Columbia Basin and on the West Coast. In particular, these hatcheries help BPA satisfy legal obligations under the Northwest Power Act and the Endangered Species Act, while simultaneously meeting its treaty and trust responsibilities to Northwest Indian tribes. BPA and its partners use hatcheries to help sustain endangered populations such as critically endangered Snake River sockeye and to supplement populations of other listed salmon and steelhead.

SUSTAINABILITY METRICS

Environmental

| Category | Unit | Baseline Year | Baseline | FY 2016 | FY 2017 | FY 2018 | % Change from Baseline |
|--------------------------------|------------|---------------|------------|------------|------------|------------|------------------------|
| FUGITIVE EMISSIONS | | | | | | | |
| Sulfur Hexafluoride (SF6) | Pounds | 2010 | 6,473 | 3,535 | 4,246 | 3,720 | -42.5% |
| PETROLEUM FUEL | | | | | | | |
| Aviation Fuel Consumption | Gallons | 2010 | 124,902 | 141,015 | 148,717 | 85,377 | -31.6% |
| Motor Fleet Fuel Consumption | Gallons | 2009 | 1,013,960 | 909,242 | 936,061 | 906,301 | -10.6% |
| ALTERNATIVE FUEL | | | | | | | |
| Motor Fleet Fuel Consumption | Gallons | 2009 | 103,647 | 96,592 | 41,781 | 93,554 | -9.7% |
| FACILITY HEATING | | | | | | | |
| Natural Gas Consumption | Therms | 2015 | 85,840 | 88,687 | 128,952 | 117,080 | 36.4% |
| FACILITY ELECTRICITY | | | | | | | |
| Electricity Consumption | kWh | 2015 | 21,039,940 | 20,549,275 | 20,384,387 | 19,404,116 | -7.8% |
| WASTE | | | | | | | |
| Waste to Landfill | Short tons | 2010 | 635 | 237 | 203 | 233 | -63.4% |
| Waste Diverted | Short tons | 2010 | 1,475 | 2,122 | 2,544 | 3,884 | 163.3% |
| FACILITY WATER | | | | | | | |
| Water | Gallons | 2015 | 38,611,901 | 31,659,432 | 34,809,619 | 26,107,329 | -32.4% |
| BUSINESS RELATED TRAVEL | | | | | | | |
| Business Air Travel | Miles | 2009 | 4,975,620 | 6,086,738 | 4,842,569 | 4,789,896 | -3.7% |

Workforce

| Category | FY 2018 |
|---|---------|
| WORKFORCE DIVERSITY | |
| Minority share of workforce | 17.4% |
| Women share of workforce | 28.7% |
| SKILLED WORKFORCE AVAILABILITY | |
| Share of workforce born on or before 1945 | 0.3% |
| Share of workforce born 1946–1964 | 34.2% |
| Share of workforce born 1965–1980 | 46.8% |
| Share of workforce born 1981–2000 | 18.7% |
| Turnover rate | 8.0% |

Safety

| Category | FY 2016 | FY 2017 | FY 2018 |
|--|---------|---------|---------|
| Near hits | 105 | 193 | 204 |
| Safety concerns | 101 | 232 | 313 |
| Injury frequency rate | 1.7 | 1.1 | 1.2 |
| Days away restricted or transferred rate | 0.8 | 0.5 | 0.3 |

Note: BPA encourages reports of near hits and safety concerns because they help the agency identify hazards and resolve them, protecting other employees from injury.



OUR PEOPLE

DIVERSITY, RESPECT, SAFETY

Diversity training

Every year, BPA's hardworking field crews from 17 sites across the region meet for a week of training, including diversity training. The Diversity and Inclusion Office worked with the technical training center and district managers to provide training on three topics:

- Understanding generational differences.
- Examining how the values, beliefs and rules of conduct we learn growing up impact teamwork and communication.
- Tools for resolving conflict due to cultural differences.

“Our Diversity and Inclusion Office has helped us understand how we can benefit from differing viewpoints, value each other’s opinions and use them to make the best decisions,” says Adelmo de la Cruz, district manager for Snohomish. “We know that today’s decisions have a lasting impact on tomorrow’s workforce and work practices, so we continue to work on fostering an environment where our employees are engaged and speak up on issues that matter to them.”

Respect and Dignity Campaign

BPA's Diversity and Inclusion Advisory Council includes representatives from across BPA who act as liaisons between their own organizations and the Diversity and Inclusion team. In 2018, the advisory council worked with the Diversity and Inclusion Office to develop a campaign to foster respect and dignity in the BPA workplace.

The objectives of the campaign will be to:

- Achieve a more inclusive workplace through increased awareness of how individual and group behaviors contribute to inclusion.
- Provide tools to help leadership and workforce support respect and dignity.

Set for rollout in 2019, the campaign will provide tips and techniques to support a workplace that offers respect and dignity. Tip categories include “seek to understand,” “give credit,” “include other views” and “strive for excellence.”

“I’m excited about the campaign,” remarks Donna Oden-Orr, an attorney in the Office of General Counsel who was one of the drivers of the effort. “It promotes communicating with each other in a way that is inclusive, recognizing that each member of our workforce brings something unique and valuable to the table.”

OUR PEOPLE

Stand Up for Safety

BPA successfully conducted its fifth annual Stand up for Safety event with a week dedicated to raising awareness of safe behaviors. The theme for the June 2018 event was “See, Say, Do.” This concept expanded on the prior year’s theme, “Be Aware When Hazards Are There,” by encouraging people to not only identify and report potential hazards, but to also take action to reduce the risk of injury to others.

Some of the simple actions one can take to reduce risk include: blocking a dangerous area until it can be made safe, notifying others in the area to exercise caution, reminding co-workers and family to drive the speed limit or simply picking up a tripping hazard. It gets easier to stay safe when we all look out for each other.



2018 Stand Up For Safety event in Vancouver, Washington.

First agencywide safety huddle

How many people can you fit in a huddle?

In the week that led up to the June 2018 Stand up for Safety event, BPA conducted a safety huddle exercise involving over 300 groups across the agency. In a departure from a traditional “safety stand-down,” this safety huddle included organizational conversations where tangible information was discussed and each group made a commitment to actively identify and suggest ways to mitigate hazards in the workplace.

In a proactive and preventative spirit, each organization was asked to run through a structured exercise to share hazards and ideas to mitigate them.

The main objective of the huddles was to make sure each employee knew where and how to submit a near-hit or safety concern.

Over 300 concerns were submitted through the safety reporting tool. In addition to reporting the concerns, many of the groups suggested potential remedies or implemented a corrective action themselves.

Leading safely

By the end of FY 18, over half of BPA’s managers had completed the Safety Leadership for Managers and Supervisors course. The training focuses on helping leaders exemplify safe behaviors by weaving a variety of techniques into their daily activities. Attendees graduate the training with new perspectives on how to spot, understand and manage diverse personalities; ways to effectively coach subordinates; recognize and assess hazards; and lead change within workgroups or crews so that everyone understands what it means to have safety as a core value.

PLURALISM COUNCIL

BPA’s Pluralism Council supports employee resource groups in their work to champion diversity and inclusion across the agency. Employee resource groups include:

- African American Resource Group
- American Indian/Alaskan Native Council
- Asian American Pacific Islander Resource Group
- Christian Values Resource Group
- Disability Awareness Resource Group
- Gay Lesbian Bisexual Transgender and Queer Resource Group
- Hispanic Latino Resource Group
- Military Veterans Resource Group
- Women’s Resource Group



OUR COMMUNITY

PARTNERSHIP, SOLUTIONS, EDUCATION

Non-wires solutions

In 2017, BPA decided not to build the I-5 Corridor Reinforcement Project it had been studying to address growing demands on the transmission system in parts of Washington and Oregon. Instead, the agency decided to seek out innovative ways to meet customer needs in a more flexible, scalable, economical and operationally efficient manner. One of these initiatives was the South of Allston Bilateral Redispatch pilot (previously called the South of Allston Non-Wires pilot). The pilot employed two methods to reduce transmission loads during peak periods in summer months: demand response, which used incentives to encourage commercial and industrial end-users to reduce their loads during times of heavy energy use; and generation redispatch, which increased or decreased local generation sources to change the flow of power and relieve the congested path.

The pilot ran for two years and successfully reduced congestion during peak periods, proving that it is possible in some cases to meet energy needs without resorting to costly and environmentally impactful infrastructure. “The pilot successfully demonstrated how to operationalize a non-wires portfolio to reliably and cost-effectively mitigate summer peak transmission congestion,” reports project manager Sarah Arison. “BPA will continue to advance the understanding of non-wires development in the United States.”

Aerial survey of the Hanford Reservation

Every two years, BPA’s Tribal Affairs group leads an aerial survey of the Hanford Reservation, one of the few areas in the Northwest in which original



Nez Perce Cultural Resources staff and elders committee representatives.

vegetation, land forms and cultural sites remain largely undisturbed. The agency conducts this survey in partnership with the Hanford Tribal Technical Working Group to demonstrate BPA’s commitment to minimizing its operational footprint on the land, vegetation and cultural sites. Because of the highly secure nature of DOE operations at Hanford, these surveys are one of the few opportunities for tribal leaders to personally visit the site.

OUR COMMUNITY

In FY 2018, BPA joined members of the Confederated Tribes of the Umatilla Indian Reservation, Nez Perce, Wanapum and Yakama Nation on a two-hour survey of the Hanford Reservation. The aerial tour included BPA facilities and construction projects, as well as key cultural resource sites. Feedback from tribal staff, leaders and elders demonstrated the importance of these surveys.

“We appreciate BPA working with us to preserve the very special aspects of the land, plants, animals and sacred sites on the Hanford Reservation,” noted one participant. “It is more than simply following through on your commitments. It is about stewardship. Seeing all this from the air shows how the land is alive and why it is so important we continue this work to protect it.”

Energy efficiency and conservation event for tribes

This year, BPA’s Energy Efficiency group partnered with the Affiliated Tribes of Northwest Indians and the Suquamish Tribe to host the 2018 Tribal Energy Efficiency and Conservation Conference. The event gave participants the opportunity to discuss best practices, technology and funding for efficiency programs geared toward tribal housing. Attendees included representatives from several Northwest tribes, the Bureau of Indian Affairs, Bonneville Environmental Foundation, Northwest Energy Coalition, and the Tribal Healthy Homes Network. Attendees learned about:

- BPA’s energy efficiency programs and how to participate in them.
- New technologies and their application in low-income households.
- The efficiency, renewables and energy policies that affect tribes throughout the Northwest.
- The networks across the region that support efficiency work.

“BPA is glad to host such a valuable event,” says Carrie Nelson, program manager for BPA’s Low-Income Energy Efficiency Program. “Our hope is to have a lasting impact that benefits energy and housing programs across the region.”

CELEBRATING HISTORIC SUCCESSES AND KEEPING THE LEGACY ALIVE

Ten years ago, seven tribes, three federal agencies (including BPA) and three states signed the historic Columbia Basin Fish Accords. The agreements committed hundreds of millions of dollars in federal funding and brought on-the-ground actions to benefit fish. They provided certainty for funding and projects, brought regional collaboration to a historic level, and resulted in better projects and more efficient implementation through cost-sharing.



Habitat restoration work on the Tucannon River, a tributary of the Snake River, completed through the Columbia Basin Fish Accords.

The Accords were a crucial element of BPA’s mitigation strategy for endangered salmon and steelhead, and they benefit other wildlife as well. Since 2008, Accord dollars have protected or improved more than 43,000 acres of riparian habitat; protected nearly 100,000 acre-feet of water; restored almost 600 miles of stream; opened access to more than 1,900 miles of fish habitat; and protected or restored more than 500 acres of estuary floodplain. The agreements also committed funding for hatcheries.

The Accords expired in 2018. But after more than a year of collaborating with Accord partners and other interested parties, BPA has extended these successful partnerships for up to four years. This action will strengthen the federal-tribal partnership and ensure effective and biologically important projects are implemented, continuing the work that has taken place through the Accords over the last 10 years. The Accord extensions, which could run through September 2022, provide more than \$400 million for fish and wildlife mitigation and protection.

OUR COMMUNITY

Industrial strength refrigeration in eastern Oregon

BPA's Energy Smart Industrial program provides technical expertise and other resources to help utilities and their industrial customers implement energy efficiency measures. One of the largest of these projects, the Boardman West Refrigeration Project implemented by the frozen food company Lamb Weston, was completed in early 2018. Through the application of advanced refrigeration controls and other energy-efficient upgrades, Lamb Weston will save nearly 13 million kilowatt-hours of electricity each year — the largest energy savings from any ESI refrigeration project to date.

Deep well irrigation to surface water conversion project

Groundwater, or water stored under the Earth's surface, is a vital source of water for both irrigation and human consumption. Groundwater use can be unsustainable, however, when it is pumped from the ground faster than it can be replenished through the natural water cycle. This was the case in Rupert, Idaho, where the A&B Irrigation District found its well water levels dropping 2 feet per year. Recognizing the need for action, the district applied to BPA's Energy Smart Reserved Power Program to fund a project



Umatilla Electric Cooperative employees and board members present Lamb Weston's leadership with a \$500,000 check for energy efficiency incentives.



A&B Irrigation District's new pumping station.

“A project of this scale, involving complex systems and state-of-the-art technologies, could not have been successful without careful planning and execution, and a tremendous amount of teamwork,” notes Nosh Makujina, ESI program delivery manager at Cascade Energy, the implementation partner for ESI. “BPA and the ESI program are proud to have played a supporting role, and we look forward to future collaborations with these and other outstanding partners.”

to convert its existing deep well pumping system to a more efficient, sustainable system that relies on surface water.

BPA worked with the district to install a new variable speed 3,500 horsepower pumping station on the Snake River to serve the irrigation needs of the area. The station replaced nine well pumps and one older, less efficient surface water pump and saves the district over 2 million kilowatt-hours of electricity per year. In addition to these efficiency gains, the project also allows the groundwater to reverse its decline while preserving the agricultural activities of the region.

OUTREACH AND STEM EVENTS

BPA REACHED OVER 14,500 K-12 STUDENTS AND COMMUNITY MEMBERS THROUGHOUT THE PACIFIC NORTHWEST IN FY 2018.



SCIENCE AND ENERGY GRANT AWARDEES FOR THE 2017–2018 SCHOOL YEAR

- Benton Conservation District
- High Desert Museum
- Kent School District, Martin Sortun Elementary
- South Umpqua High School
- Washington Alliance for Better Schools

BPA IN THE CLASSROOM

Employee volunteers led over 50 classroom presentations and science, technology, engineering and math (or STEM) related hands-on activities in classrooms throughout BPA's service territory. Presentations support energy literacy and STEM education, including a brief talk about the energy system in the Northwest and a fun, hands-on activity using the engineering method. K-8 students have the chance to build mini transmission towers, motors and turbines.

SCIENCE AND ENERGY GRANTS PROGRAM

BPA awarded \$10,000 to various eligible organizations to support STEM, environmental and energy related educational programs throughout its service territory in 2018.

BPA REGIONAL MIDDLE AND HIGH SCHOOL SCIENCE BOWL

BPA's 27th annual Regional Middle and High School Science Bowl competitions were held at the University of Portland during 2018. These events bring almost 700 students to the largest regional science bowl in the nation. BPA's regional middle school champion, Odle Middle School of Bellevue, Washington, went on to win the Department of Energy National Science Bowl Championship held in Washington, D.C.

EVENTS

- Kids in the Creek at Salmon Fest
LEAVENWORTH, WASHINGTON
- The Energy Experience at the Reach Museum
LEAVENWORTH, WASHINGTON
- Oregon Tradeswomen's Career Fair
PORTLAND, OREGON
- OMSI Mini Maker Faire
PORTLAND, OREGON
- Bonneville Dam Conductor Replacement Project education event
BONNEVILLE DAM, OREGON
- Washington State Science and Engineering Fair
BREMERTON, WASHINGTON
- Southwest Washington Science and Engineering Fair
VANCOUVER, WASHINGTON
- FIRST Robotics Lego League Championship
HILLSBORO, OREGON
- Snake River Festival
COLFAX, WASHINGTON
- Kennewick RiverFest,
KENNEWICK, WASHINGTON
- Port of Clarkston RiverFest
CLARKSTON, WASHINGTON
- Salish Tribal School
SPOKANE, WASHINGTON
- Google Wind Challenge
THE DALLES, OREGON

BPA'S YOUR LENS / OUR WORLD PHOTO CONTEST 2018/19



by Robert Meyers



by Craig Frackrell



by Dennis Groven



by Rahm Dinavahi



by Stephanie Starke



by Joe Astrue



by Jose Deguzman



by Tony Norris

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