

# DATA POWERED

... to inform and inspire regional planning



*Better data. Better planning. Better communities.*

FY 2023-24 ANNUAL REPORT

[PAGregion.com](http://PAGregion.com)



## USING DATA TO INSPIRE OUR STORY, PROPEL OUR REGION INTO THE FUTURE

Rex Scott, 2024 PAG Regional Council Chair  
*Pima County Board of Supervisors*

When data and inspiration meet, we can take steps to advance our region.

As a repository of regional data, Pima Association of Governments (PAG) can look beyond the raw numbers to identify trends or patterns. From there, we can simply allow the trends or patterns to inform our decisions, or we can build upon those trends and patterns to inspire new approaches to our planning.

As the federally required metropolitan planning organization for the greater Tucson region, PAG is many things at once. Our planning addresses transportation, air quality and water quality management planning. PAG also manages the Regional Transportation Authority (RTA) and its 20-year regional transportation plan and half-cent sales tax collected within Pima County.

In addition, PAG serves as a council of governments where regional leaders assemble to collaboratively set regional policies.

To help manage PAG's important planning responsibilities, the PAG data science team compiles, sorts and categorizes massive amounts of data each year. PAG staff use the relevant data to collaborate with our local, county, state and tribal members in line with our mission to make informed and effective regional planning decisions using pooled resources.

The data can help us collectively determine where future roadways will be needed, where safety features can save lives, and where new mobility services and facilities will be most effective.

This data also can be used to develop creative strategies to ensure our air quality planning leads to a reduction in pollutants in order to maintain or improve the air we breathe every day.

As the region's federally designated water quality manager, PAG relies on a variety of data to inspire integrated planning that addresses the quality of the region's precious water resources, whether that be groundwater, surface water, stormwater or wastewater.

As a leader in long-range regional planning, we are fortunate to be in a position to envision the sort of region we want ours to become. While working within the constraints of our federal or state legal mandates or requirements, we can still be inspired by the data we generate to consider various outcomes and proactively identify and tackle any challenges that pop up along the way to achieve great things.

While data is science, inspiration is art and backed by people who care. By working collectively and cooperatively as partners, PAG's professional experts and its members can combine creativity with the data to meet our goal of improving the region's mobility, sustainability and livability.

Below are a few ways where data and inspiration meet:

- Traffic count and other transportation data show vehicle flows, driver behaviors and public transportation usage, which planners can employ to imagine new and more efficient and effective transportation systems.
- Trends in population growth, age distribution and migration patterns help us and our member jurisdictions anticipate and creatively plan for future housing, transportation and infrastructure needs.
- PAG's collection of orthophotos and LiDAR images provides granular level information about land use, natural resources, and environmental assets that help both public and private sector leaders envision future development.
- Data from public surveys, event feedback and social media engagement can provide insights to anticipate and meet the preferences of our community.

Powered by PAG's wealth of data, let's allow ourselves to seek continued inspiration for the best possible regional solutions and create engaging stories of success that will resonate for generations.



## WHO WE ARE

## 2024 PAG Regional Council



Pima County Board of Supervisors  
**REX SCOTT**  
Chair



City of South Tucson Mayor  
**PAUL DIAZ**  
Vice Chair



Town of Marana Mayor  
**ED HONEA**  
Treasurer



Tohono O'odham  
Nation Chairman  
**VERLON JOSE**



Pascua Yaqui Tribe Chairman  
**PETER YUCUPICIO**



City of Tucson Mayor  
**REGINA ROMERO**



Town of Oro Valley Mayor  
**JOE WINFIELD**



Town of Sahuarita Mayor  
**TOM MURPHY**



AZ State Transportation  
Board Member  
**TED MAXWELL**



Pima Association of Governments  
**FARHAD MOGHIMI**  
Executive Director



### *In memory*

We celebrate the memory of **Marana Mayor Ed Honea** who exemplified regional leadership during his many years of service to Pima Association of Governments.

## WHAT WE DO

Pima Association of Governments (PAG) was established as a council of governments in November 1970 to share resources and address regional issues, and it was designated a metropolitan planning organization (MPO) in Pima County by the state in 1973.

The Federal Highway Administration (FHWA) requires MPOs to conduct long-range transportation planning in order to secure federal funding for the region.

PAG's other federal designations are for water quality management planning (since 1972), air quality planning (since 1978) and solid waste planning (since 1976). PAG also serves as a federally designated Transportation Management Agency (TMA) (since July 2002). TMAs are established in urbanized areas with populations over 200,000 and ensure the latest census data is used in transit and transportation planning.

In 2004, the state Legislature enabled the establishment of the Regional Transportation Authority as a special taxing district and it is managed by PAG. PAG's nine Regional Council members also serve as the governing body for the RTA, which oversees a voter-approved, 20-year regional transportation plan funded through a countywide transaction privilege, or sales, tax. For more information about the RTA, visit [RTAmobility.com](http://RTAmobility.com).

The PAG Regional Council is made up of chief elected or appointed officials from local, county, tribal and state governments who work together to represent the greater Tucson region in matters of transportation planning, air quality, water quality management and economic vitality. Each member of the Regional Council has one vote to encourage a regional mindset in seeking solutions that support enhanced mobility, sustainability and livability for all across the greater Tucson region.

## OUR MISSION

To address regional issues through cooperative efforts and pooled resources, and to provide accurate, relevant data that leads to effective regional planning decisions.

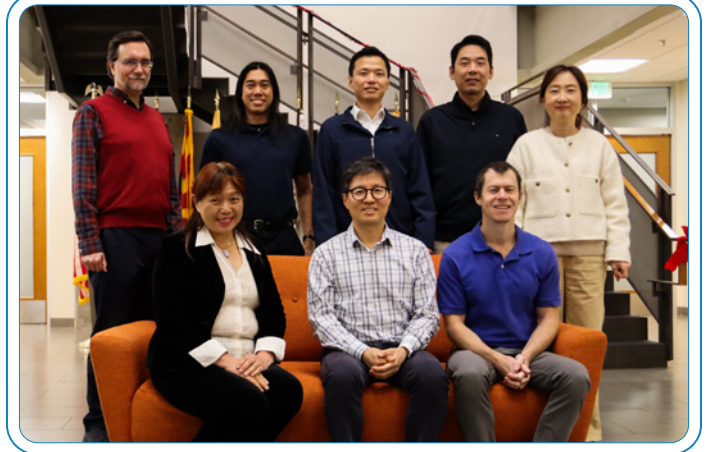


# DATA INFORMED, DATA INSPIRED

If we had to choose one word that is fundamental to the work we do at Pima Association of Governments (PAG), it would hands down be “data.”

Much of the regional planning work PAG does wouldn't be possible without collecting and analyzing the data to drive informed, strategic action that benefits our communities for years to come.

“We mine mounds of data and look for and refine the nuggets that provide valuable direction to help us shape our region,” said PAG Data Science Administrator Hyunsoo Noh, Ph.D., “because as a planning agency, it's important for us to foresee the future as much as possible to stay ahead of the curve in what we recommend.”



*PAG's Data Science team. Top row, from left: Erik Kramer, James Tokishi, Xiao Li, Xiaobo Ma, Yunemi Jang. Bottom row, from left: Caroline Leung, Hyunsoo Noh, Ryan Hatch.*

PAG actively collects data from many sources, including regional traffic count and multimodal performance measures, demographic and socioeconomic sources, development permits, and public and travel surveys, that seek information about the community's opinion and travel characteristics and options. The data then guides PAG's strategic planning by helping to identify driving and commuting behaviors and patterns, locations of population growth, and areas of potential air pollution among other factors. By leveraging these data sources, PAG creates comprehensive, forward-thinking plans to improve the mobility, sustainability and livability for those who live and do business in the Tucson metropolitan area.

## Imagining the Future

As we compile and analyze the data, we consider the trends that may shape the future of the region. Applying this knowledge and seeking inspiration, we work with our partners on regional plans that forecast the region's long-term needs rather than simply react to existing conditions.

PAG partner jurisdictions are crucial to this task. With their help, we build datasets and develop models that can perform complex modeling scenarios to inform our planning.

“Without the help of our jurisdictional partners, we wouldn't have that data,” Noh said.

Here are some of the ways data informs and inspires at PAG and beyond:

- Traffic count data show traffic flows, levels of usage, and driver behaviors. With this data, PAG and our partners can envision the future transportation needs of an area. This can inform decisions about additional travel lanes, bicycle and pedestrian facilities, modern intersections, new signalization features, and more. This data can help determine where a new style of traffic interchange might work best or guide planning of new construction for a needed project.
- Private sector builders and developers use traffic count data, and PAG's Regional Mobility and Accessibility Plan (RMAP) projected traffic volumes to make important decisions about where to invest millions of dollars for new houses, offices and retail developments.
- Traffic data also aids transit officials in identifying areas where services can be most effectively placed to serve the community and provide additional commuting options. This might lead to more frequent transit service in key areas or indicate the need to fill gaps in sidewalks to improve connectivity.

- Long-range transportation plan updates rely on the project lists from jurisdictions that are put into traffic models created by PAG's data science team. These models can help foresee how proposed improvements and new transportation infrastructure will affect economic growth and development opportunities, the impacts they may have on the environment, and identify ways to minimize fuel use to reduce air pollution.
- Data analysis helps PAG and partner jurisdictions understand current travel behaviors and transportation issues and develop plans that address climate change, reduce emissions such as promoting telework, and promote green spaces, such as incorporating curb cuts that allow stormwater runoff to irrigate shade trees or other roadway corridor landscaping.
- PAG's work in gathering population and employment data puts into perspective the region's population growth, age distribution, migration patterns, job market share and growth, and employment trends. This informs long-term planning and helps anticipate service and infrastructure needs, such as helping an aging and low-income population to access transportation services that connect to medical facilities with ease.
- Analysis of building permit data informs population estimates to anticipate growth patterns and to plan for housing, retail, transportation and utility infrastructure.
- Data from public surveys, public engagement feedback, and social media comments can provide insights about the preferences of our community. PAG and partner jurisdictions can use this community feedback to incorporate needs and preferences into planning processes.

Through ongoing analysis, PAG also tests the effectiveness of prior work, allowing for adjustments and improvements in future planning efforts.

Regional planning relies not only on the raw data but also on the collective vision, creativity and wisdom of those involved at all levels to ensure we develop data-inspired solutions that address our regional needs for a better future.





# REGIONAL DATA: A DIGITAL INVENTORY OF TRANSPORTATION INFRASTRUCTURE

Building on PAG's fall 2023 orthophotography investment, the geographic information systems team at PAG continued to bring more comprehensive 2D and 3D mapping of the physical infrastructure in the region's urban environment. Working with Ecopia AI, a leading artificial intelligence company that specializes in extracting insight from geospatial big data at high speed, this project will delineate the transportation networks by reading new orthographic imagery and creating a consolidated inventory. Regional planners will soon have a more comprehensive set of landcover data to aid them in identifying current conditions and assessing future needs and, therefore, better inform decision-making for local leaders.

A more complete geographic inventory of infrastructure assets across the metro area, including roadways, lanes, sidewalks, bicycle lanes, crosswalks, vegetation, buildings, and more, allows PAG and planners across the region to identify critical transportation infrastructure gaps in the developed areas through enhanced analysis capabilities.

The data provides critical insights to help inform priorities, planning and implementation of new transportation infrastructure. The data also can be employed in assessing safety within the transportation network and aid in the planning and design of greater regional connectivity and accessibility by bike and foot.

The new data is improving PAG's carbon reduction program strategies and is being used to enhance the Regional Active Transportation Plan, which is under development. PAG members will have access to the data needed to build infrastructure and implement programs that support increased active transportation and carbon emission reductions.



*Feature data layers extracted from high resolution orthophoto imagery near Reid Park and Randolph Golf Course area*

## TRANSPORTATION PLANNING FOR THE SHORT- AND LONG-TERM

Transportation planning is a core responsibility of PAG as the region's metropolitan planning organization for Pima County. To fulfill this obligation and secure millions of federal, state and local dollars annually for transportation improvements, PAG develops a long-range transportation plan every four years.

The Regional Mobility and Accessibility Plan (RMAP) takes a 25- to 30-year outlook on needed transportation improvements throughout Pima County. The RMAP identifies the region's anticipated long-range transportation projects and revenues.

In developing the updated draft plan, all aspects of the transportation network are incorporated, including accessible pedestrian walkways, bicycle facilities, intermodal facilities, buses, transit facilities and commuter vanpool providers. Additionally, the draft plan identifies performance measures to gauge the impacts of the anticipated transportation projects on air quality.



REGIONAL MOBILITY AND ACCESSIBILITY

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**TRANSPORTATION FUTURE!**

**START THE SURVEY**

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PAG staff also developed and successfully launched a six-week public engagement survey to gather input from the public and assess transportation priorities for development of the 2055 RMAP. More than 4,500 people completed the online survey, which was promoted extensively through email, partner promotions, news releases, newsletters, and traditional and social media advertising in both English and Spanish media outlets.

Efforts to reach and educate members of the public also included extensive public outreach, with PAG staff attending several public events where community members in hard-to-reach communities were invited to review plan elements, ask questions, and take the survey. PAG will continue to work with regional transportation stakeholders and member jurisdictions to collect input from all network users that will further inform plan development.

## Transportation Improvement Program

Development of the FY 2025–FY 2029 Transportation Improvement Program (TIP) continued in fiscal year 2024. The TIP is a five-year schedule and budget of proposed transportation improvements within eastern Pima County and is developed in alignment with the long-range RMAP.

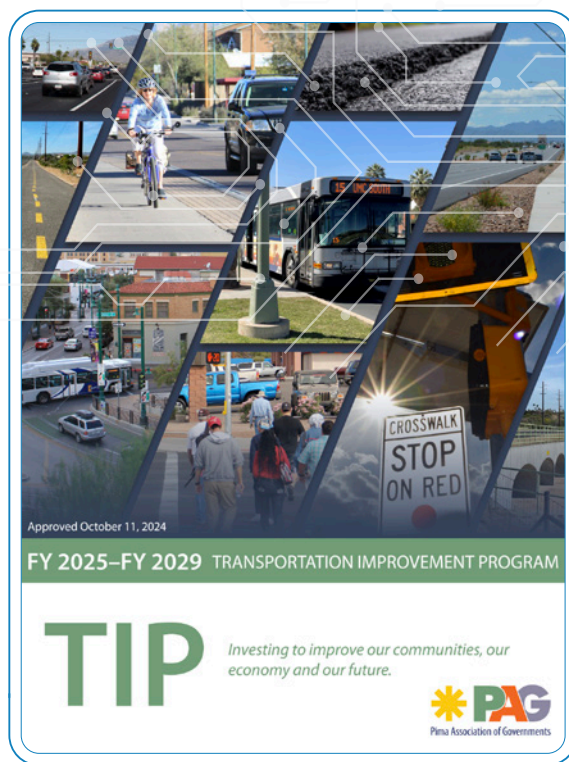
PAG staff organized open house events to gather the public's input in developing the TIP update. In all, three open houses were held for the public to ask questions and provide feedback on the draft program. PAG staff promoted the events and encouraged public input through an advertising campaign that included news releases, print and digital advertising, and social media promotion.

Interactive polling also was used at open house events to help move the discussions and engage the audiences in attendance. These forums provided residents with the opportunity to learn more about transportation funding sources, where transportation funding will be spent over the next five years, and requirements of how the funds can be used.

The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) require PAG to maintain the TIP. PAG typically updates the TIP every two to three years with a goal of maximizing the use of federal, state and local funds and other resources to meet the multimodal needs of the region.

The update incorporates input from PAG member jurisdictions about improvements to the regional transportation network. These include improvements to national, state and regional roadways, transit, ride sharing, bikeways and pedestrian facilities. Within the program, each project is identified with a funding source, the jurisdiction implementing it, the timeline and details about the work being done within the five-year period.

The PAG Regional Council approved the FY 2025–FY 2029 TIP in May 2024 and it went into effect following a public and final federal review of additional air quality conformity documents as a result of federally requested changes in the modeling process.





# INVESTING YOUR TRANSPORTATION DOLLARS

The Regional Transportation Authority, which is managed by Pima Association of Governments, is continuing project delivery of its 20-year regional transportation plan voters approved in 2006. To date, the RTA has invested \$1.6 billion to deliver more than 1,000 roadway, transit, safety, environmental and economic vitality improvement projects and services across the greater Tucson region.

The RTA Board, which mirrors the PAG Regional Council but has different officers, voted on Sept. 26, 2024, to approve a new draft \$2.46 billion regional transportation plan for public input prior to a possible November 2025 election. Public outreach and feedback activities started in late 2024, and based on feedback received during this period, the RTA Board will consider plan revisions before considering final plan approval for ballot placement. If Pima County voters approve a new 20-year plan and a new half-cent sales tax, RTA transportation investments would continue for another 20 years.

Proposed roadway corridor projects were selected from lists submitted by RTA member jurisdictions. A citizens' advisory committee and technical advisory committee developed plan options including categorical projects for other plan elements, to recommend to the RTA Board. The board made final revisions before approving the initial draft plan, which has transportation improvements in the following major plan elements:

- Roadway Corridor
- Arterial Rehabilitation
- Safety, ADA and Active Transportation
- Transit
- Environmental

For more information about the current plan and project delivery, visit [RTAmobility.com](https://RTAmobility.com). To learn more about the RTA Next draft plan and to sign up for updates and notices of public events, please visit [RTAnext.com](https://RTAnext.com).



## RTA*next*

Investing in transportation to meet your needs

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# IMPROVING TRANSIT SERVICES FOR THE ENTIRE COMMUNITY

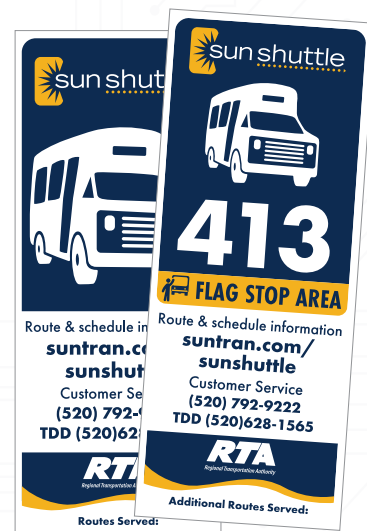
PAG coordinates regional transit planning with funding from several state and federal programs to deliver efficient transit services for residents across the region. We work with partner jurisdictions in the greater Tucson region, the Arizona Department of Transportation (ADOT), the FTA, private vendors and nonprofit agencies to plan for and deliver a regional network of transit services, including special needs services.

PAG transit planners successfully collaborated with partners at Sun Tran to consolidate the RTA-funded Sun Shuttle neighborhood service and Sun Tran mass transit service schedules and informational booklets into a single Ride Guide booklet that will go into circulation in FY 2024-25. This consolidated guide offers riders a single document to find all regional transit service schedules.

New, two-sided shuttle stop signs were designed and installed at all Sun Shuttle stops across the region. The newly designed signs offer more detailed descriptions and better visibility at more than 200 locations.

Transit planning staff also collaborated with City of Tucson staff on the city's regional transit Comprehensive Operational Analysis (COA). The analysis examines opportunities to improve transit options in the region to create a more equitable, effective, and efficient transit network. The COA evaluated the Sun Tran, Sun Link, Sun Express and Sun Shuttle services, and developed a final plan to improve the overall transit network.

Updates to the Sun Shuttle Dial-a-Ride app also progressed. Sun Shuttle Dial-a-Ride is the Americans with Disabilities Act (ADA) paratransit service in Pima County for Sun Shuttle. When completed, the improved app will allow users to request rides, review and manage rides, track upcoming and completed rides, customize ride preferences, and track rides on a map, among other updated features.



# PROMOTING AIR QUALITY THROUGH TRAVEL REDUCTION

PAG is the region's federally designated transportation conformity and state-designated air quality planning organization. In this role, we work to ensure that regional transportation activities do not adversely impact air quality.

The Clean Air Act and federal transportation rules require a demonstration of air quality conformity for the TIP and RMAP to ensure that federal funding and approval are given to highway and transit projects which conform to specified air quality goals. This applies within PAG's transportation planning area, the Rillito PM<sub>10</sub> (particulate matter) nonattainment area, and the Ajo PM<sub>10</sub> maintenance area. PAG conducted modeling and analysis, interagency consultation and public involvement in the process of demonstrating air quality transportation conformity for the FY 2025–FY 2029 TIP.

PAG's Travel Reduction Program (TRP) encourages the use of transportation alternatives to single-occupancy cars in daily commutes. Throughout the fiscal year, PAG staff developed strategies to reach more of the regional workforce through the TRP. By working with TRP employers with multiple locations, the TRP was able to expand program reach and increase the total number of regional employees represented in the program by 10%. The operational change also improved efficiency and reduced the administrative burden for multi-location sites.

The TRP provides area employers with resources and tools that encourage their workers to rideshare or use other modes of transportation to reduce the number of vehicles on the road. Employers with 100 or more full-time equivalent employees are required by local ordinances to participate, and smaller employers are encouraged to participate voluntarily.



PAG staff also completed the biennial Greenhouse Gas Inventory. The Inventory, covering years 2016 through 2021, seeks to quantify the major greenhouse gas emission sources resulting from activities under the control or influence of PAG region governments and to identify and develop practices and policies to reduce emissions. Over the report's analysis period, greenhouse gas emissions fell 15.6% from 14.4 million metric tons in 2016 to 12.1 million metric tons in 2021.

## Carbon Reduction Program

PAG's carbon reduction strategies were adopted into ADOT's Statewide Carbon Reduction Strategy in November 2023. This includes nine separate consultant-supported planning projects that were approved to reduce transportation carbon emissions in the region.





# TRANSPORTATION ART BY YOUTH BEAUTIFIES PUBLIC SPACES

PAG takes an interest in not only the functionality of the regional transportation network but also the aesthetics.

Working with member jurisdictions, PAG accepts applications for funding for public transportation art projects. The sponsoring agency collaborates with local schools or non-profit art organizations to develop art installation proposals. PAG reviews the proposals for program compliance. Once approved, the youth artists work with local professional artists and teachers to direct them through the creative process.

In FY 2024, PAG worked with member jurisdictions to fund the following Transportation Art by Youth (TABY) projects:

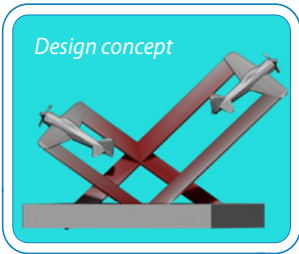
- City of Tucson: Escalante Road at Lincoln Park. This artwork is meant to call attention and direct the public to the new dog park called Wagging Tails Dog Park. The murals include imagery of dogs as a placemaking and wayfinding strategy and to beautify the area.



- Town of Sahuarita: Three projects located along Quail Crossing Boulevard between Nogales Highway and Old Nogales Highway, Nogales Highway and Sahuarita Road, and La Cañada Drive and Sahuarita Road. The artwork includes a bench and waste receptacle adjacent to the multipurpose path along the completed Quail Crossing roadway extension. The youths also painted themed murals on two existing traffic signal cabinets and battery backup cabinets.



- Town of Marana: Avra Valley Road at the entrance to the Marana Regional Airport. The aviation-themed installment will highlight the importance of aviation to all travelers along Avra Valley Road.



The TABY program offers summer employment for youth from our local jurisdictions, which provides students with civic involvement experience to build confidence and interpersonal skills through collaborative work experience. PAG started the TABY program in 1995, and it is funded through regional Highway User Revenue Funds (HURF) allocated to PAG. Student artists across the region have helped complete more than 100 projects through the TABY program.

# PAG OPERATING STATEMENT

## FY 2023-24

(Audited)

REVENUES:		
7.9%	Local	\$ 779,053
3.9%	State grants and aid	381,553
88.3%	Federal grants and aid	8,741,451
Total revenues		\$ 9,902,057

DIRECT PROGRAM COSTS:		EXPENSES:
	Personnel services	\$ 5,060,985
	Professional services	1,501,236
	Travel	2,634
	Occupancy and utilities	240,511
	Equipment and maintenance	99,180
	Depreciation	0
	Office	7,295
	Conferences, meetings and memberships	59,609
	Other	369,092
Total program costs		\$ 7,340,542

INDIRECT & ADMINISTRATIVE COSTS:	
Personnel services	\$ 1,371,615
Professional services	96,875
Travel	3,586
Occupancy and utilities	729,410
Equipment and maintenance	80,510
Depreciation	12,275
Office	2,763
Conferences, meetings and memberships	46,945
Other	\$144,171
<b>Total indirect &amp; administrative costs</b>	<b>\$ 2,488,150</b>

Total expenses	\$ 9,828,692
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Change in net assets	\$ 73,365
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Net assets at beginning of year	\$ 1,360,082
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Net assets at end of year	\$ 1,433,447
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(Numbers are rounded)



# DATA POWERED

*PAG operates its programs without regard to race, color and national origin in compliance with Title VI of the Civil Rights Act. If you need translation assistance, please call (520) 792-1093 and ask for Zonia Kelley. Si necesita ayuda con traducción, llame por favor al (520) 792-1093 y comuníquese con Zonia Kelley.*

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