



Impacting Young Lives Throughout Arizona

**State Fiscal Year 2023
Annual Report**

Dear Fellow Arizonans:

National attention has recently been focused on early care and education, and more people are realizing that child care is essential for a strong economy.

Last year, federal lawmakers passed the CHIPS and Science Act, which invests about \$280 billion to bolster the nation's semiconductor industry. Interestingly, one of the grant requirements is that companies also provide a plan for access to child care in order to be eligible for the money. This, along with the creation of a new National Early Care and Education Workforce Center to help recruit and retain a diverse and qualified workforce for early childhood programs, is elevating the child care workforce crisis into the national spotlight.

Today's babies, toddlers and preschoolers are our state's generation next—the generation that in just a couple of decades will be entering the workforce and beginning their own families. Addressing early childhood needs is our best opportunity to ensure a solid foundation is set from the start.

We have a shared responsibility to ensure all children have the tools they need to learn, grow and succeed. That means supporting families with every policy we set—from child tax credits to paid family leave—to reduce financial pressures on families and help to create the safe, stable environments that children need to thrive.

In this year's report, you will read about the outcomes of work First Things First has done in collaboration with partners statewide. You will read about home-based support that kept families engaged in their child's health and education (Page 21). You will read about efforts to support professional development for child care and preschool professionals (Page 15). And you will read about communities coming together to support our state's youngest children (Page 8).

Pandemic relief funds directed to child care over the last three years have helped to shore up this vital infrastructure for Arizona's economy, but these funds are short-term and will soon end. Now, we need everyone to come together to find commonsense, long-term solutions.

It is vital that business and community leaders as well as policymakers work with early childhood partners like FTF to make the case for early childhood investments. Securing commitments at all levels of our community to support the future success of babies, toddlers and preschoolers is key to our state's success.

As always, we appreciate your partnership in those efforts and look forward to the day when we realize our collective vision: that all children in Arizona are ready for school and on the road to success.



Gerald Szostak
Board Chair

A stylized, handwritten signature in black ink.



Melinda Morrison Gulick
Chief Executive Officer

A handwritten signature in black ink.

Table of Contents

About First Things First _____ 4

Our Impact At-A-Glance _____ 6

Investing in Quality First Means Investing in Arizona’s Future _____ 8

Supporting Child Care Staff Through Professional Development Opportunities _____ 15

FTF Investments Help Preserve Half a Billion Dollars in
Federal Child Care Funds _____ 20

Home Visitation Most Benefits Babies and Toddlers in Families
Who Face Challenging Circumstances _____ 21

Long-Term Solutions Needed as Tobacco Funding for Early
Childhood Programs Continue Decline _____ 27

Statewide and Regional Expenditures _____ 31

Celebrating a Decade of Service to Arizona’s Young Children _____ 34

About First Things First

Created by a 2006 citizen's initiative, First Things First (FTF) is one of the critical partners in building a family-centered, comprehensive, collaborative and high-quality early childhood system that supports the development, health and early education of Arizona children from birth to age 5. FTF's work focuses on seven main areas, including:

Quality Child Care and Preschool

Children with access to quality early learning do better in school and are more likely to graduate from high school. FTF funds researched-based quality improvement supports to child care and preschool programs that help children thrive. These include healthy and safe learning environments that help children develop emotionally, physically, socially and academically; coaching for early learning professionals to better engage young learners; and developmentally appropriate learning materials. Scholarships also are funded to help more babies, toddlers and preschoolers access quality early learning.

Strengthening Families and Early Literacy

Families are a child's first and best teachers. FTF programs give parents options when it comes to supporting their child's health and learning. Services are voluntary and provided at levels that meet the family's needs, from community hubs where families can access parenting classes, information and referrals to voluntary, evidence-based home visitation programs delivered in the home from a nurse or parent educator to address a variety of parenting situations, like grandparents raising grandchildren, parenting children with special needs or families with multiple births. Literacy approaches include providing information to families and caregivers about the importance of language and literacy development, as well as access to books and opportunities for families to engage in language and literacy workshops.

Teacher/Workforce Training and Development

Children's relationships with teachers and caregivers impact whether their brains will develop in ways that promote learning. Children 5 and younger learn differently than school-age children. The quality of early learning depends on the education and skills of the teacher. FTF funds college scholarships and other professional development support to expand the knowledge and skills of professionals working with babies, toddlers and preschoolers. In addition, FTF funds a variety of evidence-based consulting models to help early childhood educators improve health practices in early care settings, better support children's mental and behavioral health, and provide more inclusive settings in which all children can participate.

System Coordination

Collaboration among system partners maximizes resources and effectiveness. At the state and regional levels, FTF works with early childhood system partners – like state agencies, tribal governments, philanthropic organizations, businesses and providers of services to kids and families – to maximize funding, reduce duplication and ultimately improve outcomes for young children. These collaborations also promote the ongoing development and continuous quality improvement of a statewide early childhood system that supports the health and development of all young children in Arizona.

Parent and Community Engagement

We all have a shared responsibility to help children arrive at school prepared to succeed. FTF works with families, caregivers and community leaders to build awareness of the importance of early childhood and steps they can take to support the education and health of young children in their communities.

Preventive Health

Undetected or untreated health issues in the early years can impact learning later on. Left unaddressed, developmental delays and chronic medical conditions can become serious learning problems that require costly interventions. FTF funds preventive developmental and sensory screenings, parent education and referrals to existing services to ensure that kids arrive at kindergarten healthy and ready to succeed. In addition, FTF funds strategies to connect families to health care options in their communities, as well as efforts to coordinate the services children receive for maximum benefit.

Research and Accountability

Measuring effectiveness and promoting continuous quality improvement relies on robust, accurate data. Data collected by FTF through research studies and grant or system partners are used to inform decision-making, monitor FTF-funded grant partner performance, enhance program effectiveness and measure the impact of FTF-funded strategies or the collective investments of Arizona's early childhood system.

Our Impact At-A-Glance

The data below detail the number of young children, families and early childhood professionals who had access to programs and services as a result of First Things First investments in State Fiscal Year 2023 (SFY23). Decisions about which programs to fund are informed by recommendations from volunteer regional councils after thorough study of the needs in their communities. As such, not all FTF programs are available in every region. The numbers below reflect the impact of various programs across all the regions that fund those strategies. FTF grant partners reached thousands of families and professionals statewide with quality programs that will give the young children in their care the opportunity to start school healthy and ready to succeed!

Early Learning

1,050

Child care and preschool providers were committed to continuous quality improvement of their early learning programs through Quality First. In addition, **384** providers participated in Quality First through funding made available from federal pandemic relief funds.

7,754

Quality First scholarships helped the families of babies, toddlers and preschoolers afford a quality early education for their kids. In addition, **2,112** young children received QF scholarships through funding made available from federal pandemic relief funds.

775

Early childhood educators received college scholarships to expand their knowledge and improve their qualifications for working with young children. In addition, **50** early childhood educators received college scholarships through funding made available from federal pandemic relief funds.

1,485

Relatives and other community caregivers attended educational sessions and received coaching to increase their understanding of children's development and strategies to support young children's health and learning.

Family Support

- 19,489** Families attended parenting activities or received referrals to needed services through family resource centers.
- 10,198** Families participated in activities to increase their awareness of core areas of family functioning and children's development.
- 4,077** Families with young children participated in voluntary home visiting programs proven to reduce parental stress levels, increase connections to community supports, and improve children's cognitive, motor, behavioral and socio-emotional development. In addition, **433** families successfully graduated from home visiting programs.
- 55,132** Kits containing important information, resources and tools for families of newborns were distributed to hospitals to help families support their child's health and learning.
- 1,458** Parents and other caregivers participated in a series of evidence-based classes designed to improve knowledge of effective parenting practices and children's development.

Health

- 21,027** Children received screenings to detect vision, hearing and developmental issues and prevent learning challenges later on.
- 6,775** Children received referrals to further assess for developmental delays/sensory issues and possible treatment or early intervention services.
- 19,394** Children received a screening to detect tooth decay which left undetected and untreated could cause damage to permanent teeth, impaired speech development and failure to thrive.
- 10,789** Children received fluoride varnish applications to protect against early childhood tooth decay.
- 305** Child care and preschool providers received mental health consultation proven to enhance teachers' confidence in dealing with students' socio-emotional needs, improve teacher-child relationships and prevent expulsions. In addition, **205** child care and preschool providers received mental health consultation through funding made available from federal pandemic relief funds.
- 54** Referrals were given to children for services to address their mental/behavioral health needs.
- 1,020** Child care and preschool providers received child care health consultation or support in maintaining health and safety standards in early learning settings. In addition, **384** child care and preschool providers received child care health consultation or support in maintaining health and safety standards in early learning settings through funding made available from federal pandemic relief funds.



Investing in Quality First Means Investing in Arizona's Future

Research from the past 40 years shows that kids with access to quality early learning are more prepared for kindergarten, do better in school and are more likely to graduate from high school. As adults, they tend to be healthier and less likely to be involved with the criminal justice or social welfare systems.

“Knowledgeable and skilled teachers in quality early learning programs engage young learners through interactions with the environment and with others,” said Ginger Sandweg, First Things First senior director of early learning.

“These teachers intentionally set up learning experiences that support the development of language and literacy, social, emotional and cognitive skills to ensure that babies, toddlers and preschoolers thrive.”

Other hallmarks of quality programs include predictable and balanced daily schedules and routines; evidence-based, culturally responsive and relevant activities and intentional instruction; regular monitoring of kids’ progress to inform teaching; and ample opportunities for family involvement in their child’s education.

“Achieving quality in child care and preschool settings isn’t easy,” Sandweg said, adding that this is the reason FTF created Quality First – Arizona’s Quality Improvement and Rating System. Quality First provides a unified, measurable standard of care and informs parents of how their local providers rate on those standards. Participating providers

receive support to improve the quality of their programs and embed a continuous quality improvement process to sustain quality. This support may include: individualized coaching and specifically targeted technical assistance; funding to make improvements to their classrooms, play spaces or retain qualified staff; and college scholarships so staff can expand their skills in engaging young learners.

Research shows that Quality First significantly improves the quality of early learning options available to Arizona’s families. When programs were first rated (2013), 25% of 857 participating rated providers met or exceeded quality standards (3- to 5-star rated). Over the next several years, enrollment increased and quality levels improved among providers participating in Quality First. In 2022, 82% of 1,365 participating rated providers met or exceeded quality standards.

Significant federal resources to address the effects of the COVID-19 pandemic were made available to communities through city, county and state governments beginning in 2020. As policymakers at all three

levels looked at ways to support working families, they turned to successful programs already in place at FTF. Examples of those partnerships include:

Expanding Quality Early Learning Options

Although FTF spends \$64.3 million through its Quality and Access Strategy to support approximately 1,400 providers in 26 regions statewide through Quality First, these resources are not sufficient to give all providers access to quality improvement support. When the Arizona Department of Economic Security (DES) decided to use federal COVID relief dollars to expand children's access to quality child care, they turned to Quality First. Through Federal Fiscal Year 2024, DES is investing \$74 million to expand Quality First to up to an additional 450 providers, also called expansion participants. At the end of SFY23, 384 child care and preschool providers had been engaged in Quality First through this funding. Of the 384 Quality First expansion participants that have been assessed and rated, almost 65% have met or exceeded quality standards. This gives families looking for quality care in their

communities more options. Providers caring for kids in the state's child care subsidy program also can be paid 50% more for the care they provide, if they participate in QF and meet or exceed the program's quality standards. This happens through an increase in the reimbursement rates statewide. In May, DES reported the reimbursement rate for infant care to child care centers had increased from \$30.20 to \$64.15 per day. The increase sets reimbursement rates in the 75th percentile of the actual cost of infant care. All Quality First expansion participants also have access to technical support in early childhood mental health – to help their teachers improve their classroom climate, enhance child-teacher relationships, support children exhibiting challenging behaviors and encourage the social-emotional development of every child.

Expanding Access to Quality Early Learning

Quality First Scholarships are intended to help more children in low-income families access quality early learning and to support programs in maintaining quality once they have reached the 3- to 5-star levels. For SFY23 the FTF Board



increased Quality First scholarship eligibility from 200% to 300% of the federal poverty level, increasing the number of families who qualify for a scholarship.

Also in Federal Fiscal Year 2023, a partnership with DES, through the use of federal American Rescue Plan Act (ARPA) dollars, increased the Quality First scholarship subsidy rate for providers. The providers receiving FTF scholarships received an additive, which will continue through SFY24. This additive takes the providers' total payment, which includes FTF payment and the DES additive, to the most recent Cost of Quality study level, which is more than the historic Cost of Quality study that FTF uses. The historic study, which

was completed in 2010, outlines the amount required to provide quality care at the various star levels, for the different age levels, within FTF's quality rating scale/system. A more recent study was completed in FFY22. Although the federal funds end after FFY24, the FTF Board has decided that FTF will continue paying the higher scholarship reimbursement rate. This will ensure that child care providers continue to receive a rate that reflects the most recent cost of quality. However, declining FTF revenues make it unlikely that funding available for scholarships will increase. Therefore, the number of children served is expected to decrease because of the higher rate per scholarship.

Parents Across Arizona Say Quality First Gave Their Children a Strong Start for Success in School

FTF Navajo Nation Region Success Story



Catreina Robertson knew she wanted to enroll her daughter Kaitlyn at the preschool at Many Farms Public School in the Chinle Unified School District in northern Arizona.

Years earlier, Robertson's oldest daughter, Kayley, had attended the preschool, which participates in First Things First's Quality First program. Reflecting on Kayley's preschool experience as Kayley completed fifth grade, Robertson said her daughter is excelling academically and credits that to the skills she learned in preschool.

Because of her older daughter's experience, Robertson eagerly enrolled younger daughter Kaitlyn into the Many Farms preschool program. After learning about speech difficulties that Kaitlyn was having, including struggling to speak clearly and with confidence, preschool teacher Roslyn Elliott quickly got to work with Kaitlyn by helping her focus on

the words she was trying to say and to pronounce them slowly.

"I knew my daughter was in good hands and I was confident that the program would better her speaking skills," Robertson said.

"I gave Kaitlyn time when she spoke," Elliott said. "I encouraged her to have conversations with me and also gave her time to have conversations with other students. And having a speech pathologist at the school is also a great resource for the teachers. All this combined is what helped Kaitlyn improve her speech."

By kindergarten, Kaitlyn was able to speak in full sentences. She was also reading at the second grade level, while also being able to count to 100. Robertson credits the skills she learned in preschool for the strong start.

As Arizona's early childhood agency, First Things First created the Quality First program to help child care providers in the state improve the quality of their programs in ways that help young children be ready for kindergarten. Participating in Quality First is free for regulated child care centers, homes and preschool programs in Arizona.

FTF Cochise Region Success Story

Many times the high cost of quality child care gives a parent pause. After nearly a decade of juggling motherhood and a job as a licensed practical nurse, Serena Hernandez who lives in southeastern Arizona, decided to go back to school. She was ready to make the next stride in her career.

“I wanted to open up the opportunities for myself,” the single mom said. But she also didn’t want to sacrifice her 3-year-old daughter’s care. When her daughter, Aniyah, received a Quality First scholarship to continue attending Great Expectations Early Learning Center in Sierra Vista, it brought immediate relief to Hernandez, whose budget tightened while taking classes.

“It was a huge blessing for me,” she said of her child’s scholarship. “It allowed me to not have to work so I could focus on school because the program was full time.”

The scholarship allowed Aniyah to stay at Great Expectations, where she had been enrolled since she was 10 months old. Hernandez sees a positive impact on her daughter’s growth and development.

“She’s definitely become more social,” Hernandez said. “She’s learned how to play with other kids better, she’s learned songs, she’s learned her colors.”

Hernandez has no doubts that her preschool activities will serve her well as she enters kindergarten, just as they did



Aniyah’s big sister, Kaliyah. Now 12, Kaliyah attended the same early learning center and received a scholarship. When she turned 5, Kaliyah not only recognized letters and colors, but was also starting to write, her mother said.

“She was really prepared for kindergarten,” Hernandez said.

Knowing that Aniyah is receiving high quality care makes her mother feel confident that she will have the skills needed to succeed in kindergarten. “She’s not just playing, she’s learning all the time,” Hernandez said.

Currently, more than 1,400 providers across Arizona participate in the Quality First program, such as Children of Hope Child Development Center in Ahwatukee.

FTF East Maricopa Region Success Story

Tiffany Vance was hopeful that the teachers at Children of Hope would help her 5-year-old son, Thatcher, develop important skills he needed to be ready for kindergarten.

Daily tasks like putting on socks and shoes and getting ready for the day could at times result in frustration for him, Vance said.

“Thatcher loves learning and socializing. He has always been the first one to help a friend, but he struggled with focus and regulation,” said Vance, a mom of three. “Before starting preschool, it was difficult for him to walk from the front to the back of the classroom without distraction or disruption.”

When Thatcher started preschool at age 4, the teachers and staff understood his strengths and his challenges.

Quality First helps early care and education providers strengthen their programs through professional development and coaching, specialized assistance from a team of early childhood experts, and funding to improve facilities and learning materials.

The teachers told Vance that implementing intervention strategies like giving the young boy choices and having him sit on a wobble seat would help him to regulate his behavior and help him focus.

Thatcher’s teachers at Children of Hope were patient and positive in their approach

to guiding learning experiences for him, Vance said. Over time, he flourished learning numbers and letters, while also making tangible connections and understanding.

“He learned what numbers and words represented and that led to him being more engaged and enthusiastic in his classroom setting,” Vance said. “His teachers used ways to keep him focused and they understood how to keep him centered.”

Thatcher has started kindergarten and although he is still developing, he is thriving in his new class. He listens, comprehends and is adjusting to new routines.

Techniques he learned in preschool have translated to home, improving interactions with their family, Vance said. He is much better at understanding tasks and making connections on his own. He is better able to stay on track to complete everyday routines, which has helped him be less frustrated and more confident.

“His preschool teachers and the quality of his experiences were instrumental in shaping who he is today,” Vance said. “He really loved his teachers, and felt so loved by them as well. Although he is a bright child, I don’t think his success would be to the level it is now if it weren’t for the early intervention he received at Children of Hope.”



Supporting Child Care Staff Through Professional Development Opportunities

Like other states across the nation, Arizona is suffering a child care workforce shortage. When child care providers are able to hire new staff, they often lose them quickly to other jobs. In an effort to help, First Things First continues to offer free unlimited access to online early childhood training courses. The coursework includes classes to help new staff understand what quality early learning means and help center directors deliver onboarding training faster to those new staff members.

Starting in 2021, FTF funded up to 15,000 subscribers to have access to the entire ChildCare Education Institute (CCEI) training catalog. The catalog includes more than 200 early childhood courses applicable to people working with infants, toddlers and preschoolers. The trainings, which are also available in Spanish, are self-paced and can be accessed from any computer at any time, to offer flexibility for child care workers.

As of June 2023, more than 14,000 child care staff across 843 child care sites have subscribed to access the entire ChildCare Education Institute (CCEI) training catalog. This includes 337 child care practitioners who have completed the new employee orientation that was created to address the turnover in the workforce. The orientation coursework is designed to meet licensing and Child Care and Development Block Grant requirements.

The catalog includes more than 200 early childhood courses applicable to people working with babies, toddlers and preschoolers. The trainings are self-paced and can be accessed from any computer at any time, which provides flexibility for child care workers.

A new contract between FTF and the Arizona Department of Economic Security's (DES) Division of Child Care has allowed FTF to expand its early childhood college scholarship program through June 2024. The expansion was made possible through federal COVID relief funds dedicated to early care and education. It allows any early childhood practitioner pursuing bachelor's level coursework towards a degree in early childhood education to apply for a scholarship covering tuition, books and fees.



FTF College Scholarships offers scholarships to aspiring early childhood educators completing a Child Development Associate (CDA) credential, associate and bachelor's degrees. Without the pandemic relief funds, the scholarship program has supported only a limited number of bachelor's degrees in specific areas of the state.

The federal relief money also allowed for an online CDA opportunity that provides early childhood practitioners with all the courses and prep they need to complete a portfolio to apply for the credential.

In addition to the online CDA pathway, the scholars also get a laptop, headset and a year of access to internet connectivity to remove barriers that typically exist in accessing online learning.

“What we know about our workforce is that sometimes there are some technology challenges,” Sandweg said. “They’ll say, ‘I can’t get online or I don’t have a laptop. I don’t have broadband internet access.’ We’re trying to get them the skills and knowledge they need and support the challenges they face when doing online coursework.”

Especially now when the early childhood workforce has seen significant turnover, this opportunity is trying to meet the challenges of employees with little or no experience in child care.

“We have brand new people who have never been in the early childhood field before,” Sandweg said. “They don’t come with previous training. And research says that higher education does make a difference. If you think about the early childhood field as a whole, we need teachers and we need teaching staff. But we also need knowledgeable administrators and instructors. So while I do think that a bachelor’s degree sets a practitioner up for success, it also sets up our field as a pipeline to move into other roles that will eventually support the direct service practitioner.”

FTF continued to offer a variety of professional development opportunities throughout 13 FTF regions and statewide in SFY23. For example, since 2009, FTF has funded Great Expectations for Teachers, Children, and Families — providing early childhood educators with in-depth professional development that allows them to earn college credit and work toward degrees in early childhood. The United Way of Tucson and Southern Arizona administers the program that provides early childhood teachers, principals and administrators access to professional development that improves their knowledge of the development and learning of children birth to age 5. In SFY23, there were 17 Communities of Practice, with more than 700 students enrolled in college classes across Pima County.

FTF Pima North Region Success Story

For Alexandra Irizarry, as she was finishing her associate degree in early childhood studies at Pima Community College in Tucson and working full-time as a preschool teacher in the Vail Unified School District, she needed a support system. She found that through her colleagues in her Great Expectations Early Learning Connections Community of Practice.

The United Way of Tucson and Southern Arizona works in partnership with the Vail Unified School District, among others, to strengthen knowledge among teachers and elementary school principals around developmentally appropriate practices and how young children learn.

Members of the Early Learning Community of Practice also meet with elementary principals for collaborative sessions and discussion about the transition to kindergarten for preschool children.

Irizarry said being a member of Early Learning Connections helped her to be a better teacher.

“Everything is interconnected,” she said. “What you learn, you can apply to your school assignments and in your classroom.”

On an average day, Irizarry cares for as many as 26 children between the ages of 3 and 5. A favorite time of day is spent outdoors on the cheerful playground, with children swinging, sliding and discovering.

“I love children of all ages, but there’s something about early childhood that is so important and beautiful,” Irizarry said. “We can make such an impact during these years. We can help shape them as people.”

After Irizarry received her Child Development Associate (CDA) credential, she knew that if she wanted to advance as a teacher, she needed a degree. School leadership encouraged her to enroll in Pima.

“I was terrified of going back to school,” Irizarry said. “I worried about being able to keep up with work and family life. I was worried about missing out on time with my own children.”



She took a deep breath and enrolled. Making the journey possible was a scholarship for tuition and books from FTF.

While Irizarry was thrilled to complete her associate degree, she’s not done. “Once I’m stronger in terms of my health, I plan to return for my bachelor’s degree in early childhood education,” she said. “I love all ages and stages, but there is something so special about very young children. When I first started in early childhood education, I didn’t know that this was my passion. The more I learned, the more I realized that this is the place I want to be.”

FTF La Paz/Mohave Region Success Story

In the FTF La Paz/Mohave Region, a professional development program is focused on how babies begin to develop language skills and how important it is to their future development.

The La Paz/Mohave Language Development Project, which is part of a larger professional development program that the FTF La Paz/Mohave Regional Council funded in SFY23, allowed Early Childhood Education Associates Inc., which is based in La Paz and Mohave counties, to work with Renate Zangl, an international child language researcher, to implement science-based strategies from Zangl's book, "Raising a Talker: Easy Activities from Birth to Age 3."

Over the course of four years, 12 child care programs from La Paz and Mohave counties participated in the professional development classes that focused on how teachers can help children birth to age 3 learn language skills.

The goal is to close the language gap among children. Researchers say that children from lower socioeconomic families enter kindergarten having heard and knowing fewer words than their more affluent peers, which puts them at a disadvantage once they begin school.

"The worry is that early language development is not occurring because children are having less and less quality



interactions with their parents and caregivers because of other distractions," said FTF Senior Regional Director Ashley Pascual, who oversees the West Region for FTF, which includes the La Paz/Mohave Region. "This means they are not developing the language skills they need and it will impede their ability to communicate effectively."

"Raising a Talker" was integrated into the culture of each child care center and preschool that participated in the project, said Margee Chieffo, president and senior managing associate of ECEd Associates. Center directors agreed to have their entire staff take the classes and implement the language program at every level for children birth to age 3 in their care.

"Think of it like a cookbook," Chieffo said. "You must follow the explicit steps. What happens when you leave out the eggs? The games are based on developmental language skills."

At the heart of the project are language games that the teachers play with the babies and toddlers and build on each other. For example, the book has communication tips based on the ages of the child. In the baby's first two months, Zangl encourages caregivers to:

- Get the baby's attention through happy speech, eye contact, smiles and gentle touches.
- Mimic his vocalizations.
- Have face-to-face chats.
- Always pause to give him a chance to answer.
- Sing traditional and personalized songs.
- Let him listen to the sound of his own name.

These are some of the invitations for the baby to look, listen and touch. And there are suggestions on how to do these activities, for example: "Sit with the baby securely placed on your thighs, his face oriented toward yours. Look at him and sing or say his name in a friendly, slightly higher tone than usual as you make eye contact: "Hello, Harry. How's my little baaaby?"

The project provided precise games for parents to help support language learning at home. The program included developmental checkpoints to monitor in real time the language and brain growth of the children cared for by teachers in the training.

In addition to improvement in language skills among children in their care, teachers also saw levels of aggression greatly reduced in the children because they were able to communicate their feelings.

Directors and staff at child care centers across both counties were provided with Zangl's monthly intensive hands-on training and three times each year, Zangl visited the preschools and centers to observe the teachers in action.

Access to in-person professional development is a challenge in the region, Pascual said. It's one of the underlying purposes of the regional council's investment in the strategy. The grant has created a connection to higher education, where before, child development classes tended to be online.

"(ECEd Associates) has developed a partnership with Mohave Community College and early childhood education instructors have been hired under the grant program," Pascual said.

As early childhood professionals move through the class offerings and earn a Child Development Associate (CDA) Credential, they have the opportunity to earn up to nine college credits toward their associate degree in early childhood education.

"It's made the gap to becoming a college student more attainable," Pascual said. "Sessions are offered on weekends and evenings. That piece was missing for a long time in the region."

FTF Investments Help Preserve Half a Billion Dollars in Federal Child Care Funds

FTF’s ongoing investments in quality improvement also will continue to ensure that Arizona is able to make full use of all available federal child care funds.

In Arizona, many children access early learning through federal Child Care Development Fund (CCDF) dollars. CCDF funds are administered by DES, which uses the funds to provide child care subsidies for a number of purposes.

Although the amount of child care subsidy funds available to support struggling families has increased dramatically over the past couple of years because of federal pandemic relief funding, one thing stayed the same: Arizona cannot claim a \$48.5 million portion of the total CCDF grant (\$208.1 million) unless the State expends \$30 million in non-federal dollars on child care-related activities.

Historically, the State met this requirement with State General Fund dollars appropriated by the Legislature to DES. State funds approved by the legislature for child care subsidies reached a high point of \$69.1 million in fiscal year 2008. Those funds were reduced during the Great Recession, then eliminated in 2012. This resulted in the State’s inability to meet the CCDF’s requirements and threatened the loss of tens of millions of dollars for child care vouchers annually.

Although some funding has since been restored (the SFY23 state General Fund contribution for child care subsidies was \$7

million to the Arizona Department of Child Safety), this amount cannot be used as even a partial match for federal child care funds, since it is being used as a match for federal child welfare funds.

In order to continue to access Arizona’s full allotment of CCDF dollars, FTF collaborated with the Governor’s Office and DES in establishing a Memorandum of Agreement (MOA) to count FTF investments as the required match. These expenditures have included the various components of quality improvement efforts – including assessing programs, coaching providers on quality improvement and professional development for early educators to expand their skills working with young children – as well as Quality First scholarships to allow young children to access quality programs.

Throughout the 13 years this MOA has been in place (see Table 1), Arizona has been able to leverage more than half a billion dollars in federal child care funds that otherwise would have been lost. By ensuring that Arizona is able to draw down all available CCDF funds, FTF is helping to ensure today’s parents can keep working. Through this effort, FTF is also improving the quality of care in licensed and certified child care and preschool settings and providing access to care through scholarships so that more young children arrive at kindergarten prepared to succeed.

Table 1.

Federal Fiscal Year	FTF Match Provided	Total Federal Child Care Subsidy Dollars Drawn Down as Result of FTF-DES MOA
2011-2022	\$344 M	\$464.7 M
2023	\$30 M	\$47 M
2024	*\$30 M	*\$47M

*projected

Source: Arizona Department of Economic Security, Division of Child Care



Home Visitation Most Benefits Babies and Toddlers in Families Who Face Challenging Circumstances

About halfway through her second pregnancy, Malia Mullenau and her husband, Reagan, got some scary news.

Doctors told them that their daughter Addelyn would have complex medical needs. Addy was diagnosed in utero with a chromosome deletion syndrome, which means that part of her body's chromosomes had been lost or deleted which could cause severe congenital anomalies and significant intellectual and physical disability.

There was so much that Reagan and Malia didn't know, but they knew that Addy was meant to be their daughter. They also knew that they would love her and care for her to the best of their abilities.

The Mullenau family lives in Thatcher, which is three hours away from the high-level medical care in Phoenix that their soon-to-be-born daughter would need. As Malia's due date approached, she stayed with family in Phoenix to safely await Addy's arrival.

Shortly before Addy was born, a friend told Malia about a voluntary home visitation program called Healthy Families. The First Things First Graham/Greenlee Regional Partnership Council



Family success story from FTF Graham/Greenlee Region

funds Healthy Families to provide parenting information, promote school readiness and connections to community resources

The Mullenau's experience is just one example of the thousands of families across Arizona who have benefited from FTF-funded home visitation models. There were three models funded in 20 FTF regions in SFY23: Healthy Families (HF), Nurse Family Partnership (NFP) and Parents as Teachers (PAT). These three models have been evaluated nationally, and each has been proven to significantly improve child and family outcomes¹ (see Table 2).

Table 2.

	Improved Outcome	HF	NFP	PAT
Short-Term Outcomes	Child cognitive, motor, behavioral, socio-emotional development	X	X	X
	Maternal mental health and depression	X	X	
	Parenting stress levels	X	X	X
Intermediate Outcomes	Connection to community supports	X	X	X
	Home environment	X	X	X
	Mother employment	X	X	
Long-Term Outcomes	Reduced child maltreatment	X	X	X
	Economic self-sufficiency		X	X
	Decreased substance abuse	X	X	

FTF's home visitation programs provide personalized support for expectant parents and parenting families with children from birth to age 5, not yet in kindergarten, who face a variety of risk factors. Services are voluntary, free and primarily provided in the families' home. Although the models vary, each involves regular home visits administered by trained professionals such as nurses, social workers, early childhood specialists or paraprofessionals.

Malia quickly bonded with her home visitor, Stephanie, who immediately helped Malia navigate as she worked with at least a dozen specialists including a cardiologist, ophthalmologist, neurologist and endocrinologist, to help give Addy the best quality of life. The home visits never felt like appointments, Mullenau said.

"We say, 'We have a friend coming to check on us,'" she said. "So much love and support was provided. No judgments were ever made, and our home visitors felt like family. When people ask what this program is and why we are a part of it, I tell them that a kind friend is sent to give us parenting tips, advice on mental health for each of us, and we learn so much on top of having direct access to resources we may need help finding for our girls, and even for us as parents."

Mullenau describes Stephanie as a steady influence through the ups and downs.

"She has seen me at my best and at my worst, yet she always came with a bright smile and a kind hug," Mullenau said. "She became a shoulder to cry on, and a friend to laugh with. The difference the program made in our family is priceless. I've learned so many things to make

me a better wife, mom and person. Addelyn and her big sister, Chloe, benefitted from Healthy Families in countless ways, too. Starting with learning techniques for comforting a newborn in sensory overload, to potty-training tips, to preparing for preschool and beyond."

While many families could benefit from home visitation, research shows the families who benefit most are those with infants and toddlers who are facing adverse or challenging circumstances. Families prioritized for enrollment in home visitation programs include those who, for example:

- Are pregnant or who have an infant.
- Earn less than the federal poverty threshold.
- Are parents under 21.
- Are single parents.
- Have less than a high school education.

¹ US Department of Health and Human Services, Home Visiting Evidence of Effectiveness. Retrieved from <https://homvee.acf.hhs.gov/>

Data collected in SFY22 shows that FTF-funded programs are consistently reaching at-risk families at levels that mirror Arizona’s population, and oftentimes, greatly exceed those levels. (See Table 3).

Table 3.

Risk Factor	Arizona	Healthy Families	Nurse Family Partnership	Parents as Teachers
Teen Parent	5%	10%	22%	2%
Single Parent	37%	32%	47%	13%
Less than a high school education	12%	25%	22%	13%
Low-income (150% FPL or less)	32%	77%	71%	46%

Home visitation programs also are reaching a diverse group of families, with participants’ racial makeup largely mirroring the state’s diverse population. All three program models also continually reach a similar or larger percentage of Hispanic, African American and Native American families than reflected in the general population (African American, 3-10% depending on program model, compared to 5% statewide; Hispanic, 59-60%, compared to 32% statewide; and Native American, 3-6%, compared to 4% statewide). This is significant because ethnic families in Arizona are disproportionately poor, which places them at higher risk for poor health and education outcomes.

In addition to enrolling the families most in need, research suggests various factors that promote positive outcomes for families. Each program model has established guidelines in these areas, including screening and referral, and retention of families in the program. SFY22 data show that FTF program models are performing well in these areas, too.

One-on-one visits with trained home visitors have been shown to support and empower families and children experiencing challenges, as well as to improve bonding and the relationship between parents and children.

Home visitation can be described as an intensive service because home visitors meet with families frequently and collect extensive information to learn about the family’s needs and to set family goals. The home visitors also have to feel comfortable and confident with the screenings and assessments that they’re doing, and why they are doing them

For example, a home visitor might be the first to talk to a family about healthy relationships and intimate partner violence, which can have adverse effects on children and families. These are hard conversations, and it’s important that skills, roles and expectations are established.

“It’s not the home visitor’s role to be the solver of all challenges families face,” said Christine Waldbeiser, FTF program specialist for family support and literacy. “But they should feel confident in their role as a professional, advocate and coach that helps the family feel supported and have access to the resources they need. They are not only experts of their program, but also know where to go outside their program to refer families. They really are opening the door to challenging conversations and explaining to families why they are asking these questions.”

FTF Pima North Region Success Story

During her time in the Amphi Parents As Teachers program in Tucson, Ana Perez loved the community and support that home visitation provides through the personalized, in-home support offered by a trained parent educator. The stay-at-home mom and her daughter, Ana Victoria, were learning together. The FTF Pima North Regional Partnership Council funds home visitation to help parents in their role as their child's first and best teacher.

The parent educator gave Perez information about various playgroups and swimming and storytime activities, where she could enroll Ana Victoria. There she met other moms who quickly became family friends and an extension of her support network.

The parent educator encouraged Perez and her husband to do activities with Ana Victoria at home, such as drawing and working on puzzles to develop her fine motor skills. The young girl loves crafts and was using a hot glue gun by age 3 as part of Perez's encouragement to try new things.

"I explained to Ana Victoria that the glue gun was very hot and that she had to be careful, but that she could do it and I would be there to help her be safe," Perez said. "I was nervous, but I knew she could do it, and she did!"



Perez said she is thankful to the home visitation program for the resources they provide because it helped teach her daughter life skills.

Another feature of home visitation is that home visitors provide developmental screenings to all participating children at regular intervals (a minimum of one screening per program year after the child reaches 2 months of age is required), and they may provide mental health screenings to participating caregivers, based on the specific needs and circumstances of the family. In addition to providing developmental screenings, home visitors offer equipment-based hearing and vision screenings to children. Access to regular screenings allows for the early detection of children's developmental, vision and hearing impairments, and may help identify resources and supports that could benefit overall family well-being.

In SFY22, which is the most recent year that data is available, 9,202 developmental screenings were conducted on children across all three program models.

- 1,400 young children with developmental concerns were identified.
- 608 young children received referrals for additional supportive services.

Depression screening also was conducted for 1,531 caregivers (43%) during the program year across models.

- 13-30% of caregivers showed indications of concern, depending on the program model.
- 61% of those were referred for additional services.

In order for families to optimally benefit from home visiting, they need to participate in services for the desired length of time, as articulated by the program model and national research. The attrition rate varied across models: 46% in HF; 38% in NFP and 25% in PAT.

While low attrition rates are always strived for, the observed attrition rates seem to be in alignment with national research that are reflective of the on-the-ground reality of program implementation with vulnerable families.

In a landmark issue of the Future of Children – a scholarly journal that provides research and analysis to promote effective policies and programs for children – national research across home visitation models showed that families' attrition rates can vary from 20-67%. More recently, researchers examining the Nurse Family Partnership program specifically noted that approximately 35% of families participating in the program go on to complete the 2.5 year program nationwide while in another study that included HF, NFP and PAT programs, researchers found that 42% of families exited within a year of enrollment. Families participating in FTF-funded home visiting programs are showing participation rates between 15-22 months, on average, depending on the program model.



Long-term Solutions Needed as Tobacco Funding for Early Childhood Programs Continue Decline

Most public revenue sources fluctuate from year to year and are impacted by a variety of factors, including economic conditions, state and federal policy decisions, and changes in consumer spending. Tobacco revenue – the primary source of funding for FTF’s early childhood investments – is one example of this. Over the past 15 years, FTF revenue has decreased dramatically due to a variety of factors, including the Great Recession, declines in the number of people smoking, and the advent of smoking alternatives, including e-cigarettes (for which FTF receives no revenue as they do not contain tobacco). As a result, the annual resources available to FTF to fulfill its vital mission are \$63.6 million less per year (38.6%) than in 2008. (See Table 4).

The latest estimates from the Seidman Research Institute at Arizona State University show that, although the rate of decline will slow slightly, the decrease in revenue will continue over the next decade. The Institute compiles regular tobacco revenue estimates for FTF to assist the state Board with fiscal management and strategic planning. Historically, FTF revenues have landed close to the expected levels in ASU’s estimates. For SFY23, actual revenues were about \$15.5 million below the expected level. Revenue is expected to decline by an additional 1.7% by 2032. If that occurs, over the next decade, FTF will have **almost \$52 million less per year** to invest in programs that promote healthy child development and learning than in 2008 (See Table 4).

Table 4: Tobacco Revenue for Early Childhood Continues to Decline

State Fiscal Year	FTF Tobacco Revenue Collections	+/- Change from Prior Year	% Difference from Baseline	\$ Change from Baseline
2008	\$164,805,113			
2009	\$159,974,131	Decrease	-2.9%	-\$4.8 million
2010	\$132,269,028	Decrease	-19.7%	-\$32.5 million
2011	\$130,701,444	Decrease	-20.7%	-\$34.1 million
2012	\$128,314,293	Decrease	-22.1%	-\$36.5 million
2013	\$125,768,040	Decrease	-23.7%	-\$39.0 million
2014	\$124,621,734	Decrease	-24.4%	-\$40.2 million
2015	\$122,115,615	Decrease	-25.9%	-\$42.7 million
2016	\$125,856,241	Increase	-23.6%	-\$38.9 million
2017	\$125,338,281	Decrease	-23.9%	-\$39.5 million
2018	\$121,746,973	Decrease	-26.1%	-\$43.1 million
2019	\$115,337,473	Decrease	-30%	-\$49.5 million
2020	\$120,672,218	Increase	-26.8%	-\$44.1 million
2021	\$118,117,184	Decrease	-28.3%	-\$46.7 million
2022	\$116,456,931	Decrease	-29.3%	-\$48.3 million
2023	\$101,247,800	Decrease	-38.6%	-\$63.6 million
2032 Projected	\$113,259,557		-31.3%	-\$51.5 million

Tobacco Tax is Primary Source of Early Childhood Funds

First Things First is the only state funding source dedicated exclusively to the beginning of the education continuum, from birth to age 5. Emphasis is placed on getting services directly to children, families and professionals through a network of community providers. In State Fiscal Year 2023 (SFY23), First Things First received approximately \$177.3 million in revenue, with tobacco tax revenues accounting for approximately \$101.2 million. Additionally, FTF received \$6.5 million from investment earnings and \$69.5 million from gifts, grants and donations. Investments in early childhood development and health programs and services that help prepare children for success in kindergarten and beyond constituted approximately 94% of spending in SFY23. Administrative expenses remain low at 6%.

The FTF state Board has been strategic and intentional in its efforts to ensure the sustainability of its current early childhood investments. This is done by commissioning the aforementioned revenue projections; continuing its successful investment strategy; monitoring and revising its adopted sustainability plan, as needed; and working with both public and private entities to leverage funds and maximize the resources available for early childhood programs. This proactive and conservative approach to sustainability earned the Board high marks from state auditors in a 2017 report.

For almost a decade, the FTF Board has been able to backfill the revenue shortfalls and keep spending stable by utilizing its sustainability fund. However, due to the expected ongoing decrease in tobacco revenue, the Board cannot maintain historical spending levels without facing a significant fiscal cliff in the next four to eight years.

The Board's Finance Committee – composed of Board and regional council members, as well as community experts in public financing – reviewed historical spending, as well as the latest revenue projections, and recommended that the Board reduce program spending to \$116.6 million per year for the SFY24-27 funding cycle. The Board approved this reduction in spending levels. This means that communities will have, on average, about 8% less to spend on programs for young children. Although this has meant tough decisions for FTF regional councils statewide, it ensures FTF will, once again, be able to keep funding levels stable for communities and families for the next eight years.

The Board also has worked to maximize impact despite these declining revenues, by prioritizing work in six major areas and encouraging regional councils statewide to fund strategies within those areas.



In the meantime, FTF will continue seeking public and private investments in early childhood by sharing the success of its funded programs and providing opportunities for businesses, philanthropy and policymakers to leverage this infrastructure to quickly and efficiently expand services to babies, toddlers and preschoolers.

To help inform the community about the need to find long-term solutions, FTF is hosting a series of forums to bring to light the challenges faced in early care and education, specifically in regard to the child care crisis.

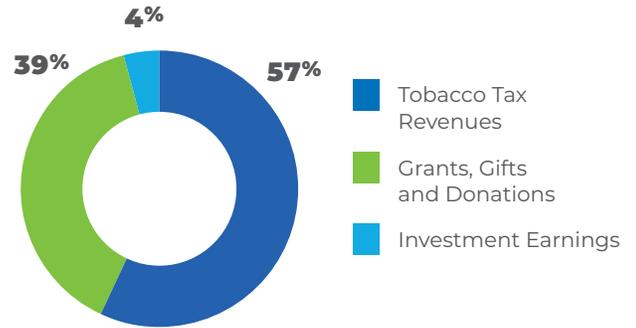
The courage and foresight of local leaders and organizations is helping to expand access to quality early childhood programs throughout the state. But with current revenues totaling just \$226 per young child – and the needs of babies, toddlers and preschoolers increasing – it is going to take significant investment from all sectors to ensure that Arizona is able to realize its vision of ensuring all kids are prepared for success in kindergarten and beyond!



Statewide and Regional Expenditures

SFY23 Revenue by Source

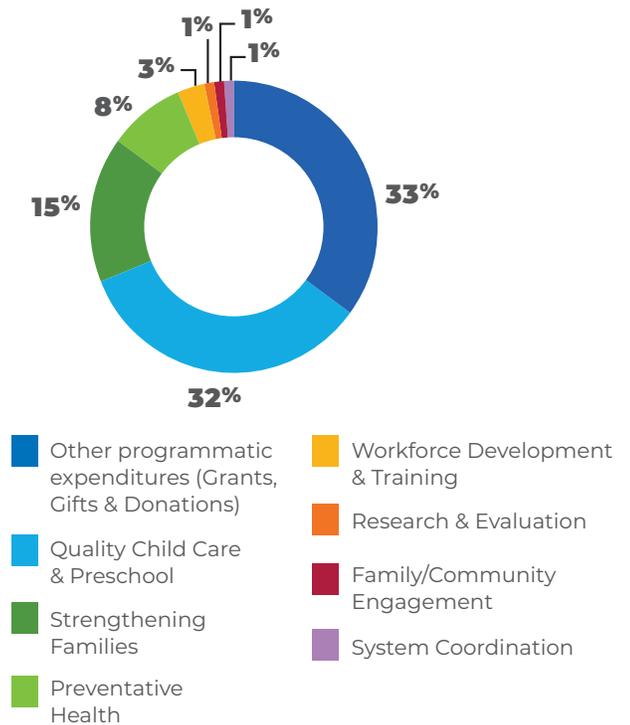
Tobacco Tax Revenues	\$101,247,800
Grants, Gifts and Donations	\$69,538,991
Investment Earnings	\$6,493,375
TOTAL	\$177,280,166



Note: Financial data presented are based on a modified accrual accounting methodology and are unaudited at time of publication and, as such, are subject to change.

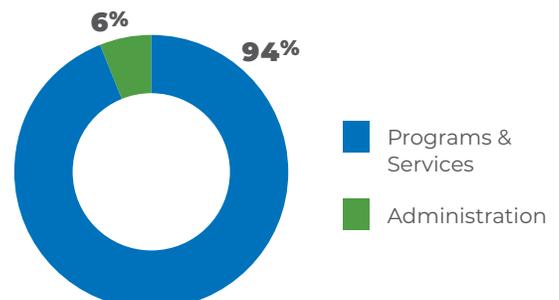
SFY23 Expenditures

Programs and Services	
Other programmatic expenditures (Grants, Gifts & Donations)	\$67,886,902
Quality Child Care & Preschool	\$64,338,723
Strengthening Families	\$29,949,050
Preventative Health	\$16,229,423
Workforce Development & Training	\$5,745,332
Research & Evaluation	\$2,739,859
Family/Community Engagement	\$2,582,018
System Coordination	\$1,129,327
Support Activity	
Administration & General	\$11,695,066

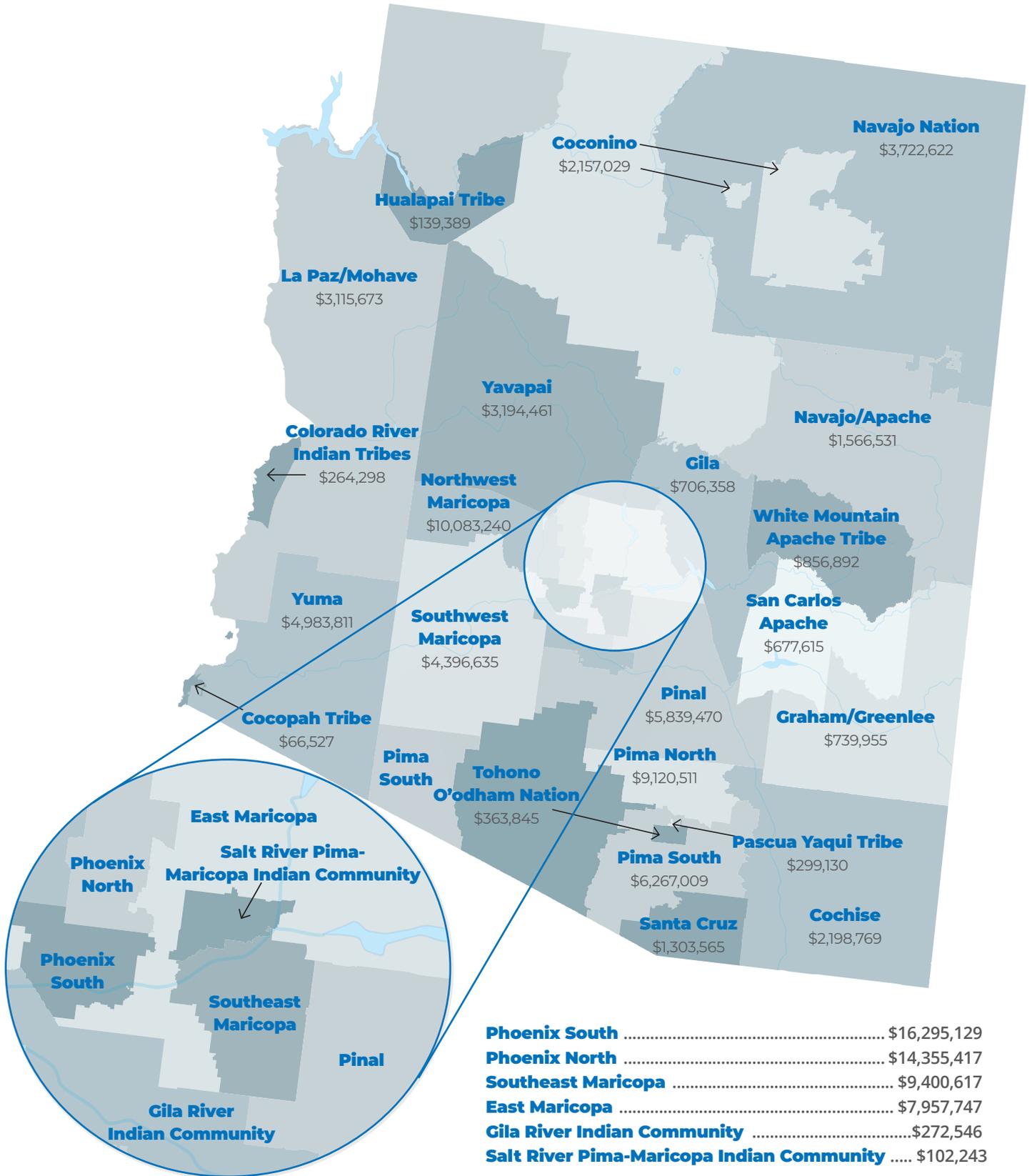


SFY23 Expenses by Category

Programs & Services	\$ 190,600,635
Administration	\$11,695,066
TOTAL	\$202,295,701



SFY23 Investments Across Arizona



Phoenix South	\$16,295,129
Phoenix North	\$14,355,417
Southeast Maricopa	\$9,400,617
East Maricopa	\$7,957,747
Gila River Indian Community	\$272,546
Salt River Pima-Maricopa Indian Community	\$102,243

*This does not include \$7,941,129 in statewide programmatic expenditures.



Celebrating a Decade of Service to Arizona's Young Children

At FTF, decisions about which early childhood programs are funded locally are informed by recommendations to the state Board from volunteer regional partnership councils. These dedicated citizens represent the many facets of our community that have a stake in our young children's success, including parents, educators, child care professionals, health care providers, tribal communities, faith representatives, business leaders and philanthropists. Each member dedicates an estimated 120 hours each year to study the needs of their communities and work with local stakeholders to identify priorities for funding.

However, being a regional council member goes beyond the work done in meeting rooms. Each member – in their professional and personal lives – works to connect others in their community with the work of FTF. They do this by building awareness of the importance of early childhood among audiences ranging from families to policymakers. They can also build community partnerships that help to expand or enhance the local support for young children or their families. Although members serve staggered four-year terms, many individuals apply for and are selected to serve additional terms. In SFY23, there were seven individuals statewide who celebrated 10 years of service to young children in their communities. They join 92 individuals acknowledged for this milestone since 2018.

This year, FTF thanks and celebrates the following 10-year champions for children.

- Danielle Brownrigg,
Parent Representative
FTF Cochise Region
- Cheryl Conde
Business Representative
FTF Tohono O'odham Nation Region
- Francisco Muñoz
Faith Representative
FTF Pascua Yaqui Tribe Region
- Elizabeth Renaud
Early Childhood Educator Representative
FTF Cocopah Tribe Region
- Brad Sale
School Administrator Representative
FTF Colorado River Indian Tribes Region
- Tashina Smith
Tribal Representative
FTF Gila Region
- David Verdugo
School Administrator Representative
FTF Santa Cruz Region

FTF asked them to share what they appreciated most about serving on the regional council and why they would recommend council participation to others in their community. Below are a few of their answers.

Francisco Muñoz, Faith Representative, FTF Pascua Yaqui Tribe Region

- The reason I love serving on the FTF regional council is I can see firsthand where the resources go, and the assistance FTF gives to the Tribe. Also, serving with community members that truly want to serve and help that birth to 5-year-old age bracket. A lot of others only focus on the teen and pre-teen age bracket.
- I would let someone know that to join your local FTF regional council shows you care about the community and the little ones in it. You care about them overall in growth, emotionally, physically, psychologically and cognitively and that is important to create a better society for the future.

Brad Sale, School Administrator Representative, FTF Colorado River Indian Tribes Region

- I enjoy being of like-minded people who care for our children. Being on the FTF regional council allows me to help the children in our area get prepared for kindergarten and beyond.
- What better way to give back to our community than to invest in the future of our community? Being on the FTF Colorado River Indian Tribes Regional Council allows me to work with others to better our children's future. The programs that are funded by FTF help give our children the "leg" up to be successful as soon as they hit kindergarten.

Regional Council Members with 15 Years of Service

The following members completed 15 years of service:

- Noreen Sakiestewa, FTF Coconino Region
- Trinity Donovan, FTF East Maricopa Region
- Priscilla Foote, FTF Gila River Indian Community Region
- Donna McGaughey, FTF Graham/Greenlee Region
- Laurie Smith, FTF Graham/Greenlee Region
- Jose Garcia, FTF La Paz/Mohave Region
- Betsy Lewis, FTF La Paz/Mohave Region
- Paula Seanez, FTF Navajo Nation Region
- Claude Endfield, FTF Navajo/Apache Region
- Cecilia Garcia, FTF Pascua Yaqui Tribe Region
- Marilynn Correa Sando, FTF Pascua Yaqui Tribe Region
- Shanna Ioane Tautolo, FTF Pascua Yaqui Tribe Region
- Patricia Merk, FTF Phoenix South Region
- Dorothy Johnson, FTF Pima North Region
- Connie Espinoza, FTF Pima South Region
- Joyce Helmuth, FTF Salt River Pima-Maricopa Indian Community Region
- Christine McIntier, FTF Salt River Pima-Maricopa Indian Community Region
- Laurel Endfield, FTF White Mountain Apache Tribe Region

 AZFirstThingsFirst
  @AZFTF
  @azfirstthingsfirst

 first-things-first
  FTFArizona

 4000 North Central Avenue, Suite 500 Phoenix, Arizona 85012

 602.771.5100 • 1.877.803.7234

First Things First partners with parents and communities to strengthen families and give all Arizona children the opportunity to arrive at kindergarten healthy and ready to succeed.

Arizona Early Childhood Development and Health Board (SFY24)

Chair

Gerald Szostak

Vice Chair

Steve Lynn

Members

Marcia Klipsch
 Dr. Darlene Melk
 Christian Osmeña
 Steve Peru
 Bea Rocklin
 Honorable Richard Weiss
 Vince Yanez

Ex-Officio Members

Jennie Cunico, Director,
 Department of Health Services

 Tom Horne,
 Superintendent of Public Instruction,
 Arizona Department of Education

 Angie Rodgers, Director,
 Arizona Department of Economic
 Security

Board Representatives

Carmen Heredia, Director,
 Arizona Health Care Cost
 Containment System

 David Lujan, Director,
 Arizona Department of
 Child Safety

 Francisco Muñoz,
 Indigenous Representative

© 2023 Arizona Early Childhood Development and Health Board (First Things First) 4000 N. Central Ave., Ste. 800, Phoenix, AZ 85012 | 602.771.5100 The First Things First annual report is produced and submitted in accordance with A.R.S.

§8-1192 A(4) and is distributed in accordance with section 18-203. Permission to copy, disseminate or otherwise use the information in this publication is granted, as long as appropriate acknowledgement is given.