

Public Law 86-121

# ANNUAL REPORT

2017

U.S. Public Health Service • Department of Health and Human Services



Division of Sanitation Facilities Construction - Indian Health Service

NOTE TO THE READER:

This is the annual report published by the Indian Health Service Sanitation Facilities Construction (SFC) Program. Detailed information concerning the SFC Program is available on the website, <http://www.dsfc.ihs.gov>.

Additional questions regarding the SFC Program can be directed to Headquarters or Area Offices by writing to the following address:

Indian Health Service  
Office of Environmental Health and Engineering  
Division of Sanitation Facilities Construction  
5600 Fishers Lane  
MS:10N14C  
Rockville, MD 20857

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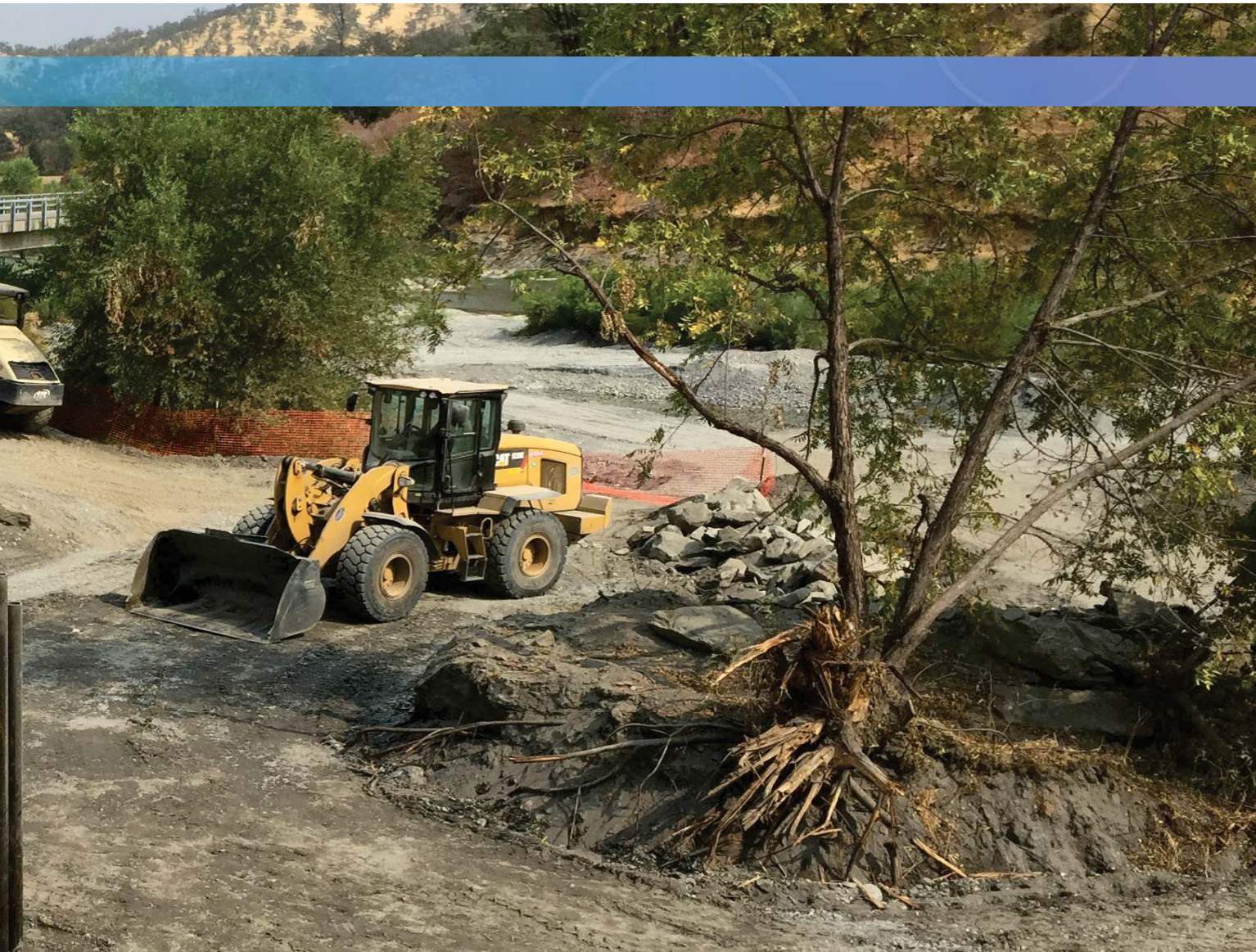
Cover Photo: White Mountain Apache Tribe, Miner Flat Water Meter Vault Construction.

Photo Credit: Tom Heintzman, Design Consultant, Eastern Arizona District Office, Phoenix Area

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# PREFACE

This report is intended to provide a description of how the Indian Health Service Sanitation Facilities Construction (SFC) Program is implemented and how the work completed during Fiscal Year (FY) 2017 has impacted American Indians and Alaska Natives in culturally diverse and oftentimes remote areas from Alaska to Florida and from Maine to California.



# BACKGROUND

The Sanitation Facilities Construction Program supports the mission of the Indian Health Service to raise the health status of American Indian and Alaska Native (AI/AN) people to the highest level through the provision of sanitation facilities that help ensure Tribal communities have access to safe drinking water and waste disposal. The SFC Program is an integral part of the IHS disease prevention effort that impacts over 405,000 AI/AN homes.

Since the passage of the Indian Sanitation Facilities Act (Public Law 86-121) in 1959, the SFC Program has worked in partnership with tribal governments and other Federal agencies to construct essential sanitation facilities and provide technical assistance that supports the operation and maintenance of those facilities.

The components of the SFC Program include:

1. Development and maintenance of an inventory of sanitation deficiencies in AI/AN communities to be used by IHS and to inform Congress.
2. Provision of environmental engineering assistance with utility master planning and sanitary surveys.
3. Development of multi-agency-funded sanitation projects, accomplishment of interagency coordination, assistance with grant applications, and leveraging of IHS funds.
4. Provision of water supply and waste disposal facilities.
5. Provision of professional engineering design and/or construction services for water supply and waste disposal facilities.
6. Provision of technical consultation and training to improve the operation and maintenance of Tribally owned water supply and waste disposal systems.
7. Advocacy for Tribes during the development of policies, regulations, and programs.
8. Assistance to Tribes with sanitation facility emergencies.

The SFC Program is unusual among Federal programs, because IHS personnel typically live close to Tribal communities and work cooperatively with Tribes in Program delivery. Enhancing Tribal capabilities and building partnerships based on mutual respect are the major keys to the success of the SFC Program. As a result of these cooperative efforts, many Tribes have developed the administrative and technical capabilities to construct their own sanitation facilities with engineering support from IHS.



# LEGISLATIVE HISTORY

The foresight of the U.S. Public Health Service and Congress helped a generation of AI/AN children escape the hardship and poor health that accompany life without access to safe drinking water and waste disposal. Today, most Indian people need not fear becoming unable to carry water into their homes. The initial step toward addressing this deficiency was the enactment of Public Law (P.L.) 86-121, which authorized the Surgeon General to construct safe water supplies and sanitary waste disposal facilities for AI/AN homes and communities. The law's passage came only four years after the creation of the Division of Indian Health, which later became the Indian Health Service. Over the succeeding years, the authority vested in the Surgeon General was transferred to the Secretary, Health, Education, and Welfare, then to the Secretary of Health and Human Services and, in 1988, to the Director, IHS. A time line summary of the legislation that created the current SFC Program and impacts to its implementation is included in Table 1.



**Table 1: Key Legislative Acts Impacting Indian Sanitation Facilities Construction**

YEAR	NAME	CITATION	DESCRIPTION
1959	Indian Sanitation Facilities Act	P.L. 86-121	Congress authorized the Surgeon General to construct essential sanitation facilities for AI/AN homes and communities.
1976	Indian Health Care Improvement Act and amendments	P.L. 94-437	Implemented Federal responsibility for the care and education of Indian people by improving the services and facilities of Federal Indian health programs and encouraging maximum participation of Indians in those programs.  Also established the requirement for an annual report to be submitted by the Secretary of Health and Human Services to the President on the level of sanitation deficiencies and the funds necessary to address those deficiencies.
1988	Indian Health Care Improvement Act and amendments	P.L. 100-713 (amended Section 302 of P.L. 94-437)	Congress reaffirmed the need for provision of safe water supply systems and sanitary sewage and solid waste disposal systems serving Indian homes as primarily a health consideration and function.
1992	Indian Health Care Improvement Act and amendments	P.L. 102-573 (amended Section 302 of P.L. 94-437)	Authorized the Secretary to provide funds to support the cost of operating, managing, and maintaining the facilities provided.  Also established the definitions for the sanitation deficiency levels.
1992	Indian Self-Determination and Education Assistance Act	P.L. 93-638, as amended	Congress recognized the importance of Tribal decision-making in Tribal affairs by giving Federally recognized Tribes the option of entering into self-governance contracts and compacts to gain more autonomy in the management and delivery of their health care programs.
2010	Indian Health Care Improvement Act of 2009	P.L. 111-148 Section 10221 enacted Section 1790 into law	Congress reaffirmed the need for the provision of necessary sanitation facilities and services, including financial and technical assistance in the establishment, training, and equipping of utility organizations to operate and maintain the facilities provided, as well as operation and maintenance assistance for Tribal sanitation facilities, when necessary, to avoid a health hazard or to protect the Federal investment in sanitation facilities.

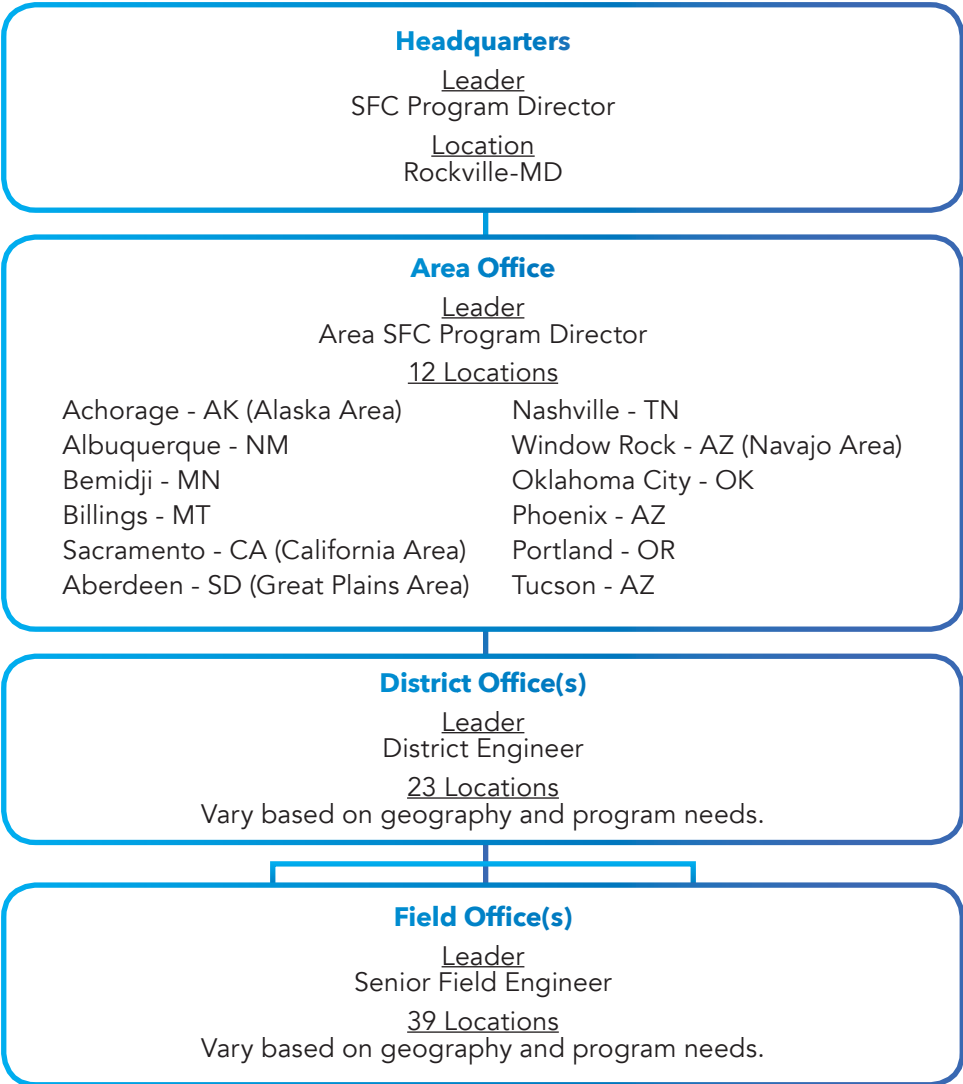


# PROGRAM IMPLEMENTATION

The NFO Program is part of the IHN Office of Environmental Health and Engineering (OEHE). SFC Program activities are carried out by engineers, engineering technicians, administrative staff, and skilled construction workers. In FY 2017 a total of 467 engineers, technicians and support staff were used to implement the SFC Program, of which over 98% are located in 12 IHS Areas across the Nation. These staff endeavor to provide sanitation facilities and technical assistance for federally recognized Tribes and Tribal organizations located in 39 states.

The Program’s Headquarters component, located in Rockville, Maryland, assists the Area Offices by allocating project funding, establishing policies, reviewing Area program implementation practices to ensure consistent and equitable program implementation nationwide, and collaborating with other Federal agencies. The SFC Programs in the 12 IHS Areas are led by their respective SFC Program Directors. Depending on the size and geography of the Area, the program may have District and Field Offices. The hierarchy and leadership of these offices are reflected in the organization chart in Figure 1.

**Figure 1: SFC Program Organization Chart**



SFC projects to construct sanitation facilities can be managed by IHS directly (Direct Service), or they can be managed by Tribes who elect to use Title I or Title V authorization under P.L. 93-638, the Indian Self-Determination and Education Assistance Act, as amended. The overall SFC goals, eligibility criteria, and project funding priorities remain the same, regardless of the delivery methods chosen by a Tribe. A list of the Tribes that have elected to manage the SFC Program under Title I or V of P.L. 93-638 is included in Table 2 below.

**Table 2: Tribes or Tribal Organizations in FY 2017 Managing the SFC Program Under Title I or Title V of P.L. 93-638, as Amended**

AREA	TRIBE / TRIBAL ORGANIZATION
Alaska	Alaska Native Tribal Health Consortium^
Bemidji	Grand Traverse Band of Ottawa and Chippewa Indians^
Billings	Confederated Salish and Kootenai Tribes of the Flathead Reservation^
	Chippewa Cree Indians of the Rocky Boy's Reservation, Montana^
	Arapaho Tribe of the Wind River Reservation, Wyoming*
	Fort Belknap Indian Community of the Fort Belknap Reservation of Montana*
California	Cabazon Band of Mission Indians, California^
	Hoopa Valley Tribe, California^
Nashville	Mashantucket Pequot Indian Tribe^
	Mississippi Band of Choctaw Indians^
	Saint Regis Mohawk Tribe^
	Eastern Band of Cherokee Indian^
	Seminole Tribe of Florida^
Navajo	Navajo Nation, Arizona, New Mexico & Utah*
Oklahoma	Absentee-Shawnee Tribe of Indians of Oklahoma^
	Cherokee Nation^
	The Chickasaw Nation^
	The Choctaw Nation of Oklahoma^
	Citizen Potawatomi Nation, Oklahoma^
	The Modoc Tribe of Oklahoma^
	The Seminole Nation of Oklahoma^
	Wyandotte Nation^
Phoenix	Gila River Indian Community of the Gila River Indian Reservation, Arizona^
Portland	Lummi Tribe of the Lummi Reservation^

\*Title 1; ^ Title V

## Tribal Involvement

The SFC Program employs a cooperative approach for planning, designing and constructing sanitation facilities serving AI/AN communities. Each project is initiated at the request of a Tribe or Tribal organization, and coordination is maintained throughout project planning, design and construction. The SFC Program works to ensure that Tribal utilities and homeowners have the necessary training to appropriately operate and maintain their facilities.

## Needs Identification

The Indian Health Care Improvement Act (IHCIA) requires IHS to develop a methodology for determining sanitation deficiencies, classify the level of sanitation deficiency for each project, implement a prioritization system for comparing sanitation facilities needs, and determine the amount of funds needed to address these deficiencies. Accordingly, the SFN Program annually estimates the total need for safe and adequate sanitation facilities serving AI/AN homes and communities, following guidance provided in the *Sanitation Deficiency System Guide for Reporting Sanitation Deficiencies for Indian Homes and Communities (SDS Guidelines)*.

Water, sewer, and solid waste sanitation deficiencies included in the annual assessment are identified solely for AI/AN homes. Deficiencies for commercial and industrial facilities and non-Indian homes cannot be addressed by the IHS under P.L. 86-121 and are not included in this report. In addition, municipalities and communities organized under the laws of a State are not typically considered Indian communities, even though there may be eligible AI/AN people living there. The provision of community-type sanitation facilities for such Indian homes is generally considered a responsibility of the non-Indian community, and the needs are not identified as sanitation deficiencies.

In an effort to reflect the relative impact on health of various water supply, CN sewage disposal, and solid waste deficiencies, the NHCMA defined the sanitation deficiency levels as follows:

**Level I (DL 1):** The deficiency level describing an Indian Tribe or community with a sanitation system that complies with all applicable water supply and pollution control laws, and in which the deficiencies relate to routine replacement, repair, or maintenance needs.

**Level II (DL 2):** The deficiency level describing an Indian Tribe or community with a sanitation system that complies with all applicable water supply and pollution control laws, and in which the deficiencies relate to capital improvements that are necessary to improve those facilities in order to meet the needs of the Tribe or community for domestic sanitation facilities.

**Level III (DL 3):** The deficiency level describing an Indian Tribe or community with a sanitation system that has an inadequate or partial water supply and a sewage disposal facility that either does not comply with applicable water supply and pollution control laws or has no solid waste disposal.

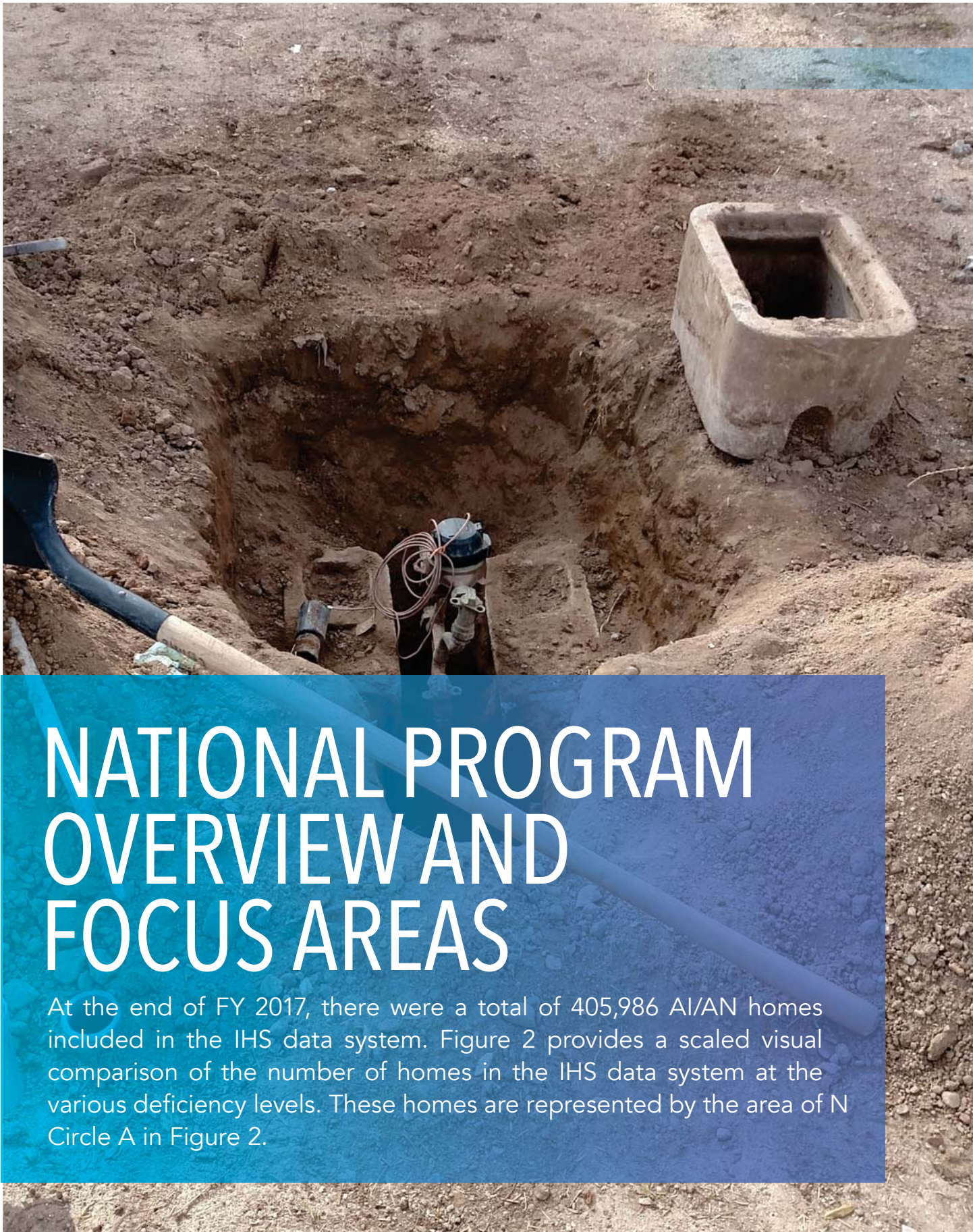
**Level IV (DL 4):** The deficiency level describing an Indian Tribe or community with a sanitation system that lacks either a safe water supply system or a sewage disposal system.

**Level V (DL 5):** The deficiency level describing an Indian Tribe or community that lacks a safe water supply system and a sewage disposal system.

Sanitation deficiencies are reported as proposed projects. A project's deficiency level is determined by an assessment of the sanitation issue by IHS and Tribal staff. Each individual project may not necessarily bring the sanitation deficiencies impacting the Tribal community to a level I or better. However, the goal is that the combination of all projects reported for each community will bring the community's deficiency level to DL 1 or better.

In each area, projects to address the identified sanitation deficiencies are evaluated against eight factors: health impact, deficiency level, adequate previous service, capital cost, local Tribal priority, operations and maintenance capability, contributions, and local conditions. Areas assign points to each project based on these factors following the SDS Guidelines. The points are summed to arrive at an overall project score. The projects are rank ordered and funded in priority order (high to low) each year with the available funds allocated by IHS and contributed from other funding agencies.





# NATIONAL PROGRAM OVERVIEW AND FOCUS AREAS

At the end of FY 2017, there were a total of 405,986 AI/AN homes included in the IHS data system. Figure 2 provides a scaled visual comparison of the number of homes in the IHS data system at the various deficiency levels. These homes are represented by the area of N Circle A in Figure 2.



Of these homes, 171,203 were identified as needing some form of sanitation facilities improvement (classified as DL 2, 3, 4 or 5 using the methodology described above). These homes are represented by the area of Circle B. The area of Circle C represents the 117,991 AI/AN homes with inadequate sanitation facilities (DL 3, 4 or 5). The area of Circle D represents the 9,339 AI/AN homes without a safe water supply system and/ or sewage disposal system (DL 4 and 5).

**Figure 2: Comparison of Homes Requiring Sanitation Facility Improvements**

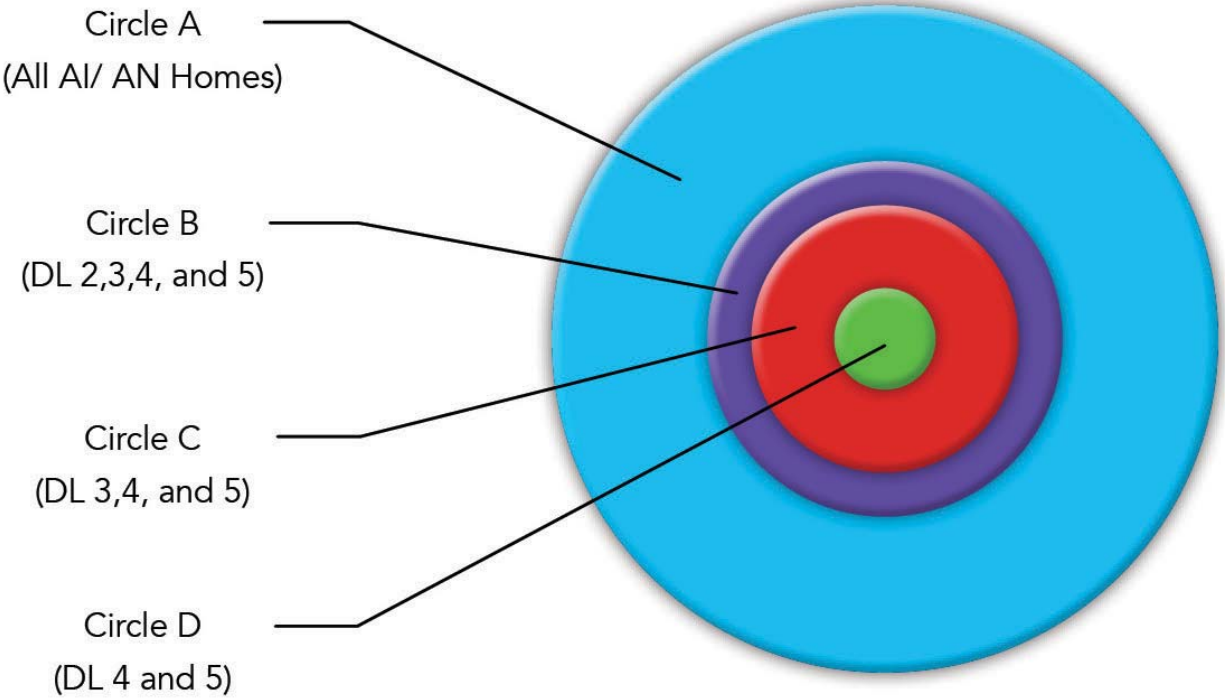
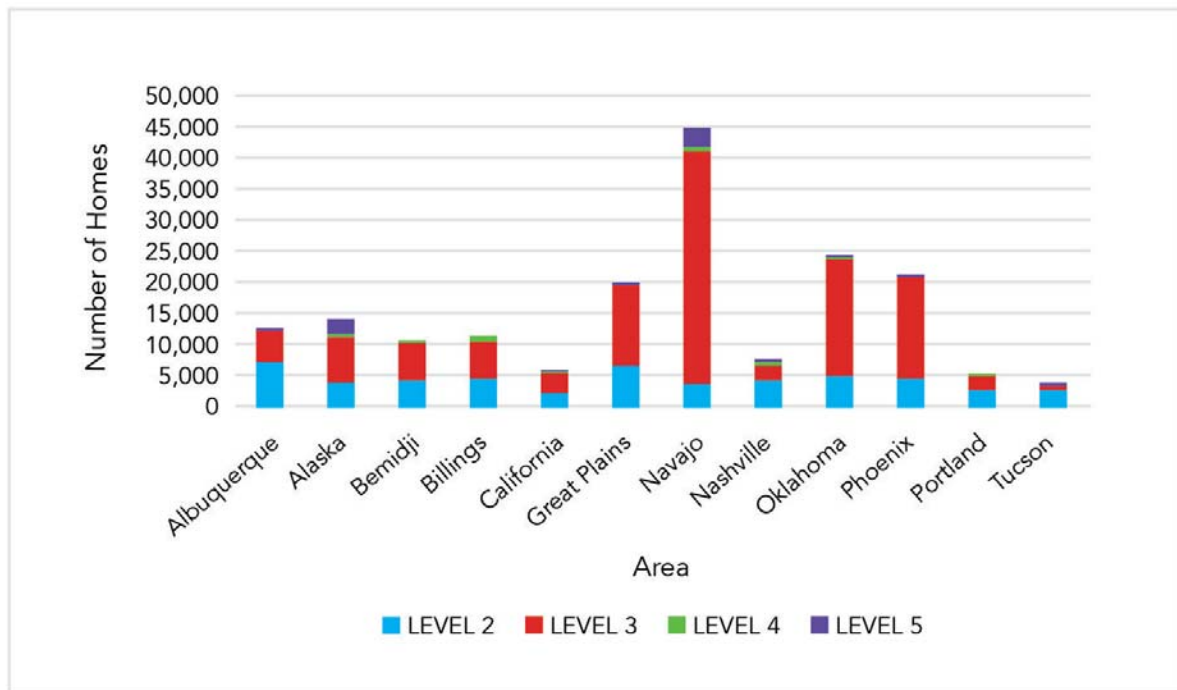


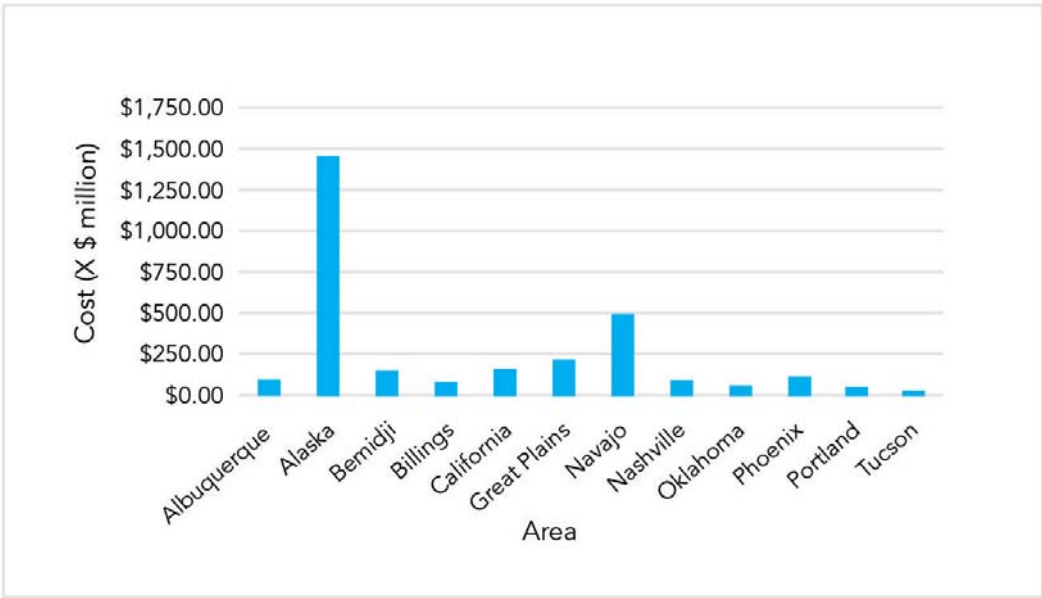
Figure 3 provides the home counts by IHS Area and Deficiency Level. C N

**Figure 3: Number of Homes Requiring Sanitation Facilities Improvements by Area**



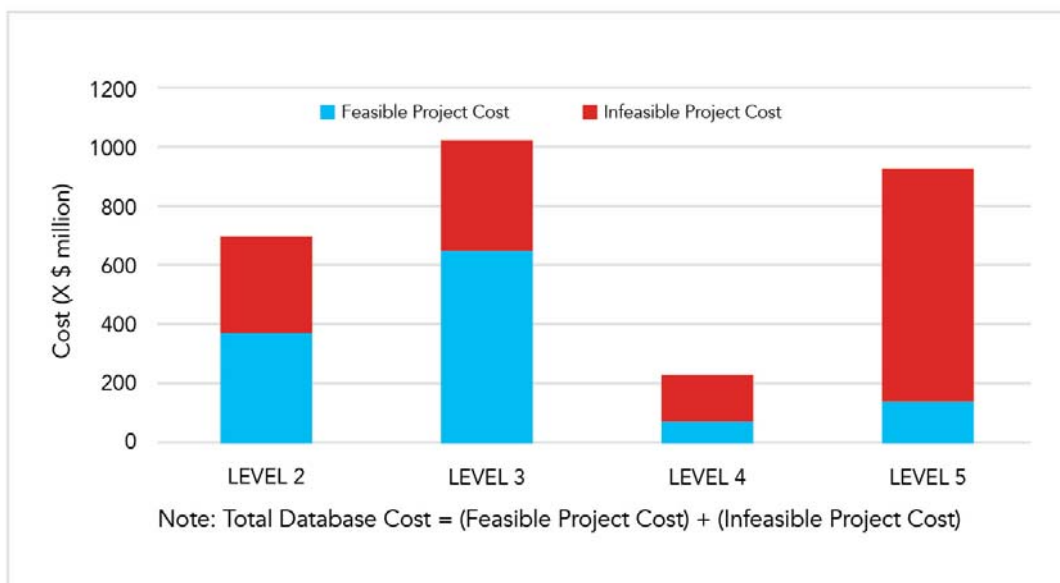
At the end of FY 2017 the total cost estimate to raise all Indian Tribes and communities to a Deficiency Level 1 was in excess of \$2.89 billion. Figure 4 N shows this cost separated by IHS Area.

**Figure 4: Total Data Base Cost to Raise Indian Tribes and Communities to a Deficiency Level 1**

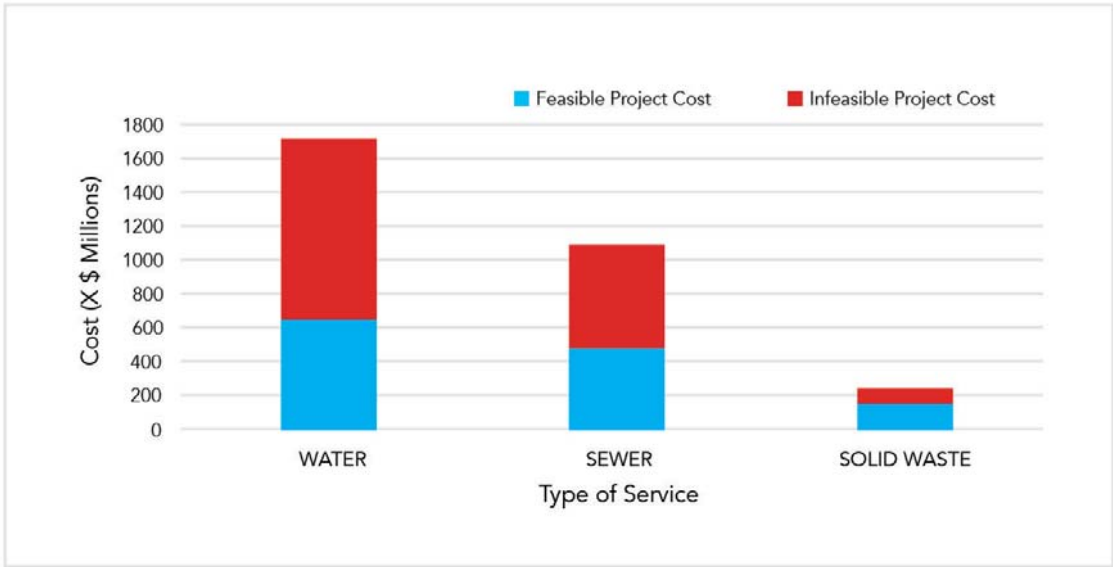


Projects with high capital costs on a per-home-served basis are considered infeasible and are not considered when IHS Headquarters allocates appropriated funds to the Areas. In FY 2017 the total database of Agency-identified sanitation deficiencies included 2,169 projects. Of these projects, 1,651 (76%) were feasible, and 518 (24%) were infeasible. Figure 5 shows the total cost organized by project feasibility and deficiency level. Figure 6 shows the total cost organized by project feasibility and type of facilities required (water, wastewater or solid waste).

**Figure 5. Estimated Cost to Address Sanitation Deficiencies by Deficiency Level**



**Figure 6. Estimated Cost to Address Sanitation Deficiencies by Type of Service.**



In FY 2017 the SFN Program received \$101 million in appropriated project funding and over \$112 million in contributed project funding from other Federal, State and Tribal entities. With these funds 401 new projects were funded in 2017 that benefited 191 Tribes and served over 31,620<sup>1</sup> Tribal homes.<sup>2</sup>

1 Count based on data from the Home Inventory Tracking System.

2 These results do not include projects originally funded in previous fiscal years that received additional funding in FY 2017.

At the end of FY 2017, the SFC Program had 3,236 active construction projects and had completed 719 final construction reports during the year. The average project undertaken by the SFC Program took 3.52 years to complete construction following agreement with the Tribe. A summary of this information is include in the Table 3.

**Table 3: SFC Program National Overview: FY 2017 Year at a Glance**

<b>PROGRAM POPULATION</b>	
Eligible Tribes	573
Tribal Home Inventory	405,986
<b>SANITATION FACILITY NEEDS</b>	
Sanitation Facilities Project Cost <sup>1</sup>	\$2,895,473,922
Tribal Homes Needing New or Improved Sanitation Facilities (% Tribal Home Inventory)	171,203 (42%)
<b>RESOURCES AVAILABLE</b>	
IHS Area Project Funds	\$100,272,000
IHS Special & Emergency Project Funds	\$1,750,000
Contributed Project Funds	\$112,070,681
Number of Engineers	219
Number of Technicians	166
Number of Support Staff	82
<b>PROJECT WORKLOAD/OUTPUT</b>	
Regular Projects Funded	401
Active Construction Projects	3,236
Final Reports Completed	719
Project Durations (years)	3.52
<b>PROGRAM IMPACT</b>	
Tribes Benefiting	191
Tribal Homes Served	31,620

<sup>1</sup>Total database cost for DL 2 to 5 projects.

The national priorities of the SFC Program during FY 2017 were:

OBJECTIVE	OUTCOME
Improving SFC Program Data Quality	Internal reviews ensured complete and accurate data supported the reported sanitation facility needs and documented construction project progress, allowing the Program to improve technical assistance delivery to Tribes and reduce project durations.
Program Guidance Revisions	Clarified guidelines to assist Program staff and Tribes understand the limits of project funding and requirements for complete data reporting.
Operation and Maintenance Technical Support	Increased data gathering and analysis to identify the operation and maintenance support needs and developed a strategic approach to help guide technical assistance provided by the SFC Program to maximize protection of the Federal investment in sanitation facilities for Indian Tribes and communities.









# AREA ACCOMPLISHMENTS AND FOCUS AREAS

# ALASKA



## ACCOMPLISHMENTS

During FY 2017, an array of active sanitation construction projects were taking place throughout the Alaska Area ranging from installation of a new water storage tank in Akhiok on the south end of Kodiak Island to completion of a multi-year multi-phase water and sanitation project in Kwethluk, a community on the Yukon-Kuskokwim Delta. In all, approximately 5.5 miles of water mains, 3.5 miles of sewer mains, and 3.5 miles water and sewer service lines were installed throughout the state. In addition to these larger projects, 60 individual eligible homes owned by Alaska Native or American Indian people were served.

For communities where traditional piped water and sewer infrastructure remains infeasible due to location, environmental conditions, or the community's size and population, non-piped sanitation systems continue to be piloted, evaluated and improved. While not a replacement for pipes, these alternatives increase the level of service to improve quality of life by providing basic sanitation needs and making honey buckets a thing of the past. In FY 2017, seven different households in the communities of Chalkyitsik, Alatna, and Allakaket have received non-piped alternative systems to help meet in-home sanitation needs.

Energy efficiency projects continue to take place throughout the Area. These projects help N sanitation systems function more efficiently, especially in places where heat is needed to keep N piped facilities from freezing during long, cold winters. In all, work across 42 communities during FY 2017 has resulted in a total annual energy savings of approximately \$1,000,000. In N many cases, these reduced energy costs result in reduced utility rates.

## FOCUS AREAS

Challenges in developing infrastructure suited to climate conditions and remoteness of the far north constantly arise in Alaskan communities. Those working in cold climates are always looking for ways to track infrastructure performance and avoid catastrophic failures and costly service disruptions. A freeze-up in the winter can keep a community without service for months at a time, and it can cost tens of thousands of dollars to fix.

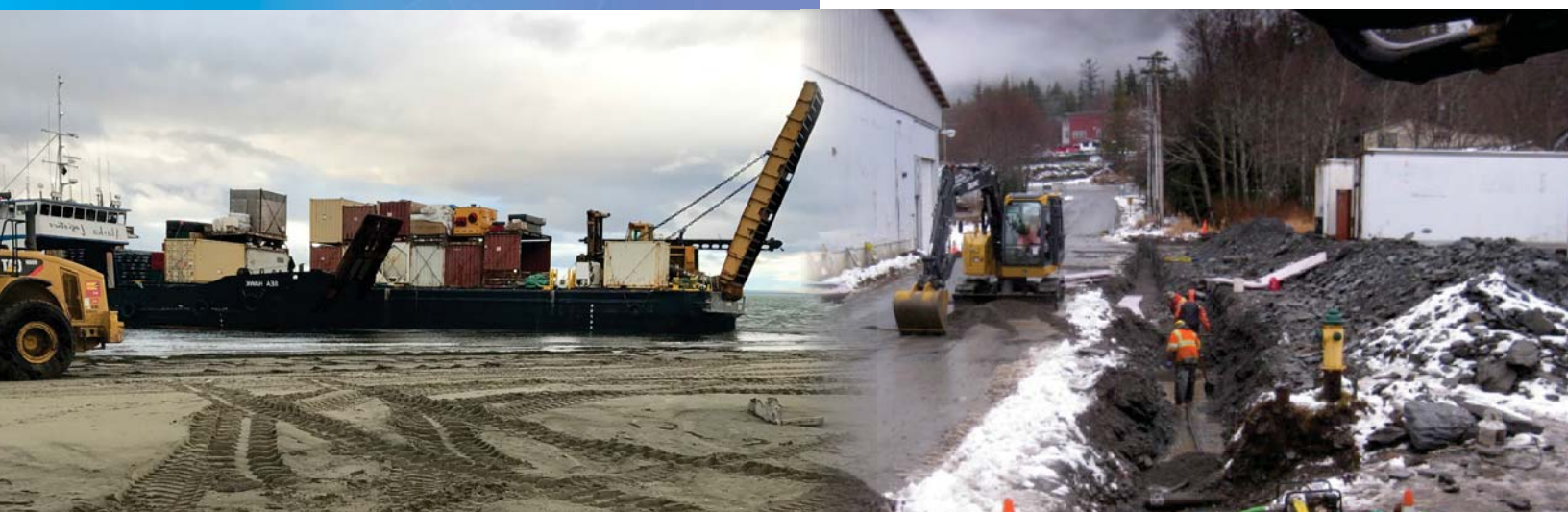
To help with this tracking, area program staff have implemented remote monitoring in nearly 30 communities across the state. Remote monitoring allows for anyone with an Internet connection to track things like temperature and pressure of water moving through a community's water mains or the water level in a community storage tank. This information can give utility operators a heads-up in terms of system performance. The more eyes watching this infrastructure, the more likely it is that those maintenance workers will be notified before something goes wrong and can take steps to keep systems working.



## ALASKA AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	212
Tribal Home Inventory	17,845
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$1,441,171,918
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	13,788 (77%)
RESOURCES AVAILABLE	
IHS Project Funds	\$17,401,000
Contributed Project Funds	\$14,419,479
Number of Engineers	24
Number of Technicians	17
Number of Support Staff	16
PROJECT WORKLOAD/OUTPUT	
Projects Funded	20
Active Construction Projects	526
Final Reports Completed	53
Average Project Duration (years)	4.21
PROGRAM IMPACT	
Tribes Benefiting	30
Number of Tribal Homes Served	1,951

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# ALBUQUERQUE

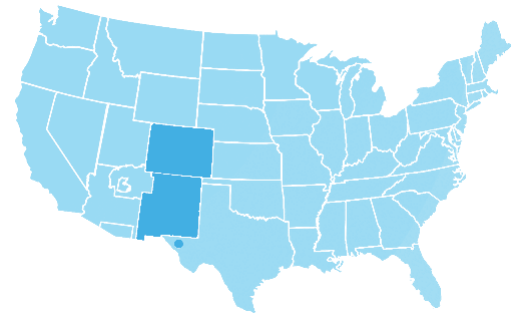


## ACCOMPLISHMENTS

During FY 2017, the Albuquerque Area completed a Preliminary Engineering Report to make major modifications to the Pueblo of Zuni Community Wastewater Treatment System. With a population of more than 10,000 people, the Pueblo of Zuni is one of the largest tribal communities served by the Area. The designed upgrades will improve both the quality and total capacity of the community treatment system for at least 20 more years and has been a partnership with IHS and the EPA. The system currently treats just under 600,000 gallons per day is made up of 8 lagoon cells that provide the detention time needed for waste treatment and was constructed through multiple projects from 1969 to 2012. After construction is complete, the upgrades will provide treatment of 700,000 gallons per day through increased surface area and rehabilitation of the existing wetlands resulting in the reduction of biological loading rates and increased total retention time. In order to reduce service interruption, this project has been broken down into two phases with the first phase starting construction in the fall of 2018. N

## FOCUS AREAS

The Albuquerque Area has placed significant effort this year on innovation and improvement in the delivery of DSFC services and support to our tribal communities. One example of this is our development and integration of Geographic Information Systems (GIS) into multiple program functions. Area staff worked closely with DSFC Headquarters and a contractor to launch GIS-Based services that allow the Area SFC Program to efficiently perform field data collection and quality checks. In FY 2017, the Albuquerque Area completed verification and documentation of existing solid waste dumping for 9 of the 24 tribal communities served by the Area using this tool. The GIS service also allows the Area to display and edit composite utility drawings in most of the 24 communities and to gather and map potential projects for inclusion in the SDS system. Integrating GIS into the DSFC workflow will provide an anticipated notable savings of staff time and an increase in accuracy and transparency of data in the STARS system which allows for a more efficient project delivery system to the Tribes.



### ALBUQUERQUE AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	24
Tribal Home Inventory	15,981
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$81,491,891
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	12,213 (76%)
RESOURCES AVAILABLE	
IHS Project Funds	\$3,890,000
Contributed Project Funds	\$3,089,750
Number of Engineers	13
Number of Technicians	7
Number of Support Staff	3
PROJECT WORKLOAD/OUTPUT	
Projects Funded	22
Active Construction Projects	106
Final Reports Completed	17
Project Durations (years)	3.16
PROGRAM IMPACT	
Tribes Benefiting	18
Tribal Homes Served	2,503

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# BEMIDJI



## ACCOMPLISHMENTS

In addition to the number of projects funded in FY 2017 reflected in the table, the Area N managed 41 additional construction projects to completion, totaling \$14M with an average N project completion duration of 2.83 years. These actions ensured the project workload for the Area was able to be maintained. The Area completed and published 71 final reports and N entered into 66 cooperative agreements to serve Native American homes with new and or improved sanitation facilities. The Area also hosted an Environmental Health Support Center (EHSC) sponsored Operation & Maintenance (O&M) training and processed 130 requests from operators to attend various trainings. Area staff provided 94 field visits to provide O&MN technical assistance and completed O&M surveys for the 34 Tribes in the Bemidji Area.

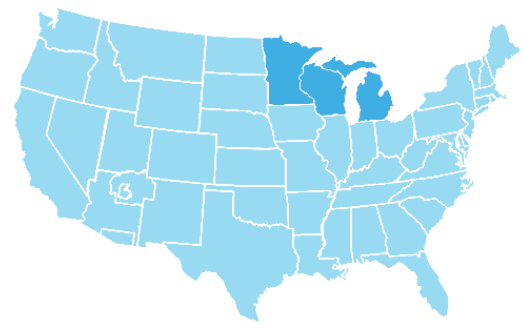
In cooperation with the EPA, the Area was able to improve the delivery of technical assistance to Tribal operation and maintenance providers through the continued funding of a Tribal Utility Consultant. The Area serves three states and currently provides funding for two Tribal Utility Coordinators. With the assistance of the EPA, the Area is able to place one coordinator in each state. By implementing this method of service, there has been a reduction in: response time, system violations, system outages, and Tribal operator turnover.

In an example of effective Tribal and federal partnerships, the Lac Courte Oreilles Band of Lake Superior Chippewa Ojibwe was in need of a new wastewater treatment facility to serve 105 homes. The existing facility was not capable of providing effective treatment due to age and equipment failure resulting in effluent violations. Several years of planning and collaborationN resulted in an effective and economical solution to rehabilitate the existing treatment plant. In all, five sources of funding including Tribal and Federal have been obligated to complete this N project at an estimated cost of \$4,928,000. N

## FOCUS AREAS

The Area is focused on balancing the planning, designing and project management of the construction of safe water and sewer facilities through the improvement of data quality of reportable projects in order to better represent the Area Tribes's sanitation needs. In an effort to enhance communication between IHS DSFC and our Tribal customers, two tribal workshops are scheduled in 2018. These workshops will be geared towards relaying important program information to Tribal representatives that may be new to working with SFC and as a refresher to existing Tribal contacts. The Area is focused on filling current vacancies throughout the Area, district & field offices by recruiting at local universities and colleges during career fairs and professional organizations in an effort to target high quality candidates.

**Sustainability of O&M tribal programs is often a major hurdle as most tribal systems do not charge for services. The Area continues to work on motivating and educating tribal leaders on the benefits of self-sustaining utility practices. Implementing a plan for GIS with the support of Headquarters will allow the Area to create composite maps for Tribal utility systems that will assist Tribal operators in asset management and identification of future needs.**



## BEMIDJI AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	34
Tribal Home Inventory	25,398
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$111,436,697
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	10,108 (40%)
RESOURCES AVAILABLE	
IHS Project Funds	\$6,217,000
Contributed Project Funds	\$9,364,966
Number of Engineers	25
Number of Technicians	14
Number of Support Staff	5
PROJECT WORKLOAD/OUTPUT	
Projects Funded	37
Active Construction Projects	171
Final Reports Completed	71
Project Durations (Years)	2.81
PROGRAM IMPACT	
Tribes Benefiting	25
Tribal Homes Served	1,291

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# BILLINGS



## ACCOMPLISHMENTS

In addition to the 115 new scattered Indian homes in Montana and Wyoming receiving safe drinking water and wastewater facilities during FY 2017, the Crow Reservation received a new water storage tank. Originally constructed in 1973, an 180,000 gallon water storage tank serving the community of Lodge Grass was failing due to corroded walls with leaks identified in three locations. Only providing 45% of the required storage for existing needs, the old storage tank was replaced with a new 360,000 gallon water storage tank that now meets the safe storage and potable water needs of the 187 homes in the community.

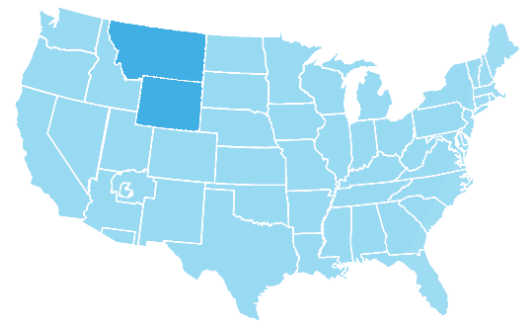
Due to the harsh conditions of winter weather in the Billings Area, many water utility outages occurred due to components being damaged by freezing conditions and subsequent power outages. One such instance took place on the Lame Deer Reservation as an outage occurred at a water booster station. Through a request for emergency assistance by the Tribal operator to the Billings Area Office (BAO), Billings Area Tribal Utility Consultants (TUC) assessed the damage caused by the freezing temperatures to the booster station. Based on the assessment by the TUCs, the Lame Deer Emergency Booster Station project was initiated by the BAO and replaced the failed components including the pumps. In total, 533 homes were affected by the low pressure conditions caused by the outage but were never without water.

Several open dumps were cleaned up and closed on the Wind River Reservation. IHS worked with the United States Department of Agriculture (USDA) Rural Development, the Eastern Shoshone Tribe, and the EPA to clean up four transfer stations and open dumps, removing 400 cubic yards of trash. The work included installing signage at all the transfer stations and constructing attendant buildings at two transfer stations. The project was funded with a \$100,000 grant from Rural Development and augments the Tribe's ability to implement their Integrated Solid Waste Management Plan.



## FOCUS AREAS

The Billings Area continues to focus on providing safe water and waste facilities to Indian homes for the 11 Tribes served within the region. The Area concentrates on reducing project durations through Tribal procurement which provides jobs to the Tribes while reducing workload on the Billings Area contracting department. Improving utility needs assessments through scheduled sanitary surveys that are conducted every two years allows the Area to concentrate on outcomes of the Operations & Maintenance program. This is accomplished by focusing on future outcomes through targeted technical assistance, asset management, and development of sustainable operating budgets. The Billings area TUCs continuously meet with the tribal utility operators to review operations and provide training.



## BILLINGS AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	11
Tribal Home Inventory	12,879
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$69,068,300
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	11,051 (86%)
RESOURCES AVAILABLE	
IHS Project Funds	\$6,027,000
Contributed Project Funds	\$4,657,243
Number of Engineers	9
Number of Technicians	7
Number of Support Staff	9
PROJECT WORKLOAD/OUTPUT	
Projects Funded	22
Active Projects	75
Final Reports Completed	47
Project Durations (Years)	1.58
PROGRAM IMPACT	
Number of Tribes Benefiting	9
Number of Tribal Homes Served	3,217

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# CALIFORNIA



## ACCOMPLISHMENTS

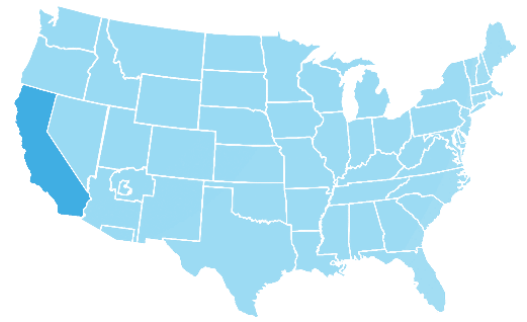
In 2017, the Area continued to successfully achieve many SFC program indicators including the reduction of project durations through improved project planning and collaboration with Tribes and outside funding agencies. The EPA, USDA, and the State of California were significant contributors to the Area's total annual project budget. In particular, funding from N USDA's Emergency Community Water Assistant Grant (ECWAG) was secured to construct a new surface water infiltration gallery in a creek bed on the Grindstone Indian Rancheria. N The original infiltration gallery was constructed over 30 years ago with water intakes placed N in the creek where the current drought has severely affected the quality and quantity of water delivered to the distribution system. The new infiltration gallery has been designed to include N multiple intake points along the creek bed to account for potential future changes to the creek level incurred by seasonal flows and climate. N

Failing existing septic systems due to age and soil conditions created a need for several projects funded by the EPA over multiple years and necessitated the construction of a new community sewer collection system for the Tuolumne Indian Rancheria. The system includes 30,000 linear feet of low pressure sewer force main and individual home pump stations serving over 50 homes. Even though the drought in Nalifornia has officially been declared over, the N Area and Tribes continue to build resilience for likely future drought events. An example of this is a project funded by both USDA's ECWAG and EPA that constructed a 4-inch water main extension across the Klamath River Bridge that spans 540-feet and 280-feet above the river on the Yurok Indian Reservation. This provided a reliable drinking water supply to homes that previously had seasonal water outages from individual spring catchments that regularly experienced poor water quality including high levels of total dissolved solids and E-coli from fecal contamination. Combined together these projects have had an impact of providing over 143 Indian homes with improved water supply and sanitation services.

In addition to these activities, the Area improved efficiencies and effectiveness by completing N the standardization of new contract documents, technical specifications, and detail drawings N that are based on current industry standards.

## FOCUS AREAS

The Area serves over 100 Tribes and the unmet needs far exceed available IHS funding. A primary focus area is the continued collaboration with Tribes and outside agencies to secure funding to address higher level water and sanitation deficiencies. While the Area continues to make significant progress in the reduction of project durations, priority has been placed on bringing additional focus and resources to active projects which are approaching or exceeding a four year mark. A critical component of service delivery is quality control, and the Area strives to make continual improvements by developing a more robust program through lessons-learned involving what worked and what did not work in an effort to strengthen project and program implementation.



## CALIFORNIA AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	105
Tribal Home Inventory	41,923
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$133,436,128
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	5,567 (13%)
RESOURCES AVAILABLE	
IHS Project Funds	\$4,740,000
Contributed Project Funds	\$4,899,890
Number of Engineers	15
Number of Technicians	13
Number of Support Staff	6
PROJECT WORKLOAD/OUTPUT	
Projects Funded	23
Number of Active Construction Projects	224
Final Reports Completed	86
Project Durations (Years)	3.7
PROGRAM IMPACT	
Tribes Benefiting	16
Tribal Homes Served	1,169

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# GREAT PLAINS



## ACCOMPLISHMENTS

The Great Plains Area received a total of \$12.4 Million for existing sanitation deficiencies through outside contributions that augmented the DSFC program's allocation. One of the beneficiaries of that funding was Antelope, SD. Antelope experienced multiple sewer main problems causing sewer to back up into resident's homes. IHS funded a planning project to perform Closed Circuit Television inspection of the sewer mains, comprised of mostly concrete pipe. This planning work confirmed that the sewer main and sewer service lines had broken pipes, offset joints, open joints, and protruding service taps throughout the system.

The Antelope community had also experienced multiple water main breaks. IHS determined the problems were wide spread throughout the community's distribution system based upon interviews with the Utility Director, mapping the breaks and inspecting the mains during repairs. The water and sewer projects were funded in FY 2015 with IHS Regular, EPA Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) funding for a combined amount of \$2,907,000. The water and sewer work was combined into one contract package with construction beginning in May 2017. In order to reduce water system shutdowns resident frustrations, the contractor built an at-grade water system and piped water to homes through their hose bibs until the new water system could be built.

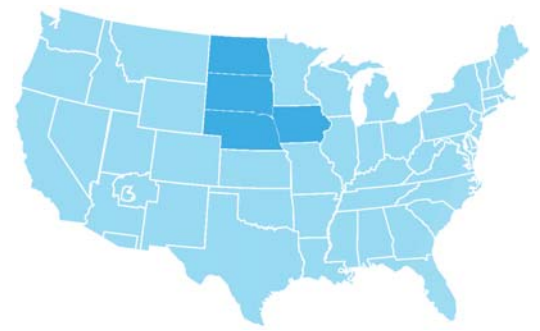
The Area hired a licensed surveyor to improve the process for obtaining rights-of-way across the varying land ownership types throughout the reservations. As a result, project construction delays related to easements and rights-of-way access have been drastically reduced and project engineers are able to maintain more emphasis on completing quality designs.

## FOCUS AREAS

Each of the past several years, the Area has utilized more contributed funds through other federal agencies than IHS allocated funds to complete sanitation construction projects. The Area continuously considers the best way to scope, plan, and coordinate projects to optimize other resources in hopes of providing the greatest program benefit to our Tribal partners.

The Area strives to employ quality professionals through attendance at recruiting events, maintaining relationships with technical schools and university programs, presenting at American Society of Civil Engineering chapter meetings, and providing intern opportunities. DSFC management collaborates on daily basis with the Area human resource office to ensure vacancies are filled timely.

Assisting Tribes with properly operating and maintaining their utility systems to promote sustainability and optimize the benefit of the IHS infrastructure installed continues to be a top priority. The Area has partnered with the EPA Region 8, Rural Water Associations, and the Inter Tribal Council of Arizona to provide several trainings, operator certification, and continuing education to tribal operators of water, wastewater, and solid waste facilities.



## GREAT PLAINS AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	20
Tribal Home Inventory	26,062
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$208,065,757
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	19,456 (75%)
RESOURCES AVAILABLE	
IHS Project Funds	\$11,026,000
Contributed Project Funds	\$ 12,431,619
Number of Engineers	34
Number of Technicians	23
Number of Support Staff	9
PROJECT WORKLOAD/OUTPUT	
Projects Funded	26
Active Construction Projects	183
Final Reports Completed	81
Project Durations (Years)	3.04
PROGRAM IMPACT	
Tribes Benefiting	15
Tribal Homes Served	2,326

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# NASHVILLE



## ACCOMPLISHMENTS

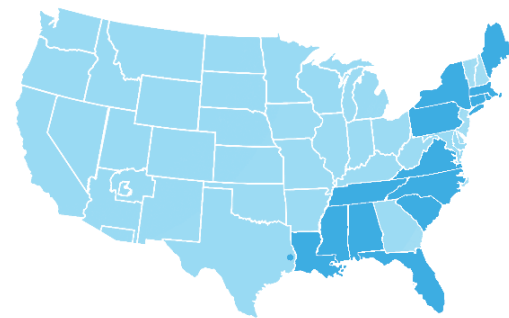
The Area improved service to our partners in Southern New England and New York via the addition of technical staff in locations which are more adjacent to our Tribal partners. The Area added staff in Manlius, New York as well as Mashpee, Massachusetts so that the program can be more responsive to the Tribes located in Connecticut, Massachusetts, New York, and Rhode Island. By diversifying staff expertise, this effort has improved project delivery efforts, and has enhanced Operations and Maintenance practices throughout the Area.

The recent completion of an asset management database with the Wampanoag Tribe of Gay Head (Aquinnah) has provided the Tribe with an effective way to manage sanitation facilities in accordance with the EPA CWA and SDWA requirements. Additionally, the Area worked closely with the Catawba Indian Nation and Miccosukee Tribe of Indians of Florida to develop and implement a unidirectional flushing program within the tribally owned public water systems. N

Flushing programs improve drinking water quality by reducing the naturally occurring organic matter normally found within the water distribution system. Reducing organic matter in the distribution pipes is important due to the possibility of it combining with chlorine which can form carcinogenic by-products that are harmful to human health. Approximately 350 Tribal homes benefited from this assistance provided by the Area staff. This effort has contributed directly to the healthier water for both tribes as well as bringing one system back into compliance relative to disinfection by-products.

## FOCUS AREAS

The Area continues to focus on providing improved service to a geographically diverse Area. In the upcoming years, the Nashville Area will focus on improving the quality of existing Tribal utility data through field sanitary surveys which the Area can then translate into a GIS-ready component. Fully populating the GIS database with attributes of system specific information such as precise geographical location, size and material of utility distribution networks will provide maximum flexibility in design planning, fiscal planning, construction, stakeholder communication, and ongoing operation and maintenance efforts.



## NASHVILLE AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	30
Tribal Home Inventory	18,134
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$83,172,360
Number of Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	7,021 (39%)
RESOURCES AVAILABLE	
IHS Project Funds Received	\$5,358,000
Contributed Project Funds	\$1,094,127
Number of Engineers	8
Number of Technicians	5
Number of Support Staff	2
PROJECT WORKLOAD/OUTPUT	
Number of Projects Funded	19
Number of Active Construction Projects	216
Final Reports Completed	23
Project Durations (Years)	3.39
PROGRAM IMPACT	
Tribes Benefiting	19
Tribal Homes Served	1,205

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# NAVAJO AREA



## ACCOMPLISHMENTS

The Navajo Area DSFC Program's funding increased by a significant amount in FY 2017, to almost \$70 million, more than double the previous year. This increase was mostly the result of contributions from other Federal and Tribal partners, such as the EPA, Bureau of Indian Affairs Conjunctive Ground Water, HUD Community Development Block Grant, Office of Navajo-Hopi Indian Relocation, and Navajo Nation Sihasin and Permanent Trust funds. The Navajo Nation's contribution of almost \$25 million was the most significant and is a reflection of the Nation's commitment to infrastructure improvements on the reservation. This past year, 781 first-service homes in conjunction with a total of 109 construction projects were funded. Construction was completed on 43 water and sewer projects which included the construction of over 58 miles of waterline, 504 individual house service connections, 13.5 miles of sewer main, 546 septic tanks and drain fields, 75 individual cistern systems, and approximately 144 house plumbing systems.

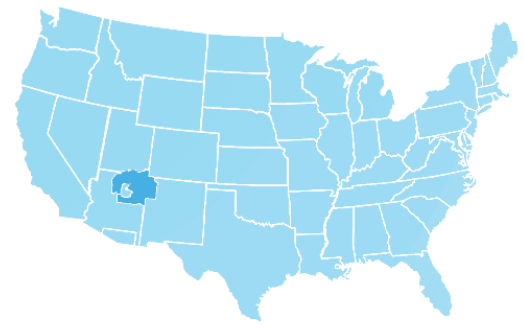


## FOCUS AREAS

The Navajo DSFC will focus on recruiting and retaining engineering and technician staff for the challenging workload ahead. In addition, Navajo DSFC will continue to work with our partners, the Navajo Engineering and Construction Authority and the Navajo Tribal Utility Authority (NTUA), to manage and prioritize the upcoming construction workload.

Large regional water system projects including the Navajo Gallup Water Supply Project (GWSP) and the Southwest Navajo Pipeline will dominate the Navajo Area SFC landscape in the next few years. At a cost of \$1.3 billion, The NGWSP will inter-tie with many Navajo community water systems, blending treated water from the San Juan River in northwest New Mexico with local NTUA ground water wells.

The Southwest Navajo Pipeline project, a 40-mile inter-tie between the communities of Leupp and Dilkon, being cooperatively funded by the IHS and Navajo Nation, will provide a more long-lasting and sustainable water supply to Navajo communities in northern Arizona. Previous attempts at constructing community wells have been plagued by extremely low yields and water quality that does not meet EPA's SDWA standards. This pipeline will also supply the new Dilkon Health Center which is currently in the design phase and will be constructed over the next several years.



## NAVAJO AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	2
Tribal Home Inventory	58,602
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$496,666,698
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	44,838 (77%)
RESOURCES AVAILABLE	
IHS Project Funds	\$22,350,000
Contributed Project Funds	\$46,352,418
Number of Engineers	36
Number of Technicians	55
Number of Support Staff	16
PROJECT WORKLOAD/OUTPUT	
Projects Funded	109
Number of Active Construction Projects	833
Final Reports Completed	131
Project Durations (Years)	3.72
PROGRAM IMPACT	
Tribes Benefiting	1
Tribal Homes Served	4,964

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# OKLAHOMA CITY



## ACCOMPLISHMENTS

The Area worked cooperatively with the Cheyenne and Arapaho Tribes to complete construction on the new Concho Water Treatment Plant in Concho, Oklahoma. Systemic problems from age including worn out mechanical parts led to the existing plant not being able to adequately treat the high iron and manganese levels present in the region's groundwater. The Area provided engineering design, construction permits, materials, connection fee, equipment, and supplied all construction necessary. Construction included a new water treatment plant building, a clear well, a booster pumping station, as well as electrical, controls, metering, sampling, and a data acquisitions systems to facilitate operation and maintenance by properly trained and certified N operators. The new Concho Water Treatment Plant will provide the Tribes with a plant capable of providing safe and reliable drinking water for 11 homes in addition to a planned health clinic.

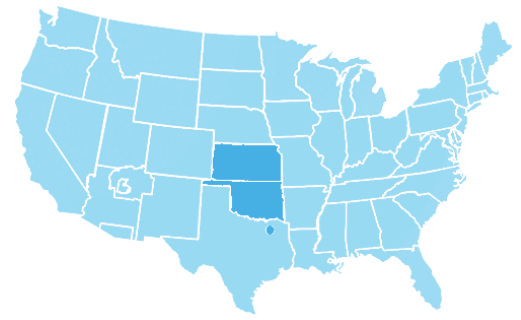
The Cherokee Nation under Public Law 93-638, developed a master plan for a reliable source of water serving five communities in Southern Delaware County. The existing stand-alone N water systems for these communities experience quantity and quality issues due to the lack of available water during droughts and high levels of radium. The South Delaware County Regionalization Project has built two new water storage tanks and is currently constructing a new water treatment plant capable of providing 2.0MGD of safe potable water service to approximately 1,072 Indian homes. The project involves the cooperation of several agencies, including the Indian Health Service, Cherokee Nation, USDA Rural Development, EPA Drinking Water State Revolving Fund, Oklahoma Department of Environmental Quality, and Oklahoma Water Resources Board.

## FOCUS AREAS

A priority of the Oklahoma City Area is to partner with the tribes to strengthen the O&M program and integrate the use of a GIS to improve the O&M technical assistance provided to tribes. The Area is currently working on a pilot project to develop an electronic as-built model for one water system that will include data compiled from previous completed sanitation projects and field verified information. The model can then be transitioned into a GIS platform that can provide reporting capabilities which will help engineers identify sanitation deficiencies. This reporting ability will have a direct impact on reducing Tribal operating expenses by prioritizing system needs while providing sustained service to customers.

The Area is also focusing on further development and implementation of project management best practices from project conception through project closeout in order to increase program efficiencies in completing sanitation projects.

Oklahoma City Area will continue to document and report all sanitation needs of the 43 Tribes within the Area with an emphasis on Tribal systems. The Oklahoma City Area includes 4 states with over 145,000 reportable AI/A homes, which equates to roughly 35% of all AI/AN homes throughout the Nation.



### OKLAHOMA CITY AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	43
Tribal Home Inventory	145,346
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$80,209,010
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	23,367 (16%)
RESOURCES AVAILABLE	
IHS Project Funds	\$11,211,000
Contributed Project Funds	\$5,013,871
Number of Engineers	10
Number of Technicians	2
Number of Support Staff	4
PROJECT WORKLOAD/OUTPUT	
Projects Funded	49
Number of Active Construction Projects	271
Final Reports Completed	89
Project Durations (Years)	2.90
PROGRAM IMPACT	
Tribes Benefiting	29
Tribal Homes Served	4,753

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# PHOENIX



## ACCOMPLISHMENTS

The Area completed construction of 40 projects valued at approximately \$15 million. A majority of these facilities were completed in partnership with Tribes who procured and managed construction via Tribal procurement contracting. These projects served the Phoenix Area Tribes across a four state region and addressed diverse needs from on-site sanitation facilities to comprehensive and master planned community water and sewer facilities.

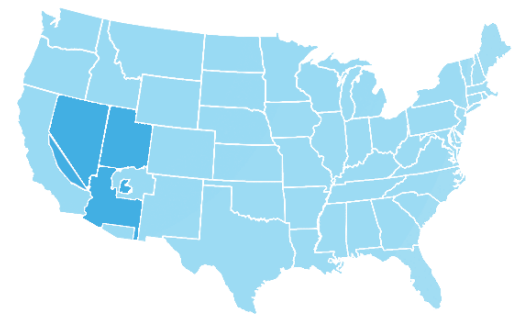
A complex project was the interconnection of two formerly independent water systems to address arsenic levels that exceeded EPA's Arsenic Maximum Contaminant Level standard on the Yavapai-Apache Nation. The non-compliant system was connected to the compliant system via a directional bore under the Verde River. The noncompliant system's existing oversized and proprietary booster station was replaced with one that could be more easily operated by the tribal utility authority.

The Area completed 52 water/sewer/solid waste system surveys documenting the condition of existing facilities and the effectiveness of the tribal utility organizations tasked with operating them. The Area led multi-state technical assistance provider work groups (Inter-Tribal Council of Arizona, Rural Community Assistance Corporation, Nevada and Utah Rural Water Associations, EPA Region 9, and Nevada Rural Development) and collaborated in delivering over 20 Tribal operator training and certification courses, drinking water system trouble shooting services, routine technical assistance, and assistance to two tribes that were under EPA Administrative enforcement orders or compliance plans targeted at compliance with the SDWA. Training courses and proctored certification exams were provided by the Inter-Tribal Council of Arizona via a national contract conceptualized by the Phoenix Area IHS and established in concert with the IHS EHSC. The Rural Community Assistance Corporation and the IHS EHSC in concert with Phoenix Area IHS District Utility Consultant (i.e. O&M) staff delivered multiple operator technical trainings focused on compliance with the SDWA and operation of lift stations.

## FOCUS AREAS

The Area strives to design sanitation facilities that match tribal needs and operational capacity. To this end there is a prioritized effort to master plan all facilities. The Area philosophy is captured in our prioritization and utilization of: 1) rigorous hiring practices targeting technical engineering skills and work ethic; 2) advanced planning of projects with tribal collaboration prior to funding; and 3) collaboration and coordination with technical assistance providers and funding agencies to advance the sustainability of existing sanitation facilities.

The Area seeks to create programmatic incentives to influence tribes to adopt reasonable water practices through non-construction alternatives such as metered water use rates. These approaches in many cases have been found to be a more sustainable solution to addressing water and wastewater needs than constructing additional facilities. Implementation of water meter rates for multiple Tribes has resulted in a reduction of millions of gallons of water use and the cancellation of a \$1M dollar project to drill a large community well leaving these resources to address other sanitation facility needs that can only be met through construction. The Area is working with multiple Tribes to develop similar projects.



## PHOENIX AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	47
Tribal Home Inventory	23,567
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$113,805,300
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	16,180 (69%)
RESOURCES AVAILABLE	
IHS Project Funds	\$7,387,000
Contributed Project Funds	\$5,676,700
Number of Engineers	27
Number of Technicians	12
Number of Support Staff	8
PROJECT WORKLOAD/OUTPUT	
Projects Funded	27
Active Construction Projects	211
Final Reports Completed	44
Project Durations (Years)	5.31
PROGRAM IMPACT	
Tribes Benefiting	17
Tribal Homes Served	5,847

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# PORTLAND



## ACCOMPLISHMENTS

In FY 2017, Portland Area served 82 homes at 20 different Tribes with individual site sanitation facilities (well, onsite wastewater system). Portland Area IHS completed improvements to community sanitation facilities that positively benefitted 1,909 homes. In FY 2017, Portland Area negotiated N and established a \$630,000 Interagency Agreement with the EPA for providing operation and N maintenance technical assistance to Tribes under the Public Water System Supervision program. As a result of this partnership with EPA, IHS staff completed 43 sanitary surveys for Tribal water systems and developed 78 sampling plans to help the Tribes comply with the SDWA. Additionally, the SFC program provided 69 individual technical assistance activities that help Tribes strengthen their utility's operation and management of the community water system. The result of all of these efforts has been that Tribal water systems in Washington, Oregon, and Idaho have improved compliance with various SDWA requirements related to monitoring water quality, reporting to EPA, and notifying the public regarding water quality.

The Area continues to provide training sessions to aid Tribal water utility operators with assuring that safe water is reliably delivered. In FY 2017, a total of 27 individual Tribal utility operators received training. Topics for training included fluoridation, chlorination, and protecting public N water supplies through cross-connection control and backflow prevention.N

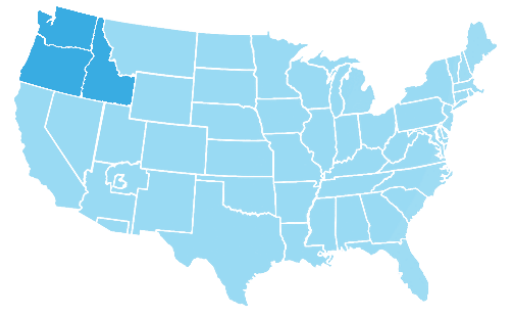
Portland Area has increased collaboration with other federal agencies and has connected Tribal staff with points-of-contact at these agencies. Annually, Portland Area IHS engineers participate in the Infrastructure Assistance Coordinating Council meeting, where multiple federal and state funding agencies meet with Tribes and municipalities to explore opportunities for cooperatively funding infrastructure projects. Portland Area IHS also engages with Oregon and Idaho funding organizations. The result of these efforts is that projects in Portland Area have seen a 34% increase in funding from non-IHS sources over the past three years. For example, Department of Housing and Urban Development provided \$412,000 towards the restoration of a sewer outfall on the N Makah Reservation, and from 2016 to 2017, EPA funding for Portland Area IHS projects increased from \$1,039,000 to \$1,418,000.N

## FOCUS AREAS

The Portland Area IHS, SFC program focuses on identifying needs and developing projects in consultation with Tribal stakeholders and facilitating project funding partnerships. In practical terms, Portland Area SFC staff place significant emphasis on engaging Tribal staff and departments in project planning and development, especially during the process of understanding the problem and in selecting potential alternatives to solve the problem.

The Area continues to work to provide Tribes with options related to project delivery. Portland Area IHS presents the Tribes with a full range of options ranging from IHS completing the work through federal procurement and a federal construction contract, to the Tribe completing it through an Indian Self-Determination Construction Contract.

The Portland Area also focuses on developing staff to be well rounded and competent in a variety of areas that are essential to being effective in developing and completing projects for the Tribes and in partnership with the Tribal staff. In addition to the areas of engineering and construction, Portland Area SFC staff are encouraged to develop strong written and oral communication skills, interpersonal skills and an understanding of Tribes and their cultural history. To do this, Portland Area District Engineers conduct in-house workshops, and encourage the development of staff through training.



## PORTLAND AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	43
Tribal Home Inventory	10,781
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$51,457,663
Number of Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	4,480 (42%)
RESOURCES AVAILABLE	
IHS Project Funds	\$4,146,000
Contributed Project Funds	\$2,469,900
Number of Engineers	12
Number of Technicians	6
Number of Support Staff	3
PROJECT WORKLOAD/OUTPUT	
Projects Funded	31
Active Construction Projects	224
Final Reports Completed	3
Project Durations (Years)	3.66
PROGRAM IMPACT	
Tribes Benefiting	11
Tribal Homes Served	1,424

<sup>^</sup>Total database cost for DL 2 to 5 projects.



# TUCSON



## ACCOMPLISHMENTS

During FY 2017, the Tucson Area completed several projects that improved wastewater disposal facilities for homes on the Tohono O’odham Nation. These wastewater disposal projects included lagoon improvements in the communities of San Simon and Gu Vo and individual wastewater disposal facilities for 200 new and existing homes scattered throughout the Nation. Additionally, several water improvement projects were under construction on the Tohono O’odham Nation during FY 2017 including the Ak Chin Arsenic Regionalization project. This project, which is funded by the EPA Drinking Water Tribal Set-aside Program for a total of \$1,780,000, provides a 7-mile long intertie between the Greater Santa Rosa Regional Water System and the community of Ak Chin whose original raw water supply yielded elevated arsenic levels. The Ak Chin Arsenic Regionalization project will benefit 57 homes and a 60-bed N skilled nursing facility.

A total of four Preliminary Engineering Reports were completed by Tucson Area engineers in FY 2017. Via these reports, alternatives for addressing various water and wastewater disposal needs on the Tohono O’odham Nation was accomplished, including plans for alleviating a high pressure zone in Sells, investigating sewer system improvements for the community of San Xavier and analyzing options for improving the quality of water provided to homes in Cockleburr community.

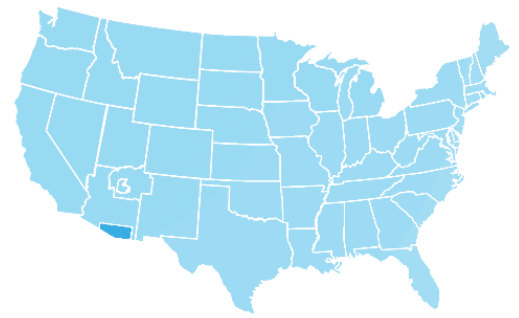
Through a collaboration between the Tohono O’odham Utility Authority (TOUA) and the IHS, approximately 70% of the water and sewer systems on the Nation had composite utility drawings completed by the end of FY 2017. These drawings allow TOUA to effectively inventory and manage assets, eliminate utility conflicts, and enhance safety. Additionally, accurate water N and sewer system information allows TOUA and IHS to efficiently plan and design new and N upgraded facilities.



## FOCUS AREAS

Several large projects are expected to be completed or in construction on the Tohono O’odham Nation during FY 2018. These projects include a 2.5-mile intertie to the Baboquivari Regional Water System which will provide improved water quality to 68 homes in the communities of Miguel and San Miguel. Additionally, the multimillion dollar Sells Water Main Upgrade project will replace 5.6 miles of deteriorated transmission main with new 18-inch pipe. This project is funded by IHS and the EPA and will serve a total of 757 homes in the communities of Sells and Big Fields.

Another focus area for FY 2018 includes the provision of sanitation facilities for new homes constructed by the Tohono O’odham Ki:ki Association (TOKA). During FY 2018, it is expected that IHS will support sanitation facilities for 68 new homes built by TOKA in the communities of Hanam Ke:k, San Miguel, San Xavier and Sells. Finally, the IHS and the Tohono O’odham Solid Waste Management Program will work collaboratively in FY 2018 to complete the cleanup of 16 open dump sites scattered across 9 communities on the Tohono O’odham Nation. A total of 649 homes will benefit as a result of these open dump closure projects.



## TUCSON AREA: FY 2017 YEAR AT A GLANCE

AREA POPULATION	
Eligible Tribes	2
Tribal Home Inventory	9,468
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$25,492,200
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	3,134 (33%)
RESOURCES AVAILABLE	
IHS Project Funds	\$519,000
Contributed Project Funds	\$2,600,718
Number of Engineers	6
Number of Technicians	5
Number of Support Staff	1
PROJECT WORKLOAD/OUTPUT	
Project Funded	16
Active Construction Projects	196
Final Reports Completed	74
Project Durations (Years)	7.06
PROGRAM IMPACT	
Tribes Benefiting	1
Tribal Homes Served	970

<sup>^</sup>Total database cost for DL 2 to 5 projects.





# LOOKING FORWARD

In order to provide American Indian and Alaska Native homes and communities with essential water supply, sewage disposal, and solid waste disposal facilities as soon as possible the DSFC is continually striving to improve the delivery of the SFC Program. In the coming fiscal years the SF NProgram will focused on: N

**Program Reviews:** Understanding the challenges and successes throughout the SFC Program is critical to improving program delivery. The DSFC is committed triannual reviews of all IHS Areas SFC Programs by Headquarters. These reviews assist leadership identify and prioritize improvement areas through comparing program statute and guidelines to current program implementation. The reviews increase transparency, fairness and reinforces accountability while helping to ensure consistent program delivery.

**Data System Improvements:** Quality defensible data is the foundation of the SFC Program and robust program tools used to gather this data help to facilitate intuitive data input and reporting. The DSFC is focused on enhancing the user interface experience of the Sanitation Deficiency Tracking and Reporting System (STARS) and incorporating additional graphical information system elements into STARS that will aid in sanitation needs identification, project planning and design, and technical assistance delivery.

**Program Impact Measurement:** Describing the health benefit associated with the program output better demonstrates the importance and value of the SFC Program. The DSFC is developing a defensible measure to quantify illness cases avoided and healthcare savings associated with the construction of sanitation facilities.

**Interagency Collaboration:** Close coordination between federal partners such as the Environmental Protection Agency, US Department of Agriculture and Department of Housing and Urban Development that also have fund sanitation facilities construction and operation and maintenance technical assistance benefits all Tribes. The DSFC is committed to continue coordination at all levels throughout the SFC Program with federal partners that have similar missions and objectives.

**Recruitment:** Technically competent staff that understand and value the SFC Program mission are critical to successful program delivery. The DSFC is committed to maintaining current staffing levels by improving recruitment strategies by increasing visibility and staff vacancies of the SFC Program through direct outreach to university engineering programs, volunteer organizations and professional societies that share similar missions.



# AREA SFC PROGRAM DIRECTORY

### **Alaska Area**

4141 Ambassador Drive  
Anchorage, AK 99508-5928  
Ph. (907) 729-3540

### **Albuquerque Area**

4101 Indian School Road NE, Suite 225  
Albuquerque, NM 87110  
Ph. (505) 248-4595

### **Bemidji Area**

522 Minnesota Avenue, NW  
Bemidji, MN 56601  
Ph. (218) 444-0504

### **Billings Area**

2900 4th Avenue N  
Billings, MT 59101  
Ph. (406) 247-7056

### **California Area**

650 Capitol Mall, Suite 7-100  
Sacramento, CA 95814  
Ph. (916) 930-3945

### **Great Plains Area**

115 4th Avenue, Southeast  
Aberdeen, SD 57401  
Ph. (605) 226-7451

### **Nashville Area**

711 Stewarts Ferry Pike  
Nashville, TN 37214-2634  
Ph. (615) 467-1586

### **Navajo Area**

P.O. Box 9020  
Window Rock, AZ 86515  
Ph. (928) 871-5851

### **Oklahoma Area**

701 Market Drive  
Oklahoma City, OK 73114  
Ph. (405) 951-3882

### **Phoenix Area**

Two Renaissance Square,  
40 North Central Avenue, Suite 600  
Phoenix, AZ 85004  
Ph. (602) 364-5068

### **Portland Area**

1414 NW Northrup Street  
Portland, OR 97209  
Ph. (503) 414-7772

### **Tucson Area**

7900 South J Stock Road  
Tucson, AZ 85746-2508  
Ph. (520) 295-2580

## SFC Program National Overview: Previous Year at a Glance (FY 2016)

PROGRAM POPULATION	
Eligible Tribes	573
Tribal Home Count	400,096
SANITATION FACILITY NEEDS	
Sanitation Facilities Project Cost <sup>^</sup>	\$3,383,769,117
Tribal Homes Needing New or Improved Sanitation Facilities (% total eligible AI/AN homes)	171,674 (43%)
RESOURCES AVAILABLE	
IHS Area Project Funds	\$97,673,000
IHS Special & Emergency Project Funds	\$1,750,000
Contributed Project Funds	\$85,566,673
Number of Engineers	228
Number of Technicians	182
Number of Support Staff	91
PROJECT WORKLOAD/OUTPUT	
Regular Projects Funded	432
Active Construction Projects	3,520
Final Reports Completed	800
Project Durations (years)	3.43
PROGRAM IMPACT	
Tribes Benefiting	160
Tribal Homes Served	39,554

<sup>^</sup>Total database cost for DL 2 to 5 projects.





Department of Health and Human Services  
Indian Health Service  
Sanitation Facilities Construction (SFC) Program

[www.dsfc.ih.gov](http://www.dsfc.ih.gov)