Meeting the Access Goal
Progress to Date

Implementation of Strategies for Increasing Access to Safe Drinking Water and Basic Sanitation to American Indian and Alaska Native Homes

Prepared by the
Infrastructure Task Force on Access

US Environmental Protection Agency

Indian Health Service

US Department of Agriculture

Department of Housing and Urban Development

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I. INTRODUCTION

In 2000 the United States made commitments at the World Summit on Sustainable Development and agreed to support a United Nations Millennium Development Goal to improve access to safe drinking water and basic sanitation around the world. As a result of this commitment, the US is addressing the lack of access to safe drinking water and basic sanitation in Indian Country by reducing the number of tribal homes without access by 50% by 2015 (Access Goal).

An Infrastructure Task Force on Access to Sanitation ("Task Force") was formed in 2003. The federal partners of the Task Force are the US Department of Agriculture (Rural Development - USDA-RD), the US Environmental Protection Agency (EPA), the US Department of Health and Human Services (Indian Health Service - IHS), the US Department of Housing and Urban Development (HUD), and the US Department of the Interior (Bureau of Indian Affairs - BIA). In June 2007 the Department Secretaries of these federal partners signed two Memoranda of Understanding (MOU) to develop strategies to help achieve the access goal.

The lack of access to safe drinking water and basic sanitation in Indian Country continues to threaten the public health of American Indian and Alaska Native (AI/AN) communities. According to 2010 data from the Indian Health Service (IHS), approximately 12% of AI/AN homes do not have safe water and/or basic sanitation facilities. This is high compared with the 0.6% of non-native homes in the United States that lacked such infrastructure in 2005 according to the US Census Bureau.

In March 2007, an Access Subgroup (Subgroup) was formed by the Task Force to identify implementation strategies to meet the Access Goal and recommend actions to be taken by the partner agencies. The Subgroup completed their charge in March 2008 and submitted a report entitled "Meeting the Access Goal – Strategies for Increasing Access to Safe Drinking Water and Wastewater Treatment to American Indian and Alaska Native Homes". This report is an excellent starting place for efforts to improve access to safe water and basic sanitation for American Indians and Alaska Natives. The report identified and categorized barriers and provided prioritized recommendations for meeting the Access Goal. As a result of those recommendations four workgroups were formed to begin addressing issues to improve access.

Although significant need remains throughout Indian Country, measurable accomplishments had been made by the Task Force. This report summarizes those accomplishments.

II. ACCESS GOAL DEFINITION AND MEASUREMENT

The "Access Goal" as defined by the Task Force is to:

> *Strive to reduce by 50 percent over the 2003 baseline data the number of homes lacking access to safe drinking water and safe wastewater disposal by 2015.*

The IHS Sanitation Tracking and Reporting System (STARS) database was deemed the best source of information about the number of homes lacking access. STARS contains a count of tribal homes and sanitation deficiencies for those homes in addition to information about projects designed to mitigate the deficiencies. 2003 was selected as the baseline year for measuring of the Access Goal. At that time, approximately 319,000 homes were included in the data system. The data system, including house counts, is updated regularly by IHS and tribal partners and annual data snapshots are taken.

Congress provided a definition to IHS for sanitation deficiency levels [25 U.S.C. Sec. 1632(g)(4)]. The Task Force adopted these IHS deficiency definitions as the definitions for access to safe drinking water and basic sanitation for the purpose of measuring progress towards the Access Goal. Lack of access is identified as homes ranked by the IHS with a deficiency level (DL) 4 or 5.

> Deficiency Level 4 (DL4) is "An Indian tribe or community with a sanitation system which lacks ***either*** a safe water supply system or a sewage disposal system".
>
> Deficiency Level 5 (DL5) is "An Indian tribe or community that lacks a safe water supply ***and*** a sewage disposal system." The IHS considers "safe water supply" and "safe sewage disposal" to be a system that complies with EPA regulations.

The tribal housing and access profile data for the universe of AI/AN homes is summarized in Table 1.

Table 1: Number of Tribal Homes Lacking Access Summary Data[1]

Year	Number of Tribal Homes	Water Only	Sewer Only	Water and Sewer	Total[2]	% Total
2003[3] (Baseline)	**319,070**	19,754	5,597	18,883	44,234	13.9%
2004	307,584	17,833	4,252	18,214	40,299	13.1%
2005	316,624	21,574	4,080	17,118	42,772	13.5%
2006	323,521	21,568	4,295	17,169	43,032	13.3%
2007	334,218	20,018	7,287	16,557	43,862	13.1%
2008	341,909	19,857	9,344	14,998	44,199	12.9%
2009	359,976	28,096	12,711	15,341	56,148	15.6%
2010	383,674	20,655	12,205	13,532	46,392	12.1%
2015 (Goal)					**22,118**	**6.9%**

[1] **Data Source**: Public Law 86-121 Annual Reports 2003, 2004, 2005 and STAR 2006 Sanitation Deficiency System (SDS) Summary Report

[2] The Total = (Water Only) + (Sewer Only) + (Water and Sewer)

[3] Prior to FY 2004 "Homes without potable water" was a separate data field in STARS and not derived from the homes categorized as DL4 for Water.

III. ACCESS WORKGROUP ACCOMPLISHMENTS

In July 2008 workgroups were formed to implement the top recommendations made in the March 2008 report. The recommendations were designed to overcome barriers for existing federal infrastructure programs to provide access to safe drinking water and basic sanitation. Table 2 provides a summary of the workgroups and recommendations they were tasked to address.

Table 2: 2008 Access Workgroups Chartered by the Infrastructure Task Force

Workgroup Name	Report Recommendation Addressed	Lead Agency
Coordinating Tribal Technical Assistance	Federal partners should work together to formally coordinate technical assistance services and adopt common standards for pre-construction documents, planning and design standards	IHS
Technical Alternatives to Increase Access to Safe Water and Wastewater Disposal on the Navajo Reservation and Alaskan Native Villages	Investigate innovative and previously used alternatives to piped water and sewer in hard to serve areas of Alaska and the Navajo Nation, and identify funding for pilot projects and subsequent implementation	EPA
Streamlining Federal Grant Paperwork	Identify opportunities to improve program coordination through streamlining the pre-construction requirements of tribes seeking federal funding for the construction of water infrastructure projects	EPA

A. Coordinating Tribal Technical Assistance

The Technical Assistance (TA) coordination workgroup was tasked in three broad areas:

1. Formally coordinate technical assistance service to ensure that adequate geographic and topical coverage are provided,
2. Complete a comprehensive evaluation of tribal operations and maintenance costs and develop an operations and maintenance allocation methodology to be used to advocate for federal funding of operational activities where statutory authority exists, and
3. Define minimum design requirements for projects funded by federal partners to ensure federally funded infrastructure projects are delivered in "operable condition" to allow tribes to properly manage their utilities.

The workgroup focused on item 1 developing nine recommendations about processes and information exchange to promote the formal coordination of technical assistance service delivered. As a result of these, the IHS TA providers agreed to host the first round of coordination activities in the last quarter of calendar year 2010. The first of these meetings was hosted by the IHS Phoenix Area in August 2010. A web-based contact manager maintained by *smallwatersupply.org* was created to allow the various TA providers to individually update their contact information and make it available to other providers and tribal operators. *Smallwatersupply.org* is a project developed by the University of Illinois. Additional details can be found in the March 9, 2010 workgroup

report titled "Strategies for Improving Technical Assistance Delivery in American Indian and Alaska Native Communities".

At the end of FY2010 the Task Force agreed to charter a new workgroup to deal with the remaining two issues this workgroup was originally charged to complete.

B. Technical Alternatives to Increase Access on the Navajo Nation and Alaska Native Villages

Initially the Task Force established a workgroup to propose new solutions to serve homes without access located in Alaskan Native Villages and the Navajo Nation. If promising alternatives were identified, the workgroups were also tasked to identify potential pilot projects and potential funding to complete those projects. Due to the differences in the environmental, socio-cultural, and geographic conditions between Alaskan Native Villages and Navajo Nation, this workgroup was divided into two groups at the outset. Additional efforts in Alaska were concentrated on improving the USDA-Rural Development funding process which is described in Section IV.

Navajo Nation

The Navajo Nation efforts focused on identifying homes lacking access, funding feasible water infrastructure projects to serve these homes, and implementing pilot projects to increase access to safe drinking water for homes that will not be connected to piped water in the near future.

To identify Navajo Nation homes lacking access, EPA Headquarters complied data on homes without access to safe drinking water and basic sanitation in a Geographic Information System (GIS) format, and overlaid the locations of existing and proposed water infrastructure and other relevant data. This project will better communicate the need to funding agencies and helps identify solutions to provide increased access to drinking water and basic sanitation. The GIS database includes 4,636 tribal homes on the Navajo Reservation without access to safe drinking water and basic sanitation as of November 2008. This represents 56% of the homes without access included in the IHS STARS database at that time. Data used in this effort was obtained from a wide variety of sources including the Navajo Tribal Utility Authority (NTUA), the Centers for Disease Control (CDC), EPA Region 9, Navajo Department of Water Resources (DWR), Navajo Department of Community Development, and Indian Health Service. Additional details regarding this process can be found in the October 2010 workgroup report titled "Mapping of Water Infrastructure and Homes without Access to Safe Drinking Water and Basic Sanitation on the Navajo Nation".

Navajo Nation departments and federal agencies are also working together to provide greater access to safe drinking water for homes that will not be connected to piped water in the near future. EPA provided $2.6 million to the Navajo Nation DWR to implement a Water Hauling Feasibility Study and Pilot Program which includes five water hauling trucks to deliver water near homes lacking piped water. Also, NTUA is making safe

water more available by adding five regulated water hauling points with $592,000 from EPA. To improve the safety of hauled water, the Navajo Nation Environmental Protection Agency (NNEPA) developed water hauling guidelines. NNEPA and CDC also developed water hauling outreach materials and radio broadcasts in Navajo and English.

Additionally, in the Black Falls Area of southwestern Navajo, IHS and EPA funded cistern systems for nine homes without piped water. Homes lacking electricity received pilot solar pumps. The community and the Forgotten People Community Development Corporation assisted in the construction of bathroom additions for the nine homes served by the project.

And in August 2008, USDA, Rural Development committed $8 million to complete Phase 2 of a regional water system to interconnect eight Navajo communities and provide access to clean, safe, reliable water. The eight (8) communities include of Huerfano, Burnham, Nageezi, Counselor, Ojo Encino, Torreon, Pueblo Pintado and Whitehorse Lake and spans an area of over 90 miles across three counties. The project will provide first-time access to safe drinking water for 1,140 tribal homes and overall improve the reliability of the water supply to for 9,458 people in an areas where dire conditions lead the State of New Mexico to issue an Emergency Declaration due to lack of potable water supply. This new regional water supply system will ensure that all eight chapters have adequate water to last for the foreseeable future, and will allow the communities to grow prosperous and healthy.

Alaska Native Villages

The members of the Alaska Native Village workgroup joined forces with the U.S. Arctic Research Commission (USARC) and the Centers for Disease Control and Prevention (CDC), along with other Federal, State, local, academic and international counterparts. This group has been planning a workshop to be held on January 2011 titled "*Water and Sanitation for the Arctic*" in order to assess needs and learn about innovations in water provision and sanitation in cold regions.

This workshop will focus on water and sanitation issues in rural Alaska, stressing the connection between health and provision of in-home water and sanitation services and a potential reframing of priority issues in the context of climate change. The workshop discussions will focus on potential research and innovations in the field. The intent of the workshop is to foster productive conversations between groups that would not typically interact and come away from this workshop with new and innovative ideas for pathways forward in these areas of research.

Objectives of the workshop:

1) Frame the problem in current context: Consider climate change and new knowledge implicating water/sanitation practices in the transmission of infectious disease.

2) Review the status of ongoing research and identify knowledge gaps related to these issues.
3) Discuss potential areas in which R&D might be helpful and future strategies for water provision and sanitation.
4) Determine the most promising plans for funding opportunities related to water and sanitation.

In 2009 and 2010, USDA provided $82.2 million for more than 30 water and waste infrastructure projects in Rural Alaskan Villages. Twenty of these projects are for the design and construction of infrastructure to provide access to safe drinking water and basic sanitation for 876 tribal homes. These projects will provide much-needed new or improved access to water and waste services for residents of these villages and contribute to further meeting access goals.

C. Streamlining Federal Paperwork

The objective of the workgroup was to develop recommendations for streamlining the multi-agency requirements placed on tribes to receive federal funding for water and waste water infrastructure construction projects. The group completed individual interviews of roughly 40 Federal staff and Tribal partners and incorporated the interview results into a draft report. The workgroup also conducted a comprehensive review of the policies, regulations, and directives of each agency relating to grant requirements, environmental reviews, and other pre-construction requirements.

This workgroup was still working to determine the feasibility, advisability, and legal ramifications of streamlining requirements necessary prior to sanitation project construction. The group drafted an internal document that summarizes the tribal grant paperwork requirements for all the Task Force member agencies. Ten different proposed recommendations were being evaluated. The workgroup is scheduled to meet in January 2011 to select the recommendation or recommendations to the Task Force for implementation.

IV. OTHER ACCOMPLISHMENTS

In addition to the accomplishments described above the Task Force partners have worked together and individually to improve the implementation of their programs which provide or support construction of water infrastructure.

A. EPA and IHS Program Coordination Improvements

During FY2010 EPA and IHS agreed on standard terms and conditions to be used in Interagency Agreements (IA) that fund drinking water and clean water projects. These standard terms and conditions were agreed to and adopted by the headquarters offices and are currently being used when infrastructure funding is transferred from EPA to IHS. EPA assigned IA processing for all IHS agreements through a centralized approval

authority in the Seattle Grants and Interagency Agreements Unit. During the same time period IHS enhanced progress and financial reporting to EPA to improve transparency for the projects the IHS manages. Together these business practices reduced the time to process agreements between those partner agencies and significantly improved the quality of interagency agreement documents, flow of information, and quality of reporting. These changes have resulted in EPA's tribal water funds to be transferred to IHS with fewer delays, allowing IHS to reduce project timelines.

As a result of the Task Force work and the coordination required to implement the funding from the 2009 American Recovery and Reinvestment Act EPA and IHS have developed a closer working relationship. The increased communication between EPA and IHS has improved the identification and selection of water infrastructure projects for funding by EPA and the oversight of the EPA tribal water infrastructure programs.

B. IHS Data Improvements

The March 2008 report included several comments and recommendations about data needed to evaluate the conditions that are causing homes to lack of access to safe drinking water and basic sanitation. The Task Force did not a charge a workgroup on any of these recommendations, but the IHS committed significant resources to make improvements to the STARS data system that is the primary source of data used to evaluate the success of providing access. When this effort is completed it will be possible to determine root cause or special condition for each home that lacks access within the IHS database. Additionally, it will make the total homes count more accurate resulting in better analysis of progress toward the access goal.

C. USDA-RD Process Improvements

By September 2010 significant progress had been made toward providing safe drinking water and basic sanitation for rural Alaskan Villages through efforts to improve the USDA-RD funding process.

In August 2008, the leadership of the Task Force visited several Alaskan Native Villages, held discussions with local leaders and residents, and participated in follow-up briefings from the state and federal agencies and technical assistance providers. The outcome of the trip provided the Task Force with a different perspective on the primary issues related to the development of water and waste water infrastructure in Alaska. Four primary areas were identified where improvements in federal agency communication and coordination could yield better results. These include:

1. Accountability and tracking of existing projects and funding,
2. Technical training,
3. Affordable and practical systems design, and
4. More efficient funding processes with additional village input.

The primary focus for the USDA was improved delivery of its Rural Alaska Village

Grant (RAVG) program. In FY 2009 and FY 2010 the USDA worked closely with the Alaska Native Tribal Health Consortium (ANTHC) and Alaska Department of Environmental Conservation (ADEC) to clarify the application procedures and facilitate their participation in the funding process. One of the first improvements was to identify villages in need of planning funds to prepare the design, financial, and environmental reports necessary to apply for construction funding.

In late FY 2009 these efforts resulted in a number of applications for USDA funding. On October 23, 2009 USDA announced $16 million in funds awarded for eligible Alaska village water and waste water projects. In FY 2010 an additional $66.2 million was awarded for water and waste water projects to improve service in Native Alaska villages.

In FY 2010 the USDA developed a RAVG Process Improvement Project to address issues related to RAVG and to respond to a Congressional request to develop a streamlining plan for the program. A Steering Committee composed of senior officials from both the national and state offices of USDA-RD, ADEC, ANTHC, IHS, EPA, and the Denali Commission was formed to provide inter-agency coordination for the project. A consultant was hired to assist in development of the project.

The key feature of the project was the RAVG Process Improvement Conference which was held in Anchorage on April 6, 7, and 8, 2010. Participants in the conference included management and staff of the organizations on the Steering Committee, Congressional and Alaska legislative staff, and other observers. Prior to the conference, the conference participants were interviewed to document the existing RAVG application, approval and tracking process, document the application processes of funding partners and solicit ideas on ways to improve program delivery in Alaska. The conference brought partners together to improve communication and laid the groundwork for better agency collaboration.

The conference participants endorsed a variety of streamline improvements. Demonstrating its commitment to improving program delivery, USDA-RD assigned staff to work full time on implementation of the recommendations that came from the Conference. The results of the conference and the streamlining efforts to date were reported to Congress on September 30, 2010. Highlights include:

1. Combining multiple applications into a single application,
2. Adopting environmental reviews of other agencies,
3. Simplifying financial review,
4. Implementing automation improvements, and
5. Developing new program agreements and documentation.

In addition to continuing the work already started, better agency collaboration also created opportunities to make advanced program improvements. USDA committed to further improvement to the RAVG program and to address rural sanitation and development issues in general.

Performance Assessment: The RD Alaska office plans to undertake a self-assessment of its performance in administering the RAVG program. The purpose of this is to verify that the goals and purpose of the RAVG program are clearly defined, that there are clear measures to demonstrate performance against program goals, and that there are effective measurement tools to provide feedback for program improvement. The self assessment is intended for the RD Alaska office but will be submitted to the Steering Committee for peer review.

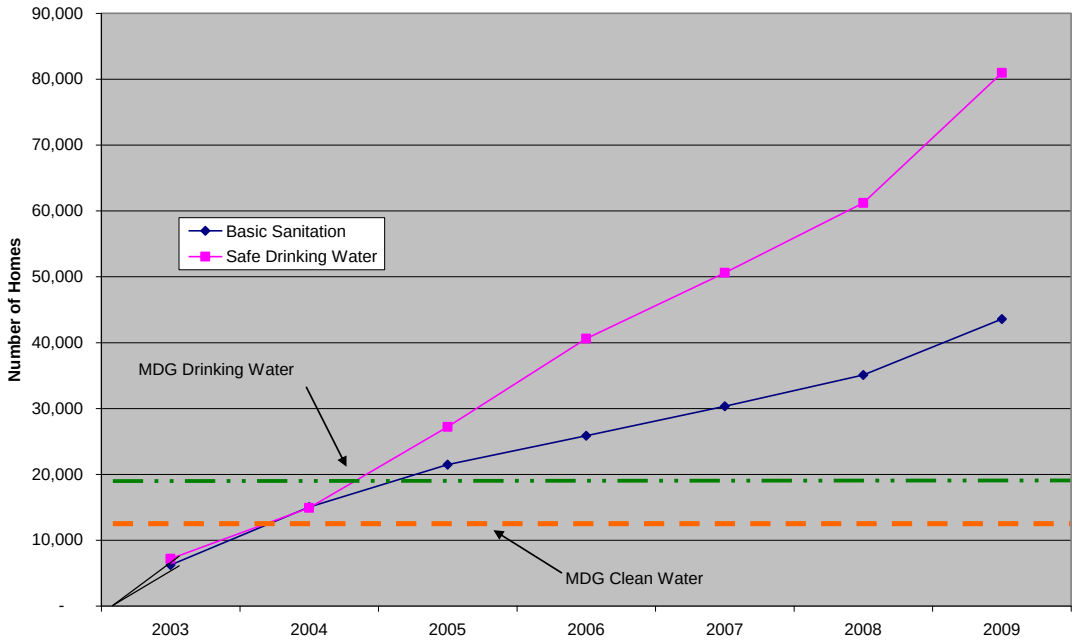
Sustainability: As additional projects are funded, it is critical that they are appropriately scoped and designed. Additionally, operational, managerial and technical capacity in the community receiving the project must be fostered to ensure long-term sustainability. The design and cost of a project must be balanced against the need for health and safety, the ability to maintain the project, available technology, and resources available to construct the project. USDA and the other members of the Steering Committee committed to leverage existing efforts and work to improve sustainability of facilities in Alaska villages.

Community Involvement: USDA and the other members of the Steering Committee committed to improve community involvement with the goal of enhancing agency collaboration, performance assessment, project design and sustainability.

V. ACCESS HOMES SERVED & REMAINING

Data from the IHS data system indicates that 80,941 tribal homes were provided access to safe drinking water and 43,562 tribal homes were provided access to basic sanitation utilizing funds from all federal partners from 2003 to 2009 (See Graph 1). During this period, the number of homes receiving access is 4 times greater for safe drinking water and 3.5 times greater for basic sanitation than the target established in 2003 under the Millennium Development Goal (MGD). These numbers demonstrate the significant progress in providing tribal homes with access to safe drinking water and basic sanitation made by EPA and the federal partners.

Graph 1: Cumulative Tribal Homes Provided Access to Safe Drinking Water and Basic Sanitation from 2003 to 2009



The Task Force recognizes there is still progress to be made providing access to safe drinking water and basic sanitation in Indian country. As Table 1 shows the percentage of tribal homes without access has only been reduced by 1.8% over the seven year period (2003 to 2010). The large increase in water infrastructure funding provided to Indian country through 2009 American Recovery and Reinvestment Act contributed to the reduction in the number of tribal homes lacking access between 2009 and 2010. However from 2003 to 2009, the number of tribal homes lacking access to safe drinking water and basic sanitation trended upward for several reasons; an increase in the total number of tribal homes included in the Indian Health Service (IHS) data system and an increase in the need for water and basic sanitation infrastructure to serve homes which previously had access to safe drinking water and basic sanitation.

VI. NEXT STEPS

The Task Force remains committed to reducing the number of homes that lack access to safe drinking water and basic sanitation. At the end of FY2010 the federal partners decided to continue support the current the workgroups listed in Table 3. The need to establish additional workgroups will be made by the Task Force as they are deemed necessary.

Table 3: 2011 Access Workgroups Chartered by the Infrastructure Task Force

Workgroup Name	Future Actions	Lead Agency
Utility Operation and Maintenance Cost	Evaluation of tribal operations and maintenance costs and development of an operations and maintenance funding allocation methodology	IHS
Streamlining Federal Paperwork	Develop recommendations for the Task Force to consider changes in paperwork processing	EPA

The Task Force will continue to liaison with workgroups currently engaged in working to improve access to safe drinking water and basic sanitation on the Navajo Nation and in Alaskan Native Villages through EPA Regions 9 and 10.

IHS is committed to continued support of the ongoing STARS development. Although the primary purpose of the IHS data systems is to support management of IHS programs, IHS acknowledges that their data is essential for all federal partners to understand and provide access for tribal homes. As a result of this IHS will maintain its commitment to providing accurate and current data and reports to the federal partners as the needs of the partners dictate.