# SANITATION DEFICIENCY SYSTEM

# S D S


A Guide for Reporting Sanitation Deficiencies for
American Indian and Alaska Native Homes and Communities

FINAL DRAFT
For Tribal Consultation

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Indian Health Service
Office of Environmental Health and Engineering
Division of Sanitation Facilities Construction

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# PREFACE

*The Secretary shall submit a report which sets forth the level of sanitation deficiency for each sanitation facilities project of each Indian tribe or community, and the amount of funds necessary to raise all Indian tribes and communities to a level I sanitation deficiency or to zero sanitation deficiency. --from Public Law 94-437, Section 302(g)*

The Indian Health Service (IHS) Sanitation Deficiency System (SDS) is an inventory of projects developed to address existing sanitation deficiencies in American Indian and Alaska Native communities. This guidance document has been prepared to ensure uniform standards and procedures for identifying deficiencies, developing projects, and prioritizing projects. All IHS Areas, regardless of how the Sanitation Facilities Construction (SFC) Program is delivered, must report their sanitation deficiencies uniformly as projects according to these guidelines, in accordance with Sections 1632 (g) (2) and (3) of the Indian Health Care Improvement Act.

In 2003, the SDS was transferred to an internet-based data entry and project information system. The SDS has been integrated with other SFC data systems within the Sanitation Tracking and Reporting System (STARS), a comprehensive tool for the identification, prioritization, tracking, and reporting of sanitation facility needs nationwide. The use of SDS and STARS provides an efficient platform for the SFC Program to carry out its mission to provide technical assistance and sanitation facilities services to American Indian Tribes and Alaska Native Villages for the cooperative development and continued operation of safe water, sewer, and solid waste systems. The statutory requirements for entering data into SDS have not changed, and the eligibility requirements for receiving service from IHS have also not changed; however, the SFC Program's guidance to ensure consistency with these requirements has been clarified, and the appearance and data entry methodology of the SDS continue to be enhanced. As the SDS and STARS data systems continue to evolve and improve, this document will periodically be revised to ensure consistent implementation of SDS and IHS policies.

This document was prepared by the SFC staff at IHS Headquarters, Rockville, Maryland. This document is a Working Draft, effective upon transmission from the Director, IHS Office of Environmental Health and Engineering (OEHE). If you have any questions, please contact the Director, Office of Environmental Health and Engineering, at the appropriate IHS Area office.

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## Abbreviations and Terminology

| | |
|---|---|
| AI/AN | American Indian and Alaska Native |
| C.F.R. | Code of Federal Regulations |
| CHSDA | Contract Health Services Delivery Area |
| Criteria Document | Indian Health Service "Criteria for the Sanitation Facilities Construction Program" |
| DL | Deficiency Level |
| DHHS | Department of Health and Human Services |
| DSFC | Division of Sanitation Facilities Construction, IHS |
| EPA | Environmental Protection Agency |
| EDU | Equivalent Dwelling Unit |
| GAO | Government Accountability Office |
| HITS | Home Inventory Tracking System |
| HPS | Housing Priority System |
| HQ SFC Program | Headquarters Sanitation Facilities Construction Program, IHS (see also DSFC) |
| HQ | Headquarters |
| HUD | Department of Housing and Urban Development |
| IHCIA | Indian Health Care Improvement Act (P.L. 94-437; 25 U.S.C. § 1632 et seq.) |
| IHS | Indian Health Service |
| ISDEAA | Indian Self-Determination and Education Assistance Act (P.L. 93-638, 25 U.S.C. § 450 et seq.) |
| ISWMP | Integrated Solid Waste Management Plan |
| MCL | Maximum Contaminant Level |
| MOA | Memorandum of Agreement |
| NAHASDA | Native American Housing Assistance and Self-Determination Act of 1996 (P. L. 104-330; 25 U.S.C. § 4101 et. seq.) |
| NPDES | National Pollutant Discharge Elimination System |
| O&M | Operation and Maintenance |
| OEHE | Office of Environmental Health and Engineering, IHS |
| OMB | Office of Management and Budget |
| OMDS | Operation and Maintenance Data System |
| P.L. | Public Law |
| P.L. 93-638 | Indian Self-Determination and Education Assistance Act |
| P.L. 94-437 | Indian Health Care Improvement Act |
| P.L. 100-713 | Indian Health Care Amendments of 1988 |
| P.L. 86-121 | Indian Sanitation Facilities Act of 1959 |
| P.L. 103-399 | Indian Lands Open Dump Cleanup Act |
| PDS | Project Data System |
| PI | Project Impact |
| PER | Preliminary Engineering Report |
| PRCDA | Purchased/Referred Care Delivery Area |

SDS .....Sanitation Deficiency System
SFC .....Sanitation Facilities Construction
STARS.....Sanitation Tracking and Reporting System
TDHE.....Tribally-Designated Housing Entity
USC.....United States Code
USDA .....U.S. Department of Agriculture

# Sanitation Deficiency System (SDS)

A Guide for Reporting Sanitation Deficiencies for American Indian and Alaska Native Homes and Communities

## 1. Introduction

### a. Purpose

This guidance document contains the standard procedures used by the IHS to report the sanitation deficiencies of American Indian and Alaska Native (AI/AN) homes and communities. This guidance document is a reference for tribal leaders who identify sanitation deficiencies that may be eligible for funding to support the construction of sanitation facilities under Public Law (P.L.) 86-121 (codified at 42 U.S.C. § 2004a). This guidance document is also a reference for IHS environmental health and engineering staff who evaluate, report, and prioritize the sanitation deficiencies.

This document provides guidelines for the SFC Program to ensure that uniform standards and procedures are applied across all IHS Areas in the identification of sanitation deficiencies and the development of projects to address those deficiencies. Comparison of data between Areas and consolidation of data by the Headquarters (HQ) SFC Program is not possible without uniformity across the Areas. These guidelines apply for all projects that are developed and prioritized through SDS, whether they are intended to be delivered through direct service or through contracts or compacts under Title I or Title V of the Indian Self-Determination and Education Assistance Act (ISDEAA) (P.L. 93-638 codified as amended at 25 U.S.C. § 5301 et seq.).

Guiding principles that outline the high-level requirements for the entry of data into the SDS are included in Appendix A. Within the framework of these guidelines, IHS Areas shall develop Area-specific guidelines that outline their individual SDS standards and procedures. The minimum content for Area-specific guidelines is listed in Section 4i. Any conflicts between Area and HQ guidelines must be reviewed and approved by the HQ SFC Program.

### b. Program Authorities

P.L. 86-121 authorizes the IHS to provide and maintain essential water supply, sewage disposal, and solid waste disposal facilities for AI/AN homes and communities as part of the Indian Health Service's comprehensive health care mission to raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level. P.L. 86-121 and SFC Program requirements are discussed extensively in the *Criteria for the Sanitation Facilities Construction Program* (Criteria Document).

P.L. 100-713 (codified as amended at 25 U.S.C. § 1632) is the November 23, 1988 Amendment to the Indian Health Care Improvement Act (IHCIA) that resulted in the creation of and maintenance of the SDS. Through Section 1632, IHS is mandated to (1)

maintain an inventory of sanitation deficiencies affecting existing Indian Tribes and communities, (2) develop and prioritize projects to address those deficiencies, and (3) annually report them to Congress. The law also requires that the methodology be "applied uniformly to an Indian tribes and communities," that the IHS "consult with the Indian tribes and tribal organizations…to determine the sanitation needs of each tribe," and that the deficiencies follow the five deficiency levels defined in the law (see Section 5).

c. Background

Since 1989, IHS has annually reported sanitation deficiencies affecting AI/AN homes and communities to Congress through the SDS as required by the IHCIA. Prior to 1989, the reporting of sanitation deficiencies as unmet needs was part of the Sanitation Facility Data System. The Sanitation Facility Data System was a database that included basic information on existing and needed sanitation facilities and information on existing operation and maintenance (O&M) organizations serving AI/AN communities.

Beginning with the 1989 reporting year, sanitation deficiency data were separated from the Sanitation Facility Data System and entered into the newly established SDS. Currently, the SDS is combined with other SFC data systems within the web-based Sanitation Tracking and Reporting System (STARS). STARS contains community profile data, the Project Data System (PDS), the Operation and Maintenance Data System (OMDS), the Service Request database for individual site sanitation facilities, the Home Inventory Tracking System (HITS), and the Housing Priority System (HPS), in addition to SDS. These guidelines do not cover the use of STARS systems other than SDS; refer to the appropriate published guidance from the HQ SFC Program for each data system as appropriate.

The inventory of sanitation deficiencies for existing AI/AN homes is organized by geographic community and associated with AI/AN homes identified in HITS. IHS annually reports these deficiencies to Congress in the form of projects to address those deficiencies. Projects are identified in terms of the sanitation need, the facilities to be provided, the cost of the facilities, and the specific homes to be served by the facilities. The SDS database is updated annually to account for cost changes, to address new and updated State and Federal regulations, to add new deficiencies not previously identified, and to remove deficiencies that have been addressed through approved projects or other means. The SDS inventory is also used for internal program management, budget formulation, justification for appropriations, and as a basis for resource allocation to Areas and Tribes. The project data entered in SDS directly supports the allocation of IHS Regular funds to the Areas. It is also used to provide information to members of Congress, the Office of Management and Budget (OMB), the Government Accountability Office (GAO), the Environmental Protection Agency (EPA), and various other Federal entities who are interested in the sanitation facility needs of Tribes.

Pursuant to 5 U.S.C. § 552a(e)(4), IHS published a notice in the Federal Register on August 26, 2009 regarding its system of records for individuals applying for assistance from the SFC Program. Refer to the Federal Register notice (Document Number E9-20410) for details.

## 2. SDS Overview

### a. Reporting Requirements

Projects to correct sanitation deficiencies affecting AI/AN homes are identified and reported in accordance with these guidelines and approved Area-specific guidelines, regardless of the cost, priority, or O&M capability of the Tribe. The IHCIA requires IHS to consult with the affected Indian Tribe (or tribal organization operating health care programs or facilities under contracts or compacts with the IHS under the ISDEAA) to determine their sanitation needs. The methodology used to report and prioritize projects is to be applied uniformly by the IHS to all Indian Tribes and communities as required by IHCIA section 302(g) (25 U.S.C. § 1632(g)).

All IHS Areas, regardless of their SFC Program delivery method, are required to report in SDS in accordance with the guidelines outlined in this document. Each Area Office must submit their SDS priority lists for review to the HQ SFC Program. The Areas' SDS project information is reviewed by the HQ SFC Program to ensure consistency with these guidelines, and feedback is provided to the Areas where additional information is needed. The national SDS "snapshot" taken in the final quarter of the calendar year aggregates the 12 Area SDS project priority lists, and the economically feasible projects on these lists become the Agency Funding Plan for the following year. The Agency Funding Plan is used for reporting to the Department of Health and Human Services (DHHS), Congress, the Office of Management and Budget (OMB), and others.

### b. SDS Project Components

The principal components of an SDS project are listed in Table 1. Through the information provided and the supporting documentation attached, projects entered in SDS by Area staff must demonstrate the planning and analysis that was carried out to identify the deficiency and design the facilities to address those deficiencies. Additional details are provided in Section 6 and Section 7 of this guideline.

**Table 1: SDS Project Components**

| Component Name | Definition |
|---|---|
| Project Name | Brief statement used to identify the project. |
| Community | Geographic area that identifies the location of the project and links it to other information (e.g. Field Office, EPA Region). |
| Tribe | Name of Tribe primarily benefiting from the project. |
| Existing Deficiency | A complete yet concise statement describing the existing sanitation deficiencies and the public health problem(s) resulting from them. |
| Homes | The number, type, and location of homes and other users benefiting from the project (regardless of eligibility). |
| Primary Project Purpose | A categorical designation of the overall purpose of the project (e.g. increase system capacity or repair/replace failed facilities). |
| Proposed Facilities | A complete yet concise summary of the facilities proposed to address the sanitation deficiencies described. |
| Primary Infrastructure Category | A categorical designation of the primary facilities being provided under the project (e.g. water treatment, sewage collection, open dump closure). |
| Project Deficiency Level | Numerical categorization of the magnitude of the sanitation deficiencies that the project addresses. |
| Cost | A detailed cost estimate of the proposed facilities, prorated by home type, funding source, and other factors as needed. |
| Funding Sources | Identification and documentation of the proposed funding sources and their current status (e.g. a Journal entry on the likelihood of availability). |
| Economic Feasibility | A yes/no determination of whether the project's eligible cost per home exceeds the allowable unit cost. |
| Rating Scores | Eight rating factors to which points are assigned for each project to facilitate their prioritization. |
| Ready to Fund | A yes/no determination completed by the Area SFC Director that confirms whether sufficient project planning has occurred and that significant project risks have been addressed. |

c. SDS Guideline Organization

These guidelines are organized in the chronological order that SDS projects are developed. Development of an SDS project consists of the following major steps:

- Identification of Sanitation Deficiencies (Section 3)
- Eligibility and SDS Reporting Procedures (Section 4)
- Deficiency Level Assignment (Section 5)
- SDS Project Development (Section 6)
- SDS Project Prioritization (Section 7)
- SDS Project Information Submission (Section 8)

## 3. Identification of Sanitation Deficiencies

For the purpose of these guidelines, a sanitation deficiency is a need arising from existing water, sewer, or solid waste facilities (or the lack thereof) that creates or may result in exposure to environmental conditions that can negatively impact public health. The identification of new sanitation deficiencies (and the review of previously identified sanitation deficiencies) can be made in several ways, the most common of which follow:

- Consultation with tribal governments, tribal staff, and tribal members
- Field visits
- Sanitary surveys
- Community environmental health profiles
- Census Bureau reports (for data comparison purposes)
- Tribal master plans for development
- Feasibility studies
- Geographic Information System (GIS) databases
- Official communication from regulatory agencies (e.g. notices of violation from EPA or State officials)

The most reliable and preferred method is a sanitary survey and/or field visit where tribal planning and/or utilities staff accompany IHS staff to document the need and obtain an accurate profile of the homes affected. The SDS database should be updated accordingly after the visit. IHS staff must be familiar with these guidelines and the deficiency level statements in the IHCIA (see Section 5) before conducting field visits in order to effectively identify and categorize sanitation deficiencies. The identification methods used for each proposed project should be documented as part of the project's record.

When identifying sanitation deficiencies, the population demographics and number of eligible homes vs. ineligible users within the community must be accurately known. Judgment should be exercised in using census data, as the Census Bureau may underreport the Indian population and number of homes in some locations. Local data sources (e.g. tribal housing authorities and planning departments) may provide more accurate population and homeownership data.

When deficiencies are identified, an effort must be made to understand which homes are affected by the deficiency. SDS projects must have all of the existing AI/AN homes that will benefit from the project identified in HITS and linked to the project. The HITS data supporting an SDS project must be accurate and must be reviewed on a regular basis (See Section 8c) to determine if any changes have occurred.

## 4. Eligibility and SDS Reporting Procedures

Once identified, sanitation deficiencies must be reviewed in the context of SDS reporting procedures and eligibility requirements to determine the appropriate IHS response. In addition to these guidelines, SFC staff must be familiar with the eligibility requirements outlined in Chapter 5 of the Criteria Document.

### a. Tribal Consultation

P.L. 86-121 requires the IHS to consult with and encourage the participation of Tribes served by SFC projects (42 U.S.C. § 2004a(c)). IHCIA section 302(g) (25 U.S.C. § 1632(g)) requires that IHS consult with Indian Tribes and tribal organizations to determine the sanitation needs of each Tribe.

Collective tribal review (e.g. through an Area's Tribal Advisory Committee) is strongly recommended to gather feedback on how SDS requirements and procedures are applied across the Area, including the use of optional scoring factors (see Sections 7g and 7h). Each Area should provide training to Tribes and/or hold meetings as needed to review SDS policies, criteria, and procedures. Each Area shall develop written procedures outlining their tribal engagement strategy and include them in Area-specific guidelines for SDS implementation (see Section 4i for additional details).

In order to document tribal input and participation in the annual SDS data collection process, Areas must include documentation of their annual engagement with Tribes in their SDS submissions to the HQ SFC Program. The specific processes will be dependent on the policies and needs of the Areas and individual Tribes. If the Area's Tribes assign priorities to their projects in accordance with Section 7e, documentation of tribal engagement can be demonstrated by the written confirmation (e.g. letter or email) provided by a designated tribal official or governing body indicating the Tribe's priorities for the annual project submission. Tribes may decline to assign priority points. In these situations, documentation of the Tribe's participation and input (e.g. a memo from IHS staff summarizing a tribal review meeting) shall be included with the Area's SDS submission in lieu of priority assignments.

Conflict can occur between IHS and a Tribe over which alternative is preferable to address a particular sanitation deficiency. For example, a Tribe may request a particular treatment technology for a wastewater treatment facility, while the IHS engineer determines that there are more cost-effective solutions. Every effort should be made to resolve differences at the local level. IHS should seek to accommodate tribal preferences where possible, but final decisions on the eligibility of projects and the level of participation of SFC staff for each proposed project are made by IHS.

### b. Sanitation Facilities Construction Program Criteria

Only existing deficiencies that meet the current eligibility policies of the SFC Program can be funded through SDS. A detailed discussion on eligibility is contained in Chapter 5 of the Criteria Document, which describes eligibility considerations for persons,

homes, sanitation facilities, and services. Sanitation facilities serving commercial, industrial, or agricultural establishments, including nursing homes, health clinics, schools, hospitals, hospital quarters, and non-AI/AN homes are not eligible for IHS Regular funding, but they can be included in an SDS project if their pro-rata share of the project costs are funded from another source (see Sections 4g and 4h) . The costs for these homes and facilities must be coded as IHS-ineligible in the SDS project.

c. Geographic Boundaries (Service Areas)

The SFC Program can only provide sanitation facilities to eligible homes in counties or other geographic areas that are designated as IHS Purchased/Referred Care Delivery Areas (PRCDAs, formerly known as Contract Health Services Delivery Areas or CHSDAs). PRCDAs are the geographical boundaries within which IHS and Tribes can provide IHS services, including the provision of sanitation facilities through SDS, to eligible tribal members. See Chapter 5, Section I of the Criteria Document for more information.

d. Reporting Solid Waste Deficiencies

The following guidelines will be used for developing SDS projects to address open dump sites and inadequate solid waste facilities for eligible homes. Solid waste deficiencies for AI/AN homes may result from the following:

- a lack of solid waste collection, transport, and/or disposal facilities,
- deficiencies in active tribally-owned and operated solid waste disposal facilities,
- deficiencies at previously used tribally-owned disposal facilities, and
- deficiencies related to open dumping on Indian and Alaska Native lands.

The reporting of solid waste deficiencies for AI/AN homes must consider the collection, transport and disposal components of service. The need for only household solid waste storage containers is not to be counted as a sanitation deficiency. The past provision of only household containers is not to be considered adequate previous solid waste service.

In accordance with the Indian Lands Open Dump Cleanup Act (P.L. 103-399 codified as amended at 25 U.S.C. § 3901), IHS and EPA are required to develop an inventory of open dump sites on Indian lands within the Operation and Maintenance Data System (OMDS), a component of STARS. Each open dump site (see criteria below) identified in the OMDS must have an associated SDS project that complies with the scope requirements detailed below. Multiple open dump sites may be addressed by one SDS project. Roadside dumping, sites that have been or are being operated for profit, minor tire piles, individual home site rubbish piles, scattered abandoned automobiles, and other scattered trash piles that do not meet the criteria for open dumps below can be listed in OMDS but are not eligible for IHS funding. For an open dump site to be eligible for IHS funding and inclusion in the SDS, it must meet the following criteria:

- The site was created through repetitive and intentional disposal practices by tribal households in a manner that does not protect public health or the environment, and

- is susceptible to open burning and/or is exposed to the elements, disease vectors, and scavengers, and
- covers a contiguous surface area of 0.5 acres of land or greater and is not sparsely scattered or windblown debris, and
- is on Indian-owned land or lands subject to the jurisdictional authority of an American Indian or Alaska Native tribal government or governing body.

The AI/AN homes counted as having deficiencies related to solid waste disposal facilities or open dumps must be those homes currently affected by the disposal facilities and/or those homes that use or have used the facilities, as best as can be determined. IHS costs must be limited to the appropriate pro-rata share of the total cost (based on the proportion of eligible AI/AN homes) when it is evident that solid waste from sources other than AI/AN homes is being or has been disposed of at the site. Tribes and IHS should work with EPA, state/county/local governments, and regional solid waste authorities to identify joint cleanup funding opportunities where there are clearly tribal and non-tribal contributors to the open dump.

In order to demonstrate that complete planning and analysis has occurred, solid waste projects in SDS must include the following in their scopes of work (if one or more parts have been completed previously, or if parts are already in place and are being enforced, include documentation of their completion with the proposed project):

- an Integrated Solid Waste Management Plan (ISWMP),
- an alternative for future solid waste disposal once the site is cleaned up, and
- proper on-site burial or removal and disposal of the existing solid waste at the site (as applicable), including any necessary modifications for the continued use or closure of the site.

Use the design criteria in the current EPA municipal solid waste landfill regulations (40 C.F.R. Part 258) when developing cost estimates for new solid waste facilities.

As part of certifying that a solid waste project is "Ready to Fund" (see Section 8a), the Area SFC Director shall coordinate with the regional EPA solid waste contact and other responsible parties to confirm that an ISWMP exists for the Tribe and is being implemented in a manner that has been shown to discourage further open dumping on tribal lands. EPA is responsible for regular assessments, evaluations, and reporting on tribal government solid waste management programs, including analysis of their effectiveness in reducing open dumping activities.

If a Tribe has a need for a solid waste facility or closure of an open dump but does not have an ISWMP (or has an insufficient ISWMP), the proposed SDS project shall include development of the ISWMP as a planning activity that can be separately funded and completed prior to full project funding. As with other planning-only projects, standalone projects for the completion of ISWMPs are not eligible for IHS Regular project funds (see Section 6c for additional details).

Although issues such as the disposal of hazardous wastes within a Tribe's PRCDA are a concern of the IHS, they are usually not within the scope or the expertise of the SFC

Program and may not involve a construction-related solution (e.g. groundwater remediation). The IHS can provide technical assistance to Tribes on solid waste but will refer Tribes with concerns related to hazardous waste identification and disposal to the EPA.

All open dump sites meeting the criteria above need to be evaluated for potential risks and closure costs as part of their SDS project's development. Clean-up and site restoration (grading, seeding, etc.) costs for non-hazardous open dumps should be included where appropriate. Although construction/demolition wastes are considered to be industrial wastes by the EPA, open dumps that include waste from such places as demolished houses and tribal buildings can be considered for an SDS project, as long as such wastes are not the primary items disposed at the site. Open dumps that primarily consist of construction/demolition waste or other types of industrial wastes, environmental remediation activities, and closure of hazardous waste sites should be referred to the EPA and should not be addressed through SDS projects.

e. Deficiencies for Department of Housing and Urban Development Homes

In accordance with a congressionally-imposed prohibition appearing annually in the appropriation act for IHS, none of the funds appropriated to the IHS may be used for sanitation facilities for new homes funded with grants by the housing programs of the United States Department of Housing and Urban Development (HUD). See Chapter 5, Section IV of the Criteria Document for more information.

When an SDS project is identified to correct deficiencies in sanitation facilities that serve existing Tribally Designated Housing Entity (TDHE)-managed HUD homes, the following shall be considered to determine if the TDHE or others should contribute toward the project:

(1) If the HUD homes that will benefit from the project are under TDHE management, and these homes clearly created or contributed to the sanitation deficiency at the time they were built (see examples below), then the TDHE (or another contributing agency) must contribute a pro-rata share of the cost of any new or improved sanitation facilities serving those homes. The pro-rata share is based on the proportional demand placed on the system's capacity by the HUD homes.

i. Example 1: a new 20-unit HUD Native American Housing Assistance and Self-Determination Act (NAHASDA)-funded subdivision was attached to an existing water system serving 80 homes that had pre-existing deficiencies in the off-site facilities (e.g. inadequate well capacity). The addition of the HUD homes contributed further to those deficiencies. An SDS project is developed to improve the off-site facilities, and the TDHE is asked to contribute a pro-rata share (20%) of the cost. The project cannot be considered Ready to Fund until the contributions are committed by HUD or others.

ii. Example 2: in the example above, if there were no capacity problems before the addition of the HUD homes, but adding the 20 homes created a deficiency in capacity, then the deficiency is not eligible for IHS Regular funding, and

the TDHE (or another contributing agency) is responsible for funding the full cost (100%) of the necessary off-site facilities.

iii. Example 3: a deteriorated community sewer system serves a mixture of homes, some of which were funded by HUD and are currently managed by the TDHE. The HUD homes were originally provided adequate sanitation facilities when they were installed. The deficiencies now are related to the deterioration of the collection system over time and are not specific to any homes on the system. An SDS project is developed to address the deteriorated collection system, and the TDHE is not required to make a contribution (Note: refer to item iii below for further guidance regarding TDHE contributions).

(2) If an SDS project proposes to serve HUD units that are managed by the TDHE but did not directly create or contribute to the deficiency when they were built as described in Example 3 above, the cost type should be coded as "IHS-eligible" when entering it into SDS. The associated HITS homes will retain their H1 designation. Note in the Costs tab comment field why those costs are IHS-eligible.

(3) Homes that were originally funded by HUD but have since been conveyed in ownership to the homeowner are treated as eligible AI/AN homes and coded as existing Indian-owned homes (E1) in HITS, if the home and occupant are otherwise eligible. IHS personnel shall coordinate with TDHE staff to identify and keep current the ownership status of homes covered by SDS projects.

(4) Regardless of whether the costs for facilities serving HUD homes are IHS-eligible or not, IHS should actively partner with the TDHE and seek funding contributions (with tribal approval) when homes under TDHE management are included in an SDS project. The goal of these efforts is to leverage TDHE support and extend the reach of limited IHS Regular project funds. The outcome of these efforts should be referenced in the SDS project submission (e.g. reference to an email response or conversation with the TDHE representative). Note that funding contributions for otherwise IHS-eligible HUD homes allow for the consideration of Contribution points for the SDS project (refer to Section 7g).

(5) If it is determined that the TDHE (or others) must contribute a share of an SDS project's cost, the cost must be prorated between IHS and the TDHE based on the proportional demand of the HUD homes, and the reason for proration must be clearly explained in the Proposed Facilities narrative. Refer to Section 4g for an additional example of prorating costs between eligible and ineligible homes. If the TDHE is not able to provide the required contribution, the IHS Area should assist the Tribe in identifying alternative funding sources and should determine if the eligible homes can be separated and adequately served on their own. Otherwise, the project cannot be considered Ready to Fund until the necessary contributions are committed.

(6) Deficiencies in individual (not community) sanitation facilities serving HUD housing units that are still under the management of the TDHE are the responsibility of HUD, through the TDHE. Those deficiencies are not eligible for

funding under the P.L. 86-121 SFC Program and should be referred to the TDHE for inclusion in their annual budget. These deficiencies can only be included in an SDS project if they are funded by a non-IHS source.

(7) The TDHE contributions should be identified separately from the IHS funding in SDS; the SDS Costs data input forms in STARS have separate fields for IHS contributions, HUD contributions, and other contributions.

f. Operation and Maintenance Needs

Authorization for IHS to assist Tribes with establishing, equipping, and training utility organizations and assist with emergency repairs is included in the IHCIA (25 U.S.C. § 1632(b)(2)). However, it is not feasible for IHS to list all Tribes' operation and maintenance needs in SDS on a project-by-project basis. The focus of SDS is to report and prioritize the sanitation facility construction needs for AI/AN homes at Deficiency Levels (DLs) 2 through 5 (refer to Section 5 for details on deficiency levels). The requirement in the IHCIA for reporting the cost to raise communities from a DL 1 to a DL 0 (25 U.S.C. § 1632(g)(1)(E)) is addressed separately by the HQ SFC Program through estimating methods that consider the average cost to provide adequate O&M services. As a result, the SDS does not establish any economic feasibility criteria for O&M-only projects. Projects in SDS that only address O&M issues are automatically designated as economically infeasible by the system.

The identification of O&M needs is important, however, for the SFC Program to ensure the sustainability of installed facilities. Projects listed in SDS should include consideration for the tools, training, and equipment needed to directly support the facilities installed. Additionally, there may be instances where listing stand-alone O&M projects in SDS is beneficial. Stand-alone projects for routine O&M needs that relate to specific facilities (e.g. repair of plumbing and pumps, replacing short-lived assets, changing wear plates or seals, painting of tanks) are rated at a DL 1 and can be included in SDS as Tribes request and as IHS staff resources allow. Inclusion of these projects in SDS may facilitate funding by partner agencies or be useful for allocating IHS Special funding (refer to Chapter 5, Section VI of the Criteria Document for further information on Special projects). Stand-alone projects for developing operation and maintenance capacity that do not address specific system components (e.g. manpower studies, asset inventories, rate studies, efficiency projects, and operator training) cannot be assigned a deficiency level and shall not be included in SDS. Where possible, these activities should be integrated into specific projects that address eligible deficiencies, provided those specific O&M activities directly support the facilities being constructed through the SDS project.

g. Communities with Varying Eligibility

Chapter 5, Section V of the Criteria Document includes provisions for SFC assistance to communities with varying eligibility. Indian communities are defined as those that have a population (not a housing count) that is 50 percent or more Indian who are eligible for IHS services under 42 C.F.R. § 136.12. For the purpose of determining whether a community is Indian or non-Indian, population estimates are based on the

most recent census data for that community or other data sources as available (e.g. tribal housing authorities and planning departments). Note that when referring to SDS projects, the "community" served includes the entire population benefitting from the project. This may be greater or less than the population defined by the local political boundary.

Chapter 5 of the Criteria Document outlines the services that IHS can provide to Indian and non-Indian communities, based on the population size and percent AI/AN. Table 2 summarizes these requirements:

**Table 2: Non-Indian Communities within a Tribal PRCDA**

| Community Category | % American Indian and/or Alaska Native Population | Overall Community Population | Is the community eligible for Regular project funds per Criteria guidelines? |
|---|---|---|---|
| Non-Indian | <50 % | >10,000 people | Limited[1] |
| Non-Indian | <50% | < 10,000 people | Yes[2] |
| Indian | >50% | N/A | Yes[2] |

[1] IHS can provide new service line connections for Indian homes with failed or non-existent individual onsite facilities. IHS can also provide replacement service line connections for Indian homes with failed service lines. Other than these service connections, no Regular project funds can be provided for improvements to or replacement of existing community sanitation facilities.

[2] IHS funds may be provided for improvements to, or replacement of, existing sanitation facilities proportionate (on a demand basis) to the number of existing Indian homes served by the facilities.

IHS funding for projects in non-Indian communities must be requested by a Tribe with PRCDA coverage for the community and documented in SDS. Usually, addressing sanitation facilities in non-Indian communities results in IHS making a funding contribution toward a community project that is not managed by IHS; hence, they are not typical IHS projects. As described in Table 2 and detailed in the Criteria Document, IHS can only provide limited assistance to non-Indian communities with a population greater than 10,000.

For projects that serve Indian communities or non-Indian communities with a population less than 10,000, the IHS funding amount that is entered in SDS can only be the pro-rata cost associated with improved services to AI/AN homes, with the following exceptions: IHS can serve tribal buildings that are used for assemblies and meetings of tribal members, such as a tribal community center, in conjunction with nearby homes if they represent an incidental cost to the project (e.g. provision of a service line connection). IHS cannot serve tribal businesses such as a casino establishment, gas station, etc. Refer to Chapter 5, Sections V and VI of the Criteria Document for further information.

When prorating project costs, the IHS funding amount entered into SDS is calculated based on the total project cost, less the prorated costs for all the commercial, industrial, governmental, and institutional establishments benefiting from the proposed facilities, and less the prorated costs for all services to the non-Indian homes, non-residential users and State/Remote housing units benefiting from the proposed facilities. In no case should funding appropriated to SFC be used to provide service to ineligible homes or

users. Cost proration is calculated by comparing the Equivalent Dwelling Unit (EDU) demand of the ineligible users to the eligible homes (refer to the example below). The IHS funding amount should not be based on the community's Indian/Non-Indian population ratio.

Funding contributions from non-IHS sources are required to cover the proportional share of ineligible homes and establishments that benefit from the project; otherwise, the project cannot be considered Ready to Fund. The funding sources and likelihood of contribution should be clearly identified in the Cost tab of the SDS project and described in the Proposed Facilities narrative. Documentation of funding commitments should be attached to the SDS project.

Note that the term 'benefiting' refers to all homes and system users that receive new or improved water, sewer, or solid waste service as a result of the project.

EXAMPLE: Community A is served by a failing community drainfield system, estimated to require $200,000 to replace. The system serves the following users:

- A population of approximately 100 (~65% tribal members)
- 15 eligible AI/AN homes
- 5 ineligible non-Indian homes
- 2 ineligible connections (a school and a convenience store), estimated to be equivalent (on an average daily flow basis) to 10 residential connections, also known as equivalent dwelling units (EDUs)
- Total ERUs = 15 + 5 + 10 = 30

The eligible IHS funding amount is calculated as follows:

Eligible cost = $200,000 – ($200,000 * 5/30) – ($200,000 * 10/30)
Eligible cost = $200,000 – $33,333 – $66,667
Eligible cost = $100,000
Eligible unit cost = $100,000 / 15 homes = $6,667 per home

The Tribe or another entity would need to contribute the share of project funding ($100,000) attributable to the 5 non-Indian homes and the 10 equivalent non-residential units. Note that the IHS funding share would be the same regardless of whether the community is Indian or non-Indian, as long as the population is less than 10,000. The SDS system will automatically calculate the eligible and ineligible shares of the project cost based on the information provided.

EDUs are determined based on the amount of water consumed or waste disposed by a typical full-time single family residence. Areas shall reference published standards (e.g. EPA's Design Manual for Onsite Wastewater Treatment and Disposal Systems) or describe their procedures for calculating EDUs for water, sewer, and solid waste service as part of their Area-specific guidelines.

The following information should be associated with each SDS Project, either through the Homes tab and associated HITS information, or through the Existing Deficiency narrative:

- the Indian and non-Indian population (if the non-Indian population is significant),
- the number of Indian and non-Indian homes, and
- the number of commercial and institutional users and their EDU equivalents.

h. Deficiencies Not Eligible For IHS Funding

The following types of needs are not eligible for IHS Regular project funding and should not be the basis for listing a project in SDS (see exceptions at end of this section). Where applicable, Areas should consider whether elements of these needs (such as O&M support) can be included as part of projects that address eligible deficiencies, if those elements are incidental to the project and their need is supported by prudent engineering.

(1) Future development – Water and sewer facilities for future homes and housing developments should not be included in SDS. SDS projects are only to be developed to address sanitation deficiencies for existing homes. This should not be confused with designing facilities to have flexibility to accommodate future demand where appropriate, in accordance with Chapter 5, Section VIII the Criteria Document. Excess capacity that is not eligible for IHS funding may be included in a project if requested by the Tribe, provided that a proportional amount of funding is provided from a non-IHS source.

(2) Anticipated needs – Deficiencies based on predicted needs or anticipated future conditions are not to be included in SDS. For example: projecting septic system failures or anticipating well failures due to ongoing drought conditions. Predictive needs may only be addressed through SDS projects if one of the following conditions exists:

i. An upcoming (i.e. fully-approved) regulatory change will place the sanitation facilities out of compliance with applicable health-based regulations.

ii. Documentation is provided that clearly points to the imminent failure of the existing facilities in question. For example, a trendline of failing system components not correctable by routine maintenance (e.g. water main breaks), when documented and combined with sound engineering analysis and judgment, might be used as evidence of an immediate (i.e. within one year) future condition.

(3) Non-sanitation facility needs – Deficiencies other than those for domestic drinking water supply, sewage disposal, and solid waste disposal facilities are not eligible for IHS Regular funding and should not be included in SDS. This includes lack of capacity in laundry facilities, demolition-only projects, replacing adequate underground vaults with above-ground facilities, projects solely for fire

suppression storage or fire suppression flow capacity, scattered or roadside trash pickup, environmental remediation needs, etc.

(4) Compliance with proposed environmental regulations – Projects intended to comply with proposed (i.e. not final) regulations should not be included in SDS. Typically, final regulations allow a period of time for achieving compliance. Deficiencies identified and proposed projects to correct the deficiencies included in SDS should be based on the date of publication of the regulations, not on the required compliance date. For example, if a final regulation published June 1, 2016, requires compliance by June 1, 2018, then SDS updates after June 1, 2016, should include funding to meet the June 1, 2018 requirements.

(5) Replacement of adequate individual facilities (e.g. wells and septic systems) with community-type facilities – the concept that community systems are preferable to individual systems cannot be the sole justification for including such projects in SDS. For example, a home with an adequately functioning individual well and septic tank/drainfield system has no water or sewer deficiencies.

(6) Projects to replace adequate existing community facilities – Projects that replace adequate community facilities, such as a purchased water supply or municipal sewage disposal, for purely preferential or economic reasons, shall not be included in SDS.

(7) Replacement of asbestos-cement pipe – Asbestos-cement piping in water distribution systems is not considered a deficiency unless there are identified problems such as documented asbestos above the regulatory threshold in the water or repetitive distribution system breaks resulting in loss of water service for AI/AN homes directly attributable to the condition of the pipe (refer to Appendix E for deficiency level examples). Worker safety issues associated with routine repair and replacement of asbestos cement pipe are not sanitation deficiencies on their own, but if the system is otherwise eligible for Regular project funding, full and appropriate care should be taken during project planning to address worker safety and protect the system's users.

(8) Interior plumbing repair and replacement projects – Interior plumbing repair and/or replacement should only be included in SDS projects if the plumbing needs are for existing AI/AN homes without water and/or sewer service, and the plumbing upgrades are necessary to sustain the installed facilities and provide functional service. Stand-alone interior plumbing repair or replacement projects are not eligible for IHS Regular funds. IHS can provide incidental bathroom piping and plumbing fixtures (e.g. replacement of broken piping and faulty toilet tank floats/flapper valves) when providing service to an existing home, but bathroom renovations and structural improvements for homes with existing piped water are not eligible for IHS Regular project funds (note that IHS can provide bathroom additions for homes with no in-home piped water and sewer). IHS will not replace plumbing and fixtures that are functional and adequate for the provision of basic service.

(9) Efficiency-only projects – Projects that address only energy or manpower efficiency issues for existing facilities (e.g. replacement of working manual meters with automated meters, installation of data acquisition systems for manpower efficiency purposes, replacement of adequate pump motors with more efficient motors) are not eligible for IHS Regular project funds and should not be included as stand-alone projects in SDS. Options to improve the efficiency of proposed sanitation facilities that address an eligible deficiency should be considered during the project planning and design phase.

(10) Deficiencies in facilities owned by Federal agencies – deficiencies in real property or facilities owned and maintained by Federal agencies (e.g. IHS, Bureau of Indian Affairs) are the responsibility of those respective agencies and are not eligible for IHS Regular project funds. Stand-alone projects to address these types of facilities should not be included in SDS.

(11) Community facility deficiencies attributable to ineligible system users – deficiencies that are entirely attributable to system users that are not eligible for IHS Regular project funds should not be included in SDS. For example, a lift station (previously adequate) that is overloaded by the addition of a commercial establishment to the collection system is not an eligible deficiency.

Exceptions: IHS Areas and Tribes may find it beneficial to list some projects in SDS that are not eligible for funding under P.L. 86-121 but may be eligible for funding through other agencies that use the SDS to identify projects (e.g. projects to serve existing HUD homes that can be funded by EPA). As staff resources allow, these types of projects may be included in the SDS database, provided that the costs are coded as ineligible and a funding source other than IHS is identified. The Existing Deficiencies narrative must include the reason for including the project in SDS.

i. Area-Specific Guideline Requirements

In addition to these national SDS guidelines, IHS Area DSFC Programs will establish Area-specific guidance for local implementation of SDS data collection and reporting. These guidelines shall include:

- Referenced design standards used for water, sewer, and solid waste facilities, and other applicable standards for design, including calculation of EDUs
- Project cost estimating procedures
- Capital cost scoring tables and a description of how historic construction costs are collected and used to develop the Area's average costs and scoring tables
- Explanation of how Contribution scores are applied to the Area's SDS projects
- Description of the Area's strategy for tribal engagement on SDS procedures and the processes for obtaining and documenting tribal project priorities

In addition to the required elements described above, the Area-specific guidelines can include the following elements as necessary:

- Descriptions of process refinements and tools for identifying deficiencies and developing projects (e.g. cost estimating templates, project review/routing forms, etc.)
- Additional examples that aid Area staff in the selection of a Deficiency Level description included in Appendix E of this document
- Additional examples that aid Area staff in the selection of a Health Impact score within the framework described in Section 7a of this guidance document

Areas shall submit their Area-specific guidelines to HQ for review and comment prior to finalization. Any significant changes in the Area's guidelines after they are finalized shall also be submitted to HQ for review and comment.

## 5. Deficiency Level Assignment

The IHCIA requires the determination of "the level of sanitation deficiency for each sanitation facilities project of each Indian tribe or community" (25 U.S.C. § 1632(g)(1)). In accordance with this requirement, Deficiency Levels (DLs) are determined for each project in SDS. Table 3 shows the deficiency level descriptions as written in the IHCIA (Level 5 is the highest priority).

**Table 3: Sanitation Deficiency Levels**

| Sanitation Deficiency Level | | Sanitation Deficiency Levels [25 U.S.C. § 1632(g)(4)] |
|---|---|---|
| | | Description |
| V | 5 | An Indian tribe or community that lacks a safe water supply and a sewage disposal system. |
| IV | 4 | An Indian tribe or community with a sanitation system which lacks either a safe water supply system or a sewage disposal system. |
| III | 3 | An Indian tribe or community with a sanitation system which has an inadequate or partial water supply and a sewage disposal facility that does not comply with applicable water supply and pollution control laws, or has no solid waste disposal facility. |
| II | 2 | An Indian tribe or community with a sanitation system which complies with all applicable water supply and pollution control laws, and in which the deficiencies relate to capital improvements that are necessary to improve the facilities in order to meet the needs of such tribe or community for domestic sanitation facilities. |
| I | 1 | An Indian tribe or community with a sanitation system which complies with all applicable water supply and pollution control laws, and in which the deficiencies relate to routine replacement, repair, or maintenance needs. |
| 0 | 0 | No deficiencies to correct. |

The Deficiency Level is determined by examining the impact the installed facilities will have on the homes included in the project. For each home, a Project Impact (PI) value is determined that describes the magnitude of the deficiency being addressed, using the Deficiency Level descriptions in the IHCIA and the examples included in Appendix E.

The Deficiency Level is automatically calculated for each project in SDS based on the arithmetic mode of the PI values assigned to the project's eligible homes. In other words, the PI value that applies at the highest number of homes becomes the overall DL for the project.

It is important to note that the PI value considers the deficiencies that are to be corrected by the project. A project that addresses a DL 2 issue for a home that also has DL 4 issues generates a Project Impact of 2 for that home. For example, a project developed to repair a washeteria/watering point that serves homes with no piped water generates a PI of 2. The project is addressing a DL 2 capital improvement issue, but the home still has a separate DL 4 issue (lack of piped water in the home).

Projects that address one type of service (e.g. the project provides water or sewer, not both, unless a DL 5 condition exists) and address deficiencies common to all of the homes on the project are preferred. Care must be taken when developing projects that address multiple deficiencies and/or types of service; the Project Impact at each home must be assigned correctly in order for the system to score the project appropriately. For example, a project to increase water pressure on a community water system may address pressure deficiencies for some homes at a DL 3 level and other homes at a DL 2 level.

If a project is addressing multiple deficiencies at a single home, that home should be assigned a PI according to the highest DL addressed by the project. For example, a field engineer develops a project that addresses a DL 3 water storage capacity issue and a DL 2 water pressure issue at a home; that home is assigned a PI of 3.

Additionally, proposed projects should reflect the full range of homes impacted and should not be artificially configured to stay within a particular deficiency level definition or serve a specific subset of homes. For example, a project for a community with a common deficiency affecting eligible and ineligible homes should not be shown as serving only the eligible homes.

Note that the examples in Appendix E are not intended to be exclusive. When deficiencies are identified, they may not be fully described by a particular example. IHS staff that are assisting with the identification of deficiencies and preparing SDS projects are expected to provide sound engineering analysis and consider how the particular deficiency compares with the statutory descriptions of the various deficiency levels in the IHCIA.

## 6. SDS Project Development

Based on the data gathered by IHS and tribal staff, projects are developed to address sanitation deficiencies for eligible AI/AN homes. Proposed SDS projects must address the deficiencies identified for the specific homes in HITS and correct those deficiencies in an organized, effective, and efficient manner. The primary purposes for developing an SDS project are to:

- Provide first service to existing AI/AN homes that lack sanitation facilities.
- Address existing sanitation facility deficiencies that pose a health risk to AI/AN homes.
- Bring systems into compliance with applicable water supply or pollution control laws.
- Increase system capacity to accommodate existing needs.

Planning, research, feasibility investigations, preliminary engineering evaluations, and comparison of alternatives are fundamental to the development of successful SFC projects. Project planning and design efforts that identify the deficiencies, fully scope the proposed alternative, and address potential project risks must be completed prior to funding a project through SDS. The recommended alternative becomes the SDS project scope. More information on planning and funding projects can be found in Chapter 8 of the Criteria Document and in the IHS DSFC Project Management Guideline.

a. Narratives

The existing sanitation deficiencies and the proposed facilities to address those deficiencies are described narratively in the Existing Deficiencies and Proposed Facilities sections in SDS, respectively. These narratives summarize the more detailed engineering analysis typically contained in the Preliminary Engineering Report (PER) or other attachments (see Section 8a). The Existing Deficiencies section should completely but concisely justify the Project Impact values assigned to the homes (see Section 5b). A reviewer should be able to determine if the project Deficiency Level is appropriate by reading the information provided. The narrative should identify the magnitude of the public health problem and explicitly identify the example statement from Appendix E of this guideline (or the Area-specific guideline) that most closely describes the deficiency to be addressed. The information provided in these narrative sections should be specific and quantitative. Vague, non-specific, or qualitative terms (e.g. terms such as “high” or “low” pressure, “frequent” breaks, “routinely” fails, “design standards” not met, “design life” exceeded, “inadequate,” “old,” etc.) should not be used to describe existing deficiencies. The existing deficiency description must be supported by appropriate documentation attached to the project.

As examples:

- “Lab results show nitrate levels of 15 mg/L, exceeding the MCL of 10 mg/L (see attached lab results)” should be used rather than “high nitrate levels.”

- "10 individual wells with yields of less than 5 gpm (pump test results attached)" should be used rather than "inadequate low-yielding wells."

- "12 septic systems with continually surfacing drainfield effluent – refer to attached report (or see Service Request documentation)" should be used rather than "failed septic systems."

- "Attached report shows daily water pressure of approximately 10 psi measured at 10 homes during peak demand periods" should be used rather than "low pressure in the water system."

Descriptive information entered in the Proposed Facilities field should fully describe the facilities necessary to address the described deficiencies. The Proposed Facilities narrative should be detailed enough for the reviewer to determine if the project's technical approach is sound. References to more detailed attachments should be used when appropriate.

b. Design and Cost Estimation of Needed Sanitation Facilities

The proposed project should be appropriately designed for the given conditions (e.g., a lagoon for the treatment and disposal of sewage in a remote dry-climate location may be more appropriate than a mechanical package sewage treatment plant). Providing piped water and sewer into each home in all locations may not be feasible; note the conditions that influenced the preferred design alternative (e.g. cost, tribal O&M capacity) in the Proposed Facilities section of the SDS project.

Proposed improvements to address the identified sanitation deficiency must be based on a geographically and technically-relevant engineering standard. These standards should be broadly accepted standards for the design and construction of sanitation facilities. When design standards are cited as a justification for deficiency level assignment, the fact that an existing facility does not meet current engineering standards does not alone serve as a basis for establishing a sanitation deficiency. The issue being resolved must be the result of a situation that impacts health. This is a critical distinction that must be understood and applied. For example, an engineering standard that recommends a minimum water main diameter is not in itself a justification for a sanitation deficiency. However, if the water main's transmission capacity is impacting the system's ability to supply an adequate quantity of water at a sufficient pressure, a deficiency may be justified. The Area's engineering design standards should be listed in their Area-specific guidelines (see Section 4i).

Projects in the top 20% by total cost of the Area's priority listing should have cost estimates and design parameters (e.g. lagoon sizing, pipeline lengths) with an accuracy goal of plus or minus 10 percent. Cost estimates and design parameters for the remaining SDS projects should be accurate to within plus or minus 25 percent. During the annual SDS review process, HQ SFC Program staff will review the Areas' cost estimating practices. The Areas will describe in their SDS guidance the required formats of cost estimates and the process for updating cost estimate data.

Cost estimates must be complete and detailed enough to demonstrate that an appropriate level of planning and analysis has occurred, based on the information known about the project at the time of submission. Costs should be limited to direct construction costs, appropriate planning costs (see Section 6c), and project fees/indirect costs only as appropriate per Chapter 9 of the Criteria Document and Chapter VI, Section 3 of the MOA Guidelines. Cost estimates must include an appropriate amount reserved for construction contingencies in accordance with Area-specific cost estimating procedures.

c. Planning and Engineering Costs

Stand-alone planning projects should not be entered in SDS. Planning needs that cannot be performed in-house and/or require funding for the procurement of outside technical assistance (e.g. soil borings, hydrogeological analysis) should be included in the construction project's scope and cost. If needed, an Area may fund the planning work while the proposed construction project remains in SDS. Refer to Section 8a for details on managing projects in SDS that are not yet Ready to Fund due to incomplete planning or other reasons.

Areas may use a variety of means to fund planning activities, depending on Area policy and the size and complexity of the needed effort. Technical support activities (e.g. drafting and surveying) are covered through Project Technical Support (PTS) funds included in the scope of the construction project (refer to Chapter 9, Section VI of the Criteria Document). Once planning work has been completed, the construction project's SDS entry and cost estimate should be appropriately updated, with the costs for the completed planning work removed from the scope and estimate.

IHS-appropriated SFC project funds shall not be used to pay for permanent professional engineering staff (refer to Chapter 9, Section VI of the Criteria Document). When a partner agency will be providing funds for the construction of sanitation facilities, and IHS has determined that a set-aside of those contributed funds is necessary to offset what would otherwise be a burden on existing IHS professional staff resources, those engineering costs are to be agreed upon through separate Area-to-funding agency discussions after the SDS submission is finalized. Those negotiated engineering costs are not to be included in the SDS cost estimate. Engineering fees and/or professional engineering services may be included as part of the SDS project scope in the following situations:

- if a project requires engineering work that is beyond the Area's scope of expertise, and professional engineering services will be procured as part of the project; or

- when a project supports community facilities located in a non-Indian community where the Tribe and IHS are not responsible for the design, but a proportional share of the engineering costs are eligible.

d. Project Phasing

Where practical, projects may be separated into smaller phases to facilitate determinations of economic feasibility (see Section 6e). Project phasing may also be necessary due to the limitations of available funding. However, each phase of the project must result in fully operational facilities that address the sanitation deficiency of the homes included in that project phase. For example, a project to provide water service to a community using individual wells must provide complete water service (source, treatment, storage, and distribution) to each home included in each phase of the project. Further, the project must serve eligible homes; the source, treatment, and/or storage cannot be provided in a stand-alone project without providing service to eligible homes.

Areas shall include in the Proposed Facilities section of the SDS project a description of how the project phasing meets this requirement. Projects or project phases that only provide partial service to existing homes (e.g. building a storage tank but not connecting it to any homes) shall not be included in SDS.

e. Economic Feasibility

SDS project development must include analysis of the cost-effectiveness of the proposed facilities. During project development, alternative concepts to address the identified deficiencies are analyzed, including the consideration of construction costs and O&M costs over the projected life span of the new facilities. Once an alternative has been selected, the construction costs are entered into SDS, and the system determines the eligible unit cost, which is the eligible cost divided by the number of eligible homes. SDS also calculates an allowable unit cost based on facility type (water, sewer, or solid waste) and geographic factors. Projects are considered economically infeasible if their eligible unit cost exceeds the allowable unit cost. Refer to Appendix B for further details.

If a project in SDS is found to be economically infeasible, the Area should, if possible, develop an alternative economically feasible project of reduced scope that will provide a minimal level of safe water supply and/or waste disposal service (e.g. not necessarily piped water and sewer). For example, a project to provide piped water for 20 remote homes that haul water is found to be economically infeasible. As an alternative, an off-site watering point and improved water hauling equipment is found to be economically feasible. Both projects should be entered into the data system. The project that is not economically feasible should be coded as a phase 2 project. There should only be one feasible project listed for each sanitation deficiency.

If a project is economically infeasible, the capital cost score is automatically set at negative twenty (-20) points by the system (see Section 8d). For projects that are divided into phases, each phase should be independently evaluated for economic feasibility. However, some project phases are dependent on the completion of previous phases (e.g. successive extensions of a community water main). In those instances where a phased project is determined to be infeasible, all subsequent project phases in SDS must be coded as infeasible and have -20 points applied for their capital cost score.

f. O&M Organization Capability

The IHS seeks to ensure that the sanitation facilities it constructs will receive sufficient O&M, so that the resulting public health benefits continue long after the facilities are placed into beneficial use. For all IHS-constructed or funded sanitation facilities, a Tribe or other responsible entity must agree to assume O&M responsibility.

A past history of facilities deteriorating, failing, or going unrepaired due to a lack of O&M or due to a lack of technical, financial and managerial capability cannot be reasons to exclude Tribes from the provision of sanitation facilities (refer to the IHCIA, 25 U.S.C. § 1632). However, the ability and interest of a Tribe (or others) to effectively operate and maintain the proposed sanitation facilities is considered during SDS project development and prioritization (see Section 8f). Area DSFC staff maintain the Operation and Maintenance Data System (OMDS), which includes profiles for tribal water, sewer, and solid waste systems and the organizations that manage them. Using a standard scoresheet, each organization is rated on their operational capacity, compliance capability, budgeting ability, and organizational structure. Examples of the O&M capacity evaluation scoresheets are included in Appendix C.

Individual site sanitation facilities (e.g. septic tanks and drainfields), often referred to as scattered sites, are typically operated and maintained by the homeowner. Areas may choose to assign a standard O&M Capability score for all scattered site projects in SDS, or they may assign a lower score for projects serving homes with previously failed facilities. Regardless, potential adverse health impacts resulting from failed facilities should not be ignored. IHS staff should discuss these situations with the Tribe and provide assistance in identifying resources to address these problems. IHS and the Tribe may cooperatively develop requirements for the homeowner as a condition of service (e.g. homeowner agreements accepting ownership and responsibility for operating and maintaining the facilities).

In the course of planning and designing sanitation facility construction projects, Areas shall consider and include the establishment, training, and equipping of utility organizations where needed to support the facilities provided by the project. Additionally, deliverables that facilitate operation and maintenance should be included as part of larger construction projects when possible, with the cost allocated to water, sewer, or solid waste (as opposed to O&M costs). Examples include control systems, water meters, as-builts, electrical control schematics, and the provision of equipment operating instructions and maintenance guides.

g. Contributions

If a project provides improvements that benefit a mixture of eligible and ineligible homes and system users, the pro rata share of the total project funding associated with the ineligible homes and users must be contributed by non-IHS sources, as described in Chapter 5, Section V of the Criteria Document. Other agencies (Federal, State, and local) also fund sanitation facility construction projects in IHS PRCDAs through various legislative authorities and often work with the IHS in achieving their program

goals. IHS staff should coordinate closely with these other funding agencies to maximize funding opportunities for projects, particularly when the costs cannot be covered by IHS.

Tribes and tribal organizations may also provide funding for SFC projects from tribal general funds, business enterprises, and private lending institutions. These and other sources of funding should be considered, along with available IHS funding, in addressing the sanitation deficiencies of existing AI/AN homes and communities.

The status (or absence) of required funding contributions must be reported in the SDS project listing. A written tribal funding proposal that describes the expected timeline of funding contributions from all parties is sufficient to mark initial SDS project submissions as Ready to Fund. Prior to any obligation of IHS funds, however, contributions must be fully committed by all parties. If contributions are not committed, IHS will not obligate any funding, and the project will remain in the SDS inventory until such time as the contributions are available.

Non-IHS funding sources can provide contributions to cover IHS-eligible costs in addition to the ineligible costs. In these cases, the project may receive priority points under the Contributions category. Refer to Section 7g for additional information.

h. Project Classification

In order to help characterize Area needs and facilitate analysis and reporting on the range of projects listed in SDS at the Area and HQ level, two classification components are included in the Project Details tab in SDS: Primary Project Purpose and Primary Infrastructure Category. The categories under these components are described below.

Primary Project Purpose:

- Provide first time piped water and/or sewer service
- Repair/replace failed facilities
- Address regulatory exceedances (e.g. drinking water Maximum Contaminant Level or wastewater discharge permit)
- Increase system capacity

Primary Infrastructure Category

- Water transmission
- Water treatment
- Water storage
- Water distribution system (including pump stations)
- Sewage treatment
- Sewage collection system (including lift stations)
- Water and/or sewer service connections
- On-site water and/or sewer
- Landfill/transfer station
- Open dump closure
- Other

In selecting a primary project purpose and infrastructure category, the category that predominates for the project should be selected. For example, a project that provides $500,000 in water storage improvements to increase system capacity and $200,000 in transmission system improvements to replace failing water main would be classified with a primary purpose of increasing system capacity and a primary infrastructure category of water storage.

## 7. SDS Project Prioritization

The SDS project prioritization methodology is based on eight (8) scoring factors: health impact, project deficiency level, previous service, capital cost, local tribal priority, O&M capability, contributions, and other considerations. Each proposed SDS project must be prioritized based on these factors. Areas have some flexibility in how the factors are applied, as described herein. These factors and the process for assigning their values are described in detail below.

IHS Areas are required to ensure that the scoring is applied fairly, consistently, and properly according to these guidelines and any Area-specific guidelines. All scores must be substantiated by the information provided in the SDS project. In the process to develop scores and the associated SDS information, it is expected that Area staff may discuss potential scores with tribal staff. In these conversations, it is important to explain that the Area staff involved provide recommended scores and that their recommendations are subject to review for consistency with these guidelines (and any applicable Area-specific guidelines) by the Area SFC Director and the HQ SFC Program.

a. Health Impact (0 to 30 points)

This factor represents the potential for occurrence of a disease or other adverse human health effect directly attributable to the failure (or lack of) water, sewer, or solid waste facilities. Health impact scores generally increase with increasing deficiency levels, but they are distinguished as a separate scoring category to account for the varying nature and severity of exposure pathways associated with deficient sanitation facilities. A framework for the scoring of this category is presented in Table 4 below. Within this framework, Areas may develop additional or more specific health impact evaluation criteria as part of their Area SDS guidelines.

A benchmark of 5 gallons/capita/day has been established as the minimum average water capacity required for basic access to water. Projects developed to address situations where the available water quantity is less than this amount should be scored with a health impact of 24 and a deficiency level of 4 for water. Areas can establish other levels of service for different deficiency levels and health impact scores based on the local conditions they determine to be appropriate.

Note that for the purpose of health impact scoring, individual on-site facilities (e.g. wells and septic systems) should be evaluated similarly to community systems, using appropriate regulations and standards as measures for evaluation (e.g. EPA Safe Drinking Water Act primary contaminants), even if those agencies do not regulate individual systems.

Tribal solid waste systems, including open dumps (see Section 4d) are reported in OMDS. Open dumps are assigned a health threat score in OMDS based on a range of site characteristics and hazard factors. The general classification of an open dump's health threat score (high, medium, or low) can be used as a basis for the SDS Health Impact score.

**Table 4: Health Impact Scoring Framework**

| Score | Facility Type | | |
|---|---|---|---|
| | **Water** | **Sewer** | **Solid Waste** |
| 30 | Documented acute disease outbreak attributable to a documented drinking water facility deficiency. | Documented acute disease outbreak attributable to a documented wastewater facility deficiency. | Documented acute disease outbreak attributable to a documented solid waste facility deficiency. |
| 24 | Likely adverse health impact; e.g. documented evidence of water contamination that would result in non-compliance with EPA's Safe Drinking Water Act (SDWA) rules, requiring a Tier 1 Public Notification[1] by the primacy agency (e.g. Fecal coliform, E.coli, Nitrate); -or- no piped water present in home -or- available water quantity less than 5 gallon/day/person. | Likely adverse health impact; e.g. untreated sewage routinely surfacing or ponding and accessible to human contact; –or– no piped sewer in home. | Likely adverse health impact; e.g. burning open dump with unrestricted access; documented drinking water aquifer contamination linked to a solid waste landfill. |
| 18 | High potential adverse health impact, e.g. documented evidence of water contamination that would result in non-compliance with maximum contaminant level, maximum residual disinfection level and treatment technique violation requiring a Tier 2 Public Notification[1] by the primacy agency (e.g. arsenic, synthetic organic chemicals, radioactive contaminants) per the SDWA. | High potential adverse health impact; e.g. violations of National Pollutant Discharge Elimination System (NPDES) permit requirements or applicable health-based code requirements where substantial human contact/impact is likely. | High potential adverse health impact; e.g. open dump with a High health threat score (401+)[2]. |
| 12 | Potential adverse health impact; e.g. regularly-occurring water outages potentially creating backsiphonage in the system, source well does not meet separation requirements from drainfield. | Potential adverse health impact; e.g. violations of NPDES permit requirements or applicable health-based code requirements with limited impact or exposure pathways to human contact. | Potential adverse health impact; e.g. open dump with a Moderate health threat score (251-400)[2], or an improperly lined/ covered solid waste landfill with limited exposure pathways to human contact. |
| 6 | Minimal health hazard; e.g. storage volume is less than design standard, operational problems limiting effectiveness of system operation (low pressures or excessive pump run times). | Minimal health hazard; e.g. manhole spacing is less than design standard, operational problems limiting effectiveness of system operation (ex. clogging lift station). | Minimal health hazard; e.g. open dump with a Low health threat score (0-250)[2], solid waste transfer station lacks adequate equipment or fencing, landfill operations create significant windblown debris or other problems. |
| 0 | No known hazard or impact. | No known hazard or impact. | No known hazard or impact. |

[1] Reference EPA's Public Notification Rule. https://www.epa.gov/dwreginfo/public-notification-rule.

[2] Reference OMDS Open Dump Health Threat Scoring guidance, STARS Library

Note: Project health impact scoring should be prorated if the homes to be served do not all fall under the same benchmark description above. For example, a project with 20 homes with a Health Impact of 24 and 20 homes with a Health Impact of 18 would have an overall Health Impact of 21:

[(20 homes * 24 HI) + (20 homes * 18 HI)] / (40 homes) = 21 HI Average Score

The justification for prorating should be clearly described in the Existing Deficiencies narrative.

b. Project Deficiency Level (0 to 18 points)

The project Deficiency Level is a categorization of the overall deficiency being addressed by the project. As described in Section 5b, it is based on the Project Impact ratings of the homes served by the project. Points are automatically assigned by the system in the following way:

18 Points.... .....Deficiency Levels 5 or 4

12 Points.... .....Deficiency Level 3

6 Points.... .....Deficiency Level 2

0 Points.... .....Deficiency Level 1

c. Adequate Previous Service (0 to 4 Points)

A home that was provided "adequate previous service" means that facilities were previously provided/funded by IHS or another Federal agency to reduce the deficiency level at the home to a DL 2 or better. Outside hand pumps and pit privies, previously provided, are not considered to be adequate. The amount of points to be assigned to a project shall be prorated based on the percent of homes without adequate previous service. Areas may develop additional evaluation criteria as part of their Area-specific SDS guidelines.

4 Points.....No previous service from IHS or any other Federal agency, or previous service was not adequate.

2 Points.....Half of the homes included in the project were adequately served (either water or sewer or both) by IHS or another Federal agency.

0 Points.....All of the homes were adequately served (either water or sewer or both) by IHS or another Federal agency.

d. Capital Cost (-20 to 16 points)

The capital cost score is assessed by comparing the eligible unit cost of the proposed facilities to the average unit cost to construct the same type of facilities in the Area. Each Area shall be responsible for establishing how their historic construction costs and other relevant sources are collected and used to develop average unit costs. The approach shall be described in the Area-specific SDS guidelines. Separate average unit costs may be developed based on whether the project provides water, sewer, or solid waste facilities. Cost scoring may also be based on the project Deficiency Level.

The eligible unit cost is automatically calculated by the system, based on the project costs that are identified as eligible, including those costs that may be covered by funding contributions from other agencies (i.e. the eligible unit cost is not affected by contributions).

Points can be assigned in the following way, as an example:

**Table 5: Capital Cost Point Distribution**

| | Percent of Area's Average Unit Cost | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Project DL 5 or 4 | | | Project DL 3 | | | Project DL 2 or 1 | | |
| **Points** | **Water** | **Sewer** | **Solid Waste** | **Water** | **Sewer** | **Solid Waste** | **Water** | **Sewer** | **Solid Waste** |
| 16 | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} |
| … | | | | | | | | | |
| 3 | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} |
| 2 | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} |
| 1 | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} |
| 0 | {Avg. Cost} | {Avg. Cost} | {Avg. Cost} | {Avg. Cost} | {Avg. Cost} | {Avg. Cost} | {Avg. Cost} | {Avg. Cost} | {Avg. Cost} |
| -1 | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} |
| -2 | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} |
| -3 | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} |
| … | | | | | | | | | |
| -16 | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} | {% range} |
| -20 | > Allowable Unit Cost | | | > Allowable Unit Cost | | | > Allowable Unit Cost | | |

Areas should ensure that point values are spread across a range of unit costs in a manner that provides for appropriate comparison and prioritization of typical projects.

e. Local Tribal Priority (0 to 16 points)

The Local Tribal Priority factor is intended to give a Tribe an opportunity to adjust the ranking of its projects based on internal preferences and priorities. Documentation of the Tribe's annual project priorities shall be attached in SDS if the Tribes choose to make priorities. Documentation must include annual written confirmation (e.g. letter or email) by a responsible tribal official or governing body. Tribal priority-setting should be based on established tribal procedures. Tribes may decline to assign priority points.

16 Points.....The Tribe's highest priority (or only requested) project.

12 Points.....The Tribe's second highest priority project.

8 Points.....The Tribe's third highest priority project.

4 Points.....The Tribe's fourth highest priority project.

0 Points.....All other proposed projects for that Tribe.

Assignment of tribal priorities by IHS personnel is not acceptable, and tribal priority points cannot be assigned without evidence of acceptance from the Tribe. This is true regardless of whether the Tribe receives SFC Program services through direct service or through contracts or compacts with the IHS under the Indian Self-Determination and Education Assistance Act (P.L. 93-638).

A Tribe can have only one project at each priority level; e.g., a Tribe cannot have two projects as their number one priorities. The method of collecting and documenting priorities may be modified appropriately to meet the specific needs of the Area (e.g., Areas serving only one Tribe or Areas with a tribally-established organization that evaluates projects and recommends priorities). The approach used by the Area should be described in the Area-specific guidelines.

f. O&M Capability (0 to 16 Points)

Determination of O&M organizational capability is based on the annual evaluations of tribal water, sewer, and solid waste systems and the organizations that maintain those systems. Systems are evaluated through sanitary surveys, and organizations are evaluated through the O&M capacity evaluation scoresheets attached in OMDS. Refer to Section 6f and Appendix C of these guidelines for additional criteria.

The O&M capacity evaluation scoresheets provide the basis for the O&M capability score in SDS. The following descriptions generally summarize ranges of results produced by the scoresheets:

| | |
|---|---|
| 12-16 Points | There is an excellent chance that the facilities provided in the proposed project will be operated properly and maintained in a good state of repair, maximizing the potential health benefits. |
| 7-11 Points | There is a reasonable chance that the facilities provided in the proposed project will be operated properly and maintained in a good state of repair, likely yielding sufficient health benefits. |

0-6 Points — There is a poor chance that the facilities provided in the proposed project will be operated properly and maintained in a good state of repair, thus yielding little or no health benefits.

For existing on-site facilities maintained by individual homeowners, Areas may assign a standard score that applies to all sites or develop a methodology to be reflected in their Area-specific guidelines similar to the point ranges above.

g. Contributions (0 to 8 Points)

The Contributions factor is an optional scoring category for Areas and should be described in the Area-specific guidelines if it is to be used. Areas should consider collective tribal input in determining whether this category is used, and if it is used, apply it uniformly for all Tribes and all projects across the Area. Points shall be prorated from zero to eight based on the amount of contributions received from non-IHS sources that offset IHS-eligible costs (see point examples below).

Contribution points are only awarded if funding contributions from non-IHS sources offset IHS-eligible costs. For example, contribution points can be awarded for Housing Authority contributions that cover IHS-eligible costs for HUD homes (see Section 4e). The contributed funds must be available to be spent during the next fiscal year. Refer to Section 6g for additional criteria regarding contributions.

8 Points.....50 percent or more of the IHS-eligible costs (project costs normally funded by IHS) are provided through non-IHS funds (count contributions toward IHS-eligible homes only).

4 Points.....25 percent of the project costs normally funded by IHS are provided through non-IHS funds.

0 Points.....No funds other than IHS funds are provided for IHS-eligible costs.

If contribution points are assigned to a project, there must be documentation in the project attachments indicating the likelihood of commitment of the contributed funds. The documentation (e.g. letter or email from the Tribe or funding agency) should identify the amount and source of the contributed funds.

h. Other Considerations (-15 to 0 points)

The Other Considerations factor is an optional scoring category for Areas and should only be used in unusual situations by the Area SFC Director. The reason for assigning points to this factor must be documented and can include the following situations:

- The need to phase projects – project phases must be prioritized in the functional order that ensures adequate service is provided for each home in each phase of the project. A later project phase that otherwise scores higher than an earlier phase may be assigned negative points under the Other Considerations factor to ensure that the phases are built in the proper order.

- Coordination with other agencies – other agencies or funding partners that have a key role in the project may not be ready to move forward with project funding or implementation. The Area may assign negative points under the Other Considerations factor to delay IHS funding until the project partners are ready to proceed.

- Project impediments – Area SFC Directors must certify that the projects in the Area's potential funding range are Ready to Fund before making their SDS submission to HQ (see Section 8a). Impediments such as incomplete planning, legal disputes, jurisdictional disputes, or other problems that prevent the project from being Ready to Fund justify the application of negative points under the Other Considerations factor to move the project out of the potential funding range.

- A backlog of current projects with undisbursed funds – Area SFC Directors may assign negative points under the Other Considerations factor in unusual situations if a particular Tribe or location has a backlog of current projects with undisbursed funds and unusual problems preventing project implementation.

Areas must provide their respective Tribes with the reason(s) why projects are assigned negative points under this factor and document that communication with a Journal entry for the SDS project.

i. Total Score

The Total Score is the sum of all the Rating Score factors. The value of the Total Score determines the Area priority ranking of the project. The higher the Total Score, the higher the priority ranking, with the Area's highest Total Score project being the Area's top priority project.

Tiebreakers: if there are multiple projects with the same score within an Area, then the project with the highest score for Health Impact becomes the project with a higher priority ranking. If the tied projects have the same Health Impact score, the tied project with the highest Deficiency Level score becomes the higher priority. If the tied projects have the same Health Impact score and Deficiency Level score, the tied project with the highest Capital Cost score becomes the higher priority. If the tied projects have the same Health Impact score, Deficiency Level score, and Capital Cost score, the tied project with the highest O&M Capability score becomes the higher priority.

If this methodology fails to prioritize the projects with the same total score (all of the rating scores are equal), the Area SFC director sets the priority of the projects in question. The Area SFC Director's decision must be based on the merits of the projects and their impacts in terms of the health of the AI/AN beneficiaries. In no case should these decisions be based on political or other influences.

## 8. SDS Project Information Submission

### a. Ready to Fund

Ready to Fund projects can stand on the information submitted and attachments included in SDS and will allow a peer reviewer to fully understand its scope and impacts. SDS projects that are certified by the Area SFC Director as Ready to Fund have the following:

- a well-defined scope,
- a detailed cost estimate,
- a completed design (i.e. plans and specifications could be created based on the information provided), and
- foreseeable risks to construction, operation, and maintenance are identified and addressed.

Only SDS projects that are certified by the Area SFC Director as Ready to Fund should be included in the Area's potential funding range, defined as 125% of the previous year's total funding allocation (including contributed funds). A checkbox is provided within the Project Details tab of the SDS project to allow the Area SFC Director to make this designation.

The need being addressed by the project and the recommended scope must be substantiated by the project attachments. For example, a project that proposes to address a DL 4 situation must have a narrative and attachments that would lead a peer reviewer to reach the same conclusion before it can be certified as Ready to Fund. A Preliminary Engineering Report, or equivalent documentation as determined by the Area SFC Director based on the scope and complexity of the project, will be required to certify a project as Ready to Fund.

Projects that score in the funding range but are not yet Ready to Fund should be removed from the range by applying negative points under the Other Considerations factor (see Section 7h). These projects can then have planning tasks funded if necessary, as described in Section 6c.

### b. Describing Changes in Overall Reported Need

The SFC HQ Program reports to Congress annually the magnitude and types of sanitation facility deficiencies affecting AI/AN homes. As part of this reporting, the SFC HQ Program must identify and describe the reason(s) for significant changes in the reported needs from year to year. When notifying SFC HQ that an Area's SDS data submission is ready for review, the Area SFC Director must include written explanation if there are significant changes in the total reported need from previous years. At a minimum, the Area must explain differences greater than +/- 20% in the following areas:

- Project cost: total feasible cost, total database cost (by deficiency level)
- Number of projects (feasible and total): by deficiency level and service type (water, sewer, and solid waste)
- Number of homes: by deficiency level and service type (water, sewer, and solid waste)
- Number of homes without access to drinking water, sewer or solid waste facilities (DL 4 and DL 5 homes)

c. Project Update Frequency

Projects must be reviewed and updated on a regular basis to ensure that the overall database represents an accurate reflection of the current sanitation facilities need. This includes updates to cost estimates, narratives, tribal priorities, HITS data, and other project details. At a minimum, projects must be updated in accordance with the frequencies outlined in Table 6 below.

**Table 6: Project Update Frequency**

| Minimum Update Frequency | Project Type |
|---|---|
| Yearly | • All projects within the Area's potential funding range (i.e. 125% of the previous year's total funding received and contributed)<br>• All projects with a project Deficiency Level of 3, 4, or 5 |
| Every 3 years | • All Other SDS Projects |

d. HQ Review

An annual SDS implementation schedule with key deadlines is provided by HQ to the Areas at the beginning of each calendar year. Areas provide their complete SDS project submission to HQ according to the implementation schedule. Area SFC Directors are responsible for ensuring that the quality of SDS project data meets the requirements of these guidelines, and they have the ability to locally assign negative points under the Other Considerations rating factor or mark projects as non-reportable in the Area's project list if they do not meet Area and/or HQ requirements. Projects that are marked as non-reportable will not be included in the SFC Program's annual report to Congress and are not assigned a priority ranking in SDS.

Annually, HQ SFC Program staff review the Areas' SDS submissions for consistency with these guidelines, any Area-specific guidelines, and other statutory requirements. Projects that do not meet these requirements are identified and returned to the Area for clarification or resolution. Projects that cannot be resolved or clarified are marked as non-reportable by HQ.

Areas will be provided time to respond to feedback provided by HQ prior to finalization of the national SDS data snapshot. HQ uses the snapshot to provide its annual report to Congress and to allocate funding to the Areas as described in Chapter 7 of the Criteria Document. Once the Regular funding allocations are made to the Areas, projects that

were on the final SDS snapshot for the year can be funded by the Areas in priority order (refer to Chapters 6 and 10 of the Criteria Document).

## Glossary--Explanation of Terms Used in SDS

a. Adequate, or Adequacy of sanitation facilities: Adequate sanitation facilities for AI/AN homes implies that piped in-home water and sewer facilities are provided, and solid waste facilities are accessible. Adequacy also includes compliance with applicable Federal, State, and local environmental laws and regulations. On a deficiency level basis, adequate facilities are rated at either a DL 0, DL 1, or DL 2.

b. Agency Funding Plan: The subset of economically feasible projects in the aggregated list of the 12 IHS Areas' SDS project submissions compiled by the HQ SFC Program and used for reporting purposes to DHHS, Congress, OMB, and others. In other words, the Agency Funding Plan for the year includes the reportable SDS projects that are economically feasible.

c. Allowable Unit Cost: The HQ SFC Program develops allowable unit costs for each State as a means to determine project economic feasibility (Note: Alaska has three regional allowable unit costs). The process for establishing the allowable unit costs and the current values of each state's allowable unit cost (as of this document's publication) are listed in Appendix B.

d. Average Unit Cost: The average unit cost is the sum of the estimated average costs to provide water, sewer, and solid waste services to an eligible AI/AN home in an Area. Within an Area, the average unit cost can be regional in nature. Each IHS Area makes estimates of its average unit costs using historical construction cost data from their Area. Areas are required to describe how they develop their average unit costs and the frequency with which they are updated in their Area-specific guidelines.

e. Community Profile: Project information in STARS is organized by community. The profile for each community in STARS summarizes the information in HITS for the homes associated with that community. Existing community buildings, commercial buildings, non-residential units, and non-Indian homes can also be linked to the community profile, although they are not eligible for IHS-funded services.

f. Eligible Homes: Through the SDS, the IHS funds the construction of sanitation facilities to serve eligible AI/AN homes. All housing units in the AI/AN community regardless of eligibility can be included in the SDS project, but it is important to designate whether each unit is eligible or ineligible. Eligibility status plays a role in many calculations, reports, and home counts. Refer to Chapter 5 of the Criteria Document for details on participant and home eligibility.

g. Eligible Services: A detailed description of eligible SFC project activities can be found in Chapter 5, Section II of the Criteria Document. In general, an IHS SFC project can provide water supply, treatment, storage, and distribution facilities; sewage collection, treatment, and disposal facilities; and solid waste collection vehicles and equipment, transfer stations, landfills, and landfill closure facilities. In certain cases, IHS can provide funds for a community's service connection fees and other tie-in or buy-in costs. IHS can also provide O&M tools, equipment, supplies (generally up to a year's

supply), and start-up training, when included to support a project that provides sanitation facilities for an eligible Indian community.

h. Eligible Unit Cost: The eligible unit cost is the portion of the project's cost that is eligible for IHS funding, divided by the number of eligible homes served by the project. Note that the eligible cost is not dependent on the funding source (it remains the same whether IHS or a contributing agency funds the eligible cost).

i. First Service and Previously Served Homes: AI/AN homes that were never served by the IHS or funded by any other Federal agency with any sanitation facilities (water, sewer, or solid waste service) are considered first service homes. Homes can only be "first service" for a particular type of sanitation facility service once. For example, if a home was previously served with water and sewer facilities by IHS or with funds from any other Federal agency (e.g. HUD, EPA, USDA), but not with solid waste facilities, the home would be "first service" for solid waste and "previously served" for water and sewer. Service is considered to be previously provided when the facilities that were installed provided adequate service at the time of installation.

j. Funding Range: The range of projects on an Area's prioritized SDS priority list that should be considered as potentially fundable in the upcoming funding cycle. To determine their potential funding range, Areas shall apply a benchmark of 125% of their previous year's IHS Regular and contributed funding to their current prioritized list of projects.

k. HUD Home: A home that was built using funds provided by housing programs of the Department of Housing and Urban Development, including the Native American Housing Assistance and Self Determination Act (NAHASDA). These homes are typically owned and managed by the Tribally-Designated Housing Entity (TDHE) and are typically not eligible for IHS Regular or Housing funds.

l. Project Impact: For each home assigned to a project, a unique Project Impact value is assigned that provides a measure of the deficiency level being addressed for that specific home (refer to Appendix E for a list of deficiency level examples). The system calculates an overall project deficiency level based on the arithmetic mode of the project impacts.

m. Ready to Fund: SDS projects that are certified by the Area SFC Director as Ready to Fund have a well-defined scope, a detailed cost estimate, a completed design, and foreseeable risks identified and addressed for the construction, operation, and maintenance of the facilities to be provided. Ready to Fund projects can stand on the information submitted and attachments included in SDS and will allow a peer reviewer to fully understand its scope and impacts.

n. Reportable Home: A home that has been entered into the HITS database with the required information for it to be included in the SFC Program's annual report to Congress on sanitation deficiencies. For a home to be reportable, the following information is required:

- The home's location (i.e. lat/long coordinates);
- The housing type (e.g. E1, H1, etc.); and,
- The home must have a community assignment

o. Reportable Project: A Reportable Project is a project that is included in the annual SDS Report to Congress. In order to be considered reportable, the project must serve eligible tribal homes for which the existing deficiencies and the proposed facilities are allowed according to the Criteria Document. A project determined to be non-reportable will be excluded from the SDS Report to Congress, will not be eligible for funding, and will not be incorporated into the Regular Funds allocation formula. The Area SFC Director, in consultation with Area staff, will determine whether projects listed in their SDS priority list are reportable. Projects will be considered non-reportable if any or all of the following conditions apply:

- The project does not contain HITS data
- The project does not serve any eligible homes
- The project does not include any eligible costs (e.g. O&M costs only)
- The project Deficiency Level is 0
- The Area SFC Director has determined the project does not have sufficient justification (e.g. insufficient planning complete and/or lack of documentation, outdated data, ineligible deficiencies, planning-only projects)

Non-reportable projects will not be assigned a priority ranking in SDS. They will be assigned a rating of "N/A" and will appear at the end of the Area's priority-ranked list of SDS projects.

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## Appendices

Appendix A
- SDS Guiding Principles

Appendix B
- Total Allowable Unit Cost and Project Feasibility

Appendix C
- Operation and Maintenance (O&M) Capability Ratings

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Appendix E
- Guidance on Assigning Deficiency Levels
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    - LEVEL II (DL2)
    - LEVEL III (DL3)
    - LEVEL IV (DL4)
    - LEVEL V (DL5)
  - Solid Waste
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    - LEVEL II (DL2)
    - LEVEL III (DL3)

Appendix F
- Copies of the Authorization Acts (P.L. 86-121; P.L. 94-437, Section 302)

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# Appendix A: SDS Guiding Principles

The SDS Guiding Principles were developed as an outcome of the December 2015 SDS strategic review meeting, which included representatives from all 12 IHS Areas, Headquarters, ANTHC, and EHSC. The group developed the following fundamental principles to guide SDS efforts, with the goal of ensuring data quality and project results:

- Quality, defensible data is the foundation of the SFC Program.
- DSFC leadership is committed to ensuring that SDS is populated with the highest quality data for all projects.
- High-quality data and consistency across the Areas allows the Program to prioritize and fund projects in a transparent, fair, and equitable manner and address the highest-need public health priorities in American Indian and Alaska Native communities.
- The SFC Program must be able to represent the AI/AN sanitation needs with integrity and credibility for the Program to be successful.
- The SDS guidelines are the platform for all SDS submittals. The guidelines serve as the reference point against which the Area SFC Directors and Headquarters will evaluate project submittals.
- Documentation is critical and is expected to fully substantiate SDS project submittals.
- The Project Narrative should be clear, concise and support the project deficiency level. It should include sufficient detail for an individual unfamiliar with the project to understand the public health issue as well as the proposed sanitation solution.
- Project entries should emphasize the quality, rather than quantity, of supplemental information and attachments in SDS.
- Public health impacts drive SFC projects – project entries should demonstrate a strong case for the actual or potential impacts of proposed SDS projects.
- A comprehensive Project Cost Estimate with the appropriate level of accuracy is required for every project and should reflect a thorough analysis of project costs.
- Projects that are marked as Ready to Fund must clearly demonstrate that sufficient planning and design effort has been completed to fully define the project and that all significant project risks are understood and addressed.
- In general, the SDS submittal represents the Program's professional competencies. The Program takes pride in its data, and high-quality SDS submittals will directly help the Program achieve its mission and vision.

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## Appendix B: Total Allowable Unit Cost and Project Feasibility

The IHS Division of Sanitation Facilities Construction developed the total allowable unit costs (also known as threshold unit costs) to provide a basis for determining overall project economic feasibility. In the context of SDS, "unit" costs refer to the eligible cost share of the overall project divided by the number of eligible homes. Threshold unit costs are developed for each state, with the exception of Alaska, which has three regional threshold unit costs to account for geographic differences that impact the cost of construction within Alaska. When a project's eligible unit cost exceeds the threshold unit cost, that project is automatically designated as economically infeasible in SDS.

The total allowable unit costs are based on data from the IHS Health Facilities Cost Index and the Department of Housing and Urban Development's Total Development Cost (TDC). The costs are based on the premise that the reasonable cost of the sanitation facilities to serve a home may be estimated from the actual cost to construct homes and hospital facilities in a particular geographic location. The total allowable unit costs are not intended to reflect the value of sanitation facilities to a homeowner or the savings in health care costs resulting from improved sanitation facilities. Additional detail on the data used to develop the total allowable unit cost follows:

- IHS Health Facilities Cost Index: The IHS Division of Facilities Planning and Construction uses the IHS Health Facilities Cost Index to estimate the cost of constructing health facilities at various IHS locations. A consultant developed and routinely updates the IHS index using industry-standard construction estimating methods.

- Department of Housing and Urban Development's Total Development Cost (TDC): The Department of Housing and Urban Development, Office of Native American Programs, developed the TDC for affordable housing delivered under the Native American Housing Assistance and Self-Determination Act of 1996 (NAHASDA). The TDC is published for each Tribe and considers costs within the tribally-recognized land base.

The total allowable unit costs published in Table B-2 of this appendix are reviewed by the HQ SFC Program periodically for adjustment when there is a significant increase or decrease within the state. Areas will be notified when adjustments are made to the total allowable unit costs. The indices and methodology used to develop the total allowable cost figures may be modified at the discretion of Director of the Division of Sanitation Facilities Construction.

In order to evaluate the feasibility of SDS projects, a percentage of the total allowable unit costs by type of facility (water, sewer, or solid waste) and project deficiency level is used for comparison with the eligible unit cost of the project. The percentages used are included in Table B-1 of this appendix. The percentages and the project's resulting feasibility are automatically calculated in SDS.

| Table B-1. Evaluating Feasibility with Total Allowable Unit Costs | | | |
|---|---|---|---|
| Project Deficiency Level | Percent of Total Allowable Unit Cost | | |
| | Water | Sewer | Solid Waste |
| 5 | 50% | 50% | |
| 4 | 50% | 50% | |
| 3 | 35% | 35% | 15% |
| 2 | 20% | 20% | 10% |

| Example: A sanitation facilities project in Washington State with a total allowable cost of $110,000 would have the following allowable costs: | | | |
|---|---|---|---|
| Project Deficiency Level | Allowable Unit Costs for: | | |
| | Water | Sewer | Solid Waste |
| 5 | $55,000 | $55,000 | |
| 4 | $55,000 | $55,000 | |
| 3 | $38,500 | $38,500 | $16,500 |
| 2 | $22,000 | $22,000 | $11,000 |

The SDS total allowable unit costs are listed by state in Table B-2 of this appendix.

Table B-2: SDS Total Allowable Unit Costs by State (Updated January 7, 2016)

| State | Allowable Unit Cost |
|---|---|
| Alabama | $85,000 |
| Alaska† | $199,000 |
| Alaska (1)† | $149,500 |
| Alaska (2)† | $172,500 |
| Arizona | $94,000 |
| California | $117,000 |
| Colorado | $95,000 |
| Connecticut | $116,500 |
| Florida | $92,500 |
| Idaho | $99,500 |
| Iowa | $97,500 |
| Kansas | $92,500 |
| Louisiana | $83,500 |
| Maine | $99,500 |
| Massachusetts | $137,500 |
| Michigan | $98,000 |
| Minnesota | $107,000 |
| Mississippi | $83,000 |
| Montana | $95,000 |
| Nebraska | $93,500 |
| Nevada | $104,500 |
| New Mexico | $93,000 |
| New York | $112,500 |
| North Carolina | $90,000 |
| North Dakota | $97,000 |
| Oklahoma | $87,000 |
| Oregon | $105,000 |
| Pennsylvania | $98,000 |
| Rhode Island | $115,500 |
| South Carolina | $85,000 |
| South Dakota | $90,000 |
| Texas | $85,000 |
| Utah | $90,000 |
| Virginia | $85,000 |
| Washington | $110,000 |
| Wisconsin | $103,000 |
| Wyoming | $88,500 |

†The State of Alaska has three regional threshold unit costs to account for geographic differences that impact the cost of construction within Alaska. The three regions are separated as follows: Alaska = Northern Region; Alaska (1) = Southern Region; Alaska (2) = Central and Western Regions.

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# Appendix C: Operation and Maintenance (O&M) Capability Ratings

As described in Section 7f of these guidelines, O&M capability is considered in the priority scoring process for SDS projects. The purpose of this consideration is to promote organizational capability and give higher priority to projects that will receive sufficient O&M over the expected life span of the facilities, which maximizes their effectiveness. The O&M Capability Rating for the organization that will operate the facilities is an element of the Operation and Maintenance Data System (OMDS) in STARS. Determination of the rating is based on regular (typically annual) evaluations of the utility organizations overseeing water, wastewater and solid waste systems serving AI/AN homes. Organizations are rated through the O&M capacity evaluation scoresheets attached in OMDS.

The following figures show examples of the O&M capacity evaluation scoresheets for water, sewer, and solid waste utilities:

**Indian Health Service**

**Sanitation Deficiency System – Operation & Maintenance Scoring**

**[ ] - WATER SUPPLY SCORESHEET**

**LAST UPDATED BY:** [ ]

**LAST UPDATE:** 06/18/2015

| OPERATION (Maximum points possible = 15) | Points |
|---|---|
| **A.** The operators have the appropriate certification level for their PWS | 2 |
| **B.** Preventive maintenance is performed with a written schedule and records of completion | 0 |
| **C.** Records are kept on all meters, pumping hours, etc. and analyzed | 2 |
| **D.** Sufficient repair parts, tools, & equipment to maintain water production are on hand | 1 |
| **E.** A safety program is in place, with training and equipment provided | 1 |
| **F.** Operators attended at least 10 hours of training during last year | 1 |
| **G.** Accurate and updated as built/system maps available, maintained, & properly | 2 |
| **H.** Treatment facilities, well heads, and storage tanks secure | 2 |
| Subtotal: | 11 |

| COMPLIANCE (Maximum points possible = 12) | Points |
|---|---|
| **A.** PWSs were in compliance for monitoring during the last year | 10 |
| **B.** The tribal utility organization participates with IHS and EPA in sanitation facility surveys and capacity development and corrects noted deficiencies | 2 |
| Subtotal: | 12 |

| BUDGET & ORGANIZATION (Maximum points possible = 13) | Points |
|---|---|
| **A.** Written rules and regulations governing the O&M of the PWS have been developed, approved, and enforced | 2 |
| **B.** A budget is prepared and tracked on a regular basis | 1 |
| **C.** The user fee structure is implemented | 8 |
| **D.** Written emergency response plan in place | 0 |
| Subtotal: | 11 |

| | |
|---|---|
| **TOTAL POINTS** | 34 |
| **SDS O&M Capability Score – Max 16 points (Total Score x 0.4)** | 14 |

**Comments:**
**Last Score Submitted** (Value: 14 Date: 06/18/2015 By: [ ])

Figure C-1: O&M Capacity Evaluation Scoresheet (Water)

**Indian Health Service**

**Sanitation Deficiency System – Operation & Maintenance Scoring**

**[ ] - SEWAGE TREATMENT SCORESHEET**

**LAST UPDATED BY:** [ ]

**LAST UPDATE:** 06/18/2015

| OPERATION (Maximum points possible = 20) | Points |
|---|---|
| **A.** The operators have the appropriate certification level for their wastewater system | 3 |
| **B.** Preventive maintenance is performed with a written schedule and records of completion | 3 |
| **C.** Records are kept on all meters, pumping hours, etc. and analyzed | 2 |
| **D.** Sufficient repair parts, tools, & equipment to maintain sewage collection / treatment are on hand | 2 |
| **E.** A safety program is in place, with training and equipment provided | 2 |
| **F.** Operators attended at least 10 hours of training during last year | 2 |
| **G.** Accurate and updated as built/system maps available, maintained, & properly stored | 2 |
| **H.** Sewage facilities are secure | 0 |
| Subtotal: | 16 |

| COMPLIANCE (Maximum points possible = 6) | Points |
|---|---|
| **A.** Treatment facility discharges were compliant during the last year | 4 |
| **B.** The tribal utility organization participates with IHS and EPA in sanitation facility surveys and capacity development and corrects noted deficiencies | 2 |
| Subtotal: | 6 |

| BUDGET & ORGANIZATION (Maximum points possible = 16) | Points |
|---|---|
| **A.** Written rules and regulations governing the O&M of the wastewater system have been developed, approved, and enforced | 3 |
| **B.** A budget is prepared and tracked on a regular basis | 3 |
| **C.** The user fee structure is implemented | 4 |
| **D.** Written emergency response plan in place | 2 |
| Subtotal: | 12 |

| | |
|---|---|
| **TOTAL POINTS** | 34 |
| **SDS O&M Capability Score – Max 16 points (Total Score x 0.381)** | 13 |

**Comments:**
**Last Score Submitted** (Value: 13 Date: 06/18/2015 By: [ ])

Figure C-2: O&M Capacity Evaluation Scoresheet (Sewer)

**Indian Health Service**

**Sanitation Deficiency System – Operation & Maintenance Scoring**

**[ ] - SOLID WASTE SCORESHEET**

**LAST UPDATED BY:** [ ]

**LAST UPDATE:** 06/18/2015

| OPERATION (Maximum points possible = 21) | Points |
|---|---|
| **A.** Tribal commitment to allocate required | 2 |
| **B.** Integrated solid waste management plan in place | 2 |
| **C.** Solid waste ordinances in place | 2 |
| **D.** Operators attended at least 10 hours of training during last year | 0 |
| **E.** Preventative maintenance is being performed with a written schedule and records | 1 |
| **F.** Records are kept all solid waste disposed | 1 |
| **G.** Major system components are in good working order in coordination with established PM program | 2 |
| **H.** A clear line of authority is established and followed | 1 |
| **I.** Sufficient repair parts, tools, and equipment on hand | 1 |
| **J.** Safety program in place | 1 |
| **K.** Accurate and updated as built/system maps available, maintained, & properly | 2 |
| **L.** Solid waste facilities are secure | 2 |
| Subtotal: | 17 |

| COMPLIANCE (Maximum points possible = 9) | Points |
|---|---|
| **A.** In compliance with RCRA D standards for waste stream separation at or prior to existing transfer and disposal sites | 4 |
| **B.** Litter control at individual collection sites | 1 |
| **C.** Restricted access at landfills and dumps | 2 |
| **D.** The tribal utility organization participates with IHS and EPA in sanitation facility surveys and capacity development and corrects noted deficiencies | 2 |
| Subtotal: | 9 |

| BUDGET & ORGANIZATION (Maximum points possible = 10) | Points |
|---|---|
| **A.** Budget is prepared annually and source of required revenue is identified | 2 |
| **B.** Budget report is prepared and tracked on a regular basis | 1 |
| **C.** Rules and regulations are enforced | 2 |
| **D.** Rate structure | 2 |
| **E.** Capital improvement plan in place | 1 |
| Subtotal: | 8 |

| | |
|---|---|
| **TOTAL POINTS** | 34 |
| **SDS O&M Capability Score – Max 16 points (Total Score x 0.4)** | 14 |

**Comments:**
**Last Score Submitted** (Value: 14 Date: 06/18/2015 By: [ ])

Figure C-3: O&M Capacity Evaluation Scoresheet (Solid Waste)

In the OMDS database, water, sewer, and solid waste systems are tied to the organizations that receive these ratings. When SDS projects are proposed that affect those systems, the evaluation score for the utility organization is automatically assigned for the project in SDS.

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# Appendix D: Project Homes and Coding Guidance

Project Homes: Projects in SDS are tied to geospatial housing data in the Home Inventory Tracking System (HITS), a separate component of STARS. In order for a home record to be minimally complete in HITS (also known as being reportable), and before it can be tied to a project in SDS, the following information is required:

- The home's location (i.e. lat/long coordinates);
- The housing type (e.g. E1, H1, etc.); and,
- The home must have a community assignment

The housing data should account for every AI/AN home affected by the project, regardless of eligibility. Existing non-Indian homes, community buildings, and other non-residential units affected by the project should also be accounted for in the SDS project Homes tab in order to determine the eligible cost for the project. However, it is not required that these units be represented in HITS. Table D-1 describes the various home type codes assigned to homes in HITS or through the Housing Groups in SDS.

Table D-1: Home Type Codes

| *HOME TYPE CODE* | *TYPE OF HOME* | *DESCRIPTION* |
|---|---|---|
| E1 | Existing AI/AN Homes | Existing, AI/AN-owned, 24-hour year-round family dwellings. Land status either trust or non-trust. Includes former H1 homes that have been conveyed to the occupant(s). |
| E2 | Non-Residential Units | Commercial, industrial, or agricultural establishments including office buildings, casinos, nursing homes, health clinics, schools, churches, hospitals, and hospital quarters. Also includes second homes and vacation homes. |
| E3 | Non-Indian Units | Any home that is not an AI/AN-owned home. |
| H1 | HUD Housing (AI/AN) | HUD-funded Indian housing projects, grants to Tribally Designated Housing Entities (TDHEs) or state and county governments for new houses financed by HUD housing programs. Includes Section 184 homes with the Housing Authority on the title. |
| H2 | BIA-HIP Housing | Homes constructed or renovated under the Bureau of Indian Affairs (BIA) Home Improvement Program (HIP). Excludes HIP Category A homes: homes that do not meet acceptable building standards. |
| H3 | Tribal Housing (AI/AN) | Community Improvement Program (CIP) homes. |
| H4 | State or Remote Housing (AI/AN) | State-owned AI/AN homes. Includes Alaska homes for teachers. |
| H5 | Other Housing (AI/AN) | Individually-financed new homes (VA, FHA, etc.). AI/AN homes with personal homeowner mortgages guaranteed by HUD under Section 184 of the Housing and Community Development Act of 1992, or others, provided the home is titled solely in the occupant's name. |
| H6 | HUD-BIA Housing (AI/AN) | Former housing program. This is not typically used. |
| H7 | HUD Block Grant (AI/AN); CDBG Complete Units | CDBG new homes and renovations funded by HUD. |

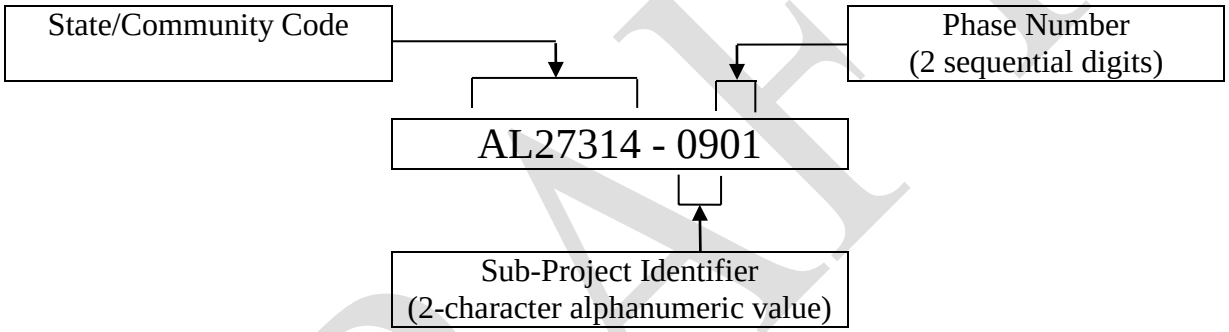
Communities: The geographical areas where homes are served by IHS have historically been organized into communities. SDS projects link to HITS to capture this data. Each SDS project (and HITS home) are associated with a community in STARS. Communities in STARS serve as a means of organizing SDS and HITS data into larger geographic areas.

Project Numbering Convention: Each project in SDS shall be assigned a number that is made up of the following components:

A. Community State Code –A unique identifier comprised of seven characters that is established in the IHS Standard Code Book to identify tribal communities.

B. Sub Project Identifier –A two character alphanumeric value assigned by the Area SFC Program to identify the project.

C. Phase Number - A sequential two digit number that identifies the project phase.



## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level I (DL1):Water Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community with a sanitation system which complies with all applicable water supply laws and in which the deficiencies relate to routine replacement, repair, or maintenance needs*** | |
| **ID#** | **The proposed project will:** |
| W1.1 | Replace expendable water treatment facility components (e.g. filtration media/resin, membranes, point of use filters, treatment process monitoring sensors) |
| W1.2 | Repair or replace pumps (e.g. well pumps, booster pumps, chemical feed pumps) |
| W1.3 | Paint storage tanks |
| W1.4 | Repair distribution gate valves |
| W1.5 | Repair distribution system breaks or leaks not meeting a DL2 justification |
| W1.6 | Paint or repair hydrants |
| W1.7 | Repair or replace marker posts |

## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level II (DL2): Water Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community with a sanitation system which complies with all applicable water supply laws in which the deficiencies relate to capital improvements that are necessary to improve the facilities in order to meet the needs of such tribe or community for domestic sanitation*** | |
| **ID#** | **The proposed project will upgrade or provide facilities to address the following deficiencies not correctable by routine operation and maintenance:** |
| W2.1 | An inability to properly operate the system due to facilities that do not meet applicable design standards† or facilities that are deteriorated (e.g. a systemic lack of operable hydrants, meters, and/or gate valves; pumps operating beyond their design capacity; telemetry control failures; pressure surges damaging facilities; repeated water main breaks attributable to deteriorated pipe; differing overflow elevations; additional water source or additional water storage required; increased main size/looping needed to improve water supply quantity and/or pressure at homes) |
| W2.2 | External environmental conditions (e.g. significant settlement or erosion) negatively impacting the operational integrity of existing facilities |
| W2.3 | A lack of standby electrical power |
| W2.4 | An inability to protect and/or restrict access to water source, treatment, and/or storage facilities |
| W2.5 | Water quality that does not meet approved National Secondary Drinking Water Standards causing an inability to properly operate the system (e.g. calcium buildup in pipes) |
| W2.6 | Deteriorated components of an individual home water service haul program |
| W2.7 | Water system leakage not correctable by routine maintenance, where the leakage exceeds 10 percent of the average daily water production rate for the entire system |

† Refer to Section 6b.

## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level III (DL3): Water Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community which has an inadequate or partial water supply that does not comply with applicable water supply laws*** | |
| **ID#** | **The proposed project will upgrade or provide facilities to address the following deficiencies not correctable by routine operation and maintenance:** |
| W3.1 | Water quality in public water systems, watering points/washeterias, or individual/shared wells that is not in compliance with the National Primary Drinking Water Regulations† |
| W3.2 | Water distribution system pressures that are less than 20 psi under normal operating conditions |
| W3.3 | Water storage facilities that provide less than 1/2 of the applicable design standard's storage requirement (not to include fire suppression) |
| W3.4 | Water facilities (e.g. individual well, community water system, washeteria or watering point) that provide less than 30 gallons per capita per day (gpcd) for domestic uses under normal operating conditions |
| W3.5 | Water system leakage not correctable by routine maintenance, where the leakage exceeds 20 percent of the average daily water production rate for the entire system |
| W3.6 | Direct or indirect cross-connection(s) with non-potable water sources (i.e. subject to backpressure and/or backsiphonage) |
| W3.7 | Water facilities (individual or community) that violate applicable code requirement(s) or advisories established for the protection of public health (e.g. well head separation requirements, well casing depth requirements, etc.) |

† While individual/shared wells may not be required to comply with the NPDWR, the NPDWR's water quality standards shall be treated as applicable for the purpose of determining the Project Impact.

## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level IV (DL4) Water Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community which lacks a safe water supply system***[†] | |
| **ID#** | **The proposed project will upgrade or provide facilities to address the following deficiencies not correctable by routine operation and maintenance:** |
| W4.1 | A lack of piped drinking water to homes (i.e. no connection to a community water system, individual well, or cistern system with regulated water delivery), including appropriate interior plumbing as necessary and allowable per the Criteria Document. |
| W4.2 | Water supplies served by an untreated surface water source (e.g. unprotected spring or groundwater under the influence of surface water with no treatment) |
| W4.3 | Water system source capacity is less than 5 gallons per capita per day (gpcd) for domestic uses under normal operating conditions. |

[†]Note that water system compliance issues are covered under DL 3 (e.g. refer to W16 for non-compliance with National Primary Drinking Water Regulations). Compliance issues with a high potential human health impact, such as issues that would require a Tier 1 public notification under the Safe Drinking Water Act (e.g. fecal coliform, nitrates, nitrites, turbidity, and total nitrogen), should be considered for IHS SFC Emergency project funding in accordance with Chapter 5, Section VII of the Criteria Document.

## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level I (DL1): Sewer Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community with a sanitation system which complies with all applicable pollution control laws and in which the deficiencies relate to routine replacement, repair or maintenance needs*** | |
| **ID#** | **The proposed project will:** |
| S1.1 | Replace expendable sewage treatment facility components (e.g. membranes, disinfection equipment, treatment process monitoring sensors, laboratory supplies) |
| S1.2 | Provide repairs to collection system piping or manholes (e.g. routine grout patching, lid replacement) not meeting a DL2 justification. |
| S1.3 | Clean/clear periodic blockages from sewage collection main |
| S1.4 | Address routine weed or drainage control at sewage treatment facilities |
| S1.5 | Repair or replace pumps (e.g. lift station pumps, effluent pumps) |
| S1.6 | Paint sewer system enclosures or piping |
| S1.7 | Repair backup or standby equipment |
| S1.8 | Repair telemetry or process control equipment |

## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level II (DL2): Sewer Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community with a sanitation system which complies with all applicable pollution control laws in which the deficiencies relate to capital improvements that are necessary to improve the facilities in order to meet the needs of such tribe or community for domestic sanitation*** | |
| **ID#** | **The proposed project will upgrade or provide facilities to address the following deficiencies not correctable by routine operation and maintenance:** |
| S2.1 | Facilities that do not meet applicable design standards† or are deteriorated to the point of impacting the ability to properly operate the system (e.g. exceeds organic/hydraulic loading rates, pump starts per hour more than manufacturer's recommendation, seismic design standards, lift station/treatment plant controls) |
| S2.2 | Capital components of an existing individual honey bucket sewage haul program or tribally-managed on-site septic maintenance program require replacement |
| S2.3 | A lack of standby electrical power |
| S2.4 | An inability to protect and/or restrict access to sewage collection or treatment facilities |
| S2.5 | Safety deficiencies associated with deteriorated or missing sewer system components (e.g. treatment plant ventilation, tank railing systems/fall cages) |
| S2.6 | Sludge volume in lagoon cell(s) limiting system treatment capacity below design standards |
| S2.7 | External environmental conditions (e.g. significant settlement or erosion) negatively impacting the operational integrity of existing facilities |
| S2.8 | Sewer system exfiltration exceeding 10% of the existing system design flow |
| S2.9 | Sewer system infiltration and inflow exceeding 20% of the existing system design flow |
| S2.10 | An existing lagoon that is seeping at least 5 times the design seepage rate in the primary cell |
| S2.11 | An existing lagoon that is seeping at least 10 times the design seepage rate in the secondary cell |

† Refer to Section 6b.

## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level III (DL3): Sewer Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community which has an inadequate or partial sewage disposal facility that does not comply with applicable pollution control laws*** | |
| **ID#** | **The proposed project will upgrade or provide facilities to address the following deficiencies not correctable by routine operation and maintenance:** |
| S3.1 | Individual or community sewer facilities that violate code requirement(s) or advisories established for the protection of public health (e.g. discharge permit violations, contamination of drinking water aquifers, inadequate drain field separation to groundwater or well, inadequate sludge disposal facilities) |
| S3.2 | A treatment system designed to be non-discharging that exceeds freeboard height or overflows and discharges under normal operating conditions |
| S3.3 | Inadequate or deteriorated sewage collection system components (e.g. lift stations or sewer mains) that result in periodic (min. 2 times per year) discharges of untreated sewage into the environment |
| S3.4 | Partially or incompletely treated sewage (e.g. surfacing septic tank effluent) entering the environment and accessible to human contact |

## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level IV (DL4) Sewer Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community that lacks a sewage disposal system*** | |
| **ID#** | **The proposed project will upgrade or provide facilities to address the following deficiencies not correctable by routine operation and maintenance:** |
| S4.1 | A lack of piped sewage conveyance from the home (e.g. no connection to a community sewer system, on-site treatment system, or honey bucket haul system), including appropriate plumbing appurtenances as necessary and allowable per the Criteria Document |
| S4.2 | A lack of or failed sewage collection facilities, treatment facilities, and/or septic tank-drainfield system(s) resulting in ongoing direct human contact with untreated sewage |

| **Deficiency Level V (DL 5): Water and Sewer Facilities**<br>***Indian tribe or community that lacks a safe water supply system and a sewage disposal system*** |
|---|
| **A DL 5 applies when a home has DL 4 conditions for both water <u>and</u> sewer.** |

## Appendix E: Guidance on Assigning Project Impact Deficiency Levels

| Deficiency Level I (DL1) Solid Waste Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community with a sanitation system which complies with all applicable pollution control laws and in which the deficiencies relate to routine replacement, repair or maintenance needs*** | |
| **ID#** | **The proposed project will:** |
| SW1.1 | Paint facilities, repair fences, and/or provide routine maintenance or minor repairs to existing solid waste collection and processing equipment |

| Deficiency Level II (DL 2) Solid Waste Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| | |
| | **The proposed project will upgrade or provide facilities to address:** |
| SW2.1 | Inadequate storage for solid waste equipment (e.g. heavy machinery, trucks, or containers) |
| SW2.2 | Solid waste transfer or collection equipment and facilities in need of major repair or replacement (e.g. no fencing, no burn box) |
| SW2.3 | A solid waste transfer or disposal site that is improperly operated due to a lack of adequate equipment |
| SW2.4 | A solid waste transfer or disposal site that has reached design capacity (e.g. additional collection equipment, landfill volume, and/or transfer station capacity required) |
| SW2.5 | Open dump site(s) (refer to Section 4d for definition), where an existing viable solid waste disposal option is available |

| Deficiency Level III (DL 3) Solid Waste Facilities<br>Project Impact Deficiency Statements | |
|---|---|
| ***Indian tribe or community with no solid waste disposal*** | |
| **ID#** | **The proposed project will upgrade or provide facilities to address:** |
| SW3.1 | A lack of solid waste collection and/or disposal facilities for homes (e.g. no access to a landfill, transfer station, and/or collection system) |
| SW3.2 | Existing solid waste disposal facilities that are directly contributing to documented contamination of a drinking water source |

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## Appendix F: Copies of the Authorization Acts

(P.L. 86-121, P.L. 94-437 Section 302)

**Public Law 86-121**
86th Congress, S. 56
July 31, 1959

AN ACT

73 Stat. 267.

To amend the Act of August 5, 1954 (68 Stat. 674), and for other purposes.

*Indians, sanitation facilities. 42 USC 2004a*

*Be it enacted by the Senate and House Representatives of the United States of America in Congress assembled,* That the Act of August 5, 1954 (68 Stat. 674), is amended by adding at the end thereof the following new section:

"Sec. 7. (a) In carrying out his functions under this subchapter with respect to the provision of sanitation facilities and services, the Surgeon General is authorized –

*Surgeon General. Powers.*

(1) to construct, improve, extend, or otherwise provide and maintain, by contract or otherwise, essential sanitation facilities, including domestic and community water supplies and facilities, drainage facilities, and sewage- and waste-disposal facilities, together with necessary appurtenances and fixtures, for Indian homes, communities, and lands;

*Construction and maintenance.*

(2) to acquire lands, or rights or interests therein, including sites, rights-of-way, and easements, and to acquire rights to the use of water, by purchase, lease, gift, exchange, or otherwise, when necessary for the purposes of this section, except that no lands or rights or interests therein may be acquired from an Indian tribe, band, group, community, or individual other than by gift or for nominal consideration, if the facility for which such lands or rights or interests therein are acquired is for the exclusive benefit of such tribe, band, group, community, or individual, respectively;

*Acquisition of lands.*

(3) to make such arrangements and agreements with appropriate public authorities and nonprofit organizations or agencies and with the Indians to be served by such sanitation facilities (and any other person so served) regarding contributions toward the construction, improvement, extension and provision thereof, and responsibilities for maintenance thereof, as in his judgment are equitable and will best assure the future maintenance of facilities in an effective and operating condition; and

(4) to transfer any facilities provided under this section, together with appurtenant interests in land, with or without a money consideration, and under such terms and conditions as in his judgment are appropriate, having regard to the contributions made and the maintenance responsibilities undertaken, and the special health needs of the Indians concerned, to any State or Territory or subdivision or public authority thereof, or to any Indian tribe, group, band, or community or, in the case of domestic appurtenances

*Transfer and reversion of lands*

and fixtures, to any one or more of the occupants of the Indian home served thereby.

(b)The Secretary of the Interior is authorized to transfer to the Surgeon General for use in carrying out the purposes of this section such interest and rights in federally owned lands under the jurisdiction of the Department of the Interior, and in Indian-owned lands that either are held by the United States in trust for Indians or are subject to a restriction against alienation imposed by the United States, including appurtenances and improvements thereto, as may be requested by the Surgeon General. Any land or interest therein, including appurtenances and improvements to such land, so transferred shall be subject to disposition by the Surgeon General in accordance with paragraph (4) of subsection (a) of this section: *Provided*, That, in any case where a beneficial interest in such land is in any Indian, or Indian tribe, band, or group, the consent of such beneficial owner to any such transfer or disposition shall first be obtained: *Provided further*, That where deemed appropriate by the Secretary of the Interior provisions shall be made for a reversion of title to such land if it ceases to be used for the purpose for which it is transferred or disposed.

*Transfer of U.S. land.*

(c) Project consultation and participation. The Surgeon General shall consult with, and encourage the participation of, the Indians concerned, States and political subdivisions thereof, in carrying out the provisions of this section.

SOURCE (Aug. 5, 1954, ch. 658, Sec. 7, as added July 31, 1959, Pub. L. 86-121, Sec. 1, 73 Stat. 267.)

**[Public Law 94-437, Section 302; 25 U.S.C. § 1632]**
**[Current through P.L. 115–173]**

UNITED STATES CODE
TITLE 25 - INDIANS
CHAPTER 18 - INDIAN HEALTH CARE
SUBCHAPTER III - HEALTH FACILITIES

SAFE WATER AND SANITARY WASTE DISPOSAL FACILITIES

SEC. 302. [25 U.S.C. §1632] (a) The Congress hereby finds and declares that—

(1) the provision of safe water supply systems and sanitary sewage and solid waste disposal systems is primarily a health consideration and function;

(2) Indian people suffer an inordinately high incidence of disease, injury, and illness directly attributable to the absence or inadequacy of such systems;

(3) the long-term cost to the United States of treating and curing such disease, injury, and illness is substantially greater than the short-term cost of providing such systems and other preventive health measures;

(4) many Indian homes and communities still lack safe water supply systems and sanitary sewage and solid waste disposal systems; and

(5) it is in the interest of the United States, and it is the policy of the United States, that all Indian communities and Indian homes, new and existing, be provided with safe and adequate water supply systems and sanitary sewage waste disposal systems as soon as possible.

(b) (1) In furtherance of the findings and declarations made in subsection (a), Congress reaffirms the primary responsibility and authority of the Service to provide the necessary sanitation facilities and services as provided in section 7 of the Act of August 5, 1954 13 (42 U.S.C. §2004a).

(2) The Secretary, acting through the Service, is authorized to provide under section 7 of the Act of August 5, 1954 13 (42 U.S.C. §2004a)—

(A) financial and technical assistance to Indian tribes and communities in the establishment, training, and equipping of utility organizations to operate and maintain Indian sanitation facilities;

(B) ongoing technical assistance and training in the management of utility organizations which operate and maintain sanitation facilities; and

(C) operation and maintenance assistance for, and emergency repairs to, tribal sanitation facilities when necessary to avoid a health hazard or to protect the Federal investment in sanitation facilities.

(3) Notwithstanding any other provision of law—

(A) the Secretary of Housing and Urban Affairs is authorized to transfer funds appropriated under the Housing and Community Development Act of 1974 (42 U.S.C. §5301, et seq.) to the Secretary of Health and Human Services, and

(B) the Secretary of Health and Human Services is authorized to accept and use such funds for the purpose of providing sanitation facilities and services for Indians under section 7 of the Act of August 5, 1954 13 (42 U.S.C. §2004a).

(c) Beginning in fiscal year 1990, the Secretary, acting through the Service, shall develop and begin implementation of a 10-year plan to provide safe water supply and sanitation sewage and solid waste disposal facilities to existing Indian homes and communities and to new and renovated Indian homes.

(d) The financial and technical capability of an Indian tribe or community to safely operate and maintain a sanitation facility shall not be a prerequisite to the provision or construction of sanitation facilities by the Secretary.

(e) (1) The Secretary is authorized to provide financial assistance to Indian tribes and communities in an amount equal to the Federal share of the costs of operating, managing, and maintaining the facilities provided under the plan described in subsection (c).

(2) For the purposes of paragraph (1), the term ''Federal share'' means 80 percent of the costs described in paragraph (1).

(3) With respect to Indian tribes with fewer than 1,000 enrolled members, the non-Federal portion of the costs of operating, managing, and maintaining such facilities may be provided, in part, through cash donations or in kind property, fairly evaluated.

(f) Programs administered by Indian tribes or tribal organizations under the authority of the Indian Self-Determination Act shall be eligible for—

(1) any funds appropriated pursuant to this section, and

(2) any funds appropriated for the purpose of providing water supply or sewage disposal services, on an equal basis with programs that are administered directly by the Service.

(g) (1) The Secretary shall submit to the President, for inclusion in each report required to be transmitted to the Congress under section 801, a report which sets forth—

(A) the current Indian sanitation facility priority system of the Service;

(B) the methodology for determining sanitation deficiencies;

(C) the level of sanitation deficiency for each sanitation facilities project of each Indian tribe or community;

(D) the amount of funds necessary to raise all Indian tribes and communities to a level I sanitation deficiency; and

(E) the amount of funds necessary to raise all Indian tribes and communities to zero sanitation deficiency.

(2) In preparing each report required under paragraph (1) (other than the initial report), the Secretary shall consult with Indian tribes and tribal organizations (including those tribes or tribal organizations operating health care programs or facilities under any contract entered into with the Service under the Indian Self-Determination Act) to determine the sanitation needs of each tribe.

(3) The methodology used by the Secretary in determining sanitation deficiencies for purposes of paragraph (1) shall be applied uniformly to all Indian tribes and communities.

(4) For purposes of this subsection, the sanitation deficiency levels for an Indian tribe or community are as follows:

(A) level I is an Indian tribe or community with a sanitation system—

(i) which complies with all applicable water supply and pollution control laws, and

(ii) in which the deficiencies relate to routine replacement, repair, or maintenance needs;

(B) level II is an Indian tribe or community with a sanitation system—

(i) which complies with all applicable water supply and pollution control laws, and

(ii) in which the deficiencies relate to capital improvements that are necessary to improve the facilities in order to meet the needs of such tribe or community for domestic sanitation facilities;

(C) level III is an Indian tribe or community with a sanitation system which—

(i) has an inadequate or partial water supply and a sewage disposal facility that does not comply with applicable water supply and pollution control laws, or

(ii) has no solid waste disposal facility;

(D) level IV is an Indian tribe or community with a sanitation system which lacks either a safe water supply system or a sewage disposal system; and

(E) level V is an Indian tribe or community that lacks a safe water supply and a sewage disposal system.

(5) For purposes of this subsection, any Indian tribe or community that lacks the operation and maintenance capability to enable its sanitation system to meet pollution control laws may not be treated as having a level I or II sanitation deficiency.

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