

**Report on the Status of Open Dumps  
on Indian Lands**

**1998 REPORT**

---

**CONTENTS**



	<u>Page</u>
Introduction .....	1
Inventory of Open Dumps .....	1
Estimated Cost of Compliance .....	5
Action Plan .....	6
10-Year Plan .....	7
Appendix A – Solid Waste Data Systems Guidance .....	9
Appendix B – Data Key - Open Dumps Inventory .....	14
Appendix C – Key to Tribal Codes .....	15
Appendix D – Open Dumps Inventory for 1998 .....	23
Appendix E – Solid Waste Project Costs from the Sanitation Deficiency System .....	57

**Status of Open Dumps on Indian Lands**  
**1998 Report**  
**December 31, 1998**

**INTRODUCTION:**

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Under the provisions of the Act, the Director, Indian Health Service (IHS), was assigned responsibility for development of an inventory of all open dump sites on Indian lands. In addition, the IHS was to submit annual reports to Congress indicating a priority for addressing solid waste deficiencies and progress made in addressing those needs. The Act also calls for the IHS to identify the level of funding necessary to bring those open dump sites into compliance with all regulations and develop comprehensive solid waste plans for every AI/AN entity.

This annual report reflects the data available as of December 31, 1998. Identification of open dump sites is an ongoing process accomplished in cooperation with tribes, the Environmental Protection Agency (EPA), and other State and Federal entities.

In addition to the inventory, this Annual Report includes the IHS's estimate of funding needs required to bring the current inventory of 1,104 open dumps on Indian lands in compliance with solid waste regulations. This information was compiled from information incorporated in the IHS's Sanitation Deficiency System and results in an initial estimated need of approximately \$126 million for activities related to the cleanup of open dump sites.

**INVENTORY OF OPEN DUMPS:**

The inventory of open dump sites reflected in this report lists a total of 1,104 sites, which is down slightly from the total of 1,162 open dumps contained in the last report. These changes result from a decrease in total number of sites attributed to closure activities coupled with increases resulting from inclusion of newly identified sites.

Supplemental IHS resources were not available for an in-depth survey and analysis of all open dumps. Completion of the open dump inventory was accomplished using limited existing resources, in an attempt to gather as much of the requested information as possible without

reducing other mandated health services. Site identification is an ongoing process, and it is expected that the number of sites will continue to increase. The comprehensiveness of the inventory is also affected by the fact that some tribes declined permission to include dump sites within their lands. The results of the survey should be viewed as a preliminary identification of solid waste sites on Indian lands, which require additional evaluation and analysis when necessary resources are made available.

As required by the Act, consultation with the EPA is continuing, based on regional and local interest in solid waste issues. The EPA was consulted on the information protocol prior to the initiation of the inventory process and was provided with a copy of the guidance used by IHS personnel in the data collection process. This guidance is included in Appendix A. Indian Health Service personnel in the twelve IHS Areas advised local tribes of the provisions of P.L. 103-399 and the protocol for the inventory process. In its current form, the inventory lists the geographic location of all known open dumps, an observation of the visible contents of each dump, and an assessment of the potential threat to health and the environment.

Dump sites were geographically located by latitude, longitude, and IHS Area. The State, tribe, reservation, and community are also used to identify sites. A key to abbreviations used in the open dump sites list is provided in Appendix B, a key to tribal codes is included in Appendix C and a complete listing of open dump site information is included in Appendix D.

Unless more factual information was already available from other sources, evaluations of site contents were made by IHS and tribal staff on the basis of what was visible on the surface of the dump site. Due to the limited resources available, comprehensive and technically specific analyses of site contents were not performed and the results reflect a “best guess” as to the likely contents. Site content evaluations are based on standard descriptions as listed in Table 1.

**Table 1**  
**Site Content Descriptions**

<b>Municipal Solid Waste:</b> meaning any household, commercial/industrial, or institutional solid waste that legally can be discarded in a municipal landfill under the provisions of the Resource Conservation and Recovery Act (RCRA), Subtitle D.
<b>Special Waste:</b> includes solid or other wastes not specifically regulated as hazardous under RCRA, Subtitle C, but which are considered to require special handling either due to regulation under other statutes or for worker safety.
<b>Hazardous Waste:</b> includes those materials listed by EPA under RCRA, Subtitle C, as hazardous.

Table 2 is a summary of the classifications of each of the 1,104 open dump sites, which were made by observing the visible contents.

**Table 2**  
**Content Classifications of Indian Open Dump Sites**

Municipal Solid Waste	485 sites
Wastes Requiring Special Handling	34 sites
Hazardous Waste	13 sites
Municipal & Special Handling Wastes	303 sites
Municipal & Hazardous Wastes	22 sites
Municipal/Special/Hazardous Wastes	7 sites
Hazardous & Special Wastes	3 sites
Undetermined	237 sites
Total Sites	1104 sites

The relative threat to health and the environment was evaluated by IHS or tribal personnel based on the consideration of factors (listed in Table A, Appendix A) that may contribute to the likelihood that a site might pose a hazard. Regional adjustments based on professional judgement were made in hazard scoring assessments. Threat was classified as low, high, and moderate based on factors detailed in Appendix A.

A summary of the potential threat to health and environment, by category, for identified sites is provided in Table 3.

**Table 3  
Indian Lands Open Dump Sites - Potential Threat to Health & Environment**

<b>Area</b>	<b>High Threat</b>	<b>Moderate Threat</b>	<b>Low Threat</b>	<b>Threat Undetermined</b>	<b>Total</b>
<b>Aberdeen</b>	14	11	25	2	<b>52</b>
<b>Alaska</b>	7	136	6	2	<b>151</b>
<b>Albuquerque</b>	1	9	6	8	<b>24</b>
<b>Bemidji</b>	4	4	0	0	<b>8</b>
<b>Billings</b>	14	19	0	0	<b>33</b>
<b>California</b>	6	25	26	32	<b>89</b>
<b>Navajo*</b>	0	1	240	0	<b>241</b>
<b>Nashville</b>	22	35	6	0	<b>63</b>
<b>Oklahoma</b>	44	69	21	0	<b>134</b>
<b>Phoenix</b>	13	77	62	2	<b>154</b>
<b>Portland</b>	8	12	44	0	<b>64</b>
<b>Tucson</b>	9	47	35	0	<b>91</b>
<b>Total</b>	<b>142</b>	<b>445</b>	<b>471</b>	<b>46</b>	<b>1104</b>

*\* As a result of differences in the definition of open dump sites between the Navajo Nation and the Indian Health Service, some sites identified by the Nation have not been included in the totals for the report nor have they been included as needs in the Sanitation Deficiency System. Efforts to resolve these definitional differences are ongoing.*

Of the sites in Table 3, 551 dump sites were indicated as located on trust lands and 203 sites were indicated as located on lands not in trust status. The land status of the remaining 350 sites is currently unidentified.

The distribution of sites by surface size is shown in Table 4.

**Table 4**  
**Distribution of Open Dumps by Surface Area**

Less than 2000 sq. meters	246 sites
Less than 5000 sq. meters	558 sites
Less than 10,000 sq. meters	688 sites
Less than 20,000 sq. meters	754 sites
Less than 40,000 sq. meters	813 sites*
Greater than 40,000 sq. meters	55 sites*
Surface area not determined	236 sites*
Total Sites (those with an *)	1104 sites

The majority of these dump sites are unattended and receive no operational care. Approximately 5 percent of the sites are covered on a monthly or more frequent basis. In addition, only 15 percent of the dumps are fenced to restrict access to the sites.

**ESTIMATED COST OF COMPLIANCE:**

The Indian Health Care Improvement Act, P.L. 94-437, as amended, requires the IHS to maintain inventories of sanitation deficiencies for new and existing Indian homes and communities, to prioritize those deficiencies, and to report them to Congress annually. Since 1989, the IHS has annually reported these needs to Congress in the form of projects. Projects are identified in terms of the facilities to be provided, the cost, and the number of homes to be served by the facilities. The inventory of sanitation facilities needs is maintained in the IHS Sanitation Deficiency System (SDS). These sanitation deficiency inventories are primarily used for internal program management, budget formulation, and justification for appropriations, and are the basis for resource allocation to Areas and tribes. Just as important, they also are used to provide a wide variety of information to members of Congress, the Office of Management and Budget, the General Accounting Office, the EPA, and various other Federal entities who are interested in tribal needs. Therefore, a logical extension of the SDS was to maintain and compile the cost information required under The Indian Lands Open Dump Cleanup Act. Beginning in July of 1996, projects associated with development of solid waste management plans, development of alternatives to disposal of solid waste in open dumps, and closure of existing open dumps were included in the SDS. The costs associated with these projects will be included in the annual reports to Congress as outlined above. A listing of the SDS projects associated with open dump sites is provided in Appendix E and an IHS Area by Area summary of the costs from this SDS listing is contained in Table 5.

**Table 5  
SDS Solid Waste Funding Requirements by Area**

<b>Area</b>	<b>Solid Waste Management</b>	<b>Solid Waste Alternative</b>	<b>Closure Cost</b>	<b>Total Funding Required for</b>
<b>Aberdeen</b>	\$375,000	\$5,852,000	\$2,753,000	\$8,980,000
<b>Alaska</b>	\$2,217,000	\$50,830,000	\$7,603,500	\$60,650,500
<b>Albuquerque</b>	\$0	\$1,173,000	\$2,210,000	\$3,383,000
<b>Bemidji</b>	\$40,000	\$227,000	\$813,500	\$1,080,500
<b>Billings</b>	\$0	\$2,690,000	\$1,060,000	\$3,750,000
<b>California</b>	\$15,000	\$1,236,500	\$1,835,500	\$3,087,000
<b>Navajo</b>	\$477,500	\$3,250,000	\$12,057,500	\$15,785,000
<b>Nashville</b>	\$26,500	\$1,035,500	\$2,453,400	\$3,515,400
<b>Oklahoma</b>	\$137,000	\$1,123,000	\$1,598,900	\$2,858,900
<b>Phoenix</b>	\$90,000	\$2,985,000	\$7,069,000	\$10,144,000
<b>Portland</b>	\$502,000	\$4,692,500	\$4,493,000	\$9,687,500
<b>Tucson</b>	\$0	\$539,900	\$2,335,735	\$2,875,635
<b>Total</b>	\$3,880,000	\$75,634,400	\$46,283,035	<b>\$125,797,435</b>

**ACTION PLAN:**

The inventory data will be revised as new open dump sites are identified and additional information obtained. Copies of the current inventory will be provided to the EPA at the national and regional levels. Due to the limited information available from this preliminary inventory effort, more extensive analyses of dump contents, soils, and geology are necessary. Each IHS Area will contact EPA officials at the nearest regional office concerning the dump site inventory for further consultation and evaluation on the assessment of contents and threat to health and the environment. Priority for additional evaluations will be based on joint consultation between the IHS, tribes, and the EPA. The assessments are expected to be dynamic as additional information is acquired through these evaluations.

Progress has been made, but none specifically tied to the authority of P.L. 103-399 in cleaning up American Indian and Alaska Native open dumps. The fiscal year (FY) 1998 IHS appropriation language stated: "The IHS may use up to \$5 million in sanitation funding to clean up and replace open dumps on Indian lands pursuant to the Indian Lands Open Dump Cleanup Act of 1994." Although this authority did not provide additional funding, it did provide some flexibility in the selection of projects to fund and placed a higher priority on solid waste projects. With existing appropriations, the IHS continues to develop solid waste projects, which include solid waste management plans, solid waste disposal alternatives, and open dump cleanups. Between FYs 1991 and 1998, the IHS funded solid waste projects totaling over \$37 million (includes some contributions from other sources). Twenty-four solid waste projects were funded in FY 1998 with a total cost of approximately \$5.6 million.

Since funds were not made available under P.L. 103-399, the IHS also has not funded any open dump clean-up demonstration projects. However, the IHS is using some Special Project funds to fund three cost studies for future open dump cleanups on the Tohono O’odham, Makah, and Blackfeet Reservations; no funds have yet been identified for the actual cleanup and replacement projects at these locations. The IHS will use these studies to gain baseline cost information for developing solid waste management plans (including evaluation and threat assessment), closure, development of alternative waste disposal methods, and post closure maintenance of open dumps on Indian lands. Also, with the FY 1997 appropriation of sanitation facilities construction (SFC) funds, Congress authorized the IHS to use up to \$3 million of the SFC appropriation for assessments of open dumps. Using this authority, 19 comprehensive assessment projects were selected at an estimated cost of \$1,527,600.

Without the additional funds or staffing necessary to specifically carry out the mandates of P.L. 103-399, the IHS will continue to address the solid waste needs of Indian homes and communities in accordance with the policies, procedures, and funding priorities established for implementing P.L. 86-121 in the Indian Health Care Improvement Act, as Amended, and the priority criteria mandated in that Act. Priority for funding under this system is determined in large part by the health impact and potential for reducing health care costs by prevention. Because of health considerations and tribal priorities, projects to provide water and sewage facilities generally have a higher priority for IHS sanitation facilities construction funds.

At the end of FY 1998, the IHS identified a need for approximately \$126 million to provide solid waste collection and disposal facilities and equipment for an estimated 143,000 Indian homes. Congress could provide funding under the specific authority of P.L. 103-399 to address solid waste issues ahead of existing problems but has not done so to date. If a separate amount of funds to implement P.L. 103-399 is appropriated by Congress, the IHS may develop and implement a separate priority system for projects to address open dumps. Otherwise, solid waste projects, including those closing open dumps, will continue to be ranked along with water and sewer projects and funded in priority order.

## **10 – Year Plan**

The Indian Lands Open Dump Cleanup Act of 1994 (P.L. 103-399) required the Secretary to develop a 10-year plan to “address solid waste disposal needs on Indian lands and Alaska Native lands.” The 10-year plan is to identify “the level of funding needed to effectively close or bring into compliance with applicable Federal standards any open dumps located on Indian lands and Alaska Native lands” and “the level of funding needed to develop comprehensive solid waste management plans for every Indian tribal government and Alaska Native entity.”

The 10-year plan is a “funding” plan. Open dump cleanup projects are listed and prioritized in the SDS. Table 6 shows the estimated amount of funds necessary over 10 years to develop solid waste management plans where needed and to clean up, or bring into compliance, open dumps. Many tribes already have developed solid waste management plans, or they do not need them



because solid waste is being disposed of properly off-reservation. An alternative method of solid waste disposal must be in operation before many dumps can be closed. Table 6 also shows the cost of providing alternative solid waste disposal facilities.

Costs indicated in Table 6 reflect an estimated inflationary factor of 3 percent each year. There are no projections of additional funding necessary to cover the costs associated with future occurrences such as population increases, or new and revised environmental regulations, etc. These costs will be reflected in the annual IHS update of the estimated needs and adjusted associated costs.

**Table 6  
10-Year Funding Plan**

<b>Fiscal Year</b>	<b>Funding For Solid Waste Management</b>	<b>Funding For Solid Waste Disposal</b>	<b>Funding For Open Dump Closures</b>	<b>Total Annual Funding Needed</b>
<b>1999</b>	\$388,000	\$7,563,440	\$4,628,304	\$12,579,744
<b>2000</b>	\$399,640	\$7,790,343	\$4,767,153	\$12,957,136
<b>2001</b>	\$411,629	\$8,024,053	\$4,910,168	\$13,345,850
<b>2002</b>	\$423,978	\$8,264,775	\$5,057,473	\$13,746,226
<b>2003</b>	\$436,697	\$8,512,718	\$5,209,197	\$14,158,612
<b>2004</b>	\$449,798	\$8,768,100	\$5,365,473	\$14,583,371
<b>2005</b>	\$463,292	\$9,031,143	\$5,526,437	\$15,020,872
<b>2006</b>	\$477,191	\$9,302,077	\$5,692,230	\$15,471,498
<b>2007</b>	\$491,507	\$9,581,140	\$5,862,997	\$15,935,644
<b>2008</b>	\$506,252	\$9,868,574	\$6,038,887	\$16,413,713
<b>Total</b>	\$4,447,984	\$86,706,363	\$53,058,319	\$144,212,666