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EVALUATION OF THE INTERAGENCY OPEN DUMP CLEANUP PROJECT FOR TRIBES

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Attachment D: Summary of Findings from Tribal Interviews and Federal Agency Interviews

ACKNOWLEDGEMENTS

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Tribal representatives included Dan Salmon of the Igiugig Village Council in Alaska; Jeff Benson of the Metlakatla Tribe in Alaska; Roberta Moto of the Native Village of Deering in Alaska; Alice Julius and Vernon Bavilla of the Native Village of Goodnews Bay in Alaska; Gloria Shellabarger of the Native Village of Kiana in Alaska; Raven Sheldon of the Native Village of Selawik in Alaska; Loretta Stone of the San Carlos Apache Tribe in Arizona; Gary J. Olson and Ned Norris of the Tohono O'odham Nation in Arizona; Barbara Ferris of the Hoopa Valley Tribe in California; Monica Hedstrom of the White Earth Reservation in Minnesota; Gerald Wagner of the Blackfeet Tribe in Montana; Peggy Cavanaugh of the Spirit Lake Tribe in North Dakota; Rhonda Azure and Elmer Davis of the Turtle Mountain Band of Chippewa Indians in North Dakota; Jessie Beck of the Ponca Tribe of Oklahoma; David Nelson of the Cheyenne River Sioux Tribe in South Dakota; Bobby Sullivan and Justin Pourier of the Oglala Sioux Tribe in South Dakota; David Ernst of the Spokane Tribe in Washington; Steve Pendleton of the Makah Tribal Council in Washington; Harvey Schuch of the Quileute Reservation in Washington; and Scott Andrews of the Swinomish Tribal Community in Washington.

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EXECUTIVE SUMMARY

BACKGROUND AND METHODOLOGY

Tribes face considerable challenges in closing open dump sites, developing sound solid waste management practices and providing a safe and healthy environment for members of the Tribal community. Resource and geographic constraints complicate these tasks and necessitate cost-effective solutions. Since 1999, six Federal Agencies that comprise the Tribal Solid Waste Interagency Workgroup[1] ("Workgroup") have provided over 100 Tribes with 13.4 million dollars in funding and assistance as part of the Interagency Open Dump Cleanup Project for Tribes ("Cleanup Project"). The Cleanup Project aims to help Tribes clean up and prevent open dumps; develop integrated solid waste management plans; and provide training and education to Tribal members to prevent illegal dumping.

Industrial Economics, Incorporated (IEc) assisted EPA in evaluating projects that were funded during the 1999, 2000, and 2001 funding cycles. The evaluation is designed to address the following four overarching questions:

- To what extent has the Cleanup Project resulted in the cleanup, closure, or prevention of open dumps?
- To what extent have Workgroup funds contributed to the development of sustainable integrated solid waste management programs?
- To what extent has there been a recurrence of open dumping in the Project-affected lands?
- To what extent do administrative issues affect the Workgroup's ability to achieve its goals?

The evaluation is based on a series of in-person or telephone discussions with Tribes and Federal Agency representatives, including: 20 funded Tribes, five Federal Agency staff from Headquarters offices, and 11 Federal Agency staff from Regional Offices. In addition, site visits to nine of 20 funded Tribes were conducted in Arizona, North and South Dakota, and Washington to provide field observations of site conditions.

KEY FINDINGS

The evaluation's overall finding is that Tribes are making steady progress in the cleanup and closure of existing open dumps and are building solid waste management capacity. IEc's discussions with Tribes and Federal Agency staff point to several specific themes, grouped according to the four overarching questions listed above:

[1] These Federal Agencies include the Bureau of Indian Affairs (BIA), Department of Defense (DOD), Environmental Protection Agency (EPA), Indian Health Service (IHS), Housing and Urban Development (HUD), and the Rural Utilities Service (RUS) in the Department of Agriculture.

Cleanup, Closure, or Prevention of Open Dumps

- ***Cleanup and Closure of Open Dumps:*** Phased, or incremental, steps are the key to steady progress by Tribes in addressing the cleanup and closure of open dumps. For example, the Metlakatla Tribe in Alaska has completed the initial waste characterization stage; the Spokane Tribe in Washington has completed 75 percent of its proposed transfer station and plans to begin closing its open dumps; and the White Earth Reservation in Minnesota has closed three open dump sites and is using surplus funds to prepare solid-waste educational materials. Average funding levels per Tribe per year do not cover the full costs of cleanup and closure activities from site assessment to post-closure maintenance. As a result, Tribes solicited funding for multiple years. For example, Tohono O'odham received funding over the 1999, 2000, 2001 funding years; and Spokane secured funding during the 1999 and 2000 funding cycles. Furthermore, Tribes' efforts have been slowed by severe weather conditions (e.g., Oglala Sioux in South Dakota) and terrain unsuitable for conventional closure approaches (e.g., most Native Alaskan Villages). The discovery of hazardous waste in a Tribe's open dump can also impede progress and require additional time and resources.

- ***Open Dump Cleanup Project Outcomes and Benefits:*** In general, participating Tribes and the Workgroup cannot yet quantify the environmental and human health outcomes of open dump closures and efforts to build Tribal solid waste management capacity. Twelve Tribes are developing, or are in the process of developing, an inventory of uncontrolled waste sites and several Tribes use GIS software to map sites. Additional efforts by Federal Agencies to correlate cleanup and closure efforts to the degree of environmental or public health threat posed by the open dump should continue. In the interim, participants are comfortable speaking qualitatively about the benefits derived from the Cleanup Project: improved awareness within the Tribal council and community about solid waste management issues and progress toward cleanup and closure of open dumps. Moreover, many benefits of the program, while critically important, may simply not lend themselves to quantification (e.g., improved Tribal capacity to proactively address solid waste management concerns).

Development of Solid Waste Management Programs

- ***Tribal Solid Waste Management Capacity:*** This evaluation documents the progress of Tribes in building solid waste management capacity. For example, 15 of 20 Tribes have established a permanent funding source and 17 of 20 Tribes reported conducting activities directly related to the development of an integrated solid waste management plan (ISWMP). Building Tribal solid waste management capacity is a significant challenge for many Tribes. Combustion of waste persists and recycling efforts are in their early stages, particularly in remote areas. The capacity of Tribes to dedicate staff to solid waste management depends on available Tribal resources. Swinomish, with a population of 2,285, has ¼ full-time equivalent (FTE) dedicated solid waste staff, whereas the Tohono O'odham has 25 solid waste staff with five times the population and 387 times the land area. Tribal interviewees stressed the importance of a supportive Tribal council to conduct planning and outreach activities with community involvement.

Recurrence of Open Dumping

- ***Recurrence or Persistence of Open Dumps:*** Although Tribes point to the increased awareness and participation of Tribal members in sound solid waste management practices (e.g., educational programs in schools and periodic community cleanups to dispose of tires and household appliances), 11 of 13 Tribes conducting open dump closure projects acknowledge the recurrence or persistence of open dumping. Although Tribal members did not identify the scale of this dumping, EPA staff suspect that it may be small-scale wildcat dumping. Factors cited include distance from disposal facilities over unpaved roads, cost to individual households unable to support additional expenses, and insufficient outreach efforts.

Administrative Challenges and Opportunities for Workgroup

- ***Funding Prioritization and Coordination:*** Scoring and ranking funding applications on a timely basis and coordinating input from Regional and Headquarters staff present an annual challenge for the Workgroup. Federal Agency respondents recommend adjustments to the ranking process to place greater emphasis on the merits and environmental benefits of the project, rather than the application's technical compliance with funding requirements. While technical compliance must be achieved prior to disbursement of funds, the funding selection process should focus heavily on potential project outcomes. Tribes also reported awards of less funding than proposed, and the difficulty of matching individual Agency requirements to solid waste needs. For example, IHS may provide direct, on-site assistance to Tribes or provide funds to a Tribe to execute work internally or through contract; RUS provides loans or grants for Tribes to purchase materials; BIA funding allows Tribes to perform the work themselves and hire contractors as necessary; and EPA funding may be used for training, outreach, and planning through the Environmental Program Management or the construction of transfer stations and the purchase of collection bins through the Indian General Assistance Program. The variations in funding stipulations from the agencies places additional burden on tribes to 'piece together' funding and project tasks.

- ***Federal Assistance and Oversight:*** Tribes and Federal Agency respondents agree that hands-on interaction and training in which Tribal members present information and experiences to other Tribes are particularly effective. Tribes in particular emphasized the benefits of hearing solid waste success stories and lessons learned from Tribal colleagues, and urged the Federal government to provide more opportunities for such networking. Tribes reported the value of conferences sponsored by the Tribal Association for Solid Waste and Emergency Response and the regional networking opportunities provided by the Tribal Solid Waste Advisory Network consisting of Tribes from Alaska, Washington, and Oregon. Tribes also acknowledged the benefits of on-site assistance, especially from Federal Agency personnel with engineering or solid waste management expertise. IHS, for example, partners with Tribes to provide direct assistance in completing projects, while trying to employ Tribal labor to the extent possible; and RUS funds outside organizations such as the Midwest Assistance Program to aid Tribes in the field.

RECOMMENDATIONS

Recommendations based on this evaluation fall into two categories. First, IEc offers recommendations to the Workgroup to consider developing performance measures, uniform reporting mechanisms, flexible funding approaches, strategies to reduce administrative burden, and support for Tribes to inventory open dumps, network, and share information developed in Tribal case studies. These recommendations cover evaluation objectives related to the Cleanup Project's performance and administrative funding barriers. Second, IEc offers lessons shared by Tribes that received funding under the Cleanup Project. Tribal lessons address the evaluation objective of assessing Tribal activities during the 1999, 2000, and 2001 funding cycles.

Recommendations to the Interagency Workgroup

The recommendations discussed in this section focus on improving the administration of the ongoing Cleanup Project and the work of the Workgroup. Due to the diverse funding requirements associated with each Federal Agency participating in the Cleanup Project and the multi-year, phased process necessary to close open dumps and build Tribal solid waste capacity, Federal Agencies face coordination challenges and an opportunity to leverage resources. Below, we discuss each of the recommendations in detail.

- ***Consider Developing Workgroup Performance Measures that Inform Interagency Funding Priorities:*** The Workgroup may wish to consider development of performance measures that set discrete milestones. These milestones will in turn inform funding priorities and decisions. For example, by establishing the short-term measure (i.e., one to three years) of closing five open dumps and developing alternative solid waste disposal options for these Tribes, the Workgroup is concentrating its resources and directing its technical assistance toward a measurable outcome. This approach may help to manage the diverse funding requirements associated with each Federal Agency participating in the Cleanup Project and the multi-year, phased process necessary to close open dumps and build Tribal solid waste capacity.

  Interagency funding priorities may also include priority ranking for those Tribes that are making steady progress toward closing open dumps and implementing integrated solid waste management plans, before funding new projects. Continued funding support may be less expensive and result in a more sustainable solid waste approach than multiple, small awards. The Workgroup may also pool its funding resources and expertise to fund a Tribe with multiple high threat sites that has been recommended by Regional staff (i.e., potential for groundwater contamination used for drinking water supply). To implement established funding priorities, the Workgroup may wish to reconsider scoring criteria and create additional opportunities for Regional collaboration to ensure consistent application of scoring criteria.

- ***Develop Uniform Reporting Mechanisms:*** The Interagency Workgroup should consider development of uniform reporting mechanisms to track program progress. A simple and

uniform reporting process would enhance the collaborative nature of this interagency effort, provide more accessible data to promote the program, and potentially address the challenges faced by resource-constrained Tribes to submit progress reports. The Workgroup needs reliable mechanisms for data collection to enable identification of, for example, the number (and percent) of open dumps that have been closed as a result of Cleanup Project funding. This would help the Workgroup evaluate the effectiveness of funding and inform the Cleanup Project's continuing improvement efforts. The Workgroup may wish to consider developing a project management tracking database that would facilitate collecting such information and managing the funded proposals.

- ***Adopt Flexible Funding Approach in Considering Tribal Needs:*** The Interagency Workgroup should consider a more flexible approach to accommodate Tribal solid waste needs in developing its criteria for funding solicitations. Tribes are faced with difficult field conditions, severe resource constraints, and competing community needs. For example, the Workgroup historically has required an ISWMP prior to additional Workgroup assistance. The development of a formal ISWMP may not be a Tribe's first priority in building Tribal capacity for solid waste management, since it does not provide tangible evidence to the community of progress. Assistance could instead begin with the cleanup of a waste site that is both an eyesore and creates a potential public health threat by attracting disease vectors. This visible first step may allow the Tribal environmental program to build momentum and community support for longer-term efforts (e.g., developing and implementing a formal ISWMP).

- ***Support Tribal Efforts to Inventory and Map Open Dumps:*** Tribes report on the continuing challenge of preventing the recurrence of open dumping on Tribal lands. Twelve Tribes are preparing inventories of uncontrolled waste sites and several Tribes use GIS software to map sites. The Workgroup may wish to consider using its collective GIS resources to assist Tribes in this effort. For example, Workgroup agencies can compile and distribute publicly-available data (e.g., spatial location of groundwater recharge areas) to assist Tribal solid waste managers in selecting alternate landfill sites. The Workgroup might also share data on the location of known open dumps already identified through the IHS inventory, or through subsequent updating efforts. This would save Tribal effort in compiling existing data and allow for Tribes to focus on supplementing these data sets as new open dumps are inventoried. With an accurate tally and locational data identifying open dumps and sensitive geology, Tribes will be better equipped to identify problem areas and take proactive measures, initiate appropriate enforcement actions, and educate the community regarding the costs of illegal dumping.

- ***Develop "Smart" Funding Process to Reduce Administrative Burden:*** Tribal and Federal respondents acknowledge the administrative difficulties associated with applying for and receiving Workgroup funds. To help diminish this burden, the Workgroup should consider several options.

  First, the Workgroup may wish to develop a "smart" funding process that streamlines a given Tribe's application to fit the nature of the proposed project. For example, an electronic application could walk Tribes through a series of questions – similar in structure to

commercially available income tax preparation packages – and require only those forms pertinent to the activities proposed. Auto-complete functions could minimize redundant data entry, and required fields (e.g., IHS "High Threat" or "Sanitation Deficiency System" identification numbers) could ensure that complete applications contain all of the information necessary for the Workgroup to make informed decisions.[2] Further, such a system would facilitate application processing by providing Workgroup members with standardized application materials across Tribes. In the case of Tribes without a reliable internet connection, simple programming should allow for all required forms to fit on a single standard 3.5" floppy disc.

Second, the Workgroup should consider creating a "funding hotline" to support Tribes in preparing their application. Tribes spoke highly of the direct technical assistance provided by Regional staff in support of solid waste management planning, site engineering and remediation activities. A single point of contact within each Agency for funding questions (who works closely with Regional staff engaged in funding administration) may provide leverage for technical staff and lessen Tribal burden.

Third, the Workgroup may want to consider streamlining disbursement of funding and improving coordination between Headquarters and Regional offices of its member Agencies. Workgroup Agencies noted delays that interfered with prompt disbursement of funds, thereby creating a compressed timeframe for Tribes to effectively use funds within the remaining fiscal year.

- ***Offer More Opportunities for Tribal Networking and Assistance:*** The Workgroup may want to consider expanding opportunities for Tribes to network with other Tribes and with Federal Agencies. Tribal respondents praised training sessions at which Tribes share knowledge and experience by presenting lessons learned. The Workgroup could solicit feedback from Tribes on regional concerns (e.g., "Waste Management in the Tundra" for Native Alaskan Villages) and facilitate workshops on those topics. Agency staff could present the technical specifics of a solid waste management challenge, and Tribes could share their experiences in developing innovative strategies to address the issue.

  Workgroup Agencies should coordinate to ensure that these efforts do not overlap with any existing solid waste training available to the tribes. Further, the Workgroup should work to identify funding sources to help convene these workshops and subsidize travel costs for Tribal attendees. Some EPA Regions conduct periodic Tribal meetings and collaborate with their Federal Agency counterparts. These efforts may provide a model to other Regions.

  Finally, the Workgroup should consider broadening its support of Tribes in determining the scope and cost of their projects. Tribes suggested that the Workgroup could: provide guidance within the solicitation notice on estimating resource needs; help Tribes in the development of concrete project stages; and arrange for direct assistance with (or a comprehensive guide written by) personnel who have experience in costing cleanups.

[2] USDA staff noted that some information may still need to be submitted in hard-copy form.

- ***Develop and Publicize Tribal Case Studies:*** Case studies often prove to be an effective vehicle for technology transfer among Tribes as well as a good vehicle for building support of funding efforts within Workgroup Agencies. Such examples present the context and challenges of a particular Tribe's waste management situation (e.g., rural location, weather, topography); the steps taken to improve waste management (e.g., funding sources, capital improvements, capacity building); and the outcomes achieved through the Tribe's efforts. Case studies provide a detailed reference point for Tribes to share valuable information as well as for Workgroup Agencies to highlight their projects and lessons learned, successes, etc. For this reason, the Workgroup may want to consider this recommendation and the networking recommendation above together.

Lessons Shared by Tribes

The evaluation also suggests a set of lessons for Tribal staff engaged in closing open dumps and building solid waste capacity. Based on the findings from interviewees, Tribes may benefit from the lessons summarized below.

- ***Solicit Tribal Council Support:*** Many Tribal members report on the importance of gaining support from solid waste champions in leadership positions to build solid waste capacity. For example, environmental managers are generally required to obtain Council support to apply for Interagency funding and long-term solid waste management resources. Continued advocacy by Tribal leaders to sustain attention to solid waste management issues and model appropriate behavior for community members is key. Tribal solid waste managers should continue to provide tangible benefits to the community and keep the Tribal Council fully informed of current and future activities.

- ***Gain Community Support:*** Tribes should make every effort to gain community support for their efforts. Outreach efforts in the schools and community programs to heighten awareness of solid waste issues help create the environment for a sustainable program. The findings suggest that many Tribes have active outreach programs, but many Tribes also report resistance from community members in establishing permanent funding sources. Tribes may want to consider the use of educational materials created by other Tribes or Federal Agencies to leverage resources; and the experience of Tribes that have been successful in creating long-term funding strategies.

- ***Seek Opportunities to Network with other Tribes and Solid Waste Professional Organizations:*** Solid waste management issues are typically large-scale problems solved over the long term. Tribes report significant benefits from leveraging knowledge and experience by networking with other Tribes, Agencies, and professional groups (e.g., Solid Waste Association of North America (SWANA), Tribal Association for Solid Waste and Emergency Response (TASWER), and Tribal Solid Waste Advisory Network (TSWAN)). Inter-Tribal networking is particularly advantageous, as it allows for a support network among those facing similar obstacles and hardships. Tribes should continue to seek appropriate networking opportunities.

- ***Define Performance Measures and Monitor Progress:*** Tribes may want to consider taking concrete steps to set goals and objectives; defining and employing performance measures; and regularly assessing progress made and areas for improvement. Open dump cleanups are usually long-term efforts. Performance measurement helps maintain momentum by breaking the project into smaller pieces with associated short-term goals and objectives that fit within a broader long-term management plan. A results-oriented approach also helps to build support from community members and the Tribal Council. Finally, by demonstrating measured and steady success in achieving goals, Tribes provide the Workgroup with evidence to support continued funding.

BACKGROUND AND INTRODUCTION CHAPTER 1

The Interagency Open Dump Cleanup Project for Tribes ("Cleanup Project") is a multi-Agency effort to help Tribes throughout Indian Country close and prevent open dumps, clean up solid waste on Tribal land, and develop safe solid waste management practices. In 1994, the U.S. Congress found that most Tribal governments and Alaskan Native entities lacked the financial and technical resources necessary to close these dumps and to develop comprehensive solid waste management plans.[3] To address these needs, EPA signed a Memorandum of Understanding (MOU) in 2000 with several Agencies including the Indian Health Service (IHS), Bureau of Indian Affairs (BIA), Department of Defense (DOD), Housing and Urban Development (HUD), and Rural Utilities Service (RUS) to develop a coordinated open dump cleanup program (see Attachment A). Since 1999, these six Federal Agencies (the Tribal Solid Waste Interagency Workgroup, or "Workgroup") have provided over 100 Tribes with 13.4 million dollars in funding and assistance to clean up and prevent open dumps. The Cleanup Project funds activities that will result in cleaning up or closing open dumps, developing integrated solid waste management plans, designing regulations to enforce sound solid waste practices, and conducting training for community members to assist them in preventing illegal dumping. EPA's Office of Solid Waste and Emergency Response, Office of Solid Waste (OSW), Municipal and Industrial Solid Waste Division coordinates the Workgroup's efforts on behalf of EPA, in collaboration with its EPA Regional Partners and other Federal Agencies. The Workgroup is one of several venues in which open dumps are addressed: each of the Workgroup's member Agencies provides funds to Tribes under separate authorizing legislation.

Having completed several cycles of funding solicitations and awards, EPA is interested in evaluating the extent to which the Cleanup Project has contributed to the cleanup and prevention of open dumps and the development of safe solid waste management programs in Indian Country. During the past several months, the Evaluation Team (comprised of personnel from IEc, EPA, and other Workgroup agencies participating in the design and execution of this evaluation) conducted an assessment of the Cleanup Project. To conduct the evaluation, IEc collected and analyzed information obtained from funded tribes and representatives of Federal agencies working on-site in direct collaboration with tribes or headquarters personnel responsible for administering the program. In addition, the Evaluation Team conducted site visits to obtain more detailed information regarding the progress of a select number of funded projects.

[3] Indian Lands Open Dump Cleanup Act of 1994, 25 USC 3901 et seq. http://assembler.law.cornell.edu/uscode/html/uscode25/usc_sup_01_25_10_41.html

The Workgroup conducted this evaluation to answer several overarching evaluation questions:

- To what extent has the Cleanup Project resulted in the cleanup, closure, or prevention of open dumps?
- To what extent have Workgroup funds contributed to the development of sustainable integrated solid waste management programs?
- To what extent has there been a recurrence of open dumping in the Project-affected lands?
- To what extent do administrative issues affect the Workgroup's ability to achieve its goals?

Given these overarching questions, the study will be useful for several different audiences. First, the evaluation results will be used by the Interagency Workgroup to better understand the benefits and results of the Cleanup Project and make future modifications to increase the effectiveness of the effort. Second, EPA Regions and other Workgroup participants may find the report useful in making adjustments in the degree and kind of technical assistance provided to Tribes. Finally, the Tribal community, particularly environmental managers, may find the report useful in securing additional support to achieve solid waste management objectives.

OVERVIEW OF OPEN DUMP CLEANUP PROJECT

Launched in 1999, the Cleanup Project is a multi-Agency program that provides funding to Tribes for four categories of solid waste related work: assessing waste sites, developing solid waste management plans, constructing waste collection facilities, and closing open dump sites. The components of the Cleanup Project include soliciting funding proposals submitted by Tribes; awarding funding to successful applicants; providing technical assistance to facilitate achievement of the objectives specified in the funding proposals; and encouraging the use of sound solid waste management practices.

To illustrate the different components of the Cleanup Project, EPA developed a logic model, i.e., a graphical representation of the relationships between program inputs, outputs, and intended outcomes (see Exhibit 1-1). Key components include the following:

- **Goals** define the overarching aims of the Cleanup Project. These set the broad principles that guide the rest of the logic model and are the criteria against which program accomplishments can be evaluated. Ideally, each component of the Project should be made consistent with program Goals. The two goals identified by the Interagency Workgroup of reducing the environmental and health impacts from open dumps and building tribal capacity for effective solid waste management provide a framework for the action areas identified in the Interagency MOA.

- **Activities and Outputs** are the specific actions taken to achieve program goals and the immediate products that result. Under the Cleanup Project, these products include various guidance materials, technical assistance, training efforts, and funding.

- **Customers** are the users of the outputs, products, or services developed. They are the target audience the Project is designed to reach (e.g., American Indian and Alaskan Native Tribal communities).

- **Short-Term Outcomes** are changes in learning, attitudes, skills, knowledge, and/or awareness resulting from Program outputs. In this case, education and training provided to Tribal environmental managers help increase community awareness of solid waste issues, including the cleanup and closure of open dumps.

- **Intermediate Outcomes** are the changes in Tribal solid waste management practices or changes in environmental managers' behaviors that are causally linked to the Cleanup Project. For example, by increasing community awareness and participation, the Tribe is building capacity and making progress on implementing its solid waste management plan.

- **Long-Term Behavioral Outcomes** differ from short-term and intermediate outcomes in both the nature of the behavioral changes and the time frame in which they are achieved. Long-term behavioral outcomes are broader in scope and often build upon the progress of intermediate behavioral outcomes. For instance, while an intermediate behavioral outcome might be the development and implementation of a solid waste management plan, a longer-term outcome would be the proper disposal of solid waste, source reduction efforts, and an increase in recycling on Tribal lands.

- **Long-Term Environmental Outcomes** parallel the overarching goals of the Project, and are the environmental benefits such as improved air and water quality that flow from the procedural, operational, and behavioral changes.

- **Partners** are the parties/organizations involved with the Cleanup Project. These include the American Indian and Alaskan Native Tribal communities themselves; and the Federal Agencies participating in the Project such as EPA, IHS, BIA, RUS, and DOD.

- **Contextual/External Variables** are factors, not directly controlled by the Project, that may affect how the program performs. For example, geographical conditions such as tundra land or short construction seasons due to severe weather events impede progress.

We used the logic model to help shape the interview questions and to develop the performance measures included in Exhibit 2-4 to assess the effectiveness of the Cleanup Project.

The Cleanup Project has funded projects in each year since 1999. For purposes of this evaluation, EPA selected 20 projects from the following three years of funding and cleanup efforts:

- 1999 Tribal funding provided a total of $1,451,451 to support the work of 10 Tribes. We examined 6 Tribes awarded 70 percent of the total funding.
- 2000 Tribal funding provided a total of $2,357,000 to support the work of 11 Tribes. We examined 7 Tribes awarded 64 percent of the total funding.
- 2001 Tribal funding provided a total of $2,809,907 to support the work of 16 Tribes. We examined 11 Tribes awarded 79 percent of the total funding.[4]

For the purpose of this evaluation, tribes were selected by EPA which represent the full range of project goals (e.g., close open dump, develop ISWM plan, characterize and assess open dumps, implement solid waste management activities) and funding sources from all participating Workgroup Agencies.

STRUCTURE OF THE REPORT

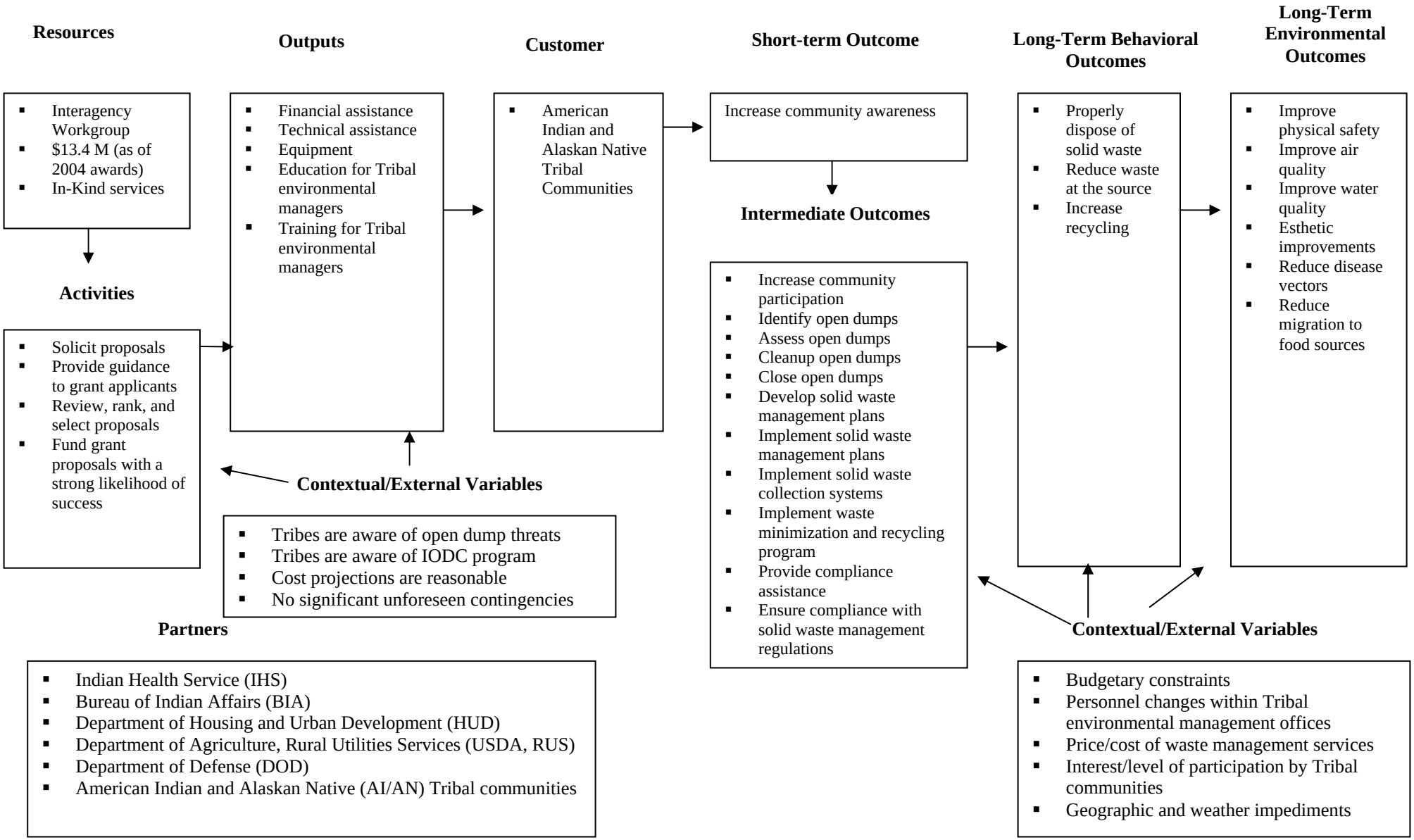
The remainder of the report is organized as follows:

- Chapter 2 presents the methodology used in this evaluation, examining the selection of the interviewees, the information collection process, and the data analysis plan.
- Chapter 3 presents the evaluation findings organized by the four overarching evaluation questions.
- Chapter 4 presents our recommendations to the Workgroup and to funded Tribes regarding management and future implementation of the Open Dump Cleanup Project.

[4] In three cases an individual Tribe received funding in multiple years. See Exhibit 2-2 for a more detailed breakdown.

Exhibit 1-1
Logic Model for Interagency Tribal Open Dump Cleanup Project

Project Goals: Reduce human health and environmental impacts associated with open dumps and improper solid waste disposal on American Indian and Alaskan Native (AI/AN) Tribal communities and 2) build capacity for effective solid waste management on Tribal lands.



METHODOLOGY CHAPTER 2

This chapter describes the approach used to evaluate the Cleanup Project. The evaluation objective was to collect information to provide insights into key aspects of the program and the extent to which specified objectives are being attained. IEc assessed overall program performance, and not the performance of individual tribes, by collecting data through interviews that were conducted on-site or by telephone with Tribal members and representatives from Federal Agencies. The Evaluation Team designed two discussion guides: one for Tribal members (Appendix A) and the other for Federal representatives (Appendix B). For Tribal members, the Evaluation Team solicited responses to general and project-specific solid waste management issues and distinguished between activities designed to close open dumps and activities designed to build solid waste management capacity. In addition, the Evaluation Team requested information regarding the administrative funding and utilization process. For Federal representatives, IEc asked questions regarding the funding solicitation and selection process, the administration of funding, federal oversight and assistance, and how Federal agencies measure the outcomes of their programs. The following sections discuss the selection of the interviewees and summarize the process used for conducting the interviews, as well as the limitations of this analysis.

DATA COLLECTION AND USE OF INFORMATION

The evaluation is based on a series of in-person or telephone discussions with Tribes and Federal Agency representatives. In addition, site visits to nine Tribes were conducted in Arizona, North and South Dakota, and Washington to provide field observations of site conditions.

At the outset of this evaluation, the Evaluation Team anticipated comparing project proposals to workplans and evaluating progress reports. Project proposals are submitted by the Tribes to secure funding. Workplans are developed by the Tribes in collaboration with the Regions to match available funds. Progress reports and a final report are submitted by the Tribes to fulfill funding obligations. To facilitate the funding selection process, project proposals are collected centrally by EPA and thus were readily available to review in advance of interviews. Workplans and progress reports are collected at the regional level. Because a comprehensive set of workplans and progress reports were not readily available at the beginning of this evaluation,

they were not included in the analysis. Workplans and progress reports were provided for the Blackfeet Tribe in Montana and the Makah Tribe in Washington, but not provided for the remaining 18 Tribes. Interviews with the Blackfeet and Makah Tribes supported information contained in these documents. As noted in our recommendations, establishment of a centralized project management tracking database may facilitate analysis in the future of all information related to the Cleanup Project.

The evaluation results will be used by the Interagency Workgroup to better understand the benefits and results of the Cleanup Project and make future modifications to increase the effectiveness of the effort. EPA Regions and other Workgroup participants may also find the report useful in making adjustments in the degree and kind of technical assistance provided to Tribes. Finally, the Tribal community, particularly environmental managers, may find the report useful in securing additional support to achieve solid waste management objectives.

DATA LIMITATIONS

To help the Workgroup consider the evaluation's findings, IEc worked with the Evaluation Team to interpret the study results. In doing so, the Evaluation Team kept several data limitations in mind:

- The interviewees represent a subset of Tribes chosen to reflect variation across land area, population, funding source, and project goals over 3 funding cycles (1999, 2000 and 2001). This report's findings are based upon responses from the Tribes listed in Exhibit 2-2 and do not reflect the activities of all Tribes that received funding.

- IEc's original methodology included a review of project proposals, workplans, and progress reports to supplement discussions with Tribes. However, the effort to obtain such information was complicated by the lack of a centralized repository for Cleanup Project planning and performance data. (Note: IEc formally recommends establishing such a project management tracking database in Chapter 4.) Therefore the findings are based primarily on information gleaned from interviews and site visits.

- In some cases, respondents may have misinterpreted questions and reported activities or outcomes performed prior (or unrelated) to Cleanup Project funding. Several Tribes have experienced staff turnover and were unfamiliar with all aspects of their Cleanup Project activities. In all cases, interviewers made an attempt to clarify answers and verify information when possible.

- Despite the Evaluation Team's efforts to conduct complete interviews with all 20 Tribes involved in this evaluation, a tornado interfered with completion of the Turtle Mountain interview and technical difficulties impeded completion of the Deering Village interview. For these partially completed interviews, IEc included data from completed questions into the analysis (and tallies) and excluded unanswered questions. Therefore, the number of responding Tribes may vary for each question.

SELECTION OF INTERVIEWEES

Funding recipients were a key source of information about the Cleanup Project. The evaluation data comes from discussions with Tribal representatives and site visits to Tribal communities who are recipients of Cleanup Project funding. Selected Tribes were diverse in terms of their land areas (e.g., ranging from 700 acres to 2.8 million acres) and populations (e.g., ranging from 33 to 20,806). See Exhibits 2-1a and 2-1b for a map showing the locations and approximate land areas of these Tribes.

Tribes were also selected to represent the full range of project goals (e.g., closure of open dumps, development of ISWM plans, characterization and assessment of open dumps, and implementation of solid waste management activities) and funding mechanisms across participating Workgroup Agencies. For example, IHS may provide funds directly to Tribes for conducting cleanups, purchasing equipment, and building transfer stations. BIA funding also allows Tribes to perform the work themselves and hire contractors as necessary. RUS provides loans or grants to Tribes for a variety of purposes, such as recycling stations, transfer stations, garbage trucks, and technical assistance training. Most of EPA's funds may only be used for training, outreach, planning, and strategic activities (i.e., no "hard" goods), though some funds (IGAP funds) help Tribes develop capacity and may support, for example, the construction of transfer stations or the purchase of collection bins, as well as training.

Participating Tribal representatives were asked to address the impacts of the funding on cleaning up open dump sites and managing solid waste activities in their Tribal community as well as provide their perception of the strengths and weaknesses of the program's design. Site visits to nine reservations also allowed the Evaluation Team to assess field conditions, and in-person interviews provided additional information to evaluate the Open Dump Cleanup Project. Exhibit 2-2 lists the Tribal interviewees selected by EPA. The exhibit includes information by interview type (i.e., in person or by telephone), State, Tribal name, the acreage of Tribal land, the Tribe's population, and the year(s) and amount of funding.

Exhibit 2-1a
Location of Tribal Interviewees: Continental United States

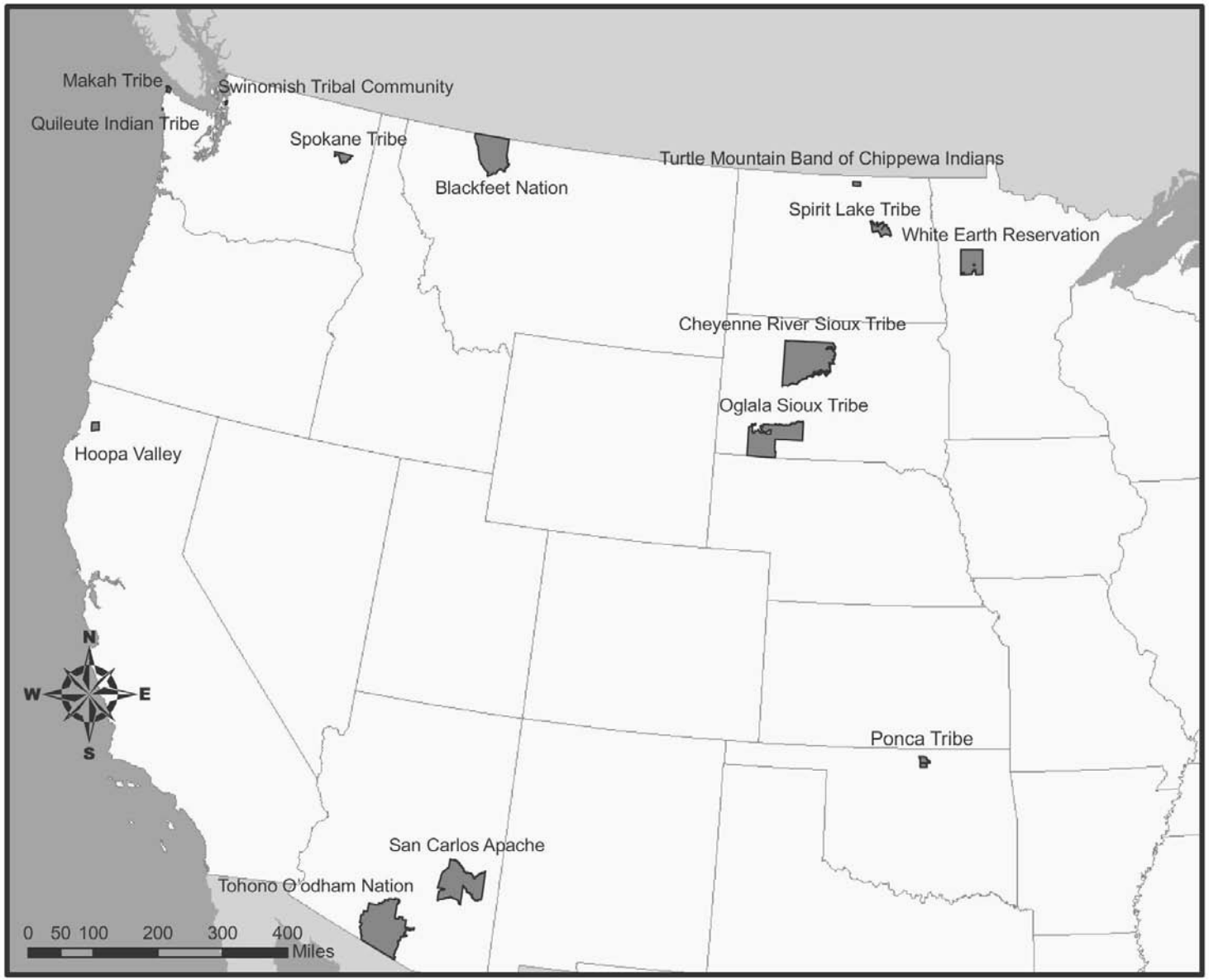


Exhibit 2-1b
Location of Tribal Interviewees: State of Alaska

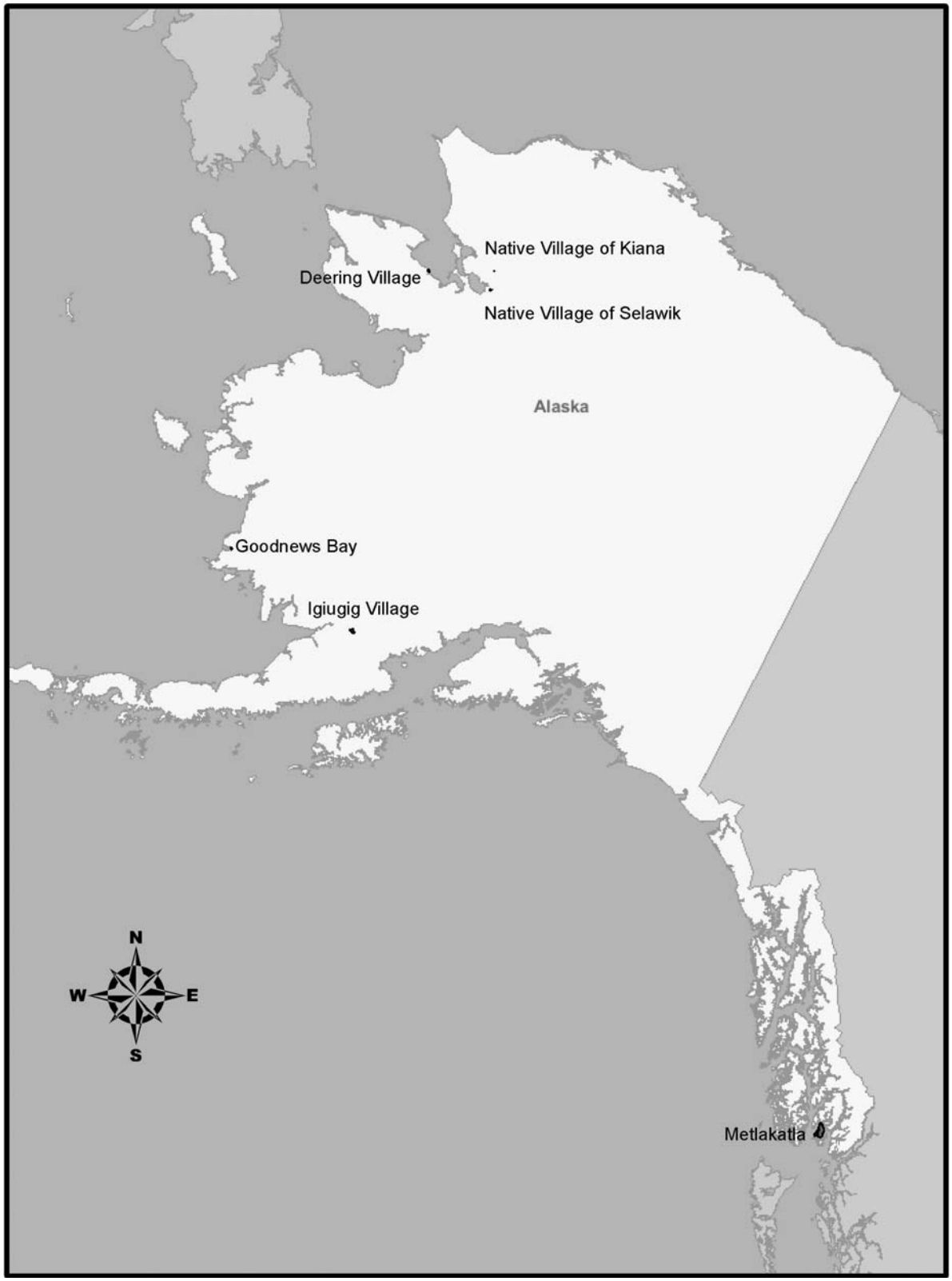


Exhibit 2-2

FUNDED TRIBAL REPRESENTATIVES

State	Tribe	Area (Acres)	Population (1996)	Funding
TELEPHONE INTERVIEWEES				
Alaska	Igiugig Village Council	69,623	33	2000 - EPA $35,000
	Metlakatla	86,000	1,464	1999 - EPA $105,000
	Native Village of Deering	92,800	157	2000 - EPA/IHS/BIA $230,000
	Native Village of Goodnews Bay	115,200	241	2001 - EPA $75,000
	Native Village of Kiana	115,200	385	2001 - EPA $103,000
	Native Village of Selawik	138,240	596	2001 - BIA $250,000
California	Hoopa Valley Tribe	85,446	2,199	1999 - IHS $200,000
Minnesota	White Earth Reservation	837,120	2,759	1999 - BIA $154,000
Montana	Blackfeet	1,525,712	8,448	1999 - EPA $110,000 2001 - EPA $135,000
Oklahoma	Ponca Tribe of Oklahoma	14,879	1,678	2001 - EPA $138,000
Washington	Spokane	154,898	1,451	1999 - IHS/EPA $290,669 2000 - BIA/EPA $297,000
SITE VISITS				
Arizona	San Carlos Apache	1,853,841	10,000	2001 - BIA $340,000
	Tohono O'odham Nation	2,774,370	10,805	1999 - IHS $153,127 2000 - IHS $287,000 2001 - IHS $148,000
North Dakota	Spirit Lake Tribe	245,141	3,754	2001 - RUS $492,500
	Turtle Mountain Band of Chippewa Indians	140,107	7,101	2000 - RUS/BIA $250,000
South Dakota	Cheyenne River Sioux Tribe	2,772,479	13,900	2001 - BIA $219,150
	Oglala Sioux Tribe	1,771,082	20,806	2000 - BIA/RUS $337,000
Washington	Makah Tribal Council	27,950	1,238	2001 - EPA $147,000
	Quileute Reservation	700	480	2000 - BIA/EPA $72,000
	Swinomish Tribal Community	7,169	2,285	2001 - IHS $335,257

Note: Area and population data from *Tiller's Guide to Indian Country: Economic Profiles of American Indian Reservations*. Tiller, Veronica E. Velarde. BowArrow Publishing, Albuquerque, NM. 1996. Cheyenne River Sioux updated its area and population data through communication with EPA, December 2004.

In addition, IEc conducted a series of interviews with Federal Agency employees who are members of the Workgroup, including representatives from EPA, IHS, BIA, DOD, and RUS. These interviewees include Agency representatives located in Headquarters and Regional offices and are presented in Exhibit 2-3 below.

Exhibit 2-3

LIST OF AGENCY PERSONNEL INTERVIEWED

Agency	Interviewee	On-Site or Phone Interview
BIA	John Graves *(Western Region)*	On-Site
	Debbie McBride *(Headquarters)*	Phone
	Roy Pulfrey *(Great Plains Region)*	On-Site
DOD	Tia Armstrong *(Headquarters)*	Phone
EPA	Chris Dege *(Headquarters)*	Phone
	Grover Partee *(Region 10)*	On-Site
	Joe Sarcone *(Region 10)*	Phone
	Stephanie Wallace *(Region 8)*	Phone
IHS	Steve Aoyama *(Headquarters)*	On-Site
	Kevin Chapman *(Phoenix Area)*	On-Site
	Richard Rubendall *(Tucson Area)*	On-Site
	Jack Sorum *(Aberdeen Area)*	On-Site
	Kelly Titensor *(Portland Area)*	Phone
RUS	Rod Beck *(North Dakota Office)*	On-Site
	Dale Van Eckhout *(North Dakota Office)*	Phone
	Linda Scott *(Headquarters)*	Phone

INFORMATION COLLECTION PROCESS

The sections below describe the information collection process for Tribal telephone interviews, Tribal site visits, and Federal Agency interviews. At the outset of each discussion, interviewers reiterated the evaluation's goal of evaluating the overall program, rather than assessing or monitoring the individual progress of any tribe or the effectiveness of any single Federal Agency's contribution to the Interagency effort.

Telephone Interviews of Funded Tribal Representatives

EPA staff coordinated the initial contact with the Tribal interview candidates. EPA also provided a copy of the discussion guide to the potential respondents in advance; this streamlined interviews and gave respondents time to gather information, as necessary. On the scheduled date, IEc and EPA headquarters staff contacted the Tribal representative by telephone and conducted the interview. As interviews were completed, IEc compiled data into an Access database in preparation for analysis.

Site Visits to Funded Tribal Representatives

Evaluation Team members – including IEc staff, EPA Headquarters and Regional staff, and field staff from BIA, IHS, and RUS – conducted site visits to nine tribes in Arizona, North and South Dakota, and Washington. The site visits supplied two primary sources of information: in-person discussions with Tribal representatives and field observations of site conditions. The Evaluation Team used the same discussion guides for in-person and phone interviews. However, due to the different funding requirements for each Federal Agency, these discussions varied among respondents. In addition to discussions with Tribal representatives and Agency Staff, site visits provided a chance to see firsthand how Tribes managed their solid waste and what they have accomplished through funding from the Cleanup Project.

Discussions with Federal Agency Staff

In addition to information collected from Tribal representatives, IEc interviewed sixteen Federal staff from Workgroup member Agencies including BIA, DOD, EPA, IHS, and RUS. Staff members present at the site visits were interviewed in person while others were interviewed by phone. IEc interviewed five Headquarters staff and eleven Regional staff to gain both perspectives. Similar to the approach used to interview Tribal representatives, a copy of the discussion guide was provided to potential respondents in advance to streamline telephone interviews and give respondents time to gather information, as necessary. Interviews were then scheduled at a time convenient for the respondent. As interviews were completed, the data was entered into an Access database in preparation for analysis.

DATA ANALYSIS PLAN

The responses from discussions with Tribal representatives and Federal Agency staff provide the foundation for the analysis in this evaluation. IEc conducted both qualitative and quantitative analyses depending on the type of information available. Due to the different project objectives provided by Interagency funding, it was often difficult to make comparisons. For example, one Tribe used the funding to conduct a site assessment for a transfer station; whereas another Tribe purchased a pumper truck. The sections below describe how we analyzed and interpreted data from the interviews and site visits.

Analysis of Discussion Data

In general, IEc developed qualitative analyses from interview data due to the small number and nature of responses. However, we provide basic counts and percentages when applicable. For example, we compiled data on the number of open dumps that have been clean closed, capped, or covered among the 13 tribes receiving funding for this activity, but we do not present percentages because of the small sample size. Much of the information collected in the discussions and site visits is qualitative in nature. Thus, we developed narrative summaries that explain trends and key findings from the discussions.

Performance Measures

In the context of program evaluation, performance measures are important for several reasons.[5] First, they can help to identify those aspects of a program that are working well and those in need of improvement. Second, they inform determinations of whether resource allocations are yielding meaningful human health and environmental benefits. Third, they help communicate a program's value to managers and decision-makers.

For each of the Cleanup Project's major components – closure of open dumps on tribal lands, building tribal solid waste management capacity, and funding administration – the Evaluation Team developed a set of performance measures that draw directly on the discussion questions. See Exhibit 2-4. For each performance measure, the exhibit briefly describes how the Evaluation Team intended to use the data.

[5] U.S. Environmental Protection Agency, National Center for Environmental Innovation, Evaluation Support Division. *Improving EPA's Performance with Program Evaluation*. June 2003. http://www.epa.gov/evaluate/generalbrochure2.pdf

Exhibit 2-4

PERFORMANCE MEASURES TO ASSESS EFFECTIVENESS OF OPEN DUMP CLEANUP PROJECT

Program Component	Performance Measure	Data Source	Intended Use for Data
Closure of Open Dumps on Tribal Lands	Number of open dumps reported by Tribal funding respondents that were cleaned up and closed, stratified by the dump's classification as a high threat or a non-high threat to the environment as a result of this program.	Funding recipient interviews; site visits; and Federal Agency staff interviews.	Are tribal funding recipients cleaning up and closing open dump sites? May help in targeting future support.
	Number of respondents that identified a recurrence of open (or wildcat[1]) dumping on Tribal lands.	Funding recipient interviews and Federal Agency staff interviews.	How effective are Tribes in preventing recurrences of open dumping? May help in determining whether resources should be allocated toward building solid waste management skills and enforcement capabilities.
Building Tribal Solid Waste Management Capacity	Number of funding recipients reporting development of a sustainable integrated solid waste management plan, stratified by the components of such a plan (i.e., plan to assure permanent, non-Federal, funding, plan to inventory uncontrolled waste sites, etc.).	Funding recipient interviews; site visits; and Federal Agency staff interviews.	To what extent are Tribal funding recipients developing sustainable integrated solid waste management plans? May help in developing future technical assistance efforts.
	Number of funding recipients implementing a solid waste management program (i.e., conducting community outreach and education activities; Tribal population uses waste collection systems, etc.).	Funding recipient interviews; site visits; and Federal Agency staff interviews.	To what extent are Tribal funding recipients implementing solid waste management programs? May help in developing future technical assistance efforts.
Administration of Funding	Number of funding recipients who achieved, or are in the process of achieving, the objectives specified in the funding proposal.	Funding recipient interviews and Federal Agency staff interviews.	Are the proposals realistic in their projections of what is feasible to accomplish with the funding? May help in developing future guidance materials to assist tribes in estimating realistic resources, time, and costs associated with cleanup projects and/or developing solid waste management plans; and in assessing the need for greater monitoring of performance.
	Number of funding recipients who reported administrative barriers in applying for and receiving funds.	Funding recipient interviews and site visits.	What are the primary administrative obstacles in implementing the open dump cleanup project? May help in eliminating administrative barriers.
	Number of funding recipients who reported receiving funding from other sources to meet the goals of the Open Dump Cleanup Project.	Funding recipient interviews and site visits.	What portion of a Tribe's project-specific solid waste funding needs are met by the open dump cleanup funding? May help in estimating the financial needs of the Tribes to accomplish the goals of the open dump cleanup project.

[1] Since respondents were not asked to distinguish between open dumping (i.e., on a community scale) and wildcat dumping (i.e., on an individual household scale), this performance measure may overstate the recurrence or persistence of open dumps on Tribal lands.

FINDINGS CHAPTER 3

Overall, this evaluation suggests that Tribes are making steady progress in cleaning up and closing open dumps and building Tribal solid waste management capacity. Significant and varied challenges face Tribes. These include funding shortfalls, competing priorities, remote locations that complicate disposal options, geographic conditions such as island tundra land and high groundwater tables, and severe weather conditions that impede construction. Workgroup members are providing substantial support to Tribes in planning and implementing their projects. The discussion of specific evaluation findings is organized by the four overarching evaluation questions outlined in Chapter 1:

- To what extent has the Cleanup Project resulted in the cleanup, closure, or prevention of open dumps?
- To what extent have Workgroup funds contributed to the development of sustainable integrated solid waste management programs?
- To what extent has there been a recurrence of open dumping in the Project-affected lands?
- To what extent do administrative issues affect the Workgroup's ability to achieve its goals?

The chapter closes with an overall summary of the Cleanup Project's progress.

CLEANUP, CLOSURE, OR PREVENTION OF OPEN DUMPS

One of the primary objectives of the Workgroup is to fund the characterization, assessment, cleanup, and closure of open dumps on Tribal lands. The 1998 IHS *Report [to Congress] on the Status of Open Dumps on Indian Lands* lists a total of 1,104 open dump sites and estimates a total cost of $46 million to address the cleanup and closure of open dumps. This evaluation covers funding of $4.7 million received by 20 Tribes during the 1999, 2000, and 2001 funding cycles. On average, individual Tribes received $75,000 for each of the three funding years. To accommodate the level of funding, Tribes must plan incremental steps working toward closure of the open dump(s). One measure of the Tribes' success is whether they made progress toward project objectives. Exhibit 3-1 describes Tribes' progress.

Exhibit 3-1

PROGRESS TOWARD PROJECT OBJECTIVES

Tribe	Project Details
Blackfeet Nation	Achieved all closure and post-closure plans outlined in workplan. Prepared open dump for closure, including site characterization, development of closure and post-closure plans, installation of ground-water monitoring wells and methane monitoring equipment. *Tribe received FY05 funds from Open Dump Cleanup project, and will soon complete dump closure.*
Cheyenne River	*Upgraded the existing landfill, improved the current residential waste collection system,* and completed objectives related to equipment purchase.
Deering	Updated SWMP and began to purchase materials for landfill construction. Lacked sufficient funds to complete construction of the proposed landfill; EPA funds expired before the Tribe could utilize them fully.
Goodnews Bay	Developed waste management plans, landfill assessment, and new landfill plan.
Hoopa Valley	Closed existing dump; set aside surplus funds to complete transfer station.
Igiugig	Developed closure plans for open dump, as outlined in workplan.
Kiana	Awaiting an updated SWMP, including a feasibility study, design plans, and closure plans for a new landfill.
Makah	Conducted Phase I assessment and NEPA review of transfer site.
Metlakatla	Characterized waste and developed historical dumping timeline to help establish responsible parties at existing open dump.
Oglala Sioux	*Closed 9 of 10 open dumps and completed 9 of 10 transfer stations.* Encountered poor weather and unforeseen equipment problems.
Ponca	Closed 9 open dumps (workplan funded two fewer than the 11 proposed).
Quileute	*Closed and fenced open dump*, including removal of 300 abandoned cars.
San Carlos	Closed 14 of 14 sites (as of November 2004), including one where hazardous materials were discovered.
Selawik	Characterized waste and purchased heavy equipment to begin closure activities (e.g., road building). Developed operations plans and received permits for new landfill site.
Spirit Lake	*Assessed solid waste transfer station site; partially-funded inert waste transfer station; and made capital equipment purchases* (e.g., pumper truck).
Spokane	Completed 75 percent of the proposed transfer station, but have not yet begun to close open dumps. (Hindered by inaccurate budget estimates and having to put out multiple bids.)
Swinomish	Closed, *capped, and gated* an abandoned open dump site.
Tohono O'odham	Closed and/or cleaned-up 21 sites, 15 of which require a final cap.
White Earth	Closed three open dump sites and put surplus funds toward educational materials.

Notes:

- Plain text represents progress reported by Tribal interviewees. *Italic text represents information obtained from conversation with EPA staff and an internal draft memo dated June 12, 2003 describing the status of these projects.*
- Technical difficulties precluded a response from Turtle Mountain.

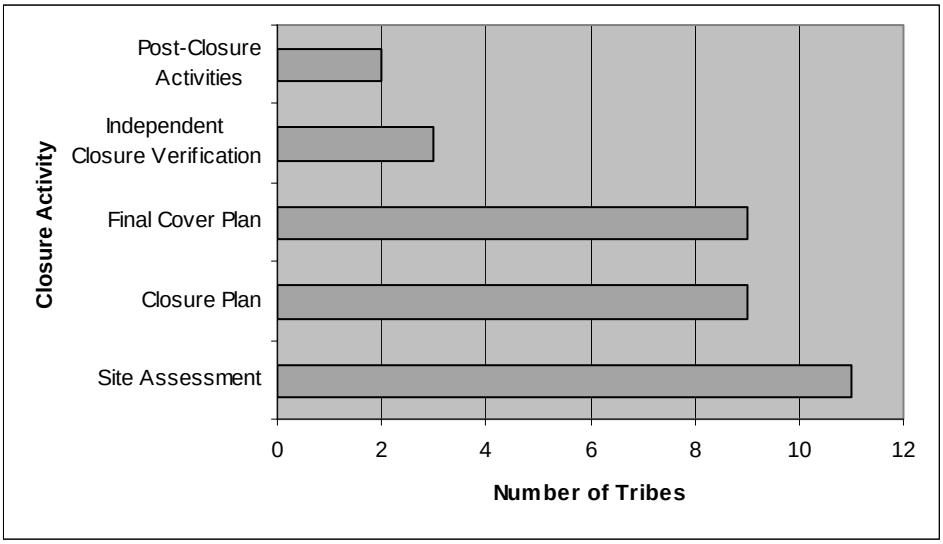
Cleanup and Closure Project Characteristics

Tribes are at various stages within the cleanup and closure process. Exhibit 3-2 illustrates the types of closure activities to which the funding was applied. Eleven of the thirteen Tribes required funding for site assessment work, which is the first step in the process of closing an open dump. Nine Tribes used funding to develop a waste inventory of the existing dump site and a plan for final cover or closure. Two Tribes (Igiugig and Swinomish) reported that they

were ready for post-closure activities. In cases where Tribes clean-closed their open dumps, post-closure activities would not be necessary. In situations where clean-closure is not an option and post-closure activities are required, some Tribes may need future funding to support these activities.

Exhibit 3-2

ELEMENTS OF OPEN DUMP CLOSURE PROJECTS



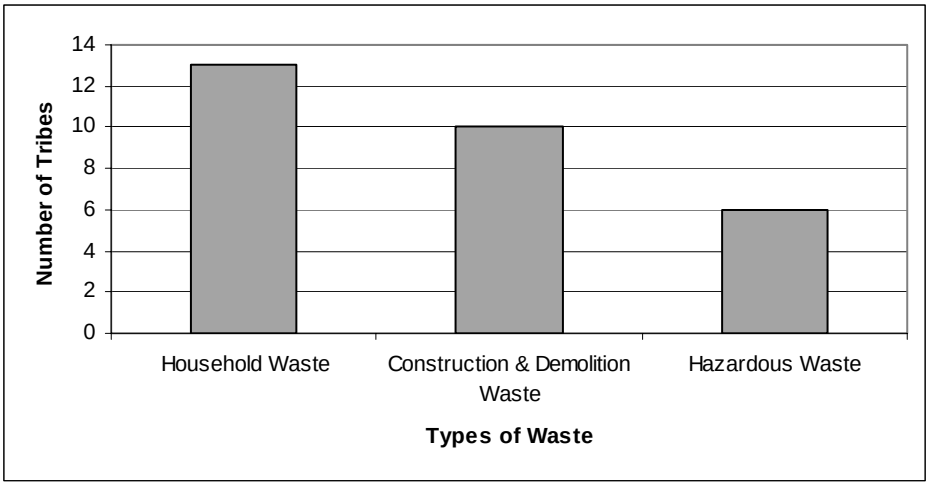
Notes:

- Exhibit reflects data for the 13 respondents who were funded to close open dumps.
- The independent closure verification required for the closure of municipal landfills, 40 CFR 258.60(h), has on occasion been included in funding agreements for the closure of open dumps.

Waste inventory activities reveal that all thirteen Tribes have open dumps containing household waste. In addition, construction and demolition debris are present among ten Tribes, and hazardous wastes are reported by six Tribes (See Exhibit 3-3). Since review of site characterization data is beyond the scope of this evaluation, the Project Team is unable to confirm the accuracy of reports of hazardous waste. If accurate, Tribal reports of the presence of hazardous waste can add significant costs and complexities to cleanup efforts.

Exhibit 3-3

WASTE TYPES WITHIN OPEN DUMPS



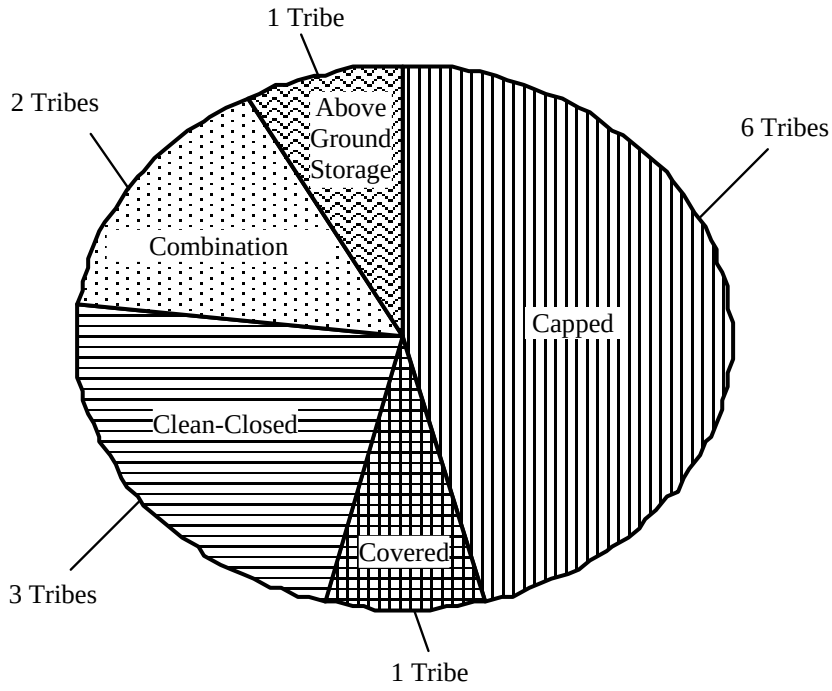
Note: Exhibit reflects data for the 13 respondents who were funded to close open dumps.

Finally, there are a variety of closure methods available to Tribes, including capping (i.e., covering an open dump with an impermeable material such as clay to prevent entry of rainwater and minimize leachate), cover (i.e., covering an open dump with soil or geosynthetic material used to impede water filtration, landfill gas emissions, and bird and rodent congregation), clean closure (i.e., closure by waste removal or decontamination), and above ground storage used by Alaskan Tribes because below ground disposal is not feasible on tundra land. The Selawik Tribe plans to use "super sacks" to accomplish this above-ground closure method. "Super sacks" are large bulk shipping bags made from woven polypropylene (plastic) that will hold waste in a disposal area surrounded by berms above the tundra.[6] Exhibit 3-4 shows that six Tribes are using capping, three Tribes are using clean closure, two Tribes are using a combination of closure methods across multiple open dumps, and one Tribe each is using the cover and above-ground storage methods of closure.

[6] For more information about "super sacks," see page 10 of http://www.epa.gov/epaoswer/non-hw/tribal/pdftxt/twj-3.pdf and http://www.ccthita-swan.org/Tutorials/supersack.cfm.

Exhibit 3-4

TYPES OF CLOSURES PLANNED/CONDUCTED



Notes:

- Exhibit reflects data for the 13 respondents who were funded to close open dumps.
- The process of capping an open dump usually involves installing cover as well. Discussion data and site visits revealed that, of the six Tribes that capped open dumps, three have covered or plan to cover them. Data for the remaining three Tribes could not confirm that covering was conducted or planned.

DEVELOPMENT OF SOLID WASTE MANAGEMENT PROGRAM

Another objective of the Workgroup is to assist Tribes in building solid waste management capacity. Tribes are actively conducting outreach activities to schools and community venues to educate the Tribal population regarding sound solid waste management practices. In addition, certain Tribes have developed, or are in the process of developing, solid waste management plans. This progress is occurring at the same time that Tribes often lack the organizational infrastructure to devote sufficient resources to solid waste management issues and face considerable resistance from Tribal members to incur additional household expenses to pay for curbside collection and proper disposal.

Tribal Management of Solid Waste

Solid waste managers are frequently in charge of other programs/media (e.g., water and sewer) in addition to solid waste. Frequently, solid waste Tribal managers must also submit

funding applications and manage funds in addition to their field responsibilities. Many solid waste managers are not trained to handle the administrative and financial complexities associated with Federal funding requirements. Dedicated solid waste FTEs range from ¼ at Swinomish to 25 at Tohono O'odham. Tribal staff assigned to manage solid waste issues may have numerous other duties and may not be centralized in any one office. For example:

- Swinomish manages solid waste through two departments (Planning and Community Development, and Housing Authority). The Swinomish Utility Authority also assists with curbside pickup of household waste.

- Spirit Lake manages solid waste through the Health Department.

- Spokane manages solid waste through its Department of Planning and Economic Development.

Funding to Support Solid Waste Management Activities

Tribes have made progress in developing funding sources to support their solid waste management activities. Among Tribes participating in this evaluation, 15 of 20 have established a permanent funding source.

- 10 Tribes include waste management fees in a monthly utility bill that includes some combination of water, sewer, telephone, and cable television.

- Five Tribes use other mechanisms (e.g., per-pound fees at landfill or transfer station; timber or fish sales; casino revenues).

Tribes note that fees and other funding sources generally do not fully support waste management activities. Tribes sometimes use surplus from more profitable activities (e.g., casinos) to help fill budget shortfalls.

Many Tribes lack sufficient funding to develop and maintain an effective waste management program. Few reservations benefit from the tax revenue of on-site industry, and reservation property taxes, if collected at all, are needed to provide other essential public services such as health care and education. Tribal member opposition to waste disposal fees at Oglala Sioux complicated the development of a sustainable solid waste management system. It is estimated, for example, that the cost per household to transport and dispose of household waste is $20 dollars per month for the Fort Peck Tribe in Montana.[7] This represents approximately five percent of the Tribe's per capita income (i.e., $4778 per year) and presents a significant economic burden for many Tribal households.[8]

[7] U.S. Environmental Protection Agency, *Tribal Decision-Maker's Guide to Solid Waste Management,* November 2003, pp. 36 and 40.

[8] Tiller, op.cit., p.404.

Integrated Solid Waste Management Plans

EPA defines an integrated solid waste management plan (ISWMP) as a document that outlines how a Tribe will reduce, manage, and dispose of its solid waste. ISWMPs guide Tribes in developing and implementing solid waste programs by establishing necessary actions and setting criteria for decision-making. During our interviews, Tribes reported the following progress:

- Tohono O'odham developed an ISWMP in the mid-1990s and has fully implemented and expanded the plan since 1998.
- Goodnews Bay developed a plan that awaits approval from Alaska Department of Environmental Conservation.
- Hoopa Valley developed a plan to manage landfill closure activities in 1996; this plan is narrower in focus than an ISWMP.
- Turtle Mountain reports that its ISWMP has been implemented through Tribal code; no formal document exists.
- Though Cheyenne River does not have a formal document, it has parts of a plan in operation.

Of the 20 Tribes participating in this evaluation, 17 Tribes reported conducting activities directly related to the development of an ISWMP. Exhibit 3-5 displays the frequency of management methods currently in place at participating Tribes.

Exhibit 3-5

SOLID WASTE MANAGEMENT METHODS

Method	Frequency/Description
Source Reduction	6 of 17 respondents note some sort of source reduction measures in place.
Recycling	16 of 17 respondents have implemented recycling. Recycling efforts tend to be in their early stages and usually include cans and white goods. The remote location of many Tribes (i.e., distant from recycling centers) presents a barrier to full implementation of an extensive recycling program. Tribes report an estimated recycling rate varying from 1 to 25 percent of waste.
Burn Boxes / Open Burning	6 of 17 respondents report the use of combustion to manage waste (4 of these 6 Tribes are located in Alaska). Some Tribes utilize combustion through managed burn boxes; other Tribes have problems with illegal open burning. Tribes report that 15 to 60 percent of their waste is managed using combustion.
Land Disposal	All Tribes report the use of land disposal. This practice includes: (a) hauling trash to an open dump on Tribal land; and (b) transporting waste to a regulated landfill (i.e., under 40 CFR 258) either on or off Tribal lands. For example, Oglala Sioux has a regulated landfill on-reservation. Tribes report an estimated land disposal rate of 30 to 100 percent of waste.

Since Tribes are at various stages in the process of developing and implementing formal ISWMPs, much of the management outlined above is occurring absent integration between these

methods. Cost considerations and easy access to alternative solid waste management options also makes it difficult even for Tribes with a formal plan to implement all desired management methods.

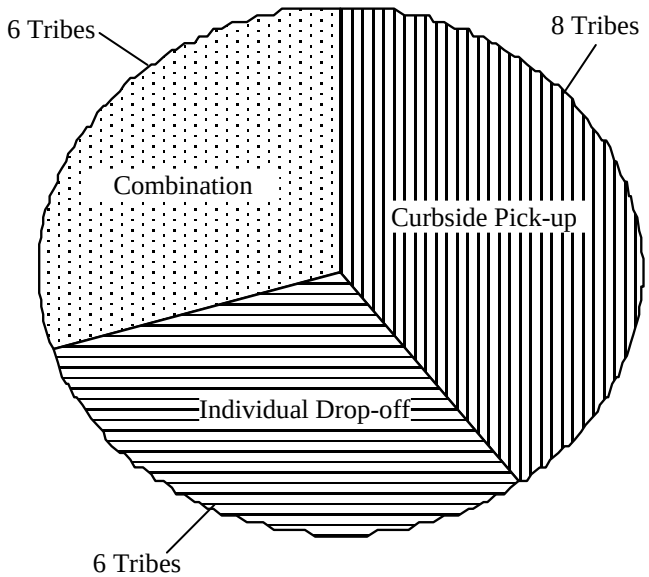
Solid Waste Collection Practices

Among Tribes participating in this evaluation, 10 use an on-reservation open dump, one uses an on-reservation compliant landfill, and nine use an off-reservation landfill (with an on-reservation transfer station). Tribes also vary as to how trash gets from a given household to a landfill or transfer station. Exhibit 3-6 displays the roughly equal split among curbside collection service (eight Tribes), individual household responsibility (six Tribes), and some combination thereof (e.g., curbside collection within population centers; individual household responsibility in outlying areas; six Tribes).

Curbside pick-up programs generally use collection bins that service multiple households rather than providing service to individual households. In the six cases where household waste collection is not available (i.e., Deering, Goodnews Bay, Hoopa Valley, Igiugig Village, Native Village of Kiana, and Native Village of Selawik), residents are responsible for transporting their trash to the nearest disposal area. Tribes believe that curbside collection can contribute to a reduction in the persistence of illegal dumping. In addition, several Tribes conduct periodic community cleanups (e.g., spring or semi-annual) to allow residents to dispose of tires, white goods, and accumulated trash.

Exhibit 3-6

TRIBAL WASTE COLLECTION PRACTICES



Note: Exhibit reflects data for all 20 respondents.

RECURRENCE OR PERSISTENCE OF OPEN DUMPS

Tribal respondents acknowledge the continuing challenge of preventing the recurrence of open and wildcat dumping.[9] Eleven of thirteen Tribes confirm that open dumping recurs or persists and identified the following contributing factors:

- Habit: members accustomed to bringing trash to a certain location.
- Proximity: new landfills are sometimes further away from population centers than the open dumps they replace. Tribal lands are frequently in very rural areas that lack paved roads.
- Overflow: collection bins lack capacity to handle overflow; trash piles up around them. Tribes lack personnel to tend to collection bins and prevent overflow.
- Cost: members unwilling (or unable) to pay fees for transport and disposal at compliant landfills.
- Communication: ineffective outreach/education on the importance of proper solid waste management.
- Neighbors: illegal dumping by non-Tribal individuals from adjoining areas.

Agency respondents note the difficulty of enforcing against Tribes. EPA in particular described the high application threshold for RCRA §7003, which requires the Agency to prove that open dumping results in "imminent and substantial endangerment" to human health or the environment.[10] While EPA will use available enforcement mechanisms when appropriate, the Agency generally prefers to work cooperatively with Tribes. This may involve assisting Tribes to build internal enforcement capacity to ensure compliance with Tribal solid waste regulations.

Only ten Tribes report having access to compliant landfills either on or off Tribal lands. Tribal respondents also point to the lack of alternative disposal sites and limited hours at transfer stations as additional factors contributing to the recurrence or persistence of open dumping on Tribal lands. Even those Tribes with access to compliant landfills estimate a five to ten percent incidence rate of illegal dumping.

Tribes are taking action to stem the recurrence or persistence of open dumping. Twelve respondents report to have developed (or to be developing) an inventory of uncontrolled waste sites; several Tribes use GIS software to map sites and aid in the coordination of cleanup,

[9] Since respondents were not asked to distinguish between open dumping (i.e., on a community scale) and wildcat dumping (i.e., on an individual household scale), this performance measure may overstate the recurrence or persistence of open dumps on Tribal lands.

[10] In such cases, RCRA §7003 provides statutory authority for EPA to commence a civil action to restrain Tribal handling, storage, treatment, transportation, or disposal of solid waste. (Source: *Guidance on Use of RCRA Section 7003*. United States Environmental Protection Agency, Office of Enforcement and Compliance Assurance. 1997.)

closure, and enforcement efforts. All respondents report to have initiated outreach and education programs – many of which are funded independently of Workgroup funding – aimed at stressing the importance of proper solid waste management.

Geographic Challenges Facing Tribes Closing Open Dumps

Substantial challenges complicate the expeditious cleanup and closure of open dumps on Tribal lands, and vary between Tribes in the lower 48 states and Native Villages in Alaska:

Lower 48 States: In the lower 48 states, Tribes face diverse issues including drought (or alternatively, floods); remote location; harsh winters; and illegal dumping by neighboring communities. For example, the Spirit Lake Tribe of North Dakota suffers frequent floods associated with high groundwater and rising lake levels, which complicate disposal efforts. The Turtle Mountain Tribe, also in North Dakota, has its construction season truncated by long, harsh winters. In Arizona, the Tohono O'odham Tribe must contend with tons of trash deposited throughout the year by illegal immigrants crossing the border.

Alaska: Alaskan Native Villages face challenges primarily related to their remote location, extreme temperatures, bitter winds, and rugged topography. Much of Alaska is based on tundra, where a thin layer of soil rests on top of permafrost, a permanently frozen layer of ground. Open dumps and landfills can exert pressure on the permafrost, causing it to melt and the ground to sink. The freezing and thawing of tundra also makes it difficult or impossible to build roads and dig trenches, limiting disposal options for many Native Villages to the extremely expensive alternative of barges or planes. In many Native Villages, roads become impassable in the spring when the tundra melts. The Native Village of Selawik, for instance, relies on a system of boardwalks rather than roads. The Metlakatla Tribe is faced with the geographic and topographic challenges of being situated on a tundra island, and therefore unable to construct a compliant landfill or to dispose of trash economically. For the Kiana Tribe, substantial erosion problems at the dumpsite complicate the process of stabilizing final closure. Runoff currently drains into a river actively used for subsistence fishing.

ADMINISTRATIVE CHALLENGES AND OPPORTUNITIES

This section describes findings related to the funding application and fund disbursement procedures for the Cleanup Project. Within the section, we cover the selection of funding recipients, administrative barriers in the process, the development of project resource estimates, and funding utilization by Tribes.

Selection of Funding Recipients

Workgroup members use a variety of approaches to solicit input from Agency staff and to rank individual Tribal applications. For the most part, with the exception of EPA's Region 8 and 9 where staff coordinate with local IHS and BIA staff, each Agency ranks applications separately

at either the national or regional level. RUS and DOD rate applications out of their national offices; and BIA, EPA, and IHS regional staff rate applications, which are then compiled at the national level by each Agency.

As each Agency completes its internal application scoring, it submits a final scoring summary to EPA headquarters, which then consolidates scores for further consideration by Workgroup members. All Agencies use a standardized "0 to 5" scoring system that ranks applications according to specific criteria. After aggregating scores across Agencies for each proposal, the Workgroup divides by the total number of possible points to arrive at each proposal's raw percentage score. The workgroup considers in detail all proposals with a raw percentage score above 80.

Federal Agency respondents suggested several shortcomings of the current scoring and ranking process:

- Scoring criteria equally weight each question asked (e.g., signing the cover letter receives the same weight as having an integrated solid waste management plan).

- Well-written proposals tend to score well; persuasive grant writing may disguise conceptually poor ideas.

- Criteria may be inconsistently applied if regional scorers do not receive guidance on how to apply the "0 to 5" scale (e.g., how to determine whether a response deserves a "3" or a "4").

These findings suggest that Workgroup members may wish to create additional opportunities for Regional collaboration, using the Region 8 model, and reconsider certain scoring criteria in an effort to fund the highest priorities of the Cleanup Project.

Administrative Barriers for Tribes

The primary administrative barrier for Tribes is the variability in funding and disbursement criteria established under each Agency's statutory authority. Funding approaches among Federal Agencies differ — both in terms of allowable expenditures under the funding and the associated recordkeeping and reporting requirements. The result is that Tribes which submit a single application to the Workgroup may have to re-submit (and substantially revise) multiple detailed workplans, track several different budgetary requirements, and submit progress reports to each disbursing Agency. As noted in more detail below, a Tribe's original proposal may only be partially funded by the Workgroup, depending on an Agency's available funding and the proposal's degree of alignment with each Agency's allowable activities. Tribes report that proposal development ranges from two to six weeks time. Tribes with on-staff grant writing experience generally report having an easier time with the proposal, workplan, and reporting requirements.

Recordkeeping and reporting requirements are important follow-on components of Workgroup funding. EPA and RUS disbursements, in particular, contain detailed reporting and recordkeeping requirements that can provide valuable data to Agency decision-makers. Tribes, however, often perceive the EPA and RUS requirements as burdensome. In contrast, Tribes praised the procurement processes of BIA and IHS funding as easy to comply with and understand; such funding approaches also allow Tribes to supply labor on an "as needed" basis, either from Tribal resources or by hiring outside contractors.

Development of Tribal Project Resource Estimates

Tribes use a variety of methods to develop estimates for their proposals and workplans.

- Spirit Lake and San Carlos Tribes develop estimates by reviewing implementation costs of previous projects.

- Ponca Tribe uses the IHS "Open Dump Survey Form" and EPA's "Trash Talk" website to estimate volumes of material in the dumps and derive costs.

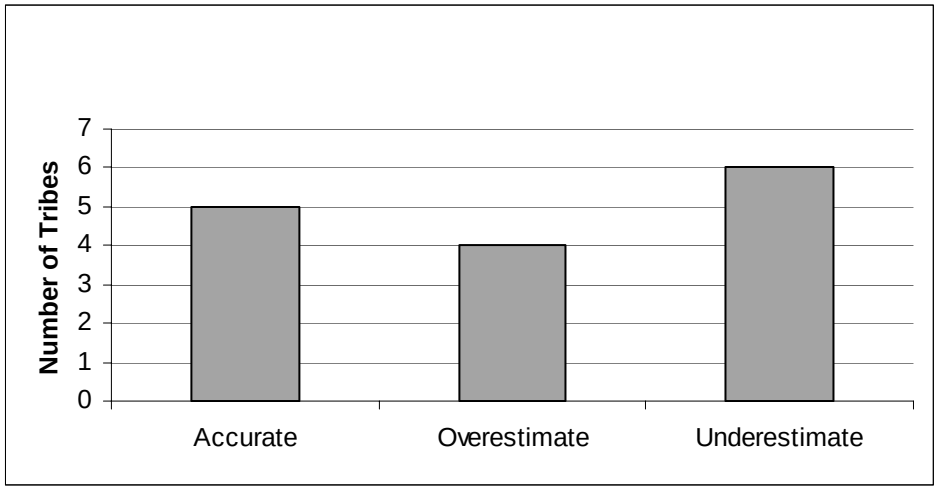
- Metlakatla and Cheyenne River develop proposals to fit within estimated levels of available Workgroup funds.

- Tribes also report receiving assistance from the Midwest Assistance Program (MAP); Alaska Native Tribe Health Consortium (ANTHC); Rural Community Assistance Corporation (RCAC); private consultants; and IHS, BIA, and EPA personnel.

Tribes also varied in terms of the accuracy of their resource estimates. Exhibit 3-7 depicts this variation with five Tribes reporting accurate estimates, four Tribes reporting an overestimate of resources and six Tribes reporting an underestimate.

Exhibit 3-7

ACCURACY OF BUDGET ESTIMATES



Note: Exhibit reflects data for the 15 (of 20) respondents who answered this question.

Tribes were marginally more likely to underestimate their budget needs than to overestimate or accurately estimate them. While funding Agencies review costs to ensure that they align with funding bids, cost databases, and previous projects, there are currently no post-project measurement efforts to track the accuracy of funding estimates.

Acknowledging the difficulty of making accurate budget estimates at the project's outset, several Tribes suggested improved guidance.

- Goodnews Bay recommends that the solicitation notice itself should provide guidance on estimating resource needs.
- Metlakatla recommends additional help from the Workgroup in determining project phases.
- Ponca Tribe recommends direct assistance with (or a comprehensive guide written by) personnel who have experience in costing cleanups.

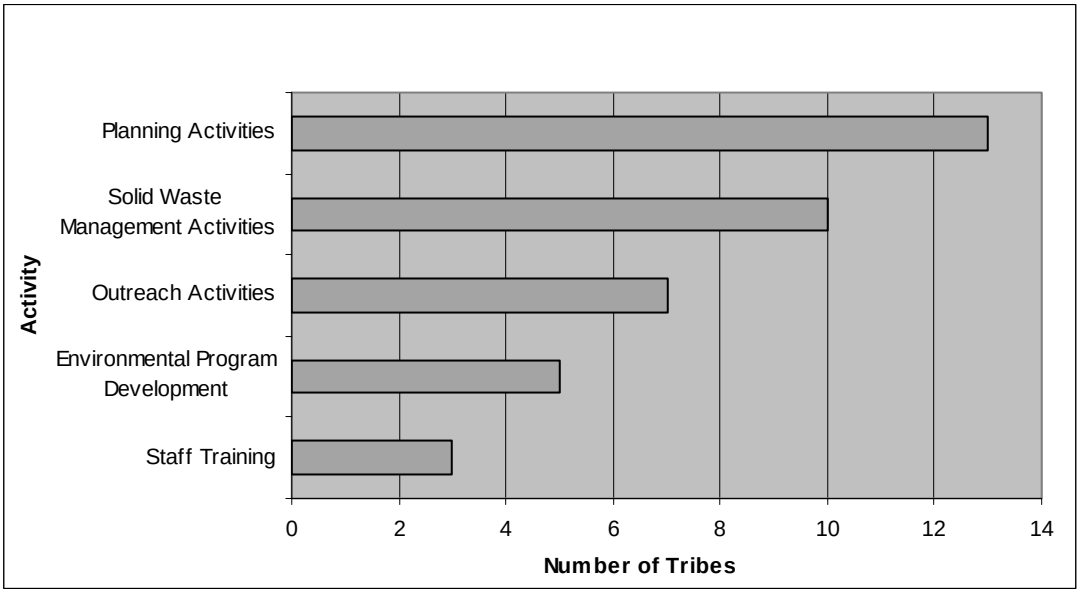
Funding Utilization

Tribes use Interagency funding for a variety of purposes including planning activities, construction of solid waste facilities, the purchase of equipment, community outreach, staff training, and the funding of positions to manage solid waste on the Tribe's environmental team. Thirteen Tribes are using funding for planning activities such as characterizing waste sites, assessing costs, conducting feasibility studies, and developing closure/construction plans for landfills or transfer stations. Ten Tribes are engaged in tangible solid waste management activities such as developing transfer stations, purchasing equipment, crushing and removing

cars, and constructing a garage to house solid waste equipment. This is consistent with core objectives of the Cleanup Program: cleaning up waste on Tribal land and closing open dumps. In addition, seven Tribes are funding outreach activities such as school and community awareness programs that distribute magnets, posters, calendars, notepads, and pamphlets describing the benefits of recycling and the costs of illegal dumping. Five Tribes are using funding to support the development of a Tribal environmental program. Finally, staff training (three Tribes) includes sending staff to formal training sessions (e.g., Manager of Landfill Operations (MOLO); Landfill Operation; Hazardous Waste Operations (HAZWOPER)). Exhibit 3-8 displays the frequency of activity types performed with Workgroup funds.

Exhibit 3-8

ACTIVITIES UNDERTAKEN WITH WORKGROUP FUNDS



Notes:

- Exhibit reflects data for the 18 (of 20) respondents who answered this question.
- Per the discussion guide, "Solid Waste Management Activities" include transfer station construction and other activities related to building necessary physical infrastructure.

Tribes were flexible in modifying project scope to match available levels of funding. While seven Tribes received sufficient funding to meet project needs, many Tribes adapted to new circumstances and undertook different solid waste activities with the funding. For example, the following Tribes made workplan and budgetary adjustments:

- Cheyenne River anticipated performing many aspects of landfill improvement, but BIA dollars are limited to funding assets (i.e., not salaries), so the funds were limited to equipment purchase.

- Goodnews Bay proposed $300,000 for closure of former open dump; they received only $75,000 to assess current landfill site and develop ISWMP.

- Selawik intended to close open dump and build a compliant landfill; they received only enough funding to buy a bulldozer and build storage garage.

- Spirit Lake requested $423,000 as part of a larger $2.7 million project; they received only $70,000 for a pumper truck.

- Igiugig requested funding to develop a closure plan and conduct closure activities, but only received funds adequate to support closure planning.

- Native Village of Kiana feels its funding will be sufficient to develop closure plans and conduct a feasibility study for a new landfill. Kiana will apply for more funds to close the existing landfill and construct a new landfill.

- Hoopa Valley's funding did not cover the expense of finalizing ramps at its transfer station.

- San Carlos and White Earth Tribes had excess funds and were able to expand what they had proposed in the workplan.

Tribes also leveraged Interagency funding by supplementing it with alternative sources of funding made available through the U.S. Department of Defense; Council on Environmental Quality's NEPA development programs; U.S. Geological Survey; and U.S. Department of Housing and Urban Development.

Federal Assistance and Oversight

Federal assistance and oversight varies significantly across Agencies within the Workgroup. This section first discusses the general oversight and assistance that Tribes receive from Federal partners, then discusses the specific assistance that Agencies provide Tribes during the proposal phase of the Cleanup Project. Finally, it summarizes the nature of assistance and oversight during the project implementation phase.

General Assistance

Aside from the funding provided through the Cleanup Project, Federal Agencies provide Tribes with a variety of additional assistance. For example, many Agencies fund circuit riders to provide field assistance to Tribes. The range of services among Agencies include the following:

- BIA offers limited training services.

- RUS provides little direct service, but they fund outside Agencies, such as the Midwest Assistance Program (MAP), to aid Tribes in the field.

- DOD may fund Tribes to attend courses such as Hazardous Waste Emergency Response (HAZWOPER). In addition, they use Tribal labor as part of their cleanup projects for military waste through the Native American Lands Environmental Mitigation Program (NALEMP). In doing so, DOD helps build Tribal capacity.

- EPA provides funding for workshops, conferences, and training courses such as those provided by the Tribal Association for Solid Waste and Emergency Response (TASWER). In addition, EPA provides direct technical assistance through Regional offices.

- If requested, IHS staff may provide on-site technical assistance to Tribes and may assist Tribes in finding funding for off-site training courses.

Agency respondents note that the majority of Tribes request these services. While efforts to measure outcomes as a result of training have not been conducted, Agency respondents believe that hands-on interaction and training in which Tribal members present information and experiences to other Tribes are particularly effective. Tribal respondents agreed that it is helpful to see what other Tribes are doing; they would like more opportunities to hear success stories or lessons learned from Tribes.[11]

The Workgroup members provide a number of different assistance services. Respondents note that such efforts could be effectively leveraged through additional Workgroup collaboration. Tribal and Federal Agency respondents recommend expansion of the following training areas:

- Development of solid waste management plans;
- Rural landfill operations;
- C&D management at landfills;
- Equipment operation; and
- Proposal writing and grant management.

Proposal Phase

The nature of assistance at the proposal phase differs widely among members of the Workgroup. Tribes are typically able to turn to IHS staff or EPA Regional staff for assistance in writing the proposal, whereas other Agencies do not offer this assistance. Tribes that have on-staff personnel with grant writing expertise find this assistance helpful. Other Tribes must turn to outside engineers and consultants for support in writing the proposal, or develop the proposal

[11] The Spokane Tribe took the initiative to form a Tribal Solid Waste Advisory Network for this purpose. This network consists of Tribes from Alaska, Washington, and Oregon. Through this group, Tribes are able to tour reservations to see what others are doing, discuss solid waste management issues, and receive training.

with available, and often limited, in-house grant-writing capabilities. In the latter case, Tribes note that writing the proposal becomes a time consuming and arduous task.

Once proposals are approved by the Workgroup, Tribes develop workplans with each funding Agency. This process includes the following:

- BIA develops a workplan from the initial proposal.
- IHS works out the technical aspects of a project in order to develop a workplan for the Tribe.
- EPA asks the Tribe to develop a workplan based upon the proposal. Generally, the workplan format is similar to the proposal. EPA personnel will provide feedback to the Tribe in this process.
- RUS requires Tribes to develop a workplan. The Agency then reviews the workplan prior to acceptance.

In cases where Tribes are responsible for developing a workplan, work may range from making minor adjustments to the proposal to substantially revising the proposal in order to meet the requirements of that particular funding Agency.

Project Implementation Phase

Workgroup members adopt Agency-specific oversight roles during project implementation. Agencies including EPA, BIA, and RUS require Tribes to submit progress reports. EPA and BIA require quarterly reports and RUS requires periodic progress reports along with a yearly or three-year report that contains detailed financial data. In addition, EPA Regional Staff provide oversight and assistance to Tribes by phone and through occasional site visits. RUS carries out additional oversight through careful tracking of equipment purchases and visits to Tribes by inspectors.

IHS staff have an on-site presence and typically possess background knowledge in engineering and/or solid waste management. IHS personnel work cooperatively with Tribes in providing appropriate solid waste facilities to Tribal communities and Alaskan Native Villages. IHS employs a cooperative approach for providing solid waste facilities to Tribes, consulting with the Tribal government throughout every phase of the construction process, from preliminary design to project completion. IHS also provides technical assistance to Tribes in the development of Tribal utility organizations for operation, maintenance, and management of their solid waste facilities.

Agencies agree that the oversight provided contributes to successful completion of cleanup projects. EPA recognizes that progress reports are time-consuming for Tribes, but EPA and RUS believe that such reports help keep Tribes on task, as well as providing information for the future/current review of project success. In addition, RUS points out that reports ensure adherence to contract terms. Finally, IHS notes that their on-site presence allows them to assist the Tribe administer their project, provide for construction inspection, and help Tribes develop their operation and maintenance capacity. Agency and Tribal respondents agree that an on-site presence can assist a Tribe in improving its solid waste disposal capabilities.

Agencies also recommend collection and compilation of funded project information in a central database, noting that this would allow the Workgroup to follow the successes of all funded Tribes and allow for general information briefings outlining the overall accomplishments of this interagency project. In addition, Tribal respondents recommend more interaction with other Tribes who have completed similar projects.

OVERALL SUMMARY OF CLEANUP PROJECT PROGRESS

The progress achieved by the Interagency Open Dump Cleanup Project can be summarized in a variety of ways. Below, we first assess overall progress against the program logic model presented in Chapter 1. Next, we characterize progress relative to the performance measures defined in Exhibit 2-4.

Assessment Against the Logic Model

As noted, the Workgroup is working to help Tribes clean up and close open dumps on Tribal land, prevent the recurrence of illegal dumping, and develop safe solid waste management practices.

Resources, Activities, and Outputs

The Workgroup has delivered on the activities and outputs that help establish the groundwork for improved solid waste management at Tribes. The Workgroup has solicited proposals; provided guidance to applicants to ensure proper completion of funding applications; ranked proposals according to standardized criteria; and disbursed funds to assist qualified Tribes in building capacity to address solid waste management issues. Workgroup agency personnel have in many cases provided direct, on-site technical assistance to Tribes in addressing complex aspects of their open dump closure projects.

Partners and Customers

The Workgroup comprises a team of Federal agencies with expertise in Native American solid waste management practices and the technical knowledge to help Tribes achieve their

goals. Participating Tribes are representative of various geographic regions, waste management challenges, and levels of technical sophistication.

Short-Term Outcomes

Recognizing that support from the tribal community is essential, Tribes have made community awareness and education a high priority. Tribes are actively conducting outreach activities aimed towards schools and community venues to educate the member population about sound solid waste management practices on tribal lands.

Intermediate Outcomes

Although many of the Workgroup-funded projects are still underway, the Workgroup has made substantial progress in attaining the intermediate outcomes outlined in the logic model. Tribes have largely identified and assessed open dumps and many Tribes have progressed to the point of cleaning up and closing them. Tribes have made less progress in developing Integrated Solid Waste Management Plans and implementing waste minimization and recycling programs, although many Tribes note that they want to improve their recycling efforts. Once Tribes feel they have addressed their more pressing needs, other efforts, such as recycling programs, may be realized.

Long-Term Behavioral and Environmental Outcomes

Tribes are generally in the early stages of realizing the long-term behavioral and environmental outcomes noted in the logic model. By identifying the problem and beginning to find solutions for decades of improper solid waste management, Tribes are setting baseline conditions for future progress. For example, many participating Tribes are now, for the first time in their history, disposing of their solid waste pursuant to applicable Tribal regulations. As Tribes continue to gain experience and momentum through the capital improvements, staff training, and overall capacity building currently underway, they stand to realize more of the concrete environmental and human health improvements described in the logic model.

Assessment Against Performance Measures

Exhibit 2-4 (Chapter 2) describes a series of performance measures against which we initially proposed to measure the progress of the Cleanup Project in this evaluation. Exhibit 3-9 describes progress against these measures.

Exhibit 3-9

ASSESSMENT AGAINST PERFORMANCE MEASURES

Program Component	Performance Measure	Data Source	Progress Made Among Participants
Closure of Open Dumps on Tribal Lands	Number of open dumps reported by Tribal funding respondents that were cleaned up and closed, stratified by the dump's classification as a high threat or a non-high threat to the environment as a result of this program.	Funding recipient interviews; site visits; and Federal Agency staff interviews.	Tribes are making steady progress in cleaning up and closing open dump sites. Due to the multi-year nature of these efforts and the lack of a centralized database to track the progress of Interagency funding, data regarding the number and type of dumps that have been closed is not readily available.
	Number of respondents that identified a recurrence of open (or wildcat[1]) dumping on Tribal lands.	Funding recipient interviews and Federal Agency staff interviews.	Despite continuing outreach efforts, 11 of 13 Tribes responding to the question report a recurrence of open dumping on a smaller scale.
Building Tribal Solid Waste Management Capacity	Number of funding recipients reporting development of a sustainable integrated solid waste management plan, stratified by the components of such a plan (i.e., plan to assure permanent, non-Federal, funding, plan to inventory uncontrolled waste sites, etc.).	Funding recipient interviews; site visits; and Federal Agency staff interviews.	Of the 20 Tribes participating in this evaluation, 17 Tribes report conducting activities directly related to the development of an ISWMP.
	Number of funding recipients implementing a solid waste management program (i.e., conducting community outreach and education activities; Tribal population uses waste collection systems, etc.).	Funding recipient interviews; site visits; and Federal Agency staff interviews.	Findings indicate that many Tribes have been able to implement portions of a solid waste management program.
Administration of Funding	Number of funding recipients who achieved, or are in the process of achieving, the objectives specified in the funding proposal and workplan.	Funding recipient interviews and Federal Agency staff interviews.	Based on interviews, twelve Tribes report full completion of workplan objectives, while five Tribes report partial completion due to complicating factors. Three Tribes did not respond to this question.
	Number of funding recipients who reported administrative barriers in applying for and receiving funds.	Funding recipient interviews and site visits.	Most respondents acknowledge administrative barriers in applying for and receiving funds. Tribes primarily cited the variability in funding and disbursement criteria established under each Agency's statutory authority.
	Number of funding recipients who reported receiving funding from other sources to meet the goals of the Open Dump Cleanup Project.	Funding recipient interviews and site visits.	Several Tribes leveraged Interagency funding by supplementing it with alternative sources of funding made available through DOD; CEQ's NEPA development program; USGS; and HUD.

[1] Since respondents were not asked to distinguish between open dumping (i.e., on a community scale) and wildcat dumping (i.e., on an individual household scale), this performance measure may overstate the recurrence or persistence of open dumps on Tribal lands.

RECOMMENDATIONS CHAPTER 4

Tribes participating in the Cleanup Project differ significantly in terms of the status of their closure of open dumps and their solid waste management capacity. While some Tribes have developed and implemented integrated solid waste management plans (e.g., Tohono O'odham Nation), others have portions of an informal plan in place (e.g., Cheyenne River). Some Tribes have cleaned up and closed open dumps (e.g., Swinomish) and others are in the site assessment and planning phase (e.g., Makah for transfer station prior to closure). Overall, Tribes are making steady progress in meeting the objectives of the Cleanup Project with assistance from members of the Workgroup. Both Tribes and the Workgroup may benefit, however, from recommendations resulting from the findings of this evaluation.

Recommendations based on this evaluation fall into two categories. First, IEc offers recommendations to the Workgroup to consider developing performance measures, uniform reporting mechanisms, flexible funding approaches, strategies to reduce administrative burden, and support for Tribes to inventory open dumps, network, and share information developed in Tribal case studies. These recommendations cover evaluation objectives related to the Cleanup Project's performance and administrative funding barriers. Second, IEc offers lessons shared by Tribes that received funding under the Cleanup Project. Tribal lessons address the evaluation objective of assessing Tribal activities during the 1999, 2000, and 2001 funding cycles.

RECOMMENDATIONS TO INTERAGENCY WORKGROUP

The recommendations discussed in this section focus on improving the administration of the ongoing Cleanup Project and the work of the Workgroup. Due to the diverse funding requirements associated with each Federal Agency participating in the Cleanup Project and the multi-year, phased process necessary to close open dumps and build Tribal solid waste capacity, Federal Agencies face coordination challenges and an opportunity to leverage resources. Below, we discuss each of the recommendations in detail.

Recommendation 1: Consider Developing Workgroup Performance Measures that Inform Interagency Funding Priorities

The Workgroup may wish to consider development of performance measures that set discrete milestones. These milestones will in turn inform funding priorities and decisions. For example, by establishing the short-term measure (i.e., one to three years) of closing five open dumps and developing alternative solid waste disposal options for these Tribes, the Workgroup is concentrating its resources and directing its technical assistance toward a measurable outcome. This approach may help to manage the diverse funding requirements associated with each Federal Agency participating in the Cleanup Project and the multi-year, phased process necessary to close open dumps and build Tribal solid waste capacity.

Interagency funding priorities may also include priority ranking for those Tribes that are making steady progress toward closing open dumps and implementing integrated solid waste management plans, before funding new projects. Continued funding support may be less expensive and result in a more sustainable solid waste approach than multiple, small awards. The Workgroup may also pool its funding resources and expertise to fund a Tribe with multiple high threat sites that has been recommended by Regional staff (i.e., potential for groundwater contamination used for drinking water supply). To implement established funding priorities, the Workgroup may wish to reconsider scoring criteria and create additional opportunities for Regional collaboration to ensure consistent application of scoring criteria.

Recommendation 2: Develop Uniform Reporting Mechanisms

The Interagency Workgroup should consider development of uniform reporting mechanisms to track program progress. A simple and uniform reporting process would enhance the collaborative nature of this interagency effort, provide more accessible data to promote the program, and potentially address the challenges faced by resource-constrained Tribes to submit progress reports. The Workgroup needs reliable mechanisms for data collection to enable identification of, for example, the number (and percent) of open dumps that have been closed as a result of Cleanup Project funding. This would help the Workgroup evaluate the effectiveness of funding and inform the Cleanup Project's continuing improvement efforts. The Workgroup may wish to consider developing a project management tracking database that would facilitate collecting such information and managing the funded proposals.

Recommendation 3: Adopt Flexible Funding Approach in Considering Tribal Needs

The Interagency Workgroup should consider a more flexible approach to accommodate Tribal solid waste needs in developing its criteria for funding tribal projects. Tribes are faced with difficult field conditions, severe resource constraints, and competing community needs. For example, the Workgroup historically has required an ISWMP prior to additional Workgroup assistance. The development of a formal ISWMP may not be a Tribe's first priority in building Tribal capacity for solid waste management, since it does not provide tangible evidence to the community of progress. Assistance could instead begin with the cleanup of a waste site that is

both an eyesore and creates a potential public health threat by attracting disease vectors. This visible first step may allow the Tribal environmental program to build momentum and community support for longer-term efforts (e.g., developing and implementing a formal ISWMP).

Recommendation 4: Support Tribal Efforts to Inventory and Map Open Dumps

Tribes report on the continuing challenge of preventing the recurrence of open dumping on Tribal lands. Twelve Tribes are preparing inventories of uncontrolled waste sites and several Tribes use GIS software to map sites. The Workgroup may wish to consider using its collective GIS resources to assist Tribes in this effort. For example, Workgroup agencies can compile and distribute publicly-available data (e.g., spatial location of groundwater recharge areas) to assist Tribal solid waste managers in selecting alternate landfill sites. The Workgroup might also share data on the location of known open dumps already identified through the IHS inventory, or through subsequent updating efforts. This would save Tribal effort in compiling existing data and allow for Tribes to focus on supplementing these data sets as new open dumps are inventoried. With an accurate tally and locational data identifying open dumps and sensitive geology, Tribes will be better equipped to identify problem areas and take proactive measures, initiate appropriate enforcement actions, and educate the community regarding the costs of illegal dumping.

Recommendation 5: Develop "Smart" Funding Process to Reduce Administrative Burden

Tribal and Federal respondents acknowledge the administrative difficulties associated with applying for and receiving Workgroup funds. To help diminish this burden, the Workgroup should consider several options.

First, the Workgroup may wish to develop a "smart" funding process that streamlines a given Tribe's application to fit the nature of the proposed project. For example, an electronic application could walk Tribes through a series of questions – similar in structure to commercially available income tax preparation packages – and require only those forms pertinent to the activities proposed. Auto-complete functions could minimize redundant data entry, and required fields (e.g., IHS "High Threat" or "Sanitation Deficiency System" identification numbers) could ensure that complete applications contain all of the information necessary for the Workgroup to make informed decisions.[12] Further, such a system would facilitate application processing by providing Workgroup members with standardized application materials across Tribes. In the case of Tribes without a reliable internet connection, simple programming should allow for all required forms to fit on a single standard 3.5" floppy disc.

Second, the Workgroup should consider creating a "funding hotline" to support Tribes in preparing their application. Tribes spoke highly of the direct technical assistance provided by Regional staff in support of solid waste management planning, site engineering and remediation activities. A single point of contact within each Agency for funding questions (who works

[12] USDA staff noted that some information may still need to be submitted in hard-copy form.

closely with Regional staff engaged in funding administration) may provide leverage for technical staff and lessen Tribal burden.

Third, the Workgroup may want to consider streamlining disbursement of funding and improving coordination between Headquarters and Regional offices of its member Agencies. Workgroup Agencies noted delays that interfered with prompt disbursement of funds, thereby creating a compressed timeframe for Tribes to effectively use funds within the remaining fiscal year.

Recommendation 6: Offer More Opportunities for Tribal Networking and Assistance

The Workgroup may want to consider expanding opportunities for Tribes to network with other Tribes and with Federal Agencies. Tribal respondents praised training sessions at which Tribes share knowledge and experience by presenting lessons learned. The Workgroup could solicit feedback from Tribes on regional concerns (e.g., "Waste Management in the Tundra" for Native Alaskan Villages) and facilitate workshops on those topics. Agency staff could present the technical specifics of a solid waste management challenge, and Tribes could share their experiences in developing innovative strategies to address the issue.

In convening such workshops, Workgroup Agencies should coordinate to fill capacity gaps while minimizing overlap with existing training opportunities. Further, the Workgroup should work to identify funding sources to help convene these workshops and subsidize travel costs for Tribal attendees. Some EPA Regions conduct periodic Tribal meetings and collaborate with their Federal Agency counterparts. These efforts may provide a model to other Regions.

Finally, the Workgroup should consider broadening its support of Tribes in determining the scope and cost of their projects. Tribes suggested that the Workgroup could: provide guidance within the solicitation notice on estimating resource needs; help Tribes in the development of concrete project stages; and arrange for direct assistance with (or a comprehensive guide written by) personnel who have experience in costing cleanups.

Recommendation 7: Develop and Publicize Tribal Case Studies

Case studies often prove to be an effective vehicle for technology transfer among Tribes. Such documents present the context and challenges of a particular Tribe's waste management situation (e.g., rural location, weather, topography); the steps taken to improve waste management (e.g., funding sources, capital improvements, capacity building); and the outcomes achieved through the Tribe's efforts. Case studies provide a detailed reference point for Tribes to share valuable information. For this reason, the Workgroup may want to consider Recommendations 6 and 7 together.

LESSONS SHARED BY FUNDED TRIBES

The evaluation also suggests a set of lessons for Tribal staff engaged in closing open dumps and building solid waste capacity. Based on the findings from interviewees, Tribes may benefit from the lessons summarized below.

Lesson 1: Solicit Tribal Council Support

Many Tribal members report on the importance of gaining support from solid waste champions in leadership positions to build solid waste capacity. For example, environmental managers are generally required to obtain Council support to apply for Interagency funding and long-term solid waste management resources. Continued advocacy by Tribal leaders to sustain attention to solid waste management issues and model appropriate behavior for community members is key. Tribal solid waste managers should continue to provide tangible benefits to the community and keep the Tribal Council fully informed of current and future activities.

Lesson 2: Gain Community Support

Tribes should make every effort to gain community support for their efforts. Outreach efforts in the schools and community programs to heighten awareness of solid waste issues help create the environment for a sustainable program. The findings suggest that many Tribes have active outreach programs, but many Tribes also report resistance from community members in establishing permanent funding sources. Tribes may want to consider the use of educational materials created by other Tribes or Federal Agencies to leverage resources; and the experience of Tribes that have been successful in creating long-term funding strategies.

Lesson 3: Seek Opportunities to Network with other Tribes and Solid Waste Professional Organizations

Solid waste management issues are typically large-scale problems solved over the long term. Tribes report significant benefits from leveraging knowledge and experience by networking with other Tribes, Agencies, and professional groups (e.g., Solid Waste Association of North America (SWANA), Tribal Association for Solid Waste and Emergency Response (TASWER), and Tribal Solid Waste Advisory Network (TSWAN)). Inter-Tribe networking is particularly advantageous, as it allows for a support network among those facing similar obstacles and hardships. Tribes should continue to seek appropriate networking opportunities.

Lesson 4: Define Performance Measures and Monitor Progress

Tribes may want to consider taking concrete steps to set goals and objectives; defining and employing performance measures; and regularly assessing progress made and areas for improvement. Open dump cleanups are usually long-term efforts. Performance measurement

helps maintain momentum by breaking the project into smaller pieces with associated short-term goals and objectives that fit within a broader long-term management plan. A results-oriented approach also helps to build support from community members and the Tribal Council. Finally, by demonstrating measured and steady success in achieving goals, Tribes provide the Workgroup with evidence to support continued funding.

Attachment A

MEMORANDUM OF UNDERSTANDING AMONG PARTICIPATING AGENCIES OF THE TRIBAL SOLID WASTE INTERAGENCY WORKGROUP

MEMORANDUM OF UNDERSTANDING
AMONG PARTICIPATING AGENCIES OF THE
TRIBAL SOLID WASTE INTERAGENCY WORKGROUP

I. INTRODUCTION

In April 1998, the Tribal Solid Waste Interagency Workgroup (the Workgroup) was formed to provide assistance to tribes in complying with the municipal solid waste landfill (MSWLF) criteria (40 CFR Part 258). The MSWLF criteria are federal regulations that govern municipal solid waste (MSW) disposal by specifying safe design and management practices to control releases into groundwater; location and operation procedures to protect human health; and closure procedures, including long-term monitoring of landfill conditions, to protect future generations.

In its 1998 *Report to Congress* on open dumps on Indian lands, the Indian Health Service (IHS) identified 1,104 sites in need of upgrade or closure, in order to meet the federal MSWLF criteria. The IHS further identified a subset of 142 "high threat" sites that need further evaluation to determine if expedited action is required.

II. PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to establish procedures that will coordinate the activities of the agencies participating in the Workgroup in a manner that promotes safe waste management on Indian lands[1], taking into account the needs of the American Indian and Alaska Native people and assuring maximum Indian participation in services provided to Indian communities. It further sets forth short-and long-term goals for assisting tribes with closing or upgrading their open dumps and planning for appropriate alternative disposal. This MOU serves as a companion to the 1991 Memorandum of Understanding among the Bureau of Indian Affairs, the Environmental Protection Agency, the Department of Housing and Urban Development, and the Indian Health Service (1991 MOU), expanding on that document to include additional agencies and specifically-defined activities. This MOU does not preclude the execution of additional MOUs or Interagency Agreements related to solid waste.

The purpose of this MOU is not to establish the intention or commitment for funding any project on the part of the federal agencies. It provides coordination of many separate federal programs and responsibilities rather than the individual procedures, requirements, or financial arrangements. In some cases, coordination with other parties, such as state agencies or non-governmental organizations, may also be considered.

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[1] Indian land as defined in 25 U.S.C. 3902(3).

III. AUTHORITIES

This MOU is established under the following authorities: the Solid Waste Disposal Act (SWDA), as amended (42 U.S.C. 6901 et seq); the Indian Health Care Improvement Act, as amended (25 U.S.C.1601 et seq); the Indian Lands Open Dump Cleanup Act (25 U.S.C. 3901 et seq), Executive Order 13084, Consultation and Coordination with Indian Tribal Governments, and the federal Indian policies of signing agencies. It is consistent with the 1991 MOU.

IV. OBJECTIVE

Since April 1998, the Workgroup has worked to develop an action plan to effectively utilize Federal resources to address tribal solid waste needs. The plan includes the development of a multi-year, interagency approach which includes identifying:

1. Legislative authorities and responsibilities of each agency as they relate to solid waste management;
2. Existing technical strengths; and
3. Available programs for assisting tribes with addressing their solid waste management needs.

The Workgroup's action plan further identifies areas where the agencies have committed to work together to assist tribal governments, including:

1. Developing solid waste management plans for tribal communities;
2. Developing realistic solid waste management alternatives which consider long-term operation and management of alternatives and tribal infrastructure;
3. Closing or upgrading noncompliant waste disposal sites; and
4. Monitoring post-closure activities.

V. INTERAGENCY COORDINATION

To the extent permitted by each agency's legal authorities and resources, Workgroup agencies agree to coordinate and consult with one another in the following areas:

1. Agencies will cooperate in the identification of MSW facilities on Indian lands and in the collection of inventory data.
2. Agencies will work together to consolidate funding, technical assistance, and training to tribal governments for solid waste management program development, including planning, implementation, closure, and post-closure activities.
3. In any situation where Emergency Actions may be invoked, EPA will notify the appropriate agency(ies) of the problem and potential action according to the standard emergency notification procedures of the EPA regional office. Such coordination among the agencies will not preclude any agency from taking action required under its respective mandates for dealing with emergency situations. Affected agencies will provide emergency assistance to tribes in accordance with their own policies and procedures.

VI. INDIVIDUAL AGENCY RESPONSIBILITIES
See Attachment 1.

VII. SHORT-TERM ACTIONS
As appropriations and resource allocations permit, the Workgroup will review IHS' list of high threat open dump sites and develop an action plan for addressing these sites and those identified as high threat by tribal governments.

VIII. LONG-TERM ACTIONS
To help achieve the above goal, this MOU supports, but is not limited to, the following projects:

1. Tribal Solid Waste Interagency Workgroup - The Workgroup will meet quarterly to continue refining its plan for helping tribes bring their waste disposal sites into compliance with the MSWLF criteria.
2. Tribal Open Dump Cleanup Project - As resources allow, the Workgroup will continue to support this project to assist tribes with closure or upgrade of "high threat" waste disposal sites and planning for appropriate alternative disposal.
3. Tribal Solid Waste Training Program - As resources allow, the Workgroup will continue to fund training activities designed to provide tribal governments with the appropriate tools for designing, operating, and maintaining effective solid waste management programs.

IX. TRIBAL CONSULTATION
In a manner consistent with Executive Order 13084 or its successors, the Workgroup will consult with tribes on its action plan as well as specific projects developed and implemented under this MOU.

X. DURATION OF AGREEMENT
This MOU shall continue in effect until all Workgroup agencies provide written notice of termination. Any participating agency may drop out with written notice to other signatory agencies. This document may be updated and periodically amended with concurrence of all parties.

XI. MOU COORDINATION
Currently, the Workgroup is chaired by EPA, which will serve as the primary coordinator of this MOU and Workgroup spokesperson. Should another agency become chair of the Workgroup, it will take on the task of MOU coordinator and Workgroup spokesperson. MOU coordinator responsibilities include, but are not limited to, scheduling Workgroup meetings and conference calls and serving as the general point of contact on Workgroup-related issues. Spokesperson responsibilities include serving as the interface among Workgroup agencies, tribal governments, and the general public, and primary distributor of information on Workgroup activities.

XII. APPROVALS

DEPARTMENT OF AGRICULTURE,
RURAL UTILITIES SERVICE

Christopher A. McLean,
Administrator, Rural Utilities Service

8/11/00
Date

DEPARTMENT OF DEFENSE

Sherri W. Goodman,
Deputy Undersecretary of Defense (Environmental Security)

8/11/00
Date

ENVIRONMENTAL PROTECTION AGENCY

Timothy Fields, Jr.,
Assistant Administrator, Office of Solid Waste and Emergency Response

8/11/00
Date

Steven A. Herman,
Assistant Administrator, Office of Enforcement and Compliance Assurance

8/11/00
Date

Katherine Gorospe,
Director, American Indian Environmental Office

8/11/00
Date

4

DEPARTMENT OF HEALTH AND HUMAN SERVICES,
INDIAN HEALTH SERVICE

for Michael H. Trujillo, M.D., M.P.H., M.S.,
Director, Indian Health Service

11 Aug 00
Date

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Jacqueline L. Johnson,
Deputy Assistant Secretary for Native American Programs,
Public and Indian Housing

11/Aug/00
Date

DEPARTMENT OF INTERIOR,
BUREAU OF INDIAN AFFAIRS

~~Kevin Gover,~~
~~Assistant Secretary for Indian Affairs~~
Deputy Commissioner
Bureau of Indian Affairs

August 11, 2000
Date

5

ATTACHMENT 1
INDIVIDUAL AGENCY RESPONSIBILITIES

Each agency remains committed to the goals it has established related to tribal environmental programs. In addition to the following responsibilities, each Federal agency is responsible for compliance with applicable regulations for its own waste management activities. Each Federal agency also must exercise appropriate oversight for the projects and programs which it funds. Specifically, each agency has committed to the following responsibilities:

Environmental Protection Agency (EPA)

1. EPA will continue to serve as an advocate for and a technical advisor to American Indians and Alaska Natives on environmental issues.
2. As resources allow, EPA will routinely, and upon request, provide training and technical assistance in various aspects of MSWLF requirements to Workgroup agencies and tribal personnel.
3. Based on resource availability, EPA will assist Indian communities in complying with the MSWLF criteria by:
   a. Working cooperatively with the IHS in its inventory and assessment of open dumps on Indian lands, as specified in P.L. 103-399. This includes providing assistance in determining the relative severity of the threat to public health and the environment.
   b. Providing financial and technical assistance to tribes for planning, assessment, training, and community outreach activities, as well as limited financial assistance for solid waste management demonstration projects.
   c. Providing technical assistance and training to Federal agencies on non-hazardous and hazardous waste related issues to ensure Federal agency compliance with the MSWLF criteria on Indian lands.

Bureau of Indian Affairs (BIA)

1. BIA will continue to serve as an advocate for and a technical advisor to American Indians and Alaska Natives on environmental management issues.
2. Based on resource availability and eligibility guidelines, BIA will financially and technically assist Indian communities to meet the MSWLF criteria with the following activities:
   a. Assist tribes with their solid waste management problems, including assessing the threat to public health and the environment of open dumps on Indian lands, assisting tribes to establish alternative disposal methods, and assist them with closure of open dumps.
   b. Provide training and technical assistance to tribal operation and maintenance organizations to establish appropriate facility operations, monitoring, and surveillance activities in keeping with good standards of practice.

c. Make a special effort to provide assistance to those systems identified by EPA as having particular difficulties in complying with MSW disposal regulations.
d. Provide technical assistance to tribes to establish their post-closure maintenance program.

Indian Health Service (IHS)

1. IHS will maintain its position as an advocate for and a technical advisor to American Indians and Alaska Natives on environmental health issues.
2. IHS will, upon request, provide EPA personnel with an orientation to acquaint them with the special situations and needs of Indians.
3. Based on resource availability and on eligibility guidelines, IHS will financially and technically assist Indian communities to meet the MSWLF criteria with the following activities:
   a. Inventory and assess the threat to public health and the environment of open dumps on Indian lands, as specified in P.L. 103-399. The assessment shall be carried out cooperatively with the Administrator of the EPA.
   b. Assist tribes to establish alternative disposal methods, then assist them with closure of open dumps.
   c. IHS will offer technical assistance to tribal operations and maintenance organizations to establish appropriate facility operations, monitoring, post-closure maintenance programs, and surveillance activities in keeping with good standards of practice.
   d. Make a special effort to provide assistance to those systems identified by EPA as having particular difficulties in complying with MSW disposal regulations.

Rural Utilities Service (RUS)

1. RUS will continue to serve as an advocate to American Indians and Alaska Natives for health and sanitation issues.
2. RUS will work with members of this MOU to assist Indian communities to meet the MSWLF criteria through the availability of all its resources and programs based on resources available, competition for funds and on eligibility guidelines.
3. RUS will encourage applications from Indian tribes for direct loans to develop water and wastewater systems, including solid waste disposal systems on reservations.
4. RUS will consider for funding complete applications from Indian tribes for the solid waste management grant program. These grants are to provide technical assistance and/or training to reduce or eliminate pollution of waste resources and to improve planning and management of solid waste facilities.

Department of Defense (DoD)

As resources and legal authorities permit, DoD will assist tribes to meet their MSWLF requirements through the following DoD activities:

1. Working cooperatively with federal agencies and tribal governments to identify DoD contributions to noncompliant MSWLFs, to include the review of proposed projects.
2. Coordinating DoD information gathering and mitigation activities associated with noncompliant MSWLFs with the Workgroup and affected tribal governments.

U.S. Department of Housing and Urban Development, Office of Native American Programs (ONAP)

As resources allow and within statutory authorities, ONAP will:

1. Continue to serve as an advocate for and technical advisor to American Indians and Alaska Natives on affordable housing programs and issues.
2. Work cooperatively with federal agencies and tribal governments to identify appropriate HUD contributions to solving noncompliant municipal solid waste landfill problems, including input on the review of proposed Workgroup projects.
3. Coordinate HUD activities associated with mitigating noncompliant municipal solid waste landfill problems with the Workgroup agencies and affected tribal governments.
4. Upon request, provide training and technical assistance on various aspects of Indian housing requirements and programs to Workgroup agencies and tribal personnel.
5. Continue to provide financial and technical assistance to tribes that are appropriate for local circumstances. Assistance will be provided through programs such as, but not limited to, Indian Housing Block Grants, Section 184 Loan Guarantees, and Indian Community Development Block Grants. ONAP will continue to support a wide variety of activities to develop, implement and maintain these and other national programs.
6. Use its technical assistance network to disseminate information on solid waste landfill planning within affordable housing and community development programs and to encourage tribes to address solid waste management needs within their Indian Housing Plans.
7. When appropriate and eligible, request consideration by the Secretary, HUD for funding from the Department's discretionary housing program funds for Workgroup-sponsored solid waste remediation and management projects (ONAP has no discretionary program funding; all federal assistance is awarded through grant programs).

Attachment B

TRIBAL OPEN DUMP CLEANUP PROJECT
DISCUSSION GUIDES FOR FUNDED TRIBES

TRIBAL OPEN DUMP CLEANUP PROJECT
Discussion Guide for Funded Tribes

Overview of Tribal Community and Open Dumps On-Site

1) Please tell us a bit about your Tribal community and how you manage your environmental program, and in particular, solid waste issues.

2) How long have you been working on solid waste environmental issues for the Tribe, and in what capacity?

3) How many people work on a full, or part-time, basis on solid waste environmental issues for the Tribe?

General Solid Waste Management Issues

4) How do Tribal members routinely manage their waste (e.g., Does an external waste disposal provider collect the trash? Do tribal members bring their waste to the local landfill? etc.)

5) Has your Tribe developed a written integrated solid waste management plan? EPA defines an integrated solid waste management plan as a process for managing solid waste and materials diverted from solid waste through a combination of any of the following four methods of management: source reduction, recycling, combustion, and landfilling. If so, to what extent has the Tribe been able to implement this plan?

6) Has your Tribe established a permanent funding source to support ongoing waste management activities? If so, what is the funding source?

Project-Specific Questions

7) Are you familiar with the proposal submitted by your Tribe for funding to the Tribal Open Dump Cleanup Project?

8) How does the project workplan differ from the Tribe's proposal? If the project workplan differs from the Tribe's proposal, please explain how.

9) Please tell us about your project and the progress you have made.

CLOSURE OF OPEN DUMP

- Was a site assessment conducted?
- Was an open dump closure plan, including cost estimates, created?
- Was a plan drafted for final cover and installation methods, an estimate of area requiring cover, a waste inventory, and schedule for completing closure?
- Was the open dump closure completed?
- If so, was the dump clean closed, covered, or capped?
- If the dump was clean closed, was all of the material removed and where did it go?
- What kind of waste was generally found in the dump (e.g., household, C&D, hazardous)?
- Has an independent verification been conducted that closure has been completed according to plan?
- Have plans been completed for post closure care, including monitoring and maintenance activities and cost estimates?

Integrated Solid Waste Program

- Which of the four methods of solid waste management does your Tribe use, and please estimate the percentage of your waste that is managed in this manner?
  - Source reduction; estimated % _____
  - Recycling; estimated % _____
  - Combustion; estimated % _____
  - Landfilling; estimated % _____
- Does the Tribal population have access to and use waste collection systems?
- Is waste generated in Indian country and other Tribal areas disposed of in compliant facilities?
- Does the Tribe have an inventory of uncontrolled waste sites (e.g., open dumps, auto junk yards, etc.) and mechanisms for updating such inventory?
- Is the Tribe in the process of a clean-up, closure, or putting controls in place, or have these activities been completed, for existing uncontrolled waste sites?
- Does the Tribe conduct community outreach and education activities to inform Tribal members regarding the proper management of solid waste?

10) To what extent has the Tribe achieved the objectives specified in its proposal?

- Completely achieved
- Partially achieved (specify percentage completion, if possible)
- Unable to achieve

Please specify reasons for degree of achievement.

11) To what extent has the Tribe achieved the objectives specified in the project workplan?

- Completely achieved
- Partially achieved (specify percentage completion, if possible)
- Unable to achieve

Please specify reasons for degree of achievement.

12) Were there unforeseen problems that arose throughout the process?

13) Extent of recurrence of open dumping in program-affected lands:

   a) What factors do you think led to the recurrence of open dumping?

   b) To your knowledge, how many projects have experienced a recurrence of open dumping either in the same, or different, location on Tribal lands?

14) Are there lessons you'd like to share with other Tribes?

15) Are there additional efforts planned for the future?

Application Process, Estimation of Resource and Funding Needs

16) To what extent are there administrative barriers in applying for and receiving funds through the Open Dump Cleanup Project (e.g., difficulty in assessing resource needs, time needed to draft proposal)? How much time and resources are needed to complete a funding proposal (including estimating resource needs) or to submit reports on the status of your activities?

17) Please describe how you estimated your resource needs when crafting your proposal for the Open Dump Cleanup Project. Do you think your estimation was accurate?

18) Who, if anyone, helped you to estimate your resource needs? Would you have liked additional guidance?

19) What oversight, guidance, training, or technical assistance did you receive while carrying out the activities outlined in your proposal? Was this assistance helpful? Why or why not? Is there additional assistance that would have been useful?

20) Was the funding you received sufficient to meet the objectives outlined in your original proposal? If not, did you receive funding from other sources to meet your objectives? If you did receive other

funding, what sources, and what percentage of your total funding needs was met by the Open Dump Cleanup Project? Alternatively, did you change the focus of your project to accomplish a more modest project than what was originally proposed to manage any funding shortfalls? Please explain.

21) Funding Utilization:

a. Were funds used to train staff? If so, please describe any training for which funding was used. Also, please identify the number of people that were trained.

b. Were funds used for outreach activities? If so, please describe these activities. Also, please identify and describe the target audience and number of people reached through these activities.

c. Were funds used to complete any strategy activities such as characterizing waste sites? Please Describe

d. Were funds used to develop a Tribal Environmental Program? If yes, please describe.

e. Were funds used to implement solid waste management activities (For example, were funds used to construct a transfer station? If yes, how many transfer stations were constructed?)

Attachment C

TRIBAL OPEN DUMP CLEANUP PROJECT
DISCUSSION GUIDE FOR FEDERAL HEADQUARTERS & REGIONAL AGENCY STAFF

TRIBAL OPEN DUMP CLEANUP PROJECT
Discussion Guide for Federal Headquarters and Regional Agency Staff

Funding Solicitation and Selection

1) Funding selection process:
   a) How do you contribute to the funding selection process?
   b) What criteria do you use?

2) Estimation of resources/time/costs necessary to achieve objectives of the proposal:
   a) Does your Agency help Tribes estimate the resources/time/costs associated with cleanup/closure projects and/or the development of integrated solid waste management plans?
   b) Do you know how many times your Agency has provided this type of assistance?
   c) Has your Agency attempted to measure the accuracy of funding resource estimates, perhaps by comparing estimated costs to actual costs? If so, please describe how this is done.

Administration of Funding

3) What role, if any, do you play in developing the workplan for the project? Please describe the activities involved in developing the workplan.

4) To what extent are there administrative barriers in procurement or disbursement of funding? Please describe your Agency's procurement and disbursement processes for Tribal open dump projects. For both procurement and disbursement, estimate the amount of resources/time needed to complete each step of the process.

Federal Oversight and Assistance

5) Effectiveness of training and technical assistance provided by your Agency:
   a) What type of training and technical assistance does your Agency provide? If your Agency performs the cleanup services for the Tribe or contracts to have the work done, please describe these activities.
   b) How many Tribes have requested training or technical assistance; and how many Tribes have been able to receive training or technical assistance from your office?
c) Which types of training and assistance are most effective? Why do you believe this is so?
d) Is there any type of assistance or training that you believe your office should provide that is not currently provided?
e) Has your Agency attempted to measure outcomes related to training or technical assistance?

6) Federal oversight and assistance:
   a) What type of Federal oversight does your Agency provide?
   b) Do you believe that this oversight has contributed to the successful completion of the project? If so, please explain.
   c) What additional efforts are needed, or would be helpful to funding recipients?

Measuring Outcomes

7) Extent to which projects selected for funding achieved the objectives specified in the proposals and/or workplans:
   a) Does your headquarters or regional office collect any information (such as annual or periodic progress reports) from funding recipients after they have received funding? Would it be possible for us to have access to this information, if available?
   b) Does your Agency have any internal controls to measure funding performance? Would it be possible for us to have access to this information, if available?

8) Extent of recurrence of open dumping in program-affected lands:
   a) To your knowledge, how many projects have experienced a recurrence of open dumping either in the same, or different, location on Tribal lands?
   b) What factors do you think led to the recurrence of open dumping?

9) Do you have any recommendations for improving the program? Where possible, please be specific.

Attachment D

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS AND FEDERAL AGENCY INTERVIEWS

PART 1: SUMMARY OF DISCUSSIONS WITH TRIBES

List of Tribes Interviewed				
EPA Region	***State***	***Tribe***	***Site/Phone***	***Date***
5	Minnesota	White Earth Reservation	Phone	20-Jul-04
6	Oklahoma	Ponca Tribe	Phone	08-Jul-04
8	Montana	Blackfeet Nation	Phone	22-Jul-04
	North Dakota	Spirit Lake Tribe	Site	20-May-04
		Turtle Mountain Band of Chippewa Indians	Site	19-May-04
	South Dakota	Cheyenne River Sioux Tribe	Site	18-May-04
		Oglala Sioux Tribe	Site	17-May-04
9	Arizona	San Carlos Apache	Site	02-Jun-04
		Tohono O'odham Nation	Site	03-Jun-04
	California	Hoopa Valley	Phone	01-Jul-04
10	Alaska	Deering Village	Phone	18-Jun-04
		Goodnews Bay	Phone	21-Jun-04
		Igiugig Village	Phone	17-Jun-04
		Metlakatla	Phone	16-Jul-04
		Native Village of Kiana	Phone	20-Jul-04
		Native Village of Selawik	Phone	15-Jul-04
	Washington	Makah Tribe	Site	25-May-04
		Quileute Indian Tribe	Site	24-May-04
		Spokane Tribe	Phone	19-Jul-04
		Swinomish Tribal Community	Site	25-May-04

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Overview of Tribal Community and Open Dumps On-Site	

General Information on Tribal communities and how they manage environmental issues (specifically solid waste)	Land Area: Highly variable across Tribes; ranges from 1 square mile (Quiluete) to 2344 square miles (Blackfeet).
	
	Population: Highly variable across Tribes; ranges from 55 (Igiugig) to over 10,000 (Blackfeet).
	
	Waste Management Structure: Tribes often manage solid waste through an office with broad environmental responsibilities (e.g., water, sewer, pesticides, community education).
	• Spirit Lake manages solid waste through health department.
	• Spokane manages solid waste through Planning and Economic Development.
	• Swinomish manages solid waste through two departments (Planning and Community Development, and Housing Authority). The Swinomish Utility Authority also assists with curbside pickup of household waste.
	• Oglala Sioux breaks out solid waste management into a separate sub-office with dedicated staff.
	• Tohono O'odham breaks day-to-day waste management and code enforcement into separate offices (Tribal EPA, Solid Waste Management, and Solid Waste Regulatory Office).
	• White Earth runs solid waste management under Natural Resources Department; solid waste branch treated as its own business unit.
	
	Waste Management Challenges: Tribes face diverse waste management challenges:
	• Resource Constraints: insufficient funding sources; very small tax base.
	• Rural Location: complicates logistics of curbside pick-up; few compliant landfills nearby.
	• Other challenges:
	  • Igiugig's landfill site is in close proximity to a school and a runway.
	  • Metlakatla's geography/topography are its most important challenges: the reservation comprises a tundra island. Tundra prevents landfill construction; barge and plane are the only off-island carting options; both are prohibitively expensive.
	  • Kiana's dumpsite area faces substantial erosion problems; drainage shifting toward river used for subsistence fishing.
	  • Selawik's land comprises primarily roadless wetlands/tundra/marsh.
	  • Spirit Lake's roads are plagued by frequent floods associated with high groundwater and rising lake levels.

Nature and duration of respondents' environmental work with Tribe	• Solid waste experience with Tribe ranges from one year (Kiana) to 20 years (San Carlos). • Mean = 8 years; median = 7.5 years. • Solid waste managers are often in charge of other programs/media (e.g., water, sewer) as well as grant writing/grant management.

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Number of employees working on solid waste environmental issues for Tribes	• Number of employees ranges from ¼ (Swinomish) to 25 (Tohono O'odham). • Mean = 6.5 full-time employees; median = 4 full time employees.
General Solid Waste Management Issues	

Common methods of solid waste management on Tribal lands	• Solid waste disposal: 11 Tribes use local landfill and 9 Tribes use external landfill with local transfer station.
	• Collection options for Tribes:
	  • Curbside pickup for individual homes or shared dumpsters (8).
	  • Households individually responsible for delivering trash to landfill/transfer station (6).
	  • Some combination of curbside and individual drop-off (6).
	• Several Tribes conduct community cleanups (e.g., spring cleanups, semi-annual cleanups) where Tribal members can dispose of tires, white goods, accumulated trash, etc.

Extent to which Tribes have developed solid waste management plans (SMWPs)	Based on interviews with Tribes and not on review of written plans: Substantial variation among Tribes: • Goodnews Bay developed a plan that awaits approval from Alaska DEC. • Kiana has drafted a plan for recycling programs and spring cleanups and is working to place trash receptacles throughout the community. • San Carlos has largely implemented its SWMP, though the plan needs updating. • Tohono O'odham developed a SWMP in the mid-1990s and has fully implemented and expanded the plan since 1998. • Cheyenne River has parts of a plan in operation, but nothing written down ("Hard to write down a plan before pieces are in place."). • Hoopa Valley developed a plan to manage landfill closure activities in 1996; no other solid waste management activities seem to be included. • Turtle Mountain reports that its SWMP has been implemented through Tribal code; no formal document exists.

Extent to which Tribes have established permanent funding sources to support ongoing waste management activities	15 of 20 Tribes have established a permanent funding source:
	• 10 Tribes fold waste management bill into monthly utility bill that includes water, sewer, telephone, cable television, etc.
	  • Some Tribes have trouble collecting fees (e.g., Oglala Sioux).
	  • Fees generally do not fully support all waste management activities.
	• 5 Tribes use other mechanisms:
	  • Collect per-pound fees at landfill
	  • Fund through other tribal activities (e.g., timber/fish sales, casino revenues)

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Project-Specific Questions	
Respondents' familiarity with Tribal proposal submitted to Workgroup	16 of 20 Tribes were familiar with the submitted proposal. In cases where the respondent was not familiar, it was due to staff turnover; unavailability of primary director; or inability on respondent's part to discern among funding sources and the activities associated with each funding source.

Extent to which project workplans differ from initial proposals	• The following five Tribes' workplans came back with less funding/activities than outlined in proposal:
	  • Cheyenne River anticipated performing many aspects of landfill improvement, but BIA dollars are limited to funding assets (i.e., not salaries), so the funds were limited to equipment purchase.
	  • Goodnews Bay proposed $300,000 for closure of former open dump; received $75,000 to assess current landfill site and develop SWMP.
	  • Selawik intended to close open dump and build a compliant landfill; received funding to buy a bulldozer and build storage garage.
	  • Spirit Lake requested $423,000 as part of a larger $2.7 million project; received $70,000 for a pumper truck.
	  • Igiugig received funding to develop closure plan, but not to conduct closure activities.
	• Kiana, Quiluete, San Carlos, and White Earth described only minor differences between proposal and workplan.

Extent to which Tribes have achieved objectives outlined in proposals	To the extent that workplans accurately reflect the initial proposals, Tribes were able to accomplish activities outlined in proposal. In cases where proposed objectives were not funded through the workplan, these activities were not accomplished.

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Extent to which Tribes have achieved objectives outlined in project workplans	• Completely Achieved: 12 out of 20 Tribes report that they completely achieved the objectives in their workplans. • Partially Achieved: 5 out of 20 Tribes report that they partially completed the objectives in their workplans. • 3 out of 20 Tribes did not respond. The following twelve Tribes completed the objectives outlined in the workplan: • Blackfeet Nation achieved all of the closure and post-closure plans outlined in workplan. • Hoopa Valley closed existing dump (funded); working to complete transfer station (unfunded). • Igiugig developed closure plans for open dump, as outlined in workplan. • Makah conducted Phase I assessment and NEPA review of transfer site. • Ponca closed several open dumps (workplan funded two fewer than proposed). • White Earth closed three open dump sites and put surplus funds toward educational materials. • Spirit Lake purchased a pumper truck (the only item funded in workplan). • Cheyenne River completed all objectives related to equipment purchase. • Quileute cleared approximately 300 abandoned cars from their land. • Swinomish closed an abandoned open dump. • San Carlos closed all sites (as of 11/2004), including one where hazardous materials were discovered. • Goodnews Bay had waste management plans, a landfill assessment, and a new landfill plan developed. Other Tribes have not yet met objectives due to a variety of circumstances: • Kiana experienced delays in choosing a landfill site and has had problems with its contractor. • Deering did not have enough funds to complete their objectives, and the EPA funds expired before the Tribe could utilize them fully. • Spokane has been hindered by inaccurate budget estimates and having to put out multiple bids. • Tohono Oodham has had to rework cover plans for closed dumps. • Oglala Sioux encountered bad weather and unforeseen equipment breakdowns.
Unforeseen problems arising throughout process	Tribes noted diverse challenges: • Delays related to weather; alternative site selection; and contractor non-response. • Lack of initial Tribal waste management capacity (i.e., contractors often a necessity). • Difficulty establishing stable funding source: members often opposed to paying for waste disposal. • Trouble discerning where grant money was coming from and what it could be used for. • Staff turnover within Tribal environmental offices. • Difficult to manage waste in remote areas. • Proposal/Workplan did not include money for vehicle maintenance; important oversight.

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Extent of recurrence of open dumps; contributing factors	• Recurrence noted in 11 of 13 respondents conducting open dump closures; however, recurrence is typically on a smaller scale than original dumping. • Contributing factors: habit; convenience; lack of alternative site; lack of personnel to keep dumpsters from overflowing; resistance to tipping fees; illegal dumping coming from off-reservation; lack of effective communication mechanisms; limited business hours at transfer stations.
Lessons learned / transferable to other Tribes	• Network with other Tribes / professional groups (e.g., Solid Waste Association of North America (SWANA) and Tribal Solid Waste Advisory Network (TSWAN)). • Set long-term goals and objectives, but break project into "fundable" chunks. • Conduct outreach to Tribal members on the importance of proper waste management. • Hire outside help if necessary, but build capacity by keeping Tribal members involved. • Use both "carrot" and "stick" to enforce Tribal environmental code.
Additional solid waste management efforts planned	• Build transfer station and close open dump(s). • Develop recycling program. • Outreach/education in community (especially schools). • Implement curbside pick-up (potentially allow private contractors to enter market). • Conduct open dump inventory and heighten enforcement efforts.
Components of Open Dump Closure Projects (13 of 20 Tribes)	
Site assessment	11 of 13 Tribes conducted site assessment as initial step in closure process.
Open dump closure plan (including cost estimates)	9 of 13 Tribes developed open dump closure plan.
Plan for final cover / waste inventory / schedule	9 of 13 Tribes developed plan for final cover, waste inventory, and schedule for project completion.
Extent of project completion	6 of 13 Tribes consider their closure project to be complete.
Nature of closure (or closure plans)	• Capped (4) • Clean Closed: (4; materials frequently carted to landfill) • Combination Clean Closed/Capped (2) • Covered (1)
Nature of waste (e.g., household, C&D, hazardous)	• All existing landfills contain household waste. To a lesser extent, landfills contain C&D waste (10) and hazardous waste (6).
Independent certification of proper closure	• 3 Tribes (Hoopa Valley; San Carlos; Tohono O'odham) have obtained independent certification of proper closure.
Post-closure activities (e.g., monitoring / maintenance)	• 2 Tribes (Hoopa Valley and Ponca) have conducted post-closure maintenance.

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Components of Integrated Solid Waste Management Program	
Current frequency of solid waste management methods	Source Reduction: 6 of 16 respondents note that they take some sort of source reduction measures. Recycling: 16 of 17 respondents implement recycling. Recycling efforts tend to be in early stages and tend to include recycling of cans and white goods. In addition, many of these Tribes are in remote locations, which are far away from recycling centers; thus, extensive recycling programs tend to be difficult to implement. Tribes report that 1 to 25 percent of their waste is recycled. Combustion: 6 of 17 respondents report the use of combustion to manage waste. 4 of the 6 Tribes that use combustion are located in Alaska. Some Tribes utilize combustion through managed burn boxes while other Tribes have problems with illegal open burning. These Tribes report that 15 to 60 percent of their waste is managed using combustion. Landfill: All 20 Tribes report the use of landfilling. Landfilling may entail taking trash to a large open dump or transferring trash to a compliant landfill either on or off tribal lands. Tribes report that 30 to 100 percent of their waste is landfilled.
Tribal access to / use of waste collection systems	• 14 of 20 Tribes conduct some form of waste collection: • 8 of these Tribes provide pick-up service to the entire population. • The remaining 6 Tribes collect from a limited subset of the population (i.e. populated areas and/or paying customers). • In addition, Tribes generally set out large bins for multiple households instead of providing service to each household directly. • Members of Deering, Goodnews Bay, Hoopa Valley, Igiugig Village, Native Village of Kiana, and Native Village of Selawik are responsible for transporting their own trash.
Extent of Tribal waste disposal in compliant facilities	10 of 20 Tribes have access to compliant waste disposal. Half of the Tribes with compliant disposal also have non-compliant dumping.
Tribal inventories of uncontrolled waste sites	12 of 16 respondents have an inventory of uncontrolled waste sites. Tribes tend to update the inventory when a new dump site is found or reported. Some Tribes have mapped dump sites using GPS.
Tribal activities at uncontrolled waste sites (e.g., cleanup, closure, controls)	12 of 16 respondents are conducting or planning to conduct cleanup, closure, or enforcement at uncontrolled sites.

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Tribal outreach / education on proper solid waste management	17 of 17 respondents report conducting outreach and education: • The majority of Tribes inform their community through newspapers, radio, and community newsletters. • Many Tribes conduct special programs in schools and at community meetings to educate the tribal members on proper waste management. • Spokane started the Tribal Solid Waste Advisory Network in order to provide training and discuss solid waste management issues across Tribes. • Cheyenne River issued the "Golden Eagle Feather Community Award" to the neighborhood with the cleanest grounds. • Goodnews Bay provides house to house education to community members. • White Earth developed an educational video. • Tohono O'ohdam hires a full-time educator.
Application Process / Estimation of Resource and Funding Needs	
Extent of administrative barriers in applying for, and receiving, funding through Open Dump Cleanup Project	• Tribes with on-staff grant writing experience generally find the application process to be an easy one; however, more remote Tribes with less expertise in applying for grants tend to have difficulties. (Goodnews Bay recommends training in grant writing) • Tribes are receiving funds for portions of their proposal that funding agency is authorized to fund. It would be nice if the interagency group could join forces to fund all aspects of a proposal. • Once funding is awarded, many Tribes have to rewrite or substantially revise proposal to meet the funding agencies' administrative requirements.
Time/resources necessary to complete proposal and submit status reports	• Tribes noted that the proposal took from 2 to 6 weeks. • Some Tribes have difficulty completing the proposal and status report requirements.
Methods for estimating project resource needs for inclusion in proposal; accuracy of estimates	• Tribes use variety of methods to estimate resource needs: • Spirit Lake and San Carlos Tribes developed estimates by reviewing implementation costs of previous projects. • The Ponca Tribe used the IHS "Open Dump Survey Form" and EPA's "Trash Talk" website to estimate volumes of material in the dumps and derive costs. • Both Metlakatla and Cheyenne River try to develop proposals that will fit within the available funds. Cheyenne River notes that they always estimate conservatively. • Tribes list a variety of sources where they receive help with resource estimates. These include the Midwest Assistance Program (MAP), the Alaska Native Tribe Health Consortium (ANTHC), consultants, and personnel from IHS, BIA, and EPA. • Swinomish is the only Tribe which developed estimates without any assistance. • 5 of 15 respondents reported that they developed accurate estimates. Of the 10 Tribes that reported inaccurate estimates, 6 reported under-estimates while 4 reported over-estimates.

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Parties assisting in project resource needs desire for additional guidance in making estimates	9 of 16 respondents report that they would like more guidance in developing resource needs: • Goodnews Bay recommends that it would be helpful if the EPA Open Dump solicitation explained how to estimate resource needs. • Metlakatla recommends additional help in determining project stages. • Ponca Tribe recommends direct assistance with personnel who have experience in costing cleanups or developing a guide which explains how to cost cleanup projects. • Spirit Lake recommends assistance with developing a future budget plan.
Satisfaction with oversight/guidance received while carrying out activities; desire for additional oversight/guidance	15 of 18 respondents report that they received assistance with their projects: • Tribes note that they receive some assistance from EPA, IHS, or BIA. • Other sources include contractors and engineering firms. • Tribes also note that they receive assistance from tribal members, particularly members with solid waste training (i.e., Manager of Landfill Operations (MOLO), Tribal Association for Solid Waste and Emergency Response (TASWER), and Solid Waste Association of North America (SWANA)). Additional oversight Recommendations: • San Carlos notes that it would be useful to see how other Tribes complete projects. • Ponca Tribe says that it would be useful to talk to someone who has accomplished similar projects. • Oglala Sioux and Metlakatla recommend more on-site assistance during the project.
Extent to which funding was sufficient to meet objectives outlined in proposal (percent)	• 7 of 19 respondents report that they had sufficient funding to meet the objectives in their proposal. • The majority of Tribes report that they need more funding.
Sources of additional "gap" funding (if applicable)	• 5 Tribes report that they received funds outside the interagency grant funds. • Tribes note the following sources of additional funding: IHS, BIA, USDA's Rural Development, HUD, DOD, CEQ's NEPA development programs, and USGS.
Project modifications due to budget shortfalls (if applicable)	• Tribes with insufficient funds either scaled down their project or completed a portion of their project: • Blackfeet Nation and Igiugig Village were able to develop closure plans, but they could not complete the closure of their dump. • Native Village of Kiana thinks that the funding will be sufficient to develop closure plans and a feasibility study, but they will need more funds to actually complete the desired closure of their landfill and construction of a new landfill. • Goodnews Bay assessed the landfill and developed a solid waste management plan, but was unable to close their landfill. • Tohono O'odham nation reduced the number of dumps that they closed. • Oglala Sioux was in the process of building transfer stations and closing their open dumps when funds ran out; thus, the project is incomplete. • San Carlos and White Earth Tribes had excess funds and were able to expand what they had proposed in the workplan.

SUMMARY OF FINDINGS FROM TRIBAL INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Funding Utilization	
Train staff (number; nature of training)	3 of 18 respondents used interagency funds to train staff. Blackfeet Nation and Ponca Tribe used funds to send staff members to formal training session (i.e., Manager of Landfill Operations (MOLO), Landfill Operating Class in Denver, and Hazardous Waste Operations (HAZWOPER)).
Outreach activities (nature; target audience; number reached)	7 of 18 respondents used interagency funds for outreach activities. These included school programs such as informational classes (and in one case a video presentation) as well as community awareness programs which distributed magnets, posters, calendars, notepads, and pamphlets on recycling and illegal dumping.
Strategic Activities (e.g., characterizing waste sites)	13 of 18 respondents used interagency funds for strategic activities. These activities consisted of characterizing waste sites, assessing costs, conducting feasibility studies, and developing closure or landfill construction plans.
Tribal environmental program	5 of 18 respondents reported using interagency funds for developing their Tribal Environmental Program. This was done through funding positions within the program and expanding the capabilities of the program.
Solid waste management activities (e.g., transfer station)	10 of 18 respondents reported using interagency funds to implement solid waste management activities. Such activities included developing transfer stations, purchasing solid waste management equipment (i.e., trucks and recycling bins), crushing and removing cars, and constructing a garage to house solid waste equipment.

PART 2: SUMMARY OF DISCUSSIONS WITH FEDERAL AGENCIES

List of Agency Personnel Interviewed			
Agency	***Interviewee***	***Site/Phone***	***Date***
BIA	John Graves *(Western Region)*	Site	02-Jun-04
	Debbie McBride *(Headquarters)*	Phone	08-Jul-04
	Roy Pulfrey *(Great Plains Region)*	Site	18-May-04
DOD	Tia Armstrong *(Headquarters)*	Phone	24-Aug-04
EPA	Chris Dege *(Headquarters)*	Phone	17-Jun-04
	Grover Partee *(Region 10)*	Site	24-May-04
	Joe Sarcone *(Region 10)*	Phone	18-Jun-04
	Stephanie Wallace *(Region 8)*	Phone	22-Jul-04
IHS	Steve Aoyama *(Headquarters)*	Site	16-Jun-04
	Kevin Chapman *(Phoenix Area)*	Site	02-Jun-04
	Richard Rubendall *(Tucson Area)*	Site	03-Jun-04
	Jack Sorum *(Aberdeen Area)*	Site	19-May-04
	Kelly Titensor *(Portland Area)*	Phone	05-Aug-04
RUS	Rod Beck	Site	19-May-04
	Dale Van Eckhout	Phone	14-Jul-04
	Linda Scott	Phone	22-Jun-04

SUMMARY OF FINDINGS FROM FEDERAL AGENCY INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Funding Solicitation and Selection	
Agencies' roles in funding selection	• RUS and DOD rate applications out of the national office. • BIA, EPA and IHS regional staff rate applications which are then compiled at the national level. • EPA region 8 works with representatives from IHS and BIA. They work together to rate their regions' applications. Therefore, if a person from a particular agency is familiar with a Tribe, he/she is able to help interpret unclear applications and give feedback. • EPA Headquarters also ranks the applications at the national level.

Selection criteria	• All agencies use the Interagency "0 to 5" scoring criteria.
	  • The Workgroup works together to compile the rankings. They add up the scores and divide by the total possible score to derive a percent, and the Workgroup considers all proposals with a score above 80 percent.
	  • Several respondents note areas for improvement in the scoring process:
	  • Interagency's criteria equally weights each question asked (i.e., signing the cover letter receives the same weight as having an integrated solid waste management plan (ISWMP)).
	  • BIA regions do not receive guidance on how to apply the "0 to 5" scale (e.g., how to determine whether a response deserves a "3" or a "4").
	  • Good grant writers tend to score well.
	  • Conceptually bad ideas may score well if the proposal is well written.

Extent to which agencies support Tribes in developing project resource estimates	• IHS and EPA help Tribes develop resource estimates:
	  • IHS field offices have personnel with engineering experience to help Tribes estimate costs.
	  • EPA may provide direct help or fund circuit workers to help with estimates (the workers are from non-profit agencies such as the Midwest Assistance Program (MAP) or the Rural Community Assistance Corporation (RCAC).
	• RUS may review costs for Tribes, but they do not help develop estimates.

Extent to which agencies have measured accuracy of project budget estimates	Agencies will review costs prior to awards to ensure that they align with funding bids, cost databases, and previous projects. However, there is no post-project measurement to track whether budgets were accurate.

SUMMARY OF FINDINGS FROM FEDERAL AGENCY INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Administration of Funding	

Agencies' roles in developing project workplans	• Development of workplans differ among agencies:
	  • BIA develops workplan from the initial proposal.
	  • EPA asks Tribe to develop workplan from the proposal and will provide the Tribe with feedback in the process.
	  • IHS works out the technical specifics of a project. Tribes simply have to submit forms to receive reimbursement of funds.
	  • RUS requires Tribes to develop a workplan. They will then review the workplan for reasonableness.
	  • DOD does not provide funding through the Cleanup Project.

Extent of administrative barriers in procurement/disbursement	• Funding from each agency is disbursed according to the agencies' respective disbursement processes and must be used according to the agencies' respective standards.
	• BIA uses "638" contracts; IHS has several methods for executing projects, including "638" contracts and agreements, P.L. 86-121 agreements, and Federal procurement. The standard procurement processes of these obligating documents are relatively easy for Tribes to work with.
	  • Contracts allow Tribes to supply labor on an "as-needed" basis instead of bidding to outside contractors. This helps build tribal capacity and can be cost effective.
	• EPA and RUS use processes that contain significant reporting and tracking requirements:
	  • One EPA respondent notes that the inflexibility of the "grant process does not lend itself to working with communities in a development setting".
	  • Another EPA respondent notes that while this process is more difficult for Tribes, it allows EPA to better control funds.

Federal Assistance and Oversight	

SUMMARY OF FINDINGS FROM FEDERAL AGENCY INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Extent of agencies' roles in training and technical assistance	• Agencies differ in the amount and forms of training and technical assistance that they provide: • BIA offers limited services in terms of training. • DOD funds cleanup projects which the Army Corps of Engineers performs with Tribes through the Native American Lands Environmental Mitigation Programs (NALEMP). In doing so, they help Tribes build capacity. In addition, they will send Tribes to training courses such as HAZWOPPER. • EPA funds workshops, conferences, and training courses such as those provided by the Tribal Association for Solid Waste and Emergency Response (TASWER); they provide direct technical assistance through regional offices; and they fund circuit workers to assist Tribes in the field. • IHS is allowed to allocate a small portion of its appropriation to provide for training for tribal operators in the operation and maintenance of tribal systems. • RUS provides little direct technical assistance, but they do fund outside agencies such as the Midwest Assistance Program (MAP) to aid Tribes.
Extent of Tribal interest in receiving training and technical assistance from partner agencies	IHS and EPA receive requests for training and technical assistance from the majority of Tribes in their regions; BIA and RUS receive few requests.
Effectiveness of varying types of training/technical assistance	• Both IHS and EPA respondents note that hands-on interaction is effective. • Training where tribal members present information and experiences to other Tribes are particularly effective.
Gaps in training and technical assistance	• Workgroup members should collaborate to discover and fill training gaps while minimizing overlap. • Training should ideally result in certification of some sort (e.g., HAZWOPER). • Areas for potential training expansion: development of solid waste management plans; rural landfill operation; C&D landfill training (use Region 5 model); equipment operation; grant writing and management.
Extent of outcome measurement with respect to evaluating success of training and technical assistance	• No reported outcome measurement efforts among respondent agencies.

SUMMARY OF FINDINGS FROM FEDERAL AGENCY INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**
Nature of agencies' oversight roles	• BIA: oversight provided per contract specifications (e.g., Sec. 638 contracts bound by certain reporting criteria). • EPA: primary oversight at regional level; grantees submit quarterly reports; frequency of site visits limited by resource constraints. • IHS: important on-site presence; oversee landfills/transfer station design; assist with projects and inspections. • RUS: monitors funding use through reports and inspections; tracks equipment purchases. • DOD: requires reports from Army Corps of Engineers and Tribes for the NALEMP cleanups.

Extent to which agency oversight contributes to successful project completion	• General agreement that oversight benefits project success:
	  • EPA: oversight particularly helpful for Tribes with few resources and limited knowledge of solid waste management issues; useful despite not always being appreciated.
	  • IHS: being in field allows IHS to help track project and steer as needed.
	  • RUS: reports keep Tribes on track with funding and ensures adherence to contract terms.
	• One EPA respondent reported on the challenge of providing effective oversight while respecting Tribal sovereignty.

Suggestions for improving oversight	• Collect uniform information about all funded projects and compile in central database. • More direct assistance (e.g., locating an EPA project officer in Alaska would allow more interaction with Tribes). • Assist Tribes in building sustainable waste management system (e.g., fee-based).
Measuring Outcomes	
Extent to which funding agencies collect information to assess Tribes' attainment of project objectives	• BIA: regions collect progress reports on a quarterly basis. • EPA: project officer is responsible for collecting quarterly reports. • IHS: on-site personnel keep running logs of progress. • RUS: collects periodic progress reports and an annual report; annual reports (for loans) and three-year reports (for grants) include detailed financials.
Nature of Agencies' internal controls for measuring funding performance	• EPA: once grant is complete, project officers sign off on completion of project objectives. • IHS: tracks (a) whether goals were met; (b) whether met on time; and (c) whether met on budget. • RUS: inspections assess progress against project milestones.

SUMMARY OF FINDINGS FROM FEDERAL AGENCY INTERVIEWS: INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES	
Topic	**Finding**

Extent of recurrence of open dumping in program-affected lands; contributing factors	• Extent: agencies unaware of specific recurrences; suspect that at least some recurrence is happening.
	• Potential Contributing Factors:
	  • Lack of enforcement:
	  • Tribes' enforcement efforts often ineffective.
	  • EPA hesitant to enforce against Tribes; high threshold for applying RCRA §7003.
	  • Habit: members accustomed to bringing trash to a certain location.
	  • Proximity: new landfills sometimes further away than the open dumps they replace.
	  • Overflow: collection bins lack capacity to handle trash flow; trash piles up around them.
	  • Cost: members unwilling (or unable) to pay fees for transport and disposal at compliant landfills.
	  • Lack of outreach/education on the importance of proper solid waste management.
	  • Off-reservation dumping: non-Tribal individuals from adjoining areas dump illegally.

SUMMARY OF FINDINGS FROM FEDERAL AGENCY INTERVIEWS: **INTERAGENCY OPEN DUMP CLEANUP FOR TRIBES**	
Topic	**Finding**
Recommendations for overall program improvement	<u>Proposal Evaluation</u> • Give more input to Tribes as to what is requested of them in proposal process. (BIA) • Broaden solicitation: restrictive process means that Tribes sometimes write to the solicitation rather than to their greatest need; get money for things they don't really want to do. (EPA) • Evaluate proposals on content rather than writing style; current process sometimes favors Tribes that contract with consultants or professional grant writers. (EPA) • Rate proposals on sustainability (e.g., if workgroup funds a transfer station, will Tribe be able to fund O&M moving forward?). (EPA) • Replace Workgroup with regional workgroups. (BIA) • Have regional workgroups feed into the national workgroup. (EPA) <u>Fund Disbursement</u> • Either fund Tribes fully or disengage entirely from Tribal waste issues. (BIA) • Strive for equitable fund disbursement across regions. (EPA) • Have a single vehicle through which to distribute funds and ensure their proper use. (BIA & DOD) • Distribute funding through regional grants administration office. (EPA) <u>Miscellaneous</u> • Place greater emphasis on sequential steps: important for Tribes to have a plan in place before moving forward. (RUS) • Place less emphasis on sequential steps: sometimes a SWMP is not needed when there is imminent public danger; Tribes would often rather start in the middle of the process to address most important issues and gain momentum rather than getting bogged down in planning. (EPA) • Have agencies report back to the workgroup on the successes of the Cleanup Projects that they fund. (DOD)