

Building a Self-Sustaining Tribal Solid Waste Program: Recommended Phases and Activities to Consider

EPA REGION 10

CONTENTS

<u>INTRODUCTION</u>	2
Why Build a Self-Sustaining Solid Waste Program?	2
Conduct a Self-Assessment Before You Begin Planning	2
<u>BUILDING A SELF-SUSTAINING TRIBAL SOLID WASTE MANAGEMENT PROGRAM</u>	3
<u>Phase 1</u>	3
Develop Qualified Personnel	3
Engage Tribal Leaders and the Community	3
Develop an Integrated Solid Waste Management Plan	3
<u>Phase 2</u>	5
Conduct Feasibility Studies and Facility Planning	5
Create Open Dump Inventory	6
Develop Waste Enforcement Program	7
<u>Phase 3</u>	7
Program Implementation	7
<u>TRIBAL WASTE MANAGEMENT AND UNDERGROUND STORAGE TANK PROGRAM CAPACITY INDICATORS</u>	9
<u>GAP-FUNDED ACTIVITIES REQUIRING AIEO APPROVAL</u>	11
Exception for Government Services	11
Clean-Up and Closure Activities	11

INTRODUCTION

Why Build a Self-Sustaining Solid Waste Program?

Proper waste management is essential to protecting human health and the environment. When improperly handled, solid and hazardous waste can contaminate soil, water, and air. In many tribal communities, removing waste is expensive and logistically difficult. Developing a self-sustaining solid waste program is essential to protecting human health and the environment and reducing the cost of solid waste operations.

Therefore, **EPA strongly encourages tribes to address solid waste capacity building and implementation in their Indian General Assistance Program (IGAP) work plans.** Following are the steps EPA recommends tribes take to conduct this work.

Solid Waste Implementation

Implementation activities such as sorting, processing, staging, and transporting solid waste and recyclables are allowable under IGAP. In 2015, Congress approved an extension of funding for these activities under the IGAP program through FY20. In 2018, Congress extended this funding indefinitely.

Tool

- **Tribal Decision Maker's Guide to Solid Waste Management**
<http://archive.epa.gov/wastes/wyl/web/pdf/trib-dmg.pdf>

Conduct a Self-Assessment Before You Begin Planning

Before planning the activities in a solid waste program, EPA recommends evaluating your tribe's capacity and financial ability to successfully establish such a program. Tribes may wish to conduct a cost/benefit analysis using the Solid Waste Program Budgeting for Alaska Tribal Communities tool below or another resource to compare the costs and requirements of making a solid waste management program sustainable.

EPA encourages tribes in Alaska that are developing a solid waste component related to landfills to visit <http://dec.alaska.gov/Applications/EH/SWIMS/Default.aspx>. This site contains landfill reports from the State of Alaska on community waste management practices and systems. Tribes can use the reports when developing GAP work plans by including specific tasks that address their landfill deficiencies.

In 2017, EPA developed a booklet to help Alaska villages estimate the costs of developing, implementing, and maintaining solid waste programs. The booklet provides cost indexes tailored to different regions of Alaska.

Tool

- **Solid Waste Program Budgeting for Alaska Tribal Communities**
<https://www.epa.gov/tribal/solid-waste-program-budgeting-alaska-tribal-communities>

BUILDING A SELF-SUSTAINING TRIBAL SOLID WASTE MANAGEMENT PROGRAM

Phase I

Develop Qualified Personnel.

- Establish a tribal waste program staffing plan for managers and staff.
- Train managers and staff in baseline knowledge and skills related to the Resource Conservation and Recovery Act (RCRA). Become familiar with the major goals, program and requirements of Subtitle D; the national EPA structure for implementing RCRA Subtitle D; and the EPA regional personnel and organizations.
- Provide solid waste personnel with planning, code writing, and administration training.
- Obtain landfill operator training, transfer station operator training.
- Instruct staff on safe and legal burning practices.
- Provide guidelines and training to staff on weighing and monitoring loads.
- Ensure staff have training on operating and maintaining heavy equipment.
- Establish a program for tribal personnel to meaningfully participate in waste management programs administered by other tribal, federal, state or local governments (including reviewing/commenting on waste disposal facility permits, and waste management regulations).
- Establish co-management roles for landfill management through an intergovernmental agreement with a municipal government (e.g., Memorandum of Understanding or other mechanism) when both governments have a stake.

Engage Tribal Leaders and the Community.

Create a solid waste committee.

- Ask elders, youth, tribal staff, council members, tribal clinic staff and representatives from other tribal departments to participate.
- Hold regular meetings.

Task the committee with asking the community about solid waste.

- How do people feel about waste? What are they concerned about? What are the biggest problems?
- What do they want in a waste program?
- What are their top priorities?
- Are there past questionnaires, reports, or other information to use as resources?

Tool	<ul style="list-style-type: none">• Tribal Decision Maker's Guide to Solid Waste Management http://archive.epa.gov/wastes/wyl/web/pdf/trib-dmg.pdf
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Develop an Integrated Solid Waste Management Plan.

Developing an Integrated Waste Management Plan is one of the most important steps in Phase I of your solid waste management program. This step appears as Capacity Indicator E.3.7 in Appendix 1 of the [GAP Guidance on the Award and Management of General Assistance Agreements for Tribes and](#)

[Intertribal Consortia](#)¹ (hereafter, “GAP Guidance”). Update your plan periodically as your solid waste management program needs, objectives, and capacity change.

Research your community and local environment.

- Understand your community, population, geography, economy, and geology.
- Consult other planning documents.
- Interview tribal planners, natural resources staff, and scientists.
- Do a waste assessment.
 - What waste types are generated on the reservation or in the community?
 - How much waste is generated and from where?
 - Include tribal government offices, businesses, and casino/event facilities.
 - Use tools and planning templates to make the waste assessment easier.
 - Consider calling an EPA or Tribal Solid Waste Advisory Network (TSWAN) circuit rider for help.
- Gather information on how local, non-tribal communities manage their waste.

Evaluate the current solid waste system

- How is waste managed?
- Is there open burning?
- Is there dumping?
- Is there a recycling program?
- What are the biggest problems?
- What is being done to prevent waste?
- What is working?
- What is not working?

Assess waste options and recommend best options

- What are the possibilities?
- What options protect the health of the community?
- What options protect the air, soil, and water?
- What is affordable and sustainable?
- Evaluate options for an integrated waste management program, which may include waste minimization, recycling, household hazardous waste collection, used oil collection, junk vehicle removal, bulk waste/appliance/electronic waste collection, and composting.
- Recommend best options.

¹ U.S. Environmental Protection Agency, [Guidance on the Award and Management of General Assistance Agreements for Tribes and Intertribal Consortia](https://www.epa.gov/sites/production/files/2015-05/documents/gap-guidance-final.pdf), May 15, 2013, <https://www.epa.gov/sites/production/files/2015-05/documents/gap-guidance-final.pdf>.

Tools

- **Tribal Decision Maker's Guide to Solid Waste Management**
<http://archive.epa.gov/wastes/wyl/web/pdf/trib-dmg.pdf>
- **Solid Waste Program Budgeting for Alaska Tribal Communities**
<https://www.epa.gov/tribal/solid-waste-program-budgeting-alaska-tribal-communities>
- **Zender Environmental Health Alaska Solid Waste Planning Template**
<http://www.zendergroup.org/plan.htm>

Determine funding and financial sustainability.

- How will the tribe pay for the system?
- Evaluate costs of recommended options.
 - Include capital costs, ongoing operations and maintenance costs.
 - Include equipment and labor costs.
 - Include closure and post-closure care costs.
- Propose a fee structure.
- Estimate revenue to be generated.
- Estimate tribal subsidies and other sources of funding.

Establish a fee structure.

- Calculate total costs to operate the system, including operations and maintenance costs, capital costs, and the cost of contingencies.
- Calculate revenues from the solid waste program going back into the solid waste program.
- How much will the tribe subsidize?
- Calculate fees based on expected costs, revenues, and subsidies.
- Consider collection fees (monthly, pay as you throw, etc.), tipping fees, and other fees.
- Consider bundling utility fees together (water, sewer, solid waste).

Obtain Tribal Council's approval of plan.

- This is usually a Tribal Council resolution.
- Approval is seen as a commitment to work to implement the solid waste plan.

A plan can become a living document that is revised as conditions and goals change. Getting approval of the plan and subsequent revisions can be a good way to keep leaders informed and invested in safe waste management.

Phase 2

Conduct Feasibility Studies and Facility Planning.

Evaluate the feasibility of building and operating programs and facilities.

- What would it take to get a collection, recycling, and/or composting program up and running?
- What would it take to build and operate a transfer station, or landfill?
- What kind of equipment is needed?
- How many staff are needed to keep the system running efficiently?

- How much would the tribe have to charge for collection and/or tipping fees to cover operations and maintenance costs?
- How much is the tribe able to subsidize?

Select preferred waste alternative(s).

- Work with the solid waste committee and community members to recommend a waste alternative(s).
- Obtain Tribal Council approval for the preferred alternative(s).
- Include minimizing waste in the overall approach (e.g., buying fewer packaged items, household hazardous waste collection, used oil collection, junk vehicle removal, bulk waste/appliance/electronic waste collection, and composting).
- Document the reasons why a waste alternative is selected.
- Keep other alternatives handy in case new information comes to light or barriers get in the way of the preferred alternative.
- Plan to collaborate with multiple partners (other tribes, consortia, agencies, nonprofits, businesses, and other organizations).
- Brainstorm to develop creative, outside-the-box waste solutions.

Tools	<ul style="list-style-type: none"> • Tribal Decision Maker’s Guide to Solid Waste Management http://archive.epa.gov/wastes/wyl/web/pdf/trib-dmg.pdf • Solid Waste Program Budgeting for Alaska Tribal Communities https://www.epa.gov/tribal/solid-waste-program-budgeting-alaska-tribal-communities • Waste Transfer Stations: A Manual for Decision Making https://www.epa.gov/sites/production/files/2016-03/documents/r02002.pdf • Site Specific Flexibility Requests for Municipal Solid Waste Landfills in Indian Country https://archive.epa.gov/epawaste/nonhaz/municipal/web/html/siteflex.html
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Create an Open Dump Inventory.

Locate dump sites.

- Find the latitude and longitude for each dump.
- Estimate the size of the site and the volume of waste on the surface.
- Assess the contents and types of waste.
- Estimate distance to nearest homes, distance to surface water, and depth to groundwater.
- Examine access controls.
- Are wastes burned? How often? Is cover material used?
- Take pictures of the site and waste present.
- Share dump inventory with EPA and Indian Health Service to become a part of the national dump inventory.
- Receive a hazard ranking score.

Tool	<ul style="list-style-type: none"> • Solid Waste Survey Form https://archive.epa.gov/wastes/conserve/tools/recmeas/web/pdf/guide_c.pdf
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Develop a Waste Enforcement Program.

Develop codes, ordinances, fees and penalties.

- Obtain Tribal Council support and approval for codes, ordinances, fees, and penalties.
- Partner with tribal police, natural resources staff, tribal housing authority, county, city or other jurisdictions.
- Work together to respond to and resolve complaints in a timely and effective way.
- Work with EPA (and in Alaska with the Alaska Department of Environmental Conservation) on inspections, compliance assistance, and enforcement of illegal open dumping and waste burning.
- Develop a compliance monitoring and enforcement strategy for the tribe's solid and hazardous waste laws, codes, and/or regulations.
- Fine violators when possible.
- Obtain Hazardous Waste Inspector credentials, if applicable.

Maintain partnerships and support

- Conduct regular meetings to keep key tribal departments and staff in touch as the enforcement program evolves.
- Provide training sessions to key staff.
- Create incentives for working together.
- Keep leaders informed about the program and successes.
- Make the public aware of the work and the health and environmental results you are achieving. Publicize successes: post messages on your website or social media, post signs at the landfill, mail flyers to community members, write newspaper articles, etc.

Tools	<ul style="list-style-type: none">• Tribal Decision Maker's Guide to Solid Waste Management http://archive.epa.gov/wastes/wyl/web/pdf/trib-dmg.pdf• National Indian Justice Center: Model Tribal Solid Waste Disposal Ordinance http://www.nijc.org/pdfs/SOLIDWAS.PDF
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Phase 3

Program Implementation

Once a tribe has established a waste management program that is generally consistent with Appendix I of the [GAP Guidance](#), GAP funds may be used for the following implementation activities in order of priority:

- Program administration
- Compliance and enforcement
- Solid waste management
- Cleanup and closure

Program Administration

Program administration generally includes all administrative oversight functions to ensure proper program implementation (e.g., financial management, human resources management, program performance evaluation, scheduling).

Compliance and Enforcement

Tribes may use GAP funds to support compliance with federal requirements, such as

- Compliance assurance, including inspections under tribal authority at non-hazardous waste disposal facilities, to help verify that such facilities comply with 40 C.F.R. Part 257 and/or Part 258
- Compliance assistance and inspections to help verify that hazardous waste generators comply with 40 C.F.R. Parts 261 and/or 262
- Compliance assurance, including inspections, to help verify that hazardous waste transporters comply with 49 C.F.R. Parts 172, 173, 178, and 179

Local solid waste management laws, codes and ordinances with local enforcement provisions may also apply. Tribes in Alaska should refer to the Alaska Administrative Code 18 AAC 60. Go to <http://www.legis.state.ak.us/basis/aac.asp> and search for 18 AAC 60.

Solid Waste Management

Activities that are part of a sustainable waste management program designed to increase source reduction, recycling, composting and sustainable materials management are also allowable under GAP. For a more complete description, see Appendix I, Section E of the [GAP Guidance](#). Grantees may develop and implement the following programs/activities:

Programs

- Waste minimization program
- Household hazardous waste collection program
- Recycling program
- Sustainable materials management programs
- Used oil collection program
- Junk vehicle removal program
- Bulk waste/appliance/electronic waste collection program
- Composting program

Activities

- Purchase, repair, upgrade and replace resource recovery, resource conservation and source separation supplies and equipment (e.g., vehicles, scales, containers, crushers, shredders, sheds, fencing, and signage)
- Construct, repair, upgrade, and replace source separation facilities (e.g., transfer stations, recycling centers, compost facilities, household hazardous waste collection facilities, construction and demolition debris facilities, used oil collection stations and other similar facilities). Construction activities require regional and EPA headquarters review and approval.
- Conduct community education and outreach activities to assess community knowledge and interest in source reduction, alternatives for managing household hazardous waste, recycling, composting and the use of green materials in tribal construction and to promote the use of such integrated solid waste management systems.

Grantees may also undertake the following activities to plan or improve a landfill:

- **Obtain land-use and construction permits.**
 - Work with EPA on site-specific flexibility for landfills.
 - In Alaska villages, work with the Alaska Department of Environmental Conservation (ADEC) on landfill siting and permitting.
 - Conduct a solid waste facility plan/study.

- **Improve existing landfill facilities.**
 - Focus on site management, access, monitoring, and waste separation.
 - Ensure equipment is reliable and the right size.
 - Establish an equipment maintenance schedule.

Tools	<ul style="list-style-type: none">• Tribal Decision Maker’s Guide to Solid Waste Management http://archive.epa.gov/wastes/wyl/web/pdf/trib-dmg.pdf• Solid Waste Program Budgeting for Alaska Tribal Communities https://www.epa.gov/tribal/solid-waste-program-budgeting-alaska-tribal-communities• Alaska Department of Environmental Health: Waste in Rural Alaska https://dec.alaska.gov/eh/solid-waste/waste-in-rural-alaska/
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Cleanup and Closure

Grantees may undertake the following activities to clean up or close an open dump:

- **Prepare and train staff.**
 - Purchase personal protective equipment.
 - Train staff on hazards/safety.
 - Call in the State Patrol or EPA Emergency Response Program if the site appears hazardous or dangerous.

Contact your GAP Project Officer to discuss the use of GAP funds for open dump cleanup activities. See Section III, GAP-Funded Activities Requiring AIEO Approval.

Tools	<ul style="list-style-type: none">• Solid Waste Management on Tribal Lands: Technical Advice for Cleanup of Accumulated Waste Sites on Tribal Lands https://19january2017snapshot.epa.gov/www3/region9/waste/tribal/tech-advice/index.html
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TRIBAL WASTE MANAGEMENT AND UNDERGROUND STORAGE TANK PROGRAM CAPACITY INDICATORS

Appendix I, Section E of the [GAP Guidance](#) lists capacity indicators for tribal waste management and underground storage tank (UST) programs. All activities designed to achieve these indicators are allowable under GAP (unless otherwise prohibited). Indicators from Section E include:

- E.3.1 Tribe has established a staffing plan (position description and recruitment/retention/promotion plan) for who will serve as tribal waste management program coordinator(s).
- E.3.2 Staff has completed appropriate training and acquired baseline knowledge and skills related to the relevant areas of RCRA (become familiar with the major goals, programs, and requirements of the RCRA; the national structure for implementing the RCRA; and the EPA regional personnel and organization).
- E.3.3 Tribe has established a program to meaningfully participate in waste management programs administered by other tribal, federal, state, or local governments (including reviewing and commenting on waste disposal facility permits and applicable waste management regulations).
- E.3.4 Tribe is receiving funding under the RCRA or other related EPA media specific program.
- E.3.5 Tribe is conducting community education and outreach activities to assess community knowledge and interest in source reduction, alternatives for managing household hazardous waste, recycling, composting, and the use of green materials in tribal construction and to promote the use of such integrated solid waste management systems.
- E.3.6 Tribe has completed a waste assessment (e.g., a waste stream characterization study of the solid and hazardous waste management practices, facilities, and issues in the community; effectiveness of current waste management system(s); waste collection and disposal options; and associated costs).
- E.3.7 Tribe has a tribally-approved Integrated Waste Management Plan (IWMP).
- E.3.8 Tribe has established a program to provide waste minimization, recycling, household hazardous waste collection, used oil collection, junk vehicle removal, bulk waste/appliance/electronic waste collection, and/or composting.
- E.3.9 Tribe has established co-management roles through an intergovernmental agreement with a municipal government (e.g., Memorandum of Understanding or other mechanism) regarding landfill management where both governments have a stake.
- E.3.10 Tribe has completed a solid waste facility plan/feasibility study.
- E.3.11 Tribe has completed an open dump inventory and submitted to EPA and IHS for inclusion in the w/STARS database (including: GPS location; estimated size/volume; contents/type of waste; estimated distance to nearest homes, surface water and groundwater; estimated project costs; and site name).
- E.3.12 Sites included in the open dump inventory have a health hazard ranking score.
- E.3.13 Tribe has coordinated with EPA to ensure accuracy of EPA's regulated hazardous waste facility inventory and operating status.
- E.3.14 Tribe has coordinated with EPA to ensure accuracy of EPA's regulated UST & LUST facility inventory and operating status.
- E.3.15 Tribe has established capacity to provide information to EPA that may be used to conduct compliance monitoring inspections or in a RCRA § 3008, § 7003, § 4005(c)(2), or § 9006 enforcement action.
- E.3.16 Tribe has established a program to assist EPA with implementing the federal RCRA program(s) (e.g., assisting the Agency to conduct compliance assistance activities for regulated entities, obtaining federal inspection credentials to inspect regulated entities, and assisting EPA to draft permits for regulated entities).
- E.3.17 Tribe has enacted waste management and/or UST laws, codes, and/or regulations with effective compliance assurance and enforcement mechanisms (including anti-littering provisions and protocols to address small-scale dumping/burning activities; siting/operating requirements for USTs that are at least as stringent as the federal program).

- E.3.18 Tribe has established a compliance monitoring and enforcement strategy for the tribe’s solid and hazardous waste management laws, codes, and/or regulations.
- E.3.19 Tribe established mechanisms to assure a financially sustainable waste management program, including financing for trash collection services (e.g., fee for service, tribal government funding of trash collection services, or other cost recovery systems).
- E.3.20 Tribal staff is leading circuit rider, train the trainer, and peer-match programs.

GAP-FUNDED ACTIVITIES REQUIRING AIEO APPROVAL

The Consolidated Appropriations Act, 2016 (Public Law No: 114-113) states that EPA may provide tribes financial assistance under GAP for, “solid waste and recovered materials collection, transportation, backhaul, and disposal services.” GAP funded assistance agreements with these unique activities may contain special terms and conditions requiring the recipient to report information about the project, such as where the materials came from (residential, institutional, or commercial) and how much material was handled (tonnage estimate). This information will provide tribes, EPA, and other federal agencies basic information about GAP funded solid waste and recovered materials service delivery activities under this unique program. Applicants should work with their assigned Project Officer to clarify how these terms and conditions will be met.

Clean-Up and Closure Activities

Regional offices will evaluate tribal requests to use GAP resources for open dump cleanup activities and submit these requests to the AIEO for a final determination. Tribes interested in using GAP funds for open dump cleanups, closure, or upgrades should read Appendix I, Section E.4(d)(i-iii) of the [GAP Guidance](#), and then confer with their GAP Project Officer before making such a request.

Further Information

For further information, contact your [EPA Project Officer](#): <https://www.epa.gov/tribal/region-10-tribal-contacts#grant-officers>.