



Environmental Health Toolkit

Strengthening Environmental Health Programs and Services in your Tribal Community



July 2017

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FOREWARD AND INTRODUCTION

The purpose of the Environmental Health (EH) Toolkit is to clearly identify the operational standards for a comprehensive environmental public health system. The standards are intended to promote healthy communities by assisting in the development, improvement and support of the public health system. Standards for environmental public health in Tribes provide a common, consistent and accountable approach to assuring that basic health protection and community health promotion are in place.

This Toolkit is intended to guide Tribal public health leaders, administrators, and staff in the assessment, development, implementation, and improvement of the delivery of their environmental health programs. The Toolkit will primarily be used for working with direct service Tribes and/or those Tribes looking to assume responsibility for their environmental health services under P.L. 93-638, Title I or Title V. This Toolkit can also help those Tribes who have already assumed environmental health services under P.L. 93-638, Title I or Title V, strengthen and expand their delivery capabilities.

Environmental public health is identified as one of the “required” or foundational public health programs that local health authorities should provide for any community. Other core public health department programs, services, and activities include, for example, health education, health promotion, community health, chronic disease prevention and control, communicable disease, injury prevention, maternal and child health, public health emergency preparedness, access to clinical services, public health laboratory services, management /administration, and governance.

ACKNOWLEDGEMENTS

The Environmental Health Toolkit was created by the Portland Area Indian Health Service, Division of Environmental Health Services (DEHS). We gratefully acknowledge Indian Health Service (IHS) DEHS Headquarters for their fundamental role and ongoing support. The Toolkit is the product of many hours of organizing, developing, and coordinating resources and gathering knowledge from several Tribal environmental health experts. While the Toolkit draws primarily from experience with Pacific Northwest Tribes, the information and resources in this document are intended for use across the United States.

The Toolkit draws on the excellent research and practical work of Celeste Davis, MPH, REHS, from the Indian Health Service. We are grateful to her for sharing her expertise and the resources she has created over the years in her work with and on behalf of Tribes.

A comprehensive bibliography is included in Chapter 7 and our appreciation extends to all of those who have created resources and tools based on research and field work and made them available to all those looking build and sustain the programs and services important to their communities.

We'd especially like to acknowledge the following list of partners and contributors to this Toolkit:

Indian Health Service Staff:

- RADM Kelly Taylor
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- Shannon Marsh
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Most importantly, we would like to thank the many Tribal nations, communities, leaders and organizations who have generously contributed their knowledge, ideas and feedback in order to create this resource.

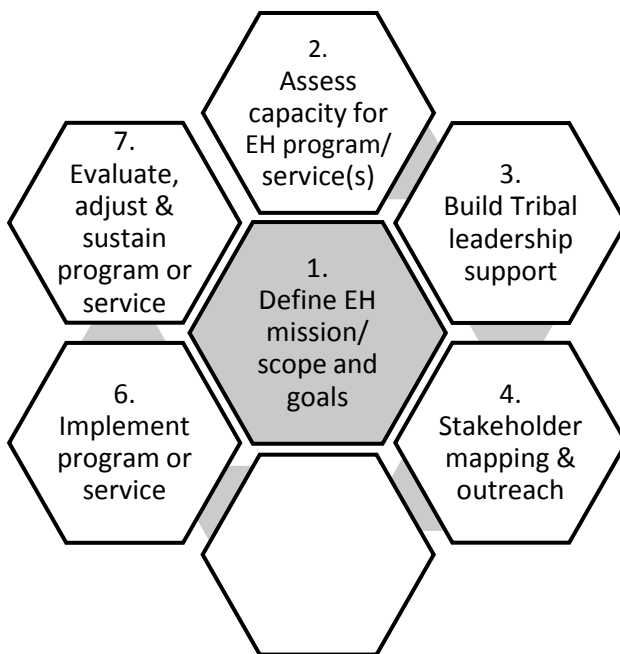
Chapter 1: Getting Started

1.1 TOOLKIT GOALS AND ROADMAP

The Indian Health Service (IHS) Divisions of Environmental Health Services (DEHS) has developed this Toolkit in order to improve the services provided by IHS and to assist tribes in developing and implementing environmental health programs. The goal of this Toolkit is to provide a set of resources for helping Tribe’s assess and strengthen their Environmental Health programs and services in order to support a comprehensive, integrated approach to environmental health. The second goal of this Toolkit is to clearly identify the operational standards for a governmental environmental health system and support tribes in achieving them.

Whether your Tribe is receiving direct service from your area IHS office, contracting, or compacting various services, this Toolkit can be used to assess the current and future state of your Tribe’s environmental health programs and services and identify what’s needed to take EH to the next level.

Figure 1.1 outlines seven steps or a “roadmap” for developing your Tribe’s environmental health programs and services. This roadmap has also been converted into an Environmental Health Program Startup/Improvement Work Plan to help tribes track and perform the work required to move through the steps. It follows on the next 2 pages.



Hold a Toolkit Workshop!

It is also recommended that you contact your local area Environmental Health Officer to discuss the opportunities they see for your Tribe.

Your EHO could also help you and your stakeholders think through how to strengthen your EH program and services by holding a 4-hour workshop based on this Toolkit.

Figure 1.1 Roadmap for Developing Tribal EH Programs and Services

Environmental Health Program Startup/Improvement Work Plan

ACTIVITY	DURATION	RESOURCES	DEADLINE	LEAD/RESPONSIBLE
1. Define EH mission/scope and goals <ul style="list-style-type: none"> <input type="checkbox"/> Identify changes (goals) associated with EH program or service development/improvement <input type="checkbox"/> Identify how effectiveness/change will be measured <input type="checkbox"/> Identify how this program or services will impact/support current EH programs and services 	1-2 months	<ul style="list-style-type: none"> • Chapter 2. Problem statement/goals document • Chapter 6 	<i>Add deadline</i>	<i>Add name and contact info</i>
2. Assess capacity for EH program or service(s) <ul style="list-style-type: none"> <input type="checkbox"/> Identify the Tribe's current EH program or service(s) – strengths, weaknesses, capacity <input type="checkbox"/> Identify where capacity needs to be built (PACAT) and actions to get there <input type="checkbox"/> Build case for why the program/actions/investments are critical and needed now 	1-2 months	<ul style="list-style-type: none"> • Chapter 1 and 2 • Chapter 2: Introductory Assessment • Chapter 3. PACAT 	<i>Add deadline</i>	<i>Add name and contact info</i>
3. Build Tribal leadership support and political will <ul style="list-style-type: none"> <input type="checkbox"/> Demonstrate how this EH program or service align with Tribe's larger mission and other important/strategic initiatives <input type="checkbox"/> Identify Tribal leadership and other key Tribal stakeholders and reach out to build interest in and support for EH programs or services 	1-3 months	<ul style="list-style-type: none"> • Chapter 1: Read over interview themes from Pacific NW Tribes • Chapter 5: Example Tribal resolutions and MOUs 	<i>Add deadline</i>	<i>Add name and contact info</i>
4. Stakeholder mapping and outreach <ul style="list-style-type: none"> <input type="checkbox"/> Identify larger stakeholder community: users of EH programs or services, local health agencies, local government staff, etc <input type="checkbox"/> Contact/convene stakeholders for input on EH, determine level of support and any ability to participate in the process 	3-6 months	<ul style="list-style-type: none"> • Chapter 2: Stakeholder mapping • Stakeholder key questions • Community outreach documents 	<i>Add deadline</i>	<i>Add name and contact info</i>

Environmental Health Program Startup/Improvement Work Plan

ACTIVITY	DURATION	RESOURCES	DEADLINE	LEAD/RESPONSIBLE
<p>5. Re-assess EH needs, opportunities and resources</p> <ul style="list-style-type: none"> <input type="checkbox"/> Based on input collected in Activities 3 and 4, confirm program mission, scope and goals <input type="checkbox"/> Outline program/service needs and budget – staff, activities, partnerships/alliances (Tribal and external), supplies, vehicles (see PACAT) <input type="checkbox"/> Identify policies, laws and regulations required to support EH program/service 	1-3 months	<ul style="list-style-type: none"> • 638 manual • IHS Self-Determination Office • Chapter 1: Connect with other Tribes • Chapter 3: PACAT 	<i>Add deadline</i>	<i>Add name and contact info</i>
<p>6. Implement the program</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hire EH staff <input type="checkbox"/> Acquire resources - office, computer, vehicles, etc <input type="checkbox"/> Develop and strengthen management and leadership practices <input type="checkbox"/> Continue strong communication with stakeholders during program build 	6 mo – 1 yr	<ul style="list-style-type: none"> • Chapter 5: Implementation & Tools 	<i>Add deadline</i>	<i>Add name and contact info</i>
<p>7. Evaluate, adjust, & sustain EH programs or services</p> <ul style="list-style-type: none"> <input type="checkbox"/> Evaluate implementation and identify needed changes/adaptations <input type="checkbox"/> Re-evaluate capacity and identify needed changes/adaptations <input type="checkbox"/> Adapt original long term goals (1, 3, 5 year plans) <input type="checkbox"/> Continue to monitor and adapt 	Start 3-4 mos into program then ongoing	<ul style="list-style-type: none"> • Chapter 3: PACAT (Chapter III) • Chapter 6: Evaluation, Maintenance, and Sustainability 	<i>Add deadline</i>	<i>Add name and contact info</i>

Keys To A Successful Environmental Health Program

It takes time to develop an effective environmental health program, and requires considerable planning. The following elements are important when it comes to building a strong foundation for a successful program and are reflected in the EH Toolkit Roadmap:

- Determining the mission of your program and use it to help guide decisions about priorities, actions, and responsibilities.
- Gaining support from internal and external stakeholders, such as Tribal leaders and departments, health department staff, and local public health practitioners.
- Assessing community needs/risks and tailoring programs and services to meet those needs. This includes learning about the culture of the Tribe(s) you serve and find ways to incorporate cultural elements and values into your program.
- Engaging and communicating clearly and frequently with stakeholders (internal and external) to build awareness, support and relationships critical to the success of EH programs and services
- Ensuring sustainability of the program through sound administrative principles, financial management, and investing in staff who will deliver quality services.
- Evaluating the effectiveness of your program frequently to measure progress.

This Toolkit is designed to help you think through each of these elements. We also recommend that you reach out to your local area DEHS office and Environmental Health Officer. They can help you host a half day workshop where you and key stakeholders can discuss your Tribe's current and future needs when it comes environmental health programs and services.

Throughout the Toolkit, programs and services are continually mentioned as they are two different elements. A *program* is the overarching infrastructure for providing a collection of services. For example, Safe Drinking Water is a program which provides the services of water testing, emergency water services, public education, and many other services. Depending on a Tribe's size and/or needs, they could start at either the program or service level.

[Begin With The End In Mind](#)

One of the best things you can do is to think about the sustainability of your program from the very beginning. The Center for Public Health Systems Science (CPHSS), a public research center at the George Warren Brown School of Social Work at Washington University in St. Louis, have created [The Sustainability Framework and Assessment Tool \(https://sustaintool.org/\)](https://sustaintool.org/), which we recommend you use to guide your efforts. Please also see Chapter 6 of this Toolkit.

The CPHSS is a recognized leader in public health systems research and evaluation. The Center's vision is to shape public health systems and policies, leading to healthier individuals and communities.

The components of the Sustainability Tool and resource categories in the CPHSS toolkit are:

- Funding Stability
- Partnerships
- Organizational Capacity
- Program Evaluation
- Program Adaption
- Communicatoins
- Environmental Support (refers to organizational or stakeholder support)
- Strategic Planning

Frequently Asked Questions About Tribal Enviornmental Health Programs

1. How do I know if starting an environmental health program is right for my tribe or nation?

The short answer is that it depends on a lot of different factors. Tribes should have a basic level of environmental health services available to their community, whether solely through IHS, via 638 contract, or a combination of various options. The biggest challenges in successfully running an environmental health program are:

- Learning the scope of all important EH activities and the scaling what is most necessary for your community
- Securing both immediate and long-term financial stability to ensure the program can sustain itself and continue to learn and do good work for years to come.
- Attracting staff with training and skills to run the program well
- Retaining staff, especially when salaries may not be competitive with other EH jobs and the work location tends to be rural

The primary reasons a Tribe may want to contract environmental health services are:

- Desire to be more responsive to your community than the existing structure.
- Desire to train and ensure EH staff understands the community as best as possible.
- Local control of the budget, scope and services delivered by an EH program.

2. What resources exist for understanding this process?

This Toolkit is designed specifically to help community members, leaders and IHS staff navigate this process of determining whether to compact or contract EH services. We have included many excellent resources borrowed from public agencies, other generous areas and tribes, and have listed all the resources in the appendix at the end of this Toolkit.

3. How much money does it take to run an EH program?

This is a highly individualized answer, so see Chapters 3 (Assessing) and 4 (Implementation) for sample budgets and more in-depth financial tools. To give a quick ballpark estimate, here are some common costs of running an EH program:

Figure 1.2 Estimated Cost of EH Program Components

EH Program Component	Annual Cost Estimate
EH Specialist	\$45,000 - 75,000 annual salary *location dependent
EH Senior manager	\$65,000 - 120,000 annual salary, location dependent
Office space	\$5,000 - 12,000 annual lease
Vehicle	\$6,000 annual lease
Supplies and Equipment	\$1,500 – 3,000 annual budget
TOTAL with manager	\$122,500 - \$216,000
TOTAL without manager	\$57,500 – 96,000

4. How do I find out what Tribes are doing for EH already?

This is also a complex question, and many resources in the Toolkit will help answer this question. Some quick resources are:

- Your local or Area IHS Environmental Health Services office
- Your state and county health departments
- Your local health clinic

1.2 THE IMPORTANCE OF ENVIRONMENTAL HEALTH

American Indians and Alaska Natives (AI/AN) face a number of environmental hazards that affect their health status, such as living in remote and isolated locations that expose residents to severe climatic conditions, hazardous geography, and disease-carrying insects and rodents. Other factors include limited availability of housing and extensive use of sub-standard housing, unsanitary methods of sewage and waste disposal, and threats to public health due to environmental justice issues and industrial pollution.

The medical and public health interventions that were effective in eliminating certain infectious diseases, improving maternal and child health, and increasing access to clean water and sanitation are still needed and important to maintaining progress in decreasing the disparities in health status experienced by AI/ANs. In addition, Tribes are facing new challenges in dealing with chronic diseases that were not major issues in past years as well other challenges associated with social determinants. Tribes are being challenged to focus on the health of whole communities rather than the medical needs of individuals. A complex set of conditions, including longer life expectancy, dramatic lifestyle changes, changes in dietary practices, pollutants, and a variety of other environmental changes, contribute to new challenges in managing chronic disease and maintaining a community's overall health.

Environmental public health is identified as one of the “required” or foundational governmental public health programs that local health authorities should provide. The IHS and many Tribes have shown that implementation of effective environmental health and injury prevention strategies can substantially reduce disease and injury rates. For example, as the number of services provided to food service establishments and drinking water systems increased 101%, the incidence of food and waterborne diseases in the AI/AN population decreased 72 %. In addition, environmental health home assessments for asthma have shown a 40% reduction in the number of patients requiring emergency room visits, improved health outcomes, and reduced health care costs.

Tribes must continue to promote and develop community resources and involvement in order to target health promotion efforts at the local level. Community health must be recognized as programs and services that extend outside of health clinics and into other community resources, such as homes, schools, water sources, and many others. As Tribes continue to mature in their capacity to assume the management of health programs, the partnership between the IHS and Tribal health programs will be more critical than ever. Our shared mission is vital to the health of AI/ANs across the Nation and in the generations to come.

This Toolkit shares strategies, approaches, and examples of tools and materials useful for developing and implementing a Tribal Government Environmental Health Program. Tribes are highly encouraged to adopt or adapt the Toolkit resources to best meet the needs of their community.

1.3 INDIAN HEALTH SERVICE AND TRIBAL ENVIRONMENTAL HEALTH

Introduction To Tribal Environmental Health

In order to achieve the mission of the Indian Health Service (IHS) and accomplish the goals set forth in Healthy People 2020 and the National Prevention Strategy, our Tribal health system must transform into one which is based on prevention and wellness. Such a transformed health system aims to provide improved health and better care at a lower cost. To realize such transformed health system and address 21st century health challenges, the Tribal health system will require a strong public health system designed to support individuals outside of the clinical setting where they live, learn, work, and play.

Many Tribes now operate their own health systems, with fully half of the traditional IHS care system being managed by tribal health departments under self-determination contracts (Title I) or self-governance compacts (Title V). Tribes are sovereign nations that define their own service populations and are committed to promoting and protecting the health and well-being of tribal members and all people residing within their self-defined service areas.

Historically, Tribes have not been funded for public health nor environmental health. Most existing treaties with the federal government include the provision of health care services; however, public health is not specifically named. Tribal health systems traditionally focus on patient-centered services, based on the federal IHS model. Clinical services which involve treating more emergent needs are often prioritized over broader public health and environmental health services.

The tribal health system overall is underfunded, significantly impacting its ability to address the public health needs contributing to the health disparities of the American Indian/Alaska Native (AI/AN) population. In order to address the lack of funding and improve the AI/AN population health, tribes must develop and implement a conceptual framework for governmental public health services.

[Background & Rationale](#)

Like public safety, public utilities, and other public infrastructure, there is a foundational level of public health services that must exist. The Core Public Health Functions Steering Committee developed the framework for the Essential Services in 1994. The Essential Public Health Services provide a fundamental framework for describing public health activities.

What is the relationship between public and environmental health?

Environmental Health is the branch of public health that focuses on the interrelationships between people and their environment, promotes human health and well-being, and fosters healthy and safe communities.

As a fundamental component of a comprehensive public health system, environmental health works to advance policies and programs to reduce chemical and other environmental exposures in air, water, soil and food to protect residents and provide communities with healthier environments.

Source: National Environmental Health Association (NEHA)

The level of service delivery may be basic, intermediate, or comprehensive. Service delivery is determined by government authority and policy(ies), management decisions, available funding for staffing, community needs, and other elements.

In 2012, an Institute of Medicine report, *For the Public's Health: Investing in a Healthier Future*, defined a minimum package of public health services, including foundational capabilities and an array of basic programs no health department can be without, known as foundational areas. Over the course of several meetings, a Public Health Leadership Forum working group drafted an initial Foundational Public Health Services (FPHS) model. The model describes *foundational public health services essential to communities everywhere for the health system to work anywhere*. Clarity and consistency of an overall conceptual framework, including definitions and methodologies for estimating costs is critically important to support a case for sustained funding for FPHS.

The states of Oregon and Washington are both working to formally identify and adopt foundational public health services and modernize their public health systems. Both models identify environmental health as a foundational program.

It is important that Tribes work with States and use the resources available through State public health departments. State governments have a responsibility and obligation to support Tribes and their governmental public health programs.

Resources for Section 1.3

- **Resource 1.3a: Local Public Health in Oregon Overview.** A description of the authorities and responsibilities of local health departments in Oregon, including codes and ordinances.
- **Resource 1.3b: Oregon Public Health Modernization Manual.** Describes the foundational capabilities and programs for public health in Oregon.
- **Resource 1.3c: The Statewide Public Health Modernization Plan for Oregon.** Strategies for executing the State's plan.
- **Resource 1.3d: Washington FPHS 2016 Definitions.** Definition of Foundational Public Health Services for Washington State.
- **Resource 1.3e: A Plan to Rebuild and Modernize Washington's Public Health System.** Strategies for executing the State's plan.

In the Appendix, you can find additional examples and resources on how public health programs are structured and delivered. It also clarifies where environmental health programs and services fit in public health and public health departments.

The IHS Approach to Environmental Health

American Indians and Alaska Natives face environmental hazards that affect health status. Maintaining a healthy environment is central to increasing quality of life and years of healthy life. Globally, nearly 25 percent of all deaths and the total disease burden can be attributed to environmental factors. Environmental factors are diverse and far reaching.

The purpose of a Tribal Government Environmental Health Program is to address the wide range of environmental conditions in AI/AN communities that contribute to public health and quality of life. Healthy environments where we live, learn, work, and play are recognized as a vital factor in a person's overall health and well-being.

Everyone has a right to safe food, clean drinking water, and standards of living and housing that protect health. Poor environmental quality has its greatest impact on people whose health status is already at risk. Therefore, environmental health must address the societal and environmental factors that increase the likelihood of exposure and disease.

Through shared decision making and sound public health measures, the IHS EHS Program strives to enhance the health and quality of life for American Indians and Alaska Natives in the following 5 priority areas:



Children's Environment:

Prevent illness and injury by reducing risk factors where children live, learn, and play.



Safe Drinking Water:

Prevent waterborne illness and ensure safe drinking water supplies.



Food Safety:

Prevent foodborne illness and promote food safety and security.



Vectorborne and Communicable Diseases:

Prevent diseases transmitted by insects, animals, humans, and the environment.



Healthy Homes:

Prevent diseases and injuries in homes caused by unhealthy living conditions.

At IHS, Environmental Health Services (EHS) falls under the Office of Environmental Health and Engineering (OEHE). The EHS Program works with tribal communities to prevent disease and injury by:

- Monitoring and investigating disease and injury;
- Identifying health hazards in the environment; and
- Providing training, technical assistance, and project funding.

The EHS Program includes the specialty areas of Injury Prevention (IP) and Institutional Environmental Health (IEH). IP specialists work with tribes and other partners to prevent severe injuries and fatalities. IEH specialists work to protect building occupants from chemical, biological, radiological, and ergonomic hazards.

Case Examples that Demonstrate the Need for a Strong and Equitable System

The National Environmental Health Association (NEHA) has identified the Zika virus outbreak, the Flint water crisis, and Hurricane Katrina as three examples with stark environmental health implications that demonstrate the need for strong environmental health systems across the United States.

Zika Virus Outbreak

Mosquito-borne diseases have and continue to threaten the public's health with such illnesses as Encephalitis, West Nile Virus Disease, Dengue, Chikungunya, and now Zika Virus Disease. Zika infection - passed from an infected pregnant woman to her fetus and capable of causing devastating birth defects - also can have significant economic consequences on affected communities. There is no vaccine to prevent Zika. The best way to prevent disease-carrying mosquitoes is through community-based mosquito control and public education programs. Environmental health actions are mobilized through Integrated Mosquito Management Programs that provide mosquito monitoring and surveillance, remove places where mosquitos lay eggs, and carefully apply pesticides to significantly reduce mosquito populations while protecting water systems and minimizing undue human and animal exposure. These actions, coupled with public education and promoting healthy housing, will undoubtedly result in reduced illness and suffering.

Flint Water Crisis

Due to recent, highly visible events, the safety of, and trust in our nation's drinking water systems have been called into question. The drinking water crisis associated with lead contamination in Flint, MI, sheds a national spotlight on an issue that is occurring across the country. In Flint, due to a change in the source of the city's drinking water without taking the necessary corrosion control steps, the safety of approximately 100,000 people's drinking water was threatened. This resulted in the leaching of lead from the plumbing causing an increase in the blood lead levels in children consuming the water. This was a preventable situation. Strong policy with sufficient oversight and accountability supported by a skilled and resourced environmental health system is essential to monitor drinking water systems. The presence of chemical and microbial contaminants must be detected, source waters must be protected, regulations must be enforced, and surveillance

systems must be in place that monitor and link water quality to human health data for rapid detection of potential public health problems.

Hurricane Katrina & Super Storm Sandy

Unforgettably, Hurricane Katrina flooded the city of New Orleans in 2005, damaging more than 100,000 homes and Super Storm Sandy hit New York, New Jersey and other neighboring states in 2012, also causing devastating damage to homes and businesses, power supply systems, and other critical infrastructures such as roads. Storms like these have both acute and longer term environmental health impacts capable of causing physical, emotional, and economic harm. Understandably, the victims' focus was on mere survival and not necessarily whether the water coming from their kitchen sink was safe to drink, whether residual mold growth in their home would impact the health of their children, or whether the reconstruction of their home would cause harmful exposures to lead or other building materials or contaminants. A strong environmental health system provides the necessary safeguards to measure, track, and respond to such concerns and mitigate the adverse health consequences.

1.4 LESSONS LEARNED: WISDOM FROM EXPERIENCE

As a part of creating this Toolkit, people from the following Tribes and organizations in the Pacific Northwest contributed their insights and experience with direct service, contracting (638 Title I) and compacting (638 Title V) their Tribe’s environmental health needs. Their experience helped inform the contents of this Toolkit. In their experience, Tribes must be prepared to engage with the 7 common challenges identified in Figure 1.5.

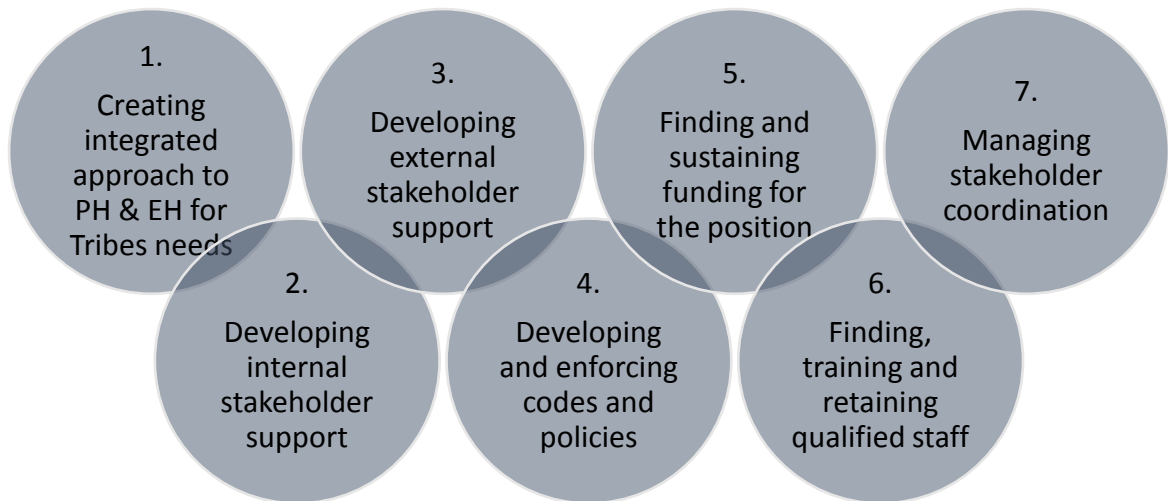
Pacific Northwest Tribes - A Diversity of Experience

This table shows tribes who provided helpful information for this process and Toolkit, as well as the form of environmental health services they currently use.

Figure 1.3 Pacific Northwest Tribes and Levels of EH Service

TRIBE	ENVIRONMENTAL HEALTH STATUS
Coeur d’Alene, ID	Compacted from IHS, 638 Title V
Tulalip Tribes, WA	Direct Service with IHS
Warm Springs, OR	Contracted from IHS, 638 Title I
Umatilla, OR	Compacted from IHS, 638 Title V
Chehalis, WA	Direct Service with IHS
Northwest Washington Indian Health Board	Board serves 5 tribes*who have contracted and or compacted from IHS; the Board is a contracted organization (638 Title I). (*Lummi, Nooksack, Swinomish, Upper Skagit, Samish)

Figure 1.4 7 Challenges Common to Compacting and Contracting



1. Creating, implementing, and sustaining an overarching and integrated approach to public and environmental health to address Tribal needs

Public and environmental health are interdependent, which requires a more holistic and integrated approach to both whenever possible. However, this is often difficult as public and environmental health programs and services can “live” in many places across an agency, government, or organization. Related to this, funding sources, staff, committees, codes and policies also “live” in many places. As such, it can be difficult to get a full picture of all that your Tribe is doing to address public and environmental health.

It is recommended that you involve stakeholders from both public and environmental health realms, from departments and services across the Tribe to explore and define the mission, vision, and goals associated with taking on environmental health programs and services. It is recommended that you think broadly at first, considering not only how to address illness and problems but also how to promote health and wellness on the human and environmental levels. Consider the unique needs of your Tribe, such as the protection of certain traditional plants or climate change.

Environmental health might play a role in policy initiatives to protect green space, conserve trees, build bicycle paths, or design houses, schools or new developments. Environmental

health could appear in the curricula of schools or community center programs. It can be helpful to connect to the stories and governing documents that are central to your Tribe.

2. Developing internal support with the Tribal Council, across departments and other critical internal stakeholders

Environmental health spans a number of Tribal services: public health, community services, natural resources, planning and land use, housing, hospitality, retail, and gaming. If your Tribe is working with IHS to deliver EH services, you will need to identify which services are currently underway in each department and work with each department to develop a vision, rationale, and work plan for transferring the program and/or services to the Tribe.

3. Developing external relationships with local and regional agencies

It is recommended that you engage first with your internal stakeholder group. As you do so, you will learn about the external relationships that will be critical to the program's success. A number of those interviewed highlighted the importance of forming and/or strengthening relationships with public and environmental health officials at local and regional levels. They typically have many resources available to help you stand up your own program and services. Most importantly, they may also be able to help you with enforcement as it can be difficult to do from within the Tribe, especially if your staff person is a Tribal member which means they could potentially be working with family members and close friends.

4. Developing and enforcing environmental health codes and policies

Almost all of those interviewed described the difficulties in establishing and/or updating their environmental health codes and policies. This work takes specialized expertise in law and policy and you'll need to consider how to fund this work, which will be on-going as codes and policies require periodic updates.

5. Finding and sustaining funding for the position

Funding for EH programs and services is a complex and on-going task. Funding can come from a variety of sources and it is hard to sustain over time. It can be difficult to fund a full-time position for a well-qualified candidate. In addition to covering a salary, you'll also need to cover the various administrative costs associated having a staff person, such as computers and software, office supplies, and training. Some funding sources will cover such costs and some will not. It is critical that you create and vet a comprehensive operating budget. Please see Section 5 for example budgets you can start with.

It is critical that you map out the various funding sources that are available, their associated requirements and limitations, and for how long the funding can be provided. There might also be ways to leverage funding across departments as environmental health spans across public health, community services, natural resources, planning and land use, hospitality, retail, and gaming activities.

6. Finding, training, and retaining qualified staff

Once you have mapped out the scope of the environmental health services that your Tribe wishes to operate, you can begin developing and/or refining the job description associated with the position. Please see Chapter 4 for more information on staffing and workforce.

All of those interviewed highlighted the challenge of trying to find someone who is both technically and “relationally” qualified. Working with Tribes requires different skills than someone who comes from an agency background. Another consideration is that most Tribes are in more rural environments, which also function differently than urban environments. Most likely you will have to choose one set of qualifications over the other.

Those with more experience and technical expertise could be good choice if you are starting with a more ambitious environmental health program. Such a candidate could bring more leadership and momentum when it comes to establishing and implementing the program and services. The candidate would likely require less training; however, such a candidate might be harder to retain if they are looking for steady professional growth.

Those with more experience working with different cultures and/or in more rural environments could be a good choice if you are starting with a specific environmental service or know that relationship-building and stakeholder engagement will be especially critical to the program’s success. The candidate would likely require more training; however, such a candidate might be easier to retain and be more suited to the work due to their passion about the work and being more focused on building Tribal relationships.

A number of those interviewed highlighted the importance of forming a relationship with local government public and environmental health officials. A couple of Tribes were able to form mentoring relationships where their staff were able to shadow their local EH person for a day or two as well as reach out for advice.

7. Managing stakeholder coordination

Once you have identified your internal and external stakeholders, there will be on-going stakeholder coordination needs, such as regular communications via meetings and/or email. You might consider creating a Steering Committee as a vehicle for gathering input, sharing information, and leveraging e experience and resources.

Whatever the case, you will need to create a plan and provide the time and resources for keeping in regular touch with your stakeholders as an open flow of communication promotes the sharing of responsibilities, resources, and opportunities.

CONNECTING WITH OTHERS

If you would like to speak with someone who can help you think through how you might change the ways in which your Tribe is providing Environmental Health services, you may contact any of the Tribes and organizations listed in the **Lessons Learned from the Pacific Northwest** section of this Toolkit.

You may also contact:

- Your local IHS DEHS Director who can connect you with local resources
- The Environmental Health Services Center (EHSC) in Albuquerque, <https://www.ihs.gov/EHSCT/index.cfm?CFID=40529484&CFTOKEN=35668023>;
- IHS Headquarters Division of Environmental Health Services, (301) 443.1054;
- The Portland Area Division of Environmental Health Services, <https://www.ihs.gov/portland/dehs/> or (503) 414.7777; and
- Your county and state Health Department or Environmental Health Association

Chapter 2: Understanding Environmental Health

2.1 DEFINING ENVIRONMENTAL HEALTH

What Is Environmental Health?

Environmental health is the branch of public health that is concerned with all aspects of the natural and built environment that may affect human health. Other terms referring to or concerning environmental health are **environmental public health, and public health protection / environmental health protection**. Environmental health and environmental protection are very much related. Environmental health is focused on the natural and built environments for the benefit of human health, whereas environmental protection is concerned with protecting the natural environment for the benefit of human health and the ecosystem.

Definitions of Environmental Health

Environmental health is the science and practice of preventing human injury and illness and promoting well-being by:

- Identifying, evaluating, and controlling environmental sources and hazardous agents;
- Monitoring and limiting exposures to hazardous physical, chemical, and biological agents in air, water, soil, food, and other environmental media or settings that may adversely affect human health;
- Informing and educating the public and industry about environmental health issues; and
- Supporting policies, plans, and regulations that promote public health and environmental protection.

“Environmental health and protection is the art and science of protecting against environmental factors that may adversely impact human health or the ecological balances essential to long-term human health and environmental quality. Such factors include, but are not limited to: air, food and water contaminants; radiation; toxic chemicals; disease vectors; safety hazards; and habitat alterations.” --*Report of the Committee on the Future of Environmental Health*.

Definition of an Environmental Health Program

A local public health authority is defined as a statutorily designated agency of local government charged with delivering identifiable health services to prevent or solve public health problems. This public health authority includes, and in most cases mandates, the provision of environmental health services. Local public health shall coordinate with local, state and federal agencies and stakeholders on environmental health issues. Coordination can also extend to natural resource and environmental protection agencies.

Environmental Public Health Standards

Environmental public health is identified as one of the “required” or foundational public health programs that local health authorities should provide. Other core public health department programs, services, and activities include, for example, health education, health promotion, community health, chronic disease prevention and control, communicable disease, injury prevention, maternal and child health, public health emergency preparedness, access to clinical services, public health laboratory services, management /administration, and governance.

The purpose of this Toolkit is to clearly identify the operational standards for a governmental environmental health system and then help tribes build the capacity to meet them. The standards are intended to promote healthy communities by assisting in the development, improvement and support of the public health system. Standards for environmental health in Tribes provide a common, consistent and accountable approach to assuring that basic health protection and community health promotion are in place.

Core Services for a Tribal Government Environmental Health Program

These standards are intentionally defined at a minimum level. They are stated in broad terms to allow flexibility and individuality in meeting needs with available resources. These Minimum Standards were developed using the Public Health Accreditation Board, Standards & Measures Version 1.5, Oregon Minimum Standards for Local Public Health Departments, Washington Foundational Public Health Services, and IHS requirements as outlined in the IHS Indian Health Manual, Chapter 11, Part 3.

The following areas shall be considered essential elements of an environmental health services program, and be specifically included in the overall annual plan of the EH department:

- Conduct health and safety inspections, assessments, and complaint investigations of regulated operations and facilities;
- Coordinate operator training and provide for a food handler training program;
- Perform and assist in outbreak investigations that have an environmental component;
- Maintain vector control activities;
- Conduct ongoing environmental and occupational health surveillance;
- Provide assessments of health impacts of environmental hazards or conditions, especially related to Community Health Assessments;
- Inform decision makers of the impacts to environmental public health based on program, project and policy decisions;
- Use environmental health expertise to address injury and disease prevention in institutional environments (longer-term care, assisted living, child care, etc.); and reduce hazardous exposures from air, land, water and other exposure pathways.
- Lead and support policy development and technical assistance to Tribal government to support implementation and enforcement of environmental health laws and regulations.

2.2 WHAT'S THE MISSION OF AN ENVIRONMENTAL HEALTH PROGRAM?

Developing A Mission Statement

A well-developed EPH mission statement will separate what is important from what is not, clearly state who will be served and how, and communicate a sense of direction to the Tribe.

Your mission statement should be a sincere, short, and simple statement. Your environmental health program mission statement needs to describe what you do/why you exist, who you serve, and how you do it. It is important to ensure that the EH mission statement align with other Tribal program mission statements.

The mission of the IHS Division of Environmental Health Services is, *“Through shared decision making and sound public health measures, enhance the quality and life of all American Indians and Alaska Natives to the highest level by eliminating environmentally related disease and injury.”*

Here’s how the Environmental Health Services mission statement provides the elements of a good mission statement:

1. What we do/why we exist: ...enhance the quality and life...to the highest level...
2. For whom: ...all American Indians and Alaska Natives...
3. How we do it: ...through shared decision-making...sound public health measures...eliminating environmentally related disease and injury

The Environmental Health Services mission aligns with and contributes to the overall IHS mission *... to raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level.*

Here are some good questions adapted from ***The Community Tool Box*** to help inform the development of your mission statement:

- What is your dream for our Tribe’s environmental health?
- What would you like to see change as a result of your EPH programs and services?
- What kind of community do we want to create?
- What do you see as the community's major issues or problems when it comes to environmental health?
- What are the unique resources that our Tribe needs to protect in order for us to have the highest quality of health and life?
- What do you think should be the purpose of this organization (or effort)?
- Why should these issues be addressed?
- How will our people’s life be better as a result of our program?

The Community Tool Box is a public service of the University of Kansas for those working to build healthier communities and bring about social change. It offers thousands of pages of tips and tools for taking action in communities.

Here are some tips to make your mission statement the best it can be (edited from Entrepreneur.com):

- *Involve those connected to your program.* Other people can help you see strengths, weaknesses and voids you might miss. If you have no partner programs or colleagues to include, consider knowledgeable family members and close friends. Be sure, however, to pick only positive, supportive people who truly want to see you succeed.
- *Set aside several hours--a full day, if possible--to work on your statement.* Good mission statements are short (1-2 sentences) Still, writing one is not a short process. It takes time to come up with language that simultaneously describes an organization's heart and soul and serves as an inspirational beacon to everyone involved in the program. Consider hiring an outside facilitator to help you.
- *Plan a date.* Set aside time to meet with the people who'll be helping you. Write a list of topics to discuss or think about. Find a quiet, comfortable place away from phones and interruptions.
- *Be prepared.* If you have several people involved, be equipped with refreshments, extra lists of topics, paper and pencils. Because not everyone understand what a mission statement is about, explain its meaning and purpose before you begin.
- *Brainstorm.* Consider every idea, no matter how silly it sounds. Stimulate ideas by looking at sample mission statements and thinking about or discussing the questions in the previous section. If you're working with a group, use a flip chart to record responses so everyone can see them. Once you've finished brainstorming, ask everyone to write individual mission statements for your business. Read the statement, select the best bits and pieces, and fit them together.
- *Use "radiant words."* Once you have the basic idea in writing, polish the language of your mission statement. The statement should create dynamic, visual images and inspire action. Use offbeat, colorful verbs and adjectives to spice up your statements.

Once your mission statement is complete, start spreading the word! You need to convey your mission statement to others inside and outside the program to tell everyone you know where you are going and why. Post it in your office, where you, employees and visitors can see it every day. Print it on company materials, such as brochures and your business plan or even on the back of your business cards.

A good example of a mission statement has been developed by the Seminole Tribe of Florida, which is listed under **Section 2.3 Resources**.

2.3 WHAT SHOULD YOU INCLUDE IN YOUR ENVIRONMENTAL HEALTH PROGRAM?

Determining The Scope Of Your Environmental Health Program

We have previously defined the core services for a Tribal Government Environmental Health Program. Your program will be based on your Tribe’s population, geographic boundaries and characteristics, the number and type of facilities requiring health and safety oversight, and many other factors.

It is important to remember that the purpose of governmental environmental health is to ensure that our drinking water, restaurants, schools, medical facilities, homes, pools and lodging facilities are safe. Environmental health programs also monitor for hazards related to outdoor recreation and workplaces, prepare for health risks related to climate change, and protect people from unnecessary exposure to toxins. The following resources and links can help guide you to defining your program’s scope:

It is also important to find ways to incorporate cultural elements and values into your program. Many Tribes may have interest in providing additional services or centering their program on more ecologically-driven concerns. For instance, if the motivation for creating an environmental health program is around the continued quality harvest of salmon, then governmental environmental health program development could look like this:

Figure 2.1 Sample Environmental Issues and Activities

ISSUE		
Safe salmon	<ul style="list-style-type: none"> • Stream water quality • Climate change • Hazardous/solid waste pollution • Occupational injuries to fishers 	<input type="checkbox"/> Water sampling <input type="checkbox"/> Education on safe food handling and proper cooking methods <input type="checkbox"/> Inspection and assessment of waste management programs, including recycling <input type="checkbox"/> Education and campaigns around home energy conservation, reducing waste and emissions, and sustainability <input type="checkbox"/> Worker training to fishers on safe practices, lifting techniques, PPE, etc.

Using The DEHS 5 National Priorities as a Starting Point

A good starting point for determining the scope for your Tribe's EH programs and services is through the lens of DEHS's 5 national priorities introduced in Chapter 1:



Children's Environment



Food Safety



Healthy Homes (and Places)



Vectorborne and Communicable Disease



Safe Drinking Water

The Introductory Assessment Worksheet is a good one to complete and discuss with Tribal leadership and key stakeholders to identify critical needs and opportunities as well as build awareness. It is also recommended that you contact your local area Environmental Health Officer to discuss the opportunities they see for your Tribe. Your EHO could also help you and your stakeholders think through how to strengthen your EH program and services by holding a 4-hour workshop based on this Toolkit.

Resources for Section 2.3

- **Resource: 2.3a Sample Scope and Mission Statement. Seminole Tribe of Florida.**
- **Resource: 2.3b PAO DEHS 2016 Profile.**
- **Resource: 2.3c Examples of Community Environmental Projects.**

Introductory Assessment Worksheet

1. What programs and services does your Tribe currently offer in each area?



Children's Environment

List/describe programs/services:



Food Safety

List/describe programs/services:



Healthy Homes (and Places)

List/describe programs/services



Vectorborne and Communicable Disease

List/describe programs/services



Safe Drinking Water

List/describe programs/services

Others:

List/describe programs/services

Introductory Assessment Worksheet (cont'd)

2. Is there a program or service that is particularly successful and/or established that the Tribe could assume? If so, which one and why?

3. Is there a program or service that is most critical at this point and time? If so, which one and why? Considerations:

- a. What are the needs of your most vulnerable populations, such as children and elderly?
- b. What are the needs of your most critical *non-business* facilities, such as community centers, housing, schools, etc?
- c. Others specific to your Tribe:

4. Is there a specific and/or unique Tribal resource in one of these areas that needs attention or protection?

Below are some of the more critical issues to consider when it comes to assessing the level of environmental health risk people face. Issues are **not** limited to the ones identified below.

Source: DEHS Inspection Risk Assessment, 2013.

Issues to consider for exposure potential:	<ul style="list-style-type: none"> • Known risk associated with media or operation • Historical health data or critical risk factors from surveys • Type of service or good provided: palliative/supportive care; shelter/housing; waste disposal; food or water for consumption
Issues to consider for complexity of operation:	<ul style="list-style-type: none"> • Industry or agency standards • Scope of service: level of care provided, menu of food, etc. • Historical evaluation of operation
Issues to consider for health impact:	<ul style="list-style-type: none"> • Potential for staff illness or injury • Potential for customer illness or injury (includes visitors and patients/residents) • Severity of expected illness or injury outcome (e.g., diarrhea, nosocomial infection, vectorborne disease, death)
Issues to consider for service impact:	<ul style="list-style-type: none"> • Financial impact to establishment or tribe, including loss of revenue and/or imposition of fines and legal costs • Loss of service to customers and/or community • Reputation or public image • Federal or tribal requirements or regulations
Issues to consider for size of population	<ul style="list-style-type: none"> • sheer numbers of staff and customers
Issues to consider for susceptibility of population	<ul style="list-style-type: none"> • age, health status/immuno-suppression, etc

2.4 WHAT EH DELIVERY MODEL BEST MEETS YOUR NEEDS?

Environmental Health Service Delivery Models

You will need to consider (or re-consider) how you will deliver the Environmental Health Program is that best meets the Tribes needs and delivery capacity. As a sovereign government and the local health authority, the Tribe has multiple options for administering and managing an environmental health program. Many Tribes have inadequate government infrastructure, not enough funding resources, and such small populations that it seems infeasible to deliver their own program.

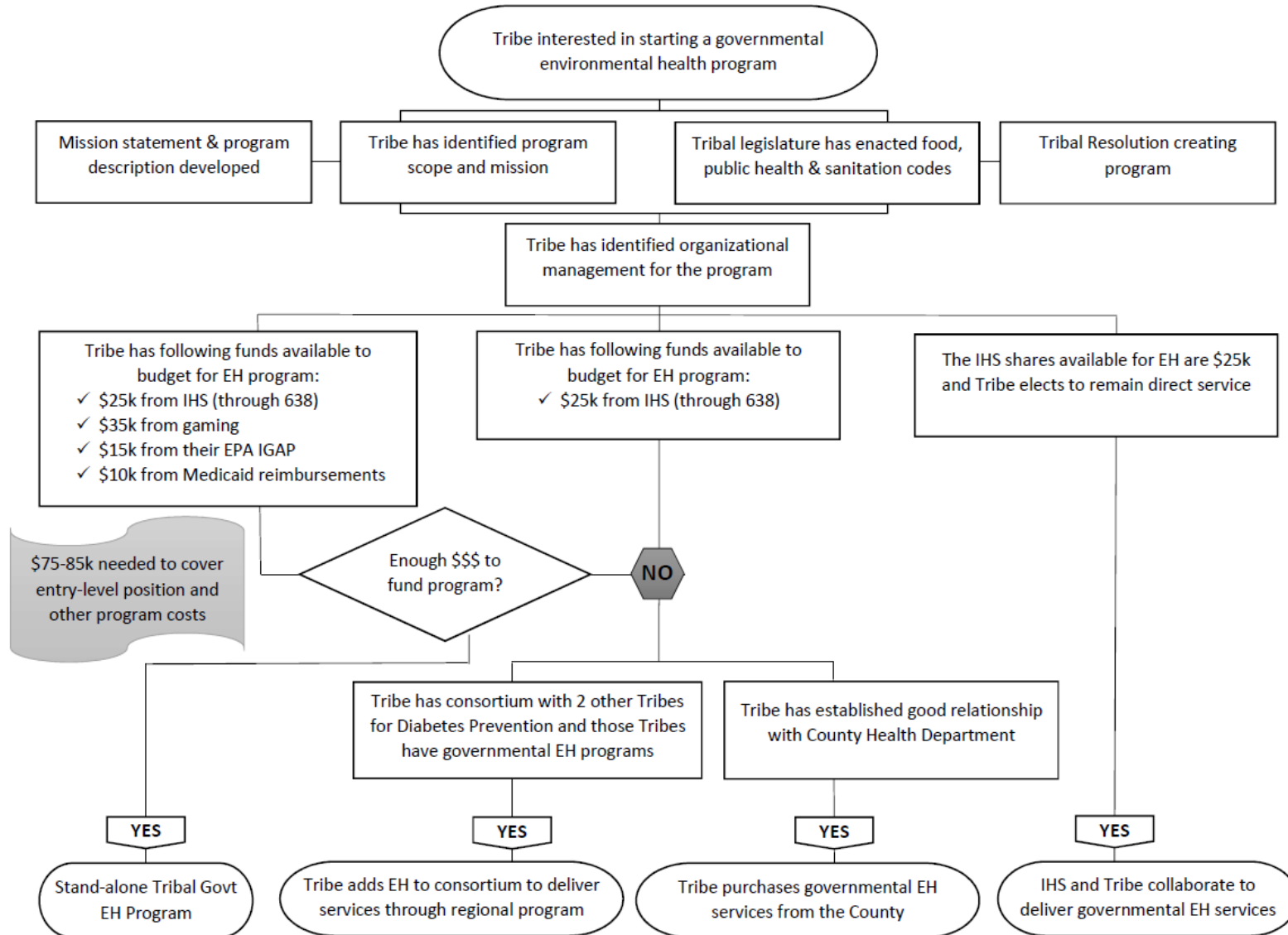
In general, there are 5 options for delivering a Tribal Government Environmental Health program, each an equal expression of sovereignty:

1. The Tribe retains direct service delivery from the IHS, IHS and the Tribe collaborate to build the Tribe's local capacity in environmental health.
2. The Tribe assumes the program shares from the IHS and delivers the program.
3. The Tribe assumes the program shares from the IHS and partners with other Tribes through a consortium to deliver a regional program.
4. The Tribe assumes the program shares from the IHS and purchases services through a contractor.
5. The Tribe assumes the program shares from the IHS and enters into an intergovernmental agreement with another local health authority for cross-jurisdictional sharing of services.

Health departments of all types and sizes are sharing services and exploring cross-jurisdictional sharing and collaboration arrangements more frequently. Cross-jurisdictional sharing is a growing strategy used at state, tribal, local, and territorial levels to address opportunities and challenges such as tight budgets, increased burden of disease, and regional planning needs.

Please see the **Service Delivery Option Decision Tree** on the next page to help you determine which delivery model would work best for your Tribe.

Figure 2.3 Service Delivery Options Decision Tree



IHS Direct Service Delivery

The IHS DEHS program will provide the following as the environmental public health advisor:

1. periodic assessment and analysis of community environmental risk factors/hazards as part of a community health assessment;
2. inspection, operator training, consultation and investigation of community institutions (such as schools, child care centers, and elder care facilities), institutional kitchens/food services, and public water supplies;
3. health promotion, training, and information to raise awareness and develop capacity to implement environmental public health services; and
4. systems management for planning, policy and procedures maintenance, reporting, workforce development, evaluation and quality improvement of the program.

In addition to those services listed above, the IHS can provide:

- injury investigation and support for older adult fall prevention, home safety, and motor vehicle crash/traffic safety or other community priority injury problems;
- occupational health and safety consultation in health care centers and other community institutions;
- home visits from clinical referrals for environmental/injury disease and conditions; and
- epidemiology and communicable disease surveillance;

The Tribe remains the local regulatory health authority of, and is responsible for providing inspection, licensure, consultation and investigation of retail food services, tourist facilities (hotels, beauty spas, public swimming pools and recreational sites), public housing, solid waste and on-site sewage sites. The IHS provides consultation and technical support through training, inspection audits, and licensed facility inspection program reviews.

Service Delivery by Tribal Self-Determination or Self-Governance

Federally recognized Tribes or Tribal organizations may contract with the IHS to plan, conduct and administer EH programs or compact with the IHS to assume full funding and control over, programs, functions, services or activities (PFSAs), or portions thereof, that the IHS would otherwise provide. If a Tribe has contracted (P.L. 93-638, Title I) or compacted (P.L. 93-638, Title V) all or parts of the DEHS program, the Tribe is responsible for environmental health services and activities, in accordance with their Scope of Work or self-governance model. Considerations about whether to assume the federal environmental health program include the amount of funding available under 638 contract or compact and how will the Tribe assure those funds can be used to deliver environmental health services.

Collaborative Service Delivery: IHS & Tribes

This conceptual model for service delivery is similar to that of the national framework for public health in which the Centers for Disease Control and Prevention (CDC) and other U.S. Department of Health and Human Services agencies provide leadership, guidance, and funding for state health departments to ensure the delivery of health services. The majority of state health departments

can be categorized as decentralized, in which public health services are delivered locally by a local employee at a local health unit. This local health authority, such as a County Health Department, may have to meet federal and/or state regulations, but for the most part serves as the regulatory health authority.

The Indian Health Service (IHS) is decentralized. While the IHS has retained a layered structure of administrative support services in the Area and program offices, an emphasis on community-oriented primary care and attention to the diversity among Indian communities has gradually produced a more decentralized organization. Key to the success of the programs is the active involvement of the community members themselves — not only by participating in health programs and healthy living but also in directing and operating the programs. Tribes are sovereign nations and governments, and as such, are the regulatory Public Health Authority. In some cases, federal regulations may also apply to Tribal governments; however, Tribes are the main responsible authority for public health. Tribal decisions to contract/compact health care programs or to continue to have the IHS operate them are equal expressions of self-determination. The IHS serves as a Health Advisor and the Tribe is the Health Authority in all cases.

Figure 2.4 Flow chart of Indian Health Service to Tribe EH authority



Cross-Jurisdictional Sharing of Public Health Services (from CDC)

Cross-jurisdictional sharing is “the deliberate exercise of public authority to enable collaboration across jurisdictional boundaries to deliver essential public health services” (Center for Sharing Public Health Services, 2013).

Cross-jurisdictional sharing can range from supporting informal arrangements to more formal changes in structure. In public health, cross-jurisdictional sharing often occurs between health departments or agencies serving two or more jurisdictions. Collaboration allows communities to solve issues or problems that cannot be easily solved by a single organization or jurisdiction.

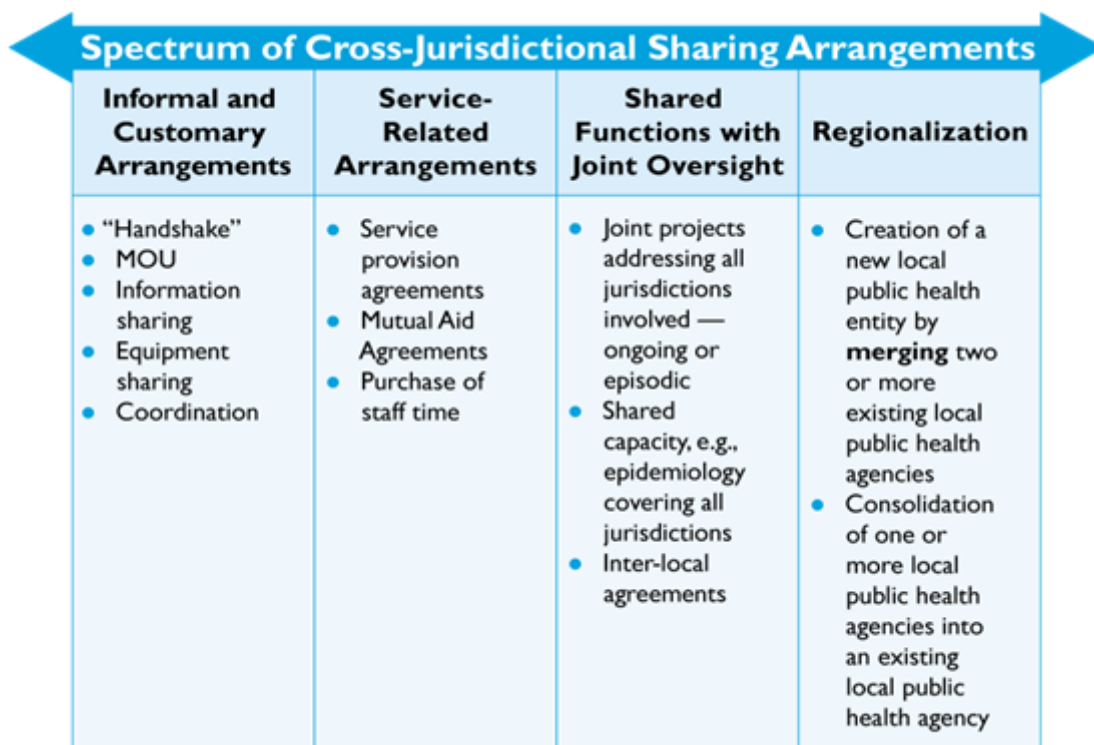
Examples of cross-jurisdictional sharing include

- Regionalization of health departments, such as through the consolidation of two or more health departments
- Sharing staff between two or more health departments, such as an epidemiologist or Environmental Health Specialist that supports multiple health department jurisdictions
- Sharing defined services, such as laboratory testing services or inspection services
- Collaborative assessment and planning processes that include two or more health departments and leads to shared priorities; examples might include regional preparedness plans, cross-border plans, or community health improvement plans

Communities across the nation continually face new challenges and opportunities. To serve people more effectively with fewer resources, many public health officials and policymakers are exploring new ways to structure the management and delivery of public health services.

Cross-jurisdictional sharing approaches vary across a broad spectrum—from informal agreements to the creation of new public health entities, and from sharing equipment or staff to establishing fully integrated regional organizations—as illustrated by this graphic from the Center for Sharing Public Health Services.

Figure 2.5 Variety of Possible EH Sharing Arrangements



Intergovernmental Agreements between Tribes and surrounding local governments are founded on mutual respect. They serve as a pledge that the governments are committed to maintaining positive government-to-government relationships for the benefit of all community members. Many Tribes have agreements with their neighbors that address a multitude of services such as police protection and mutual aid, fire protection, zoning and land use, road maintenance, sewerage district services, storm water, environmental protection and restoration, tourism, and emergency communications.

Resources for Section 2.4

- **Resource 2.4a: Service Delivery Options Decision Tree**
- **Resource 2.4b: IHS Reference Guide, Differences between Title I Contracting and Title V Compacting under PL 93-638.**
- **Resource 2.4c: 638 Toolkit**
- **Resource 2.4d: IHS Portland Area Programs, Functions, Services, and Activities. Excerpt of Environmental Health Services.**
- **Resources 2.4e – 2.4j: Multiple sample Tribal MOUs and MOAs for the Delivery of Public Health Services.**
- **Resource 2.4f: Exploring Service Sharing to Improve Tribal Public Health. Agreement Examples and a Worksheet from the Institute for Wisconsin’s Health.**
- **Resource 2.4g: Public Health Mutual Aid Agreements – A menu of suggested provisions from the CDC Public Health Law Program.**
- **Resource 2.4h: Shared Services in Public Health.**

Chapter 3: Assessing & Developing Capacity EH Programs and Services

3.1 INTRODUCTION TO THE PORTLAND AREA CAPACITY ASSESSMENT TOOL (PACAT)

Once you have defined your, it is recommended you complete the Portland Area's Capacity Assessment Tool (PACAT), which is included at the end of this chapter.

HELPFUL TIP: If you are in the preliminary stages of developing your program, the full PACAT may not be useful – most of your responses will be “no” because you have not started or implemented your Environmental Health program. It may be more useful to skip section **I. Core Functions and Activities of an Environmental Health Program**, section and go directly to the sections II. and III. related to readiness for governmental administration and management of the program. Always keep in mind that the PACAT standards and measures are “best practices” and should be used as performance goals and objectives.

The PACAT is designed to be used at multiple levels. It can be used to focus on a particular programmatic area of shared concern such as food safety, or to assess a division, department, or the whole environmental health system.

The PACAT was developed to clearly define standards for the level of performance and capacity to which all environmental health systems and programs should aspire. The PACAT was originally developed in 2004 - 2005, based on the National Public Health Performance Standards (NPHPS) Program at the Centers for Disease Control and Prevention (CDC). In 2006, the CDC developed the Environmental Public Health Performance Standards (EnvPHPS) to improve environmental health services delivery throughout the nation. DEHS has incorporated it's 3 Core Functions and Ten Essential Health Services to shape how it delivers services to American Indian/Alaska Native (AI/AN) communities across the country.

Value and Benefits of the PACAT

Tribal EH programs and services that utilize the PACAT may expect the following benefits:

- Educating participants about environmental health and the range of services and partners needed to improve the public's health.
- Improving collaboration of partners to enhance communication, improve coordination of activities and resources, and reduce duplication of services.
- Identifying strengths and gaps that can be addressed through quality improvement efforts.
- Providing a benchmark for governmental environmental public health practice improvements by setting a “gold standard.”
- Providing information and data that EH Systems and programs may use to better advocate for changes in policy and resource allocation to improve community environmental health status.

Through the process of completing the EHS CAT, users will:

- Assess the capacity of an EH System or program to perform the EssEnvHS.
- Identify critical gaps in performance to inform the development of an action plan to address the identified gaps and barriers to meeting the EnvPHPS
- Educate staff and community partners about the role of environmental health in preventing disease and reducing hazards, and the infrastructure necessary to fulfill that role.

The information obtained from completing the instrument can be used to:

- track and measure accomplishment
- approach decision-makers with information regarding the steps necessary to improve the environmental health system or program, justify continued or expanded services, support for training, or additional staff.

The Ten Essential Public Health Services Framework

The PACAT is built around the CDC's (Centers for Disease Control and Prevention) Ten Essential Public Health Services (EssEnvHS) framework shown in Figure 3.1 which the IHS DEHS has adopted. The EssEnvHS describe the collective set of capacities and activities necessary to effectively provide programs and services aimed at improving and protecting environmental health.

As shown in Figure 3.1, the Ten Essential Public Health Services (EssEnvHS) has 3 Core Functions:

1. Assessment
2. Policy Development
3. Assurance

The Assessment, Policy Development and Assurance core functions and associated 10 services are described in Figure 3.2.

Let's clarify how you could use the DEHS national priorities and the EssEnvHS model to assess your Tribe's EH programs and services. Let's say your Tribe decides to focus on establishing or strengthening Children's Environments, one of DEHS's national priorities. You could then use the EssEnvHS tool to determine which dimension you most need to develop in order to improve your programs and services in Children's Environment.

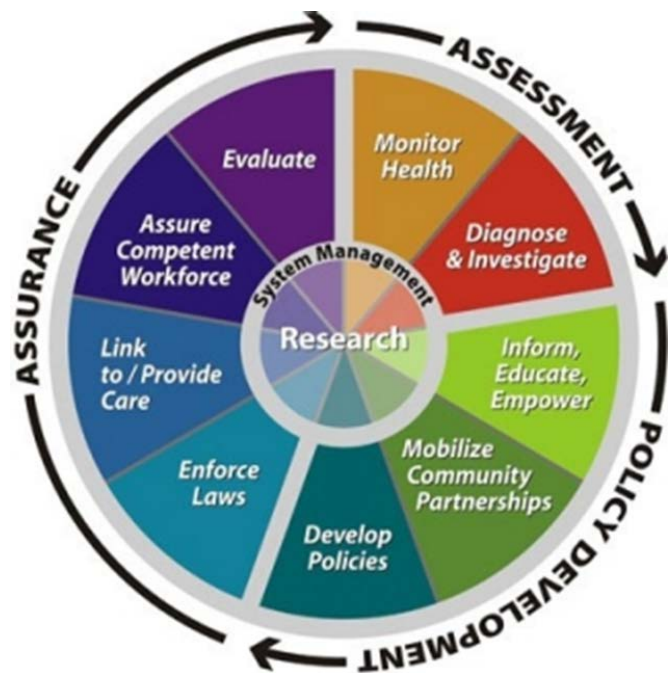


Figure 3.1 The 10 Essential Public Health Services (EssEnvHS)

Figure 3.2. The 3 Core Functions and 10 Essential Health Services

Assessment: Assess the health needs of the community; investigate the occurrence of health effects and health hazards in the community; and analyze the determinants of identified health needs.

1. Monitor **environmental and health status to identify and solve community environmental health problems.**
2. Diagnose and investigate **environmental health problems and health hazards in the community.**

Policy Development: Advocate for public health, build constituencies, and identify resources in the community; prioritize among health need; and, plan and develop policies to address priority health need.

3. Inform, educate, and empower **people about environmental health issues.**
4. Mobilize **community partnerships to identify and solve environmental health problems.**
5. Develop policies and plans **that support individual and community environmental health efforts.**

Assurance: Manage resources and develop organizational structure; implement programs. Work with other organizations, agencies and individuals to assure the implementation of programs in the community that fit community priorities. Work with the community to change community policy, practice or mores; evaluate programs and provide quality assurance; and, inform and educate the public.

6. Enforce **laws and regulations that protect health and ensure safety.**
7. Link **people to needed environmental health services and assure the provision of environmental health services when otherwise unavailable.**
8. Assure a **competent environmental health workforce.**
9. Evaluate **the effectiveness, accessibility, and quality of personal and population based environmental health services.**
10. Research **for new insights and innovative solutions to environmental health problems and issues.**

IHS DEHS Portland Area Capacity Assessment Tool (PACAT)

INSTRUCTIONS

As each question is discussed, the response that best fits the current level of activity should be determined. The responses to the assessment can and perhaps should serve as a benchmark for future improvements. It is best to be “brutally” honest with responses.

1. Each standard is followed by assessment questions. Taken together, the responses to these questions serve as a measure of the level of performance.
2. Responses should be placed on the questionnaire. Be sure to make a copy of the completed form for your records.
3. “Yes” responses can be given 1 point, “No” responses and “Don’t Know” responses can be given 0 points. This will provide a quantifiable score that may be more useful for demonstrating and tracking the level of capacity and show where gaps are and improvement is needed.
4. Each completed instrument will have thirteen scores: a score for each of the ten EssEnvHS activities (Part I), a score for Governance and Administration (Part II), and a score for Management (Part III). Taken together, they will result in a total score.
5. There is no scoring “key” or “level to achieve”. Scoring is specific to each Tribe with the first assessment creating a baseline against which to determine if capacity is increasing. The higher the score the greater the capacity.

Once the results from the assessment have been tabulated, the person or team responsible for coordinating the assessment should meet to consider next steps. Typically, a Tribe or department will score low in one or more of the ten essential services. The group should review the gaps revealed by the assessment, and prioritize one or more gaps to address with an improvement plan. The group may also wish to establish a schedule for periodically reviewing progress on the work plan, and for reassessing the department or program after a specified time period to assess progress.

I. Core Functions and Activities of an Environmental Health Program

ASSESSMENT (PREVENT)

1. Monitor Environmental and Health Status to Identify and Solve Community Environmental Health Problems (SCORE: _____) out of 4 possible points

1.1 Does your Tribe have a formal system in place to identify and assess environmental health threats (such as a policy for a data tracking or surveillance system)?

- Yes No Don't know

If yes, please describe your Tribal policies:

1.2 Does your Tribe have a formal system in place to acquire community input?

- Yes No Don't know

1.3 Does your Tribe routinely conduct a community environmental health needs assessment?

- Yes No Don't know

1.4 Does your Tribe have a formal system for identifying vulnerable populations?

- Yes No Don't know

2. Diagnose and Investigate Environmental Health Problems and Hazards in the Community (SCORE: _____) out of 4 possible points

2.1 Does your Tribe have written protocols to analyze the relationship between environmental health hazards and health impacts?

- Yes No Don't know

2.2 Does the Tribe have memorandum of agreement with agencies involved in investigating and mitigating environmental hazard/risk?

- Yes No Don't know

If yes, please check which agencies (check all that apply):

- | | |
|---|--|
| <input type="checkbox"/> Local County Health Department | and Urban Development |
| <input type="checkbox"/> State Health Authority | <input type="checkbox"/> Indian Health Service |
| <input type="checkbox"/> U.S. Environmental Protection Agency | <input type="checkbox"/> Other (specify)_____ |
| <input type="checkbox"/> U.S. Department of Housing | |

2.3 Does your Tribe have communicable disease control capacity to investigate environmental hazards or environmentally related disease and injury?

- Yes No Don't know

2.4 Does your tribe have technical capacity to perform environmental health risk assessments as part of an outbreak or emergency response?

- Yes No Don't know

POLICY DEVELOPMENT (PROTECT)

3. Inform, Educate, and Empower People about Environmental Health Issues (SCORE: _____) out of 3 possible points

3.1 Does your your Tribe have an environmental health advisory group?

- Yes No Don't know

3.2 Does your Tribe regularly provide environmental health information and/or training to the community?

- Yes No Don't know

3.3 Does your Tribe regularly evaluate the effectiveness and appropriateness of communication methods for informing the public about environmental health issues?

- Yes No Don't know

4. Mobilize Community Partnerships to Identify and Solve Environmental Health Problems (SCORE: _____) out of 5 possible points

4.1 Does your Tribe have a formal system for identifying stakeholders or interested parties?

- Yes No Don't know

4.2 Does your Tribe partner with university or colleges that are potential sources of recruiting future environmental health service staff?

- Yes No Don't know

4.3 Does your Tribe have an up-to-date, written directory of potential partners?

- Yes No Don't know

4.4 Does your Tribe have a formal process for developing collaborative or shared efforts on issues of common interest?

- Yes No Don't know

4.5 In the past 12 months, have Environmental Health staff collaborated closely on projects (e.g., publication of a report, preparation of a grant application, design or evaluation of a program or intervention) with one or more of the following agencies and/or organizations:

Private voluntary organizations (e.g. Red Cross) Yes No Don't know

Managed care organizations (e.g. Kaiser Permanente) Yes No Don't know

U.S. Environmental Protection Agency (EPA) Yes No Don't know

U.S. Dept of Housing and Urban Development (HUD) Yes No Don't know

Indian Health Service Yes No Don't know

Local Health Department Yes No Don't know

State Health Department Yes No Don't know

Other (specify): _____

5. Develop Policies and Plans that Support Individual and Community Environmental Health Efforts (SCORE: _____) out of 4 possible points

5.1 Does the Tribe have a formal process in place to develop a plan to address priority environmental health issues?

- Yes No Don't know

5.2 Does the Tribe have ready access to policy makers for briefing, educating, or communicating with them about environmental health issues?

- Yes No Don't know

5.3 Does the Tribe have a formal process to include the community in policy development?

- Yes No Don't know

5.4 Does the Tribe have a formal process in place to review the effectiveness of environmental health policies on a periodic basis?

- Yes No Don't know

ASSURANCE (IMPROVE)

6. Enforce/Support Laws and Regulations (SCORE: _____) out of 4 possible points

6.1 Does the Tribe have a formal process in place to evaluate the effectiveness, appropriateness, and clarity of laws, regulations, and compliance requirements?

- Yes No Don't know

6.2 Does the Tribe have a formal process to obtain feedback from the regulated community?

- Yes No Don't know

6.3 Does the Tribe have ready access to legal advice or resources?

- Yes No Don't know

6.4 Does the Tribe have a formal system to ensure consistency of enforcement actions?

- Yes No Don't know

7. Link People to Needed Environmental Health Services and Assure the Provision of EH Services when Otherwise Unavailable (SCORE: _____) out of 4 possible points

7.1 Does the Tribe have a formal protocol for addressing Environmental Health needs it cannot meet?

- Yes No Don't know

7.2 Does the Tribe have the capacity to provide Environmental Health services to all tribal members?

- Yes No Don't know

7.3 Does the Tribe have an up-to-date directory of referral sources?

- Yes No Don't know

7.4 Does the Tribe have a formal protocol for expanding Environmental Health Services beyond normal capacity through mutual aid agreements?

- Yes No Don't know

8. Assure a Competent Environmental Health Workforce (SCORE: _____) out of 4 possible points

8.1 Does the Tribe have an on-going training plan to improve the knowledge, skills, and abilities to perform Environmental Health Services?

- Yes No Don't know

8.2 Does the Tribe have any written standards identifying minimum competencies needed to perform Environmental Health Services?

- Yes No Don't know

8.3 Does the Tribe have routinely conduct personnel assessments/evaluations?

- Yes No Don't know

8.4 Does the Tribe have a written policy on the recruitment, training, and retention of tribal staff?

- Yes No Don't know

9. Evaluate Effectiveness, Accessibility, and Quality of Environmental Health Services (SCORE: _____) out of 4 possible points

9.1 Does the Tribe have a formal process to routinely perform program evaluations or assessments (e.g., outcome and utilization of services)?

- Yes No Don't know

9.2 Does the Tribe survey community groups or stakeholders to obtain feedback about Environmental Health Services?

- Yes No Don't know

9.3 Does the Tribe have quality improvement plan in place?

- Yes No Don't know

9.4 Does the Tribe have performance standards/best practice in place to measure Tribe's progress?

- Yes No Don't know

10. Research for New Insights and Innovative Solutions to Environmental Health Problems (SCORE: _____) out of 3 possible points

10. 1 Does the Tribe have a formal process for identifying research needs?

- Yes No Don't know

10.2 Does the Tribe have a formal relationship with research entities, such as university, medical institutions, or the Tribal Epi-Center?

- Yes No Don't know

10.3 Does the Tribe have the capacity to seek grants, new funding opportunities, or partners for research projects?

Yes No Don't know

II. Tribal Governance and Administration of an Environmental Health Program (Score: _____)

1. Does the Tribe have a defined Environmental Health Program?
 Yes No Don't know
 - a. If you answered yes to Question 1, is the program part of the Health Department?
 Yes No Don't know
 - b. If you answered yes to Question 1, where does the program fit in the Tribe's government structure or organization chart?
2. Is there leadership support for EH programs/services?
 Yes No Don't know
3. Does the Tribe have a resolution or ordinance supporting an Environmental Health Program?
 Yes No Don't know
4. Is there legislative capacity for codification of statues, laws, regulations, ordinances required to administer an EH program
 Yes No Don't know
5. Does the Tribe have jurisdictional and regulatory authority for providing environmental health services (enforcement and intervention authority, charge and collection of fees
 Yes No Don't know
6. Does the Tribe have codes or policies related to environmental health and safety?
 Yes No Don't know

If yes, check all that apply and most closely match your codes or policies.

- Provide licensing and certification or permitting of recreational facilities, food service establishments, pools or aquatic facilities, child care centers, public tourism and hospitality attractions. List and document types:

- Implement a food handler training and operator certification program.

- Routine inspection and review of regulated entities and recreational facilities, food service establishments, pools or aquatic facilities, child care centers, public tourism and hospitality attractions, and others. List and document types:

- A fee schedule for licensing, certification or permitting, inspection or review, or food handler training. List and document types:

- Perform and assist with outbreak investigations that have an environmental component.
- Conduct ongoing environmental and occupational health surveillance.
- Requirements for the staffing (education, training, and licensing) of environmental health professionals.

7. Is there a source of funding; e.g., gaming revenue, government funds (Tribal subsidy), or other money; available for staffing and delivering an EH program or service?

- Yes No Don't know

8. What are the funding sources for staffing and delivering an environmental health program within the Tribe? (Specify value for percentage (e.g., "40" for 40%) of total funding for each source. If no funding, enter "0" for that source. Values should total 100.)

- | | |
|---|-------------------------|
| <input type="checkbox"/> Revenue from Environmental Health Fees | Specify Percentage: __% |
| <input type="checkbox"/> Federal Grant Funds | Specify Percentage: __% |
| <input type="checkbox"/> State Grant Funds | Specify Percentage: __% |
| <input type="checkbox"/> Other Tribal Funds | Specify Percentage: __% |

III. Tribal Management of an Environmental Health Program

1. Does the Program have a written plan or guidelines for Environmental Health?

- Yes No Don't know

a. Does the program have documented environmental health policies and procedures?

- Yes No Don't know

If yes, list policies and procedures:

b. Defined scope of services or program elements?

- Yes No Don't know

If yes, describe scope and elements.

2. Does the Tribe have relationships (MOU, Mutual Aid, etc.) - formal or informal - with local, state, or federal environmental health agencies to assist?

- Yes No Don't know

If yes, list with whom.

3. Does the Program employ or contract professional staff?

- Yes No Other

4. Is there capacity for hiring environmental health professionals?

- Yes No Don't know

a. Is there capacity for hiring professionals within the Tribe?

(if yes, add 1 pt to #4 score)

- Yes No Don't know

b. Is there capacity for hiring professionals in the commuting area?

(if yes, add 1 pt to #4 score)

- Yes No Don't know

5. Does the Program have education and training requirements for positions?

- Yes No Don't know

If yes, list education/training requirements:

6. Does the Program have professional licensing or registration as an environmental health specialist or other environmental/public health credential for positions?

- Yes No Don't know

If yes, list licensing/registration requirements:

- Does the Program have training or development plan for positions?
 Yes No Don't know

If yes, please list and/or describe.

7. Does the Program have a budget line and authority for a spending plan?
 Yes No Don't know

8. Is there management support for program delivery, including financial management and human resource management (workload and staffing requirements)?
 Yes No Don't know

9. Does the Program have resources and equipment available to staff?
 Yes No Don't know

List resources and/or equipment available to staff:

10. Does the Program have office space and vehicle?
 Yes No Don't know

11. Does the Program have training funds?
 Yes No Don't know

12. Does the Program have travel funds to support training (and other needs)?
 Yes No Don't know

PACAT SCORE TABULATION TABLE

I. CORE FUNCTIONS & SERVICES	SCORES	
1. Monitor Environmental and Health Status		Assessment Subtotal (1,2)
2. Diagnose and Investigate EH Problems & Hazards		
3. Inform, Educate, and Empower People about EH		
4. Mobilize Community Partnerships to Identify and Solve EH Problems		Policy Subtotal (3,4,5)
5. Develop Policies and Plans that Support Individual and Community EH Efforts		
6. Enforce/Support Laws and Regulations		
7. Link People to Needed EH Services		
8. Assure a Competent EH Workforce		
9. Evaluate Effectiveness, Accessibility, and Quality of EH Services		Assurance Subtotal (6,7,8,9,10)
10. Research for New Insights and Innovative Solutions to EH Problems		
I. Core Functions & Services		<i>Add up scores for #1-10</i>
II. Tribal Governance and Administration		
III. Tribal Management		
TOTAL		

Note: Subtotals should NOT included in the total score. The boxes are provided so that you can determine capacity needs by function (Assessment, Policy Development, Assurance).

CHAPTER 4. WHO TO INVOLVE AND HOW TO BUILD SUPPORT

4.1 STAKEHOLDER ENGAGEMENT: BUILDING INTERNAL AND EXTERNAL SUPPORT

We highly recommend a participatory process when it comes to initiating and/or building your Tribe's environmental health program and services. Doing so will help ensure greater success as you build commitment along the way rather than seek buy-in at the end. You will also gain a better understanding of your Tribal and community context, benefit from more ideas from differing perspectives, and uncover access to additional resources through more and stronger relationships.

What Is Stakeholder Engagement?

Stakeholder engagement means involving as many as possible of those who are affected by or have an interest in your program, services, project, initiative, intervention, or effort. These are the people in your community whose opinions are respected, whose insights are valued, and whose support is almost always needed to make any big changes.

When a group or person is impacted by another, they will want to understand why and how your work intersects with theirs. In order to respond with relevant and influential information, you'll need to spend some time learning and considering your stakeholders perspectives. Doing so involves both analysis on your own and 1-2 colleagues as well as conversation with your stakeholders.

Resources for Section 4.1

- **Resource 4.1 BSR Stakeholder Mapping Final**

Why is Stakeholder Engagement Critical to Your Success?

The most important reason for identifying and understanding stakeholders is that it allows you to recruit them as part of the effort. The **Community Tool Box**, a public online resource provided by the Work Group for Community Health and Development at the University of Kansas, believe stakeholder engagement provides 10 important advantages:

1. It puts more ideas on the table than would be the case if the development and implementation of the effort were confined to a single organization or to a small group of like-minded people.
2. It includes varied perspectives from all sectors and elements of the community affected, thus giving a clearer picture of the community context and potential pitfalls and assets.
3. It gains buy-in and support for the effort from all stakeholders by making them an integral part of its development, planning, implementation, and evaluation. It becomes their effort, and they'll do their best to make it work.
4. It's fair to everyone. All stakeholders can have a say in the development of an effort that may seriously affect them.

5. It saves you from being blindsided by concerns you didn't know about. If everyone has a seat at the table, concerns can be aired and resolved before they become stumbling blocks. Even if they can't be resolved, they won't come as surprises that derail the effort just when you thought everything was going well.
6. It strengthens your position if there's opposition. Having all stakeholders on board makes a huge difference in terms of political and moral clout.
7. It creates bridging social capital for the community. Social capital is the web of acquaintances, friendships, family ties, favors, obligations, and other social currency that can be used to cement relationships and strengthen community. Bridging social capital, which creates connections among diverse groups that might not otherwise interact, is perhaps the most valuable kind. It makes possible a community without barriers of class or economics, where people from all walks of life can know and value one another. A participatory process, often including everyone from welfare recipients to bank officers and physicians, can help to create just this sort of situation.
8. It increases the credibility of your organization. Involving and attending to the concerns of all stakeholders establishes your organization as fair, ethical, and transparent, and makes it more likely that others will work with you in other circumstances.
9. It increases the chances for the success of your effort. For all of the above reasons, identifying stakeholders and responding to their concerns makes it far more likely that your effort will have both the community support it needs and the appropriate focus to be effective.
10. This process begins to help you identify the different perspectives you'll need to address as you reach out for support. It is highly recommended that you engage stakeholders early in order to build commitment rather than seek buy in at the end. While it might seem too time consuming and expensive to involve more rather than less people, seeking buy in can be equally time consuming and expensive if not more so should the initiative or project not be adopted or only partially adopted.

4.2 WHAT IS THE STAKEHOLDER ENGAGEMENT PROCESS?

A typical stakeholder engagement process consists of the following 4 steps:

1. Identifying: listing relevant groups, organizations, and people
2. Understanding: understanding stakeholder perspectives and interests
3. Mapping: visualizing relationships to objectives and other stakeholders
4. Prioritizing: ranking stakeholder relevance and identifying issues

Following these four steps will determine who can have the most positive or negative influence on your effort, who is likely to be most affected by your effort, and how you should work with stakeholders with different levels of interest and influence. While you can perform these 4 steps alone, it is highly recommended that you do so with a small, diverse group as it will help you gain a broader base of support.

Step 1 – Identify Your Stakeholders

The first step in Stakeholder Engagement is to brainstorm a list of all of those people and organizations who may be interested in your efforts – either as a supporter or a resistor. Think of all the people who would be affected by your efforts. Be sure to include both internal (Tribal) and external stakeholders. There is no magic list of stakeholders; who should be involved will depend on the scope and nature of your environmental health program and/or services. Below is a list of potential stakeholders to consider.

Figure 4.1 Environmental Health Stakeholders

Potential Stakeholders
<ul style="list-style-type: none">• Tribal council• Other key Tribal elders• Various Department leaders:<ul style="list-style-type: none">• Natural Resources• Planning and development• Housing• Clinic doctors and/or staff• Community center directors• Casino managers• Food service providers• Retail providers• Business leaders• IHS Environmental Health Specialist (or, Officer)• Local government public and environmental health officials• Regional government public and environmental health official• Vendors and contractors

Step 2 – Understand Your Key Stakeholders

You now need to know more about your key stakeholders. Once you have identified a list of stakeholders, it is useful to do further analysis to better understand their relevance and the perspective they offer, to understand their relationship to environmental health programs and services. You need to know how they are likely to feel about and react to your project so you can determine what and how to best communicate with them.

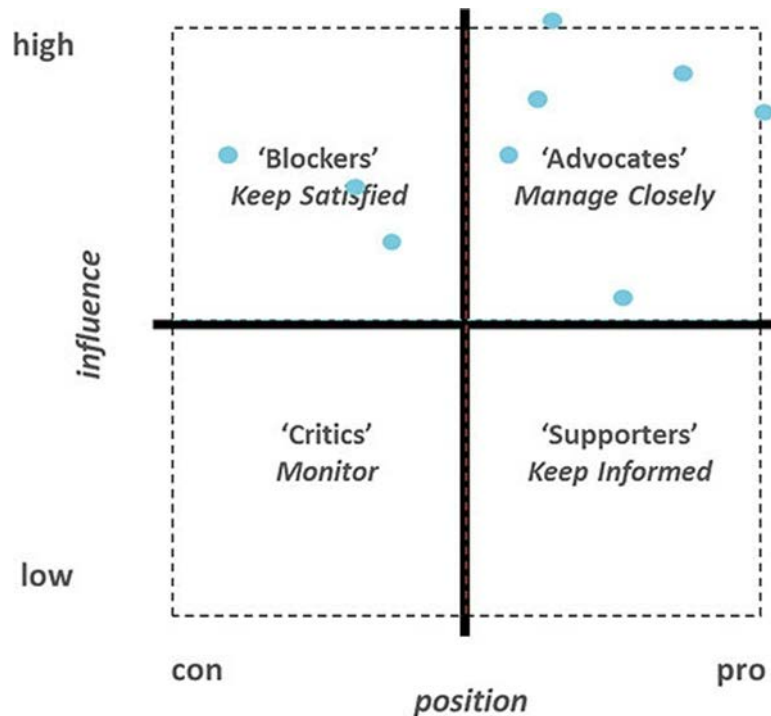
Key questions that can help you understand your stakeholders are:

- How will your environmental health program and/or services **benefit** them?
- How will your environmental health program and/or services **impact** them?
- What will they be most concerned about? What are their interests?
- What information will they want from you?
- If they are not likely to be positive, how might you earn their support of your project?

- If you don't think you will be able to gain their support, how will you manage their opposition?
- Who else might be influenced by their opinions? Do these people become stakeholders in their own right?

A very good way of answering these questions is to talk to your stakeholders directly – people are often quite open about their views, and asking people's opinions is often the first step in building a successful relationship with them.

Figure 4.2: Chart of position v influence and type of stakeholders



Step 3 – Create a Stakeholder Map

You can summarize the understanding you have gained on a stakeholder map, so that you can easily see which stakeholders are expected to be blockers or critics, and which stakeholders are likely to be advocates and supporters or your project.

A good way of doing this is by color coding: showing advocates and supporters in green, blockers and critics in red, and others who are neutral in orange.

Here is a list of criteria from the **Community Tool Box** to help you analyze the importance of each identified stakeholder:

1. Contribution: Does the stakeholder have information, counsel, or expertise on the issue that could be helpful to the company?

2. Legitimacy: How legitimate is the stakeholder's claim for engagement?
3. Willingness to engage: How willing is the stakeholder to engage?
4. Influence: How much influence does the stakeholder have and who do they influence? This could uncover additional stakeholders.
5. Necessity of involvement: Is this someone who could derail or delegitimize the process if they were not included in the engagement?

Step 4 – Prioritize Your Stakeholders

You may now have a long list of people and organizations that are affected by your work. It is not practical and usually not necessary to engage with all stakeholder groups with the same level of intensity all of the time. Being strategic and clear about whom you are engaging with and why, before jumping in, can help save both time and money.

The key is not to agonize over whether your stakeholder list is “right.” By working through the four steps of the Stakeholder Engagement process you will have created a robust, relevant, prioritized stakeholder list that you can feel confident in. And, it will change over time as your understanding deepens and the scope of your efforts become more defined.

If you can answer the following questions you can move on.

Is our list focused on relevant stakeholders who are important to our current and future efforts?

1. Do we have a good understanding of where stakeholders are coming from, what they may want, whether they would be interested in engaging with our organization, and why?
2. How can we further understand and qualify these stakeholders? Through discussions with internal colleagues? Reading reference reports? Finding specific blogs or Twitter accounts to follow?
3. Based on our prioritized stakeholders, can we define a granular level of engagement?
4. Will this list inform tactics, formats, and investment considerations?
5. Have we given thought to what type of resources (expertise, people, and budget) we need to support our engagement strategy and follow-up activities?

Developing Communication Materials

Communication messages and materials are essential to increase awareness, gain stakeholder support, and recruit participants for your environmental health program. We invite you to draw from the ***IHS Healthy Heart Toolkit*** as you consider what communication materials to create. Here are a few ideas to start with:

- **Develop a program identity based upon your mission statement:**
 - Choose a name and design a logo for your program that is unique and will be meaningful in your community.
 - Consider obtaining feedback on your program name from community members.
 - Consider working with local artists to design your program's logo.
 - Incorporate local culture and traditions into messages and graphics.
- **Develop program materials, such as:**
 - Letterhead,
 - Signage (e.g., banners, marquee)
 - Brochures and flyers
 - Fact sheets
 - Promotional materials in your recruitment efforts, such as:
 - Monthly calendar of events
 - Public service announcement scripts for radio and TV stations (provide brief information about your program and contact information)
 - Create ads and write articles about your program, the benefits of environmental health, participant success stories, project news, etc.
- **Ensure that you have written consent to include a person's photo and/or quote on materials, websites, and social media.**
- **Distribute program materials. Consider the following:**
 - Community clinics and health centers
 - Recreational facilities (e.g., basketball courts or gym, wellness center, softball fields)
 - Local events and powwows
 - Coalition and Tribal council meetings
 - Grocery stores and other local businesses
 - Worksites
 - Local and Tribal radio and TV stations
 - Tribal and area newspapers and newsletters
 - Movie theaters
 - Websites, blogs, and social media
 - Tribal businesses (e.g., grocery stores, gas stations, casinos)
- **Develop presentations about your program.**
 - Present at meetings with stakeholders, partners, and community members.
 - Tailor your presentation to speak to the interests, needs, and concerns of your audience.
- **Conduct outreach and promotional activities.**
- **Ensure that your messages and materials are updated frequently.**

For more information, please visit the IHS Healthy Heart Toolkit here:
<https://www.ihs.gov/sdpi/sdpi-toolkits/healthy-heart-program-toolkit/>

Chapter 5: Implementation & Tools

5.1 WHO RUNS A TRIBAL ENVIRONMENTAL HEALTH PROGRAM?

Environmental Health Governing Entity

Governing entities can directly and indirectly influence the direction of the environmental health program. The Public Health Accreditation Board lists the following criteria for a governing entity:

1. It is an official part of Tribal, state, or local government.
2. It has primary responsibility for policy-making and/or governing a Tribal, state, or local health department.
3. It advises, advocates, or consults with the health department on matters related to resources, policy making, legal authority, collaboration, and/or improvement activities.
4. It is the point of accountability for the health department.
5. In the case of shared governance (more than one entity provides governance functions to the health department), the governing entity, for accreditation purposes, is the Tribal, state, regional, or local entity that, in the judgment of the health department applying for accreditation, has the primary responsibility for supporting the applicant health department in achieving accreditation.

These criteria provide a strong framework for any public health program's governing body. The Tribal Government Environmental Health Program operates with specific authorities within its jurisdiction. These authorities could be set forth in statutory law, administrative rules, codes, ordinances, rules or resolutions. These authorities may be regulatory or programmatic.

Tribal Public Health Law is based on three principles:

- Tribal nations maintain inherent sovereignty.
- Tribes exercise this sovereignty through tribal law and governance.
- Federal Indian law affects the relationship between Tribes, states, and the federal government.

Tribes should have a resolution, ordinance, or executive order that sets forth its mandated environmental health operations and services, describes its authority and jurisdiction, and describes the governing entity's structure and composition (e.g., a Board of Health with a charter, the Chair's office, etc.).

Resources for Section 5.1:

- **Resource 5.1a: Public Health Terminology.** Glossary of useful terms for governing and managing programs.
- **Resource 5.1b: Association of State and Territorial Health Officials, Guide to Knowing Tribal Health.**
- **Resources 5.1c – 5.1e: Multiple examples of Tribal Health Programs’ governance structure and organizational chart.**
- **Resource 5.1f: CDC Profile in Public Health Law News.** Interview with Patrick Peck, Environmental Health Program Manager for the Seminole Tribe of Florida.
- **Resource 5.1g: Tribal Public Health: Law, Governance, and Leadership.** Presentation from the CDC Public Health Law Program.
- **Resources 5.1h – 5.1t: Multiple Tribal Resolutions, Codes, and Ordinances for Environmental Public Health.** For purposes of example.

5.2 OPERATING THE TRIBAL ENVIRONMENTAL HEALTH PROGRAM

Environmental Health Program Management

Organizational administration and management is the process of organizing, leading, and controlling resources to make decisions and achieve goals. Governmental environmental health departments must have a well-managed human resources and workforce development system, have knowledge about public health authorities and mandates, have data management capabilities, and be competent in general financial management. This requires an operational infrastructure that supports the performance of environmental health functions.

Building an Effective Environmental Health System

Investing in essential governmental environmental health services through dedicated resources will create an effective environmental health system that proactively protects communities and helps everyone attain good health. Federal, state, local, and tribal governments should adopt standard approaches to ensuring environmental health equity, protections and access for all, particularly vulnerable and at-risk populations.

Environmental health professionals work every day to ensure that the air we breathe, the water we drink, and the food we eat are safe and secure. No one would want a person without a medical degree performing surgery, nor should anyone want the safety of their food or water being determined by a person who is not a highly skilled professional.

Offering collaboration early on, enhancing their capabilities to detect and respond to threats, grounding policy and actions in evidence-based research, and ensuring that their services reach everyone are critical tenets of a system that can create resilient communities after a disaster.

GUIDELINES, POLICIES, & PLANS

The Tribal Government Environmental Health Program should have guidelines and policies that describe the environmental health services and activities as well as administrative functions. The Tribe will already have in place the policies and procedures for administrative functions and services such as IT support, use of the government automotive fleet, procurement planning and acquisitions, and office supplies. Environmental health guidelines and policies should be developed specifically for the Tribal program and incorporate all authorities and regulations that serve as the foundation for the governmental environmental health program.

Establishing annual goals and objectives in a work plan is a good method for documenting planned technical assistance and services. The work plan serves as a management tool for tracking progress, identifying strengths and weaknesses, and controlling the scope of services to those that can be realistically delivered. If the Tribe has contracted their environmental health program from the IHS, the scope of work from the annual funding agreement is a good starting work plan.

Additionally, the environmental health program will need to establish standard operating procedures and forms to perform the services, activities, and interventions such as inspections, operator training, outbreak investigation, etc.

FUNDING

The IHS is the primary source of funding for tribal and urban Indian health programs. It provides appropriations from Congress that are used to provide direct medical and specialty care services to eligible AI/AN people. Along with ambulatory primary care services, dental care, mental health care, and other clinical services, many Tribes are also served by community health (e.g., childhood immunizations, home visits) and environmental health (e.g., sanitation, injury prevention) programs.

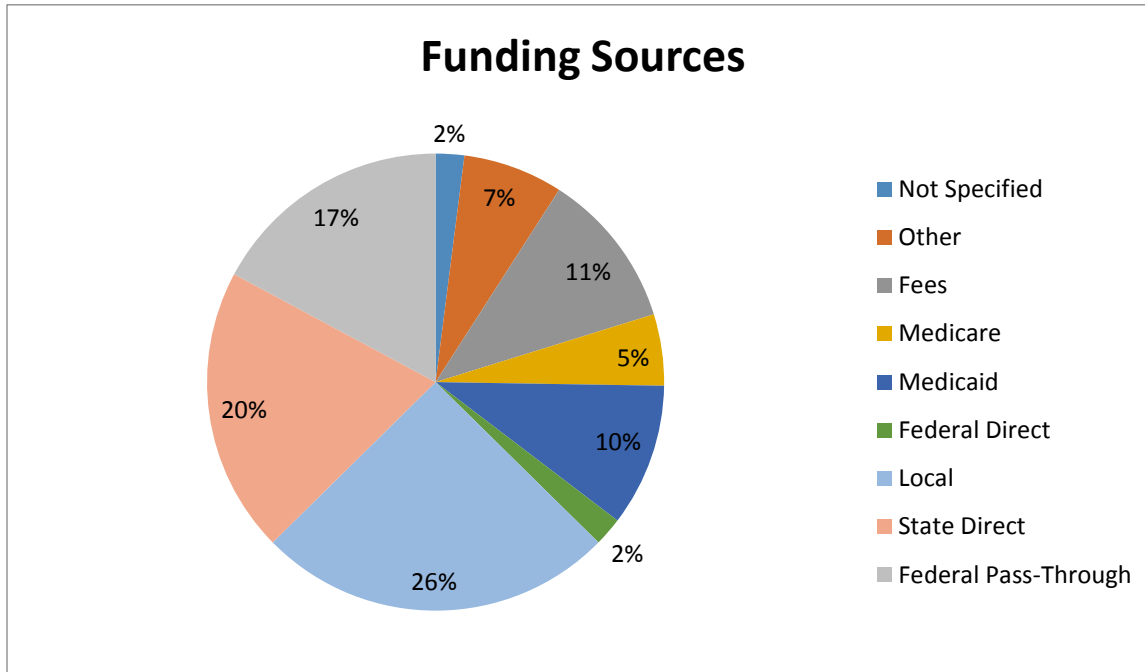
Indian health programs are often referred to by Indian Health Service funding authority: “Direct Service” (IHS), “Contracting” (P.L. 93-638 Title I), and “Compacting” (P. L. 93-638 Title V)---also known as the Indian Health Service, Tribal, Urban (I/T/U) programs with both P.L. 93-638 Title I and Title V considered Tribal.

In addition to IHS funds, tribal programs are eligible for a wide range of competitive grants and cooperative agreements from other federal agencies and state programs. Tribes also have options to use taxes and revenues from gaming and enterprises, fees for permitting/licensing and inspecting, health care revenue from third-party billing of insurance, Medicare, and Medicaid for funding their public health programs.

How are local health departments funded?

Local health departments (LHDs), on average, receive 25 percent of their funding from local sources— including city/township revenue and county revenue. Another 20 percent of local health department funding comes from direct state funds. Federal funds that “pass through” states en route to localities account for another 17 percent of the typical local health department revenues.

*Figure 5.1. Local Health Department Funding Sources**



Source: National Association of County and City Health Officials, 2009

*Among LHDs reporting detailed revenue data.

Resources for Section 5.2

- **Resource 5.2a: IHS Indian Health Manual, Part 3, Chapter 11. Environmental Health.**
- **Resource 5.2b: Sample Tribal Work Plan for Environmental Health.**
- **Resource 5.2c: Sample IHS Scope of Work for Delivering an Environmental Health Program through 638 Annual Funding Agreements.**
- **Resources 5.2d: IHS DEHS Activity Type and Facility Establishment Definitions.**
- **Resource 5.2e: IHS Portland Area DEHS, Risk-Based Guide for Prioritizing Facility and Operation Inspections.**
- **Resources 5.2f – 5.2z: Multiple example and sample guidelines, forms, charts, and policies for the implementation and day-to-day operations of an environmental health program.**

- **Resource 5.2aa: IHS DEHS Fund Distribution Methodology (final draft).** A reference guide to understanding the appropriations and flow of funds for delivering IHS environmental health programs.
- **Resource 5.2bb: IHS Portland Area DEHS Sample Fee Schedule.** A guide for Tribal Environmental Health Programs to use in establishing fees associated with a variety of services.
- **Resource 5.2cc: IHS Portland Area DEHS Sample Tribal Environmental Health Program Budget.**

5.3 STAFFING A TRIBAL ENVIRONMENTAL HEALTH PROGRAM

Program Leadership and Management

Successfully developing or taking over the leadership and management of environmental health programs requires expertise in 3 areas: technical, management, and leadership. Being able to address all 3 areas requires a combination of individual training and development and building a good team and/or support system of people with these abilities in mind.

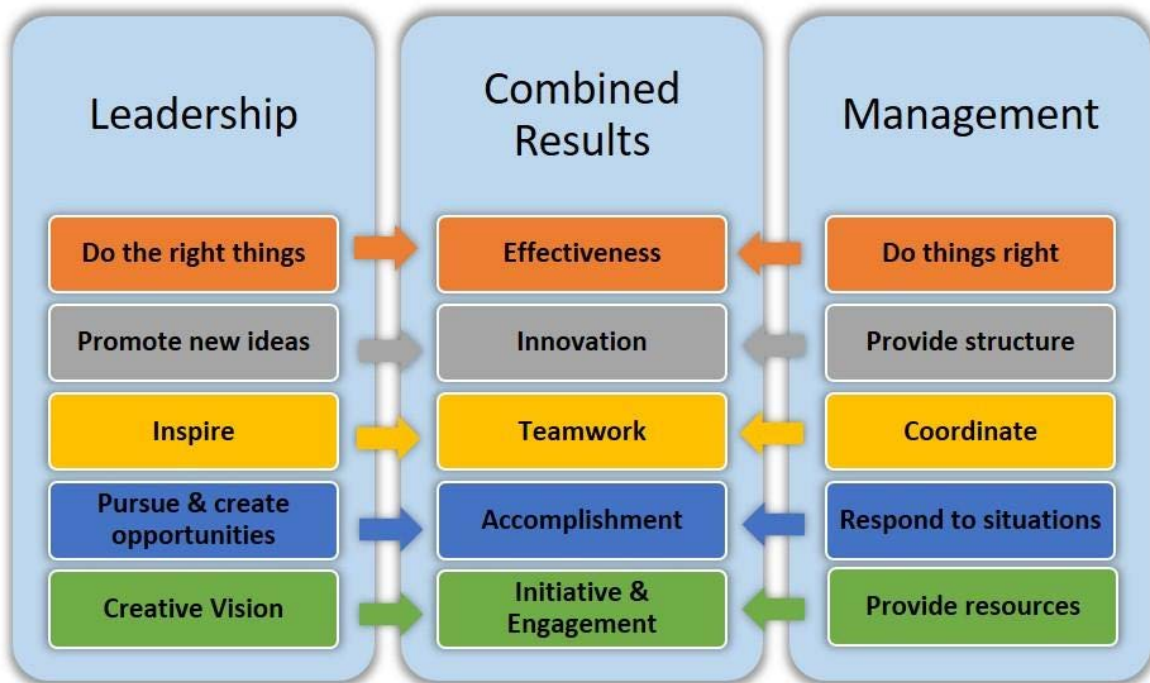
Figure 5.1 Three Components of Program Success



Management is about structuring work for a group of people while leadership is about inspiring those same people in ways that bring out their best while also driving larger organizational and/or Tribal initiatives. To the extent possible, match your and other people's roles and responsibilities with their natural strengths and be prepared to seek out training and development opportunities.

Both leadership and management skills are necessary to achieve the results associated with the administration of a successful program. Consider the processes you'll need to put in place to ensure these skills are practiced, such as regular meetings and facilitation methods to promote new ideas and ways to coordinate work across a team or multiple departments that might be involved in your environmental public health program and services.

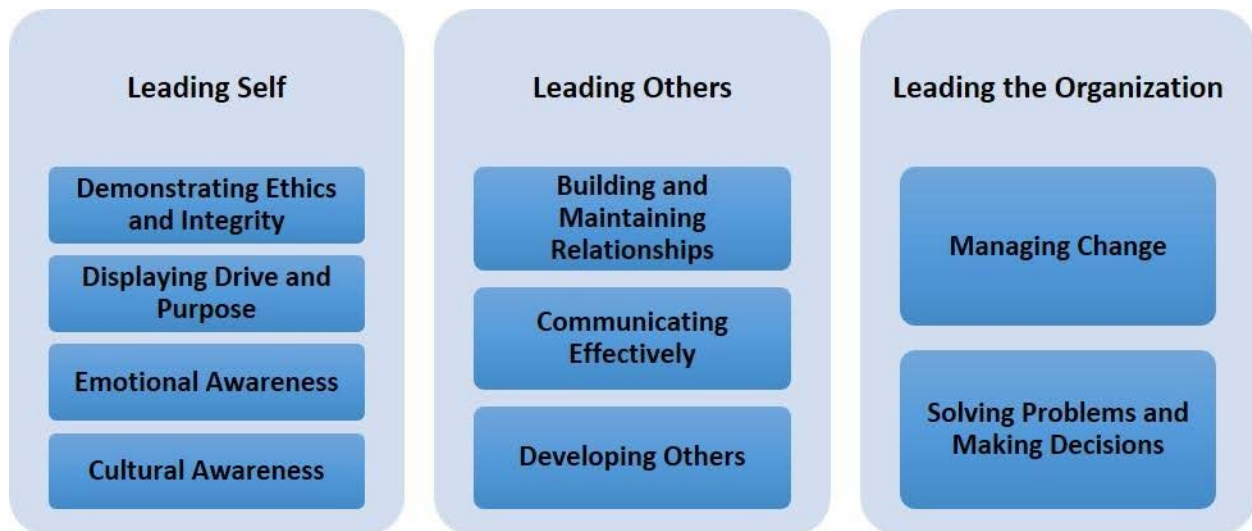
Figure 5.2: Leadership, Management, and their Combined Results



In 2008, a cross-functional workgroup of mid- and senior-level Office of Environmental Health and Engineering (OEHE) staff was assembled to develop the OEHE Leadership and Personal Development initiative (LPD).

The focus of the LPD is to grow leadership competencies to support OEHE's public and environmental health goals. The LPD Competency Model highlights the competencies that should be prioritized across OEHE and provides a framework for leadership and personal growth. You can use this framework for thinking about your abilities as well as those who will be helping you administer and deliver your environmental health program.

Figure 5.3 Leadership Competencies used in IHS's Leadership and Personal Development program



- **Leading Self** competencies are critical to all OEHE employees and serve as a foundation for development of the other competencies.
- **Leading Others** competencies become important for employees who increasingly participate in teams or change initiatives; serve as subject matter experts; or manage people, teams, and projects.
- **Leading the Organization** competencies will best serve employees who manage or frequently collaborate with multiple levels of employees or departments, interact with other IHS and partnering agency stakeholders, or are involved in the creation and implementation of organizational strategy.

The list below provides a list of development activities to help you and others build your competency in each area. You can also contact the Environmental Health Support Center (EHSC) for more information about upcoming opportunities in the OEHE Leadership and Personal Development program. The Environmental Health Support Center (EHSC) sponsors training courses on a wide variety of subjects related to the programs of the Indian Health Service's Office of Environmental Health and Engineering.

Suggested Activities for Developing Within Each Competency

LEADING SELF: Emotional Awareness

- Myers-Briggs Type Indicator
- StrengthsFinder
- Emotional Intelligence Assessment

LEADING SELF: Cultural Competency

- Diversity training
- Social justice training
- Understanding Your World View, Values and Beliefs

LEADING OTHERS: Communicating Effectively

- Public Presentation skills
- Critical Conversations skills
- Group Facilitation skills

LEADING OTHERS: Developing Relationships

- Conflict Management Skills
- Developing Influence Skills
- Leading Project Teams Skills
- Community Engagement Skills
- Assignment to Mentor

LEADING OTHERS: Developing Others

- Managing Performance Skills
- Coaching and Mentoring Skills

LEADING OTHERS: Solving Problems and Making Decisions

- Public Health Decision Making Skills
- Root cause analysis
- Decision-making styles

LEADING THE ORGANIZATION: Managing Change

- Change Management Skills
- Systems Thinking Skills
- Having a senior mentor

Building a Technical Workforce

In order to have a successful program, you will need to have at least one full-time professional Environmental Health Specialist devoted to the Tribe. The professional should have the technical competencies to carry out the program as listed below.

Definition of an Environmental Health Professional or Specialist

An environmental health professional or specialist is a practitioner with appropriate academic education and training and registration or certification to perform the following activities:

- investigate, sample, measure, and assess hazardous environmental agents in various environmental media and settings;
- recommend and apply protective interventions that control hazards to health;
- develop, promote, and enforce guidelines, policies, laws, and regulations;
- develop and provide health communications and educational materials;
- manage and lead environmental health units within organizations;
- perform systems analysis;
- engage community members to understand, address, and resolve problems;
- review construction and land use plans and make recommendations;
- interpret research utilizing science and evidence to understand the relationship between health and environment; and
- interpret data and prepare technical summaries and reports.

These competencies are best realized through a licensed professional. The REHS/RS is the most prevalent credential and professionals demonstrate competency in an impressive range of environmental health issues, directing and training personnel to respond to routine or emergency environmental situations, and providing education to their communities on environmental health concerns. In addition, REHS/RS credential holders are key members in ensuring communities are in compliance with local, state and federal environmental health regulations.

Just as important as the technical competencies are the cultural competencies of the professional. There are many challenges in working with unique cultures, sovereign Tribes and other jurisdictions. The environmental health professional must be able to work with all people in a respectful manner and be able to clearly communicate expectations. One method to demonstrate this competency is through the use of “Indian Preference” hiring authorities. It will be important to outline the minimum qualifications and standards you are looking for in the job position description and advertisement.

Resources for Section 5.3

- **Resource 5.3a: IHS OEHE Leadership and Personal Development Resource Guide.**
- **Resource 5.3b: Core Competencies for Local Environmental Health Professionals.**
- **Resource 5.3c: IHS Career Development Plan for Environmental Health Professionals.**
- **Resource 5.3d: IHS Portland Area DEHS, Sample Training Plan for Entry-Level Environmental Health Professionals.**
- **Resources 5.3e – 5.3j: Multiple sample position descriptions, MOAs, and contracts for environmental health professionals from Tribes and IHS.**

Chapter 6: Evaluation, Maintenance and Sustainability

6.1 RE-EVALUATING CAPACITY & MILESTONES

Revisit your planning documents as you begin to get your program off the ground. What goals and ideals were laid out as you began the process? What has changed?

Between six months and one year into implementation, revisit the Capacity Assessment<which one? and see what has changed. Where have you found resources you didn't know about? Where have you run into challenges that were more expensive or difficult than expected? This reflection is essential not only when getting a program started, but also when learning to adapt to changing circumstances.

Choosing your Metrics for Evaluating your Program

As you begin to implement your customized plan for Environmental Health to serve your community, it's crucial to have metrics set up as soon as possible so you can determine if you are achieving the results you desire. Ideally, stakeholders and community members should play a part in formulating your outcomes and associated metrics.

Often the acronym SMART is used to provide a guide for goal-setting.

- **S-specific.** What one issue or policy are you hoping to change?
- **M-measurable.** How will you know when you have reached the goal?
- **A- ambitious.** How will this be better than the status quo? Big dreams motivate us to think differently and work smarter to reach them.
- **R- realistic.** Balanced with ambition, can you envision a way this could happen if all the stars align?
- **T- time bound.** When will you check back in to see if you've reached the target?

For example, having a goal of "training every member of the community on safe use of car seats" might be an ambitious and measurable goal, but training may not actually impact the problem at hand, which is injury and/or death of infants due to unsafe and incorrect car seat use. It would be important, then, to have a secondary goal and outcome of "Reducing the number of infant car seat malfunction deaths to zero by 2020". This would help determine if the training was effective. It could be that training half the community is all that is needed to achieve this goal due to training participants sharing their new knowledge with friends and family members, which improves their car seat use and reduces injuries and deaths without attending the training.

There are many resources on program evaluation and metrics in the appendix guide, as well as across the spectrum of nonprofit and government agencies that can be helpful. Look for the following documents in Chapter 7, the appendix:

Not Perfection, But Responsiveness

It is important to note that very few new programs will hit all of their goals from the beginning. What is more important than immediate success is the opportunity and practice of measuring and, often, adjusting course so you stay responsive to program outcomes and emerging community needs. For example, if an important outcome for your community is to ensure good treatment for those with diabetes and prevention for those without diabetes, it will not happen overnight.

While it may be frustrating to look at a year's worth of data that shows that diabetes treatment is poor in one clinic and improving in another clinic, take the opportunity to learn what the improving clinic is doing. When you find small victories, take time to celebrate them, then use those lessons in other places that can benefit.

Resources for Section 6.1

- **Resource 6.1a: CDC Framework for Program Evaluation.**
- **Resource 6.1b PEPH Evaluation Metrics Manual.**
- **Resource 6.1c: WHO Guideline for Evaluation of Environmental Health Services.**

6.2 BUILDING A SUSTAINABLE PROGRAM

BUILDING A SUSTAINABLE PROGRAM

As mentioned in *Chapter 1 Keys to Success*, The Center for Public Health Systems Science (CPHSS), a public research center at the George Warren Brown School of Social Work at Washington University in St. Louis, offers the framework below for thinking about how to ensure the stability of a program. Please note that the CPHSS term “environmental support” has been changed to “stakeholder support” to avoid confusion.




CPHSS is a recognized leader in public health systems research and evaluation. The Center's vision is to shape public health systems and policies, leading to healthier individuals and communities. They have created [The Sustainability Framework and Assessment Tool](#), which we recommend you use to guide your efforts from the very beginning.

Using the CPHSS framework, sustainability is then best achieved through program development that includes:

- A long-term focus organized around a yearly **strategic planning** process, whether for your program specifically or as a part of your Tribal governance.
- Cultivating internal and external **stakeholder support** or a positive climate for your program and services through strong partnerships and regular communications

- Establishing **funding stability** through securing some or all of the following:
 - Financial support from local Tribe(s)
 - Grants from other sources (e.g., foundations, government, private funding)
 - Billing for services, when possible
 - Volunteers, donations, in-kind
 - Fundraising
- Caring for your on-going **partnerships** with key internal and external stakeholders
- Building **organizational capacity** to ensure the needed people, processes, and resources are in place to support your program so that its elements are consistently and efficiently implemented
- Performing regular **program evaluations** to based on objective measures and reliable data to inform on-going program implementation.
- Applying what you learn in your program evaluations to select and implement **program adaptations** to ensure efficacy, efficiency, and relevancy.
- Regular **communications** with internal and external stakeholders, including the public, about the scope and successes of the program and its services in order to continually build awareness and support.

External resources to assist in assessment and planning:

- [American Indian Development Associates](#)  [PDF] – This organization provides information on developing strategies for maintaining long-term programs.
- [Community Tool Box](#)  – This public health toolbox provides numerous resources for sustainability planning and additional tools and tips for those working on building healthier communities.
- [Program Sustainability Assessment Tool](#)  – This tool is designed to measure program capacity for sustainability by evaluating political support, funding stability, partnerships, organizational capacity, program evaluation, program adaptation, communications, and strategic plans.

Resources for Section 6.2

- **Resource: 6.2 CPHSS Sustainability Assessment**

APPENDIX: TOOLKIT RESOURCES

Summary List of EH Toolkit Resources by Chapter Section

Ch.	Citation
1.3a	Oregon Coalition of Local Health Officials. (2014). <i>Local public health in Oregon: An overview</i> . Available from: http://public.health.oregon.gov/Pages/Home.aspx
1.3b	Oregon Health Authority, Public Health Division (OHA-PHD). (2016). <i>Public health modernization manual</i> , OHA 8714 (rev. 6/16). Available from: healthoregon.org/modernization
1.3c	OHA-PHD, Oregon Public Health Advisory Board. (2016). <i>Statewide public health modernization plan: A modern public health system for every person in Oregon, Oregon revised statutes, Chapter 431</i> , OHA 8722 (2/2017). Available from: healthoregon.org/modernization
1.3d	Washington Department of Health (WADOH). (2016). <i>Washington: Definition of foundational public health services</i> , Version 1.2. Available from: http://www.doh.wa.gov
1.3e	WADOH, Washington State and Local Public Health Officials, Washington Board of Health. (2016). <i>Public health modernization: A plan to rebuild and modernize Washington's public health system</i> . Available from: http://www.doh.wa.gov
2.3a	Seminole Tribe of Florida (STOF), Environmental Health Program. [Description and links to products and services, accessed 11/24/16]. Available from: http://www.semtribe.com/Services/Health.aspx
2.3b	U.S. Department of Health and Human Services (DHHS), Indian Health Service (IHS), Portland Area Office, Division of Environmental Health Services (PAO-DEHS). [Program profile. 2016].
2.3c	McOliver, C.A., Camper, A.K., Doyle, J.T., Eggers, M.J., Ford, T.E., Lila, M.A., ...Donatuto, J. (2015). Community-based research as a mechanism to reduce environmental health disparities in American Indian and Alaska Native communities. <i>International Journal of Environmental Research and Public Health</i> , 12, 4076-4100. doi:10.3390/ijerph120404076. [Examples of community environmental projects and services].
2.4a	IHS-PAO-DEHS. [Tribal Governmental Environmental Health Program, Service Delivery Decision Tree, 2016].
2.4b	IHS. <i>Differences between Title I contracting and Title V compacting under the Indian Self-Determination Education Assistance Act</i> . [Reference guide]. Available from: https://www.ihs.gov/SelfGovernance/
2.4c	Helmsley Charitable Trust to the Sanford Health Foundation, Warne, D. (2013). <i>638 Toolkit: Considerations for Tribes regarding contracting or compacting clinical services from the Indian Health Service under PL 93-638</i> .
2.4d	IHS. [Programs, Functions, Services, and Activities for the Portland Area, Environmental Health Services, pp. 39-40 of 53, 2010].

Ch.	Citation
2.4e	Intergovernmental Memorandum of Understanding (MOU), Public Health Seattle-King County and Snoqualmie Tribe, # PHSKC2007NM042. (2007). [For purposes of example]. Retrieved via internet search.
2.4f	MOU between North Dakota Department of Health and Lake Region District Health Unit (n/a). [For purposes of example]. Retrieved via internet search.
2.4g	MOU between Chignik Bay Tribal Council and the City of Chignik (2005). [For purposes of example]. Retrieved via internet search.
2.4h	MOU between Ashland County Health Department and Bad River Health Services (n/a). [For purposes of example]. Retrieved via internet search.
2.4i	Olympic Regional Tribal-Public Health Collaboration and Mutual Aid Agreement (n/a). [For purposes of example]. Retrieved via internet search.
2.4j	MOU between Tulalip Tribes and IHS-PAO-DEHS (2009). [For purposes of example]. Retrieved via internet search.
2.4k	Institute for Wisconsin’s Health, Incorporated. (2014). <i>Exploring service sharing to improve tribal public health: agreement examples and worksheet</i> Available from: www.instituteforwihealth.org
2.4l	Stier, D.D., Thombley, M.L., DHHS, Centers for Disease Control and Prevention (CDC), Public Health Law Program. (n/a). <i>Public health mutual aid agreements – a menu of suggested provisions</i> . Retrieved via internet search.
2.4m	Northwood Shared Services Project WI; Center for Sharing Public Health Services, Robert Wood Johnson Foundation. (2014). <i>Shared services in public health</i> . Available from: http://phsharing.org/sites/wisconsin/
4.1	BSR. (2011). <i>Stakeholder Mapping</i> . [Reference guide from <i>Five-Step Approach to Stakeholder Engagement</i>]. Available from: https://www.bsr.org/
5.1a	IHS-PAO-DEHS. [Public health terminology: Glossary of useful terms for governing and managing programs, 2016].
5.1b	Association of State and Territorial Health Officials. (n/a) <i>Knowing tribal health, 202-371-9090</i> . Available from: www.astho.org
5.1c	STOF, Environmental Health Program. (2016). [Example of governance structure and organizational chart, accessed 06/16]. Available from: http://www.semtribe.com/Services/Health.aspx
5.1d	Yurok Tribe, Environmental Health Program. (2012). [Example of governance structure and organizational chart, accessed 11/14/16]. Available from: http://www.yuroktribe.org/departments/
5.1e	Fort Peck Tribe, Tribal Health Programs. [Example of governance structure and organizational chart, accessed 11/14/16]. Available from: http://www.fortpecktribes.org/fpth
5.1f	CDC. (2016, November). Profile in public health, interview with Patrick Peck, environmental health program manager for the STOF. <i>Public health law news</i> . Available from: https://www.cdc.gov/phlp/news/2016/2016-11-16.html
5.1g	Hoss, A., CDC. Public Health Law Program (2016). <i>Tribal public health: Law, governance, and leadership</i> . [Presentation from the National Tribal Forum for

Ch.	Citation
	Community Health Practice, 08/31/16, Spokane, WA].
5.1h	Delaware Tribe of Indians. (2013). [Resolution of the Tribal Council of the Delaware Tribe of Indians to authorize to establish the Delaware Tribal Health Department Establishment Act, Resolution 2013-41].
5.1i	Confederated Tribes of the Umatilla Indian Reservation. (2015). <i>Environmental Health and Safety Code</i> . [For purposes of example]. Retrieved via internet search.
5.1j	Spirit Lake Tribe. Law and Order Code. (2015). <i>Title 16: Environment, Health, and Sanitation</i> . [For purposes of example]. Retrieved via internet search.
5.1k	Jamestown S'klallam Tribe. Tribal Code. (2012). <i>Title 28 – Public Health and Safety Code</i> . [For purposes of example]. Retrieved via internet search.
5.1l	Tanana Chiefs Conference, Inc. (2001). <i>Environmental ordinance development for Alaska Tribes</i> . Retrieved via internet search.
5.1m	Tulalip Tribes. (1989). Tulalip Food Service Sanitation Ordinance. [For purposes of example, accessed 10/6/16]. Available from: http://www.tulaliptribes-nsn.gov/
5.1n	STOF, Environmental Health Program. (n/a). Food Service License Application. [For purposes of example]. Available from: http://www.semtribe.com/Services/Health.aspx
5.1o	National Indian Justice Center. (n/a). <i>Model Tribal Waste Disposal Ordinance</i> . Retrieved via internet search.
5.1p	National Indian Justice Center. (n/a). <i>Model Tribal Water Quality Ordinance</i> . Retrieved via internet search.
5.1q	National Indian Justice Center. (n/a). <i>Model Tribal Air Quality Ordinance</i> . Retrieved via internet search.
5.1r	Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians. Tribal Code. (2005). <i>Title 5 – Regulatory Provisions: Chapter 5-5 Indoor Air Quality</i> . [For purposes of example]. Retrieved via internet search.
5.1s	Swinomish Tribe. (2004). <i>Title 12 – Building and Construction: Chapter 6 Ventilation and Indoor Air</i> . [For purposes of example]. Retrieved via internet search.
5.1t	Saginaw Chippewa Indian Tribe of Michigan. (1989). <i>Ordinance No. 21: Prevention and Control of Diseases and Disabilities</i> . [For purposes of example]. Retrieved via internet search.
5.2a	IHS-DEHS. (2013). <i>Indian Health Manual, Part 3, Chapter 11: Environmental Health</i> . Available from: https://www.ihs.gov/IHM/index.cfm
5.2b	IHS-PAO-DEHS. [Tribal Work Plan, 2009].
5.2c	IHS-PAO. [Sample Scope of Work (Programs, Functions, Services, and Activities) for 638 Annual Funding Agreements, including environmental health services, 2011].
5.2d	IHS-DEHS. [Activity Type Definitions for the environmental health program, current].
5.2d	IHS-DEHS. [Facility Establishment Type Definitions for the environmental health program, current].
5.2e	IHS-PAO-DEHS. [Facility and Operation Inspection Risk Assessment Guide, 2013].

Ch.	Citation
5.2f	National Indian Gaming Commission. (2008). <i>Environmental, Public Health and Safety Site Visit Survey</i> . [Survey checklist for health and safety compliance in gaming facilities].
5.2g	Partnership for Food Protection, National Workplan Workgroup. (2013). <i>Model for Local Federal/State Planning and Coordination of Field Operations and Training</i> .
5.2h	Conference for Food Protection (CFP). (2012). <i>Food Establishment Inspection Report</i> . Available from: http://www.foodprotect.org/
5.2i	U.S. DHHS, Food and Drug Administration, CFP. (2008). <i>Plan Review for Food Establishments</i> . Available from: http://www.foodprotect.org/
5.2j	CFP. (2014). <i>Recommended Guidance for Mobile Food Establishments</i> . Available from: http://www.foodprotect.org/
5.2k	U.S. Department of Agriculture, Food and Nutrition Service (FNS). (2010). <i>FNS Handbook 501: Chapter 7 – Warehousing and Inventory Control</i> . Available from: https://www.fns.usda.gov/
5.2l	IHS-DEHS. [Online Food Handler Training System, User Guide, 2013. System can be accessed: https://www.ihs.gov/foodhandler/].
5.2m	IHS-DEHS. [Healthy Homes Checklist based on the National Center for Healthy Home and American Public Health Association (APHA), based on the National Healthy Housing Standard, draft – 2016].
5.2n	DHHS, Administration for Children and Families. Office of Head Start. (2016). FY 2016 Environmental Health and Safety Monitoring Protocol. Available from: https://eclkc.ohs.acf.hhs.gov/hslc/grants/monitoring/docs/fy2016-EnvHS.pdf
5.2o	IHS-DEHS. [Institutional Facility Checklist, current].
5.2p	CDC. (2006). <i>Integrated pest management: Conducting urban rodent surveys</i> . Available from: https://www.cdc.gov
5.2q	CDC. (2008). <i>Environmental Health Assessment Form for Shelters: For rapid assessment of shelter conditions during disasters</i> .
5.2r	DHHS. Agency for Toxic Substances and Disease Registry. (n/a). <i>Safeguarding communities from chemical exposures</i> . Available from: https://www.atsdr.cdc.gov
5.2s	IHS-PAO-DEHS. [Flowchart for conducting a consumer product complaint investigation, 2016].
5.2t	IHS-PAO-DEHS [Flowchart for conducting an environmental contamination or spill investigation, 2016].
5.2u	American Public Health Association (APHA). (2017). <i>Public Health Talks Environmental Tracking: Environmental Public Health Tracking Toolbox</i> . Available from: http://www.apha.org
5.2v	IHS-PAO-DEHS. [Description for Environmental Disease and Injury Monitoring and Investigation Program, 2016].
5.2w	New Jersey Department of Health, Communicable Disease Service. (2014). <i>General Guidelines for the Control of Outbreaks in School and Childcare Settings</i> . Retrieved via internet search.

Ch.	Citation
5.2x	OHA-PHD. (n/a). Respiratory Disease Outbreaks: Summary of respiratory outbreak investigation strategies. [Accessed 02/12]. Available from: https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/Outbreaks/Pages/respdisese.aspx
5.2y	Council to Improve Foodborne Outbreak Response. Council of State and Territorial Epidemiologists. (2014). <i>Guidelines for Foodborne Disease Outbreak Response, 2nd edition</i> . Available from: http://www.cifor.us/
5.2z	Minnesota Department of Health. (n/a). Waterborne Outbreak Investigations. [Accessed 09/14]. Available from: http://www.health.state.mn.us/divs/idepc/dtopics/waterborne/outbreaks/investigation.html
5.2aa	IHS-DEHS. [DEHS Fund Distribution Methodology or DEHS Criteria – 2009 Final Draft, reference for understanding appropriation and flow of funds for environmental health services].
5.2bb	IHS-PAO-DEHS. [Sample fee schedule for a tribal governmental environmental health program, with a variety of environmental health services and activities, 2016].
5.2cc	IHS-PAO-DEHS. [Sample budget for a tribal governmental environmental health program, 2016].
5.3a	IHS, Office of Environmental Health and Engineering. (2013). <i>Leadership and Personal Development Resource Guide</i> .
5.3b	CDC, National Center for Environmental Health. APHA. (2001). <i>Environmental health competency project: Recommendations for core competencies for local environmental health practitioners</i> . Available from: https://www.cdc.gov/nceh/ehs/corecomp/core_competencies_eh_practice.pdf
5.3c	IHS-DEHS. (n/a). <i>Career Development Plan for Environmental Health Professionals</i> .
5.3d	IHS-PAO-DEHS. [Entry-level employee, Environmental Health Training Plan, 2016].
5.3e	Tribal Environmental Health Specialist Job Description. (2015). [For purposes of example]. Retrieved via internet search
5.3f	Spirit Lake Tribe Environmental Health Specialist Job Description. [2016]. For purposes of example]. Retrieved via internet search
5.3g	Tribal Public Health Sanitarian Job Description. [For purposes of example]. Retrieved via internet search
5.3h	Independent Contract Agreement to provide Tribal Environmental Health Services. (2016). [For purposes of example]. Retrieved via internet search
5.3i	IHS. Memorandum of Agreement under P.L. 93-638, Sec. 104(b). (2013). [Assignment of a commissioned officer to work as an IHS employee for Tribal Environmental Health Services. For purposes of example].
5.3j	IHS-PAO-DEHS. Environmental Health Specialist Job Description, GS-11 (junior field). [For purposes of example].

Ch.	Citation
6.1a	CDC. (1999). <i>Framework for program evaluation</i> . <i>MMWR</i> , 48. RR-011. Available from: https://www.cdc.gov
6.1b	DHHS. National Institute for Environmental Health Sciences. (2012). <i>Partnerships for environmental public health: Evaluation metrics manual</i> . NIH Publication No. 12-7825. Available from: https://www.niehs.nih.gov/research/supported/translational/peph/metrics/
6.1c	Drew, C.H., van Duivenboden, J., Bonnefory, X. World Health Organization, Europe Series 90. (2000). <i>Environmental health services in Europe 5: Guidelines for evaluation of environmental health services</i> . ISBN 92 890 1357 5 Available from: http://www.euro.who.int/en/publications/abstracts/environmental-health-services-in-europe-5.-guidelines-for-evaluation-of-environmental-health-services
6.2	Washington University. Center for Public Health Systems Science. (2013). <i>The program sustainability assessment tool</i> . v2. Available from: https://sustaintool.org/

Recommended Resources Used in the Development of the EH Toolkit

Source (alpha order)	Link	What to look for
Centers for Disease Control and Prevention Environmental Health Services: EnvPHPS 10 Essential Services Toolkit	https://www.cdc.gov/nceh/ehs/envphps/essential_services_toolkit.htm http://www.cdc.gov/nphpsp/essentialservices.html	
Centers for Disease Control-Environmental Public Health Online Classes	http://www.cdc.gov/nceh/ehs/eLearn/EPHOC.htm	
Indian Health Service, Division of Environmental Health Services, HQ and Portland Area	https://www.ihs.gov/dehs/ https://www.ihs.gov/portland/dehs/	Ten Essential Environmental Health Services, Documents and Resources
National Association of County and City Health Officials (NACCHO)	http://www.naccho.org/	NACCHO University, Environmental Public Health Primer, Management Essential Training Series
Northwest Center for Public Health Practice (at University of Washington)	http://www.nwcphp.org/	
University of Kansas Community Tool Box	http://ctb.ku.edu/en	
Program Sustainability Assessment Tool (by Washington University)	https://sustaintool.org/	
Seminole Tribe of Florida, Environmental Health Program Director, Mr. Patrick Peck, CEHP, RS/ REHS, DAAS, MA	http://www.semtribe.com/Services/EHP.aspx Contact person available for questions: Email: patrickpeck@semtribe.com Work cell phone: 954-410-2482. Office phone: 954-985-2330 ext. 10615	