From Inventory to Implementation:

Septic Mapping and Outreach as the First Step Toward Effective Tribal Septic Management

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CENTER FOR
INDIGENOUS HEALTH



SWINOMISH INDIAN TRIBAL COMMUNITY
DEPARTMENT OF ENVIRONMENTAL PROTECTION





Introductions

Swinomish Department of Environmental Protection (SDEP)

Vision: Preserving our culture by connecting our Tribal citizens to their natural resources.

Mission: To protect and restore the natural environment and the health and welfare of the Swinomish Indian Tribal Community for present and future generations.

Johns Hopkins Center for Indigenous Health (JHCIH)

A non-profit public health organization nested within Johns Hopkins University.

Vision: Thriving Indigenous communities worldwide.

Mission: We work in partnership with communities to advance Indigenous well-being and health leadership to the highest level.

Swinomish Indian Tribal Community

- Treaty of Point Elliott 1855
  - Confirmed SITC's pre-existing Treaty-reserved rights
    - Right of taking fish at usual and accustomed grounds
- Enrollment 1,054, with 790 living on Reservation (2020 Census).
- Modern-day Tribe sustains old ways & values
  - Salmon fishing, subsistence shellfishing, hunting & gathering
  - 1st salmon ceremony, canoe journey, clam bake, etc.
- Looking ahead 7 generations

•"*We didn't inherit this earth from our grandparents, or our parents, we borrowed it from our children. It's just loaned to us, we are stewards of this earth." –Brian Cladoosby*

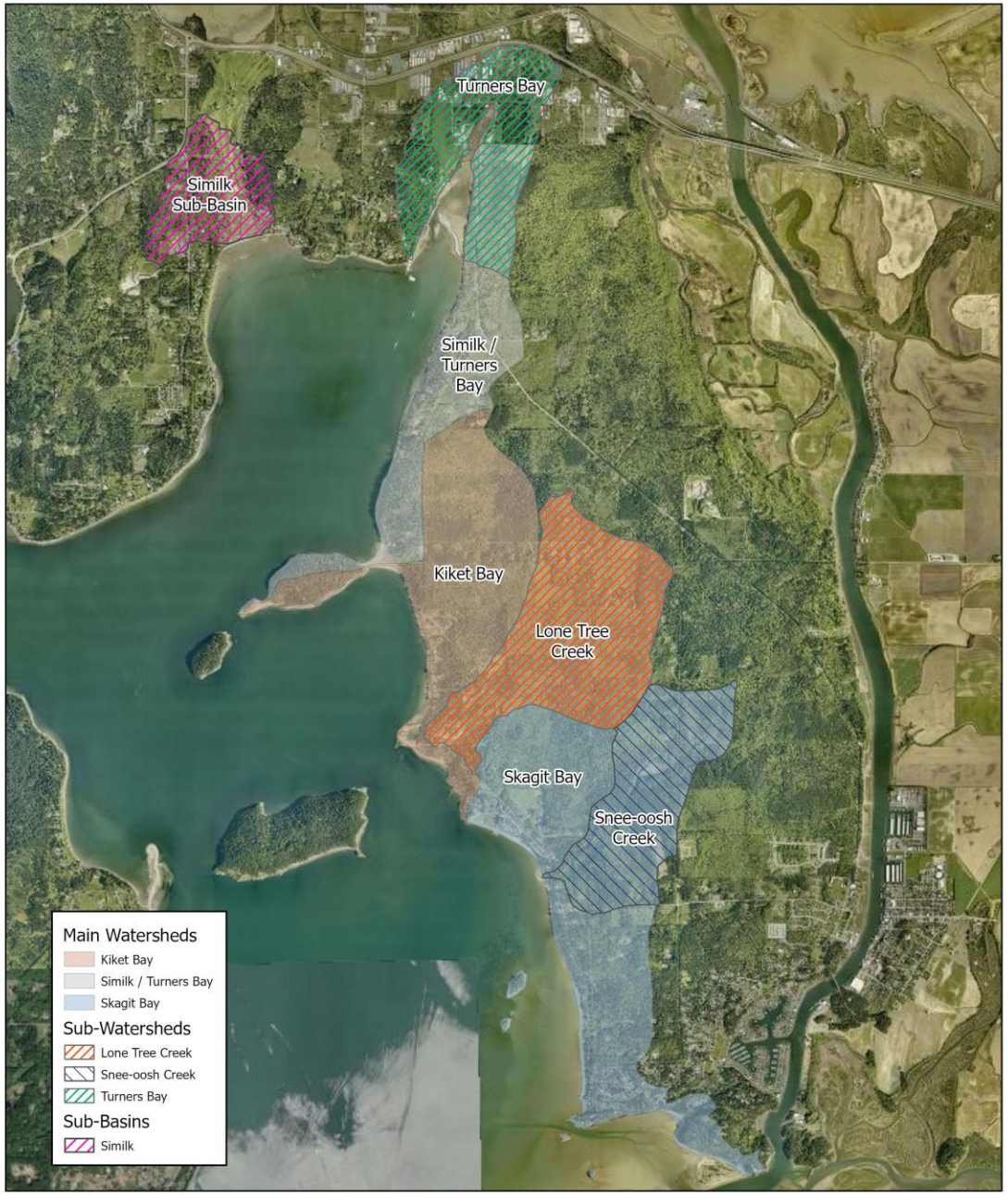




Swinomish Pollution Identification & Correction (PIC) Program

- Identifies and corrects bacterial pollution sources impacting Tribal waters
- Partners with local, state, Tribal, and federal agencies to protect water quality
- Uses source tracking and homeowner engagement to address pollution sources
- Provides financial assistance for septic system maintenance and repairs
- Eligible services include inspections, pump-outs, dye tests, and select minor repairs

Spəc Happens,
Septic Care Matter



PIC Watersheds Map

0 0.250.5 1 Miles

The Swinomish Indian Tribal Community makes no claim as to the completeness, accuracy, or content of any data contained herein. This map is not intended to reflect the exterior boundaries of the Swinomish Indian Reservation. No part of this document may be reproduced without prior permission of the Swinomish Indian Tribal Community. PIC_Watersheds_Map_20251014_HMB.aprx. User name: hbock, 10/22/2025. Pictometry 2025.

SWINOMISH INDIAN TRIBAL COMMUNITY

The Problem

- Data gaps identified during PIC investigations
- Septic records fragmented across multiple entities
- Land status and jurisdictional complexities limited data access
- Incomplete system information hindered pollution source investigations
- No centralized Tribal system for tracking OSS records and compliance
- Comprehensive inventory needed to support water quality protection



Forming a Relationship

April 2025

Maya Presents at WSEHA AEC

Summer 2025

Follow-up meetings identified opportunities for collaboration

January 2026

Contract signed & official collaboration began

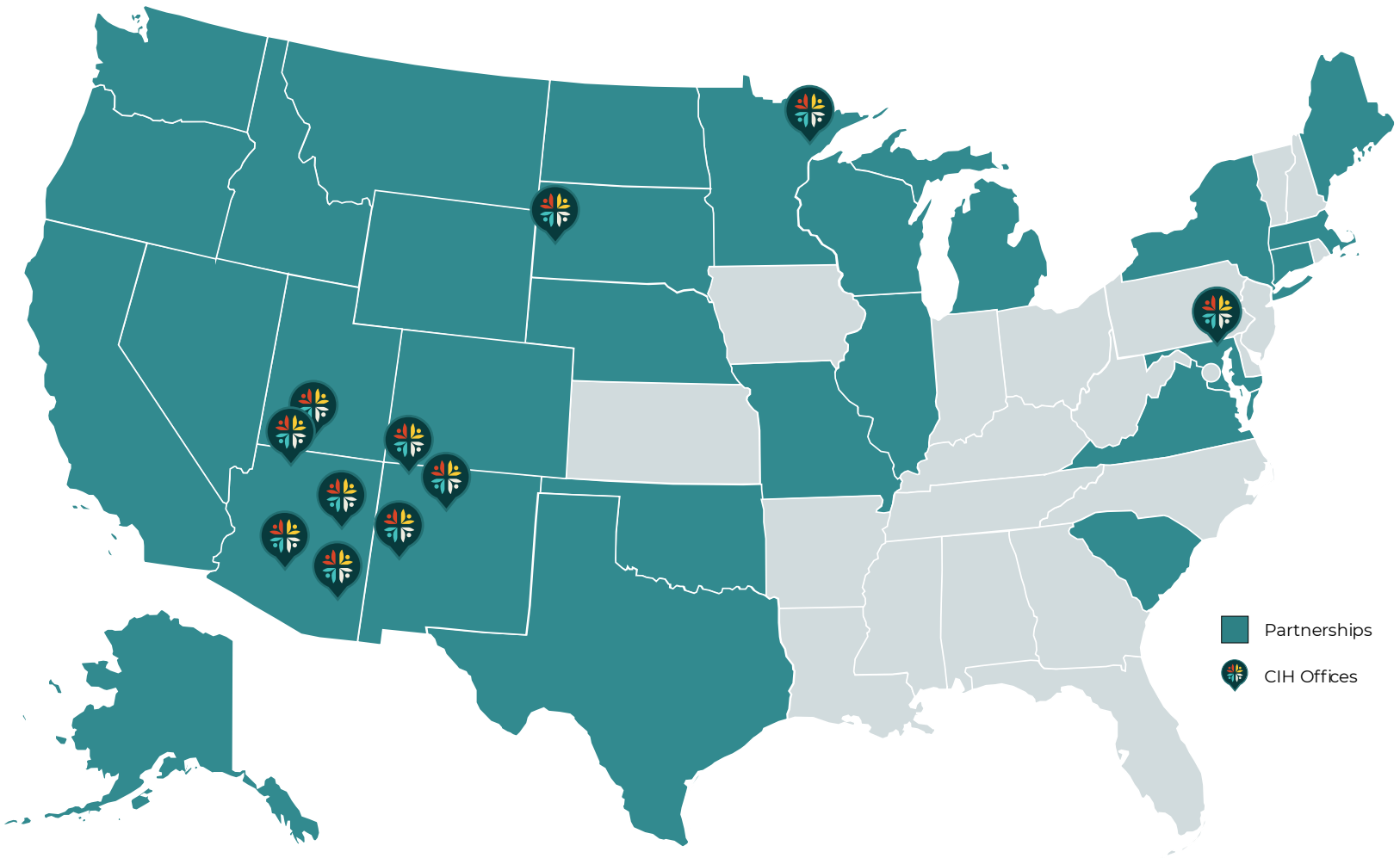
August 2026

Contract ended

October 2026

Presenting on partnership!

JHCIH's Scope



Today, we have 350+ staff members and faculty working at the Center.

80% of the Center's employees are Indigenous

Over **90%** of the Center team members work on the frontlines of Indigenous communities

Programming across **29** states and **186** communities.

Current Project



Project Goal

To develop a complete inventory of all household wastewater systems across Swinomish Tribal lands and protocols for in-person verification of unknown systems.

Phase 1: Create wastewater system inventory.	**Phase 2:** Develop a community-informed methodology for verification.

General Stakeholders Involved

- Dept. Of Environmental Protection (DEP)
  - Land Management Dept.
    - GIS
  - Planning Dept.
    - Permitting
  - Utility Authority
  - Public Health Dept.
  - Communications Dept.





Phase I

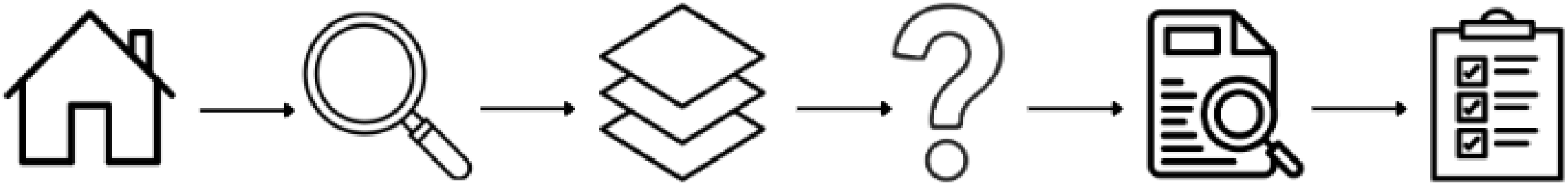
Create a Wastewater System Inventory

Determined which households have:

- **Unknown Information** - No wastewater system information was found for the household in any available data sources.
- **Incomplete Information** - Available data sources indicate that the household has a septic system, but the specific type of septic system is not noted.
- **Conflicting Information** - Available data sources indicate more than one type of wastewater system for the household.



Merging Wastewater Data Sources



Create a Basemap of All Residential Structures

Explore Data Sources and Find Join Fields

Merge Wastewater Data with Basemap

Interpret Data

Analyze Data

Finalize Inventory

Phase I Stakeholders

- **Swinomish DEP**
  - Lead & coordinate
- **Johns Hopkins CIH**
  - Create WW system inventory
  - Ensure legacy of data workflows
    - Transparency, interpretability & customizability
- **Swinomish Land Management**
  - Historical knowledge
  - Provide data sources
    - Tax authorities, DOH, SUA, ORME, etc.
- **Swinomish Utility Authority**
  - Inform with current workflow
  - Historical knowledge



Phase II


PolyScience
Soaky
7/21/2026
BioClave
Benchmark
Nitrile Gloves

Household Wastewater Assessment Methodology

- Co-development of assessment materials and outreach strategy needed to conduct a future wastewater inventory effort.

- Swinomish DEP and Tribal partners guided the development of a community-informed approach to identify, document, and verify household wastewater systems across Swinomish Tribal Lands.

- To kick-off Phase II, Swinomish DEP graciously hosted an in-person site visit.
    - Site visit emphasized the importance of place-based knowledge & relationships

Phase II Stakeholders

- **Swinomish DEP**
  - Lead & coordinate
  - Tribal staff assist with community context, outreach strategy, & implementation ideas
- **Johns Hopkins CIH**
  - Co-develop methodology, assessment form, and outreach strategy
- **Swinomish Public Health**
  - Assist with ideas for implementation
  - Will be involved in long-term outreach & enforcement
- **Swinomish Communications**
  - Ensure materials are sufficient & compatible with other Tribal outreach materials



Phase II Deliverables

- Outreach strategy
  - Included outreach methods and approaches grouped by:
    - Non-Tribal Households
    - Tribal Households
- Assessment components
  - Household contact procedures
  - In-person household visits
  - Assessment administration
    - Resource connecting
    - Assessment information management

Next Steps & Future Work



From Inventory to Long-Term Management: ORME

Comprehensive OSS inventory established → Inventory data will be integrated into ORME → Centralized system for records, inspections, and maintenance tracking

Supports long-term Tribal septic management → Pathway to becoming the first Tribal regulatory entity in ORME → Moves from inventorying systems to actively managing infrastructure







Outreach Campaign

Community Awareness

- Inform residents of future efforts
- Septic maintenance education
- Connection to WQ
- Purpose & benefits

Targeted Outreach

- Door-to-door visits
- Fill inventory data gaps
- JHCIH survey
- Improve reliability of septic records

Lessons Learned

Successes

- Turned fragmented records and datasets into a usable inventory
- Highlighted where data gaps are and outlined next steps
- Positioned the Tribe to have future capabilities to independently track & manage OSS information
- Built a new partnership

Challenges

- GIS data cleaning
  - Time intensive & tedious
- Jurisdictional complexity
- Need for ongoing data maintenance after partnership
- Nuances of outreach methodology for Tribal vs. Non-Tribal households





Questions?

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