

Chignik Subregional Watershed Plan Implementation Strategies

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Chignik Subregional Watershed Plan: Celebration & Implementation



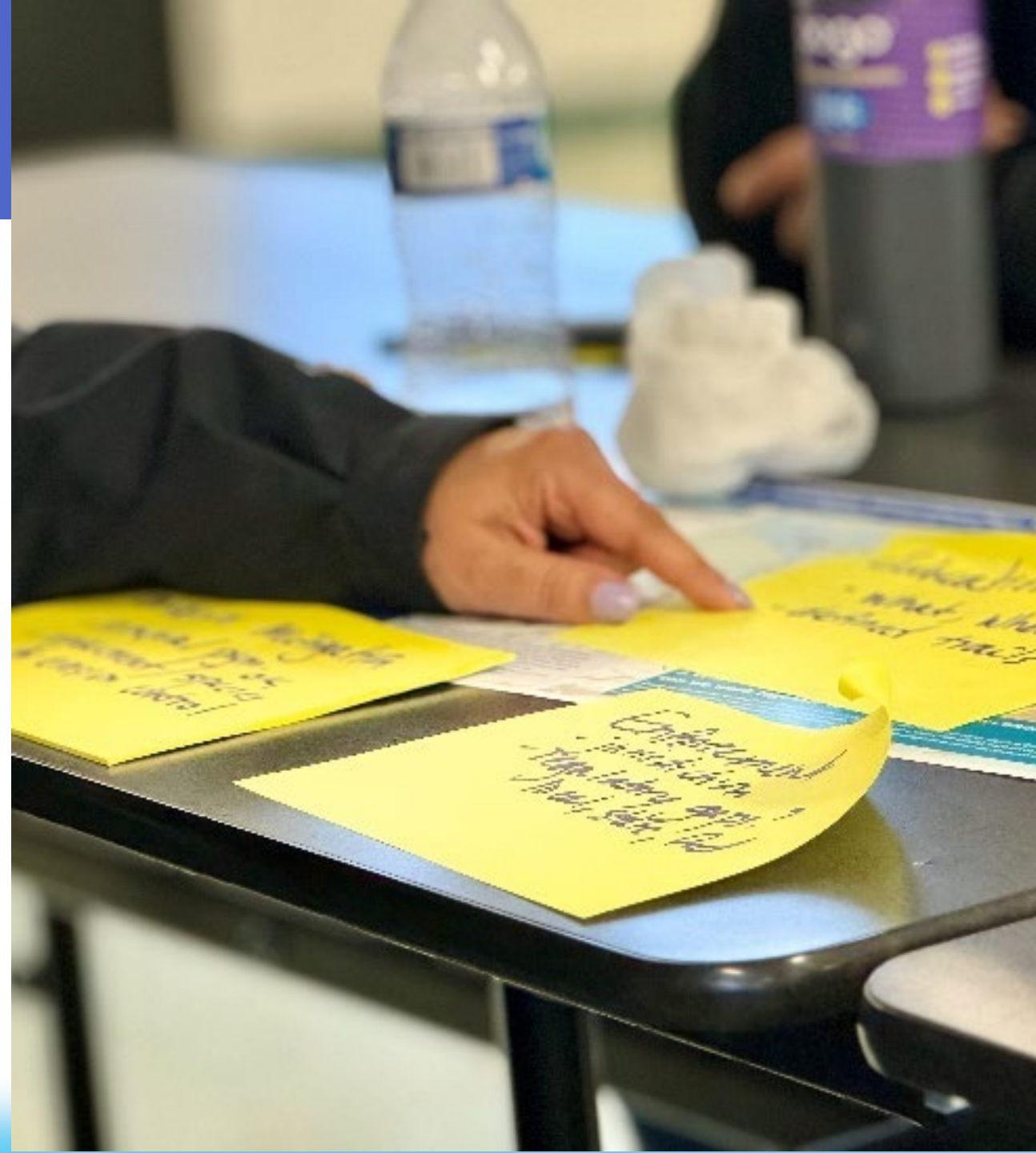
Presentation at the 2025 Chignik Regional Resiliency Symposium, June 25, 2025

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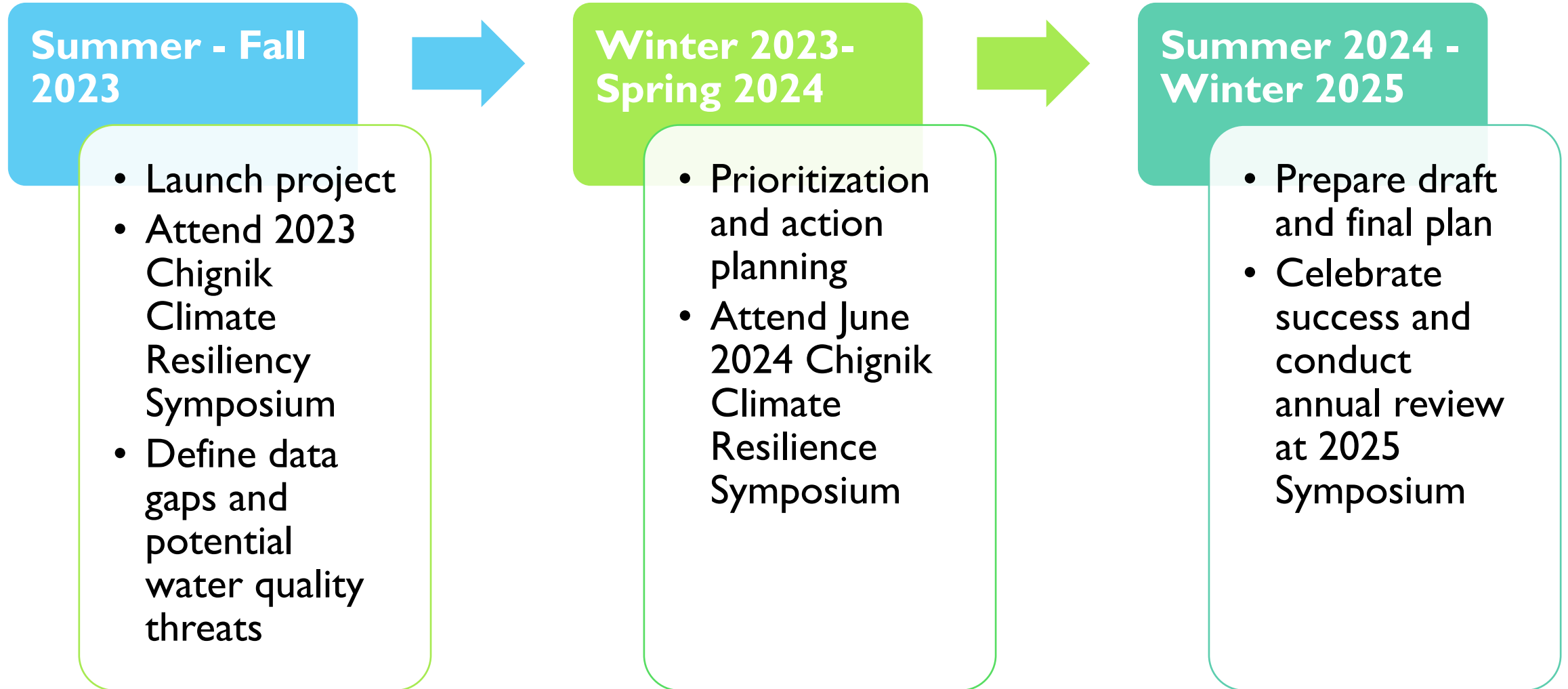


Presentation Overview

- Review Plan Process & Objectives
- Share Guiding Principles
- Review Implementation Strategies



Watershed Plan Timeline



Thank you to everyone who contributed! A special thank you to:

- Chignik Subregion
 - Chignik Bay Tribal Council: Debbie Carlson, Jeanette Carlson
 - Chignik Intertribal Coalition: George Anderson
 - Chignik Lake Traditional Council: Denise Bereskin, Zita Andrews
 - Chignik Regional Aquaculture Association: Austin Shangin, Chuck McCallum
 - Chignik River Limited: Ron Lind
 - City of Chignik: Dannica Anderson
 - Native Village of Chignik Lagoon: Michelle Anderson, Oscar Mills, Sabrina Anderson
- Partners and Supporters
 - Alaska Department of Environmental Conservation: Mary Inovejas and Laura Eldred
 - Artesian Knowledge: Marcus Geist
 - Bristol Bay Heritage Land Trust: Tim Troll
 - Flensburg Consulting: Sue Flensburg
 - Lake and Peninsula Borough: Danica Wilson, Jordan Keeler, Nathan Hill
 - University of Alaska Fairbanks, Alaska Coastal Cooperative: Chris Maio, Matthew Balazs
- 2023 and 2024 Chignik Regional Resiliency Symposium Participants

This project was funded in part by a Department of Environmental Conservation Alaska Clean Water Actions grant with support from the U.S. Environmental Protection Agency.

Watershed Plan Objectives

- Summarizes what we know today
- Shares how the watershed is valued
- Collaboratively identifies and prioritizes projects that will promote water quality



Watershed Plan Components

**Introduction &
Watershed
Description**

**Potential Water
Quality Threats**

**Implementation
Plan**

- Guiding Principles
- Strategies
- Actions

*Our focus
for today*

How Were Priorities Selected?



Implementation Plan as a **living document**

- Current priorities are based on a **5-year time frame**
- Designed to be **adaptable, flexible** as priorities are resolved or change over time
- **Annual reviews** conducted at Symposiums to update the plan



Implementation Plan Structure



Guiding Principles that shape our approach to completing strategies

Strategies that define our approach to addressing key environmental challenges

- Selected based on alignment with existing community plans, stakeholder support, and ability to meet watershed plan criteria.
- Categorized by **priority strategies** that are regional-specific or community-specific and **other strategies**

Priority A
Regional

Priority B
Regional

Priority C
Chignik
Bay

Priority D
Chignik
Lake

Priority E
Chignik
Lagoon

Guiding Principles

**Tell Our
Story**

**Prioritize
Youth
Voices**

**Integrate
Local
Economies**

**Protect
Data
Sovereignty**

**Foster
Collaborative
Governance**

- Shape our approach to protecting the Chignik watershed, informing how we complete **strategies**.
- Developed based on input at the 2024 Chignik Regional Resiliency Symposium.

Strategies

5 Priority Strategies

Priority A

**Address
Alder
Overgrowth**

Priority B

**Improve
Monitoring
of Salmon
Populations**

Priority C *Chignik Bay*

**Complete
Drainage
Map and
Stormwater
Management
Plan**

Priority D *Chignik Lake*

**Clean Up
Contaminated
Sites**

Priority E *Chignik Lagoon*

**Monitor
Water
Quality**

Regional

Specific Communities

Priority A (Regional): Address Alder Overgrowth

What are the actions to make progress on this priority in the next year? Who?

I. Use new LiDAR, historic imagery, and remote sensing data to assess alder overgrowth areas and quantify change. Document changes in berry patches through local observations and remote sensing.	Lead: All Chignik Communities Potential Partners: Alaska Coastal Cooperative (ACC), Lake & Peninsula Borough
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Other longer-term actions (2026 and beyond): adding alder clearing along landfill roads to IGAP funding requests, clearing alders along roads and trails, identifying areas along streambanks in need of, and a longer-term alder management work plan.

Priority B (Regional): Improve Monitoring of Salmon Populations

What are the actions to make progress on this priority in the next year?	Who?
1. Continue to implement the multi-year salmon escapement enumeration and quality project using Artificial Intelligence for enumeration and species identification at the Chignik Weir.	Lead: Chignik Intertribal Coalition (CIC) Potential Partners: Chignik Regional Aquaculture Association (CRAA), ADF&G, USFWS
2. Install research and data sensing buoys around the area. University of Washington is monitoring water temperatures in Black Lake and Chignik Lake; no monitoring has occurred yet in Chignik Lagoon or the Bay.	Lead: ACC Potential Partners: University of Washington
3. Add anadromous streams to ADF&G Anadromous Waters Catalog; update fish distribution for identified streams and known species.	Lead: CIC, CRAA Potential Partners: ACC, Bristol Bay Heritage Land Trust
4. Compile and share data collection efforts to date; ensure data sovereignty objectives are considered in current and future data collection efforts.	Lead: CIC Potential Partners: ACC

Other longer-term actions (2026 and beyond): environmental DNA testing, king avoidance program.

Priority C (Chignik Bay): Complete Drainage Map & Stormwater Management Plan

What are the actions to make progress on this priority in the next year?	Who?
1. Procure funding and develop partnerships with lead agencies and community stakeholders. COMPLETE!	Lead: Chignik Bay Tribal Council Potential Partners: City of Chignik
2. Create a request for proposals (RFP), solicit bids, and select a qualified engineering firm.	Lead: Chignik Bay Tribal Council Potential Partners: City of Chignik, Far West Corporation
3. Develop a drainage map for the community. Include site assessment mapping for old or current landfills in Chignik Bay that may not be captured by ADEC (e.g. the Alaska Packers Cannery area from 1976).	Lead: Chignik Bay Tribal Council Potential Partners: City of Chignik
Coming soon: residents will be surveyed to ask about known problem areas for flooding, erosion, and stormwater/drainage issues.	

Other longer-term actions (2026 and beyond): develop and implement a stormwater management plan.

Priority D (Chignik Lake): Clean Up Contaminated Sites

What are the actions to make progress on this priority in the next year?	Who?
I. Develop partnerships with lead agencies and community stakeholders for site assessments	Lead: Chignik Lake Community Potential Partners: Alaska Community Action on Toxics

Other longer-term actions (2026 and beyond): Complete site assessments of known contaminated sites and undocumented sites; perform clean up and mitigation efforts; implement recommendations identified in the October 2024 Chignik Lake Landfill Inspection Report

Priority E (Chignik Lagoon): Initiate water quality monitoring to identify areas of concern and prioritize next steps.

What are the actions to make progress on this priority in the next year?	Who?
1. Identify priority sites, conduct baseline water quality testing, and train IGAP coordinators on taking samples, potentially via the free technical assistance provided by Zender Environmental Group.	Lead: Chignik Lagoon Village Council Potential Partners: Zender Environmental Group; ADEC Water Quality Program
2. Incorporate water quality sampling into the work plan for future IGAP funding requests to the Environmental Protection Agency (EPA) so Tribal staff can collect and process water quality samples on a regular basis.	Lead: Chignik Lagoon Village Council Potential Partners: Zender Environmental Group, Bristol Bay Native Association; ADEC Water Quality Program

Other longer-term actions (2026 and beyond): Use water quality data to identify areas of concern and help prioritize capital improvements; develop measurable milestones to determine if progress is being made towards attaining state water quality standards.

Implementation Plan: Other Strategies, Relevant to All Communities (Examples, 1 of 2)

1. Inventory location and ownership of derelict buildings and vessels, old equipment storage, fuel storage, and old cannery sites where contamination may be more likely to occur or is occurring. Demo abandoned buildings and investigate brownfield repurposing.

2. Establish baseline water quality data collection system.

3. Implement various improvements to solid waste management: Separate burnable and non-burnable wastes, eliminate open burning whenever possible, ensure all dumpsters have lids and that dump areas are fenced; using spill guards to prevent oil leak contamination, maintain landfill signs, encourage backhauling, and continue to implement the IGAP recycling program.

Implementation Plan: Other Strategies, Relevant to All Communities (Examples, 2 of 2)

4. Establish, monitor, improve existing commercial fishing waste disposal system (e.g., for byproducts like fish carcasses).

5. Establish shellfish testing program for bivalves at risk for saxitoxin contamination, which can lead to paralytical shellfish poisoning.

6. Participate in BBNA's Brownfield's Program for contaminated sites with potential for redevelopment. Sites that may be eligible are:

(Chignik Bay) #1 School Road, Southern Chignik's Tank Farm, Trident Seafoods.

(Chignik Lake) Tank Farm, Fuel Transfer Area, and the Water Line Upgrade Area.

(Chignik Lagoon) Old cannery across from village and CLNC lands site and old landing craft area near main village site.

Download the Watershed Plan and related materials:

ChignikWatershed.com

Chignik Subregional
WATERSHED PLAN

[Purpose](#)

[FAQs](#)

[Boundaries](#)

[Timeline](#)

[Project Documents](#)

[Resources](#)

Chignik Subregional Watershed Plan

[Download the Final Watershed Plan Here, Completed March 2025](#)



What was the project purpose?

Through an Alaska Clean Water Action grant from the Alaska Department of Environmental Conservation, the Chignik Bay Tribal Council prepared a subregional

What is a watershed?

A watershed is a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

What is watershed planning?

Watershed planning provides a framework for assessing and managing water quality within a watershed.

Adopted from the Environmental Protection Agency's Handbook for Developing Watershed Plans

Watershed Quick Facts

3.7° F increase in temperature over the last 50 years.

216 residents as of 2022.

43% land is owned and managed by village corporations.

683 miles (and counting) anadromous steams, home to five salmon species.

Potential Water Quality Threats

A. Big rain events cause erosion, changes to stream function, and increased runoff.

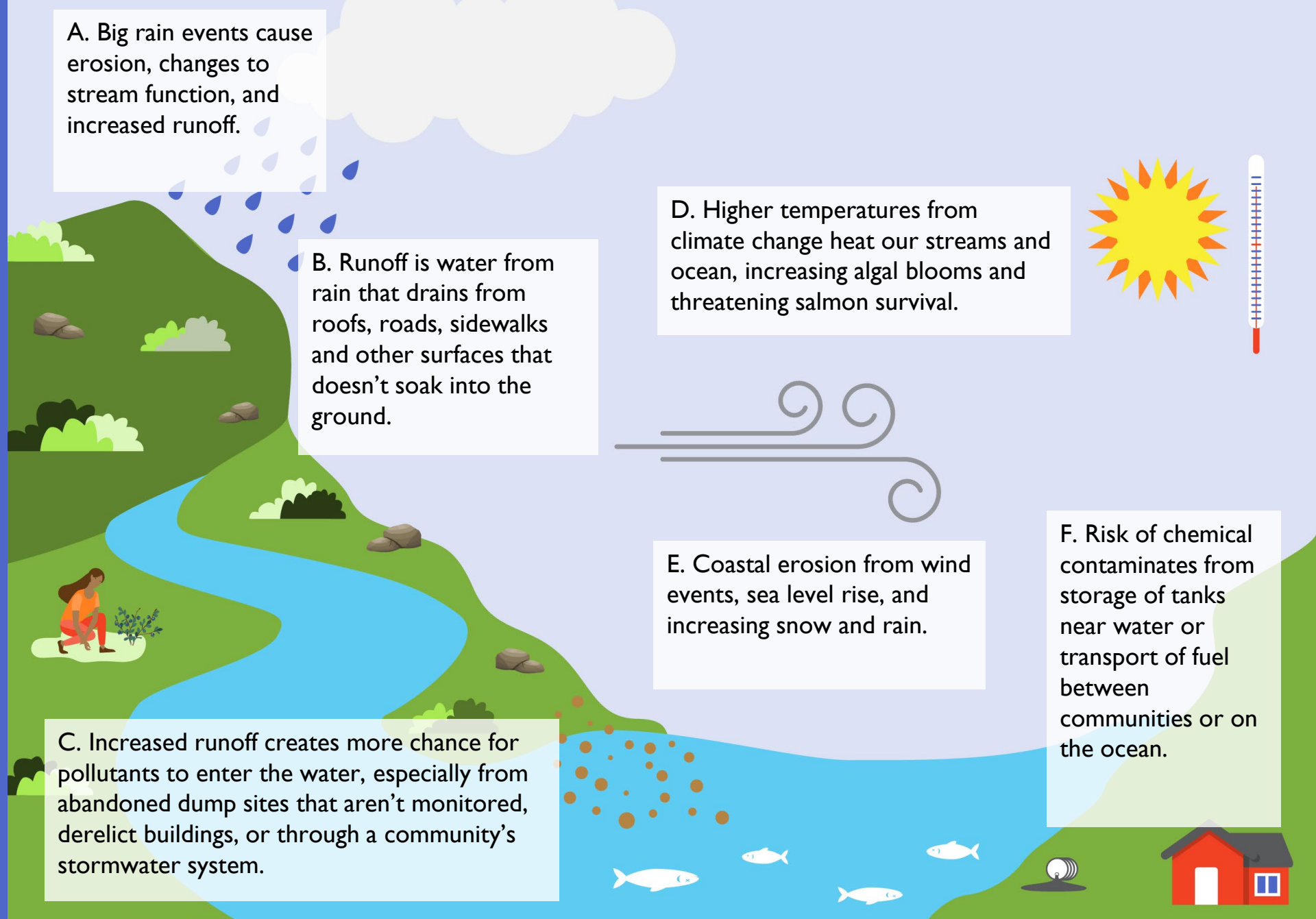
B. Runoff is water from rain that drains from roofs, roads, sidewalks and other surfaces that doesn't soak into the ground.

C. Increased runoff creates more chance for pollutants to enter the water, especially from abandoned dump sites that aren't monitored, derelict buildings, or through a community's stormwater system.

D. Higher temperatures from climate change heat our streams and ocean, increasing algal blooms and threatening salmon survival.

E. Coastal erosion from wind events, sea level rise, and increasing snow and rain.

F. Risk of chemical contaminates from storage of tanks near water or transport of fuel between communities or on the ocean.



Implementation Plan Layout

Guiding Principles that shape our approach to completing strategies

Strategies that define our approach to addressing key environmental challenges

Priority A
Regional

Priority B
Regional

Priority C
Chignik
Bay

Priority D
Chignik
Lake

Priority E
Chignik
Lagoon

**Other
Strategies**
Regional

Actions or steps taken to implement strategies

A Actions
1...
2...
3...

B Actions
1...
2...
3...

C Actions
1...
2...
3...

D Actions
1...
2...
3...

E Actions
1...
2...
3...

Implementation Plan: Other Strategies

(Listed by Lead Organization)

Alaska Coastal Cooperative

- In Chignik Bay, monitor the erosion occurring at the bank of Indian Creek Bridge using the water level gauge installed in 2022.
- Establish baseline data for water temperature of priority anadromous streams and rearing grounds.
- To improve predictions regarding erosion flood events in Chignik Bay streams and shorelines, install water level gauges, collect nearshore single or multibeam bathymetry, and collect ground control and check points.
- Use bathymetric data to determine shellfish areas.
- Document dynamic movement of fish.
- Identify traditional uses within the watershed to help prioritize areas and/or prevent or mitigate harm from threats to the watershed.

Implementation Plan: Other Strategies (Listed by Lead Organization)

Chignik Intertribal Coalition

- Develop and implement tissue sampling program to monitor heavy metals in salmonids and other key subsistence or commercial species.
- Identify spawning and nursing grounds for Kings.

Implementation Plan: Other Strategies (Listed by Lead Organization)

City of Chignik

- Reduce contaminants from road dust by resurfacing roads, enforcing slower speed limits, and/or purchasing a water truck.
- Complete community sanitation infrastructure projects in Chignik Bay to repair station #5 controls, complete the access trail to the reservoir, and other related improvements.
- In Chignik Bay, address landfill leachate.

Chignik Bay Tribal Council

- Address coastal bank erosion threatening the clinic in Chignik Bay.
- In Chignik Bay, transport and install the new incinerator at the landfill for fire mitigation, landfill life extension, and to reduce leachate.

Implementation Plan: Other Strategies (Listed by Lead Organization)

Chignik Lagoon / Chignik Lagoon Village Council

- Repair septic systems in Chignik Lagoon.
- Improve road access to the active landfill site.
- In Chignik Lagoon, repair road and pathways on fuel distribution routes.
- Address/remove abandoned barge in Chignik Lagoon. Could do lead testing? ADEC has plans to visit Ugashik to do lead testing of their abandoned vessel.

Implementation Plan: Other Strategies (Listed by Lead Organization)

Chignik Lake / Chignik Lake Village Council

- Upgrade the water tower and build a new pump house to supply more pressure to fire hydrants.
- In Chignik Lake, maintain & improve oil collection program.
- Replace water plant.
- Update and improve drainage features as needed in the community.
- Continue to work with Alaska Rural Utility Collaborative (ARUC) to develop a sustainable and safe water system.