Watershed Resource Action Plan

Executive Summary

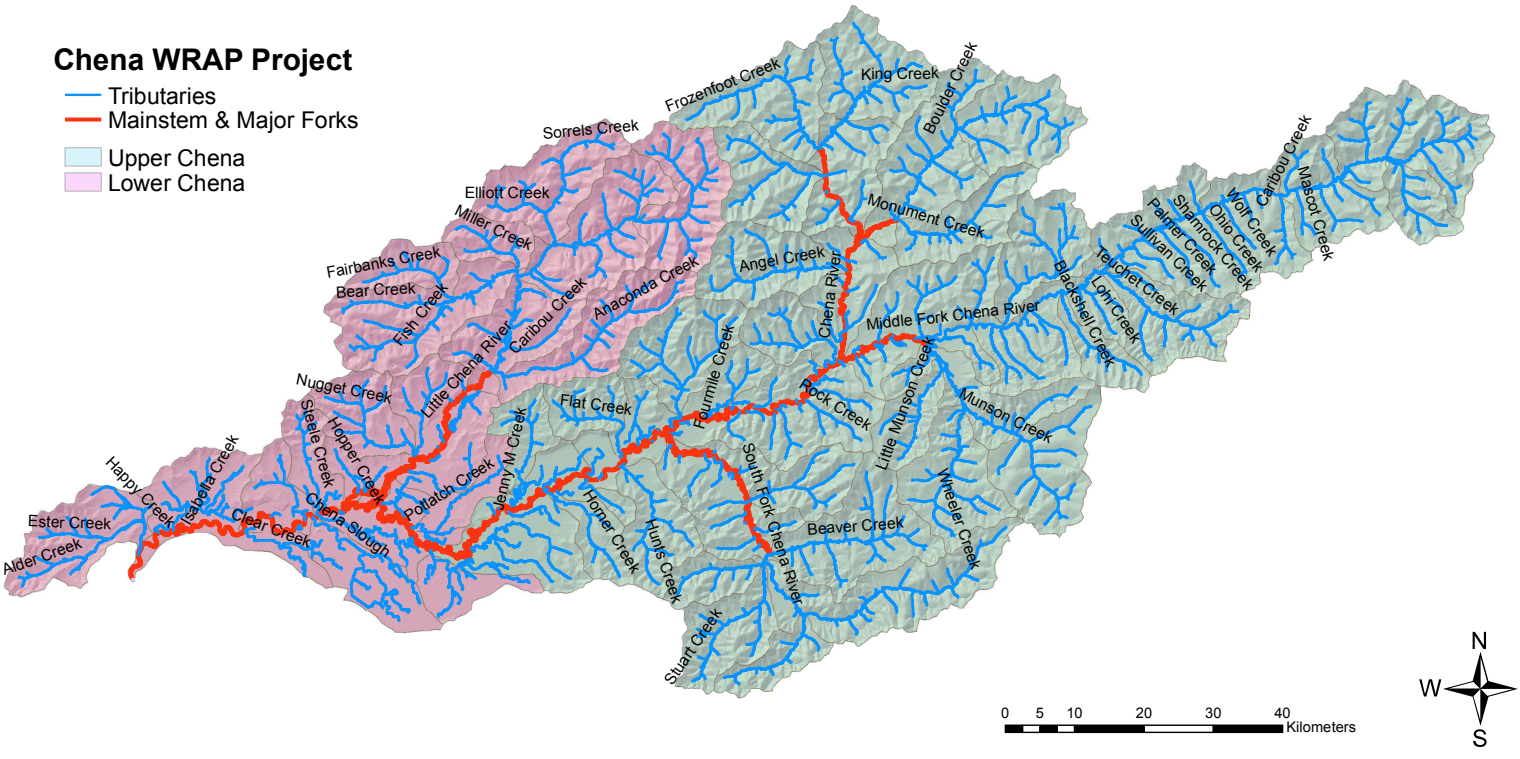
-- 1st Edition --

For the Chena River

-- Established June 2015 --

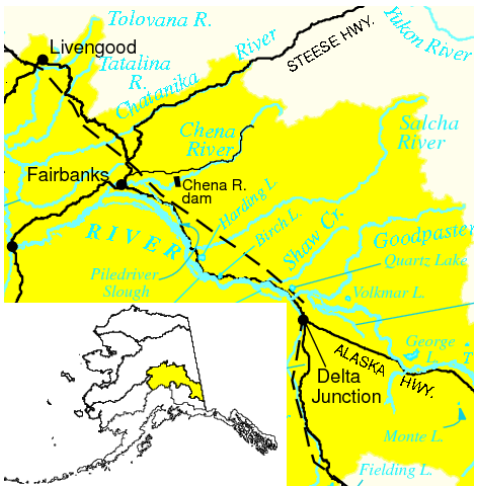
Collaboratively Managed by
E.S.C.A.P.E. Working Group
Rain to Rivers Resource Center

Hosted and prepared by
Tanana Valley Watershed Association

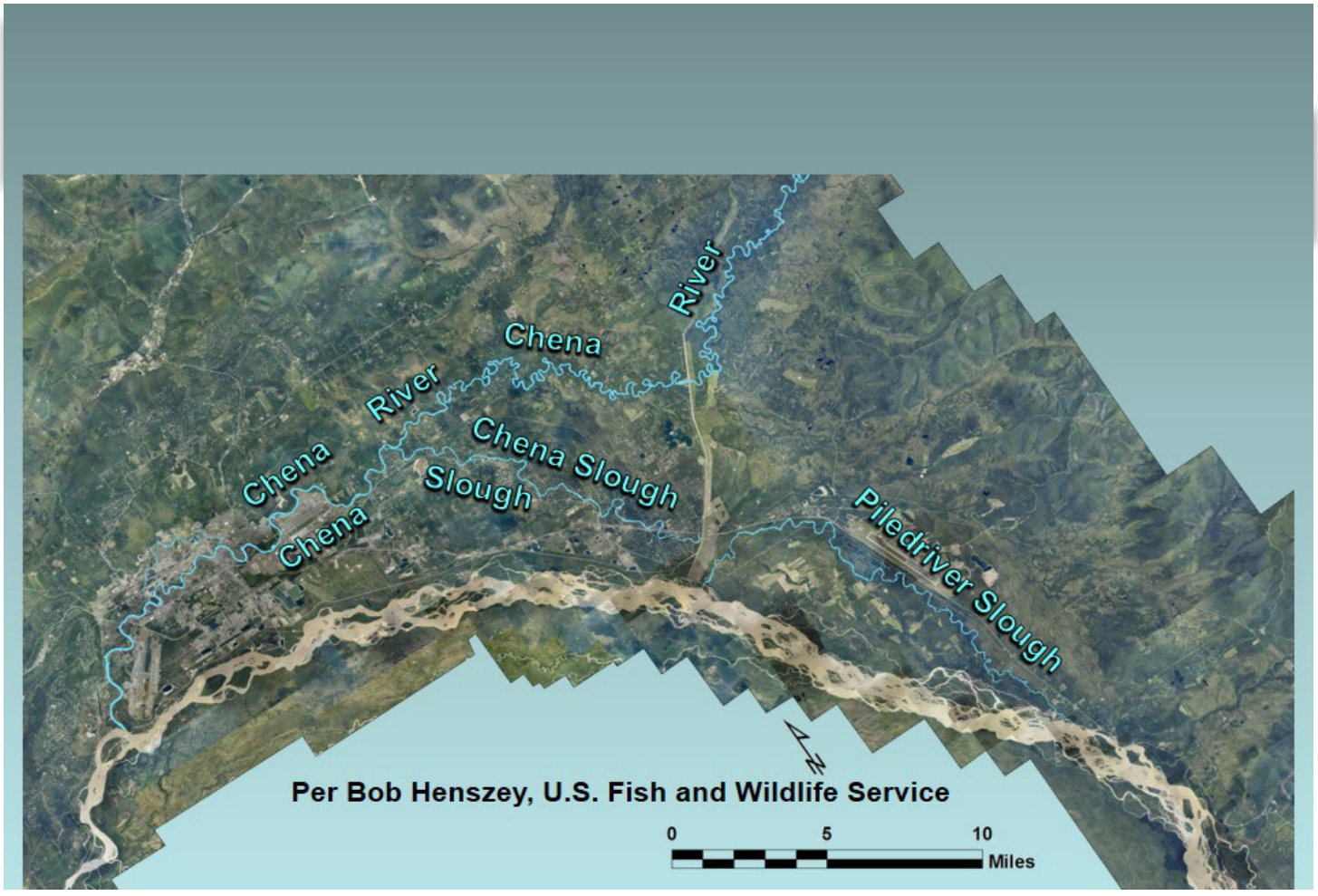


Background

The Salcha River mainstem is another tributary of the Tanana River running 125 miles. Its major forks include South Fork, Upper Fork, Twenty-five Mile Creek, and Flat Creek. The group divided the watershed into two parts: the Upper Salcha, defined as above the South Fork, and the Lower Salcha below the South Fork to the confluence with the Tanana River. The main stem river drains an area of 2,170 square miles. This apparently pristine, wild river is important for fish populations, including juvenile Chinook and chum salmon populations, many wildlife species, local businesses, homeowners, and recreationists. The Salcha River hosts the largest return of Yukon River Chinook in Alaska. The current and predicted future health of focal targets of the Salcha River was established based on the best available knowledge.



The Chena River mainstem is a tributary of the Tanana River that drains the Yukon-Tanana Uplands. Its major forks include the North Fork, South Fork, West Fork, Middle (East) Fork and the Little Chena River. The group divided the watershed into two parts: the Upper Chena was defined to be above the Moose Creek Dam, and the Lower Chena below the dam to the confluence with the Tanana River. The Chena River Watershed encompasses 2,115 square miles. It is important for fish populations, including Chinook (king) and chum salmon populations, many wildlife species, local businesses, homeowners, and recreationists. The Chena River is the second most important river for Chinook salmon in the Tanana River. The current and predicted future health of focal targets of the Chena River was determined based on the best available scientific knowledge.



THE WATERSHED RESOURCE ACTION PLAN (WRAP) is the result of a team of scientists and policy experts using a peer-planning process. The participants were led through a community-based conservation approach for the Chena and Salcha River Watersheds. This is the first version of the WRAP's executive summary.

THE PLANNING PROCESS followed is an internationally-renowned conservation action planning process developed by The Nature Conservancy. This approach has been used throughout Alaska, including the Kenai Peninsula, Mat-Su Basin, Southwest Alaska, and Southeast Alaska Fish Habitat Partnerships. This planning model is used by teams aiming to conserve and manage species, landscapes, and seascapes.

TO DEVELOP THE WRAP, Tanana Valley Watershed Association (TVWA) hosted consultant Greg Low, owner of Applied Conservation. The goals of the planning process were to:

- Determine targets and resources in the watersheds;
- Assess the current and future health of these resources;
- Identify critical threats; and
- Develop strategies to enhance health and abate those threats.

TWENTY PARTICIPATING scientists and policy experts met for three, 2.5-day workshops (and several short meetings) from November 2014 through April 2015. They worked in two subcommittees: one for the Chena River Watershed and one for the Salcha River Watershed. Each subcommittee identified ecological systems or "focal targets" and species or "nested targets" within the two systems. After targets were identified they established measurable key ecological attributes (KEA) and indicators of viability for each focal target in order to rank the health of the two watersheds. Each group held interim meetings during December 2014 and January 2015 to finish defining the targets and scoring for the KEAs and indictors.

THE SECOND WORKSHOP in February 2015 identified threats and their sources. The group recognized there were large knowledge gaps for the Salcha River Watershed so they shifted the remainder of their time in the second workshop to developing and ranking threats to the Chena River Watershed.

THE FINAL WORKSHOP in April 2015 concluded with the drafting of objectives and strategies for the Chena River Watershed to address the highest-priority threats. Feasibility of successful implementation along with costs were then used to evaluate "Return on Investment" and ranking of highest-priority strategies.

THE RESULT is a list of solutions-based actions geared towards multi-faceted community, landowner, and agency partnerships. The group did identify two key objectives for the Salcha River Watershed: maintain the health of the watershed and improve our understanding of what threats may degrade that health.

Process

Targets refer to selected environmental communities or particular species. They identified ecosystem-level resources within the watershed. Within these conservation targets were nested targets, which were specific species of importance.

Conservation Targets:

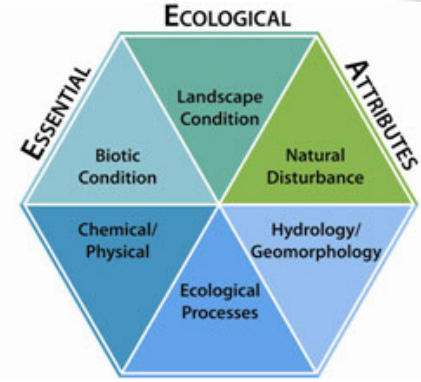
- Alpine Tundra
- Boreal Forest
- Tributaries
- Sloughs & Wetlands
- Mainstem River & Major Forks
- Confluence with the Tanana River

Nested Targets:

- Caribou, Moose, Marten, Little Brown Bat
- Rock Ptarmigan, Olive-Sided Flycatcher, Rusty Blackbird, Osprey, and Bald Eagle
- Adult as well as rearing Juvenile Chinook and chum Salmon, Burbot, Arctic Grayling and other Fishs

Essential Key ecological attributes (KEA) were categorized based on landscape context, conditions and size. KEAs are important characteristics needed for health of the identified targets.

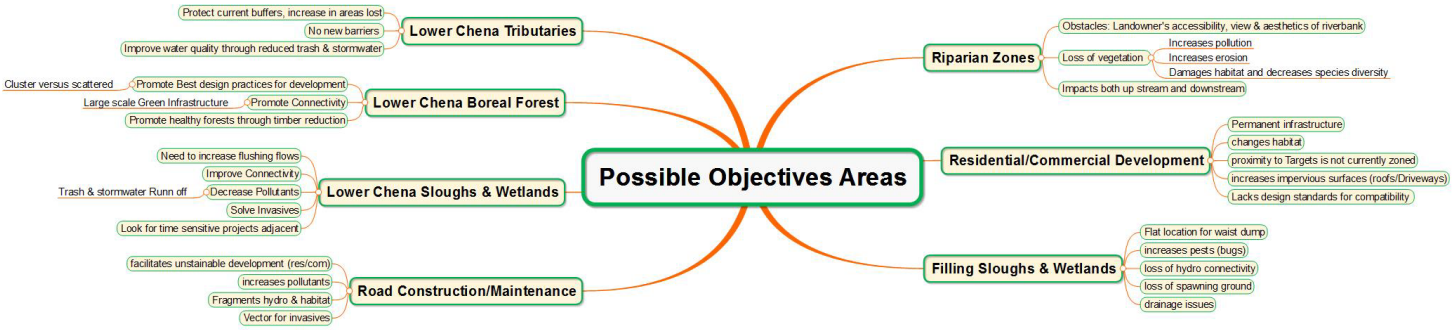
* Fire Regime
* Extent of Area
* Habitat Connectivity
* Hydrologic Regime
* River Bottom and Banks
* Characteristic Native Plant and Animal Community
* Vegetation Composition & Structure Mosaic
* Species Composition
* Delta Dynamics
* In-channel Habitat
* Water Quality
* Connectivity to Tributaries & Within the Mainstem



Highest-Ranking Threats:

- Incompatible Residential and Commercial Development
- Incompatible Road Design and Maintenance
- Filling in of Sloughs & Wetlands
- Removal of Native Vegetation from Riparian Areas
- Warmer Climate and Weather Extremes

Scientists and experts deliberated on threats and their sources. After the current health of the Chena River Watershed was determined, the WRAP committee focused on identifying how the status could change over a ten-year time frame with the current level of management. The sources of threats that contributed very high and high threats to the health of the focal targets were identified.

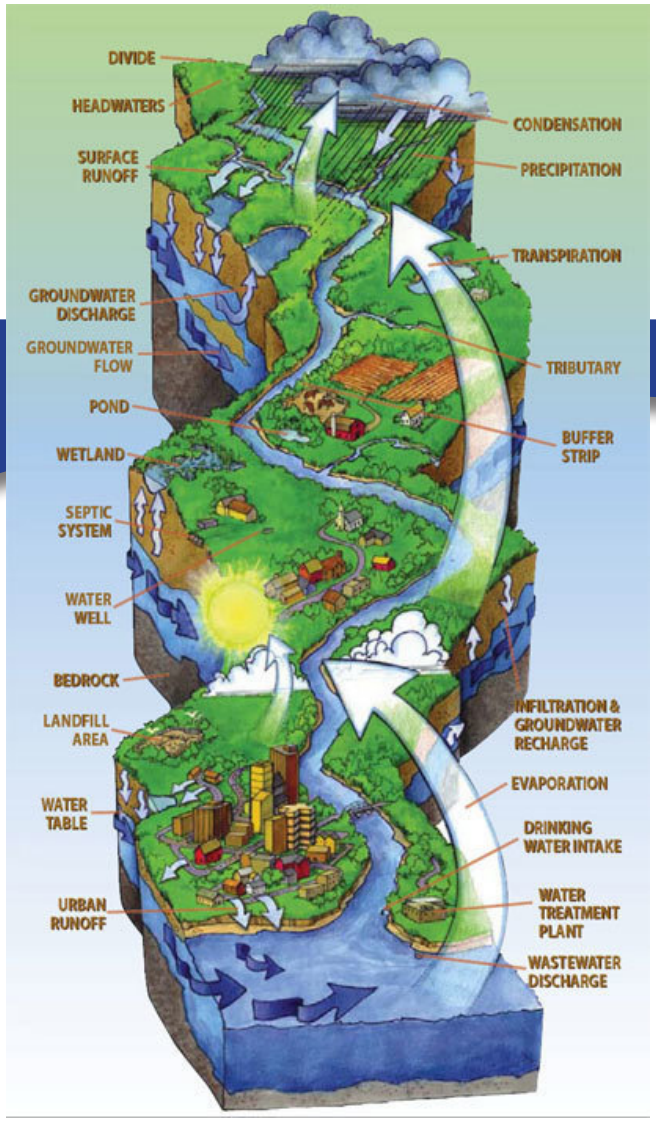


These "very high" to "high" threats drove the creation of a list of strategies to enhance target health. The goal was to evaluate the likelihood of a strategy to improve the health of a target over the next ten years. Each strategy was evaluated upon the feasibility of the action to effect positive change and the cost.

For each objective the group then assessed the "Return-on-Investment" for each of the seven objectives. The objectives that will likely give the "greatest bang for the buck" are those focused on improving fish passage to important rearing and spawning habitat; preventing loss of riparian native vegetation; achieving clean water standards; and restoring lost in-stream and riparian habitat.

Status Ranking Legend for Health Scorecard

- Poor status (highly altered, low function)
- Fair status (moderately altered, moderate function)
- Good status (some alterations, mostly functional)
- Very Good status (minor alterations, high function, i.e. "Mother Nature")



The Chena and Salcha Watersheds are home to Alaska's largest runs of Yukon River Chinook Salmon; yet, the trends of fish returning to spawn appears to continue a mysterious decline in the Chena. These rivers also are important for a variety of native fish and wildlife, and provide many ecosystem services to humans. While these rivers are generally in good health, we recognize the opportunities to improve habitats important for Chinook salmon and other fish and wildlife. It is important now more than ever before to work together as stewards of these watersheds for fish, wildlife, and people.

Chena River Watershed Resource Action Plan at a Glance

Est. June 2015

Obj. 1 Natural streambank vegetation

No net loss of native vegetated streambank areas within the Lower Chena River mainstem, tributaries and sloughs.

Consider minimum streambank buffer width (i.e. 50 feet) and vegetation composition needed.

Assess reasonable uses by landowners - existing setback and zoning guidelines.

Mobilize support of key constituencies (e.g., Riverfront Commission), community members and other stakeholders.

Show the benefits of restoring streambank vegetation.

Develop a list of prioritized "shovel ready" restoration projects based on habitat value, current degradation, and opportunity.

Obj. 2 Natural streambanks

Restore important fish habitats by reducing hardened banks (i.e. riprap) in the lower Chena River mainstem, sloughs and tributaries; also increase large woody debris and native vegetated or bioengineered banks.

Identify streambank restoration projects, and promote best management practices (BMPs) for streambanks.

Allow for more large woody debris below the dam.

Discourage future bank hardening practices.

Share the *Power of Roots* by showing landowners the benefits of intact vegetation within riparian areas.

Obj. 3 Fish passage upstream

Restore connectivity so both juvenile and adult fish have timely access to key habitats in the Chena River tributaries and sloughs.

Build constituency to support both ADOT&PF and borough fish-passage culvert upgrades.

Based on ADF&G inventory, turn high priority degraded "red" and "grey" culverts to "green."

Identify significant fish passage barriers, not yet catalogued, and add them to the shovel-ready list.

About WRAP

Scientists and agencies worked as an interdisciplinary team over the past six months to produce a Watershed Resource Action Plan (WRAP) for the Tanana Valley watershed's Chena River. This process was facilitated by Greg Low of Applied Conservation and hosted by the Tanana Valley Watershed Association. The timeliness of this plan was inspired by a genuine concern for Chinook salmon populations in the Chena and Salcha Rivers.

The team of knowledgeable experts, representing numerous agencies and community representatives, worked to identify and craft solutions for the highest sources of threats to the Chena River. Through implementing strategic objectives the river's health will improve over the next ten to fifteen years.

The working group identified these seven objectives and many action items that the community can take to improve the health of the Chena River.

www.ESCAPEwrap.com

ENGAGING SALCHA AND CHENA AREA PARTNERS ON ECOSYSTEMS E.S.C.A.P.E.

Obj. 4 Good water quality

Ensure Lower Chena River mainstem, tributaries and sloughs meet ADEC water quality standards.*
(* restoration plan in place - e.g., Noyes Slough)

Promote healthy streambank vegetation (see Obj. 1) to filter runoff contaminates.

Address impervious issues associated with existing development.

Assess major sources of runoff on highways, borough and city roads, and private lanes.

Explore use of vacuum street-sweepers (not pushers and brooms), catch basins, and sediment filters.

Improve existing education and training regarding storm water pollution.

Continue ongoing assessment/monitoring of water quality.

Obj. 5 Healthy forest habitat

Responsibly develop roads and residential areas within the boreal forests of the Chena watershed.

Minimize forest fragmentation.

Mitigate habitat loss.

Promote BMPs for residential/commercial development.

Avoid adverse downstream impacts on water quality and flows.

Avoid key fire prone areas (e.g. black spruce).

Obj. 6 Conserve sloughs and wetlands

No net loss of sloughs and wetlands in the upper and lower Chena River watershed as well as restore wetlands and sloughs to function naturally.

Address filling of sloughs and wetlands.

Promote BMPs for residential/commercial development.

Manage water levels, flow and fluctuations.

Support juvenile salmon and grayling habitats.

Obj. 7 Maintain Natural Diversity

Implement programs to control invasive species (terrestrial and aquatic) in the Chena River Watershed.

Eradicate high priority invaders (e.g. - elodea).

Contain any established invasives from future spreading outside existing areas (e.g. bird vetch).

Prevent the establishment of any new invasives.

WATERSHED RESOURCES ACTION PLAN

Additional Information

Conservation Action Planning has been used by hundreds of project teams to help conserve great places, including the Kenai Fish Habitat Partnership.

The process included three, 2.5-day workshops to assess current and projected future health of the resources, identify critical threats, and develop conservation strategies to enhance health and abate threats. Workshops were held in November of 2014, February of 2015 and April of 2015 at the Rain to Rivers Resource Center, 516 2nd Avenue in downtown Fairbanks.

The team was able to develop means to conserve landscapes that captured specific species important to the Chena River watershed. They also explored parallels on the Salcha River and determined additional information was required in order to craft meaningful objectives and actions for that watershed.

The draft plan was released on Friday, June 12th at the Chena River Summit. For more information contact Tanana Valley Watershed staff at TVWatershed@gmail.com or by phone 907-374-8890.

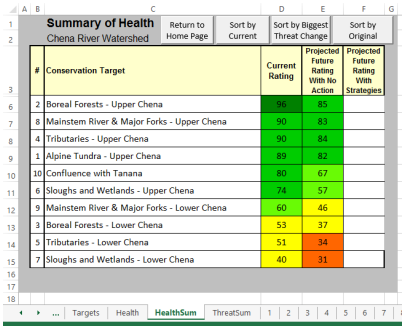
Next Steps

People all across the United States have worked towards protecting, restoring and enhancing their local watersheds. The first step is bringing together landowners, business owners, agencies, public citizens and non-profit organizations for this movement in managing our resources. Coordination is necessary to build a united force as well as keeping momentum. Tanana Valley Watershed Association (TVWA) intends to support the collaboration by convening interested stakeholders as part of the Engaging Salcha & Chena Area Partners on Ecosystem (ESCAPE).

With ESCAPE, we can implement WRAP through:

- Research, conservation and education actions;
- Communicating messages to the general public;
- Coordinating and compiling essential scientific information;
- Establishing & defining desired outcomes for fish; and
- Identifying priority locations/issues/projects.

Monitor the Chena's Score Card & Gather information on the Salcha



Summary of Health — Chena River Watershed

#	Conservation Target	Current Rating	Projected Future Rating With No Action	Projected Future Rating With Strategies
2	Boreal Forests - Upper Chena	96	85	
8	Mainstem River & Major Forks - Upper Chena	90	83	
4	Tributaries - Upper Chena	90	84	
1	Alpine Tundra - Upper Chena	89	82	
10	Confluence with Tanana	80	67	
6	Sloughs and Wetlands - Upper Chena	74	57	
9	Mainstem River & Major Forks - Lower Chena	60	46	
3	Boreal Forests - Lower Chena	53	37	
5	Tributaries - Lower Chena	51	34	
7	Sloughs and Wetlands - Lower Chena	40	31	

Give Feedback Online: www.ESCAPEwrap.com

COLLABORATING WITH SCIENTISTS AND EXPERTS ON WATERSHED RESOURCE ACTION PLANS!

The process included three, 2.5-day workshops with the planning team to target areas in the Chena River Watershed (focusing on ecosystem-level resources), assess current and projected future health of the resources, identify critical threats, and develop conservation strategies to enhance health and abate threats. The workshops were held in November of 2014, February of 2015 and April of 2015.

DOWNLOAD THE SUMMARY

The following are seven objectives and a few of the action bullets the working group determined were viable steps to improve the health of the Chena River.

Click to download 2 page overview (may take a minute to download)

PROVIDE FEEDBACK

TVWA is requesting input from now until June 5th. Please take this opportunity to contribute your comments, suggestions, support, additional resources, & concerns or questions by taking an online survey.

TAKE SURVEY NOW

Executive Summary
-- 1st Edition --

For the Chena River
-- Established June 2015 --

Watershed Resources Action Plan

Contributing Committee Members

Jewelz Barker - TVWA
Jimmy Fox - U.S. Fish and Wildlife Service
Irene Holak - TVWA
Greg Low, Facilitator - Applied Conservation
Aaron Martin - U.S. Fish and Wildlife Service
Aditi Shenoy – Fairbanks Cooperative Weed Management Area
Audra Brase - Alaska Department of Fish and Game
Bob Henszey - U.S. Fish and Wildlife Service
Chandra McGee - Alaska Department of Environmental Conservation
Christy Everett - TVWA
David Wigglesworth - U.S. Fish and Wildlife Service
Gale Vick - Tanana Chiefs Conference
Jackson Fox - City of Fairbanks
James Savereide - Alaska Department of Fish and Game
Jeff Falke – USGS | University of Alaska Fairbanks and Alaska Cooperative Fish and Wildlife Research Unit
Jeff Adams - U.S. Fish and Wildlife Service
Jessica Guritz - Fairbanks Soil and Water Conservation District
Laura Jacobs - Alaska Department of Fish and Game
Melissa Riordan - U.S. Army of Corps of Engineers
Roger Harding - Alaska Department of Fish and Game
Anna Plager – Chena Riverfront Commission

Tanana Chiefs Conference