Robe Lake
Salmon Habitat Restoration Project

Robe Lake

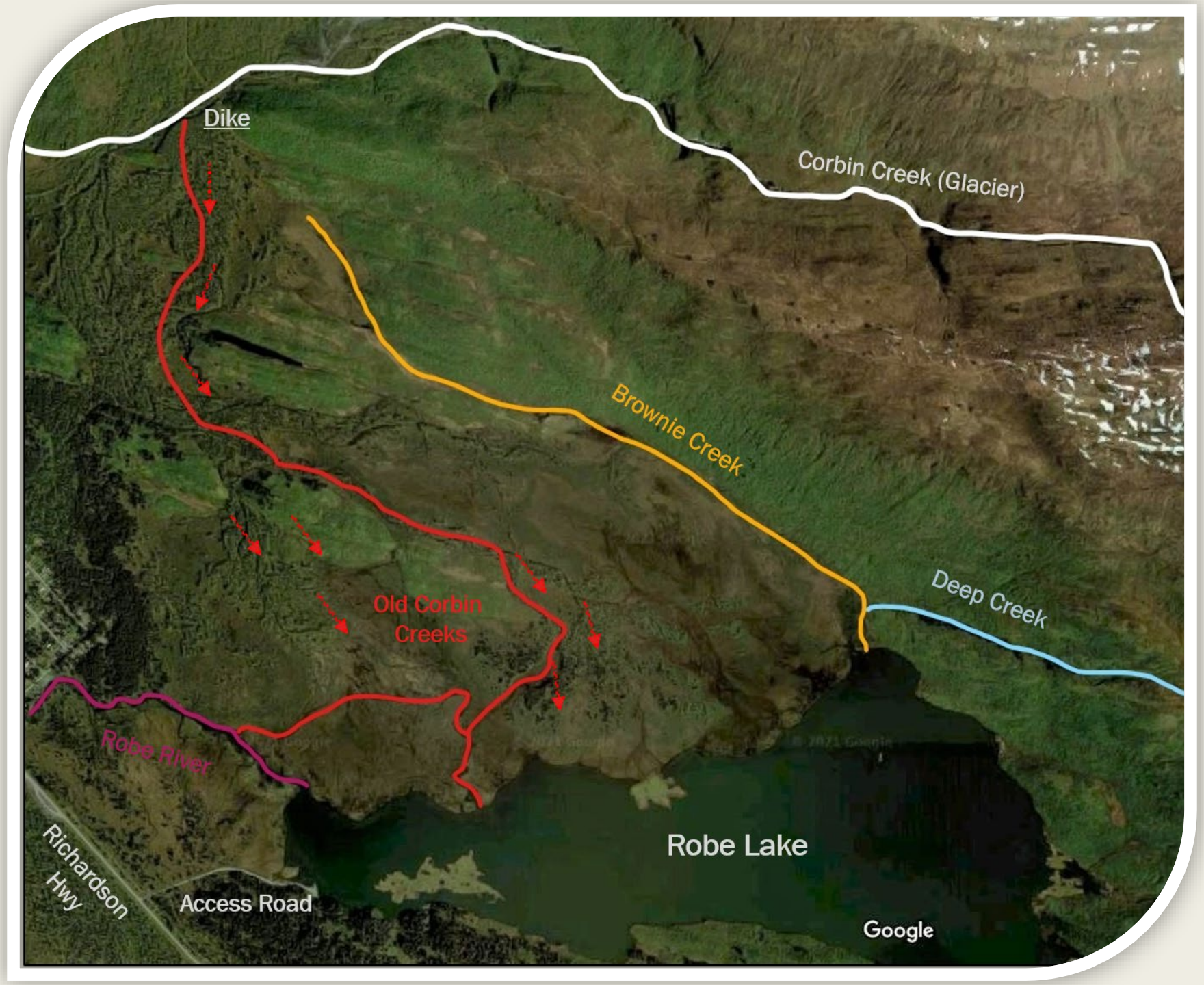
Largest fresh water lake in Port Valdez

Approx., 682 acres. Mean depth of 3.12 meters, 5 meters max depth

Three tributaries: Old Corbin Creek
Brownie Creek
Deep Creek

Single outlet: Robe River

- ✓ Corbin Creek Coho salmon is the donor stock for VFDA's sport fishery enhancement program
- ✓ Sockeye & Coho salmon stocks are important to sport fishery and other customary users
- ✓ Popular community recreational area for kayak, SUP, boating, and waterfowl hunting
- ✓ Float plane landing and mooring


Dike
Corbin Creek (Glacier)
Brownie Creek
Deep Creek
Old Corbin
Creeks
Robe River
Robe Lake
Richardson
Hwy
Access Road
Google

Chronology of Lake Change

Prior to 1956

Valdez Glacier Stream overflow deposited into the lake via Corbin creek

Cold glacial water deposited silt preventing light from penetrating shallow depths

Aquatic vegetation kept in check

1956

City of Valdez diked main Corbin Creek flow to protect Richardson Hwy

1966

Changing lake dynamics allowed water to warm, increasing growth of aquatic vegetation

1970

City of Valdez received EPA Clean Lakes Program grant to establish baseline data and identify methods to restore the lake

1981 to date

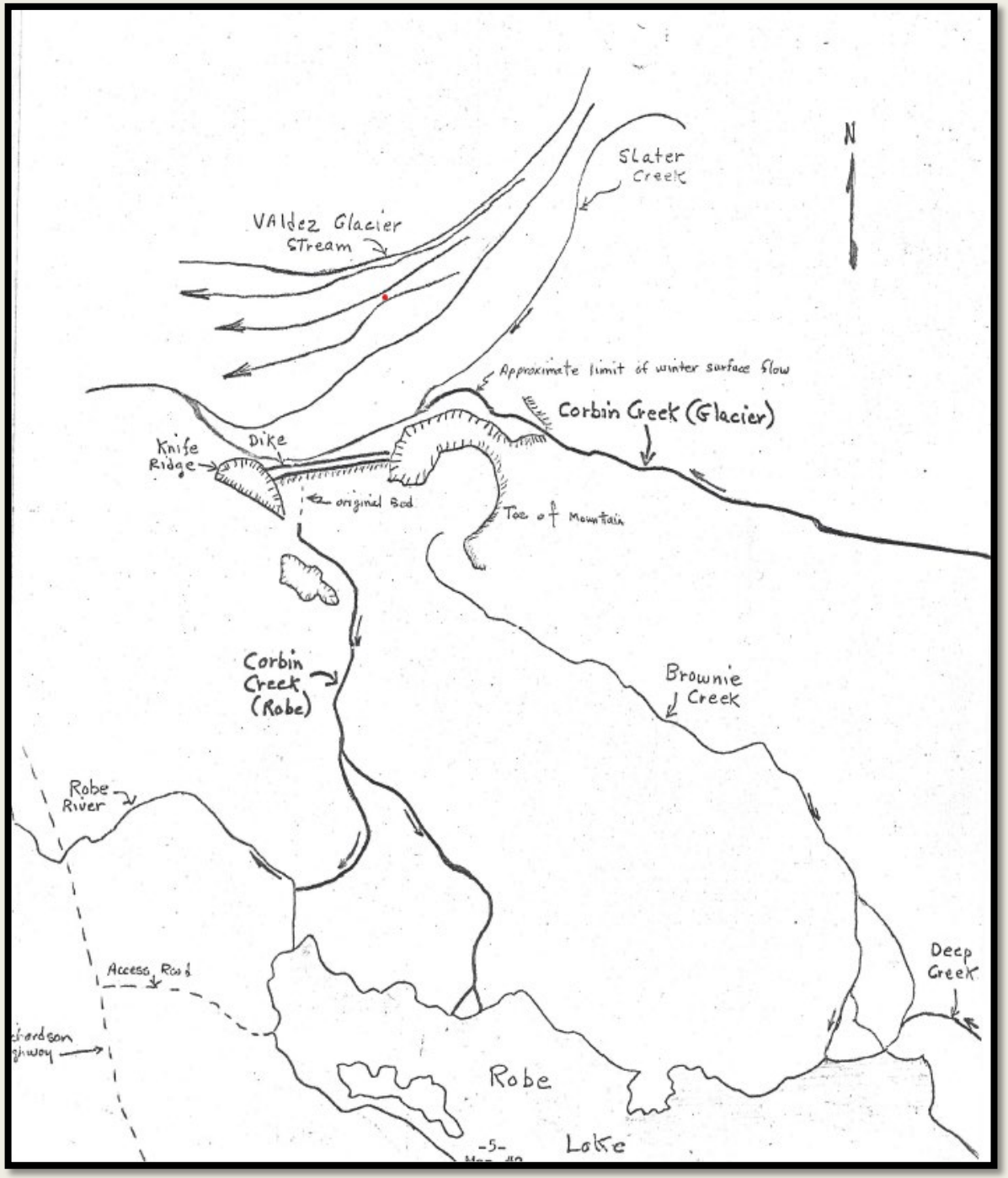
VFDA, ADF&G, COV conducted studies to assess lake change, map stream flows, determine methods to control vegetation, and maintain salmon habitat

Purchased a mechanical weed harvester

Manual stream restoration in 1988 to improve spawning habitat

Annual weed removal funded by COV grant

Results are diminishing


N
Slater Creek
Valdez Glacier Stream
Approximate limit of winter surface flow
Corbin Creek (Glacier)
Knife Ridge
Dike
original Bed
Toe of Mountain
Corbin Creek (Robe)
Brownie Creek
Robe River
Access Road
Deep Creek
Robe Lake

Robe Lake Habitat Project Goals

- Increase water flow to Old Corbin Creek to reduce aquatic growth and keep spawning beds open naturally
- Mechanically improve existing stream channel entrances in Old Corbin and Brownie Creek to provide better access for existing spawning stock through aquatic plant removal
- Increase lake size where feasible through mechanical vegetation removal.

Current Robe Lake Efforts

Mechanical Aquatic Vegetation Removal

- Cooperative annual effort funded by the City of Valdez and the Valdez Fisheries Development Association
- Removing approximately 400-500 cubic yards annually
- In the process of sourcing a new aquatic harvester

Habitat Analysis of Robe Lake

- Environmental study funded by a City of Valdez grant
- Evaluate and provide a current status update
  - Survey contemporary lake area
  - Map existing stream channels for Brownie and Corbin creeks
  - Determine annual tributary and outlet flows
  - Identify opportunities for improvement; including non- mechanical, cost, permitting, and funding sources

A Long Term Solution?

Develop a non-mechanical solution to control vegetative growth through improved lake flushing.

U.S. Army Corp of Engineers (ACOE) Section 206 Aquatic Ecosystem Restoration Program.

- VFDA has petitioned the ACOE to evaluate Robe Lake and propose a long term solution
- The ACOE has agreed to conduct a Federal Interest Determination for a project. √ We are Here!
  - First step in assessing viability of a project and identifying sponsors.
  - ACOE will spend up to $100,000 with no non-federal match required.
  - If viable, will conduct a Cost Shared Feasibility Study – Requires a 50% non-federal match
    - Non-federal match may be reduced by up to $511,000 if sponsor works with a federally recognized native tribe.
  - If feasible, project moves to Project Partnership Agreement - Requires a 35% non-federal match
- VFDA has agreed to sponsor the project, contingent upon identifying interested parties to co-sponsor the non-federal portion of the project.

Benefits of Co-Sponsorship

- Project is within the community of Valdez. Project improvements may be proposed for lands owned by a co sponsor
- Robe Lake is a popular community recreational site and provides an important salmon resource for subsistence, sport, and commercial harvests
- Co-sponsors would have a seat at the decision table to evaluate the project and address interests, public concern and impacts of the proposed solution to land use and surrounding developments
- Improved lake ecosystem for salmon production brings economic value to Prince William Sound and benefit through increased resource harvest opportunity
- Long term solution may help to reduce costs of future mechanical mitigation
- Opportunity to improve upon a man-made negative environmental condition

Example Cost of Co-Sponsorship

- Cost Shared Feasibility Study – 50% Federal/ 50% Non-Federal

Estimated cost of the Cost Shared Feasibility Study	$ 1,200,000
Federal share is 50%	- $ 600,000
Non Federal Share is 50%	$ 600,000
If a co sponsor is a federally recognized native tribe, first $511,00 is waived	-$ 511,000
Non Federal Share	$ 89,000

- Project Design and Construction – 65% Federal/ 35% Non-Federal

Estimated cost of a hypothetical project design and construction	$ 3,000,000
Federal Share is 65%	-$ 1,950,000
Non-Federal Share is 35%	$ 1,050,000
If a co sponsor is a federally recognized native tribe, first $511,00 is waived	-$ 511,000
Non Federal Share	$ 539,000

- Lands, Easements, Right of Ways, Relocations, and Disposal – Credit to project of up to 35% of non-federal contribution
- Operations and Maintenance costs are 100% non federal

Next Steps

- Approve Letter of Interest to become a co-sponsor of this ACOE Section 206 Aquatic Ecosystem Restoration Program Project for Robe Lake

  Letters of Interest are due no later than August 10th

- Letter of Interest can be conditioned upon future governing bodies approval of spending

- Work with the ACOE and other co-sponsors to develop a project that improves Robe Lake, the community of Valdez, and the lives of Prince William Sound residents

Questions?