



## Seward-Bear Creek Flood Service Area



The mission of the Flood Service Area is to provide flood **planning, protection, and mitigation services**, in coordination with the appropriate agencies, to reduce the risk of flood damage to private and public property, through addressing issues that best reflect a fair use of the tax-levy for watershed-wide benefit.

*Seward Hwy, Airport & City of Seward  
Salmon Creek & Resurrection River 2012*

# PLANNING

## Multijurisdictional Hazard Mitigation Plan

**Table 4-3 Hazard Identification Matrix**

Hazard	Probability	Magnitude / Severity
<p><b>Erosion</b></p>	<p>3 – Likely Event is probable within the next three years. History of events is greater than 20 percent but less than or equal to 33 percent likely per year.</p>	<p>2 – Limited Complete shutdown of critical facilities for more than one week. More than 10 percent of property is severely damaged.</p>
<p><b>Flood</b></p>	<p>4 – Highly Likely Event has up to 1 in 1-year chance of occurring (1/1 =100 percent). History of events is greater than 33 percent likely per year. <i>[Future climate change influenced weather patterns could potentially increase the 100-year flood recurrence probability to a more frequent 50-year event equivalent by the year 2050.]</i></p>	<p>2 – Limited Complete shutdown of critical facilities for more than one week. More than 10 percent of property is severely damaged.</p>
<p><b>Ground Failure (Avalanche, Landslide/ Debris Flow)</b></p>	<p>3 – Likely Event has up to 1 in 3 years chance of occurring (1/3=33 percent). History of events is greater than 20 percent but less than or equal to 33 percent likely per year.</p>	<p>3 - Critical Injuries and/or illnesses result in permanent disability. Complete shutdown of critical facilities for at least two weeks.</p>
<p><b>Tsunami &amp; Seiche Coastal Storm Surge</b></p>	<p>4 - Highly Likely As it is not possible to predict when a tsunami will occur, an event is forecast to be highly likely to occur, though the recurrence interval is unknown.</p>	<p>4 - Catastrophic Multiple injuries and/or deaths. Complete shutdown of facilities for 30 or more days. More than 50 percent of property is severely damaged.</p>

# PLANNING

## Annual Project Prioritization

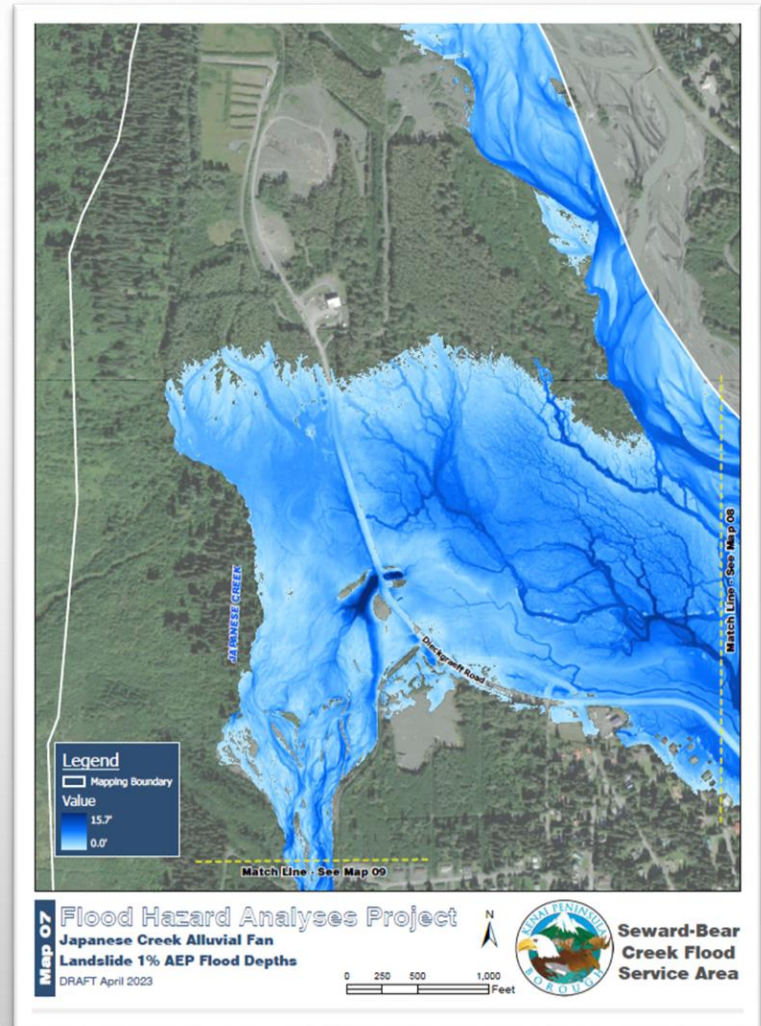
Priority Rank	Project Description	Responsible Entity	Time frame	Potential Funding	Benefit-Cost Feasibility	Estimated Project Costs
1	<p><b>Sediment Management &amp; Maintenance Program</b></p> <ul style="list-style-type: none"> <li>• Salmon Creek KC4 revetment – ground controls, design plans winter 2023</li> <li>• Lost Creek – GCP installed – update design plans winter 2023;               <ul style="list-style-type: none"> <li>○ Maintenance to be completed Spring 2023</li> </ul> </li> <li>• Sawmill Creek – 2020-21 \$89,000, 12,000 cy               <ul style="list-style-type: none"> <li>○ Maintenance to be completed Spring 2023</li> </ul> </li> <li>• Kwechak Creek – 2021 \$46,000, 10,000 cy; 2022 \$60,497</li> <li>• Salmon Creek SC15 – 2022 \$31,777</li> <li>• Box Canyon Creek – GCP installed</li> <li>• Continued surveys – hydrologic/ meteorological data collection               <ul style="list-style-type: none"> <li>○ IGages - Kwechak installed, Spruce to be installed</li> </ul> </li> <li>• Site planning:               <ul style="list-style-type: none"> <li>○ Japanese Creek – short-term mitigation until road plan completed</li> <li>○ FY24 – Spruce Creek GCP, design plans</li> <li>○ FY24-25 – Salmon Creek SC15 Sediment Management Plan                   <ul style="list-style-type: none"> <li>▪ New lidar collection – Spring 2023</li> <li>▪ SMP Analysis, design plans FY24-25</li> </ul> </li> <li>○ Japanese Creek – TBD following Road improvements</li> <li>○ FY25 – Lost Creek SC6 upstream Seward Hwy/ Railroad</li> </ul> </li> </ul>	SBCFSA ADOT&PF KPB City AKRR Private Owners	ongoing           1 - 3 years	SBCFSA Contract Services, Partnership Funding, AKRR Contract	Feasible, BCA not completed	Site setup \$20,000  Pre- Post Surveys \$6-8,000 per site  Maintenance \$40-108,000 per site
2	<p><b>Funding Requests</b></p> <ul style="list-style-type: none"> <li>• KPB/SBCFSA – Grant/ funding applications               <ul style="list-style-type: none"> <li>○ Replace or relocate Forest Road bridge at Lost Creek</li> <li>○ Replace Bruno Road bridge at Kwechak Creek with longer span</li> <li>○ Harden embankment at Tiehacker corner Kwechak Creek KC7</li> <li>○ Nashwoods neighborhood drainage ditching</li> <li>○ Parcel acquisitions Salmon Creek Conservation Area                   <ul style="list-style-type: none"> <li>▪ Potential NFWF grant award FY23</li> <li>▪ Develop parcel ranking and prioritization</li> </ul> </li> </ul> </li> <li>• USFWS National Fish Passage Priorities               <ul style="list-style-type: none"> <li>○ Second Avenue culverts</li> </ul> </li> </ul>	KPB SBCFSA USFWS USACE ADOT&PF AKRR City	1 - 3 years	Hazard Mitigation Grants, KPB General Fund, SBCFSA Fund Balance, USACE Continuing Authorities Programs, Infrastructure Bill Programs	BCA to be determined for each project	TBD



# PROTECTION

## Hazard Identification & Mapping Updates

- Japanese Creek Alluvial Floodplain
  - LiDAR Collection
  - Hazard Analyses & Updated Mapping
    - Japanese & Scheffler Creeks
  - City Floodplain 15.25 Code Revisions
- Spring 2023 LiDAR Acquisition & Processing
  - Partnership with FEMA & State of Alaska Geospatial Office
    - Service Area and Alpine Reaches
    - Landslide/ Erosion Analyses
    - Flood Hazard Updates
    - Sediment Planning
- Seward Tsunami Inundation Updated Map & Public Outreach



# PROTECTION

## Permit Application Assistance & Project Review

<https://www.kpb.us/service-areas/sbcfsa>

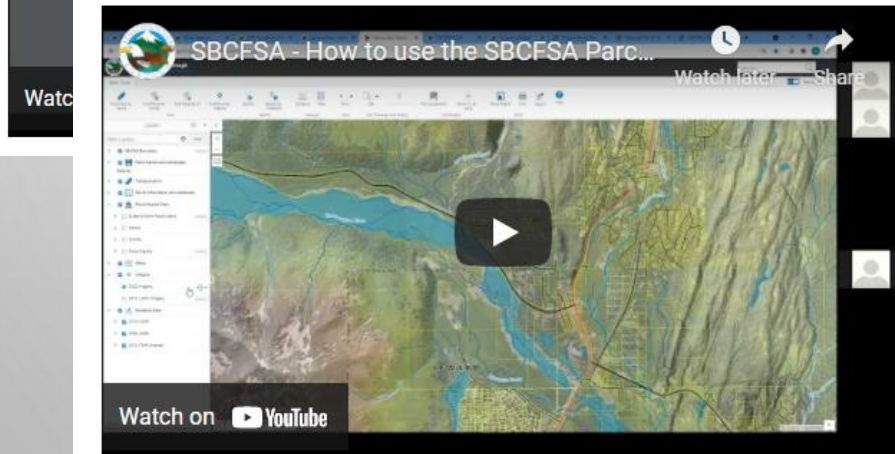
### Multi-Agency Permit Application

Click [here](#) to download the River Center Permit Application for any development within the special flood hazard area.

### How to Apply for a Multi-Agency Permit



### How to Use the SBCFSA Parcel Viewer



*In Alaska, water resources are important to all of us!*

## Permitting & Agency Information Day


Agency representatives will be available to assist with your permit application, summer project and provide information on:

- ♦ Planning
- ♦ Permitting
- ♦ Flood Risk Prevention
- ♦ Updated Building Codes
- ♦ Floodplain Management
- ♦ National Flood Insurance Program
- ♦ Fisheries & Wildlife Management
- ♦ Habitat and Wetlands

**APRIL 26<sup>th</sup> 10am - 2pm**

**SEWARD LIBRARY COMMUNITY ROOM**  
239 SIXTH AVENUE

Sponsored by:





# SHORT TERM MITIGATION

## Sediment Management & Maintenance Program

- FY23 Maintenance & Planning
  - Maintenance Completed at 4 Project Sites
  - Salmon Creek Revetment Sediment Management Controls & Design Plans
- FY24 Program Implementation
  - Excavation of 50,000 Cubic Yards of Material
- Future Site Planning



*Sawmill Creek  
maintenance project,  
following 2020 flood event.*

# LONG TERM MITIGATION

## Funding Requests & Partnerships

- National Fish & Wildlife Federation Coastal Resiliency Planning
  - Trout Unlimited, U.S. Fish & Wildlife Service, City of Seward & Qutekcak
- Bruno Road Armoring & Questawoods Drainage Improvements
  - SBCFSA, Roads, Capital Projects & Seward Utilities
- Dieckgraeff Road Modifications & Japanese Creek Improvements
  - FEMA Disaster Declaration Project Worksheet

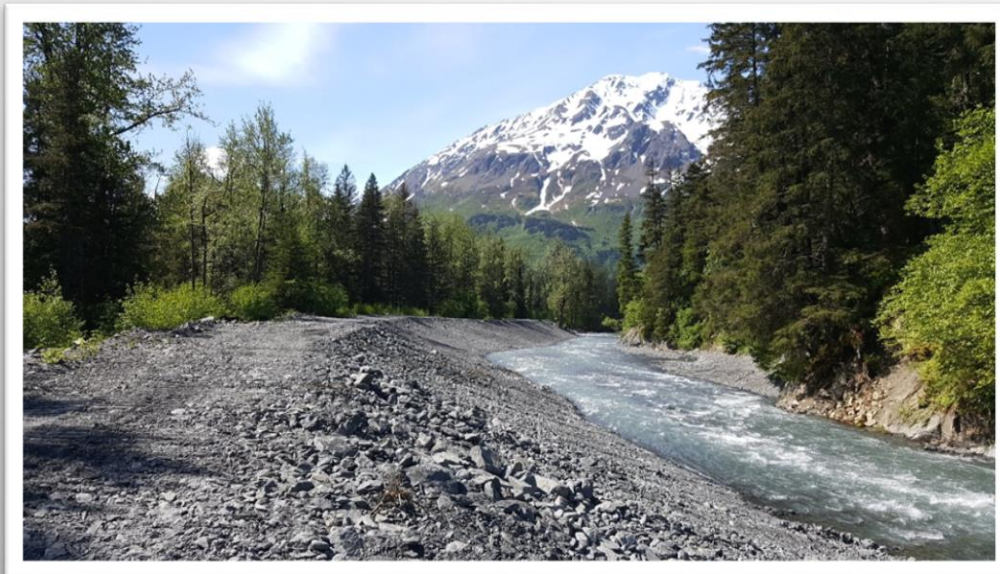


*Japanese Creek overwhelms Dieckgraeff Road culverts during 2018 flood event.*

# LONG TERM MITIGATION

## Funding Requests & Partnerships

- Box Canyon Creek Flood Risk Management
  - U.S. Army Corps of Engineers, U.S. Department of Agriculture Forest Service & Cook Inlet Region, Inc.
  - Federal Interest Determination & Feasibility Studies
- State & Federal Capital Improvement Project Requests



*Box Canyon Creek diversion berm restoration project, following the 2018 flood event.*



# IMPLEMENTATION

Lowell Canyon Creek Diversion Tunnel Outlet Oct. 2018



© AlaskaAerialTechnologies

<https://www.youtube.com/watch?v=hsNC0jTUwSA&authuser=0>