



Seward/Bear Creek
Flood Service Area

Annual Report

Seward Alaska 2018 Flood Event

October 12-22

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

PLANNING

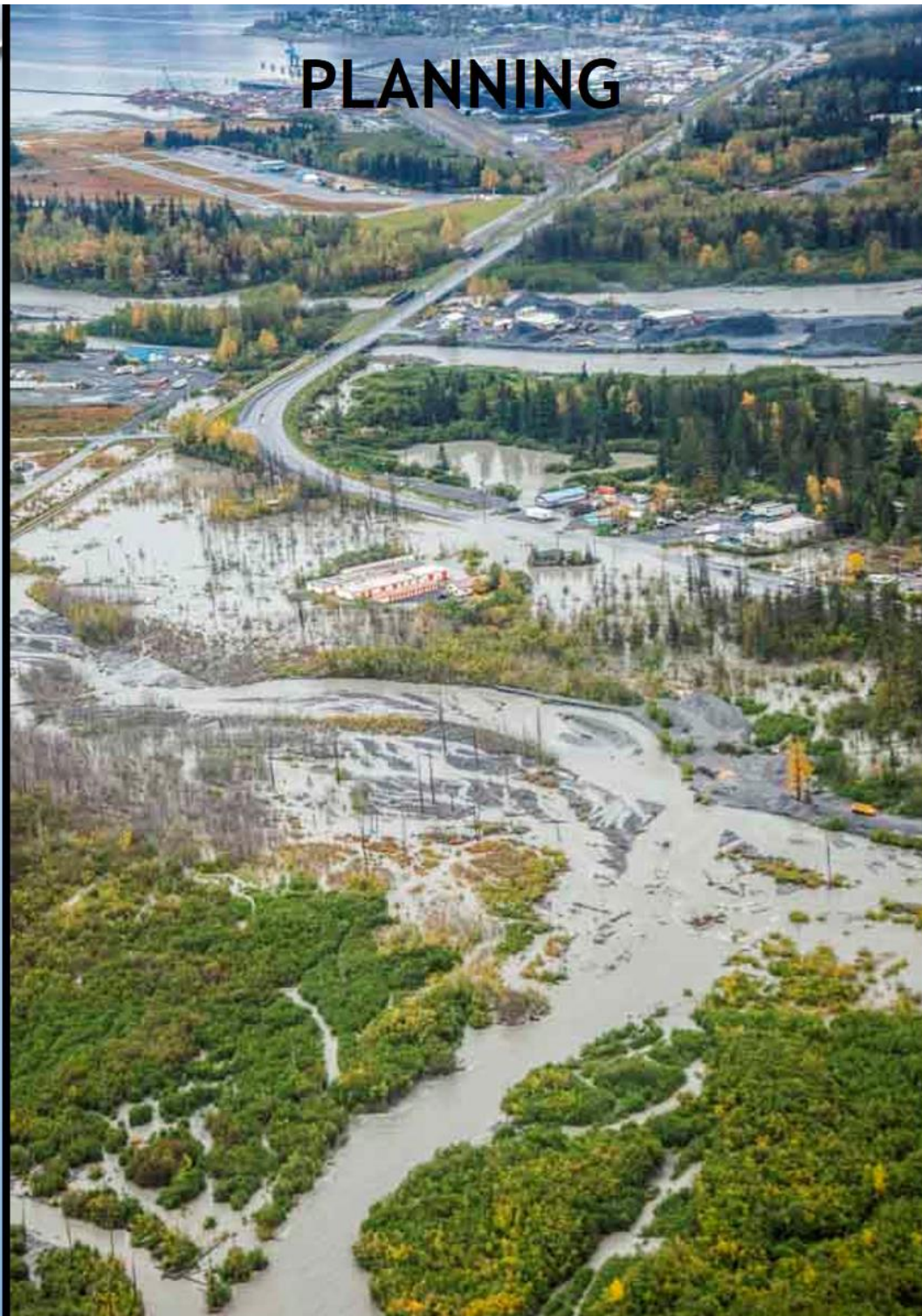


Table 4-3 Hazard Identification Matrix

Hazard	Probability	Magnitude / Severity
Erosion	<p>3 – Likely</p> <p>Event is probable within the next three years.</p> <p>History of events is greater than 20 percent but less than or equal to 33 percent likely per year.</p>	<p>2 – Limited</p> <p>Complete shutdown of critical facilities for more than one week.</p> <p>More than 10 percent of property is severely damaged.</p>
Flood	<p>4 - Highly Likely</p> <p>Event has up to 1 in 1-year chance of occurring (1/1=100 percent).</p> <p>History of events is greater than 33 percent likely per year.</p> <p><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</p> <p>Complete shutdown of critical facilities for more than one week.</p> <p>More than 10 percent of property is severely damaged.</p>
Ground Failure (Avalanche, Landslide/ Debris Flow, Permafrost, Subsidence)	<p>3 – Likely</p> <p>Event has up to 1 in 3 years chance of occurring (1/3=33 percent).</p> <p>History of events is greater than 20 percent but less than or equal to 33 percent likely per year.</p>	<p>3 - Critical</p> <p>Injuries and/or illnesses result in permanent disability.</p> <p>Complete shutdown of critical facilities for at least two weeks.</p>
Tsunami & Seiche	<p>4 - Highly Likely</p> <p>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</p> <p>Multiple injuries and/or deaths.</p> <p>Complete shutdown of facilities for 30 or more days.</p> <p>More than 50 percent of property is severely damaged.</p>

Table 6-8 SBCFSA Mitigation Action Plan (MAP) Matrix

Action ID	Description	Priority (Low, Medium, High)	Responsible Entity or Department:	Time-frame (3-5 years, 2-4 years, 1-3 years)	Potential Funding	Benefit-Costs (B/C) / Technical Feasibility (T/F)
						with materials and equipment depending on the method selected.
FL 6.7	Obtain an exemption to the Alaska Department of Natural Resources (DNR) Material Sales Fees on navigable rivers and streams and state lands for sediment and debris management, stream channel maintenance and flood control or other flood mitigation projects.	High	SBCFSA	1-3 years	SBCFSA, City, KPB, Tribe, DCRA, Denali Commission	B/C: Improving water flow capability will greatly reduce potential infrastructure and residential losses. Project costs would outweigh replacement costs of lost facilities. TF: The community has the skill to implement this action. Specialized skills may need to be contracted-out with materials and equipment on the method selected.
FL 6.8	Evaluate each watershed to develop land use plans for removing and storing creek bed load to: <ul style="list-style-type: none"> • Perform periodic sediment management/bed load removal as necessary. • Identify and permit fill areas for future flood-free development sites. • Identify storage sites that limit gravel transportation costs. 	High	SBCFSA	3-5 years	City, KPB, Tribe, HMA Programs, ANA, DOT/PF, Denali Commission, NRCS, USACE, USDA/EWP, USDA/ECP, USACE, DCRA/ACCIMP	B/C: Improving water flow capability will greatly reduce potential infrastructure and residential losses. Project costs would outweigh replacement costs of lost facilities. TF: The community has the skill to implement this action. Specialized skills may need to be contracted-out with materials and equipment depending on the method selected.
FL 6.9	Seek funding for sediment and debris management to remove excessive stream bed sediment load, gravel and glacial debris.	High	SBCFSA	2-4 years	City, KPB, Tribe, HMA Programs, NRCS, ANA, USACE, US USDA, Lindbergh Grants Program	B/C: Improving water flow capability will greatly reduce potential infrastructure and residential losses. Project costs would outweigh replacement costs of lost facilities. TF: The community has the skill to implement this action. Specialized skills may need to be contracted-out

Priority Rank	M.A.P. Action ID	Project Description	Potential Funding	Responsible Entity	Time-frame	Benefit Costs Technical Feasibility	* Project Costs Appropriated
1	MH 1.2 MH 1.13 MH 1.14 ER 5.1 ER 5.4 FL 6.6 FL 6.7 FL 6.8 FL 6.9 FL 6.10 FL 6.14	<p>Japanese (<u>Japp</u>) Creek <i>Long-term Mitigation</i></p> <ul style="list-style-type: none"> Request USACE Section 205 project re-authorization, determine local sponsor/ funding for feasibility study Sediment Management Plan/ catch basin, deposition areas Long-term maintenance permits from City, USACE, AKF&G, AKDNR, UA Lands 	City of Seward, KPB, USACE study match, SBCFSA Fund Balance	KPB, SBCFSA, City, USACE	1-3 years	BC 10.6 – 14.8 Technically feasible	Feasibility study approx. \$250,000 Construction TBD
2	ER 5.1 ER 5.4 FL 6.6	Box Canyon Creek Project Planning	KPB & CIRI Co-applicants for Hazard Mitigation Grant, Future USACE Section 205	CIRI, KPB, SBCFSA, USNFS	1-2 years	BC undetermined Requires CIRI, USNFS agreements, Costs higher than typical HMGP grant	undetermined
3	MH 1.14 FL 6.3 FL 6.7 FL 6.9 FL 6.10 FL 6.14	<p>Sediment Management Plan (Channel Maintenance & Basin Debris Removal Plan)</p> <ul style="list-style-type: none"> Submit HMGP Planning grant application for Watershed-wide plan Sawmill Creek – submitted to DNR 2018 Salmon Creek 	SBCFSA Fund Balance, Partnership Funding, State Capital Project Request	SBCFSA State DOT KPB (DNR)	1-2 years	BC not applicable	undetermined
4	MH 1.14 FL 6.6	<p>Annual Channel & Embankment Maintenance</p> <ul style="list-style-type: none"> <u>Japp</u> Creek Lost Creek (LC 4-5) Lost/Salmon Confluence (SC 7-8) Spruce Creek 	SBCFSA Contract Services or Fund Balance	SBCFSA	Annually	BC undetermined Technically feasible	2018 – Lost Creek up to \$30,000

Japanese Creek



Clear Creek Revetment & Channel Restoration



Sawmill Creek Channel & Embankment Restoration



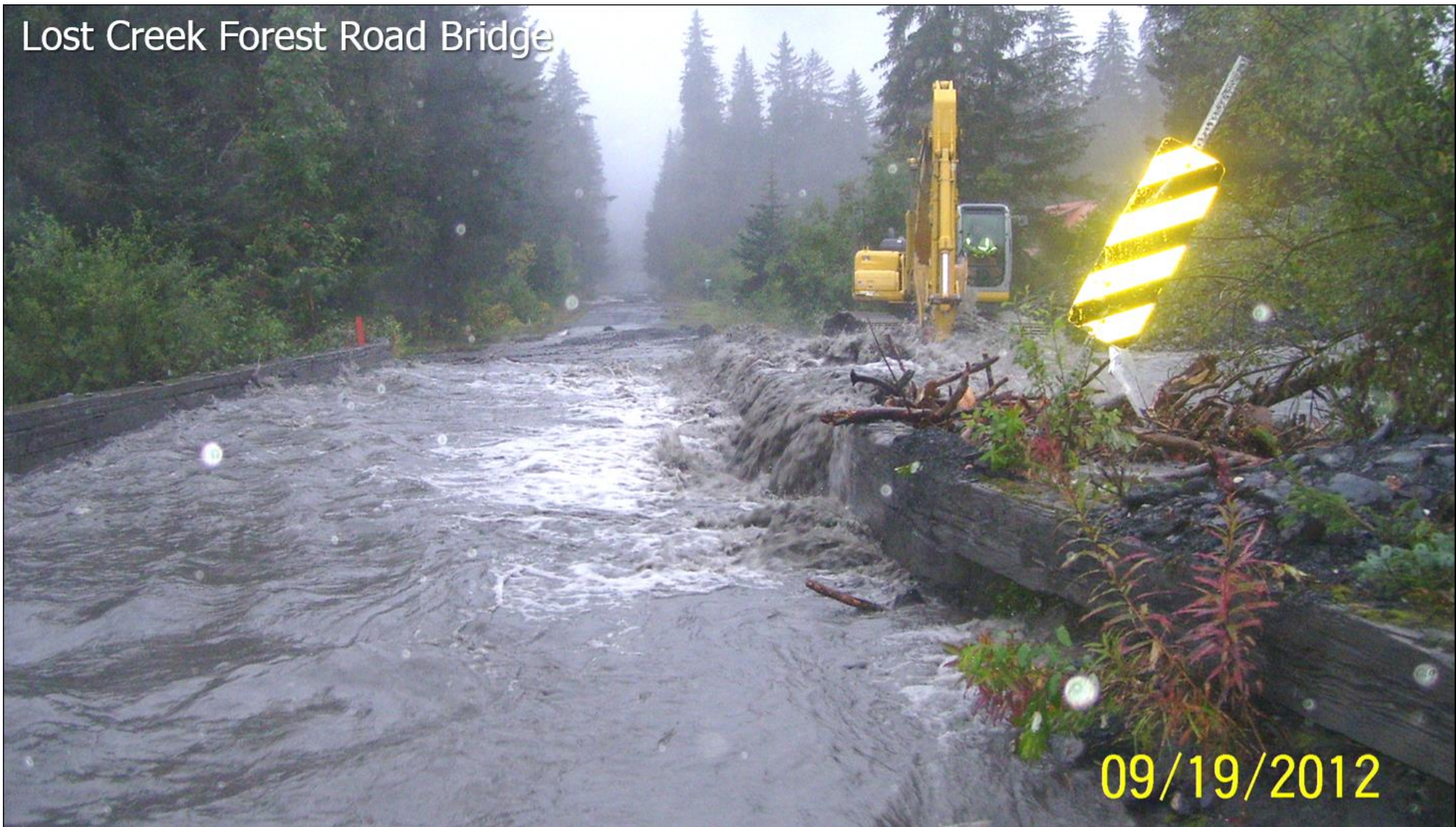
Salmon Creek Revetment & Recreational Area



Box Canyon Creek October 2018



Lost Creek Forest Road Bridge



09/19/2012

Second Avenue Culverts – Two Lakes Trailhead



Lowell Canyon Creek Outlet Tunnel October 2018

