

**Nelson Slough Wetland Restoration
PMIS #91341
Implementation Plan**

January 2004



Park Unit Lead

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Project Coordinator

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ABSTRACT

For many decades, local residents and Klondike Gold Rush National Historical Park visitors drove automobiles and off-road vehicles through Nelson Slough, a small tidal wetland, to access the Taiya River Delta and adjacent tidal flats. After construction of a downstream bridge in the late 1990s, the park restricted vehicle access but continued to allow horse traffic through the slough. In 2002, the park closed the area to horses in order to improve the condition of this highly degraded area. Years of unrestricted vehicle and horse traffic have significantly impacted this 1 acre tidal wetland. Natural bank structure and native aquatic vegetation are wetland features that have been impacted at Nelson Slough. This area is immediately adjacent to a popular parking area and hiking trail and is visited by increasing numbers of park visitors throughout the year. The extent of the impacts to this wetland and the high visibility of the site make restoration a high priority for the park. This project will restore the natural structure and function of this degraded wetland thus improving habitat for anadromous fish species including coho salmon.

INTRODUCTION

Problem Statement

Nelson Slough is an intertidal wetland that is periodically inundated by tidal water and regularly influenced by flowing groundwater. Nelson Slough drains into Nelson Creek, a medium sized clearwater stream that contains important spawning habitat for pink and chum salmon as well as rearing habitat for juvenile coho salmon and dolly varden char. Approximately 1/2 mile downstream of Nelson Slough the creek enters the Taiya Inlet 1/4 mile west of the much larger Taiya River Delta. In 2000, the park delineated the wetlands of the Dyea area of the Lower Taiya River Valley including the Nelson Slough wetland (Bosworth 2000). Just downstream of the former horse crossing, the slough has a gravel channel bottom choked with *Carex lyngbyei*, a salt tolerant sedge. Similarly, just upstream of the impacted area, *Carex lyngbyei* and *Poa palustris* dominate the channel. Virtually no aquatic vegetation (important cover for juvenile salmonids) can be found at the horse crossing. Restoration of this site is considered highly feasible given the pristine nature of the larger wetland complex.

Since the larger Taiya River is a major glacial river, Nelson Creek contains some of the most important salmon spawning and rearing habitats in the watershed. KLGO salmon runs are the only significant wild salmon runs in the park and in the surrounding area. The river delta is also habitat for terrestrial animals including black bear, brown bear, amphibians, song-birds, and bald eagles. These resources are identified in the KLGO enabling legislation, GMP and RMP as fundamental to the park's mission. The park must manage natural resources to preserve natural processes and keystone species such as salmon.

Background

Klondike Gold Rush National Historical Park (KLG0) is located at the end of Alaska's famous "Inside Passage". The Chilkoot Trail unit of the park is bounded at one end by the terminus of Lynn Canal, a long marine fjord, and at the other end by Chilkoot Pass, which is on the border with Canada and the continental interior ecosystem. The Chilkoot unit lies entirely within the Taiya River watershed.

The Nelson Slough wetland has a substrate of gravels and sands under fine organic sediments. These organic-bottom channels with soft aquatic vegetation are very susceptible to disturbance. Decades of vehicle and horse traffic have seriously degraded approximately 1 acre of this productive wetland. Now that the park has prohibited horses and all vehicles from crossing the slough, resource managers seek to restore the site to its natural functioning condition. Trampling by horses and vehicles has removed all aquatic and riparian vegetation from the area, and the absence of riparian vegetation has led to increased erosion and turbidity in this normally clear stream. This loss of vegetation and increased turbidity has decreased the suitability of the site for rearing juvenile salmonids and other wildlife. Without intervention, this site would take an unacceptably long time to recover naturally. Because Nelson Slough is immediately adjacent to a popular parking and hiking area, the park seeks to immediately mitigate many years of resource degradation and restore this important aquatic habitat.

Restoration of Nelson Slough would immediately resolve a long-term natural resource problem that has frustrated park managers since the park's inception in 1976. Due to the relatively small size of the wetland and the surrounding disturbed areas, this project could be completed within a short period of time and results would be immediately obvious. Nelson Slough is a very popular area of the park visited by many local residents and park visitors year-round. Restoration of this site would enhance the area's natural values and improve the visitor experience within a very short time period. The potential for full functional restoration of the Nelson Slough wetland is very high given the types and levels of impacts at this site. Likewise, the proximity of undisturbed analogs ensure the development of a technically sound restoration plan.

Success of this wetland restoration project will provide considerable information for resource managers interested in similar restoration efforts in other parts of the watershed. No wetland restoration projects have been undertaken in the Skagway and Taiya watersheds, although many areas in need of enhancement have been identified by the newly formed Taiya Inlet Watershed Council. This project will serve as a model for future efforts in the area and will provide a valuable educational tool for conveying to the public the importance of wetlands. Park staff and local heavy equipment operators will become familiar with restoration techniques and this newly acquired expertise should prove invaluable to future watershed restoration efforts.

Specific Objectives to be Addressed

The objectives of this study are to completely restore the Nelson Slough wetland to its natural functional state. A qualified wetland restoration specialist will develop the restoration plan and provide technical assistance during the project implementation phase. A NMFS aquatic habitat restoration specialist and an Alaska Department of Fish and Game habitat biologist based in Juneau will review the restoration plan produced by the contractor and will also provide technical assistance during wetland reconstruction. The Alaska Regional Hydrologist will also review the project prior to implementation. Techniques used in the restoration will follow standard procedures developed by southeast Alaska aquatic habitat restoration specialists.

Environmental Planning

This project would require an Essential Fish Habitat permit from the Alaska Department of Fish and Game and a 404 Permit from the U.S. Army Corps of Engineers. An Environmental Screening Form (ESF) is currently being prepared for the project and National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) compliance process has been initiated.

Principal Project Managers

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IMPLEMENTATION PLAN

Design Specifications and Plan Sheets – Approach and Methods – Tasks, Organization and Schedule

In FY2003, Klondike Gold Rush National Historical Park contracted with Mark Sogge, a wetland and stream restoration specialist with Streamcraft (Haines, AK) to evaluate the Nelson Slough site and write a restoration plan. We intend to evaluate Streamcraft's restoration plan and recommendations with the assistance of Kevin Noon, NPS Wetland Scientist.

Design specifications, plan sheets, methods, tasks, and schedule are all described in the attached restoration plan – “Design of the Nelson Slough Wetland Restoration Project”, prepared by Streamcraft, November 2003.

Monitoring Plan

The Streamcraft restoration plan does not include recommendations for post-project monitoring. We intend to follow wetland restoration monitoring and assessment guidelines described in the following publication:

Pacific Estuarine Research Laboratory (PERL). 1990. A manual for assessing restored and natural coastal wetlands. Biology Dept. San Diego State University, San Diego, CA. 105 pp.

Immediately upstream and downstream of the impacted portion of Nelson Slough are undisturbed, natural wetlands that will serve as ideal reference sites for determining the success of our restoration project. Since this is a small project and funding is limited, we can only assess a minimal number of wetland attributes. Our primary focus will be wetland and adjacent upland vegetation as an indicator of habitat condition and wetland function. We have already established a photo point in approximately the same location as the photo taken on the front cover of this document and will continue to monitor changes in plant distributions and hydrologic functions in this way. We also intend to establish several new photo points for monitoring conditions at our reference sites as well. At a finer scale, we will conduct quantitative sampling of plant species composition, cover, and canopy heights using permanent sampling locations (quadrats along transects) in both the restored and reference locations.

We have also considered sampling resident fishes using minnow traps at replicate stations since Nelson Slough wetland is an important nursery for juvenile salmonids. We will continue to conduct annual breeding bird surveys (one of the point counts along this established route is located at Nelson Slough). This route has been surveyed consistently for the past 8 years and continues to provide an excellent long-term dataset for breeding bird activity in the area. However, given the relatively small size of the disturbed site and proximity of high-quality, natural wetland habitats immediately upstream and downstream, we do not expect to see significant changes in bird species distribution or abundance as a result of this project.

DELIVERABLES AND OTHER REPORTING REQUIREMENTS

Final Completion Report

The Park Lead for the project will work closely with the WRD Project Coordinator to develop guidelines for writing a final project completion report and other project deliverables. Specific requirements for the number of copies and format (hard copy and/or electronic) will also be determined. A timeline for delivery of the final completion report will also be established by the Park Lead and WRD Project Coordinator.

Annual Accomplishment Report

An annual accomplishment report will be prepared by the Park Unit lead and entered into the "Accomplishments" field of the projects PMIS record by the close of FY04 (no later than October 30th). The accomplishment report will contain an abstract not to exceed 300 words in length as a stand-alone document.

QA/QC

This project will entail the collection of field data for the assessment of field conditions prior to, during and after restoration of Nelson Slough. No water quality data will be collected, however, data collection will be a critical component of the post-project monitoring plan and will be described in greater detail in the Implementation Plan section of the document.

Budget-Cost

Still in the preliminary stage (from the PMIS proposal):

Item	Description	Qty	Unit	Unit Cost	Item Cost
Personnel Services Costs	NPS Biological Sciences Technician (3 pay periods)= \$4500	1	Each	\$4,500.00	\$4,500.00
Travel And Transportation Costs	None.	1	Each	\$0.00	\$0.00
Supplies and Equipment Costs	Soil, heavy equipment rental = \$10,500	1	Each	\$10,500.00	\$10,500.00
Contractor and Cooperator Costs	Wetland Resoration Specialist = \$5000	1	Each	\$5,000.00	\$5,000.00
Other Costs	None.	1	Each	\$0.00	\$0.00
Overhead Costs	None.	1	Each	\$0.00	\$0.00
Total Costs Anticipated					\$20,000.00

* MONDAY TO DO RESTORATION

Project Identification - PMIS 91341	
Project Title: Nelson Slough Wetland Restoration Design and Implementation	Project Total Cost: \$20,000.00
Park/Unit: Klondike Gold Rush National Historical Park	Region: Alaska
States: AK	Congressional District: 01
Old Package Number:	Reference Number:
Project Type: Non-facility	Financial System Package Number: KLGO 091341
Contact Person: Meg Hahr	Contact Phone: 907-983-9228

Project Status - PMIS 91341	
Date Created: 12/08/02	Review Status: Park-Approved on 01/09/2003
Date of Last Update: 03/24/03	Updated By: Margaret Hahr (Meg_Hahr)

Project Narratives - PMIS 91341
<p>Description</p> <p>For many decades, local residents and Klondike Gold Rush National Historical Park visitors drove automobiles and off-road vehicles through Nelson Slough, a small tidal wetland, to access the Taiya River Delta and adjacent tidal flats. After construction of a downstream bridge in the late 1990s, the park restricted vehicle access but continued to allow horse traffic through the slough. In 2002, the park closed the area to horses in order to improve the condition of this highly degraded area. Years of unrestricted vehicle and horse traffic have significantly impacted this 1 acre tidal wetland. Natural bank structure and native aquatic vegetation are wetland features that have been impacted at Nelson Slough. This area is immediately adjacent to a popular parking area and hiking trail and is visited by increasing numbers of park visitors throughout the year. The extent of the impacts to this wetland and the high visibility of the site make restoration a high priority for the park. This project will restore the natural structure and function of this degraded wetland thus improving habitat for anadromous fish species including coho salmon.</p>
<p>Justifications</p> <p>Klondike Gold Rush National Historical Park (KLGO) is located at the end of Alaska's famous "Inside Passage". The Chilkoot Trail unit of the park is bounded at one end by the terminus of Lynn Canal, a long marine fjord, and at the other end by Chilkoot Pass, which is on the border with Canada and the continental interior ecosystem. The Chilkoot unit lies entirely within the Taiya River watershed.</p> <p>Nelson Slough is an intertidal wetland that is periodically inundated by tidal water and regularly influenced by flowing groundwater. Nelson Slough drains into Nelson Creek, a medium sized clearwater stream that contains important spawning habitat for pink and chum salmon as well as rearing habitat for juvenile coho salmon and dolly varden char. Approximately 1/2 mile downstream of Nelson Slough the creek enters the Taiya Inlet 1/4 mile west of the much larger Taiya River Delta. In 2000, the park delineated the wetlands of the Dyea area of the Lower</p>

Taiya River Valley including the Nelson Slough wetland (Bosworth 2000). Just downstream of the former horse crossing, the slough has a gravel channel bottom choked with *Carex lyngbyei*, a salt tolerant sedge. Similarly, just upstream of the impacted area, *Carex lyngbyei* and *Poa palustris* dominate the channel. Virtually no aquatic vegetation (important cover for juvenile salmonids) can be found at the horse crossing. Restoration of this site is considered highly feasible given the pristine nature of the larger wetland complex.

Since the larger Taiya River is a major glacial river, Nelson Creek contains some of the most important salmon spawning and rearing habitats in the watershed. KLGO salmon runs are the only significant wild salmon runs in the park and in the surrounding area. The river delta is also habitat for terrestrial animals including black bear, brown bear, amphibians, song-birds, and bald eagles. These resources are identified in the KLGO enabling legislation, GMP and RMP as fundamental to the park's mission. The park must manage natural resources to preserve natural processes and keystone species such as salmon.

The Nelson Slough wetland has a substrate of gravels and sands under fine organic sediments. These organic-bottom channels with soft aquatic vegetation are very susceptible to disturbance. Decades of vehicle and horse traffic have seriously degraded approximately 1 acre of this productive wetland. Now that the park has prohibited horses and all vehicles from crossing the slough, resource managers seek to restore the site to its natural functioning condition. Trampling by horses and vehicles has removed all aquatic and riparian vegetation from the area, and the absence of riparian vegetation has led to increased erosion and turbidity in this normally clear stream. This loss of vegetation and increased turbidity has decreased the suitability of the site for rearing juvenile salmonids and other wildlife. Without intervention, this site would take an unacceptably long time to recover naturally. Because Nelson Slough is immediately adjacent to a popular parking and hiking area, the park seeks to immediately mitigate many years of resource degradation and restore this important aquatic habitat.

Restoration of Nelson Slough would immediately resolve a long-term natural resource problem that has frustrated park managers since the park's inception in 1976. Due to the relatively small size of the wetland and the surrounding disturbed areas, this project could be completed within a short period of time and results would be immediately obvious. Nelson Slough is a very popular area of the park visited by many local residents and park visitors year-round. Restoration of this site would enhance the area's natural values and improve the visitor experience within a very short time period. The potential for full functional restoration of the Nelson Slough wetland is very high given the types and levels of impacts at this site. Likewise, the proximity of undisturbed analogs ensure the development of a technically sound restoration plan.

Success of this wetland restoration project will provide considerable information for resource managers interested in similar restoration efforts in other parts of the watershed. No wetland restoration projects have been undertaken in the Skagway and Taiya watersheds, although many areas in need of enhancement have been identified by the newly formed Taiya Inlet Watershed Council. This project will serve as a model for future efforts in the area and will provide a valuable educational tool for conveying to the public the importance of wetlands. Park staff and local heavy equipment operators will become familiar with restoration techniques and this newly acquired expertise should prove invaluable to future watershed restoration efforts.

The project budget is based on experience with similar wetland restoration projects in remote locations of southeast Alaska. Salaries in Alaska are subject to a 25 % cost of living allowance. Access to the project site will be by park vehicle since the project area is in the front-country. A NMFS aquatic habitat restoration specialist and an Alaska Department of Fish and Game habitat biologist based in Juneau will also assist in the restoration at no cost to the park. A

qualified wetland restoration specialist with considerable experience in southeast Alaska will design the restoration plan and provide technical assistance during the project implementation phase.

Heavy equipment needed for the restoration is available locally. Suitable soils and plant materials needed for revegetation are not available in Skagway and must be procured from outside of the area.

NPS regional support for this project comes from the expertise of the Alaska Support Office hydrologist, who will provide technical assistance throughout the project. Direct support from the park includes planning, logistics, labor and coordination from the KLGO natural resources specialist will amount to \$7,000. Regional and park support comes to \$7,500 or 27% of the total project costs.

This project would require an Essential Fish Habitat permit from the Alaska Department of Fish and Game and a 404 Permit from the U.S. Army Corps of Engineers. The park would comply with the requirements of the National Environmental Act and the Historic Preservation Act to ensure that natural and cultural resources would be protected.

References:

Bosworth, Koren. 2000. Wetlands of the Dyea area of the Lower Taiya River Valley. USDI National Park Service unpublished report, Klondike Gold Rush National Historical Park.

Measurable Results

The objectives of this study are to completely restore the Nelson Slough wetland to its natural functional state. A qualified wetland restoration specialist will develop the restoration plan and provide technical assistance during the project implementation phase. A NMFS aquatic habitat restoration specialist and an Alaska Department of Fish and Game habitat biologist based in Juneau will review the restoration plan produced by the contractor and will also provide technical assistance during wetland reconstruction. The Alaska Regional Hydrologist will also review the project prior to implementation. Techniques used in the restoration will follow standard procedures developed by southeast Alaska aquatic habitat restoration specialists.

Project Activities, Assets, Emphasis Areas and GPRA Goals - PMIS 91341

<p>Activities</p> <ul style="list-style-type: none"> • Mitigate Damages • Restoration 	<p>Assets</p> <ul style="list-style-type: none"> • Amphibian or Reptile • Fish • Freshwater Aquatic Ecosystem • Marine and Estuarine Ecosystem
<p>Emphasis Areas</p> <ul style="list-style-type: none"> • Conservation Education • Habitat Enhancement • Water and Watershed Restoration 	<p>GPRA Goals and Percent Values</p> <ul style="list-style-type: none"> • Visitor Understanding, 10% • Park-Specific Water Quality, 20% • Aquatic Resources, 20% • Visitor Satisfaction, 10% • Native Species of Special Concern,

- Youth Work Programs

- 20%
- Park-Specific Disturbed Lands, 20%

Project Prioritization Information - PMIS 91341

Unit Priority: 21 IN FY 2003

Unit Priority Band: MEDIUM

Related OFS Funding Requests - PMIS 91341

Request ID: 8383

Request title: Protect Natural Resources

Project Funding Component - PMIS 91341A

Funding Component Title: Restoration of Nelson Slough

Funding Component Request Amount: \$20,000.00

Funding Component Reference Number (Multi-purpose):

Funding Component Type: Non-recurring , Not Deferred

Funding Component Description: Habitat restoration of anadromous fish habitat is needed to repair impacts to park resources from visitor use.

Initial Planned FY: 2004

Requested Funding FY: 2005

Review Status: Park-submitted

Funded Amount:

Date of Park Submission: 01/13/2003

Submitted By:

Upper-level Review Status:

Fee-demo Submission Number:

Formulated FY:

Funded FY:

Formulated Program:

Funded PWE Accounts:

Formulated Funding Source:

Funded Funding Source:

Component Cost Estimates

Estimated By: Margaret Hahr

Date of Estimate: 12/08/2002

Estimate in 2003 dollars

Class of Estimate: C

Item	Description	Qty	Unit	Unit Cost	Item Cost
Personnel Services Costs	NPS Biological Sciences Technician (3 pay periods)= \$4500	1	Each	\$4,500.00	\$4,500.00
Travel And Transportation Costs	None.	1	Each	\$0.00	\$0.00
Supplies and Equipment Costs	Soil, plant materials, heavy equipment rental = \$10,500	1	Each	\$10,500.00	\$10,500.00

Contractor and Cooperator Costs	Wetland Resoration Specialist = \$5000	1	Each	\$5,000.00	\$5,000.00
Other Costs	None.	1	Each	\$0.00	\$0.00
Overhead Costs	None.	1	Each	\$0.00	\$0.00
Component Funding Request					\$20,000.00

Eligible Funding Sources and Funding Priorities

Funding Source	Unit Priority at Formulation	Regional Priority	National Priority	Year Unit-Prioritized
NRPP - Regional Small Park Block Allocations	21			2003
NRPP - Disturbed Land Restoration	21			2003
Water Resource Division - Competitive	21	4		2003

Additional Criteria - PMIS 91341A

Ranking Criteria:

1) Significance of the resource or issue to the Park

For many decades, local residents and Klondike Gold Rush National Historical Park visitors drove automobiles and off-road vehicles through Nelson Slough, a small tidal wetland. After construction of a downstream bridge in the late 1990s, the park closed the crossing to vehicles but continued to allow horse traffic. In 2002, the park prohibited the use of horses the slough with the intent of restoring the area to its natural condition. Years of unrestricted vehicle and horse traffic have significantly impacted this 1 acre tidal wetland. The natural bank structure and native aquatic vegetation are no longer present at the former slough crossing. This area is immediately adjacent to a popular parking area and hiking trail and is visited by increasing numbers of park visitors throughout the year. The extent of the impacts to this wetland and the high visibility of the site make restoration a high priority for the park. This project will restore the natural structure and function of this degraded wetland thus improving habitat for anadromous fish species including coho salmon.

Since the larger Taiya River is a major glacial river, Nelson Creek contains some of the most important salmon spawning and rearing habitat in the watershed. KLGO salmon runs are the only significant wild salmon runs in the park and in the surrounding area. The river delta is also habitat for terrestrial animals including black bear, brown bear, amphibians, song-birds, and bald eagles. These resources are identified in the KLGO enabling legislation, GMP and RMP as fundamental to the park's mission. The park must manage natural resources to preserve natural processes and keystone species such as salmon.

2) Severity of resource threat, problem or need

The Nelson Slough wetland has a substrate of gravels and sands under fine organic sediments. These organic-bottom channels with soft aquatic vegetation are very susceptible to disturbance. Decades of vehicle and horse traffic have seriously degraded approximately 1 square mile of this productive wetland. Now that the park has prohibited horses and all vehicles from crossing the slough in the area, resource managers seek to restore the site to its naturally functional state. Trampling by horses and vehicles has removed all aquatic and riparian vegetation from the area, and the absence of riparian vegetation has led to increased erosion and turbidity in this normally clear stream. This loss of vegetation and increased turbidity has decreased the suitability of the site for rearing juvenile salmonids and other wildlife. Without intervention, this site would take an unacceptably long time to recover naturally. Because Nelson Slough is immediately adjacent to a popular parking and hiking area, the park seeks to immediately mitigate many years of resource degradation by restoring this important aquatic habitat.

3) Problem definition and information base

Nelson Slough is an intertidal wetland that is periodically inundated by tidal water and regularly influenced by flowing groundwater. Nelson Slough drains into Nelson Creek, a medium sized clearwater stream that contains important spawning habitat for pink and chum salmon as well as rearing habitat for juvenile coho salmon and dolly varden char. Approximately 1 mile downstream of Nelson Slough the creek enters the Taiya Inlet due west of the much larger Taiya River Delta. In 2000, the park delineated the wetlands of the Dyea area of the Lower Taiya River Valley including the Nelson Slough wetland (Bosworth 2000). Just downstream of the former horse crossing, the slough has a gravel channel bottom choked with *Carex lyngbyei*, a salt tolerant sedge. Similarly, just upstream of the impacted area, *Carex lyngbyei* and *Poa palustris* dominate the channel. Virtually no aquatic vegetation (important cover for juvenile salmonids) can be found at the horse crossing. Restoration of this site is considered highly feasible given the pristine nature of the larger wetland complex.

4) Technical Soundness

The objectives of this study are to completely restore the Nelson Slough wetland to its natural functional state. A qualified wetland restoration specialist will develop the restoration plan and provide technical assistance during the project implementation phase. A NMFS aquatic habitat restoration specialist and an Alaska Department of Fish and Game habitat biologist based in Juneau will review the restoration plan produced by the contractor and will also provide technical assistance during wetland reconstruction. The Alaska Regional Hydrologist will also review the project prior to implementation. Techniques used in the restoration will follow standard procedures developed by southeast Alaska aquatic habitat restoration specialists.

5) Problem resolution

Restoration of Nelson Slough would immediately resolve a long-term natural resource problem that has frustrated park managers since the park's inception in 1976. Due to the relatively small size of the wetland and the surrounding disturbed areas, this project could be completed within a short period of time and results would be immediately obvious. Nelson Slough is a very popular area of the park visited by many local residents and park visitors year-round. Restoration of this site would enhance the area's natural values and improve the visitor experience within a very short time period. The potential for full functional restoration of the Nelson Slough wetland is very high given the types and levels of impacts at this site and the proximity of undisturbed analogs necessary for a successful restoration plan.

6) Transferability

Success of this wetland restoration project will provide considerable information for resource managers interested in similar restoration efforts in other parts of the watershed. No wetland restoration projects have been undertaken in the Skagway and Taiya watersheds, although many areas in need of enhancement have been identified by the newly formed Taiya Inlet Watershed Council. This project will serve as a model for future efforts in the area and will provide a valuable educational tool for conveying to the public the importance of wetlands. Park staff and local heavy equipment operators will become familiar with restoration techniques and this newly acquired expertise should prove invaluable to future watershed restoration efforts.

7) Cost effectiveness

The project budget is based on experience with similar wetland restoration projects in remote locations of southeast Alaska. Salaries in Alaska are subject to a 25 % cost of living allowance. Access to the project site will be by park vehicle since the project area is in the front-country. A NMFS aquatic habitat restoration specialist and an Alaska Department of Fish and Game habitat biologist based in Juneau will also assist in the restoration at no cost to the park. A qualified wetland restoration specialist with considerable experience in southeast Alaska will design the restoration plan and provide technical assistance during the project implementation phase.

Heavy equipment needed for the restoration is available locally. Suitable soils and plant materials needed for revegetation are not available in Skagway and must be procured from outside of the area.

8) Project support

NPS regional support for this project comes from the expertise of the Alaska Support Office hydrologist, who will provide technical assistance throughout the project. Direct support from the park includes planning, logistics, labor and coordination from the KLGO natural resources specialist will amount to \$7,000. Regional and park support comes to \$7,500 or 27% of the total project costs.

Component Start Date:	Component Completion Date:
Completion Status:	Accomplishment Reported By:
Report Submission Date:	Report Last Updated on:
Accomplishment Report	