Alaska Department of Fish and Game
State Wildlife Grant
ANNUAL INTERIM PERFORMANCE REPORT

Grant Number: T-1 **Segment Number:** 6
Project Number: 18
Project Title: Amphibian monitoring in Southeast Alaska
Project Duration: July 1, 2004 – June 30, 2007
Report Period: July 1, 2004 – June 30, 2005
Report Due Date: September 30, 2005

Objectives

1. To conduct a 2-yr pilot study of the spatial distribution (occupancy), habitat characteristics, and sampling of western-toad breeding sites in 3 pilot study areas: Prince of Wales Island, Admiralty Island, and the Upper Lynn Canal (Chilkat Valley and Skagway areas);
2. To integrate this information into a scientifically defensible strategy for large-scale monitoring of western toad trends;
3. To enhance prospects for long-term monitoring by initiating agency partnerships in all relevant aspects of this study and integrating efforts with objectives of state and federal agencies, including the USGS-ARMI program

Summary of Accomplishments (Describe accomplishments related to the work that was proposed to be done during this same period in the Project Description and work schedule):

1. As planned, we conducted surveys to evaluate the spatial distribution (occupancy), habitat characteristics, and sampling characteristics of western-toad breeding sites in 3 pilot study areas: Prince of Wales Island, Admiralty Island, and the Upper Lynn Canal (Chilkat Valley and Skagway areas). 22 participants (3 staff; 19 from partners organization) surveyed approximately 450 randomly-selected and opportunistic wetland sites over a total area of 9,642km^2. Encounter rates of western toads in wetland habitats are preliminarily estimated to be 20-25%. We also documented the occurrence of wood frogs and rough skinned newts. Tasks successfully accomplished included: assembling GIS and data sources, classifying wetland habitat data for potential habitat, prioritizing watersheds in the general study areas, developing a sampling design, meeting and coordinating with agency partners, planning for survey logistics, training agency partners, cooperatively carrying out surveys for amphibian occupancy, recording wetland microhabitat data, photo-documenting sites, conducting chytrid fungus surveys, obtaining voucher specimens at breeding sites, recording and entering survey, microhabitat, and observation data, transferring knowledge, skills, and GIS data to agency partners, periodically following up with agency partners, conducting public presentations to solicit observations, coordinating progress with USGS-ARMI scientists, conducting administrative and financial duties (e.g. expense-tracking) as needed, and traveling among study areas.

2. No progress was made or planned to be made during this report period to integrate this information into a scientifically defensible strategy for large-scale monitoring of western toad trends. (Objective 2)

3. We initiated agency partnerships, received support from, and/or cooperated with the following agency partners during this time period:

Original Partners
Alaska Department of Fish and Game, Sportfish Division (Douglas Offices)
Alaska Department of Fish and Game, Sea Lion Research Group (Haines)
U.S. Forest Service, Admiralty National Monument
U.S. Forest Service, Thorne Bay Ranger District
U.S. Forest Service, Juneau Forestry Science Laboratory
National Park Service, Klondike Goldrush National Historical Park
U.S. Fish and Wildlife Service (Juneau Field Office)
University of Alaska Southeast, Environmental Science and Biology Departments
U.S.G.S. ARMI - Pacific Northwest
Takshanuk Water Council
Denver Zoological Foundation
Earthwatch Foundation

New Partners
Alaska Department of Fish and Game, Wildlife Conservation (Douglas Office)
Alaska Department of Fish and Game, Sportfish Division (Haines Office)
Alaska Department of Fish and Game, Sea Lion Research Group (Haines)
U.S. Forest Service, Juneau Ranger District
U.S. Forest Service, Craig Ranger District
Bureau of Land Management, Anchorage Office
U.S.G.S. ARMI - Southeastern U.S.
University of Alaska Fairbanks, School of Fisheries

Significant Deviations (if any, and explain the reasons for these):
1. None.
2. None.
3. We involved and received support from additional agency partners that were not outlined in the original proposal.

Actual Costs during this Report Period (personnel plus all operating expense totals):
The following costs have been invoiced but have yet to be paid as we are awaiting match documentation.

Federal (from ADF&G):	Partner (nonfederal share):
$3,659.21	$1,219.74

Project Leader (or Report Contact Person): Sanjay Pyare

Additional Information: (Not required. Add any additional detail, if desired, related to the progress of the project):

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Project Duration: July 1, 2004 – June 30, 2007
Report Period: July 1, 2005 – June 30, 2006
Report Due Date: September 30, 2006
Partner: University of Alaska Southeast

Objectives

1. To conduct a 2-yr pilot study of the spatial distribution (occupancy), habitat characteristics, and sampling of western-toad breeding sites in 3 pilot study areas: Prince of Wales Island, Admiralty Island, and the Upper Lynn Canal (Chilkat Valley and Skagway areas);
2. To integrate this information into a scientifically defensible strategy for large-scale monitoring of western toad trends;
3. To enhance prospects for long-term monitoring by initiating agency partnerships in all relevant aspects of this study and integrating efforts with objectives of state and federal agencies, including the USGS-ARMI program

Summary of Accomplishments

The following numbers correspond with the objectives above:

1. We are continuing to conduct surveys to evaluate the spatial distribution (occupancy), habitat characteristics, and sampling characteristics of western-toad breeding sites in 3 pilot study areas: Prince of Wales Island, Admiralty Island, and the Upper Lynn Canal (Chilkat Valley). 19 participants (6 staff; 13 from partners organization) surveyed approximately 450 randomly-selected and opportunistic wetland sites over a total area of 9,642km^2. Encounter rates of western toads in wetland habitats are preliminarily estimated to be 5-20%. We also documented the occurrence of wood frogs and rough skinned newts. Finally we conducted chytrid fungus surveys at 13 breeding sites in the region. Tasks successfully accomplished included: assembling GIS and data sources, classifying wetland habitat data for potential habitat, prioritizing watersheds in the general study areas, developing a sampling design, meeting and coordinating with agency partners, planning for survey logistics, training agency partners, cooperatively carrying out surveys for amphibian occupancy, recording wetland microhabitat data, photo-documenting sites, conducting chytrid fungus surveys, obtaining voucher specimens at breeding sites, recording and entering survey, microhabitat, and observation data, transferring knowledge, skills, and GIS data to agency partners, periodically following up with agency partners, conducting public presentations to solicit observations, coordinating progress with USGS-ARMI scientists, conducting administrative and financial duties (e.g. expense-tracking) as needed, and traveling among study areas.

2. No progress was made yet to integrate this information into a scientifically defensible strategy for large-scale monitoring of western toad trends. This will occur Aug-Nov 2006 (Objective 2)

3. We continued to facilitate partnerships, received support from, and/or cooperated with 20 agency partners during this time period.

Significant Deviations
None

Actual Costs during this Report Period *(personnel plus all operating expense totals)*:
(Reported costs included ADF&G indirect calculated at 13.5%)

Federal (from ADF&G):	Partner (nonfederal share):
$51,477	$17,159

Project Leader *(or Report Contact Person)*: Sanjay Pyare

Additional Information:
1. Do you anticipate having any unspent funds at the end of the project? No

FEDERAL AID
FINAL PERFORMANCE REPORT

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 25526
Juneau, AK 99802-5526

Alaska Department of Fish and Game
State Wildlife Grant

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Project Duration: July 1, 2004 – June 30, 2007
Report Period: July 1, 2006 – June 30, 2007
Report Due Date: September 30, 2007
Partner: University of Alaska Southeast

Project Objectives

1. To conduct a 2-yr pilot study of the spatial distribution (occupancy), habitat characteristics, and sampling of western-toad breeding sites in 3 pilot study areas: Prince of Wales Island, Admiralty Island, and the Upper Lynn Canal (Chilkat Valley and Skagway areas);
2. To integrate this information into a scientifically defensible strategy for large-scale monitoring of western toad trends;
3. To enhance prospects for long-term monitoring by initiating agency partnerships in all relevant aspects of this study and integrating efforts with objectives of state and federal agencies, including the USGS-ARMI program

Summary of Project Accomplishments for entire project

Objective 1: At 544 wetland sites in a 9,642km^2 study area of Southeast Alaska, boreal toad sampling protocols were developed and refined, and multi-agency surveys were carried out to estimate boreal-toad occupancy. Follow-up analyses were conducted to determine that boreal toads currently occupy about 17.5% of this landscape, with significant variation across the region and the highest occupancy occurring on Admiralty Island (26.3%) and the lowest on Prince of Wales Island (14.2%). Related analyses were conducted to also determine that boreal toads breed in only 8.1% of this landscape, with some evidence for a propensity to breed in shallower margins of larger water bodies. 10 sites were surveyed for chytrid fungus and all were infected, with approximately 1/3 of all individuals infected. Finally, analyses were conducted to determine that rough-skin newts currently occupy 9% of the landscapes they occur in.

Objective 2: Using sampling protocols that were developed over the past 2 years and the resulting inventory / baseline information on boreal toad distribution, I have demonstrated an efficient and scientifically robust technique to conduct future boreal toad monitoring on a 3-5 year cycle, given sufficient resources. Thus far, I have used this experience and data to guide informal discussions and presentations about future monitoring, which is still in preliminary stages, among several government agency and non-government partners. Provided sufficient resources and continued interest, I anticipate working with the Alaska Amphibian Working Group to circulate concepts for a future 3- to 5-year cycle, multi-agency monitoring initiative in a more formal sense in the coming year.

Objective 3: As a result of this project, I provided support to, consulted with, gave presentations to, and/or initiated agency partnerships, with 13 entities (ADF&G Non-Game, ADF&G Sport Fish, U.S. Fish and Wildlife Service, Admiralty National Monument, Thorne Bay Ranger District, Craig Ranger District, Ketchikan Ranger District, Sitka Ranger District, Yakutat Ranger District, U.S. Forest Service Alaska Region, Glacier Bay National Park, Klondike Gold Rush National Historical Park, USGS-BRD) in the area of amphibian inventory and monitoring in Alaska. These partnerships have in turn contributed to the following: 3-4 ranger districts on the Tongass National Forest are now budgeting for and conducting amphibian work, better information is available to refine the statewide CWCS and U.S. Fish and Wildlife monitoring priorities, Alaska is now officially recognized by the USGS ARMI Program, and a multi-agency "Alaska Amphibian Working Group" has recently been created to help guide future monitoring..

Project Accomplishments during last segment period only (July 1, 2006 – June 30, 2007)

Objective 1: Sampling protocols were refined in the last segment and 283 wetland sites were surveyed in a 9,642km^2 study area for boreal-toad occupancy. Follow-up analyses were conducted to determine that boreal toads currently occupy about 17.5% of habitat in this landscape, with significant variation across the region and the highest occupancy occurring on Admiralty Island (26.3%) and the lowest on Prince of Wales Island (14.2%). It was also determined that boreal toads breed in only 8.1% of the landscape, with some evidence for a propensity to breed in shallower margins of larger water bodies. All 10 sites surveyed for chytrid fungus were infected, and approximately 1/3 of all individuals tested were infected. Rough-skin newts currently occupy 9% of the landscapes they occur in.

Objective 2: During this segment, using sampling protocols that were developed over 2 years and the resulting inventory / baseline information on boreal toad distribution, I demonstrated an efficient and scientifically robust technique to conduct future boreal toad monitoring on a 3-5 year cycle, given sufficient resources. I used this experience and data to guide informal discussions and presentations about future monitoring, which is still in preliminary stages, among several government agency and non-government partners.

Objective 3: I provided support to, consulted with, gave presentations to and/or initiated agency partnerships, with 12 entities (ADF&G Non-Game, U.S. Fish and Wildlife Service, Admiralty National Monument, Thorne Bay Ranger District, Craig Ranger District, Ketchikan Ranger District, Sitka Ranger District, Yakutat Ranger District, U.S. Forest Service Alaska Region, Glacier Bay National Park, Klondike Gold Rush National Historical Park, USGS-BRD) in the area of amphibian inventory and monitoring in Alaska. I also coordinated specifically with the USGS ARMI Program to incorporate Alaska formally into this national monitoring program, as well as stimulated the development of multi-agency "Alaska Amphibian Working Group" to help guide future monitoring.

Significant Deviations: none

Project Leader*:* Sanjay Pyare