PEACE/WILLISTON
FISH & WILDLIFE
COMPENSATION
PROGRAM

BC hydro

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Peace/Williston Fish and Wildlife Compensation Program
Annual Report 2006/07

M.D. Wood and B.G. Blackman
October 2007

PWFWCP Report No. 313

The Peace/Williston Fish & Wildlife Compensation Program is a co-operative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

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PEACE /WILLISTON FISH AND WILDLIFE COMPENSATION PROGRAM

ANNUAL REPORT 2006/07

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Rebecca Reid (Dept. of Fisheries and Oceans)
Nancy Wilkin (Ministry of Environment)

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Conrad Thiessen (MoE, Fort St. John)

FISH BIOLOGISTS:

Brian Blackman (BCH) - Senior Biologist
Arne Langston (BCH)
Randy Zemlak (BCH)

WILDLIFE BIOLOGISTS:

Mari Wood (BCH) - Senior Biologist
Fraser Corbould (BCH)

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ACRONYMS

PWFWCP

BCH	B.C. Hydro
CCI	Community Consultation and Information
CR	Community Relations
ESIM	Environmental and Social Issues Manager
ETS	Environmental Technical Specialist
FTC	Fish Technical Committee
FTR	Full-Time Regular
FTT	Full-Time Temporary
MoE	Ministry of Environment
NRS	Natural Resource Specialist
PC	Policy Committee
PST	Planning, Safety and Training
PWAC	Peace/Williston Advisory Committee
PWFWCP	Peace/Williston Fish and Wildlife Compensation Program
SC	Steering Committee
SIP	Strategic Implementation Plan
SWP	Safe Work Procedures
TC	Technical Committee
WLR	Water License Requirements
WTC `	Wildlife Technical Committee
WUP	Water Use Planning

STAKEHOLDERS and PROJECT COLLABORATORS

ABIT	Abitibi Consolidated
BCTA	BC Trappers Association
BCWF	BC Wildlife Federation
CANFOR	Canadian Forest Products Ltd.
CWS	Canadian Wildlife Service
DFO	Department of Fisheries and Oceans
FFS	Freshwater Fisheries Society
FRBC	Forest Renewal BC
FWCP (CB)	Fish and Wildlife Compensation Program- Columbia Basin
GOABC	Guide-Outfitters Association of BC
HCTF	Habitat Conservation Trust Fund
HHRG	Hudson's Hope Rod and Gun Club
LCHH	Lions Club of Hudson's Hope
MFGA	Mackenzie Fish and Game Association
MNO	Mackenzie Nature Observatory
MoF	Ministry of Forests
TKD	Tsay Keh Dene Band
WII	Wildlife Infometrics Inc.
WSSBC	Wild Sheep Society of BC
WSC	Water survey of Canada
UBC	University of British Columbia
UNBC	University of Northern British Columbia

ADMINISTRATION

Membership on the Steering Committee (SC) remained the same as the previous fiscal, but the role of Chair was turned over from Ted Down (Ministry of Environment (MoE)) to Kevin Conlin (BC Hydro (BCH)). Membership on the Wildlife Technical Committee (WTC) changed with BCH representative Alan Chan-McLeod replaced by Pete Scales from Hudson's Hope, and MoE Peace Region representative Rod Backmeyer replaced by Conrad Thiessen. Doug Heard remained as Chair of the WTC for the 4th consecutive year. On the Fish Technical Committee (FTC), BCH representatives Alan Laidlaw and Cynthia Powell were replaced by Pete Scales (Hudson's Hope) and David Wilson (Burnaby), and the role of chair was turned over from Cynthia Powell to Ray Pillipow (MoE). Deb Bisson, BC Hydro's Environmental and Social Issues Manager (ESIM) in Hudson's Hope, remained as the administrative supervisor for PWFWCP staff. To ensure compatibility with the MOE computer system all staff computers were upgraded, and a 5 year "Licence Agreement" was signed with MOE for office/warehouse space and administrative support.

Senior fish biologist Brian Blackman (NRS 3), fish biologists Arne Langston (NRS 2) and Randy Zemlak (ETS 1), Senior wildlife biologist Mari Wood (NRS 3) and wildlife biologist Fraser Corbould (NRS 2), continued as Full-Time Regular (FTR) staff responsible for administering, managing, and conducting program projects and activities. Arne Langston applied for a job reclassification and was upgraded to an NRS 3, and Randy Zemlak was reclassified to an NRS 2 position. Jeremy Ayotte (hired in June 2005 for a 2-year Full-Time Temporary (FTT) term to assist the Wildlife Program with the Ospika Goat Project) left the program after one year in June 2006.

Administrative activities in 06/07 included tracking program expenditures, managing contracts, preparing performance review plans, and preparing monthly reports. A review of staff time tracking (categories to which staff allocate their time throughout the year) resulted in a reclassification and renaming of the existing non-Project categories. Activities relating to safety and training which were previously tracked under "Administration" were included with "Planning" activities in a new category called "Planning, Safety and Training". The previous category of Public Consultation was renamed to "Community Consultation and Communications" which includes consultation meetings, information dissemination, and extension activities. Quarterly and annual program reporting was included within the "information dissemination" portion of this category.

PLANNING, SAFETY, AND TRAINING

Planning

The Fish Program (FTC members and staff fish biologists) held its annual "technical" session in May and two additional budget meetings in October and November to discuss the current year's projects and finances and prepare the 07/08 budget for submission to the SC. The Wildlife Program (WTC members and staff wildlife biologists) held two conference calls (June and December) and two in-person meetings (November and January) to discuss 06/07 Wildlife Program issues and Strategic Implementation Plans (SIP's), and to develop the 07/08 budget.

Senior biologists and TC chairs from the Fish and Wildlife Programs attended the SC's annual 2-day January meeting in Vancouver to present their respective 2007/08 budgets. All staff and some TC members attended on the second day to discuss SIP development and explore synergies between the Water Licence Requirements (WLR) and Water Use Plan (WUP) group. Informal meetings were also held throughout the year with individuals, consultants, and stakeholder representatives to discuss current and potential projects for the future.

After numerous internal reviews and a facilitated workshop involving Fish TC members and staff fish biologists, two draft SIP's (Kokanee and Bull Trout) were submitted to the SC. Drafts of Dinosaur Reservoir and Fish Species Conservation SIP's were also developed.

Mari Wood attended the Provincial Biologists' meeting in Prince George in October, the "Bear Conservation in a Fast-Changing North America" conference in Revelstoke in October, and the GOABC Stone's Sheep Workshop in Prince George in November. Fraser Corbould attended a Biodiversity Workshop in Prince George. All fish staff attended the BC Hydro Large Rivers Indexing Workshop in Burnaby in February.

Safety

Program staff participated in monthly safety meetings, and developed hazard identifications and developed or updated Safe Work Procedures (SWP's) for program activities such as conducting aerial surveys, working around helicopters, towing and anchoring woody debris, using gillnets, using bear spray, operating ATV's, operating small boats in lakes, and operating the Williston Ranger. Staff also received safety training on Workplace Hazardous Materials Information System (WHMIS), Transportation of Dangerous Goods (TDG), back injury prevention, and secure vehicle load/cargo requirements.

Training (Non-Safety)

All staff participated in BC Hydro's Contract Management Process training, and Working Effectively with Aboriginal Communities training. Randy Zemlak attended a course on YSI meter maintenance. Fraser Corbould attended a GIS for Managers training course at UNBC, Brian Blackman attended an iMap training course, and Fraser, Randy and Arne Langston attended several in-house ArcGIS Tier 2 training courses.

COMMUNITY CONSULTATION AND INFORMATION

Community Consultation

No consultation activities were undertaken this year.

Information Dissemination

Activities Conducted by Program Staff

Senior biologists produced the 2005/06 Annual Report as well as quarterly reports throughout the year. The Kokanee in the Classroom Project was profiled again on CBC-TV, and on the program-sponsored UNBC lecture series through PGTV. Two radio programs out of Mackenzie dealt with Program activities and a number of newspaper articles appeared in the P.G. Citizen, Mackenzie Times, and Alaska Highway News discussing the UNBC lecture, Dina Creek Spawning Channel, Kokanee in the Classroom Project, and the Dina Creek Ecology field day.

Brian Blackman attended a display booth at the BC Wildlife Federation's (BCWF) 50th Annual General Meeting (AGM) in Penticton in April. Mari Wood attended the BC Trappers Association(BCTA) AGM in March in Prince George, and the Wild Sheep Society of BC's (WSSBC) AGM in March in Kamloops including delivering a presentation on the 6-year Peace Arm Stone's sheep research project and organizing a Wildlife Identification Contest. Wood also coordinated the preparation of a tri-compensation program display booth, and manned the booth at the Guide-Outfitters Association of BC's (GOABC) AGM in Victoria in March. Arne Langston coordinated the 4th in a series of annual lectures sponsored by the PWFWCP at UNBC, where Dr.

Robert Lackey (US Environmental Protection Agency, Corvallis, Oregon) lectured on the Salmon 2100 Project on the future of salmon. The lecture was preceded by a brief overview of the PWFWCP, and followed by a "meet and greet session" with PWFWCP biologists at their display booth. All program staff attended a MoE team-building session and delivered a short presentation on the PWFWCP objectives and staff.

The PWFWCP display booth is used during many events to inform the public about current project work and accomplishments.

Wildlife program staff met with Tsay Keh Dene (TKD) representatives to discuss the Ospika Goat Project (OGP) and other issues, and subsequently provided a written update on the OGP. Senior program biologists also completed a detailed summary document of the 07/08 Fish and Wildlife Budgets for TKD in December, which outlined opportunities for involvement/employment in program activities. Fish program staff provided updated information on kokanee spawner distribution and numbers to TKD, Kwadacha and Takla representatives, and provided the bands with an opportunity to participate in the kokanee spawner counts and Davis River bull trout redd counts. Informal meetings were also held with representatives of TKD and McLeod Lake bands. The PWFWCP and specific fish and wildlife projects were also discussed through informal meetings and talks with industry representatives, club members, guide outfitters, trappers, contractors, students, tourists, and other government agencies. Detailed project information and technical reports were also discussed with, and disseminated to consultants, biologists, and researchers.

Program biologists also contributed to PWFWCP public consultation activities handled by BC Hydro's Public Affairs department (see below). Activities included drafting and editing project articles for *Natureline* (the PWFWCP's official newsletter), developing text, maps and photos for program awareness and wildlife viewing signs, completing "project summaries" to be posted to the website to explain each of the wildlife projects listed, and representing the PWFWCP at various stakeholder AGM's .

Activities Conducted by BC Hydro's Community Relations Department

Additional program reports were posted to the PWFWCP website (http://www.bchydro.com/pwcp/) and general maintenance continued. Advertisements for the PWFWCP were placed in the 2006/07 Freshwater Fishing Regulations Synopsis, and the 2006/07 Hunting and Trapping Regulations Synopsis. The 15th issue of *Natureline* was formatted, published and disseminated. Two news releases were produced on climate change and freshwater fish protection. Sponsorship was provided to the BCWF 50th AGM, the GOABC AGM, and the 43rd North American Moose

Conference and Workshop scheduled for June 2007 in Prince George. Funding was also provided for completion of the "Fish Species of BC" book, and for the UNBC lecture series presenter. Additional promotional items were produced (toques, coffee mugs etc.) and display materials were updated.

Extension

Activities Conducted by Program Staff

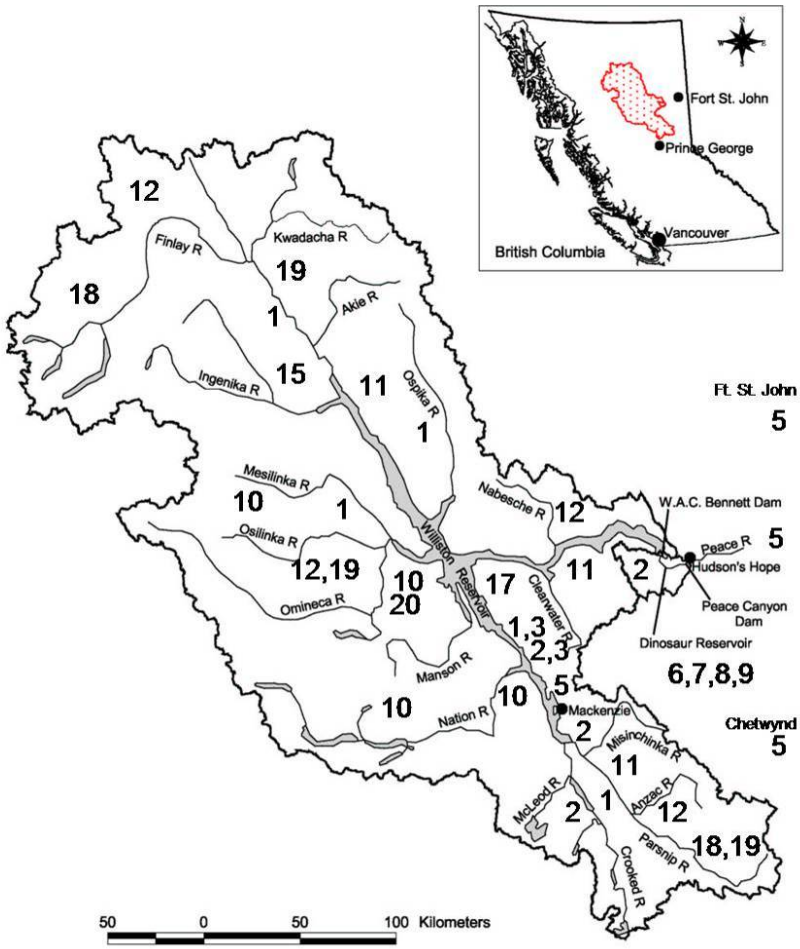
Brian Blackman continued to provide input and advice on Montana's Arctic Grayling Recovery Program and was part of a team that provided input on the "status" of the species to the US Fish and Wildlife Service. He also continued to provide input into BC Hydro's WUP/WLR process. Blackman also represented the program at a Peace/Williston Advisory Committee (PWAC) meeting in August. All fish staff attended the BC Hydro Large Rivers Indexing Workshop and Brian Blackman made a presentation of activities in Williston Watershed to the group.

Input to various planning processes and agencies regarding wildlife management issues and other research projects was provided by wildlife staff throughout the year including: 1) review and comment on Peace Arm heli-portable seismic proposals, 2) participation in CWS's "Stewardship and Species at Risk" interviews and questionnaires, and 3) provision of data from the 6-year Omineca Mountains Caribou Project to a research team analyzing broad-level nationwide caribou data, and to a Canfor biologist working with MoE on Ungulate Winter Range/Wildlife Habitat Area designations for northern caribou in Mackenzie TSA. Mari Wood attended the GOABC Stone's Sheep Workshop in Prince George and the Wild Sheep Society of BC's annual general meeting in Kamloops and gave presentations at both meetings on her 6-year Stone's sheep research project. She also attended the Northern Caribou Recovery Implementation Group meeting in Mackenzie, and a multi-agency meeting in Fort St. John to discuss a major subdivision and golf course development proposal with the Dunlevy Special Management Area along the Peace Arm. The latter also involved a review of the Dunlevy Management Plan document, provision of data on sheep ranges, and summarization of the impacts of golf courses on wildlife. Wood also participated as a key member on the organizing committee for the 43rd North American Moose Conference and Workshop in Prince George.

FISH PROGRAM

By: Brian Blackman

2006/07 FISH PROJECT LOCATIONS



Map	Task#	Project	Location
1	06-01	Project Maintenance (WSC)	Parsnip
2	06-02	Stocking Program	Watershed
3	06-03	Small Lake Stocking Evaluations	Watershed
	06-04	Report Writing Previous Years	Office
5	06-05	Classroom Kokanee (DFO, MNO, MFGA, FFS)	Watershed
6	06-06	Dinosaur Reservoir Habitat Improvements	Dinosaur
7	06-07	Dinosaur Reservoir Fish Assessment	Dinosaur
8	06-08	Dinosaur Reservoir Creel Survey	Dinosaur
9	06-09	Dinosaur Tributary Spawning Habitat Assessment	Dinosaur
10	06-10	Evolution and Distribution of Pygmy Whitefish (UBC)	Parsnip/Finlay
11	06-11	Bull Trout Redd Count Index	Finlay/Parsnip
12	06-12	Kokanee Spawner Distribution Survey	Watershed
13	06-13	Grayling Management and Recovery Plan (Funded Project – MoE)	Office
	06-14	UNBC Research Lecture Series(UNBC)	UNBC
15	06-15	Grayling Fry Distribution in the Finlay Watershed	Parsnip
	06-16	Freshwater Fishes of BC Book (BCH, FWCP (CB), Fortis BC, HCTF, MoE)	Office
17	06-17	Foreshore Enhancement Project	Parsnip
18	06-18	Genetic Analysis of Arctic Grayling Population Structure (UNBC)	Watershed
19	06-19	Genetic Analysis of Kokanee Population Structure (DFO)	Watershed
20	06-20	Omineca Arm Bathymetric Mapping (BCH)	Finlay
	06-21	Dinosaur Reservoir Woody Debris Project Evaluation	Dinosaur

Collaborators are listed in brackets following the project name.
"Funded Projects" are projects funded by the PWFWCP but administered and conducted by other agencies.

FISH PROJECT SUMMARIES

1. PROJECT MAINTENANCE (#06-01)

Project Objectives: To provide maintenance of the Dina Creek spawning habitat improvement project, and funding for maintenance of 10 water temperature sensors maintained by Water Survey of Canada.

2006/07 (Year 12 of ongoing): Annual maintenance was completed to prepare the spawning channels for rainbow trout. Habitat complexing, spawning gravel addition and removal of beaver dams obstructing passage at the culvert on Dina Creek were completed. Project biologists led and participated in the Dina Creek Field Day, where local students learn about stream ecology. The Parsnip River thermister was damaged and was replaced by a new armored unit. Quality assurance checks on all 10 stations were undertaken in the fall and all were within accuracy specifications. Raw water temperature data from the 10 stations for 2006 was received from Water Survey of Canada and the data has been corrected and added to the water temperature data base. This project meets the Program Strategic Objectives of monitoring global warming, and public awareness and appreciation of northern ecosystems.

2. STOCKING PROGRAM (#06-02)

Project Objective: To provide funds to cover the costs to the Freshwater Fisheries Society for the rearing and release of fish into PWFWCP stocked lakes.

2006/07 (Year 18 of ongoing): This year 8,500 rainbow trout were released into Dina Lakes #3&7, Wright, and Butternut, and 4,000 brook trout were released into Bruce Lake. Brood requests for 2008 were submitted and R. Zemlak attended the Provincial Small Lakes Committee meeting in November. This project addresses the Program Strategic Objective of providing additional recreational opportunities.

3. SMALL LAKE STOCKING EVALUATIONS (#06-03)

Project Objectives: To evaluate the fish populations in small lakes that PWFWCP stocks and ensure the goals of the stocking program are met. The 2006 objective was to evaluate the fish populations (native and introduced) of Lost Lake and 43 Mile Pothole and seek out potential enhancement opportunities.

2006/07 (Year 8 of ongoing): The evaluations of Lost and 43 Mile Pothole lakes were completed in June. Lost lake populations appear to be healthy but the 43 Mile Pothole fish were spawnbound. Sterile fish will be requested for this lake in the future. Reports for these evaluations are completed and awaiting final approval. This project meets the Program Strategic Objective of evaluating enhancement projects.

Rainbow trout captured from 43 Mile Lake.

4. REPORT WRITING PREVIOUS YEARS (#06-04)

Project Objective: To provide staff time and funds for the completion of reports from previous years and to have them placed on the Program website.

2006/07 (Year 8 of Ongoing): Reports completed and incorporated into the report series this year include:

No. 306 2005 Dinosaur Reservoir Creel Survey Report. R. Stiemer. April 2006. 14pp plus appendices.

No. 308 Fish Counting Fence operation on Johnson Creek 2006.. K Newsholme and T Euchner. October 2006. 15 pp plus appendices.

No. 310 Identification of potential Lake Trout spawning areas in the Dinosaur Reservoir 2003-2004. Euchner T. December 2006. Prepared for PWFWCP by Diversified Environmental Services Fort. St. John. 32pp plus appendices

No. 312 Recreational Fishery Stock Assessment of Wright Lake, 2004. R.J. Zemlak and D.M. Cowie. December 2006. 15pp plus appendices.

This project meets the Program Strategic Objective of sharing information.

5. CLASSROOM KOKANEE (#06-05)

Project Objective: To coordinate an educational program to raise kokanee in a classroom environment, as an educational tool in Mackenzie (two schools), Hudson's Hope, Chetwynd (two schools) and Ft. St. John.

2006/07 (Year 10 of ongoing): This project was conducted in conjunction with the local School District, the Department of Fisheries and Oceans and the Freshwater Fisheries Society of B.C. The Habitat Conservation Trust Fund, Mackenzie Nature Observatory, Mackenzie Fish and Game Association, Canfor Ltd., BC Hydro office at the W.A.C. Bennett Dam, Lions Club of Hudson's Hope, and the Hudson's Hope Rod and Gun Club were all partners in the initiation of the project. In May and June of 2006, kokanee reared in classrooms the previous winter were released into local streams. The release of the fry coincided with a one day field trip, to learn about field ecology, and the event was covered by the local media. Art contest winners were selected and prizes awarded. Clearwater Trout Hatchery (Freshwater Fisheries Society) provided 50 kokanee eggs per school this year. Program staff delivered the eggs to seven schools in Ft. St. John, Hudson's Hope, Chetwynd and Mackenzie and provided a one hour (age appropriate) scientific presentations to 300 students this year. This project meets the Program Strategic Objective of encouraging the public to participate in program activities to increase public awareness of the program and general fisheries issues.

Students learn about fish and wildlife habitat at a local creek.

6. DINOSAUR RESERVOIR HABITAT IMPROVEMENTS (#06-06)

Project Objective**:** To provide improved habitat in Dinosaur Reservoir through the addition of cover in the form of woody structures.

2006/07 (Year 8 of ongoing): 2006 was the fifth year of habitat improvements through the addition of woody structures along the shoreline. A number of structures from previous years required repairs (boom logs broke) and additional wood was added to all existing structures. Approximately 30 new structures were added to three existing sites enhancing an additional 300 meters of shoreline. A survey was conducted of the available littoral habitat in 2005 and 2006. Based on the survey it was estimated that an additional four km of shoreline can be enhanced with an additional 200 structures. To date 1.6 km of shoreline enhanced have been enhanced using 65 structures. This project is an integral part of the strategies outlined for Dinosaur Reservoir in the Dinosaur Reservoir Management Plan. These plan(s) emphasise habitat improvements to compensate for limitations on production as a result of construction of the Site One Dam, while at the same time maintaining or improving recreational opportunities without reliance on a stocking program if possible. This project meets the Program Strategic Objective to maintain biodiversity and recreational opportunities and to improve fish populations through the enhancement of existing habitat, particularly where potential losses can be attributed to the construction of the dams.

Habitat structures covering 200 m of shoreline were added to Johnson Bay in Dinosaur Reservoir.

7. DINOSAUR RESERVOIR FISH ASSESSMENT (#06-07)

Project Objectives: To assess the status of the fish species in Dinosaur Reservoir and in particular to document the changes that may be the result of habitat enhancement or management actions.

2006/07 (Year 4 of ongoing): This year the electrofishing went smoothly except that water clarity was poor which may have accounted for the lower number of fish captured this year. However, the percentage of rainbow trout captured at the enhancement sites increased by 15%. This project addresses the Program Strategic Objectives of evaluating habitat improvement projects and monitoring fish populations.

8. DINOSAUR RESERVOIR CREEL SURVEY (#06-08)

Project Objective: To determine angler effort, catch success, and gather biological catch data from the Dinosaur Reservoir Fishery. This data can be compared to previous surveys to document any changes and will be used as a benchmark in order to assess the affects of habitat improvement and management actions on the recreational fishery.

2006/07 (Year 2 of 2). The survey was completed as planned but the data has not yet been analysed. This project meets the Program Strategic Objectives of addressing potential losses of recreational activities and evaluating the results of enhancement and management activities.

9. DINOSAUR TRIBUTARY SPAWNING HABITAT ASSESSMENT (06-09)

Project Objectives: To document availability and use of tributary stream spawning and rearing habitat by resident fish speicies. This project will also identify possible habitat enhancement opportunities and provide baseline data to evaluate future habitat enhancement or management actions.

2006/07 (Year 2 of ongoing): In 2006 a fish trap/fence was installed in Johnson Creek to provide baseline information on the use and success of spawning in one of the two identified spawning streams in the watershed. Stream spawning and rearing habitat has been identified as a possible limiting factor for fish production in Dinosaur Watershed. A total of 404 rainbow trout were captured passing through the fence. One hundred and twenty four of these fish were marked with spaghetti tags. None of the "large (2-10kg)" rainbow trout reported from the reservoir were observed spawning in Johnson Creek. It is assumed these larger fish probably spend most of their time in the WAC Bennett Dam tailrace area and as such probably spawn in Gething Creek. The report on this project has been completed and has been added to the report series. As well electrofishing surveys were conducted on Johnson and Gething creeks. Rainbow trout fry were captured throughout the accessible potions of both streams and the fry were much more abundant than in previous years. This project is addressing the Strategic Program Objective of compensating for habitat limitations, which are a direct result of the construction of the dams.

Fish fence/trap structure installed on Johnson Creek to monitor use and spawning success of rainbow trout.

10. EVOLUTION AND DISTRIBUTION OF WILLISTON PYGMY WHITEFISH POPULATIONS (#06-10)

Project Objectives: To verify the presence of pygmy whitefish populations located within the western portion of the Williston watershed, to document the uniqueness of pygmy whitefish populations relative to those across North America, and to learn more about their possible migration patterns between Williston watershed lakes.

2006/07 (Year 2 of 2): Pygmy whitefish samples were collected from Uslika Lake, Dina Lake #1, and Chuchi Lake, as well as Six Mile and Centennial bays of Williston Reservoir. Tissue samples were provided to Dr. Eric Taylor and Dr. Jonathon Witt of UBC for mitochondrial and microsatellite DNA analysis to determine the genetic status of the populations. North American pygmy whitefish are clustered into two major groups. Preliminary results indicate that Williston populations belong to a single group at the mitochondrial DNA sequence level. Two separate manuscripts are schedule for completion in the summer of 2007. These reports will provide recommendations that will be used in a management plan for this species. This project meets the strategic objective of promoting biodiversity and information sharing.

Dr. Eric Taylor (foreground) and Dr. Jonathon Witt assist program fish biologists with collecting genetic material from pygmy whitefish captured from Tacheeda Lakes

11. BULL TROUT REDD COUNT INDEXING (#06-11)

Project Objective: To monitor and compare bull trout redd counts at strategic index sites for a five year period to determine population trends with the intent of enabling input into management, protection and enhancement plans for Williston Reservoir bull trout.

2006/07 (Year 4 of 5) Redd counts on Davis River (Finlay Reach), Misinchinka River (Parsnip Reach) and Point Creek (Peace Reach) were completed in September 2006. This information will be added to that collected in previous year in order to provide long term population trend data. This project meets the Program Strategic Objective to evaluate the status of fish and their habitat.

Biologists enumerate and record key habitat characteristics of bull trout redds in Point Creek.

12. KOKANEE SPAWNER DISTRIBUTION SURVEY (#06-12)

Project Objectives: To determine if a viable kokanee populations has been established in Williston Reservoir from the stocking program, and to document current spawner distribution and identify high use spawning areas

2006/07 (Year 5 of 5): This year there was a dramatic increase in the numbers and distribution of kokanee spawners observed in the watershed. The estimate for 2006 was 1,000,000 spawners up from 193,000 fish in 2005. Previously 234,000 kokanee were observed in 2004, 199,000 in 2003, and 81,000 in 2002. In 2006 the Omineca system had the most kokanee with 590,000 (Osilinka 246k, Omineca 218k, Germansen 108k and Mesilinka 15k). There were 210,000 in the Ingenika (Ingenika 171k, Pelly 28k and Swannell 10k). The Finlay system had 126,000 (Finlay 33k, Bower 16k and Russel 51k). There were also 31,000 kokanee in the Manson River and 19,000 in the Ospika. Some of this increase could be attributed to the very low clear water conditions in 2006 which made it possible to obtain counts from systems like the Omineca which were too murky to get counts from on previous years. This project meets the Program Strategic Objective to evaluate the status of fish and their habitat and to evaluate enhancement projects.

An aerial view of a small section of the Germansen River where approximately 750 kokanee were observed spawning.

13. GRAYLING MANAGEMENT AND RECOVERY PLAN (#06-13)

Project Objectives: To provide an acceptable framework for a "recovery" plan for Arctic grayling in the watershed aimed at protecting and enhancing the remaining stocks or habitats, and to conceivably reintroducing stocks back into areas where they have been extirpated.

2006/07 (Year 4 of ongoing): No workshops were held in 2006. Ministry of Environment staff have been working on this internally. This project meets the strategic objective to evaluate the status of fish and their habitat.

14. UNBC RESEARCH LECTURE SERIES (#06-14)

Project Objective: To support an annual lecture at UNBC to promote research on Northern Aquatic ecosystems as provided in the PWFWCP Aquatic Research Award.

2006/07. (Year 4 of ongoing): Dr. R. Lackey (US EPA, Corvallis Or) presented the lecture "The Salmon 2100 Project on the future of salmon. The lecture was preceded by a brief overview of the PWFWCP and was followed by a "meet and greet session" with a Program display and biologists available to answer questions. There was also local television and newspaper coverage of the event. This project meets the Program Strategic Objective of sharing information, developing partnerships, and creating public and scientific community awareness and support of PWFWCP and for the "Aquatic Research Award.

15. DISTRIBUTION OF GRAYLING FRY IN THE FINLAY RIVER (#06-15)

Project Objectives: (1) To determine the distribution and relative abundance of Arctic grayling fry in Williston Reservoir tributary streams; (2) To map potential spawning areas, based on the distribution of 0+ grayling, for possible future study; Surveys were conducted in the Omineca in 2001, Osilinka in 2002, Ingenika in 2003, Nation in 2004 and the Parsnip in 2005.

2006/07 (Year 1 of 2): We surveyed the upper Finlay River and tributaries in 2006 with the plan of surveying the lower river in 2007. The upper Finlay River is headed by several large lakes and as a result is relatively warm and stable. Productivity appears to be high based on the amount of algae in the river. We sampled 57 open electrofishing sites covering 5.5 km of shoreline and 86 Arctic grayling were captured from 30 sites. At the same time 120 rainbow trout were captured. Helicopter access to the smaller tributaries was limited but use of the larger tributary streams appears to be extensive. Both adult and young of the year grayling were captured into the headwaters of the Toodoggone River upstream from Toodoggone Lake and more than 50 km from the Finlay River.

Typical habitat of the upper Toodoggone River where both adult and young-of-the-year Arctic grayling were present.

16. FRESHWATER FISHES OF B.C. BOOK (#06-16)

Project Objective: To champion and coordinate the production of a book, which will be the most up to date and detailed reference for the identification of fish species of British Columbia. This book

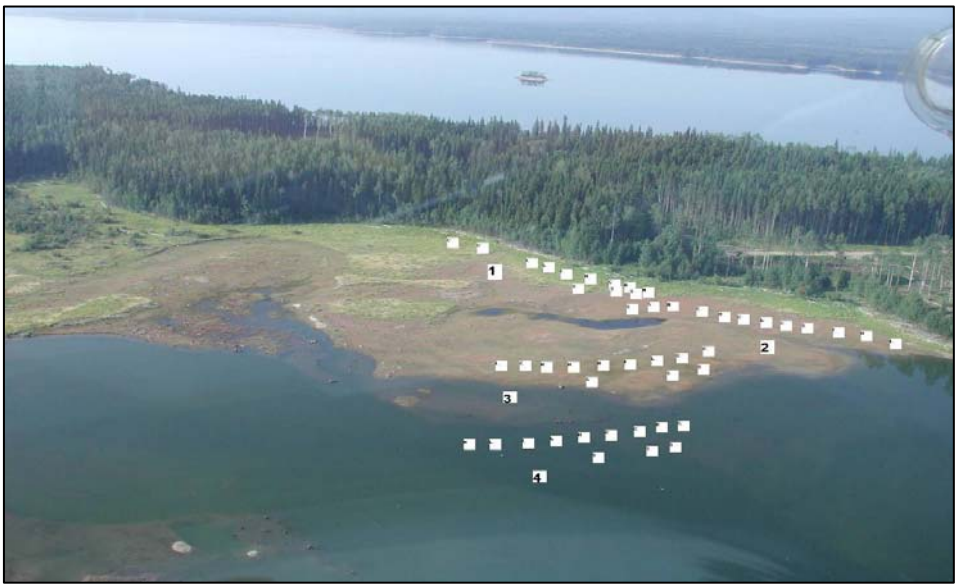
should become the standard for all professional biologists, field workers, and students. Coordinate the contributing partners involvement (funds), develop terms of reference for publications to three academic presses, and award the contract. Work with the authors to complete the book.

2006/07 (Year 3 of 3): The University of Alberta Press is in the process of publishing this book which is expected to be ready for distribution during the fall of 2007. A. Langston has worked with the contributors to develop text for promotion of the sponsors of the book and has provided editorial comments on the text as well as arranging a special block purchase of the books for donation to BC high schools colleges and universities. This project addresses the strategic objectives of sharing information and developing partnerships

17. FORESHORE/EMBAYMENT ENHANCEMENT PILOT PROJECT (# 06-17)

Project Objectives: To provide richer more complex habitat for native fish species by promoting more vigorous plant growth in the foreshore areas of embayments. This pilot project will test the effects of fertilizer on the development of vegetation in the drawdown zone.

2006/07 (Year 1 of 5): Test plots were set up in Tony Creek embayment (10 km north of Mackenzie) to test the effects of fertilizer on plant development in the foreshore area. Two concentrations of standard fertilizer (21-7-7), and one concentration of struvite (provided by K Ashley) were set up in four different (based on elevation) vegetation bands. Vegetation within the plots (including controls) was documented. However, immediately after the plots were established and fertilizer applied the operating regime at the dam was changed and water levels rose and covered all the sites approximately two months earlier than normal. All plots remained under water until late October. Despite the rapid rise in water by June 2 (2005) the plant height in Strata 1 and 2 (which was under water) was greater in the high fertilizer concentration and struvite plots. Again in 2006 water levels rose quickly to the level where the plots were flooded out before early July. A site visit in May 2006 showed the unusually high water in 2005 had killed most of the perennial vegetation but new plants were already emerging in strata 1-3. A report has been completed on the preliminary findings of this study. This project addresses the Program Mandate to enhance critical habitats to compensate for negative impacts resulting from the creation of the reservoir.



Tony Creek embayment on August 19, 2004 with the reservoir at 668m, the average (1990-2004) water level for that time of year. High water in 2005 and 2006 flooded back into the forest by July 1. The four fertilizer strata, placed in distinctly different vegetation types as a result of elevation differences, have been superimposed.

18. GENETIC ANALYSIS OF ARCTIC GRAYLING POPULATION STRUCTURE IN THE WILLISTON WATERSHED (# 06-17)

Project Objectives*:* To characterize the population structure for grayling in major tributaries that flow into Williston Reservoir, to determine whether these populations are discrete stocks or if there is genetic exchange between systems, and to confirm the movement patterns identified in the elemental signatures project (04-20)

2006/07 (Year 2 of 2): Under the direction of Dr. J.M. Shrimpton genetic analysis using microsatellite markers was conducted on 245 samples previously collected from 9 watershed streams. Eleven polymorphic microsatellites were amplified and the number of alleles for each microsatellite was low (2 to 9) but altogether 51 different alleles were identified. Analysis of the data indicates that the populations examined from different watersheds were genetically distinct from each other and that differences were loosely associated with geographic distance, although that was not the case with all stocks. This confirmed the movement patterns identified previously using the analysis of elemental signatures. The data also suggested that the stocks were distinct before the reservoir was formed but that now the chances of genetic exchanges between systems are very remote given the fragmentation of the populations, geographic distances and the apparent lack of movement through the reservoir. The final report recommends that for management purposes each population should be treated as a distinct unit. An additional 86 samples were obtained from the Finlay River in 2006 which will be analysed using the same methods to determine if there are distinct populations within that system. This project will provide information that will be used for the management of arctic grayling.

19. GENETIC ANALYSIS OF KOKANEE POPULATION STRUCTURE IN WILLISTON WATERSHED (# 06-19)

Project Objectives: To determine the genetic makeup of the kokanee population of the watershed. Particularly to identify the native stocks, determine their origins, and distribution with respect to the introduced populations from Columbia River hatchery stocks.

2006/07 (Year 1 of 2): Fifty kokanee each from Arctic L. Thutade L. and Tacheeda L, Germansen R., Pelly Ck., Tsaydiz Ck., Russel Ck, Bower Ck and two separate samples from the Finlay River were collected and submitted to the Pacific Biological Station (Fisheries and Oceans Canada) for analysis and comparison with other sockeye and kokanee stocks in B.C. A report is expected in 2007. This project will address the strategic objective of contributing to the management of kokanee.

20. OMINECA ARM BATHYMETRIC MAPPING (# 06-20)

Project Objectives: To create a bathymetric map of Omineca Embayment which will be incorporated into the existing Finlay Reach digital elevation model.

2006/07 (Year 1 of 1): The data has been collected and submitted for inclusion in the Finlay Reach digital elevation model. This work is required to support the Omineca embayment hydroacoustic survey scheduled for 2008. This project will contribute to the management of fish and their habitat by providing detailed habitat availability information.

21. PROJECT EVALUATION OF DINOSAUR RESERVOIR WOODY DEBRIS ADDITIONS (# 06-21)

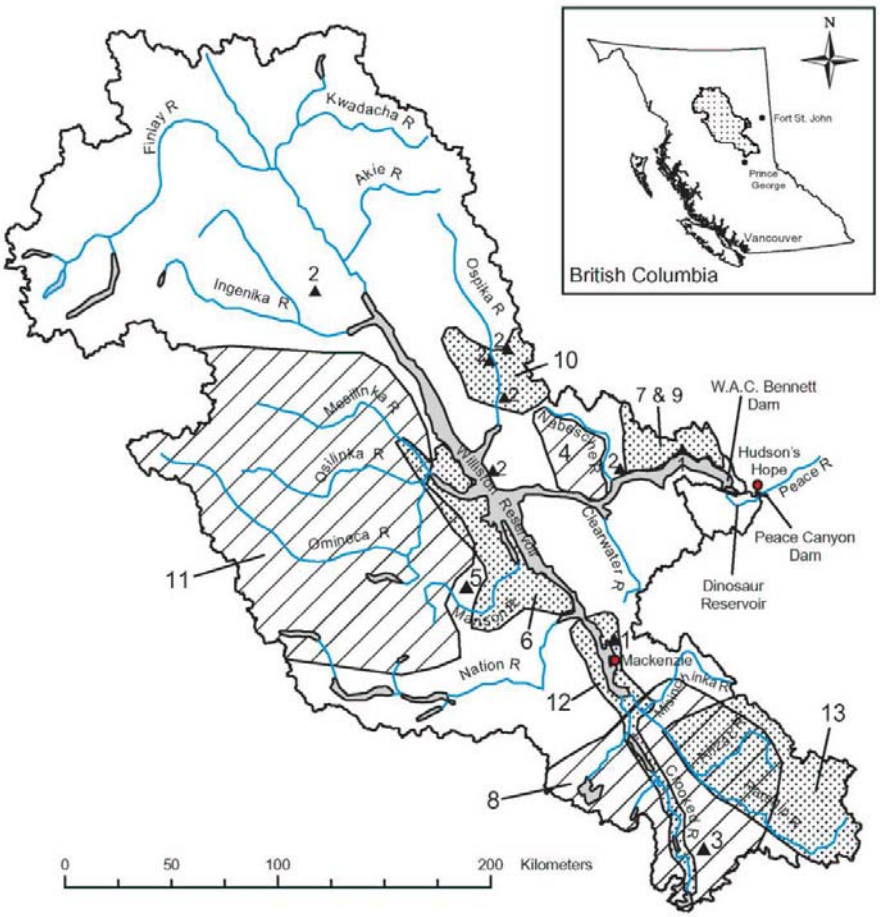
Project Objectives: To evaluate how the project is contributing to the strategic objectives of the program and to identify possible ways of improving the delivery of similar projects in the future.

2006/07 (Year 1 of 1): It was decided by the FTC to extend this project into the 2007/2008 budget cycle so that a "site visit" could be conducted by the contractor during the summer while PWFWCP crews were working on the project. A request for proposal was sent out to four local consultants to provide proposals on the contract. This project addresses the strategic objective of program accountability and constant improvement of project delivery.

WILDLIFE PROGRAM

By: Mari D. Wood

2006/07 WILDLIFE PROJECT LOCATIONS



Map	Task#	Project	Location
1	06-01	Mackenzie Migratory Songbird Monitoring (Funded Project – MNO, CWS)	Parsnip
2	06-02	Environmental Monitoring – Weather Stations	Watershed
3	06-03	Cottonwood Tree Enhancement Trial	Parsnip
4	06-04	Nabesche Goats & Licks	Peace
5	06-05	Donna Creek Forestry/Biodiversity (CANFOR)	Parsnip
6	06-06	Fisher Habitat Use Project (FRBC, MoE, CANFOR, ABIT)	Parsnip
7	06-07	Peace/20 Mile Stone's Sheep	Peace
8	06-08	McLeod Lake Grizzly Bear Behaviour	Parsnip
9	06-09	Peace Arm Prescribed Burn (MoE, MoF)	Peace
10	06-10	Ospika Goat/Mineral Lick Project (CANFOR)	Finlay
11	06-11	Caribou Recovery – Technical Synthesis (Funded Project – MoE, WII)	Omineca
12	06-12	Wetlands Enhancement Maintenance	Omineca/Parsnip
13	06-13	Parsnip Caribou Recovery Trial (Funded Project - MoE)	Parsnip
14	06-14	Project Evaluation – Wetlands Enhancements	Office
	06-15	Wildlife Extension	Office
	06-16	Data Analyses and Reporting	Office

Collaborators are listed in brackets following the project name with the following multi-collaborator exceptions:
"Funded Projects" are projects funded by the PWFWCP but administered and conducted by other agencies.

WILDLIFE PROJECT SUMMARIES

1. MACKENZIE MIGRATORY BIRD MONITORING (FUNDED PROJECT) (#06-01)

(This project is administered and delivered by the MNO.)

Project Objectives: To determine the population status and trends of neotropical migratory songbird populations in the northern Rocky Mountain Trench, and to identify those species that may be at risk from habitat loss and degradation. This is a long-term initiative of the Canadian Wildlife Service to monitor trends of songbird populations throughout North America, to which the PWFWCP contributes annual funding support.

2006/07 (Yr 12 of 18): The mist-nets and banding station at Mugaha Marsh were re-established in July and a master bander was hired for the fall migration season. Volunteers from the MNO, other organizations, and the general public provided assistance on a full-time basis. Between July 18 and September 23, 3,298 birds of 66 different species were banded at the station. The most commonly banded species were the Ruby-crowned Kinglet (610), Yellow-rumped Warbler (306; includes Audubon's and Myrtle's subspecies), American Redstart (269), Common Yellowthroat (257), Dark-eyed Junco (240; includes Slate-colored and Oregon subspecies) and Orange-crowned Warbler (206). Success capturing owls was the best in the station's history, with 106 Northern saw-whet owls and 1 Boreal owl being caught in only 51 net-hours. The CWS initiated analysis of the long-term migration data set in relation to Williston Reservoir water levels and regional weather trends.

A Cedar Waxwing, banded and ready for release.

2. ENVIRONMENTAL MONITORING – WEATHER STATIONS (#06-02)

Project Objectives: To obtain baseline snow depth and other microclimate data from various sites throughout the Williston Reservoir watershed that will supplement current projects, and help assess site suitability for past and future enhancement projects.

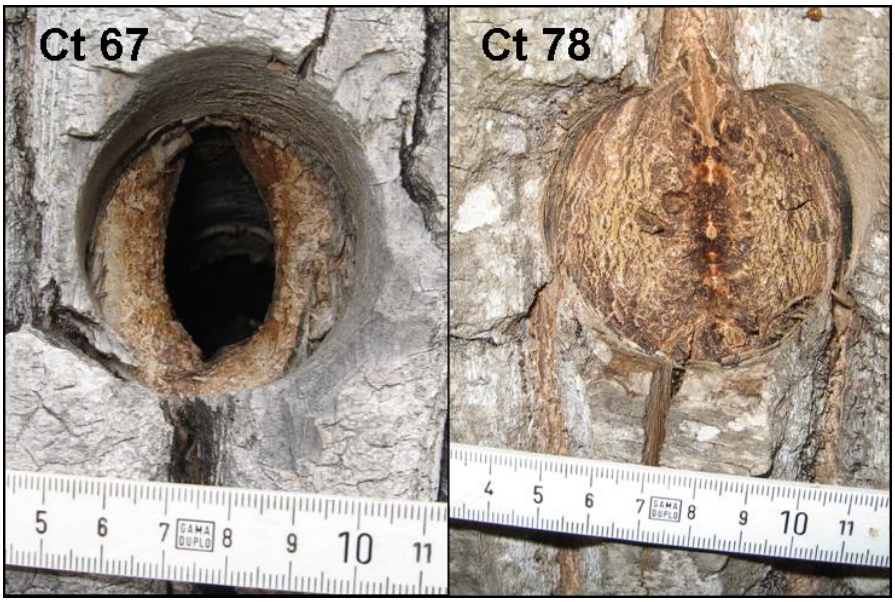
2006/07 (Year 9 of 9): Year-round data were collected from the 8 remote stations located throughout the watershed. Four stations (20 Mile, Aylard, Horetzky and Pelly) were dismantled and retired in the fall due to new program direction; stations are to be used for project-specific purposes and not for general monitoring. Ospika (3) and Bevel stations will remain operational until the end of the Ospika Goat Project (fall 2007). Databases were updated accordingly.

A weather station in the upper Ospika River drainage damaged by a grizzly bear in early spring.

3. COTTONWOOD TREE ENHANCEMENT TRIAL (#06-03)

Project Objectives: To determine if an access route (drilled hole), created to the core of mature cottonwood trees, will hasten the establishment of heartrot and result in the creation of internal chambers that are useable by secondary cavity-using wildlife. Treated trees, as well as others, will also be monitored to determine stem retention rates.

2006/07 (Year 6 of 7): In the fall of 2006, drilled holes were assessed for the second time (Yr 4 post-treatment); an initial evaluation occurred in 2003 (Yr 1). Over 95% of monitored stems were still standing. Due to cambium growth, the hole entrance had fused closed for about 40% of the holes. However, less than 10% of the holes showed any sign of internal decay being present. Another assessment will be conducted in 2009 (Yr 7), at which time a report detailing the project findings will be prepared.



Two examples illustrating the cambium growth that is reducing the entrance opening at drilled holes on large-diameter cottonwood trees (4 years post-treatment).

4. NABESCHE GOATS & LICKS (#06-04)

Project Objectives: To improve the distribution of minerals throughout the range of suitable goat terrain in the Nabesche River drainage through the establishment of artificial mineral licks, and as a result, expand the current range and population of goats in the drainage.

2006/07 (Year 9 of 11): An assessment of treatment site use by goats was scheduled for Sep 2006, but deferred due to earlier than normal snowfall in the mountains which covered the sites. Replenishment of the treatment sites with salt blocks is scheduled for spring 2007, followed by an assessment of the sites in Sep 2007.

5. DONNA CREEK FORESTRY/BIODIVERSITY PROJECT (#06-05)

Project Objectives: To develop alternative forest harvesting techniques designed to benefit wildlife that utilise tree cavities (e.g. woodpeckers, red-breasted nuthatch, marten), and to monitor wildlife use of the harvested treatments at successive seral stages (i.e. approx. every 10 years) over the next 60 to 100 years.

2006/07 (Year 15 of ongoing): Phase II (shrub seral stage) of the project was initiated with the first of 2 consecutive years of breeding bird surveys being conducted in spring 2006. An interim report documenting the methods and preliminary observations was also prepared. General bird diversity appeared to be similar to Phase I findings but only 1 active cavity-nest was found. In 2007, bird surveys will again be conducted and data on habitat characteristics will be collected. A final report for Phase II activities will also be prepared.

Islands of timber (1/4 hectare) retained in one of the Donna Creek treatment blocks designed to benefit cavity-nesters.

6. FISHER HABITAT USE PROJECT (#06-06)

Project Objective: To obtain a better understanding of fisher ecology and population dynamics in the sub-boreal forests that will lead to the design and implementation of future enhancement and protection activities.

2006/07 (Year 11 of 11): Drafts of all chapters for the final 5-year Project Report were prepared and were reviewed in-house. Selected chapters were also sent for external review. Final edits and reviews are ongoing. A manuscript on the fisher density estimate was published in the journal Northwestern Naturalist.

7. PEACE/20 MILE STONE'S SHEEP PROJECTS (#06-07)

Project Objectives:

20 Mile Project: To define the winter tick infestation in Stone's sheep wintering at low elevation on 20 Mile Point, north side of the Peace Arm, including determination of the cause of the problem, and the extent to which it affects herd health and productivity.

Peace Arm Project: To determine differences in lamb survival rates and mortality causes between low and high elevation-wintering subpopulations of Stone's sheep along the Peace Arm, to identify rates and causes of mortality in adult ewes and rams, and to address mortality issues and/or develop management prescriptions based on study findings.

2006/07 (Year 9 of 10): Summarization and analysis of the 6 years of combined data from both sheep projects continued. The Final 6-year report is scheduled for completion in 2007.

8. MCLEOD LAKE GRIZZLY BEAR BEHAVIOUR (#06-08)

Project Objectivess: To classify the behaviour of individual grizzly bears (and by extension, the behaviour by age, sex, and reproductive status) into bears that become a threat to humans after closure of a landfill and bears that do not, and to assist with improving the decisions made by the Conservation Officer Service (COS) of when and which bears to remove from landfill sites, and which bears to ignore and let live.

2006/07 (Year 6 of 6): Completion of the report was deferred due to other higher program priorities.

9. NORTH PEACE ARM PRESCRIBED BURNS (#06-10)

Project Objectives: To enhance forage for ungulates (primarily Stone's sheep and elk) and bears, and to provide foraging and breeding habitat for many wildlife species that require early seral habitats. The objective of the current burn is to convert conifer adjacent to East Branham Cliffs to expand the grassland area for a wintering population of Stone's sheep.

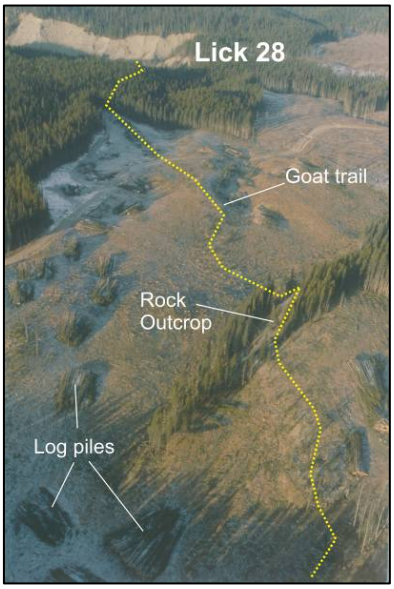
2006/07 (Ongoing): In spring 2003, a fireguard was cut along the top of East Branham Cliffs, and brush was piled in preparation for burning. Burning of the piles was attempted in both 2003 and 2004 but deferred due to unsuitable weather conditions. The piles were burned in fall 2005, though weather conditions still prevented all the brush piles from being completed consumed. Burning of the piles was again attempted in fall 2006 but deferred due to unsuitable weather conditions. An attempt to burn the piles will occur again in fall 2007, followed by broadcast burning of the standing conifer trees in spring 2008.

10. OSPIKA GOAT/MINERAL LICK STUDY (#06-11)

Project Objectives: To determine the impacts of different forest harvesting options on mountain goat behaviour related to low-elevation mineral licks and trails.

2006/07 (Yr 5 of 6): The use of 4 low-elevation mineral licks by 19 radio-collared goats was monitored again between April and November by remote telemetry and camera stations; sites were visited and data were downloaded approximately every 2 weeks. Collared goats were also

monitoring biweekly during the mineral lick season (Apr-Nov) by fixed-wing aircraft. Three previously radio-collared nannies were recaptured and fitted with new collars in July 2006. This was the first year of monitoring after the buffer strip of timber along the access trail to Lick 28 was harvested (November 2005). Remote cameras along the trail provided little valuable information since goats showed much less fidelity to the trail after the area was clearcut. Although the average number of lick visits per collared goat also declined, the same trend was also observed at the primary control lick (Lick 17). A formal response from the PWFWCP to proposed mineral exploration on the Frank Range (core year-round range for goats using Lick 28) was also developed; the exploration work was deferred to 2007 prior to the letter being released. Lick visit data from the 2006 season were interpreted, summarized, and presented to the PWFWCP Technical Committee, and 2006 photo interpretation was completed by contractor.



The goat trail to Lick 28 after the timbered buffer strip along the trail was removed.

11. CARIBOU RECOVERY – SYNTHESIS OF TECHNICAL INFO (FUNDED PROJECT) (#06-11) (This project is administered by MoE and conducted by Wildlife Infometrics, Mackenzie)

Project Objectives: To synthesize existing technical information on the Wolverine and Chase Herds to establish a scientific basis for recovery of threatened caribou populations in the North-central BC portion of the Southern Mountains National Ecological Area.

2006/07 (Yr 2 of 3): This project was deferred for the second year, and is to be completed in 2007/08.

12. WETLANDS ENHANCEMENT MAINTENANCE (#06-12)

Project Objectives: To ensure previously established waterfowl nesting structures are maintained in good condition at wetland enhancement sites.

2006/07 (ongoing): Since 1991, nest-site enhancements have been conducted at 16 wetland sites in the Parsnip drainage in order to increase nesting sites for waterfowl. In 2006, maintenance activities were conducted on 52 nest boxes, 16 floating islands, and 3 nesting tunnels. Some structures could not be replaced due to availability of replacement structures, so maintenance activities will be conducted in 2007. Maintenance activities occur every 3-5 years.

A Canada goose nest situated on a floating island at Mugaha marsh, near Mackenzie, BC
(Photo by Vi Lambie)

13. PARSNIP CARIBOU RECOVERY TRIAL (FUNDED PROJECT) (#06-13)

(This project is administered and conducted entirely by MoE.)

Project Objectives: To assist with the recovery of threatened caribou populations in the Southern Mountains National Ecological Area by evaluating the feasibility of increasing the Parsnip Caribou Herd population by reducing moose numbers in the area (using increased hunter harvest) which would result in fewer wolves and less predation on caribou.

2006/07 (Yr 1 of 4): This project was initiated by the Ministry of Environment in 05/06, but continued in 06/07 with funding provided by the PWFWCP. 55 VHF and 4 GPS collars were purchased for placement on caribou, moose and wolves but given environmental constraints related to animal capture, only 16 caribou and 10 wolves were collared this year (moose could not be captured because deep snow conditions forced moose into the forest). Moose hunting permits and season length were increased for fall 2006 in hopes of increasing moose harvest. Preliminary data suggest that the kill did not increase with more permits being issued; therefore hunter success was lower. Few roads in the drainage precluded easy access to areas not already being hunted. If those preliminary data are accurate then moose hunting seasons will be changed to increase hunter success rates. Body condition measurements (average antler spread, kidney fat indices) and reproductive tracts were analysed to indicate body condition and productivity rates prior to moose reduction. All but one cow was pregnant (n=20), and where fetuses were countable, 4 cows had twins and 8 had a single fetus. Caribou cow/calf surveys were conducted in the Wolverine (control) in fall 2006, but an insufficient number of radio-collared caribou precluded a survey in the Parsnip (treatment). The Parsnip caribou were censused in March 2007: 159 caribou (13.2% calves) including 10 of 13 radio-collared animals were counted during the survey resulting in a corrected population estimate of 207 caribou. Applying a 0.83 correction factor that was used in previous censuses resulted in a population estimate of 192 caribou. The total count and population estimates for the Parsnip are somewhat lower than in March 2006, but higher than previous years.

An unusual pure white male wolf is tranquilized and fitted with a Global Positioning System radio-collar.

14. PROJECT EVALUATION (WETLANDS ENHANCEMENTS) (#06-14)

Project Objectives: To review a project or suite of projects to ensure achievement of the PWFWCP strategic objectives related to evaluation and accountability, and to ensure that the PWFWCP is effectively addressing strategic priorities identified for the Wildlife Sub-program. Topic for 2006/07

was wetland enhancement projects that involved water-control structures: Neilson Lake and Rocky Marsh.

2006/07 (Yr 1 of 1): Neilson Lake and Rocky Marsh Wetland Enhancement Projects were completed by PWFWCP in partnership with DU Canada and several community organizations. The project evaluation concluded that both wetlands are regionally significant, but the biological potential of the wetlands as a result of the enhancement is secondary to the success of the partnerships and education opportunities that were developed and created. The evaluation also concluded that this type of project contributes to several strategic objectives of PWFWCP, as well as the priorities of the wildlife and communication program goals (e.g., maintain or increase abundance of priority wildlife species, promote public awareness). Future recommendations ranged from examining the potential of maintaining natural beaver dams at wetlands, enhancing coarse woody debris at wetland sites, researching artificial dam maintenance, and developing a formal data/report sharing agreement for future projects.

Water-control structure (earthen dam with variable-crest drop inlet) and wetland at Rocky Marsh (25 ha).

15. WILDLIFE EXTENSION (#06-15)

Project Objectives: To provide data and expertise on wildlife management issues and planning processes in BC.

2006/07 (Ongoing): Reporting of Extension activities has been transferred to "Community Consultation and Communications" - please see that section for further details.

16. DATA ANALYSES/REPORT WRITING (#06-16)

Project Objectives: To analyse data and complete reports from previous fiscal projects.

2006/07 (Ongoing): No backlog reports were completed this fiscal. Reports on *current* projects are discussed under applicable project summaries elsewhere in this document.

FINANCIAL SUMMARIES

By: Mari D. Wood

COMMUNITY CONSULTATION AND INFORMATION (BCH Community Relations)

The annual budget for Community Consultation and Information (CCI) in 06/07 was $127,250 of which $26,754 was spent on tasks delivered by BCH's Community Relations department (Table 1). [PWFWCP staff wages on CCI activities are not included in these amounts, and are accounted for under the Fish and Wildlife program budgets respectively, see Tables 2 and 3.] An under-expenditure of $5,000 currently shows in the "Fish Species of BC book" task as a result of collaborative funding received for the project. The final cost of the project will be approximately $16,000 which will be reflected in the 07/08 fiscal. The Program Video/DVD, Information Dissemination, and Public Consultation Planning tasks were not completed thus no costs were incurred. Completion of the Website Report Descriptions, and Program Signs at Dinosaur, Dunlevy and Mugaha, were deferred to 07/08. Carryover funds at the end of the year were $100,496, which will be available for 2007/08.

Table 1. Detailed Community Consultation and Information expenditures for 2006/07.

#	SPECIFIC PROJECT	Amount Budgeted	Amount Expended[1]
	Administration, Planning & Budgeting	0	3,541
1	Natureline	13,000	2,700
2	New Releases & Media Interviews	2,000	2,383
3	Website Updating & Maintenance	6,500	6,513
4	Program Video/DVD	18,500	0
5	Fishing Regulations Ad	1,500	250
6	Hunting Regulations Ad	1,500	250
7	Information Dissemination	0	0
8	UNBC Lecture Series	3,750	2,406
9	Website Report Description Updates	5,500	425
10	Signs – Dinosaur, Dunlevy, & Mugaha	13,000	3,000
11	Mail Update	500	934
12	Fish Species of BC Book	10,500	-5000
13	Public Consultation	40,000	0
14	Presentations	4,250	6,659
15	Donations	4,000	2,750
16	Promotional Items	2,750	3,484
	TOTALS	**$127,250**	**$26,754**

[1] "Amount Expended" includes operational costs, BCH Community Relations staff wages, and consultant costs. Expenditures are approximate since staff and consultant wages were not tracked on a per project basis throughout the year.

FISH PROGRAM

Funds available for the Fish Program in 2006/07 were $651,201 plus $186,981 carry over for a total $838,182 and expenditures during the fiscal year totalled $693,145 (Table 2). Projects accounted for $438,800 or 63% of the expenditures. Administration costs were $115,862 (17%) which was slightly lower than budgeted because the accounting of some activities was shifted from Administration to other categories. Costs spent on Community Consultation and Information through the Fish budget directly (i.e. primarily staff wages on CCI activities; see Table 1 in previous section for expenditures by BCH's Community Relations department) were $32,431 (5%). Staff time spent on Administration was 164 days (22%), PST 203 days (28%), CCI 71 days (9%), and Projects 304 days (41%). Carryover funds at the end of the year were $154,528, which will be available for 2007/08.

Table 2. Detailed Fish Program budget expenditures for the 2006/07 fiscal.

#	SPECIFIC PROJECT	PROJECT COSTS[1]	CATEGORY TOTALS	% Budgeted	% Expended
	ADMINISTRATION[2]		115,862	21%	17%
	PLANNING, SAFETY & TRAINING[3]		106,052	15%	15%
	COMMUNITY CONSULTATION & INFO[4]		32,431	2%	5%
	PROJECTS		438,800	62%	63%
1	Project Maintenance	14,848			
2	Stocking Program	18,198			
3	Small Lake Stocking Evaluations	13,080			
4	Report Writing (Previous Years)	20,258			
5	Classroom Kokanee	14,309			
6	Dinosaur Reservoir Habitat Improvements	49,942			
7	Dinosaur Reservoir Fish Assessment	10,888			
8	Dinosaur Reservoir Creel Survey	17,277			
9	Dinosaur Tributary Spawning Hab Assess	37,034			
10	Evolution & Distribution of Pygmy Whitefish	44,858			
11	Bull Trout Redd Count Indexing	11,937			
12	Kokanee Spawner Distribution Survey	50,350			
13	Grayling Management & Recovery Plan	0			
14	UNBC Research Lecture Series	3,874			
15	Grayling Fry Distribution in Finlay Watershed	52,927			
16	Freshwater Fishes of BC Book	3,762			
17	Foreshore Enhancement Project	1,072			
18	Genetic Analysis of Grayling Popn Structure	5,756			
19	Genetic Analysis of Kokanee Popn Structure	57,300			
20	Omineca Arm Bathymetric Mapping	10,397			
21	Project Evaluation – Dinosaur Woody Debris	735			
		438,800	**693,145**		**100%**

[1] Project Costs: includes operational costs, staff wages and travel, equipment & supplies, and vehicle costs.
[2] Administration: includes staff wages, office and warehouse lease, MOE administrative support, computers, phones, office supplies, and vehicle costs.
[3] Planning, Safety & Training: includes staff wages & travel, Technical Committee travel, training courses, and vehicle costs.
[4] Community Consultation and Information: includes program staff wages & travel, and vehicle costs; does not include monies spent through BCH Community Relations department.

WILDLIFE PROGRAM

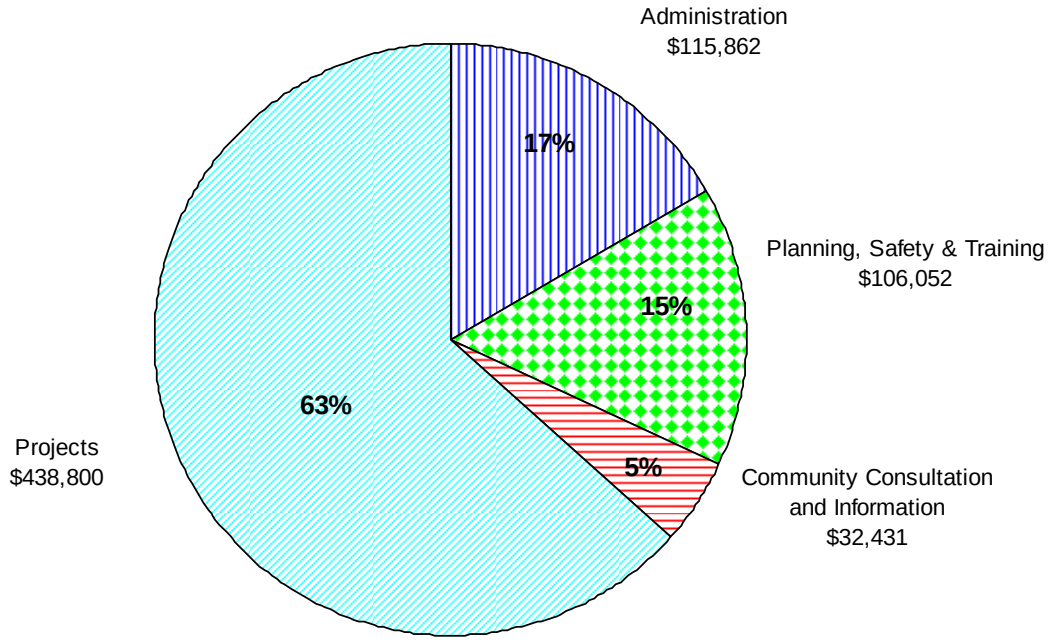
The basic annual Wildlife Program budget in 2006/07 was $532,800, plus an additional $302,500 in carry-over funds from 2005/06 and $110,885 leftover in the Strategic Entrenchment Fund, resulting in a total available fiscal budget of $946,185. Wildlife program expenditures in 2006/07 amounted to $619,941, of which 78% ($484,316) was spent on wildlife research, enhancement, and evaluation projects (Table 3). Costs spent on Community Consultation and Information through the Wildlife budget directly (i.e. primarily staff wages on CCI activities; see Table 1 for expenditures by BCH's Community Relations department) were $23,544 (4%). Staff time spent on Administration was 63 days (14%), PST 100 days (23%), CCI 50 days (11%), and Projects 232 days (52%). Carry-over of funds from 2005/06 plus the under-expenditures on some 06/07 budgeted projects and the deferral of other projects to 07/08 resulted in a cost savings of $326,244 which was carried over to the 2007/08 fiscal.

Table 3. Detailed Wildlife Program budget expenditures for the 2006/07 fiscal.

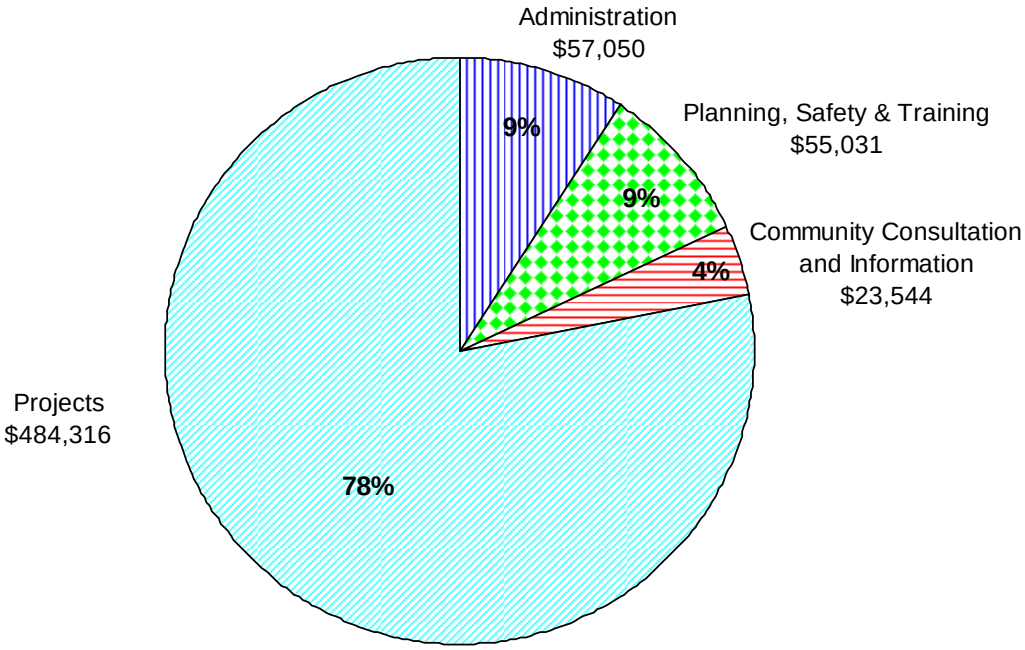
#	SPECIFIC PROJECT	PROJECT COSTS[1]	CATEGORY TOTALS	% Budgeted	% Expended
	ADMINISTRATION[2]	57,050	57,050	12%	9%
	PLANNING, SAFETY & TRAINING[3]	55,031	55,031	4%	9%
	COMMUNITY CONSULTATION & INFO[4]	23,544	23,544	2%	4%
	PROJECTS		484,316	83%	78%
1	Mackenzie Migratory Bird	7,245			
2	Environmental Monitoring (Weather)	34,447			
3	Cottonwood Tree Enhancement	8,281			
4	Nabesche Goats & Licks	87			
5	Donna Creek Forestry/Biodiversity	64,266			
6	Fisher Habitat Use	49,429			
7	20 Mile/Peace Stone's Sheep	7,777			
8	McLeod Grizzly Bear Behaviour	294			
9	North Peace Prescribed Burns	218			
10	Ospika Goat/Mineral Lick Project	215,562			
11	Caribou Recovery (Info Synthesis)	175			
12	Wetlands Enhancement Maintenance	5,426			
13	Parsnip Caribou Recovery Trial	86,875			
14	Project Evaluations – Weather/Wetlands	4,955			
15	Data Analyses and Reporting	0			
n/a	Impacts of Kokanee Introduction	4,279			
n/a	Equipment recovery	-5,000			
		619,941	**$619,941**		**100%**

[1] Project Costs: includes operational costs, staff wages and travel, equipment & supplies, and vehicle costs.
[2] Administration: includes staff wages, office and warehouse lease, MOE administrative support, computers, phones, office supplies, and vehicle costs.
[3] Planning, Safety & Training: includes staff wages & travel, Technical Committee travel, training courses, and vehicle costs.
[4] Community Consultation & Information: includes staff wages & travel and vehicle costs; does not include monies spent through BCH Community Relations department.

FISH PROGRAM 06/07 EXPENDITURES



WILDLIFE PROGRAM 06/07 EXPENDITURES



PWFWCP 06/07 FINANCIAL SUMMARY

Total expenditures for the PWFWCP in 06/07 amounted to $1,339,840, with $923,166 (69%) devoted to Fish and Wildlife projects.