



Kootenay Lake

The Return of South Arm Kokanee – A Waiting Game

Sometimes you just have to wait and see. That's how it is for fisheries biologists who are waiting for kokanee to return to tributaries in the south arm of Kootenay Lake after several years of conservation efforts.

These conservation efforts began in 2005 with the start of nutrient additions to the south arm, and were coupled with the transplanting of 4 million "eyed" kokanee eggs into artificially constructed gravel "redds" in key south arm tributaries: Crawford Creek, Boulder Creek, Summit Creek, and the Goat River.

The addition of nutrients to the south arm (funded by the Kootenai Tribe of Idaho) should increase in-lake survival rates for kokanee. Planting large numbers of eyed-eggs in the tributaries should help "jump start" kokanee stocks in anticipation of a positive response to the nutrient additions.

Adult kokanee were collected and artificially spawned at the Meadow Creek spawning channel by the Freshwater Fisheries Society of B.C. The Society then transported the fertilized kokanee eggs to their hatchery in the East Kootenay, where they were incubated to the eyed-egg stage.

About 40,000 eyed-eggs were deposited into each artificial gravel nest or "redd." The resulting kokanee, which will benefit from the addition of nutrients to the south arm, would be expected to return to spawn in 2009. This year the Fish & Wildlife Compensation

Program (FWCP) will add gravel to Boulder Creek as additional substrate for spawning kokanee.

Fisheries biologists, and anglers too, hope these efforts in the south arm will prove just as successful as efforts to restore kokanee in the north arm. In 1992 the FWCP and the Ministry of Environment, started adding nutrients – nitrogen and phosphorus – and kokanee numbers in the north arm have been restored to near historical levels.



These kokanee (above), in the alevin stage of their development, are the result of efforts to help boost kokanee stocks in the south arm of Kootenay Lake. Photo below: Transplanting kokanee eyed-eggs (lower centre) will help jump start kokanee stocks. They develop into the alevin stage before developing to the fry stage.



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B.C. Breeding Bird Atlas Takes Flight

In North America, there are growing concerns in the birder community that many “common” birds are becoming “uncommon.” The Audubon Society cited the top twenty common birds in decline, that have lost more than half of their population in the last forty years. The same might be true in B.C., but due to significant information gaps, we might not know it’s happening.

Bird Studies Canada (BSC), a national non-profit organization, is trying to fill those data gaps by launching the B.C. Breeding Bird Atlas, with funding and support from the Fish & Wildlife Compensation Program (FWCP). The five-year project will gather field data and results in a database that can be used by the public, planners, biologists, and policy makers.

“The B.C. Breeding Bird Atlas of B.C. is a systematic survey of the distribution and abundance of all breeding bird species, and their habitats, in the province,” says BSC’s Peter Davidson who is spearheading the project. The success of the project lies with volunteers who will undertake the surveying.

It will be carried out by skilled and trained volunteers, using a technique called “atlasing” which involves splitting the province into grids and data collection points within those grids. Volunteers will conduct thorough bird surveys during

five breeding seasons. The data collected will appear online in real time, complete with mapping and graphing tools.

“It is likely to be one of the largest volunteer-based projects in the province,” says FWCP wildlife biologist and bird specialist Irene Manley. “The project will definitely advance local and regional knowledge of so-called common birds and that will help with conservation planning.”

To find out more about the B.C. Breeding Bird Atlas, or how to get involved, visit www.birdatlas.bc.ca.



Marc-André Beaucher

Sandhill cranes and many other local birds will be the focus of the bird atlas.

continued from page 1

South Arm

Rebuilding Kootenay Lake Kokanee Takes Teamwork



B.C. Ministry of Environment

These kokanee in the eyed-egg stage of their development have been transplanted into key tributaries in the south arm of Kootenay Lake.



B.C. Ministry of Environment

Working on behalf of the Ministry of Environment, Gary Munro (left) and Les Fleck, transplant kokanee eggs into a man-made spawning site.

Nutrient additions in the South Arm of Kootenay Lake compensate for the Libby Dam and are delivered by the B.C. Ministry of Environment and are funded by the Kootenai Tribe of Idaho through the Bonneville Power Administration and the Northwest Power and Conservation Council’s Columbia Basin Fish and Wildlife Program.

Nutrient additions in the North Arm of Kootenay Lake compensate for the Duncan Dam and are jointly coordinated by the B.C. Ministry of Environment and the Fish & Wildlife Compensation Program, which provides annual funding.

Now, That's a Birdhouse!

At some time in your life you may have built a birdhouse, but chances are it looked nothing like the high-rise residences that Gerry Thompson, volunteer Public Representative with the Fish & Wildlife Compensation Program, has recently constructed. Each bird box stands over 3.6m (12 feet) in height. That's a big birdhouse for a bird that can fit into the palm of your hand.

The bird in question is the Vaux's Swift, a small cigar-shaped bird that eats insects, and feeds entirely on the wing. The southern portion of the Columbia Basin provides critical habitat for the Vaux's Swift as they are associated with Interior Cedar Hemlock forests. More than half of their global breeding sites occur in B.C.

While the bird is not listed as vulnerable, it is facing a number of threats to its roosting and nesting sites. Historically these sites have consisted of hollow trees, often found in old growth forests. With the creation of the regional reservoirs and changes in forestry practices, however, such habitat has become more limited. In fact, the majority of recorded nest sites are now in man-made chimneys. The Vaux's Swift can be found in unused industrial or residential chimneys. As more brick chimneys are converted to steel or aluminum, even this man-made habitat is in decline.



Gerry Thompson made 27 of these birdhouses for Vaux's Swifts.

So the FWCP is trying to help matters by installing custom-made Vaux's Swift "chimneys." Each bird chimney will provide a single nest site for a breeding pair of swifts, or migratory roosts for dozens of swifts.

"Every nest box took over 50 linear board feet of cedar to make, and two weeks of work to complete the 27 boxes," says Gerry Thompson, a Creston Valley resident and public member of the FWCP's Steering Committee. "Although the design was straightforward enough, what really took time and patience was the scoring of each panel every few centimetres for the entire length of the box."

The scoring helps the fledgling Vaux's Swift clamber up and down the inside of the box.

Gerry, who has been building nest boxes as a hobby to help the birdlife in the Creston Valley for over 10 years, donated his time and equipment for the project, while the FWCP paid for the materials.

"Installing the boxes will be the next challenge given the weight of each unit," added Gerry. Each one will be placed on bare, straight tree trunks at least 10 metres off the ground. They will be installed around the Duncan Lardeau area, Kootenay Lake, Arrow Lakes Reservoir, and the Pend d'Oreille and Creston Valleys.

Angus Glass

So You Think You Know It All? **Answers on page 10**

- 1 The FWCP has been gathering information from anglers on the Arrow Lakes Reservoir for years. This is often referred to as a creel survey but what does the word creel mean?
- 2 Do you know what the inspiration was for the now 50-year old Velcro fastening system?
- 3 Dolly Varden: Is it a fish or a literary character?
- 4 Badgers are a species-at-risk in the East Kootenay. What is one of the biggest risks they face today?



Pend d'Oreille Valley

Nightly Counts Of White-Tail Deer Helps Conservation

Most of us try to wrap up our day's work by day's end. But for at least one wildlife biologist, nightfall marks the start of his work. For the last three years, wildlife biologist Ross Clarke has spent many early spring evenings driving around the Pend d'Oreille (PDO) valley south east of Trail counting white-tail deer.

"They tend to congregate at dusk, in the agricultural fields and conservation properties at the west end of the valley to take advantage of the early spring green-up, which provides an excellent opportunity to count them," says Ross who works on behalf of the Fish & Wildlife Compensation Program (FWCP). Using a spotlight to find deer in the dark, Ross drives an 18.5 kilometre route through the PDO valley from March and until early April. He starts out doing the counts every other night and then nightly to catch the peak. As the weather warms the deer disperse to their summer ranges and his night job ends, until next spring.

"Two hundred and six is the most deer I've seen in one night," says Ross. He adds that retired FWCP wildlife biologist John Gwilliam, who became involved in the counts in the late 1970s and worked extensively in the PDO during his 25-year

career, would sometimes count upwards of 300 deer in one night during the early 1990s when the local white-tail deer population was high.

"The present trend is upwards," says Ross. Construction of the Seven Mile Dam south-east of Trail flooded white-tail deer habitat in the area. The FWCP works to conserve and enhance local fish and wildlife impacted by the construction of BC Hydro dams in the Columbia Basin and the annual spot-light count is an important tool for assessing the relative abundance of this local ungulate. The results will help the FWCP plan its conservation efforts to support deer and elk in the area.

"We have been collecting data on white-tail deer in the Pend d'Oreille for 30 plus years," says Ross, adding that the data he collects is also used by the B.C. Ministry of Environment (MOE) to set harvest rates for white-tail.

Management of the 1,755 hectares of conservation lands in the Pend d'Oreille Valley is guided by a Wildlife Management Plan developed by the FWCP, the MOE, the Habitat Conservation Trust Fund, and BC Hydro. The Wildlife Management Plan is online at www.fwcp.ca



Ministry of
Environment

Partners in Conservation & Enhancement


The FWCP works on behalf of its Program Partners BC Hydro, the B.C. Ministry of Environment and Fisheries and Oceans Canada to conserve and enhance fish and wildlife populations affected by the construction of BC Hydro dams in the Columbia Basin.

BC Hydro 

If you would like to receive our newsletter electronically, contact:

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This newsletter is printed on 
100% postconsumer waste paper.

Update Newsletter

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We Would Appreciate Your Feedback

Let us know if you have questions or comments about the newsletter, or the Compensation Program.

Bull Trout Study

“Ear Bones” Will Help Fish Conservation

The FWCP is using ear bones and micro-chemistry to help identify streams that could be conservation priorities for bull trout. By analyzing the chemical composition, or rather the changes in chemical composition, biologists will be able to tell where the bull trout have been living.

“Once we know where the bull trout are spawning and being reared, then we will know what streams and tributaries need protecting in the Arrow Lakes Reservoir,” says FWCP fisheries biologist Steve Arndt. Many of the historical spawning areas for this fish were lost when the reservoir was created following construction of the Hugh Keenleyside Dam on the Columbia River near Castlegar.

The so-called ear bone or otolith on the bull trout is a calcified structure at the bottom of its brain. As the fish moves between various water systems, say from a stream when it’s a fry to the main reservoir as it gets older, there are elemental changes that can be identified in the otolith using micro-chemistry. The otolith is collected and a slice of it is analyzed to detect these elemental changes.

Think of the age rings on a tree. This is similar. So, if you know what stream the fish came from you can figure out what streams are being used for spawning, rearing, and what streams may benefit from conservation or protection.

“Eventually this work will help us assess if there is adequate spawning and rearing habitat for bull trout,” says Steve. For now, this new approach is being tested on a pilot basis that will give biologists confidence in the science.

Fifty-six juvenile and ten adult otoliths have been collected from bull trout in the Arrow Lakes Reservoir. These will be



Nicole Laforge

A bull trout otolith will play an important role in habitat conservation.



Ernest Keeley

Science will help conservation planning for bull trout like these

compared against water samples. Assuming the pilot project goes well, and we are confident in this approach, the FWCP will likely expand the use of otoliths and micro-chemistry to better understand what habitat - local streams and tributaries - are important to a healthy bull trout population. Then conservation decisions can be made based on sound science.”



Fish & Wildlife Projects 2008-09

Fish

- 1 Arrow Lakes Reservoir Nutrient Restoration Program
- 2 Upper Columbia Sturgeon Hatchery
- 3 Hill Creek Spawning Channel
- 4 Meadow Creek Spawning Channel
- 5 Kootenay Lake Nutrient Restoration Program
- 6 Kaslo River Bull Trout Assessment
- 7 Kootenay Lake Bull Trout Monitoring Program
- 8 Kootenay Lake Creel Survey Design
- 9 Small Works-Cottonwood Creek Sediment Control Study
- 10 Small Works-Boulder Creek Kokanee Enhancement
- 11 Small Works-Arrow Bull Trout Otolith Microchemistry
- 12 Small Works-Lardeau River Gravel Assessment
- 13 Small Works-Gerrard Rainbow Trout Escapement Estimates
- 14 Dam Impacts Review (bw)

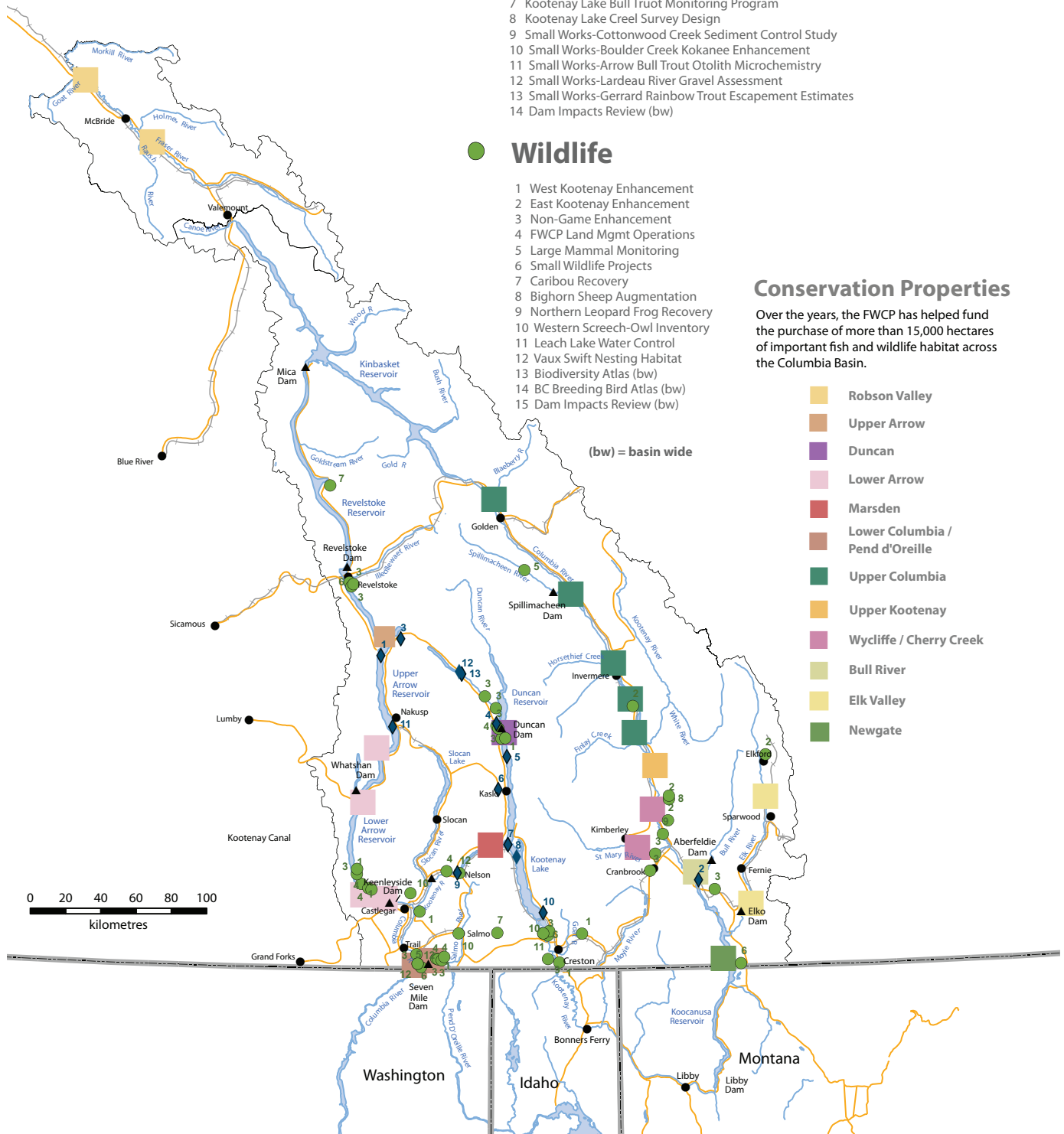
Wildlife

- 1 West Kootenay Enhancement
- 2 East Kootenay Enhancement
- 3 Non-Game Enhancement
- 4 FWCP Land Mgmt Operations
- 5 Large Mammal Monitoring
- 6 Small Wildlife Projects
- 7 Caribou Recovery
- 8 Bighorn Sheep Augmentation
- 9 Northern Leopard Frog Recovery
- 10 Western Screech-Owl Inventory
- 11 Leach Lake Water Control
- 12 Vaux Swift Nesting Habitat
- 13 Biodiversity Atlas (bw)
- 14 BC Breeding Bird Atlas (bw)
- 15 Dam Impacts Review (bw)

Conservation Properties

Over the years, the FWCP has helped fund the purchase of more than 15,000 hectares of important fish and wildlife habitat across the Columbia Basin.

- Robson Valley
- Upper Arrow
- Duncan
- Lower Arrow
- Marsden
- Lower Columbia / Pend d'Oreille
- Upper Columbia
- Upper Kootenay
- Wycliffe / Cherry Creek
- Bull River
- Elk Valley
- Newgate



Projects Ready to Roll out in 2008 – 09

The decisions have been made, the budgets have been set and the rubber is already starting to hit the road. FWCP fish and wildlife projects approved for 2008 – 09 are already underway or scheduled to begin soon.

The fish and wildlife projects will be managed and delivered by FWCP biologists on behalf of its program partners BC Hydro, the Ministry of Environment and Fisheries and Oceans Canada.

Each of the projects funded this year will help the FWCP achieve its mandate which is to conserve and enhance fish & wildlife impacted by the construction of BC Hydro dams in the Columbia Basin.

“We try to make sure there is a balance of projects across the Columbia Basin that include hands-on work that will make a difference right away, and longer-term projects that will help improve our understanding of a species and conservation planning in the future,” says Greg Mustard of Invermere. Greg is a public representative on the FWCP’s Steering Committee which provides strategic input that guides the FWCP’s work.

The single, largest project funded by FWCP, is the Nutrient Restoration Program in Kootenay Lake and the Arrow Lakes Reservoir (previously the Fertilization and Monitoring Program). Now viewed as one of the largest, successful lake restoration programs in the world, this work is rebuilding the food web that has been impacted by upstream dams which trap nutrients. This project, together with the operation and management of the Hill Creek and Meadow Creek spawning channels, accounts for a significant portion of the FWCP fisheries budget.

Other fisheries projects include studying bull trout production in Kootenay Lake and the Arrow Lakes Reservoir, as well as developing an angler survey for Kootenay Lake. Some funds will also be set aside to purchase property with high fisheries values as part of the FWCP’s ongoing commitment to conserving critical habitats.

FWCP wildlife projects slated for this fiscal year include: continuing with efforts to support declining herds of Rocky Mountain Bighorn Sheep in the East Kootenay and studying wildlife trees needed by Vaux Swifts, relatively common birds that may be on the

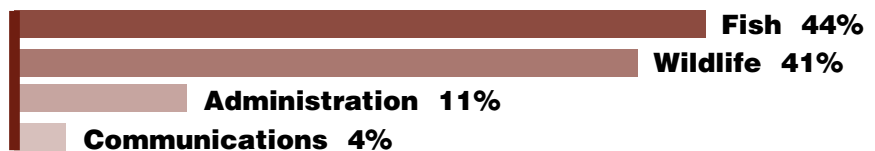
decline. Some FWCP funds will be earmarked to help the Creston Valley Wildlife Management Area maintain water systems that are vital to the maintenance of the world-class wetlands in Creston. The FWCP will partner with provincial government agencies to deliver ecosystem restoration work near Castlegar in the Arrow Reservoir.

The FWCP has been involved in recovery efforts of the endangered Northern Leopard Frog for years and that commitment will continue this year. In addition, the FWCP is funding an amphibian study that will look at several frog species at-risk in the West Kootenay.

Effort will also go into developing the Biodiversity Atlas more fully so that this online mapping tool can really contribute to improved decision-making and conservation planning.

For more information see the FWCP map on page 4 or visit www.fwcp.ca for a complete list of conservation and enhancement projects funded by the FWCP in 2008-09.

How is the money spent?



The Bucks Start Here

BC Hydro’s water licence in the Columbia area requires that it compensate for impacts to fish and wildlife resulting from the construction of BC Hydro dams. It does so by providing \$3.2 million (indexed for inflation based on 1995 dollars) to the Fish & Wildlife Compensation Program. In fiscal 2008 - 09 BC Hydro will provide \$4.7 million to the FWCP. The compensation program works on behalf of its program partners, BC Hydro, the B.C. Ministry of Environment and Fisheries and Oceans Canada to deliver projects that will conserve and enhance fish and wildlife impacted by the construction of BC Hydro dams. Find out more by downloading the FWCP backgrounder at www.fwcp.ca

Multi-Year Dam Impact Project Nears Completion

For the last few years, FWCP fish & wildlife biologists have been breaking new ground on an innovative project that will help them more fully understand the construction or footprint impacts of BC Hydro dams on local fish and wildlife.

This multi-year project has combined critical thinking, historical photographs and cutting-edge mapping technology. The results are being synthesized and the final chapters are being drafted.

“The chapters will all go through a peer review,” says senior FWCP wildlife biologist John Krebs, who has been leading the wildlife portion of the work.

“When complete, the Footprint Impact Assessment will provide a model for other jurisdictions looking to better understand the biological impacts of dam construction,” says the B.C. Ministry of Environment’s Wayne Stetski, co-chair of the FWCP Steering Committee.

The work is scheduled to wrap up in 2008.



B.C. Hydro

Footprint impacts refer to the initial construction and impoundment impacts primarily associated with habitat loss. The FWCP’s mandate does not include operational impacts (i.e., flow reduction and water levels).

First Nations Species Recovery is a Team Effort

When you are trying to help a species-at-risk recover, it takes a team effort. Thanks in part to the ongoing efforts of the Lower Kootenay and St Mary’s Ktunaxa bands, several local species-at-risk have had extra help. Wildlife biologist and amphibian specialist Penny Ohanjanian has spearheaded the involvement of the Ktunaxa Nation in the recovery efforts for the Northern Leopard frog.

The cornerstone of the recovery effort has been the captive rearing and release of young frogs and tadpoles every year from 2001 to 2005. This work has been led by the Fish & Wildlife Compensation Program (FWCP). During this time about 25,000 northern leopard frogs were released across the Creston Valley Wildlife Management Area (CVWMA) and in Bumpers Flats in the East Kootenay.

Dan Wigle and Curtis Wullum, Ktunaxa Natural Resources Coordinators for the St Mary’s and Lower Kootenay bands, have trained other band members with an interest in wildlife, to help with ongoing monitoring that is critical to assessing the success of recovery efforts.

“There was plenty of good news for the endangered Northern leopard frog last year,” says Joe Nicholas, who is a First Nations representative on the FWCP’s Steering Committee, “and it’s great that local First Nations have a chance to be part of that.” Joe is referring to the discovery that Northern Leopard frogs are breeding in the East Kootenay after a 30-year absence, and more egg masses were

found in the Creston Valley Wildlife Management Area than have been found since 2001.

The work of local First Nations has not been restricted to Northern leopard frogs. With funding assistance from a variety of sources, including the Interdepartmental Recovery Fund and the Aboriginal Critical Habitat Protection Fund, a long list of species-at-risk has been monitored in recent years including the Northern leopard frog, Yellow Breasted Chat, Flammulated and Western Screech-Owl, and Great Blue Herons.



Angus Glas

Northern leopard frogs are one of several species-at-risk that have benefited from the help of local First Nations.

Angler Survey

Tracking Kokanee and Other Fish with Your Help

Think of this as a riddle. What happens 12 months a year, five days a month? Give up? The correct answer is the FWCP's angler survey on the Arrow Lakes Reservoir (ALR).

"The information we collect from anglers is really the only way we get information about bigger fish in the Arrow Lakes," says FWCP Fisheries Biologist Steve Arndt. "And that helps us track how effective our efforts are to restore the ecosystem."

The FWCP has been adding nutrients to the ALR since 1999 in an effort to compensate for nutrients trapped upstream by dams. The angler survey - also known as a creel survey - has been happening on the ALR since the 1960s to track pre- and post-dam conditions. This year, crews will survey anglers at boat launches at Syringa Park near Castlegar, in Nakusp, and at the Shelter Bay provincial park.

"The information we get from anglers about their catch is really important and helps us understand the size, overall health, abundance, age, and sometimes the diet, of bigger fish like bull trout and rainbows," says Steve. "We really appreciate the support of local anglers."

The health and abundance of the fish is an indicator of feeding conditions within the system, and getting that information from anglers is key to monitoring the effectiveness of the Nutrient Restoration Program (formerly known as the Fertilization and Monitoring Program).

If it's Angler Survey Day, there will be people at the boat launches asking for information about your catch that day. "Our survey has nothing to do with fishing regulations or enforcement," say Steve adding that plans are underway to expand the angler survey to Kootenay Lake.

Number of anglers interviewed

2006 - 1624
2007 - 1784
2008 - 377 (to date)

Percentage B.C. residents

2006 - 94%
2007 - 91%
2008 - 94% (to date)

Most popular species fished for

- bull trout
- rainbow trout
- kokanee

Average angling time

- On average it takes
- two hours to catch a kokanee
 - two hours to catch a burbot
 - 14 hours to catch a bull trout

Results from Arrow Lakes Reservoir Creel Survey

Sturgeon Update

This spring, the Upper Columbia White Sturgeon Recovery Initiative hosted two juvenile sturgeon release events. With the help of close to 900 local elementary students, more than 6,400 juvenile sturgeon were released into the Kootenay River near Trail and another 6,400 (approximately) were released into the Columbia River near Castlegar and Trail. The FWCP hosted a third event to release juvenile sturgeon into the Kootenay River near Creston. More than 550 fish were released by local residents.

The Fish & Wildlife Compensation Program is an active member of the recovery initiative and co-funds the sturgeon operations at the Kootenay Trout Hatchery where the endangered sturgeon are reared. Visit www.fwcp.ca and view a short video that explains how the broodstock, which is critical to the recovery efforts, is collected.



Angus Glass

These students from the Vallican Whole School in the Slocan Valley joined hundreds of other students and helped release juvenile white sturgeon.

Want to know more?

Find out more about efforts to recover the sturgeon at www.uppercolumbiasturgeon.org

Land Management Plan

Changes at Fort Shepherd near Trail

When a piece of land includes rare habitat found only in the West Kootenay, is home to several species-at-risk, and has important archeological and heritage features, it's a parcel of land that many people want to protect for generations to come. That's exactly what's happening to about 1,000 hectares of land along the Columbia River near Trail.

The land, known as the Fort Shepherd Conservancy, was gifted (in part) to The Land Conservancy (TLC) from Teck Cominco for conservation purposes. The Fish & Wildlife Compensation Program along with several other funding partners, provided the additional funds that will help to acquire this unique piece of land.

The TLC, with funding from the FWCP, has now developed a Land Management Plan that will guide the long-term management, restoration and conservation of the property. "The plan identifies many things that can be done over time to fully restore and conserve this unique property," says FWCP wildlife biologist Irene Manley.

The plan addresses public education, access, habitat enhancement, weed management, biodiversity management, and recreational, archeological and heritage values. It also prescribes

a number of actions aimed at restoring and/or protecting the many unique features of this land.

"Our goal now is to educate people and make them aware of the changes at the Fort Shepherd Conservancy," says Irene, who adds that the Trail Wildlife Association is actively involved with this conservation effort. Signs to mark the boundary of the new conservation property are being installed, as well as signs to discourage mud bogging in the sensitive shoreline habitats. Motorized use is now restricted to the main roads to prevent further habitat damage.

"When we have access to the lands under control we can start to do restoration work that will help ensure the diverse habitats and species that rely on them are protected," says Irene. "Managing the land carefully means the lands can be conserved and enhanced for years to come, starting today."

You can download the Fort Shepherd Conservancy Land Management Plan online at the Fish & Wildlife Compensation Program website at www.fwcp.ca

The FWCP helps acquire conservation properties like this one to compensate for the valley bottom habitat that was lost to reservoirs created by construction of BC Hydro dams.

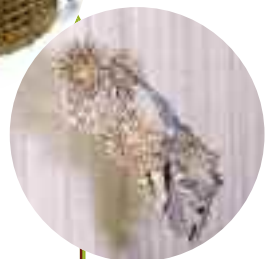
A Vision For the Future

The significant values of the Fort Shepherd Conservancy will be protected, enhanced and restored, and opportunities for human activities compatible with this conservation vision will be encouraged.

So You Think You Know It All?

Answers from page 3

- 1** Creel refers to the old-fashioned wicker basket that anglers used to store their day's catch. Grass may have been added to the basket - the creel - to help keep the fish cool until dinner time. So the creel survey is a survey of what's in the basket. Today, most anglers don't use baskets but the word is still with us.
- 2** Swiss inventor George de Mestral was inspired by Mother Nature. He came up with the Velcro design in the 1940s after studying burrs that stuck to his dog's fur and his wool pants during a hunting trip. Today Velcro is used on everything from diapers to body armor. Burdock is an invasive weed that can be a hassle for hikers and deadly for smaller animals like this bat.
- 3** Both. The original Dolly Varden is a character in the Charles Dickens' novel "Barnaby Rudge," but most of us in the Kootenays, think of a fish when we hear those words. Dolly varden is often used to refer to bull trout. In fact, the dolly varden and bull trout are two distinct types of char, but they look similar.
- 4** One of the biggest threats to badgers is highway mortality or road kill. Reducing the number of badgers killed by vehicles is an important part of the recovery plan for American badgers. A recent FWCP report recommends improving existing culverts and adding new ones so fewer badgers are killed crossing our increasingly busy roads. Give a badger a brake.



Ernest Kealey

Steve Towers

Private Landowners Can Help Owls

Finding an endangered species is one thing. Ensuring its survival is another. That's where private landowners can help.

"We were really happy to find Screech-Owl nests in 2007, especially given their scarcity in British Columbia," says senior FWCP wildlife biologist John Krebs. "The challenge now is making sure the endangered owls have enough suitable habitat." John is referring to the Western Screech-Owl nests found last year in the West Kootenay by FWCP biologists.

The FWCP is offering help to local landowners who might be interested in placing wire mesh around potential screech-owl wildlife trees in a bid to stop beavers from falling trees that may be ideal owl habitat.

"These owls love black cottonwoods for nesting, often found on low elevation private land. Given that this type of habitat often overlaps with beavers, we want to be proactive this year and promote stewardship by working with landowners on habitat improvement that may include the screening - wire meshing - of select, large cottonwood trees," says John.

One of the nests found last year was located in a tree that has since blown down, highlighting the need to protect existing prime habitat sites. This is another reason why it's important to keep as many cottonwoods as possible.

"There have been many human-induced impacts, including the creation of the reservoirs, that have reduced available cottonwood habitat for these birds," says Kevin Conlin, Co-Chair of the Steering Committee for the FWCP. "That is why we are actively trying to work with landowners to help conserve remaining habitat. By helping protect the remaining habitat for these owls, the FWCP is trying to compensate for losses resulting from dam construction in the Columbia Basin."

If you have cottonwood trees on your property and suspect they are being used by Western Screech-Owls, FWCP biologists would be interested in surveying your property to see if owls are already nesting there. If you don't think you have an owl on your property, and you don't have

cottonwoods, you can still help this small, endangered owl by building and installing an owl nest box. While not an adequate substitute for a wildlife tree, nest boxes can provide temporary nesting or roosting sites.

Contact the FWCP if you want help to protect trees on your property or want your land surveyed for owls. Find out more at our owl page at www.fwcp.ca.

You can report your owl sightings online too.



Jacob Dulisse

You can help endangered Western Screech-Owls by reporting any potential sightings or nests on your property.

Fungus Will Help "Homeless" Cavity Nesters

The Fish & Wildlife Compensation Program (FWCP) is experimenting with a relatively new way to create wildlife trees in 10% of the time that it takes Mother Nature.

"We inoculated 107 live trees in the Hofert Hoodoos Conservation Area south of Invermere last fall," says FWCP wildlife biologist Irene Manley. "We have high hopes that within 10 to 15 years many of them will provide excellent habitat for a variety of birds, including woodpeckers, owls and even ducks."

The inoculation involves drilling several holes above the midpoint of the tree trunk, and inserting wooden dowels impregnated with a heart rot fungi native to the local area. The fungi are introduced in the upper half of the tree because cavity nesters usually prefer to nest more than seven metres above the ground to avoid predators.

"The idea is not to kill the tree but to have a large, strong, standing, live tree with a section of heart rot decay suitable for cavity excavators," says Irene.

Modern forestry practices, agriculture, human development and reservoir creation have all had their hands in the decline of suitable wildlife trees. "The lack of old forest structure means that the part of the ecosystem that helps break down the wood - the fungi - is not as prevalent as it once was," says Irene. "It's a vicious cycle — the fewer large mature trees that are present to harbour heart rot fungi, the less common the fungi becomes and the fewer fungal spores there will be available to infect other trees, creating future wildlife habitat."

The FWCP is continuing efforts to create wildlife trees and is inoculating more trees with fungus in 2008.

Aren't all trees wildlife trees?

While all trees might be used by wildlife, not all trees are "wildlife trees." A wildlife tree is a standing tree (alive or dead) in a decaying state that provides valuable habitat for many species. In B.C., the wildlife trees become prime real estate for mammals, amphibians, and about 70 species of birds, including Western Screech-Owls. See photo above on page 11.



Angus Glass

Wildlife tree specialist Devin Miller with the dowels impregnated with heart rot fungi



Angus Glass

Holes are drilled prior to inserting the wooden dowels impregnated with heart rot fungi (this tree has also been topped with the cut roughed up to speed up the decaying process)

You can Help a Species-At-Risk

The Fish & Wildlife Compensation Program (FWCP) is looking for your help. If you have spotted a Western skink, a Bald Eagle nest, a Common Nighthawk, a caribou, or if you know where a Western Screech-Owl is nesting, we want to know.

Your input will help us gather more information about these species-at-risk and will help us plan conservation measures.

Post your sightings online at www.fwcp.ca. While you are there, sign up for our free fish and wildlife newsletter. You could win a free shirt just for subscribing.



Jakob Duilisse

Western Skink

This colourful local lizard is blue-listed meaning it is vulnerable. The FWCP is looking for skink sightings to establish a benchmark for the Western Skink range in the Columbia Basin. Let us know if you have seen a Western skink in any of these areas: Kootenay Lake, north of Creston and along the West Arm; Slocan Valley and Slocan Lake; Arrow Lakes Reservoir (north of Castlegar), Nakusp and Revelstoke areas; and East Kootenay.



Jakob Duilisse

Western Screech-Owl

This small, nocturnal owl is an endangered species that likes to live in riparian cottonwood habitat. If you have cottonwood trees on your property and you think Western Screech-Owls are using them, please let us know.



Bald Eagle Nests

In recent years there has been a 25% decline in the number of heron breeding sites in the Columbia Basin. This high decline rate seems to be related to a combination of factors, including harassment and predation by Bald Eagles. Nest sightings will be added to a database and followed up to confirm/map a precise nest location, and to determine eagle productivity relative to heron productivity and nest failure. Reporting an eagle nest will help local Great Blue Herons.



Common Nighthawks

Common Nighthawks used to be considered a relatively common bird but in 2007 they were listed as a threatened species in Canada. The FWCP is looking for your help. If you have seen a nighthawk, we would like to know about it so we can improve our understanding of its range in the Columbia Basin.



Garry Beaudry

Caribou

You can help the recovery of endangered caribou herds in the Columbia Basin by reporting any caribou sightings. Your information will help the B.C. Ministry of Environment with its recovery efforts.

Thank you!

Thanks to everyone who has reported an eagle nest in the last 12 months. The response has been extremely positive and has allowed us to identify many lesser-known breeding sites throughout the Columbia Basin. We will update you on this project in an upcoming newsletter.

Send Us Your Photos

If you have a great photo of the local fish and wildlife in the Columbia Basin, send it to us. If we publish your photo, you'll get some FWCP swag. Send your images to info@fwcp.ca.

Keep in mind that printable photos require a "high quality" setting on your digital camera.



Dakota May, age 10, took this photo of a frog near Golden.



Thanks to Rodney Woodburn for sending in this bobcat shot taken near Nelson's orange bridge.

Ecosystem Restoration



Angus Glass

Simon Constantine was part of the crew from Timberland Forest Fire Systems Ltd. that implemented this successful prescribed burn, on behalf of the FWCP and the B.C. Ministry of Environment, on seven hectares in the Deer Park Conservation Area, near Castlegar in spring 2008. The FWCP had been waiting for the right weather conditions for four years to undertake this work to help restore more open forest habitat. This burn will benefit a wide variety of species impacted by the construction of BC Hydro dams in the area, including cavity nesting birds, deer, elk and Bighorn sheep. Ecosystem restoration projects like this is one way the FWCP helps to conserve and enhance wildlife impacted by construction of BC Hydro dams. The FWCP has helped restore more than 5,000 hectares of habitat in the Columbia Basin.