

## UPPER COLUMBIA WHITE STURGEON RECOVERY INITIATIVE

- January 2007 Newsletter
- 2005-2006 Annual Report



**THE INITIATIVE** brings together the interests of government, First Nations and American Tribes, industry, environmental groups and others to the challenge of building a healthy future for the white sturgeon in the upper Columbia River in British Columbia and Washington. Available population estimates show that within the Canadian portion of the upper Columbia River basin, including the Arrow Lakes Reservoir, the white sturgeon population is about 1,000 wild fish. From the Canada-U.S. border to the Grand Coulee Dam in Washington State, about 3,200 adult wild white sturgeon reside. The causes for decline are not fully understood. However, in the last 125 years, human development, construction of hydroelectric dams, water quality changes from contaminants, changes in flow patterns, as well as the introduction of exotic species and harvesting may have led to its decline. The majority of white sturgeon are more than 30 years old, suggesting a population of aging fish with relatively few young to replace the old. It is hoped that through a commitment to water management, habitat restoration and conservation fish culture, the upper Columbia white sturgeon will recover to healthy, self-sustaining numbers.

In keeping with regular progress reporting for endangered species listed under the Species at Risk Act (SARA), this newsletter serves to provide highlights presented during a half day public workshop held October 19, 2006 in Castlegar; an Annual Report of financial information for the 2005-2006 project funding year, the partners and people involved, as well as current year highlights.

*...“helping hands for ancients of the deep”*



**Following more than three years effort, the upper Columbia white sturgeon was listed as Endangered under Canada's federal Species at Risk Act (SARA) in August 2006.**

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## WHITE STURGEON RECOVERY: DIFFERENT POPULATIONS, SIMILAR CHALLENGES

— prepared by Angus Glass

Biologists, presenting information on various sub-populations of white sturgeon in the Columbia Basin recently, were united with a common message: natural recruitment was not occurring and the mystery has to be solved to save the species. This message was delivered during the *White Sturgeon Recovery Initiatives in B.C and the United States* technical environmental session, at the 2006 Columbia Basin Environmental & Cultural Conference held in Castlegar October 19-22, 2006.

The session was comprised of Larry and Mike Hildebrand from session sponsor, Golder Associates Ltd., Matt Neufeld from the Ministry of Environment, and Jason McLellan from the Washington Department of Fish & Wildlife.

Larry provided an overview of the status of upper Columbia white sturgeon stocks:

- From the Canadian border to Hugh Keenleyside dam there is estimated to be between 900 and 1,300 adults, most over 35 years of age.
- There are few sturgeon in Arrow Lakes Reservoir (between 40 and 90 adults).
- Sturgeon presence in Revelstoke and Mica Reservoirs was not confirmed by sampling in the late 1990's. If they do exist there, numbers are thought to be less than 50 in each water body.

Larry zeroed in on recruitment failure as the heart of the white sturgeon recovery problem. "The conservation aquaculture component is just a stop gap in the Recovery Plan. Our next objective is to investigate the reasons for recruitment failure."

Matt's focus was on the Kootenay River white sturgeon population, but again citing recruitment as the major stumbling block, having recorded virtually none there since 1974. Kootenay River, both north and south of the border, has an aging white sturgeon population - estimated at less than 500 adults and decreasing annually by 9%.

Delegates were given a "fish-eye" perspective of sturgeon in their natural habitat by Mike who screened a one-minute underwater video. The footage was taken in March 2006, at a depth of around 20 metres in the Waneta Eddy. It showed hundreds of juveniles, between one and four years of age, and up to approximately 60 cm in length, in large groups next to one another on the riverbed. It provided an image of these amazing fish that is hard to forget.

Jason provided an overview of the sturgeon research in Lake Roosevelt. He indicated that of the estimated 3,223 adult population south of the border, only about 10% of the population travel into Canada, most of which are seeking reproductive habitat.

There is an identified spawning area near Northport and, in the mid 1990's, minor recruitment did occur. But the very same question concerning poor recruitment is evident.

Finally, a sobering message emerged during the question and answer period. According to Larry, the upper Columbia River white sturgeon may only last for another 20 to 60 years if the recovery efforts are *not* successful. Clearly there is not a lot of time for biologists to solve the recruitment conundrum and implement workable solutions. So, we all need to stay committed.



Initiative researchers prepare to land adult white sturgeon for biological examination.



Biologists, Matt Howell and Kim Fields examine a juvenile sturgeon during the fall monitoring program.

## **BRINGING THE STURGEON BACK FROM THE BRINK: IT WILL TAKE TIME AND A LONG-TERM COMMITMENT**

— prepared by Lynne Betts



Nancie Dohan helps an elementary school student release a juvenile sturgeon to the Columbia River.

Bringing the sturgeon back from the brink in the upper Columbia River will take a long-term commitment, more scientific research and involve kids, teachers, parents and anglers - today and tomorrow.

These were just some of the key messages told to 20+ people who attended a session called *The Columbia Sturgeon Recovery - Science and Communities Working Together*. The community environmental session was part of the recent October 2006 Columbia Basin Environmental and Cultural Conference held in Castlegar, and was sponsored by BC Hydro and the Upper Columbia White Sturgeon Recovery Initiative (UCWSRI).

“We are literally seeing a disappearing act,” said Maureen DeHaan, Co-Chair of the UCWSRI Community Working Group who underscored the need for more science to better understand why the species is on the decline. “Then we can figure out what we can do about it.”

Fortunately, researchers like Steve McAdam, Ministry of Environment and Chair of the UCWSRI Technical Working Group, is busy trying to understand recruitment failure.

Steve told the group that many research projects are underway now including: studying cryopreservation (freezing) of sturgeon milt, investigations to determine what role contaminants or temperature may have on spawning incubation, identifying critical habitat and monitoring local spawning areas. And of course the juveniles, which have been released each spring by the thousands near Castlegar and Trail, are being monitored.

Community involvement is a key part of the recovery work and the release of juvenile sturgeon has become an important opportunity for the UCWSRI to connect with people and raise awareness.

“This species will take decades to recover so we need to educate the kids today so they will help the sturgeon recovery tomorrow,” says Angus Glass, who works on UCWSRI Outreach Efforts.

A workshop participant stressed their support for student involvement but expressed concern about handling the fish gently and the need to integrate the cultural significance of sturgeon into education efforts.

Education is also part of the UCWSRI's work and sturgeon education kits are now available at no charge to primary and elementary classes in the Columbia Basin. The sturgeon curriculum gives teachers and students alike the chance to learn more about sturgeon while building long-term interest in its recovery.

An angler contact program is requesting descriptions of encounters with white sturgeon. Information on best practices to minimize the effects of incidental encounters are provided to anglers.



Elementary school children arrive to Beaver Creek, near Trail to assist with the annual spring Juvenile Release Event.



A display of the UCWSRI White Sturgeon Education Kit for youth K - 3 and Grades 4 - 7.

# 2005-2006 ANNUAL REPORT<sup>1</sup>

## Messages from the Chairs

It's been six years since the Initiative was formed in 2000 to help white sturgeon return from the brink of extinction. From the innovative 2-year agreement signed at that time between BC Hydro, the provincial and federal governments, the commitment to address the endangered upper Columbia River white sturgeon population has continued with measurable success. Together with our 28 program and external funding partners, the Initiative is firmly working together to rebuild the white sturgeon population in the upper Columbia River in British Columbia and Washington.

In 2005-2006 we continued to build on our Initiative's achievements with \$1.22 million in funding and in-kind resources and celebrate a fifth successful cycle of juvenile white sturgeon culture and rearing - juveniles rearing on both sides of the Canada and U.S. border, and ongoing

growth in research projects, education, information and outreach to raise awareness of issues facing upper Columbia white sturgeon. It was through the committed efforts of the Technical Working Group and the Community Working Group, representing highly committed and talented Tribal and First Nations representatives, state, provincial and federal agency staff and interested community members working cooperatively that the delivery of more than two dozen projects was made possible.

The funding was dedicated to several Core and Priority 1 funding areas:

- Sturgeon fish culture operations at British Columbia and Washington facilities
- Broodstock collection and tagging activities
- Transboundary Reach juvenile monitoring
- Communications, public outreach and education efforts
- Contaminants and fin deformity investigations
- Adult sturgeon monitoring in Lake Roosevelt and Waneta
- Stock assessment and telemetry studies in the Transboundary Reach
- Geomorphologic and population sub-structure analyses
- Temperature effects on incubation success and survival
- Technical and community working groups advisory and administrative support
- Annual public reporting through a public workshop



Steve McAdam  
Ministry of Environment  
Technical Working Group  
Canadian Co-Chair



Deanne Pavlik-Kunkel  
Spokane Tribe of Indians  
Technical Working Group  
U.S. Co-Chair



Bill Duncan  
Teck Cominco Metals Ltd.  
Community Working Group Chair



Maureen DeHaan  
Fish & Wildlife Compensation Program-Columbia Basin  
Community Working Group Co-Chair

As chairs we would like to thank all the Initiative partners and volunteers from British Columbia and Washington who have helped in these transboundary endeavours and as we strive to move forward to rebuild the upper Columbia white sturgeon population.

<sup>1</sup> A fiscal year is comprised of a 12 month period between April 1 to March 31. The 2005 - 2006 Annual Report provides highlights for projects undertaken from April 1, 2005 to March 31, 2006.

**Balance sheet for April 2005 – March 2006**

For reporting Year 6, Initiative project funding levels reached nearly \$1.0 million and involved 11 of 28 program and external funding partners, directly funding new and continuing recovery projects. The two main program areas funded by the Initiative are (1) administrative and communications activities and (2) technical projects.

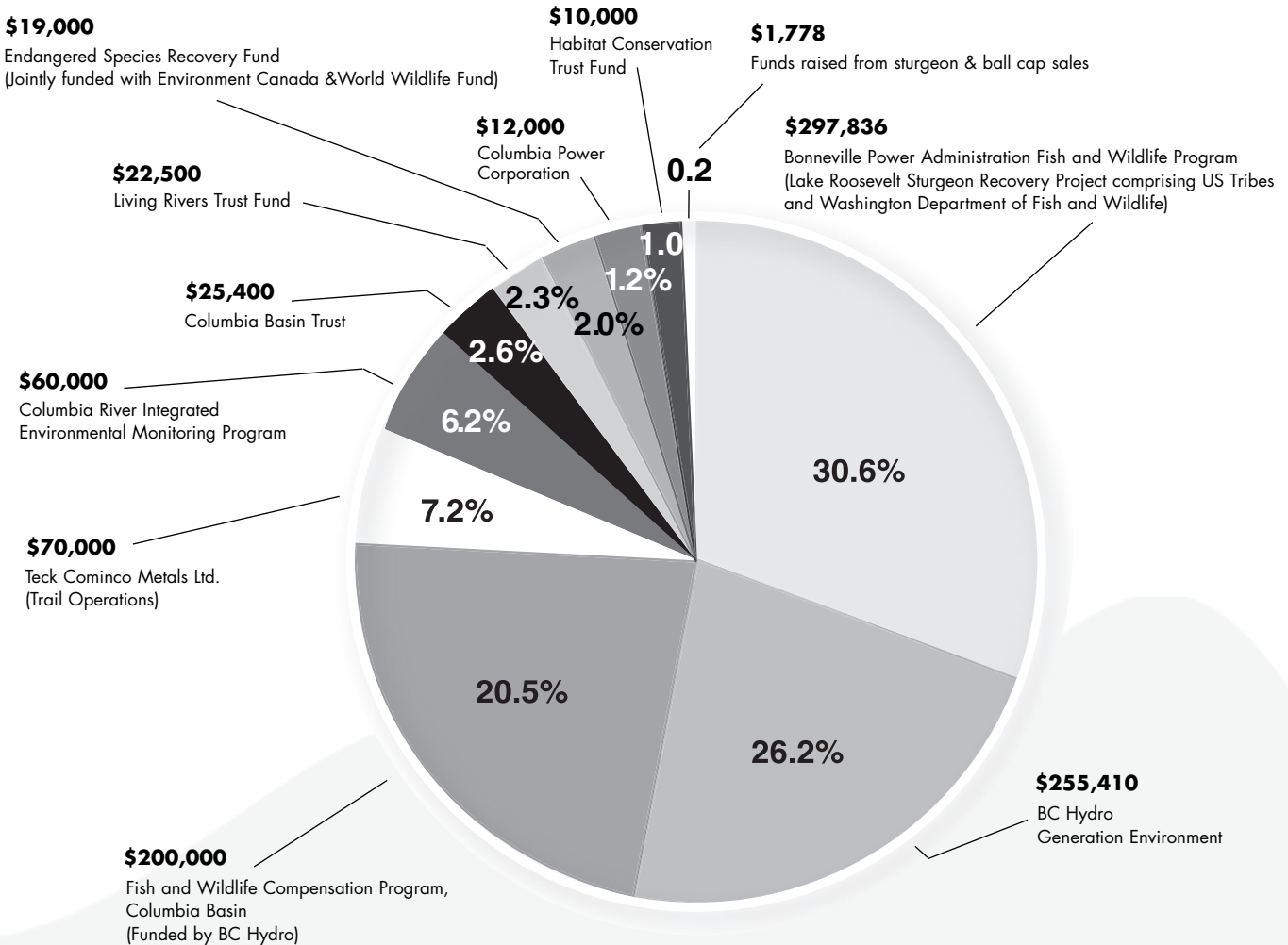
The most significant projects funded were the conservation fish aquaculture operations at the Kootenay Sturgeon Conservation Hatchery complex in B.C., near Cranbrook and the Columbia Basin Hatchery in Moses Lake, Washington State, where \$242,000 in project funding was dedicated. The second major effort was an \$111,540 commitment to the Transboundary Reach juvenile monitoring in B.C. and Washington. The broodstock collection program, tag

purchases for adult and juvenile sturgeon, adult spawn monitoring in Waneta and Lake Roosevelt were also significantly-funded Core programs.

Bonneville Power Administration Fish and Wildlife Program, BC Hydro and the Fish and Wildlife Compensation Program—Columbia Basin, provided 77% of Initiative funding, with remaining partners contributing the balance. In addition, an estimated \$255,410 was provided as in-kind contributions by partners' staff with the Freshwater Fisheries Society of B.C., Ministry of Environment, BC Hydro, Canadian Columbia River Inter-tribal Fisheries Commission and Golder Associates Ltd.

Access to copies of the reports produced during 2005-2006 and prior years is available through the Initiative Web Site, [www.uppercolumbiasturgeon.org](http://www.uppercolumbiasturgeon.org) under the Reports and Other Reports section of the Research page.

**2005-2006 FUNDING BY INITIATIVE PARTNERS**



2005-2006 Annual Report continued on page 6

## TECHNICAL AND COMMUNITY INVOLVEMENT

The ongoing success of this Initiative has been due to the long serving support and dedication of the members of two core teams: the Technical Working Group and the Community Working Group. These teams bring skill, expertise and community perspective to the white sturgeon recovery process. The Initiative greatly appreciates the dedication and commitment provided by these groups.

**The Technical Working Group** is responsible for the development and implementation of the Recovery Plan. The team is made up of biologists, researchers, and other experts from provincial, federal and state governments, BC Hydro, Teck Cominco Metals, Bonneville Power Administration, First Nations and American tribes and others. Recovery is a shared Canada-U.S. goal, so the team includes members from Washington and Oregon states as well as from British Columbia.

**The Community Working Group** is responsible for developing a common vision, garnering public support for sturgeon recovery, providing information and feedback on recovery operations, informing the public, and seeking funding for recovery and outreach education projects. Members of the group represent a range of interests including federal, provincial and local governments, First Nations and American tribes, industry and environmental groups, U.S. regulatory agencies and the public.

## PARTNERS INVOLVED DURING 2005-2006

The success of the Upper Columbia White Sturgeon Recovery Initiative has only been possible since its inception in year 2000, with the ongoing support and commitment of many organizations from both sides of the border. A very special thanks is extended to our program partners and external funding partners for the 2005-2006 project year.

### PROGRAM PARTNERS

BC Hydro  
BC Ministry of Environment  
Bonneville Power Administration  
Canadian Columbia River Inter-tribal Fisheries Commission  
Columbia Basin Trust  
Colville Confederated Tribes  
Columbia-Kootenay Fisheries Renewal Partnership  
Columbia Power Corporation  
Fish and Wildlife Compensation Program, Columbia Basin  
Fisheries and Oceans Canada  
Freshwater Fisheries Society of British Columbia  
Golder Associates Limited  
Oregon State University  
Revelstoke Rod and Gun Club  
Salmo Watershed Streamkeepers Society  
Selkirk College  
Spokane Tribe of Indians  
Teck Cominco Metals Limited  
U.S. Fish and Wildlife Service  
University of Idaho  
USGS Fisheries Research Center  
Washington Department of Fish and Wildlife  
West Kootenay Naturalists  
Zellstoff Celgar Limited Partnership

### EXTERNAL FUNDING PARTNERS

Columbia River Integrated Environmental Monitoring Program  
Endangered Species Recovery Fund, jointly funded:  
with Environment Canada & World Wildlife Fund  
Government of Canada's Habitat Stewardship Program  
for Species at Risk  
Habitat Conservation Trust Fund  
Living Rivers Trust Fund



Initiative partners assist local school groups in the release of ten-month old juvenile white sturgeon to the Columbia River.

## COMMUNITY OUTREACH AND EDUCATION

Since the start of the Initiative, the provision of support by community organizations and Initiative partners toward outreach and educational activities has been extraordinary, and 2006 was no exception. During May 2006, dozens of local high school and adult volunteers assisted school children during annual juvenile sturgeon release events held in Trail and Castlegar, B.C., and in Lake Roosevelt, in conjunction with Student Discovery Week. During the fall, Initiative partners hosted two more events. On September 24, an outreach display was organized in conjunction with Trail's BC Rivers Day community event at Gyro Park, and information about white sturgeon and the Angler Awareness Program was provided. The following week, Teck Cominco Metals Ltd hosted the *Sturgeon Recovery* station for elementary school children during the October 3-4, 2006 Lake Roosevelt Water Quality Festival held at Kettle Falls. With more than 2,000 people participating annually in community opportunities organized on both sides of the border, the message to help recover this transboundary sturgeon population to the Columbia River is firmly taking hold for the years to come.



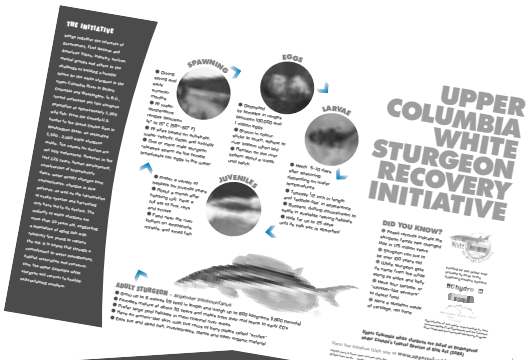
Initiative partners assist local school groups in the release of 2005 brood juvenile white sturgeon to the Columbia River, May 3, 2006.



Ten-month old juvenile white sturgeon just prior to its spring 2006 release to the Roosevelt Reach area

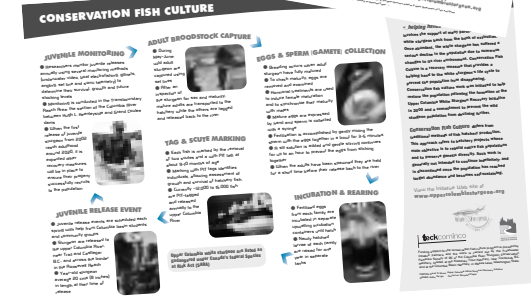
It has been through these ongoing efforts of support by Initiative partners to provide education about the Columbia River white sturgeon population that children, parents and community alike are learning more about what the Initiative is doing to help this ancient fish. Sales of Initiative ball caps and a 2nd Edition sturgeon toy, *Scutie* have helped cover the costs for making information available for schools and the community.

A special achievement this year was the Community Working Group's delivery of an afternoon workshop organized with the Technical Working Group, and in conjunction with an international environmental cultural conference, *The Columbia Basin 2006 - A Cultural Environment & an Environmental Culture* held in Castlegar during October 2006. The working group collaborated with Keystone Conference and Session sponsors, Golder Associates Ltd., BC Hydro, and the UCWSRI to organize two open sessions for the public to attend. The first session, *White Sturgeon Recovery Initiatives in British Columbia and the United States*, comprised four informative technical Power Point presentations on the status of white sturgeon and recovery efforts being made for sturgeon populations in the Columbia River basin including Lake Roosevelt and the Kootenay River. The second session, *Columbia Sturgeon Recovery - Science and Communities Working Together*, included four Power Point and interactive presentations that highlighted the community and technical efforts being made in outreach and education, including the resource information tools and events that are organized annually, a new community sampling plan for juvenile white sturgeon, the Angler Awareness Program, and the research and recovery projects in progress by the Technical Working Group members. The workshop was warmly welcomed by the basin community as a special public opportunity to meet those involved with the Initiative while receiving an informative overview of the 2005-2006 progress that has been made. Highlights from these sessions are provided as articles in this newsletter. Copies of the presentations can be provided by contacting the Initiative Web Site.



## 2006 FALL HIGHLIGHTS

- The Angler Awareness Program resumed through 2006, with financial support from the federal government Habitat Stewardship Program and Columbia Basin Trust. For more information on how to provide information regarding white sturgeon incidental catches, or for best practices to avoid encounters, please contact us through our Web Site and an outreach technician will contact you!
- An original Conservation Fish Culture Life Cycle poster was produced during fall 2006 as a companion to the natural white sturgeon Life Cycle poster produced in 2004. The posters are available from the Web Site, or contact us for a copy.
- Also this past fall, Initiative partners Teck Cominco Metals Ltd. and Columbia River Integrated Environmental Monitoring Program collaborated to form a transboundary white sturgeon Contaminants Working Group. Building on the years of work established by the Canadian-based Contaminants Working Group, the new work group was expanded to include members from both sides of the border to exchange information and research related to the physiological effects of water quality and contaminants as possible causes for white sturgeon recruitment failure. The group held its first meeting in November and plans to meet again in February 2007 in Spokane, Wash. If you are interested in learning more about this group, please contact us through our Web Site.



Two Initiative Life Cycle posters produced for outreach and education activities.



Outreach technician, Mark Thomas and Community Working Group member, Rena Vandebos assist at the Initiative booth during BC Rivers Day, September 2006.

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**For more information**  
about the UCWSRI view the  
Initiative Web site at  
[www.uppercolumbiasturgeon.org](http://www.uppercolumbiasturgeon.org)  
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**Funding Support** for this Newsletter  
was provided by **BC Hydro**

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UCWSRI partner photos  
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(Golder Associates Ltd.) photo

## 2006 TO 2007 PROJECT ACTIVITIES

For the 2006-2007 project funding year, the Initiative's Technical Working Group projected an annual operational budget nearing \$900,000 in funding to deliver priority technical, administrative and communications activities, as outlined in the 2002 Recovery Plan. Public outreach and educational programs will continue as in previous years. Now three quarters through the 2006-2007 project funding year, a total of \$726,000 in funding was secured to fully, or partially fund about 20 Core and Priority 1 projects. The significant funding areas remain in hatchery operations and maintenance for the conservation fish culture programs at the Sturgeon Conservation Hatchery near Cranbrook, B.C., and the Columbia Basin Hatchery in Moses Lake, Washington; PIT tag purchases and marking efforts; and, juvenile monitoring in the Transboundary Reach area. Priority 1 projects include research investigations related to recruitment failure hypotheses evaluation and research planning; and ongoing geomorphologic, stock assessment and telemetry investigations. Initiative partners will need to continue to seek resources to support the recovery of white sturgeon over the long term.