

Downstream Enhancement: Recovery of the Critically Endangered Nechako White Sturgeon Population

Cory Williamson
Fisheries Biologist
Chair- Nechako White Sturgeon- Technical Working Group



RECOVERY INITIATIVE

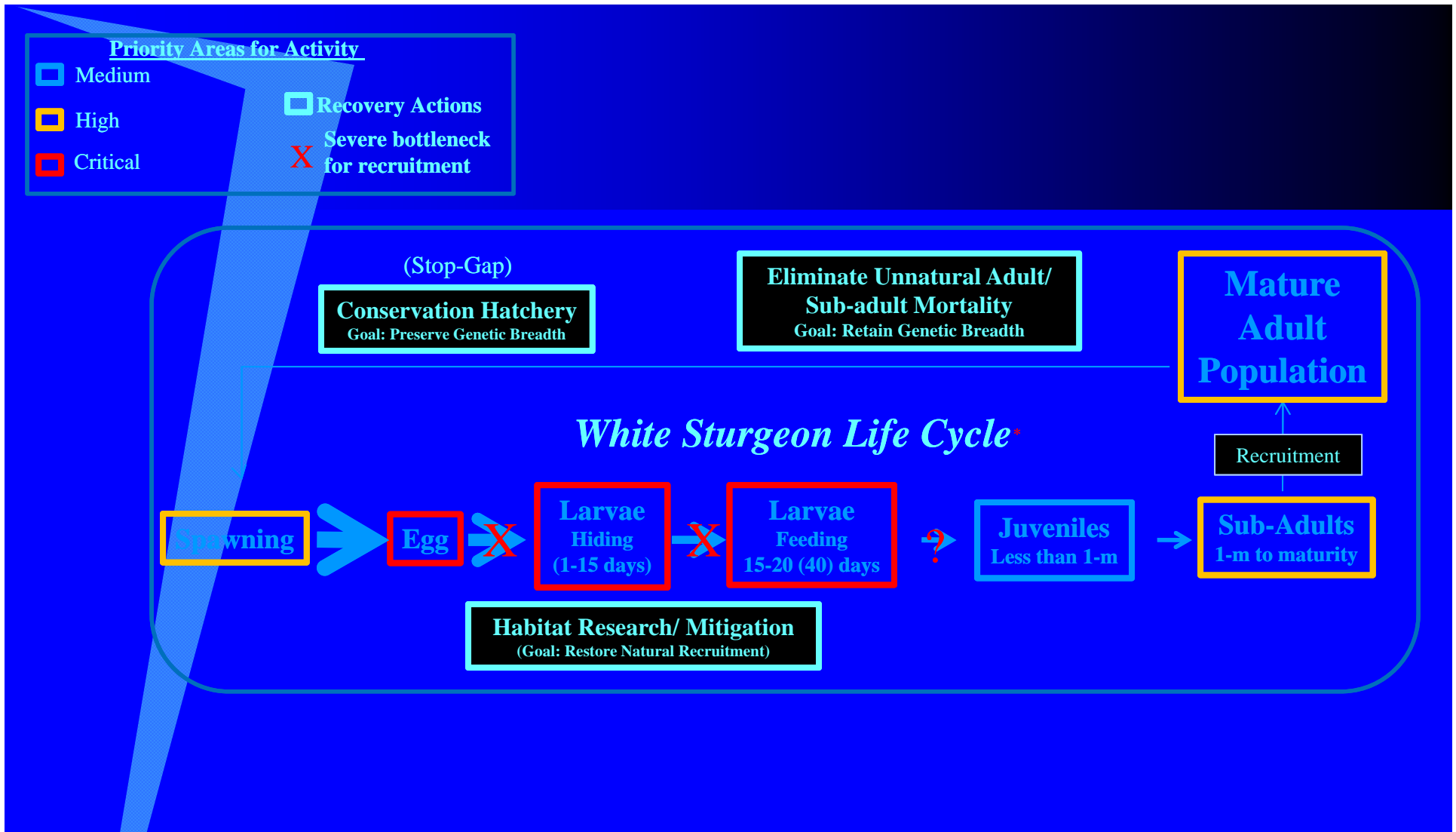
www.nechakowhitesturgeon.org

Nechako Sturgeon Recovery

- Core Recovery Actions
- Urgency
- Recovery Plans/ Activities:
- Current Funding
- NWSRI Priorities

Towards a naturally self-sustained population

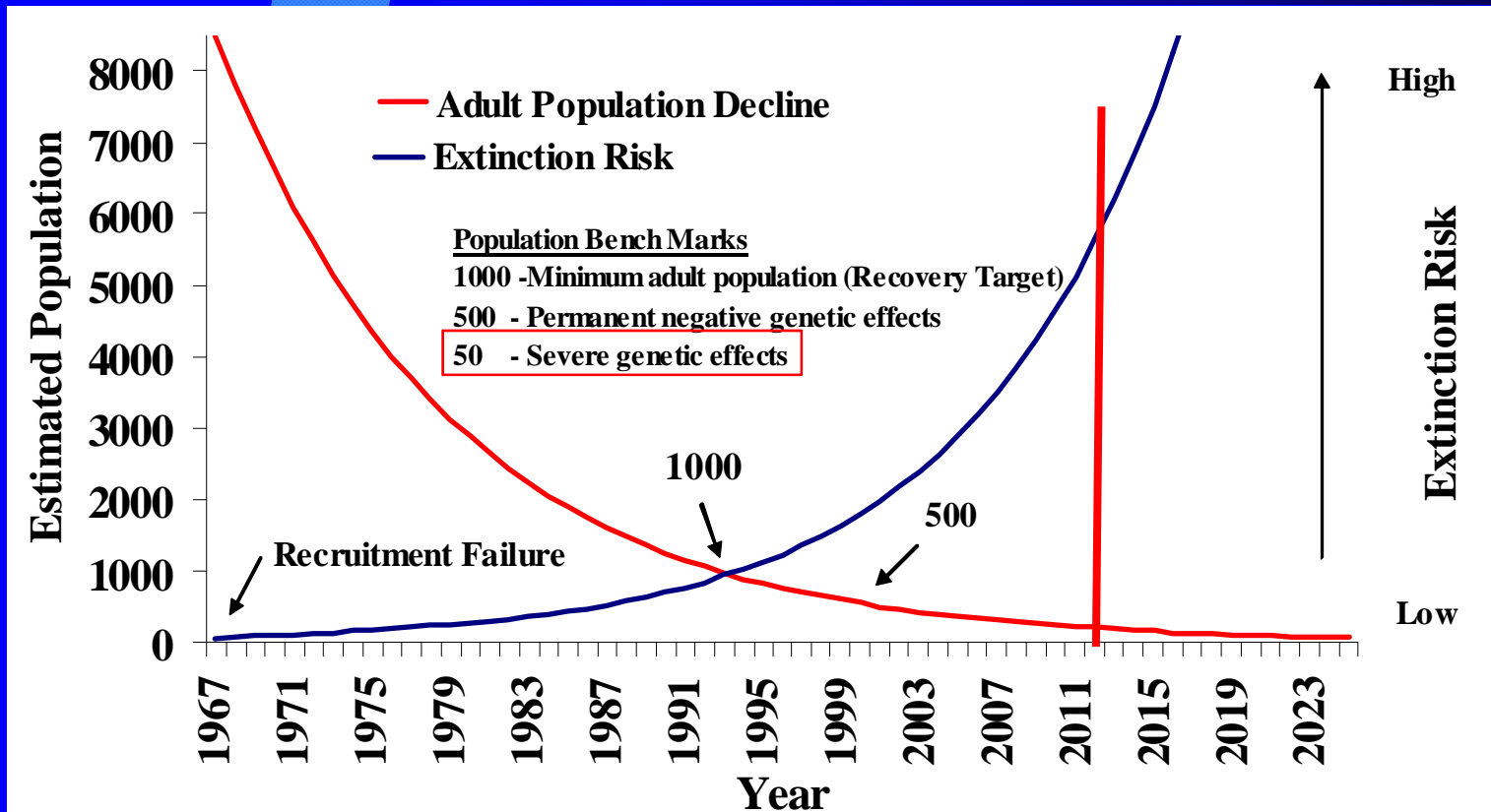




Towards a naturally self-sustained population



Conservation Fish Culture is Critical

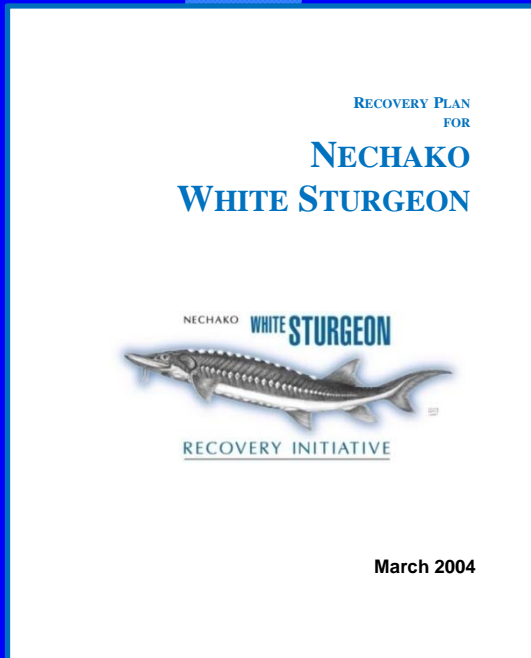


50% decline every 7-10 yrs

Towards a naturally self-sustained population



Recovery Planning



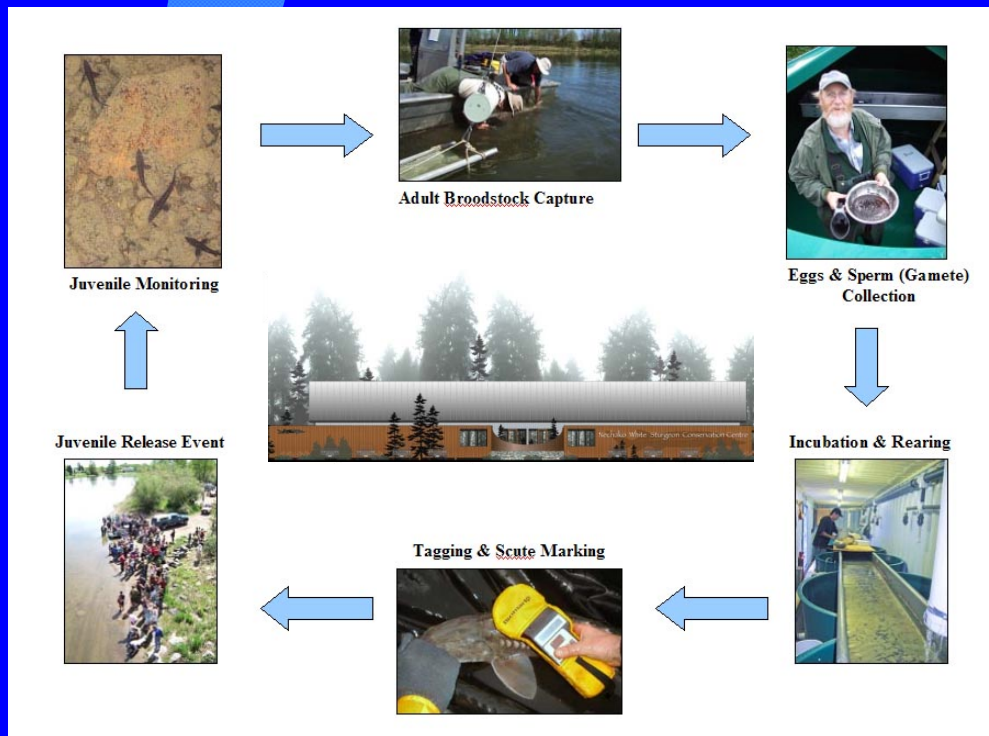
- ◆ **2004 Basin Recovery Plan**
 - ◆ Core Recovery Actions and management (**Basin**)
- ◆ **2009 National Recovery Strategy (Draft)**
 - ◆ Core Recovery Actions and Pop. Management (**Species**)
- ◆ **2007 NWSRI Strategic Plan**
 - ◆ Conservation Centre and Habitat Mitigation Programs (**Core Annual Work**)
- ◆ **2008 NWSRI- Habitat Management Plan**
 - ◆ Habitat management , focus on larvae and juveniles (**Preliminary plan, adaptive management**)

Towards a naturally self-sustained population



CONSERVATION FISH CULTURE

To achieve long-term goal, fish culture is required immediately:



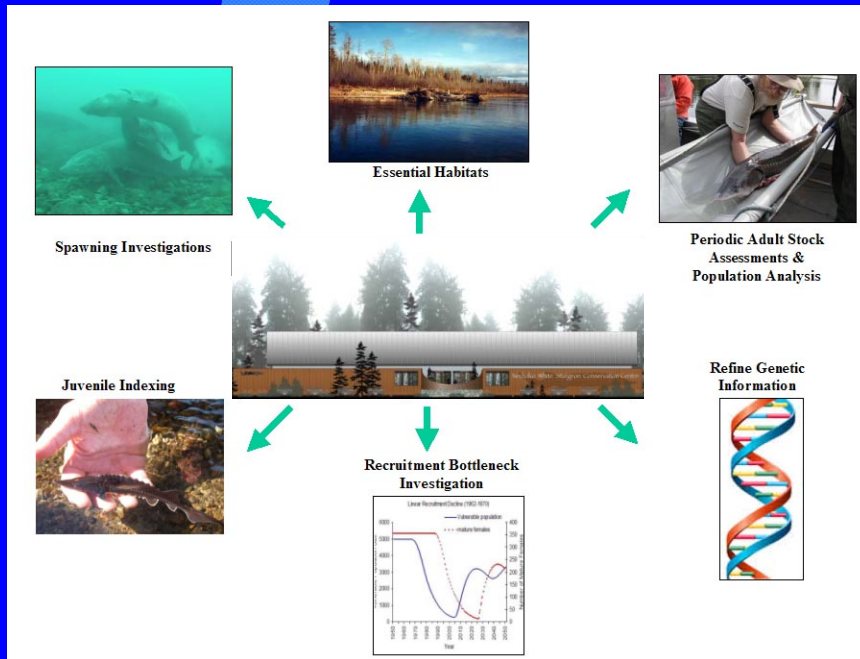
- Produce a genetically diverse *founder* population from Nechako brood-stock
- Produce eggs, larvae and juvenile white sturgeon to understand habitat requirements
- Develop capacity to over winter maturing adult sturgeon
- Engage the community in environmental education and stewardship

Towards a naturally self-sustained population



HABITAT, RECRUITMENT, AND RESTORATION

To achieve the long-term goals, the Habitat, Recruitment and Restoration Activities must complete:



- Lab-based work on larval/juvenile substrate preference (**Complete**)
- Spawning investigation:s (**Ongoing**)
 - spatial and temporal distribution.
 - examine egg and larval habitats.
- In-river substrate remediation/preference tests (**Started; Ongoing**)
- Monitoring habitat conditions before and after restoration work (**Started**)
- Assessment of Geomorphology (**TBD**)
- Habitat restoration (**TBD**)
- Monitoring and Assessment (**Ongoing**):

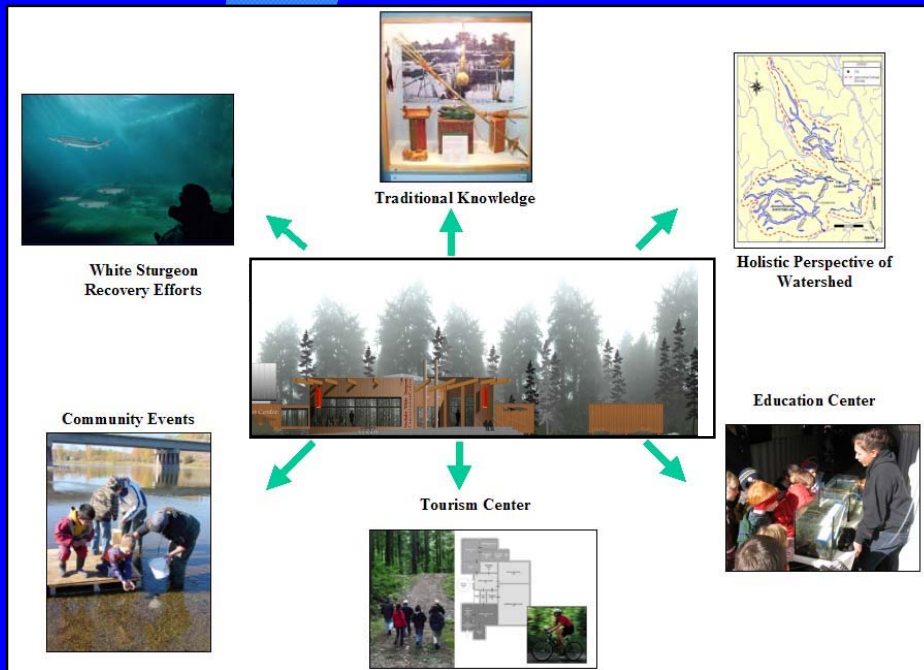
Towards a naturally self-sustained population



Nechako White Sturgeon Conservation Centre
 Vanderhoof, the geographical center of British Columbia

STEWARDSHIP, OUTREACH, AND EDUCATION

To achieve the long-term goal, the Stewardship Activities must:



- Reduce harm to white sturgeon
- Educate stakeholders
 - White Sturgeon, Environmental Stewardship, FN Traditional Knowledge, Culture).
- Strengthen partnerships with First Nations and the local/regional communities.
- Distribute information and education materials to support the Centre's goals.
- Continue to integrate with field or laboratory research through UNBC, UBC, CNC etc.
- Integrate environmental education with public and private school system.

Towards a naturally self-sustained population



NWSRI: Current Funding

- **Proposal driven or from partners.**
 - Ephemeral and unpredictable
 - Levels often insufficient to generate publishable work
 - Subject to changing financial status of governments & project partners
 - Priorities can be constrained by available funders or envelopes
- **Budgets are annual and on fiscal, calendar or cycle**
 - Usually out of sync with timing of field work, projects

Towards a naturally self-sustained population



Project Specific Planning Challenges

- **Field project implementation**
 - Large dynamic river
 - associated uncertainty (floods, climate etc.)
 - Larger project require inter-annual planning/ funding
 - work most often occurs at start of new fiscal year
- **Conservation Centre Construction/ Operations**
 - No local facility/ staff at present, increased costs
 - Difficult to retain staff – technical and specialist roles development expertise in seasonal and permanent employees.

Towards a naturally self-sustained population



NWSRI: Immediate Priorities

- **Construction of Recovery Centre (2012-13)**
 - **Required now to prevent extinction, ongoing genetic loss.**
 - **NWSRC: underpins all other recovery work**
- **Larval habitat investigations (2012 - 2013)**
 - Monitoring of 2011 habitat manipulation, spawning
 - Geomorphology/ sedimentation
- **Harm Reduction (ongoing)**
- **Population status and monitoring**
 - Last status update: 1999
 - Little monitoring due to focus on recruitment failure since 2003

Towards a naturally self-sustained population



NWSRI: Long Term Priorities

- ◆ Obtain stable sources of funding and leverage opportunities for ongoing funding of recovery projects
- ◆ Ongoing Implementation of NWSRI Conservation Centre Programming
 - ◆ Est. \$0.8 M/yr
- ◆ Implementation of NWSRI- Habitat Management Plan
 - ◆ Est. \$12.4 M (over 3-5 years)
- ◆ Ongoing Implementation of studies within wider scope of Recovery Plan/Strategy

Towards a naturally self-sustained population



Acknowledgements

- Carrier Sekani Tribal Council
- District of Vanderhoof
- Fisheries and Oceans Canada
- Freshwater Fisheries Society of BC
- BC Ministry of Forests, Lands and Natural Resource Operations
- BC Ministry of Environment
- Rio Tinto Alcan
- Aboriginal Affairs and Northern Development Canada
- BC Wildlife Federation
- City of Prince George
- Environmental Dynamics Inc.
- Environment Canada
- Nature BC
- Fraser Basin Council
- Fraser River Sturgeon Conservation Society
- Golder Associates Ltd.
- Lheidli T'enneh Band
- Nechako River Alliance
- Nechako Watershed Council
- Resources North Association
- Saikuz First Nation
- School District 57
- Sport Fishers
- Spruce City Wildlife Association
- Tl'azt'en Fisheries Program
- Triton Environmental Consultants

Towards a naturally self-sustained population





Questions?

Towards a naturally self-sustained population



Nechako White Sturgeon Conservation Centre
Vanderhoof, the geographical center of British Columbia