

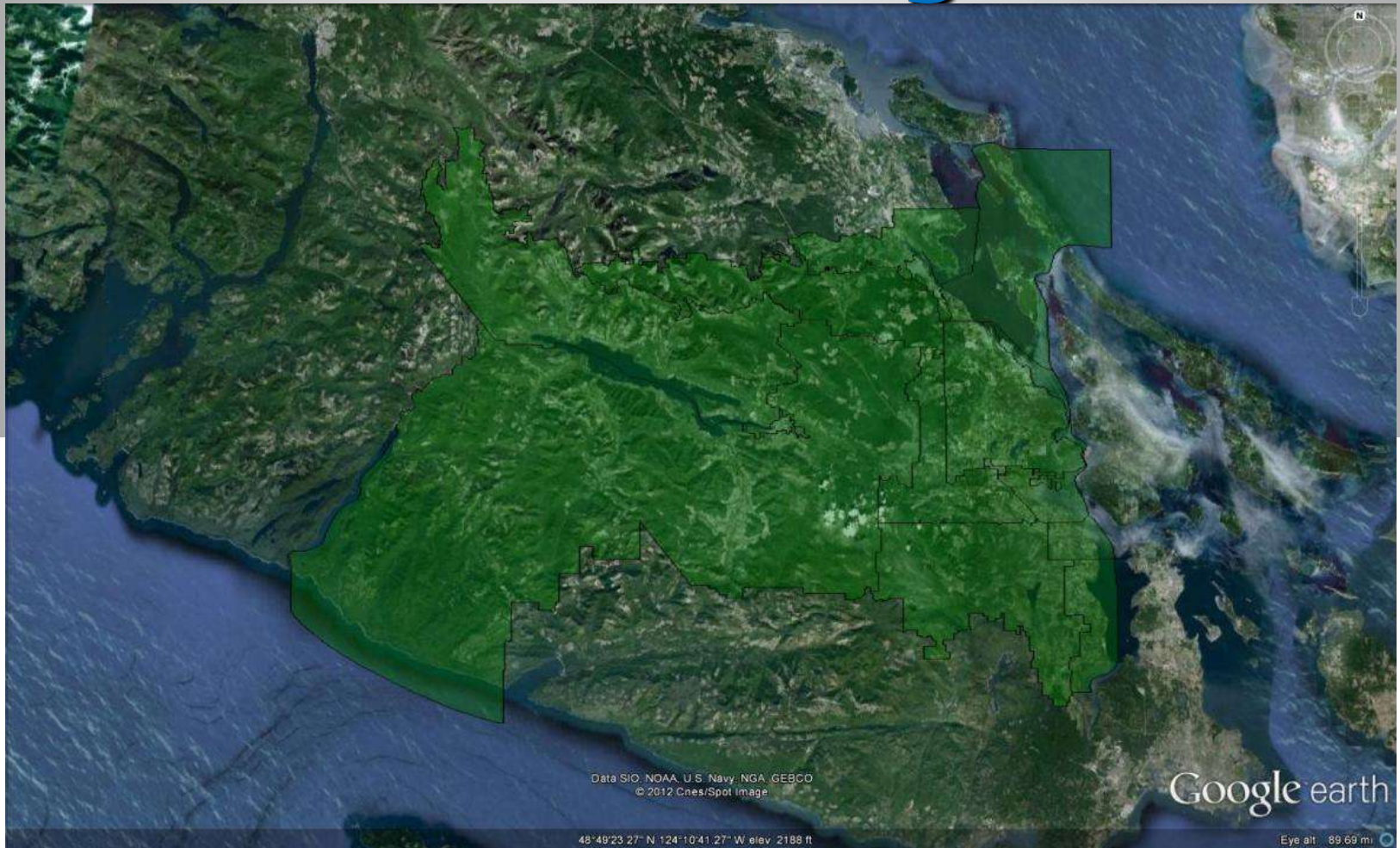
Cowichan Watershed Board A Reason to Celebrate & Some Lessons Learned



**FFESC
Conference**

**June 2012
UBC**

The Cowichan Region



Cowichan Watershed Board

This Evening

- Background
 - Big Picture Issues
 - Cowichan Watershed Plan
- Our Response –
The Cowichan Watershed Board
- Success Factors/Lessons Learned
- Challenges



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Context – Big Picture (elephants in the room)

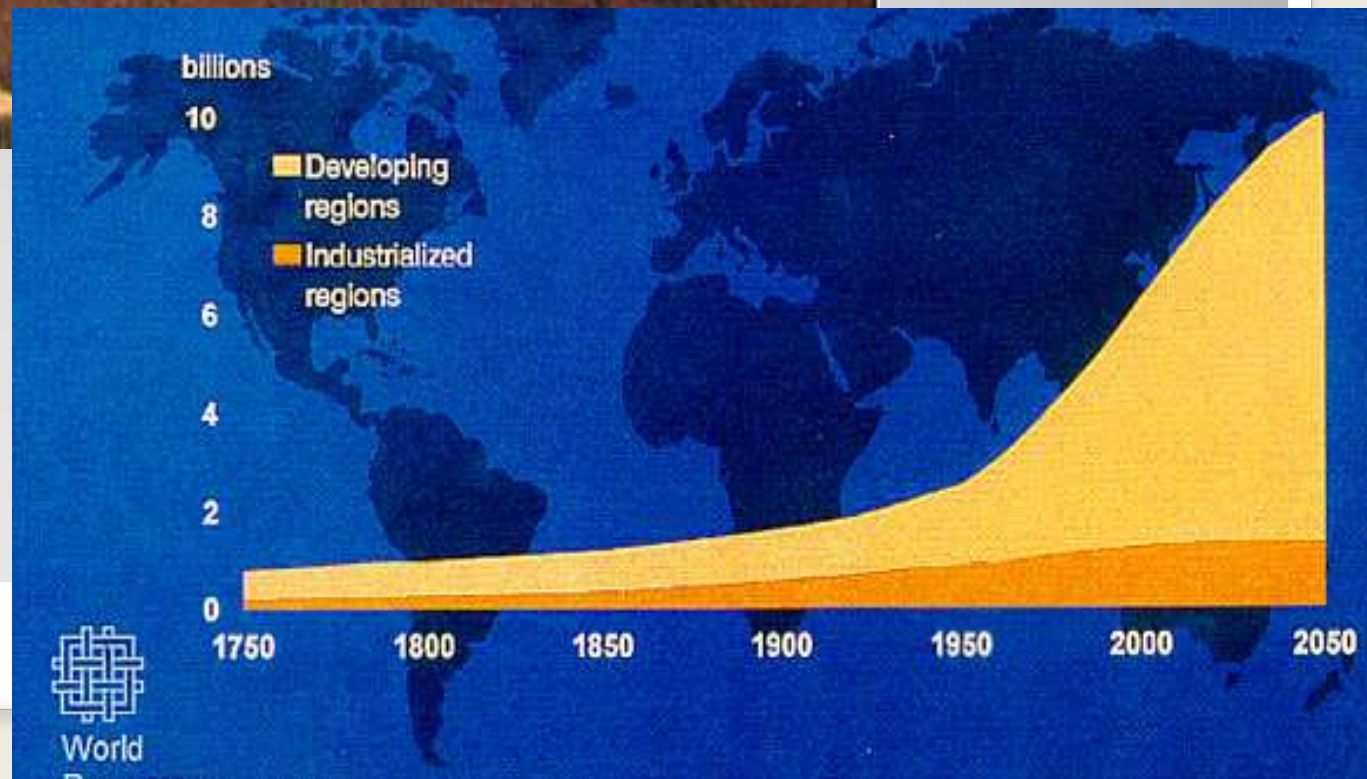
- Global Warming & Climate Chaos



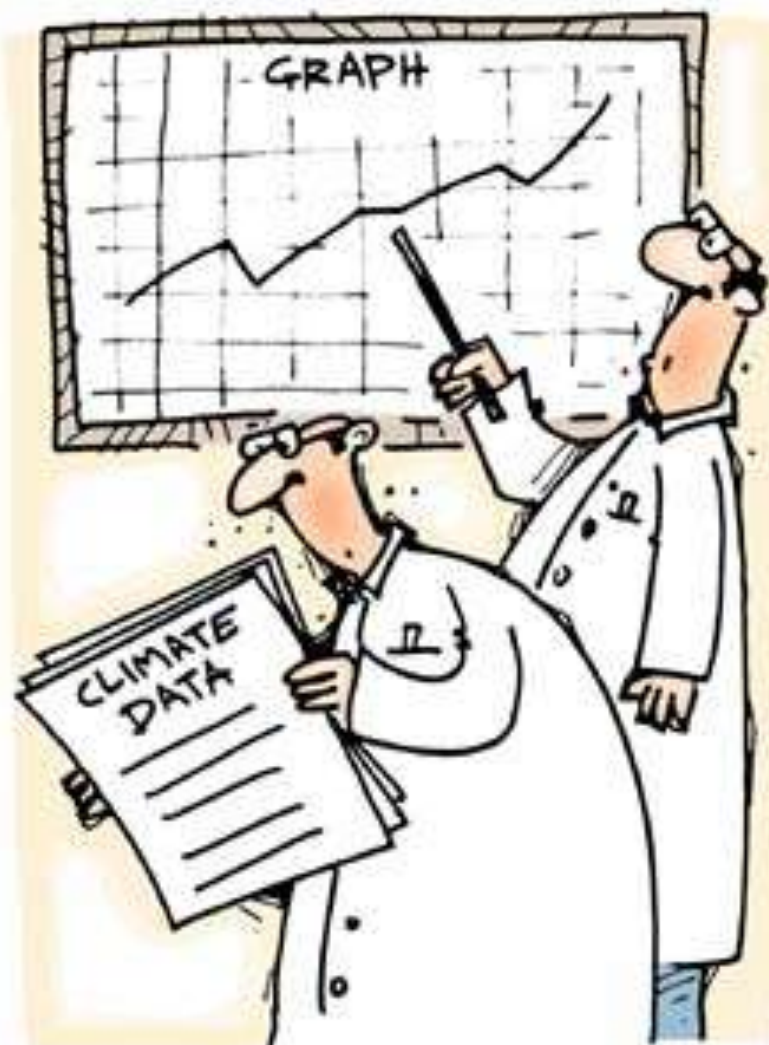
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THE GREENHOUSE EFFECT





ASSESSING THE IMPACT OF CLIMATE CHANGE...



THE SCIENTISTS



THE POLITICIANS

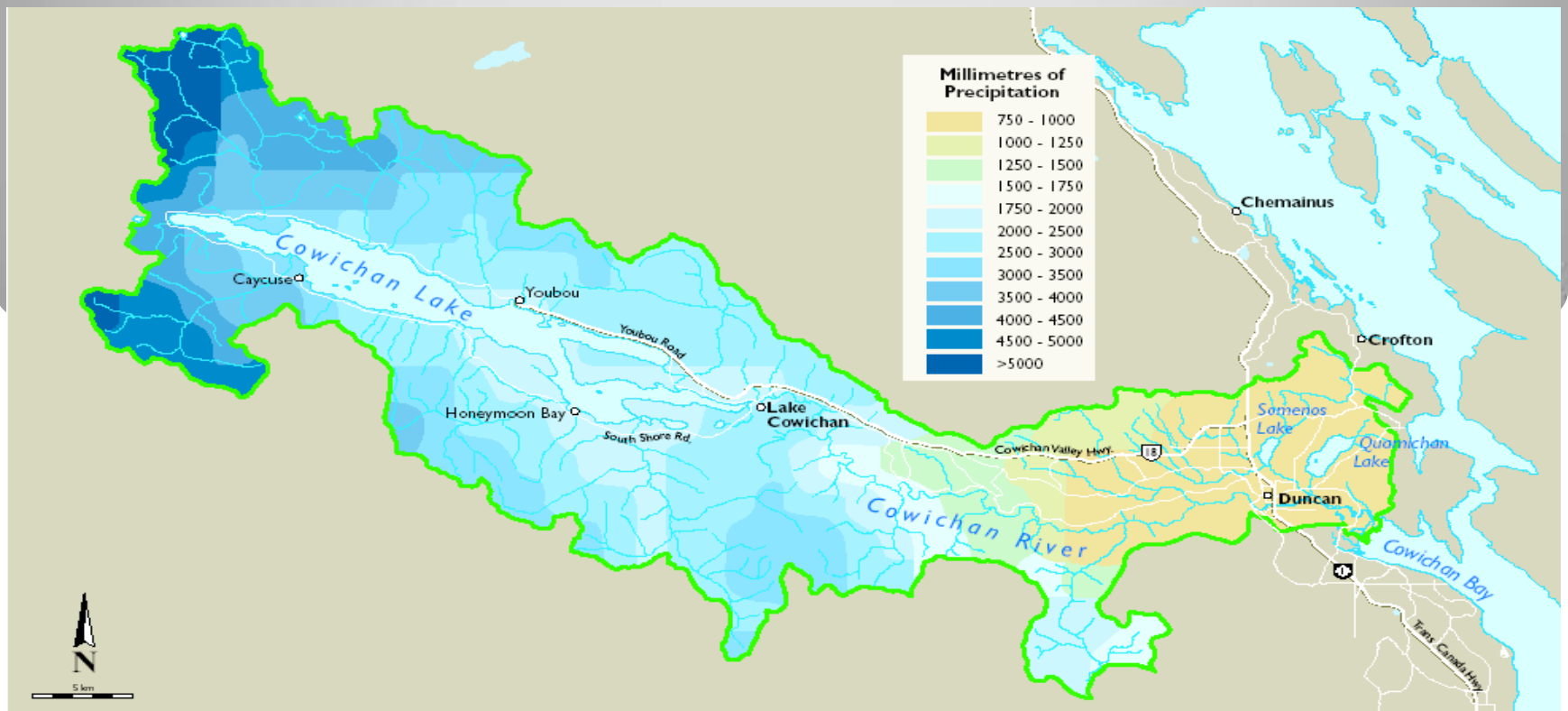
Context – Big Picture (elephants to consider)

- **Global Warming Climate Chaos**
- **Pop Growth/Eco-Footprint**
- **Peak Senior Gov' t**
- **Financial Crisis/
Peak Debt**
- **Rights**



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Context – Local



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For 1000s of years the watershed was home to...

- Forests of massive fir & cedar
- Lakes & streams rich with salmon
- Tidal flats abundant with shellfish



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For 1000s of years the watershed was home to...

- An abundance of deer, elk, bear, plants
- Clean and plentiful water
- Great villages of the Cowichan people

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Over past 150 years dramatic changes to the watershed.....

- Clear cuts and young forests now dominate
- Salmon runs have been devastated by land use & habitat degradation issues
- Shellfish beds are polluted



Context -Local



Context -Local



2003 Drought – Wake-up Call

- River level critically low ...
- Crofton Pulp & Paper within days of being shutdown
- Pollution – insufficient water for sewage dilution
- Trucking of salmon to spawning grounds
- “Who do you call?” problem
- Integrated management plan essential

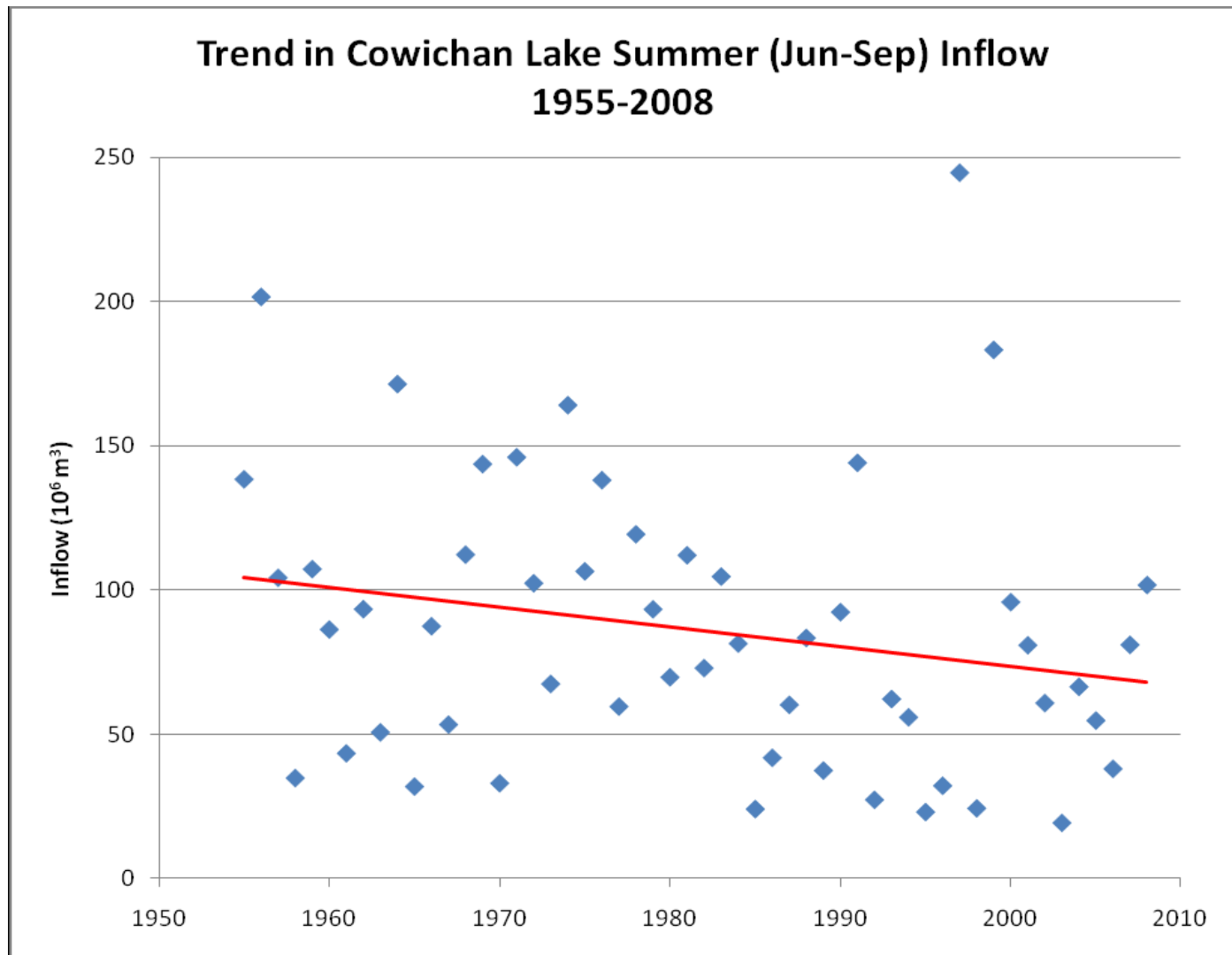


Context – Local



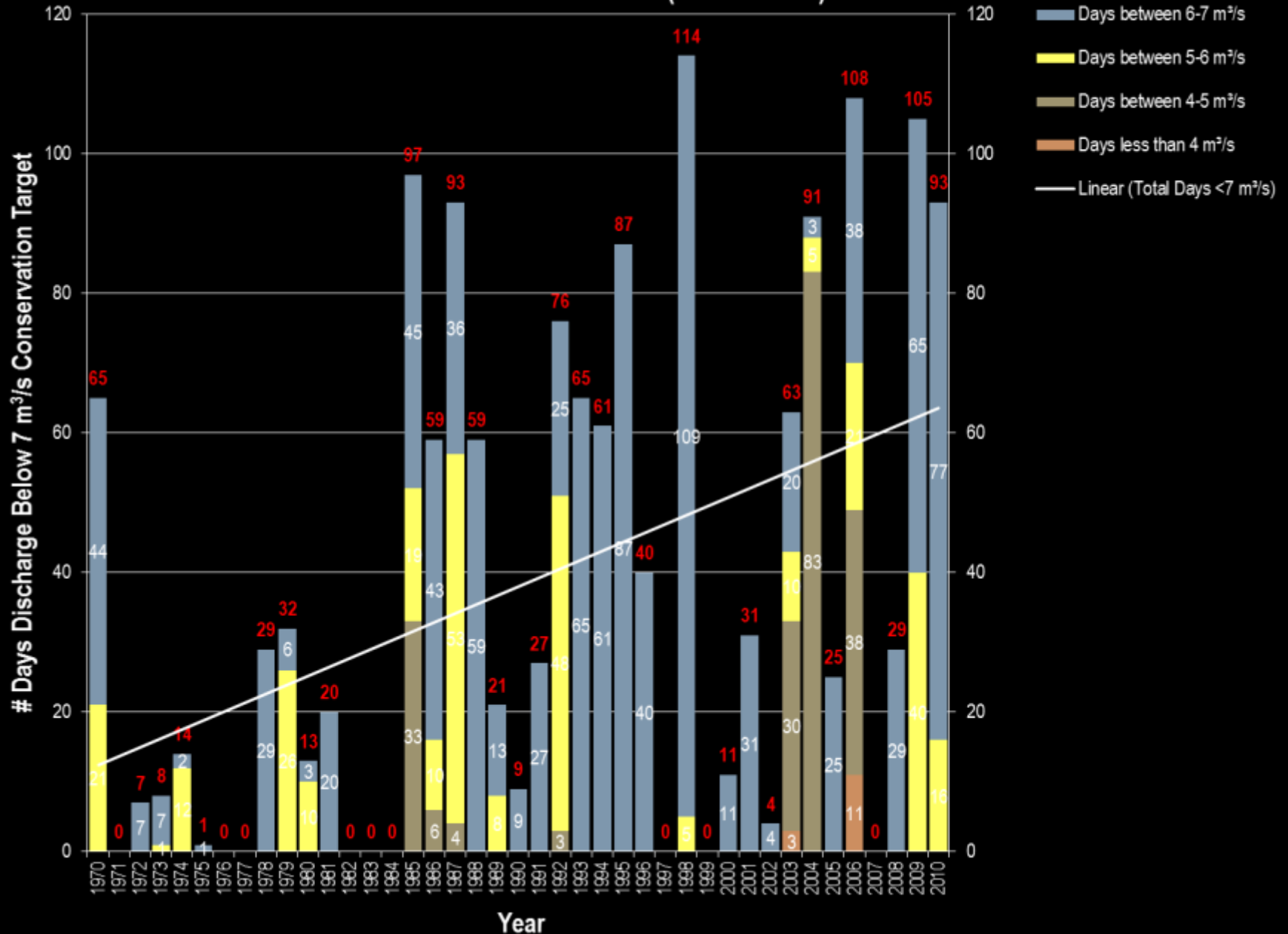
Sept. 25, 2007
Weir on Cowichan Lake

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During the late 1950' s, summer inflow averaged about 104 million cubic meters. By 2008, it had dropped to an average of 68 million cubic meters, an annual reduction of 35 percent.

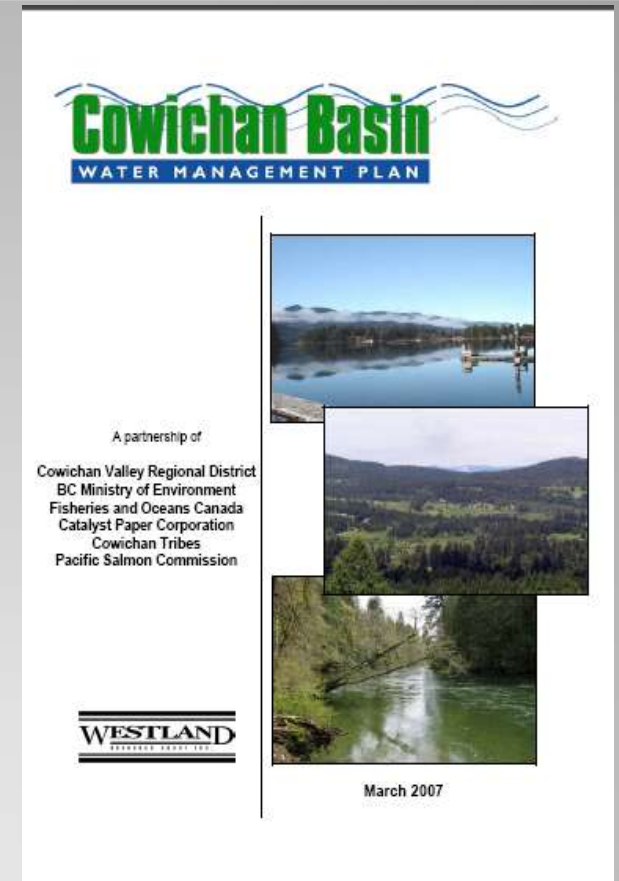
Cowichan River Historical Low Flows at WSC Station 08HA002 Greendale Trestle - Below Lake Cowichan (1970 – 2010)



Context - Local

The Water Management Plan

- Completed early 2007
- 6 Goals, 23 Objectives, 89 Actions



Elements of Plan

- **Water Conservation**
- **Manage Water Supply to Meet Needs**
- **Water Quality**
- **Protect/Enhance Habitats/Biodiversity**
- **Flood Management**
- **Governance**
- **Communications**

3 Years Later Implementation Scant – A Leadership vacuum

- Due to diffuse and diverse accountabilities for the watershed
- No one body to drive implementation



Cowichan Watershed Board Model Adopted

Key Characteristics:

- **Local leadership**
- **CVRD/Cowichan Tribes full partners**
- **Inclusive of fed & prov govts**
- **Inclusive of regional opinion leaders**
- **Special advisors and strong Technical Advisory Committee**

Governance Body

- Legitimately represent all interests (accountability)
- Integrated-whole watershed thinking
- Consensus approach
- Attract partners & funding



CWB Members

Cowichan Tribes

- Chief Harvey Alphonse*
- Darin George

At Large

- Hon. David Anderson
- Mayor Ross Forrest
- Mayor Jon Lefebure
- Tim Kulchyski

B.C.

- Dr. Lorna Medd
- David Slade

* Co-chairs

CVRD

- Rob Hutchins*
- Lori Iannidinardo
- Ian Morrison

Canada

- Andrew Thomson (DFO)

Special Advisors

- Arvid Charlie
- Dr. Bruce Fraser
- Dr. Nicole Vaugeois
- Ted van der Gulik
- Dr. Rick Nordin
- Oliver Brandes

Tech. Advisory Comm.

Purpose

- **Implement Watershed Plan**
- **Provide Leadership/Direction for Managing the Watershed**
- **Engage Communities**

CWB Approach

- **No regulatory authority - consensus, cooperation & partnership based**
- **Facilitate community education, advocate for best practices, plan and make decisions/recommendations to others, coordinator of activities**
- **Commitment to science and best available information**

Expanding on the Plan

Additional Areas of Board Focus:

- Culture
- Economic Development
- Public health



Achievements @ 2 years

- Building and Nurturing Relationships & Partnerships
- Building knowledge & understanding
- Completing projects to fill information gaps and address policy issues.
- Setting Targets for the Watershed.

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Achievements

Targets:

- Water Quality
- Estuarine Health
- Fish Sustainability
- Water Efficiency
- Watershed IQ
- Summer Flow
- Protect Riparian Areas



Targets

1. Water Quality

Issues

- Negative impact of pollution on watershed resources and public health

Approach

- Identify pollution sources
- Work with polluters to address problems
- Bylaws, policies that support water quality

Targets:

- Total suspended solids do not exceed guidelines
- Safe to eat shellfish from Cowichan Bay by 2020



Target

4. Water Conservation

Issue

- Better water use supports water supply in the river.

Approaches

- Determine current use and barriers to conservation
- Water Awareness Education

Targets:

- Work with communities and industry to set best practices and conservation targets.

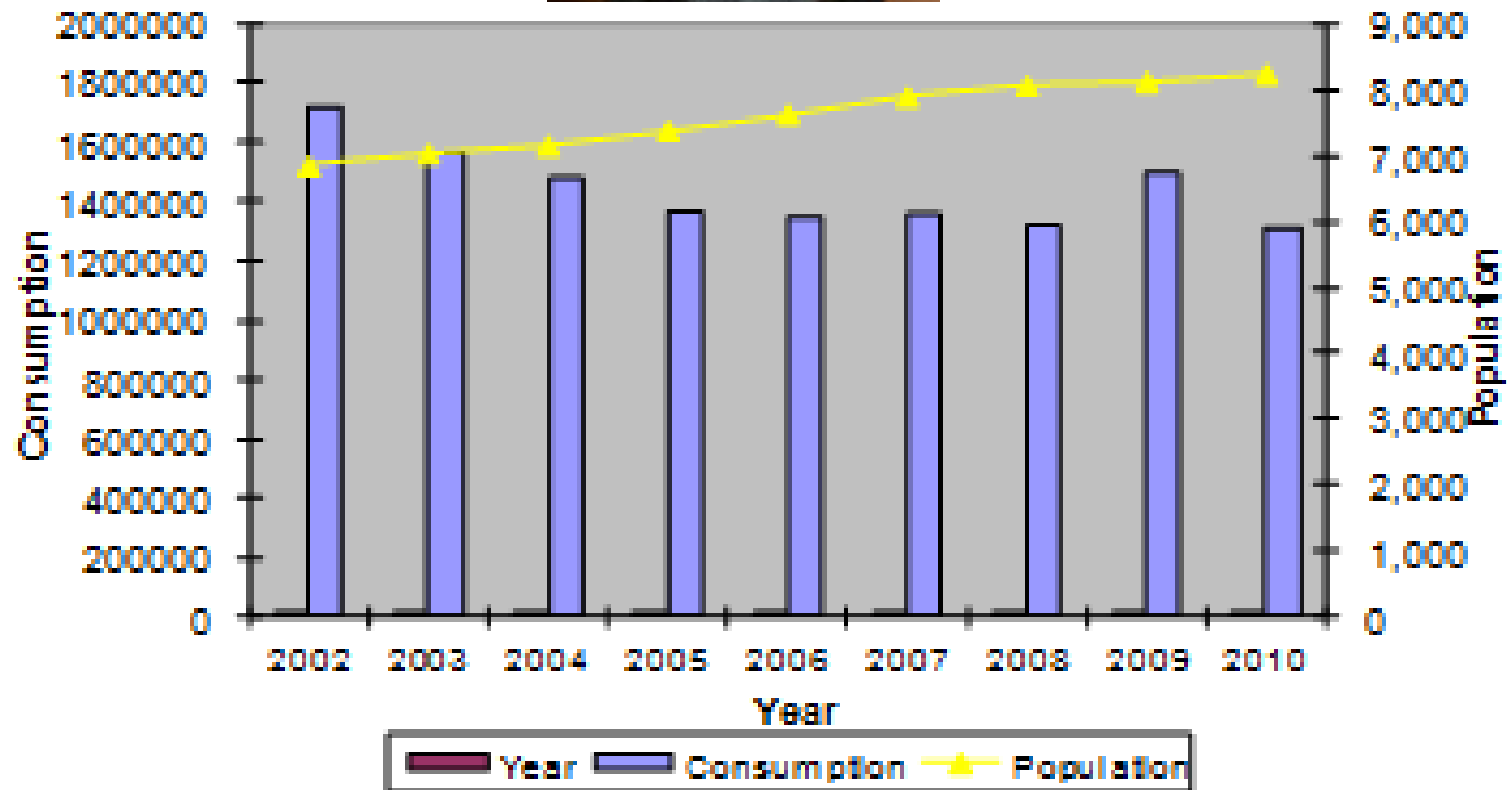
Universal water metering, increasing block rate structure





LADYSMITH

Water Consumption Comparison







Targets

6. Summer Flows – Manage Water Supply



Issue:

- Average spring/summer inflows have declined by 36% since mid 80's) – low summer river flows an increasing problem.

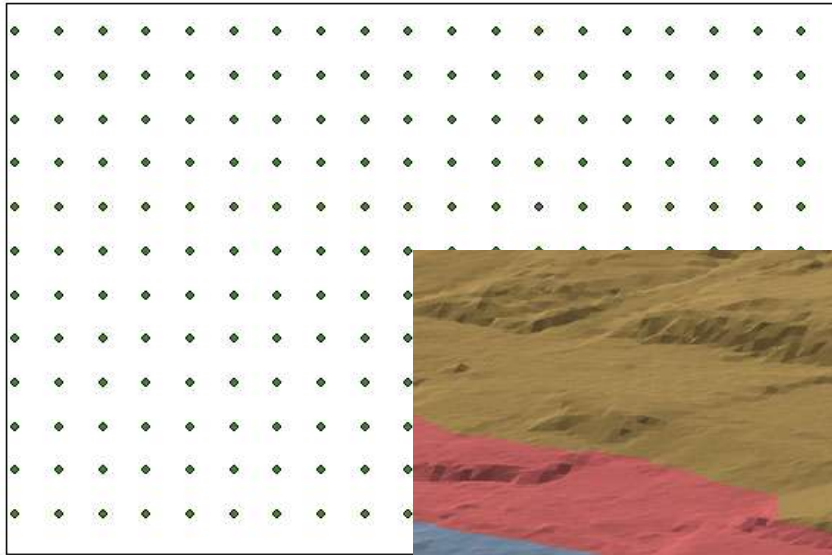
Approaches:

- Short-term – We need to use existing weir better.
- Longer term – Raise the weir to ensure water supply that will address drought (impact studies underway)

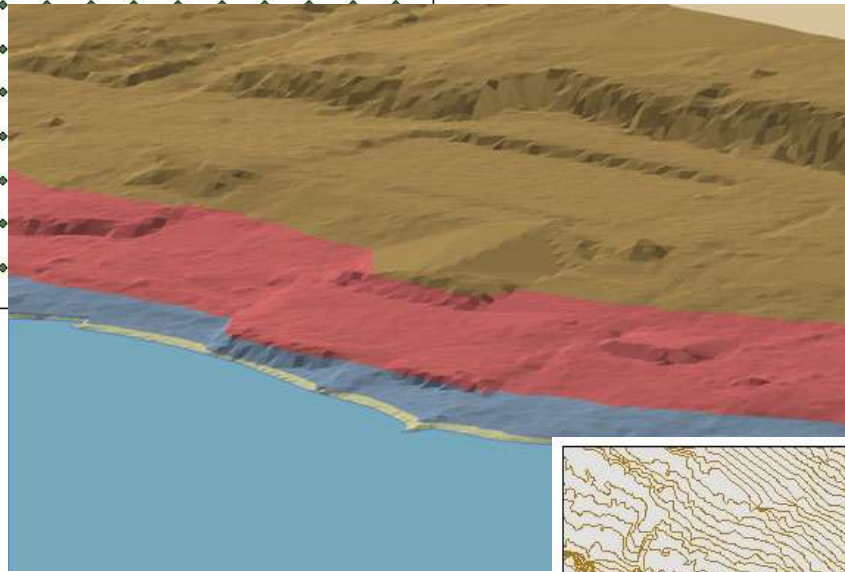
Target

- Summer river flow always ≥ 7 cms

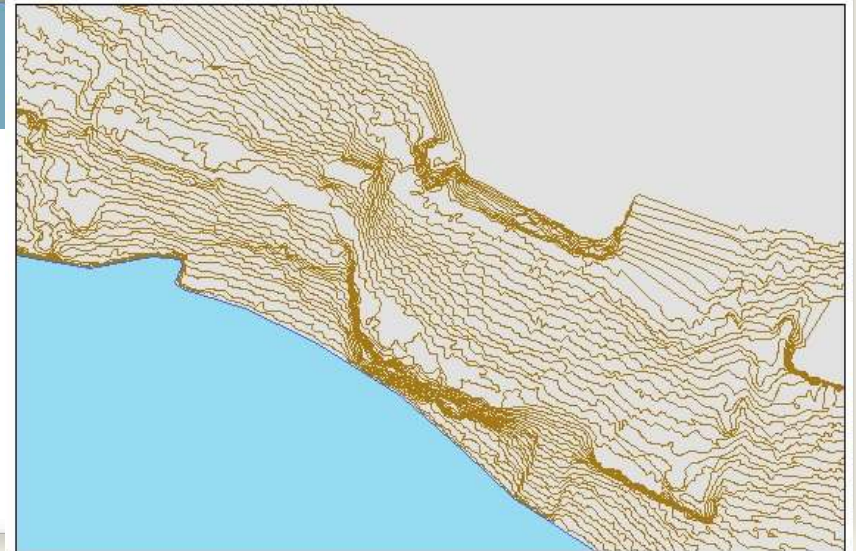
LiDAR Data



Points with ground
elevation values



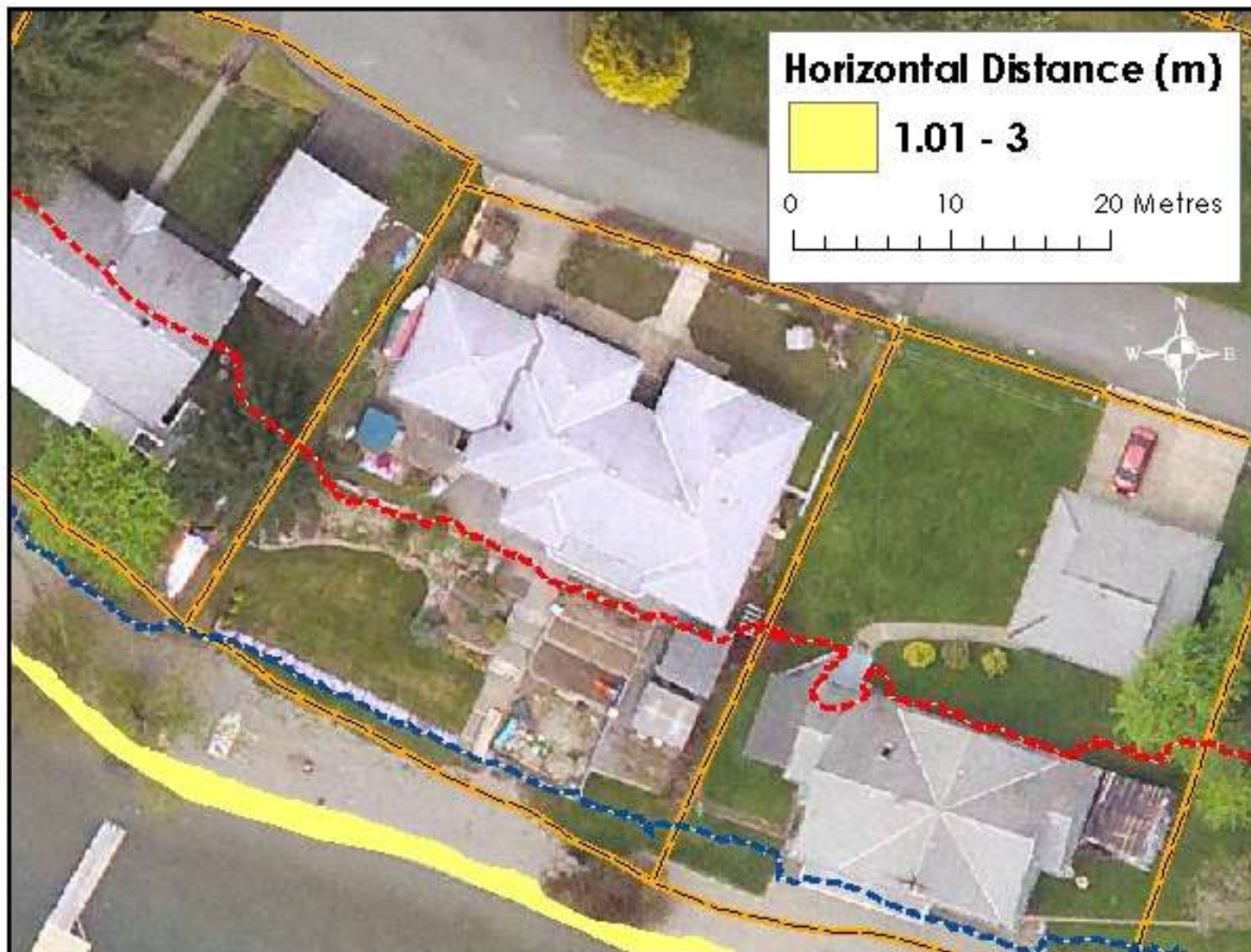
3-D surface model

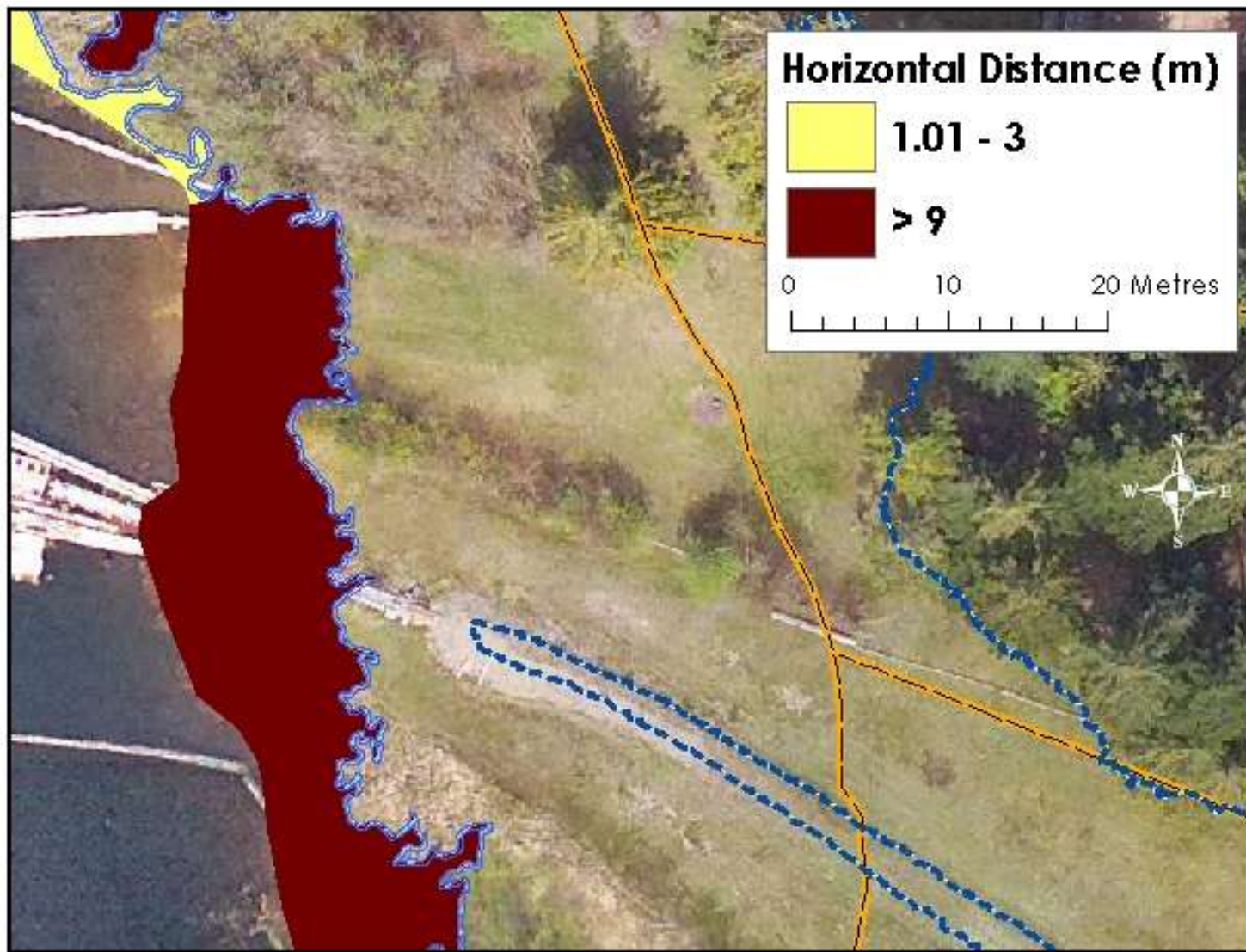


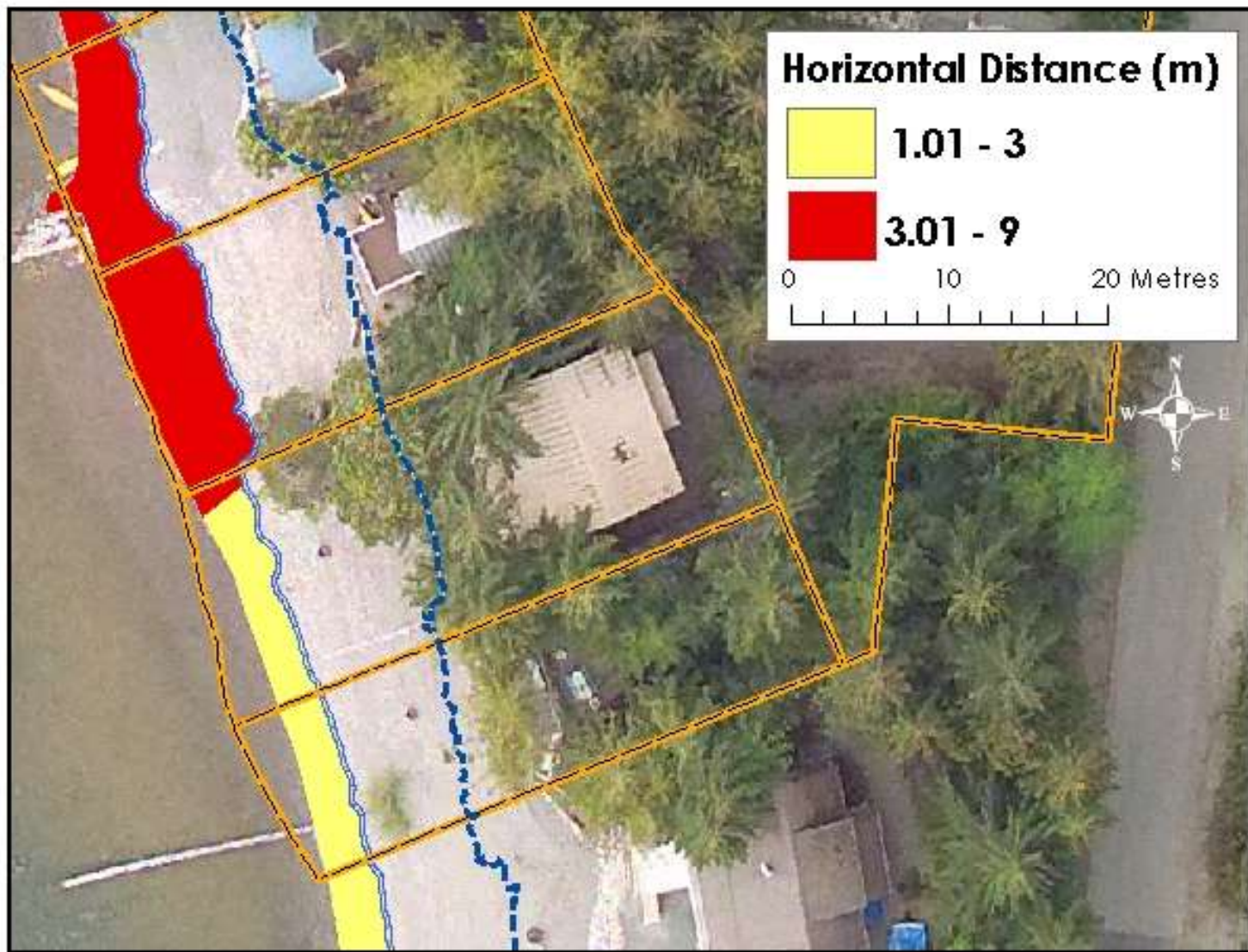
10 cm contours

Significant Water Levels









Success Factors/Lessons Learned

- 1. Acknowledged Crisis or Golden Opportunity**
 - Motivator large enough to overcome procrastination
- ✓ *Unites*
 - ✓ *Motivates*
 - ✓ *Legitimizes*
 - ✓ *Reinforces Commitment*



Success Factors/Lessons Learned

2. Champions

- around crisis (pre Plan)
- for implementation

- ✓ *Unite*
- ✓ *Motivate*
- ✓ *Legitimize*
- ✓ *Reinforce Commitment*



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Success Factors/Lessons Learned

3. Comprehensive Watershed Plan

- Inclusive process
- Whole watershed
- Well documented

- ✓ *Unites*
- ✓ *Motivates*
- ✓ *Legitimizes*
- ✓ *Reinforces Commitment*

Success Factors/Lessons Learned

4. Multi-level Leadership

- ongoing
- collaborative

- ✓ *Unites*
- ✓ *Motivates*
- ✓ *Legitimizes*
- ✓ *Reinforces
Commitment*



Success Factors/Lessons Learned

5. Governance Model

- locally led
- legitimate
- accountable
- inclusive of Sr. Govt' s
- respected/respectful
- inclusive & accessible

- ✓ *Unites*
- ✓ *Motivates*
- ✓ *Legitimizes*
- ✓ *Reinforces
Commitment*

Success Factors/Lessons Learned

6. Partnerships & Relationships

- Cowichan Tribes full partner
- Nurture relationships with broad set of partners & stakeholders

- ✓ *Unites*
- ✓ *Motivates*
- ✓ *Legitimizes*
- ✓ *Reinforces Commitment*



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Success Factors/Lessons Learned

7. Caring & Sharing

- “No one cares how much you know until they know how much you care”
- Cooperation not competition (be an enabler not a threat)

- ✓ *Unites*
- ✓ *Motivates*
- ✓ *Legitimizes*
- ✓ *Reinforces Commitment*

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Success Factors/Lessons Learned

9. Wily Veterans and Youth

- know and care
- focused but open minded
- passion/infectiousness

- ✓ *Unites*
- ✓ *Motivates*
- ✓ *Legitimizes*
- ✓ *Reinforces
Commitment*



Success Factors/Lessons Learned

10. Finances/Funding

- Right amount at right time

- ✓ *Unites*
- ✓ *Motivates*
- ✓ *Legitimizes*
- ✓ *Reinforces
Commitment*

Success Factors/Lessons Learned

11. Science-based Informed Approach



- ✓ *Unites*
- ✓ *Motivates*
- ✓ *Legitimizes*
- ✓ *Reinforces Commitment*

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Moving Forward

Challenges:

- Dancing with elephants
- Local power
- Secure long term stable funding
- Monitoring and research





Thank you

Huy ch qa

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