

Cowichan Watershed Board Meeting

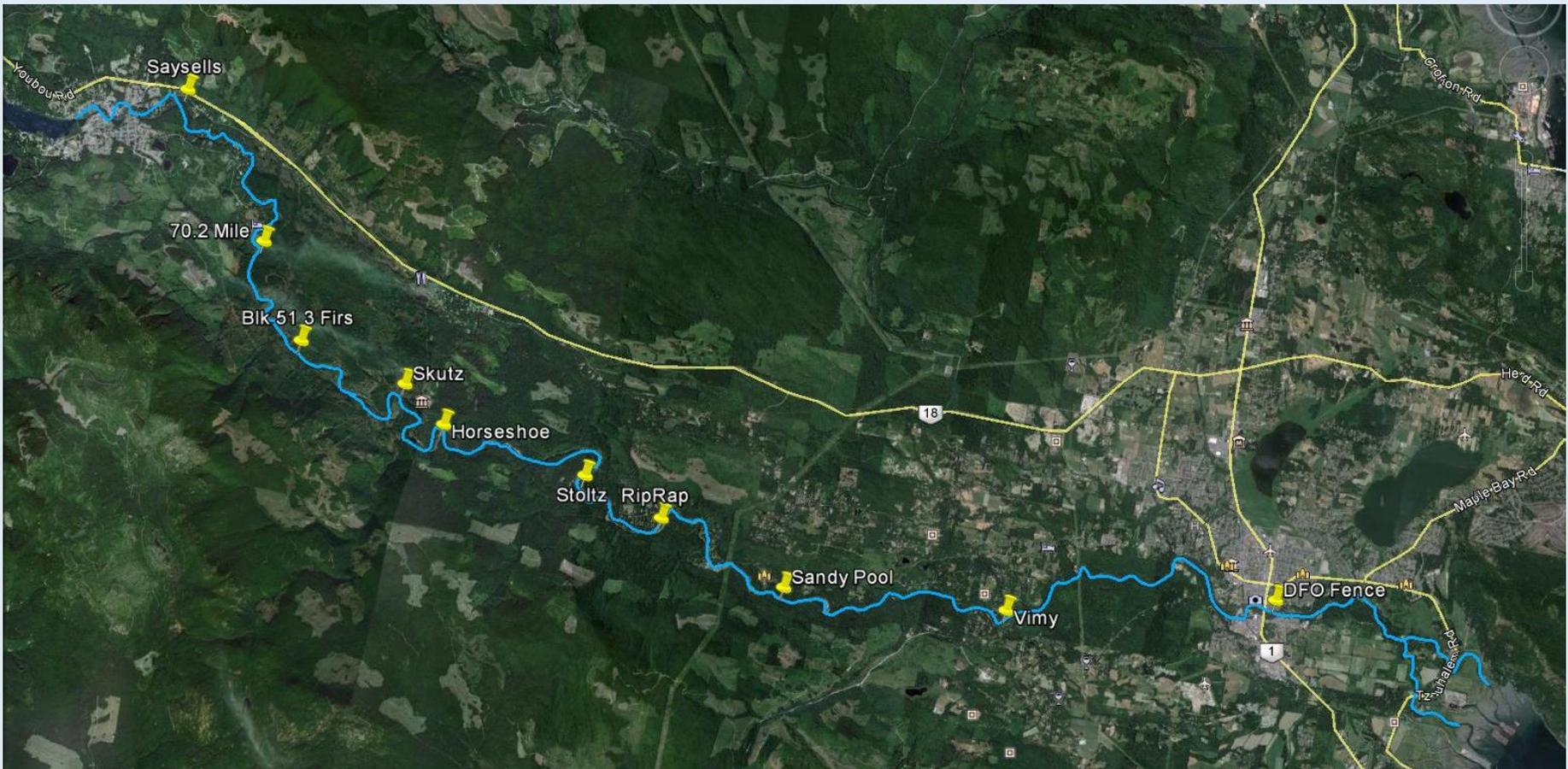
- 1. 2015 Update on Fish Sustainability Target**
- 2. Cowichan River Low Flow Mitigation Strategy, 2015**

February 29, 2016, 9:15-11:30 AM
CVRD Board Room, Duncan, BC

James Craig, ASCT
BC Conservation Foundation

CWB Fish Sustainability Target – Steelhead fry abundance should meet or exceed target densities

- 10 sites assessed annually since 1999...

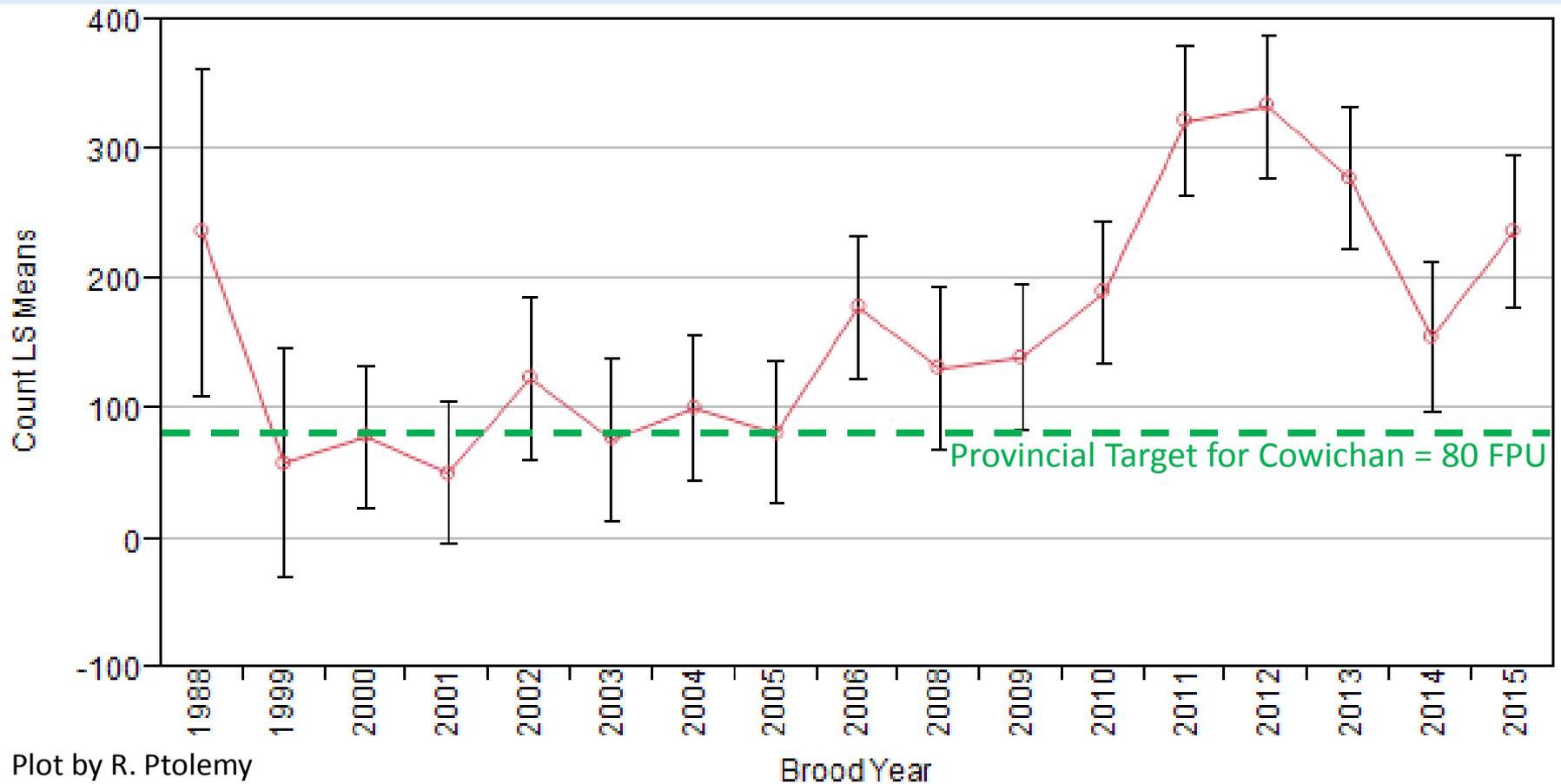


CWB Fish Sustainability Target – Steelhead fry abundance should meet or exceed target densities



CWB Fish Sustainability Target – Steelhead fry abundance should meet or exceed target densities

- Results: RB fry habitat saturation was 100% at many mid-upper river sites...*Need to determine the contribution of steelhead fry and resident rainbow fry to these densities...*



Cowichan River

Low Flow Mitigation Strategy, 2015



Snorkeller and the coho fry he is observing in the cold water plume of a small tributary upstream of Stoltz Bluff, August 4, 2015.

for:

Brian Houle, P.Eng.
Catalyst Paper Corporation
Crofton, BC

by:

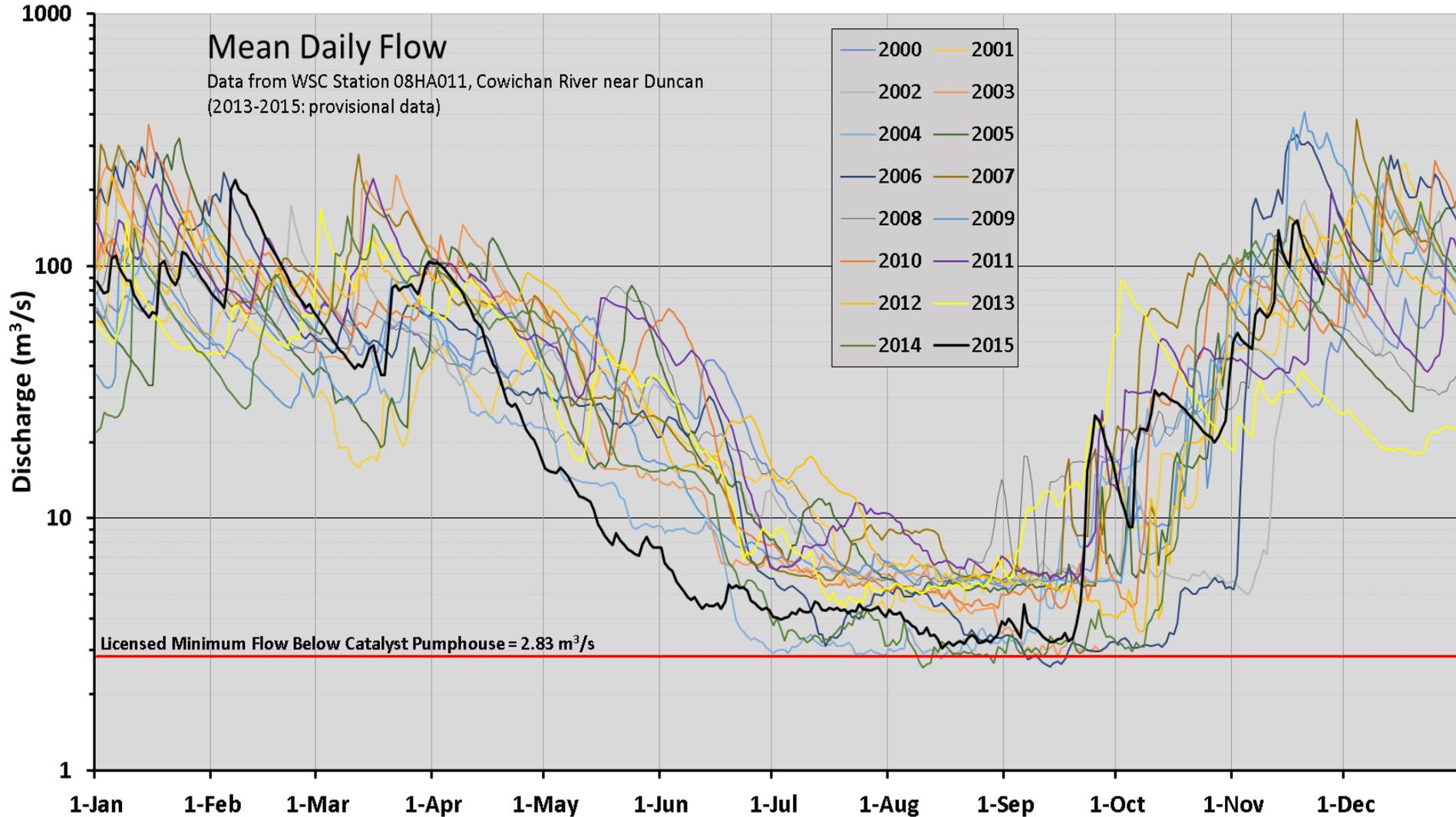
J.D.C. Craig, ASCT, BC Conservation Foundation
T. Kulchyski, Cowichan Tribes

January 2016

<http://www.cowichanwatershedboard.ca/>

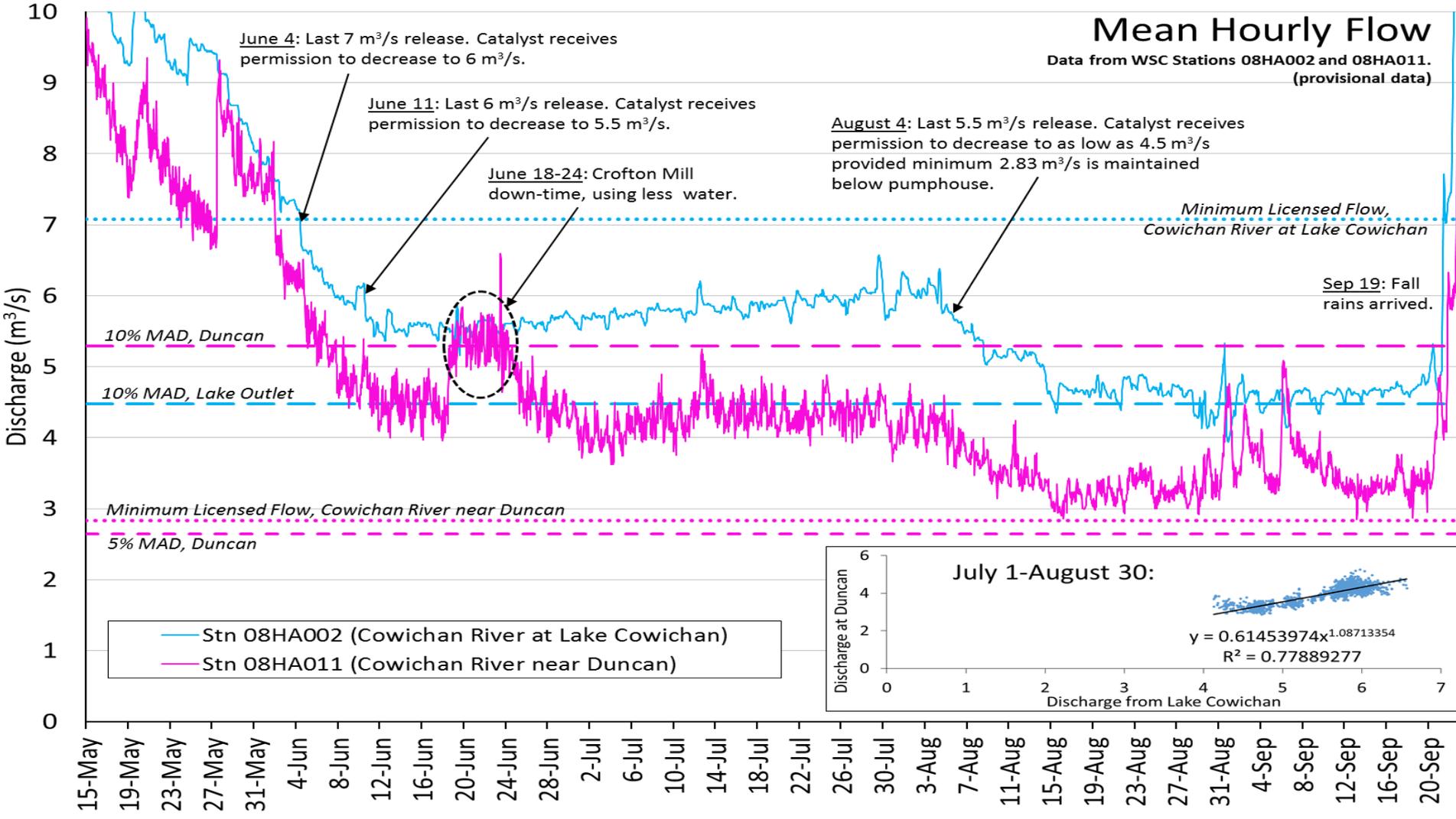
Cowichan River Low Flow Mitigation Strategy, 2015

HIGHLIGHTS



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HIGHLIGHTS

Wrixon's Run Temperature Profiling

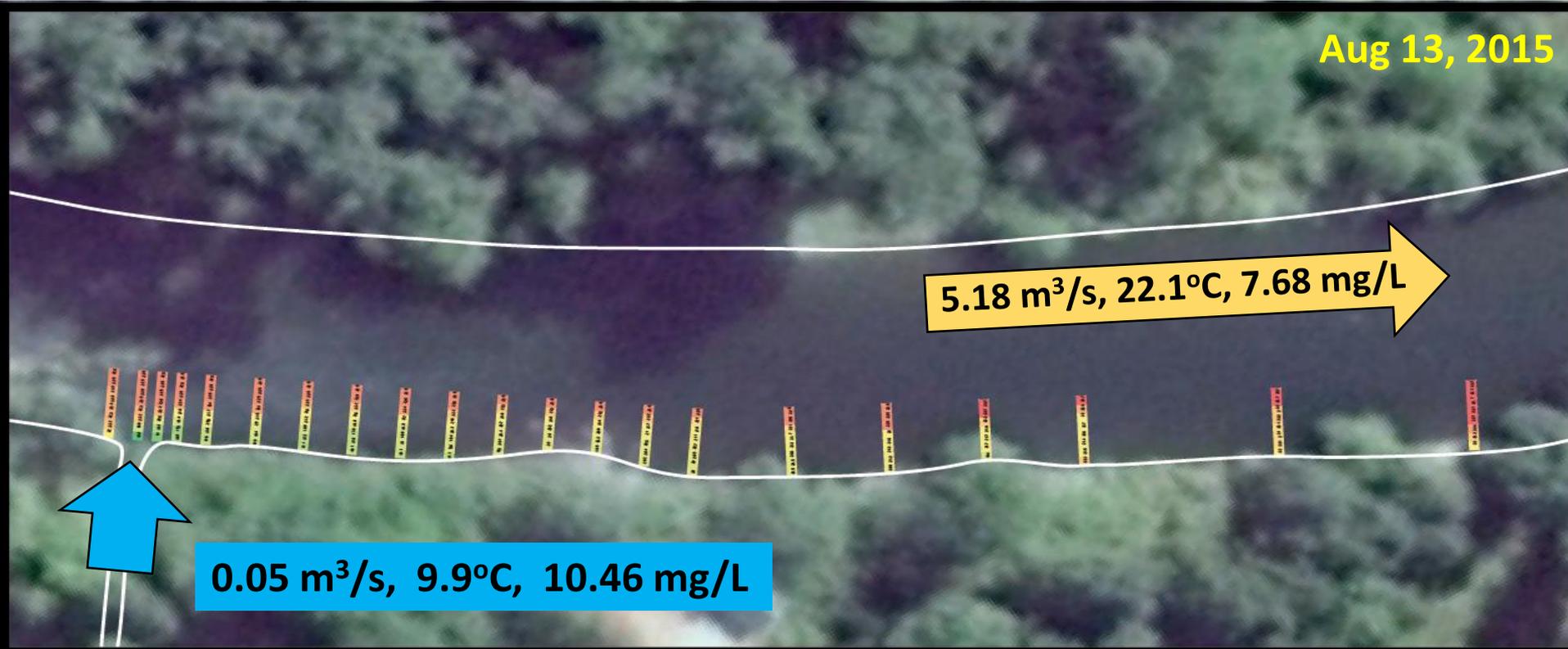
August 13, 2015



rkm 41.5

Cowichan River Low Flow Mitigation Strategy, 2015

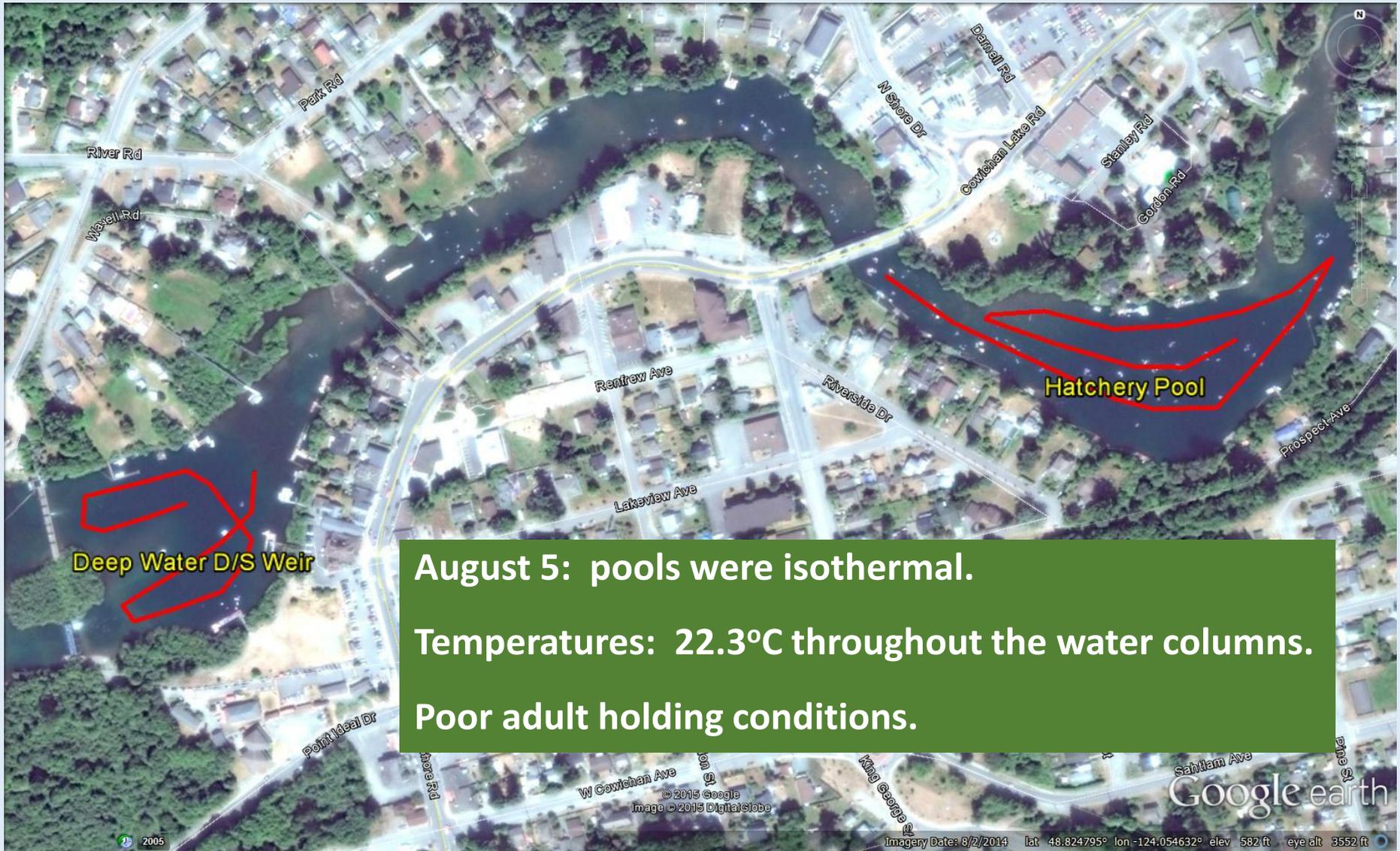
HIGHLIGHTS, Wrixon's Run cont'd...



- Cooling just above substrates detected for 107 m, up to 5.5 m width, 446 m² area.
- Area with water temperatures <20°C: 89 m².
- Adult fish using the area: 95 trout (BT, RB) and one sockeye.

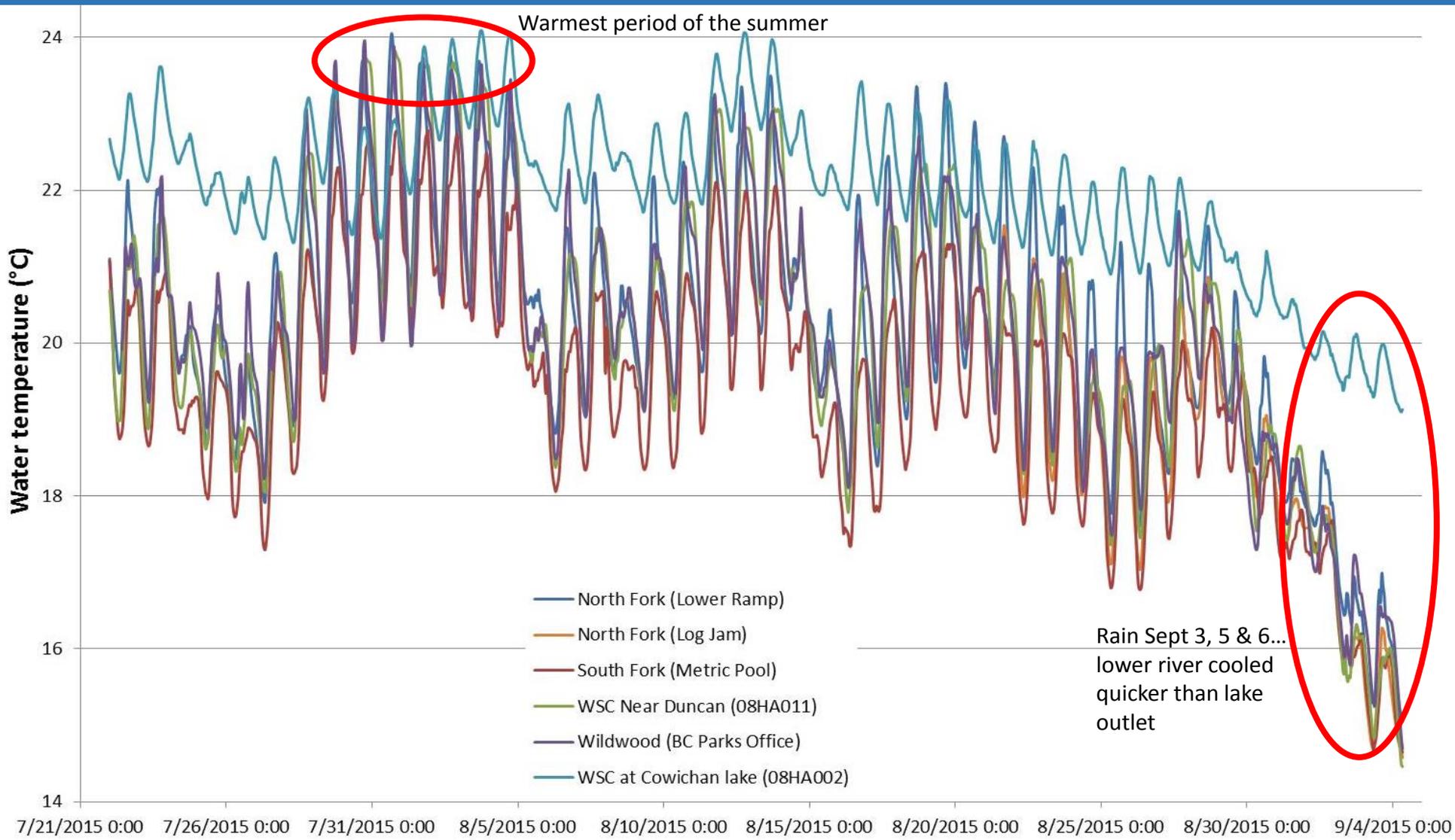
Cowichan River Low Flow Mitigation Strategy, 2015

HIGHLIGHTS, more temperature profiling...



Cowichan River Low Flow Mitigation Strategy, 2015

HIGHLIGHTS

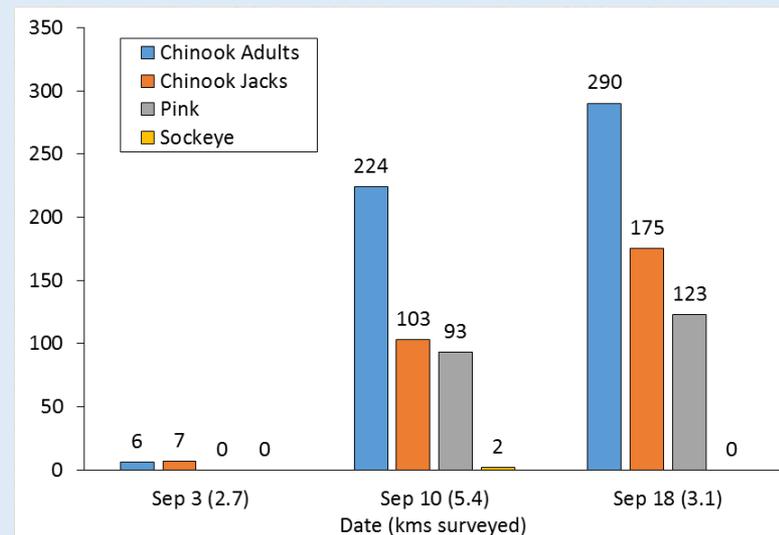


Cowichan River Low Flow Mitigation Strategy, 2015

HIGHLIGHTS

Adult Chinook Monitoring

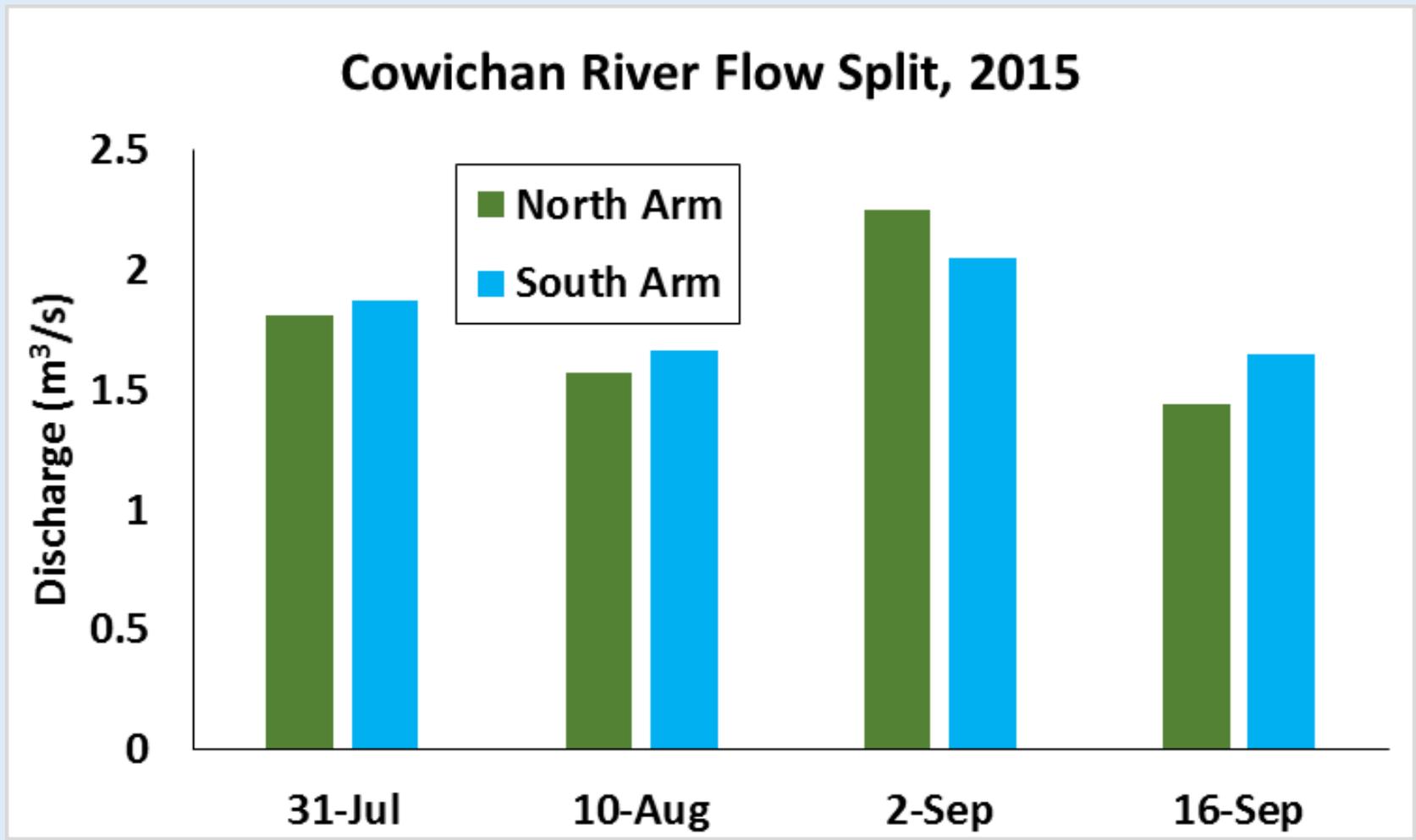
- July/August surveys in upper river for *early run Chinook* never counted more than two fish. 2.5 km of deep pool canyon habitat impossible to survey confidently. Snorkel technique not reliable.
- Early run DIDSON program operated by DFO/CT likely more effective provided species ID is improved (adding video back-up in 2016).
- CT snorkel program in lower river effective and useful to determine *early Fall run* numbers prior to counting fence operation.
- Mainstem PIT tag antenna now funded by PSF's SSMSP – may have implications on future fence operations for Fall run.



Cowichan River Low Flow Mitigation Strategy, 2015

HIGHLIGHTS

Lower River Flow Monitoring



Cowichan River Low Flow Mitigation Strategy, 2015

Recommendations

1. Stream flow measurements at the Duncan station by WSC or equivalent should occur every 2 weeks if/once lake releases drop below the 7.08 m³/s target.
2. Coordination between WSC and Catalyst should improve accuracy of Duncan station reporting.
3. Re-location of the Duncan station just upstream out of the influence of the DFO fence should also improve accuracy*.
4. Flows and conditions should be monitored in the North and South Arms.

Cowichan River Low Flow Mitigation Strategy, 2015

Recommendations

5. Strive to maintain a “natural” spring flow regime to best meet the needs of outmigrants.
6. Continue to monitor water quality, particularly temperature.
7. Support volunteer salvage efforts, especially coordinators. Crews salvaged 304,282 fish in 2015. Agencies should review guidelines with volunteers and promote standardized data collection.
8. Tribes and FLNRO should partner in the July swim for trout and early Chinook.

Cowichan River Low Flow Mitigation Strategy, 2015

Recommendations

9. Mid-river and weir DIDSONs should continue, with video for species confirmation.
10. Tribes weekly snorkel surveys should continue below Allenby Road from mid-August to mid-September or until fence is installed and operational.
11. Lower river bank surveys will help document marine mammal presence, abundance and predation on Chinook.

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QUESTIONS?

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