


Review of Area D assessment fishery

1




Analyses

Two options considered:

1. Related Early Summer-run abundance to catch per effort in 10 boat assessment fishery only.
2. Related Early Summer-run abundance to catch per effort in commercial fishery and then used 10 boat assessment to predict catch per effort in commercial fishery.

3




Background

10 boat assessment fishery began in 2002.

Purpose: Assess Early Summer-run abundance in marine areas

- Fishery occurs once per year near to peak of Early Summers timed in consultation with PSC and DFO staff.
- Precedes Area D commercial opening
- Not run in 2007 or 2008 as there was no TAC

2



Data Sets

Ten boat assessment data

Year	Post-season		Johnstone Strait Early Summer-run of 10 boat return	In-season		Predicted		Early Summer		Dates of 10 boat assessment
	Early Summer	Diversion Rate		diversion rate at time of assessment	Early Summer total run from Flgs assessment	Early Summer-post-run 10 boat season area 20	50% date			
2002	801,956	22%	176,430	8%	1,155,145	2.21	30-Jul	July 27-29		
2003	549,246	59%	324,055	27%	878,174	17.37	31-Jul	July 27-29		
2004	1,240,321	52%	644,967	24%	1,282,366	26.80	27-Jul	July 23-25		
2005	1,820,227	43%	782,698	18%	1,134,725	14.23	10-Aug	Aug 2-4		
2006							22-Aug	July 31-Aug 1		

Notes: 2005 was excluded from the analysis as the Early Summer 50% date occurred nearly 3 weeks after the 10 boat assessment fishery that year.

4

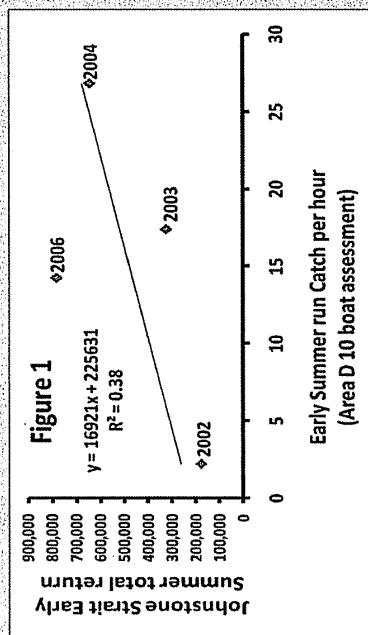
Data Sets

Commercial fishery data

Year	Total Early Summer Return	Post- season Early Summer Diversion Rate	In-season diversion Johnstone Strait Early Summer- run return at fishery	Johnstone Strait Early Summer- run from Figs. 2A & B 3	Total Early Summer run from Figs 2C & fishery area 20	post- season 50% date Chr	Dates of commercial fishery
1998	752,491	52%	391,295	57%	4,60	28-Jul	July 29-31
1999	387,158	20%	77,432	18%	1.83	26-Jul	July 28-30
2000	1,055,389	24%	253,293	32%	4.01	20-Jul	Aug 2-3
2001	392,782	15%	58,917	18%	0.82	19-Jul	July 28-30
2002	801,956	22%	176,430	15%	1.47	30-Jul	July 30-Aug 1
2003	549,246	59%	324,055	56%	3.61	31-Jul	July 31-Aug 2
2004	1,240,321	52%	644,967	41%	12.84	27-Jul	July 26-28
2005	1,820,227	43%	782,698	22%	4.56	10-Aug	Aug 7-9
2006	615,233					22-Aug	Sept 12-14

Notes: 2005 was excluded from the analysis as the Early Summer 50% date occurred nearly 3 before the commercial fishery that year.

Results Option 1: 10 boat assessment only



Analysis Steps Option 1: 10 boat assessment only

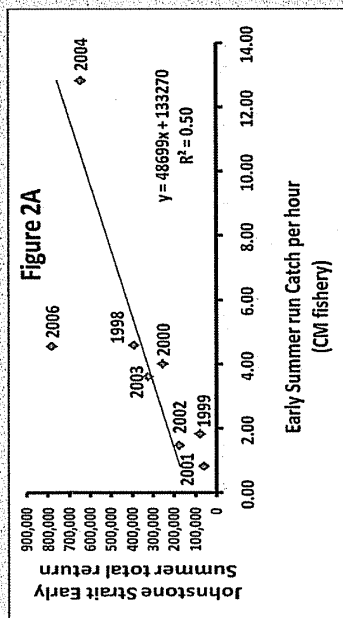
1. Regressed the Johnstone Strait Early Summer-run abundance against the Early Summer run catch per hour in 10 boat assessment fishery only.

Analysis Steps Option 2: 10 boat assessment with commercial fishery

1. Regressed Johnstone Strait Early Summer-run abundance to Early Summer run catch per hour in commercial fishery.
2. Predict Early Summer run catch per hour in commercial fishery from catch per hour in 10 boat assessment fishery.
3. Use 2 relationships above to predict Johnstone Strait Early Summer-run abundance from 10 boat assessment fishery catch per hour.

Results Option 2: 10 boat assessment with commercial fishery

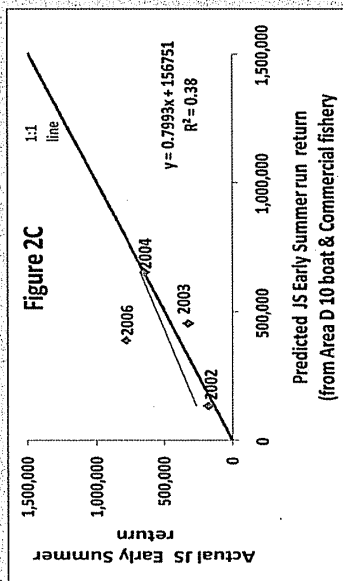
1. Johnstone Strait Early Summer-run abundance and catch per hour in commercial fishery.



9

Results Option 2: 10 boat assessment with commercial fishery

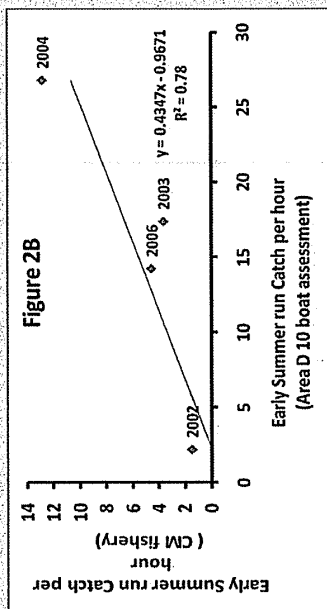
1. Predict Johnstone Strait Early Summer-run abundance 10 boat predictions of commercial fishery catch per hour.



11

Results Option 2: 10 boat assessment with commercial fishery

2. Early Summer run catch per hour in commercial and 10 boat assessment fisheries.

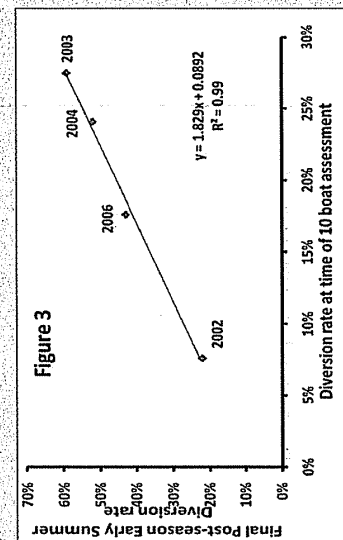


10

Other results

Area 12 and 20 Gill net test fishery can predict post-season diversion rate fairly well at least for these years.

This would permit prediction of total run (both approaches), but prediction of Johnstone Strait run is too poor at this time to help.



12

Conclusions and recommendations



1. The relationships in Figs. 1 and 2C have insufficient predictive power to result in recommendations from PSC staff to change in-season run sizes.
2. The predictive powers of both the 10 boat and commercial fishery have decreased substantially relative to past evaluations.
3. This decrease is primary due to the effect of additional data, particularly 2006, for which the catch per hour appears to be quite low relative to the abundance.
4. One possible explanation is that the 2006 assessment fishery was timed earlier relative to the peak than previous years.

13

Some final comments



- Marine assessments in seaward approaches currently rely on test fisheries which do not provide timely estimates for marine area fisheries.
 - Large fractions of the TAC in both countries are allocated to commercial fisheries in seaward locations
- Panel has a number of options:
1. Accept increased risk to conservation objectives and conduct seaward fisheries.
 2. Do not accept risk and fail to achieve allocation objectives
 3. Try to reduce the risk by improving seaward assessments and changing commercial fisheries (e.g. "small bites"? shift allocations close to river.

15

Conclusions and recommendations



5. More data points needed to determine if 10 boat assessment can provide a robust tool for abundance estimation.
6. Therefore, PSC staff recommend that the Area D Association and DFO to continue to conduct the assessment as in past years to lengthen the time series.
7. Treatment with respect to TAC is a policy issue for Panel discussion

14

Some final comments



- The issues associated with the Larocque case have complicated the way future test fisheries options may be funded.
- These issues likely reduce the acceptability of expanding test fisheries to associated costs and funding constraints.
- Thus, small scale commercial ventures may represent the only option for development of improved marine area assessments.
- The challenge is how to craft such assessment fisheries to ensure they occur on a regular basis across the range of abundances to provide the data needed to meet the technical requirements of assessment.

16