

# Hidden Falls CR Assessment

Description &  
5-year modeling using  
2006-2010 Hidden Falls  
Harvest Data

March 2012 Update



# Assessment/ Revenue Timeline

- **Determine Assessment Rate** for 2012 Hidden Falls fishery  
(March 2012 – NSRAA Spring Board of Directors meeting)
- **Conduct Fishery** – processors collect revenue  
(late June – early August, 2012)
- **Post-season estimate of revenues** collected  
(Sept-Nov?, 2012 – needed to set the following year's assessment rate)
- **Determine Assessment Rate** for 2013 Hidden Falls fishery  
(March, 2013)
- **NSRAA receives revenues** from 2012 season  
(June or July, 2013)

# Timeline Example



March  
2012– Board  
Meeting  
Set 2012 rate  
20%

July 2012  
HF Fishery  
20% Assess.

March  
2013– Board  
Meeting  
Set 2013 rate  
XX %

July 2013  
HF Fishery  
XX% Assess.

Need to determine 2012 rate:

- 1) 2012 Chum Forecast
- 2) -
- 3) Est. of next year's NSRAA budget (FY 13)

Need to determine 2013 rate:

- 1) 2013 Chum Forecast
- 2) Est. of Carry-over from July 2012 fishery
- 3) Est. of next year's NSRAA budget (FY 14)

July 2013 –  
NSRAA  
receives  
2012  
revenue

# Timeline Example



Under the current CR method, NSRAA collects CR revenue in-season (during the harvest).

July 2012  
HF Fishery  
20% Assess.

July 2013  
HF Fishery  
XX% Assess.

NSRAA will need a means to “forward fund” the first season's revenue needs.

This can be done through an external loan or a “loan” from NSRAA’s reserves, and repaid over a number of years.

~July 2013 –  
NSRAA receives  
2012 revenue

Under the assessment method, NSRAA would not receive CR revenue until the following summer..... about 12 months later than the current method.

# Determining Assessment Rate: Definitions

Harvest pounds forecast = (HF Chum forecast – broodstock needs) x avg. wt.

Example: (1,500,000 forecast - 150,000 broodstock needed)

= 1,350,000 harvestable fish

x 8.0 lb. avg. weight

= 10,800,000 harvest pounds forecast

# Determining Assessment Rate: Definitions

**CR required** = cost recovery revenue required from Hidden Falls chum

**Carry-over** = under-or over-collection of revenue in a given year – applied towards following year's CR

**Adjusted CR required** = CR required +/- any carry-over from previous season

Example : \$1,700,000 **CR required** - \$150,000 **carry-over** =  
\$1,550,000 **adjusted CR required**

# Determine Assessment Rate: Calculation

Example:

If :

- 10,800,000 harvest pounds forecast
- \$1,550,000 adjusted CR required

- Calculation:

1)  $\$1,550,000 / 10,800,000 = \underline{\$0.1435}$  per pound ;

2) round up to \$0.15 ;

3) add a **safety factor of \$0.02** to bring rate to **\$0.17**

## Determine Assessment Rate: Calculation #2

- Final Calculation: initially, NSRAA's board proposed a flat rate (eg. \$0.17 cents / pound), but the Department of Revenue determined that the assessment had to be a percentage of ex-vessel value.
- To turn the calculated flat rate into a percent, one must estimate the ex-vessel seine price for the upcoming season:
- If calculated rate is \$0.17
- And estimated ex-vessel price is \$0.75
- Percent =  $\$.17 / \$.75 =$ 23%

# Will it Work?

## 5-year modeling

5-year hypothetical modeling – based on actual data from 2006-2010 Hidden Falls harvest



## 5-year modeling results – Process

- We created a model using 2006-2010 data to compare the current method with the assessment method:
- For each year, an **assessment rate was calculated “pre-season”** based on the chum forecast and CR requirements
- **Revenue estimates were calculated** using the season’s assessment rate and actual return & harvest data
- **Results were compared** for the current CR method vs. the assessment method.

## 5-year modeling results – Process

- Using the results, we review how the assessment method would change:
  - Overall Seine Value
  - 3 % SET Revenue from the Hidden Falls harvest
  - NSRAA Revenue needs / Cash flow

## 5-year modeling results – Rates

Rates – set based on forecast & adjusted revenue required:

Year	Base	Rate with \$.02 safety
2006	\$0.10	\$0.12
2007	\$0.06	\$0.08
2008	\$0.20	\$0.22
2009	\$0.04	\$0.06
2010	\$0.13	\$0.15
Average	\$0.11	\$0.13

## 5-year modeling results – Rates

Rates – set based on forecast & adjusted revenue required:

Year	Rate with \$.02 safety	Seine Price	Effective Percent
2006	\$0.12	\$0.329	36%
2007	\$0.08	\$0.354	23%
2008	\$0.22	\$0.679	32%
2009	\$0.06	\$0.513	12%
2010	\$0.15	\$0.668	22%
Average	\$0.13	\$0.509	25%

★ Given the current price trends, the percent would be lower than shown by the modeling. For example,  $\$0.13 / \$0.75 = 17\%$

# 5-year modeling results

- Adj. revenue required & actual revenue collected, resulting in carry-over amounts:

Year	CR Required (Adj.)		Revenue Collected		Carry-over
2006	\$	1,040,048	\$	2,054,120	\$ 1,014,071.88
2007	\$	1,023,143	\$	612,280	\$ (410,863.11)
2008	\$	2,891,599	\$	3,796,897	\$ 905,298.60
2009	\$	528,765	\$	830,881	\$ 302,116.03
2010	\$	1,507,924	\$	978,053	\$ (529,870.82)
Average	\$	1,398,296	\$	1,654,446	\$ 256,151

## 5-year modeling results – Results

- There was a fair amount of deviation from revenue needs from year to year - due mainly to forecasting accuracy - but the carry-over adjustment balances things out each year.
- Cash flow of revenues to NSRAA would change, but there would be no net change to NSRAA's CR revenue.

# 5-year modeling results – Results

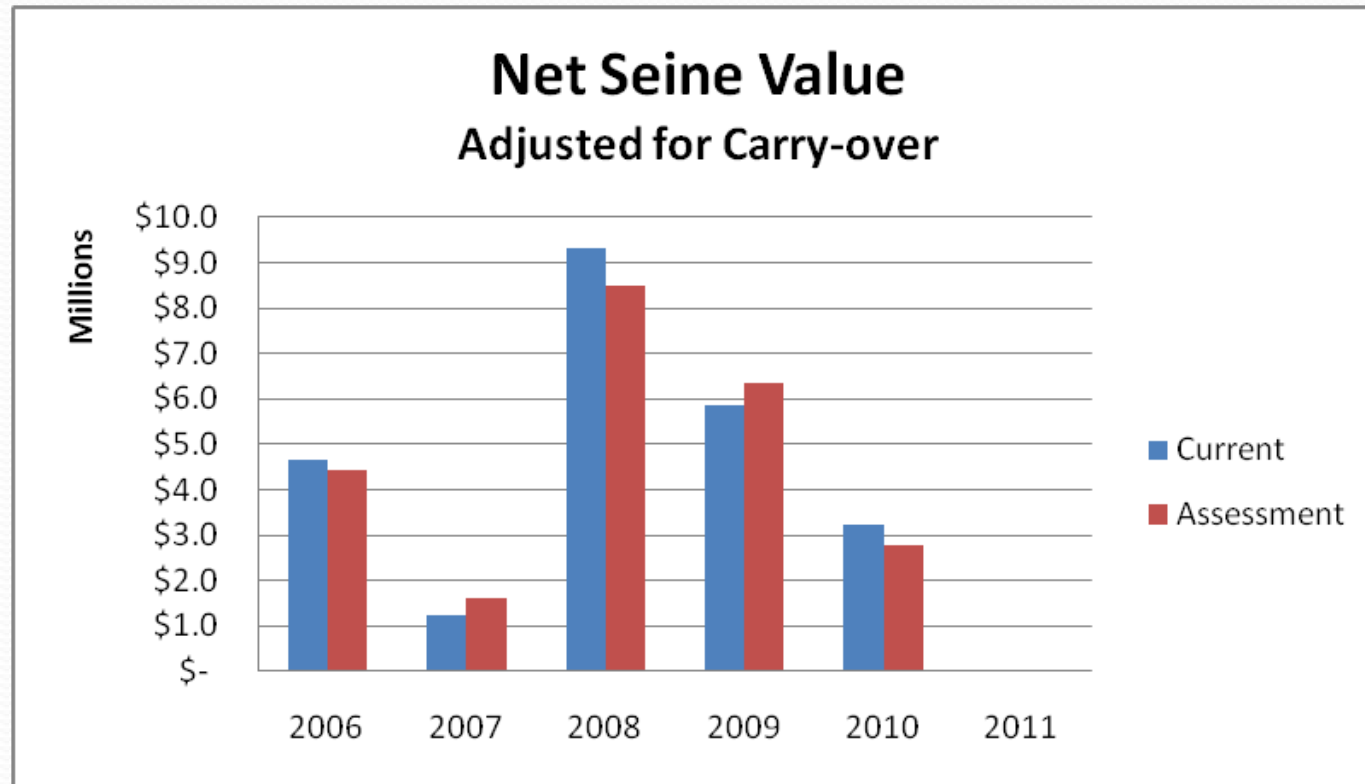
- **Assessment rate** averaged about **\$0.13** per pound (with a range of \$0.06-\$0.22). This includes a \$.02 safety.
- This averages out to about **25%** on a percentage basis (with a range of 12%-36%).
- Averaged out, the **seine value** for the 5-year period was within a few percent using the two methods (current vs. assessment).
- Assuming 3% SET (Salmon Enhancement Tax) is calculated on the Gross Seine Value, **3% revenues will exceed those of the current method.**

# 5-year modeling results – Effect on Seine Value

Table 1. Comparison of Current and Assessment CR Methods


Gear		Seine			
Net Seine w Carry-over.		Scenario:		Percent	Value
Year	Current	Assessment	Difference	Difference	
2006	\$ 4,639,604	\$ 4,422,712	-4.7%	\$ (216,892)	
2007	\$ 1,221,252	\$ 1,604,916	31.4%	\$ 383,664	
2008	\$ 9,324,215	\$ 8,475,449	-9.1%	\$ (848,766)	
2009	\$ 5,875,947	\$ 6,362,144	8.3%	\$ 486,198	
2010	\$ 3,172,818	\$ 2,717,005	-14.4%	\$ (455,814)	
2011		\$ -			
<b>Grand Total</b>	<b>\$ 24,233,837</b>	<b>\$ 23,582,226</b>	<b>-2.7%</b>	<b>\$ (651,611)</b>	


# 5-year modeling results – Effect on Seine Value



# 5-year modeling results: Revenue Flow

Table 3. Revenue Flow with Assessment Method

Gear Seine 

Scenario:   
Assessment

Year.	CR required.	Carry-over.	ADJ CR required=Go	Rev. Collected	CR Surplus/Deficit.
2006	\$ 1,040,048		\$ 1,040,048	\$ 2,054,120	\$ 1,014,072
2007	\$ 2,037,215	\$ 1,014,072	\$ 1,023,143	\$ 612,280	\$ (410,863)
2008	\$ 2,480,736	\$ (410,863)	\$ 2,891,599	\$ 3,796,897	\$ 905,299
2009	\$ 1,434,063	\$ 905,299	\$ 528,765	\$ 830,881	\$ 302,116
2010	\$ 1,810,040	\$ 302,116	\$ 1,507,924	\$ 978,053	\$ (529,871)
2011	\$ 954,000	\$ (529,871)	\$ 1,483,871		
<b>Grand Total</b>	<b>\$ 9,756,102</b>	<b>\$ 1,280,753</b>	<b>\$ 8,475,349</b>	<b>\$ 8,272,231</b>	<b>\$ 1,280,753</b>

	<u>CR Required</u>	<u>CR Rev Collected</u>
2006-10	\$ 8,802,102	\$ 8,272,231
carry-over		\$ (529,871)
balance		\$ 8,802,102

NSRAA CR Revenue needs balance each year with the carry-over figured in

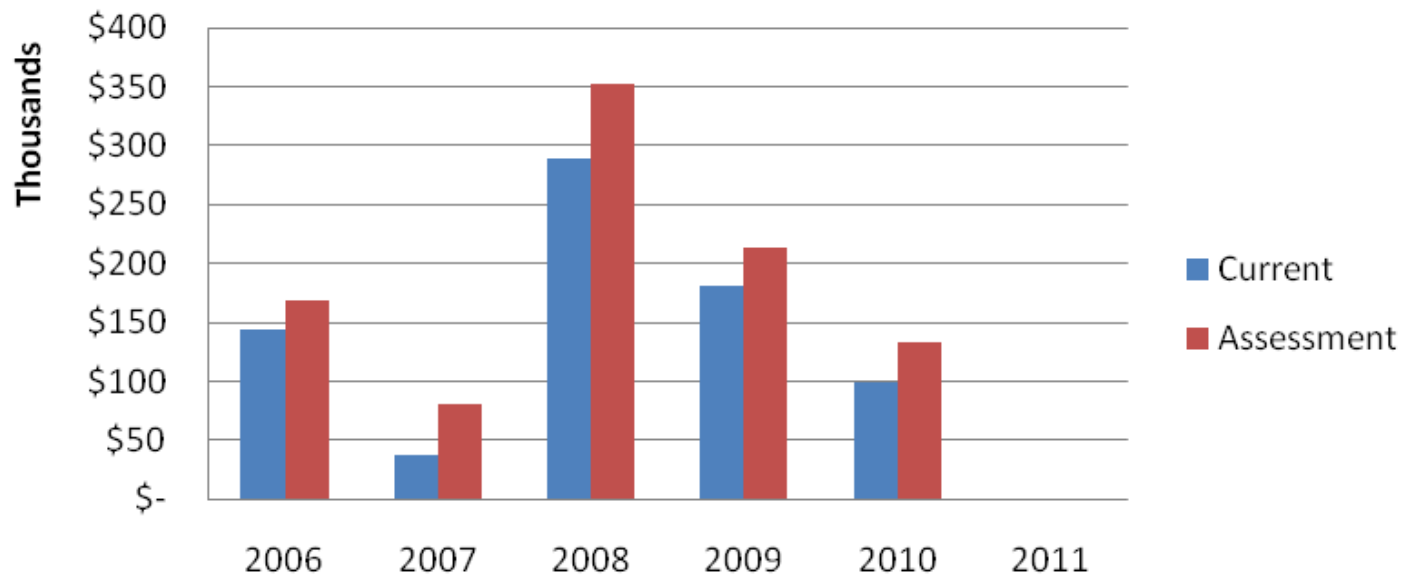
# 5-year modeling results – 3% SET on Gross Seine Value

Table 2. Comparison of 3% SET with Current and Assessment CR Methods

Gear		Seine			
3% SET Calculations		Scenario:		Percent	Value
Row Labels	Current	Assessment	Difference		Difference
2006	\$ 143,493	\$ 168,951	18%	\$	25,458
2007	\$ 37,771	\$ 81,280	115%	\$	43,510
2008	\$ 288,378	\$ 351,558	22%	\$	63,180
2009	\$ 181,730	\$ 213,121	17%	\$	31,391
2010	\$ 99,891	\$ 133,015	33%	\$	33,124
2011					
<b>Grand Total</b>	<b>\$ 751,263</b>	<b>\$ 947,926</b>	<b>26%</b>	<b>\$</b>	<b>196,663</b>

# 5-year modeling results – 3% SET on Gross Seine Value

## 3% SET Estimate Calculated on Gross Seine Value



# 5-year modeling results: Possible 3% SET Adjustment

- Any adjustment for this higher 3% revenue can be handled in-house by NSRAA as part of our budget process.

