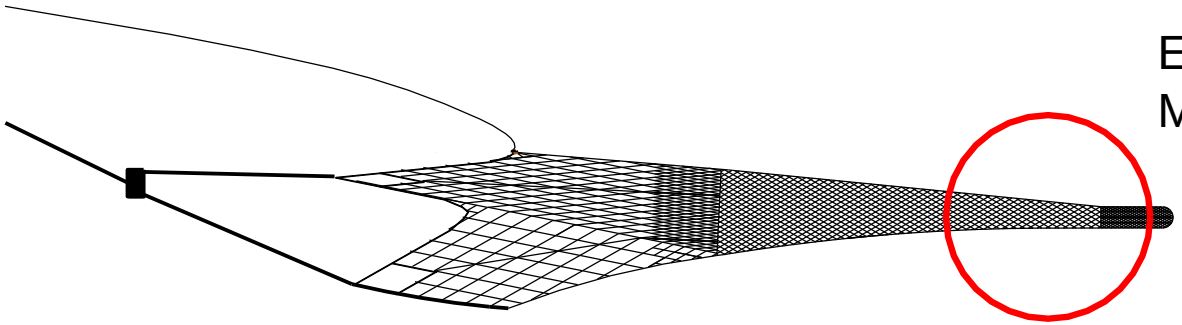
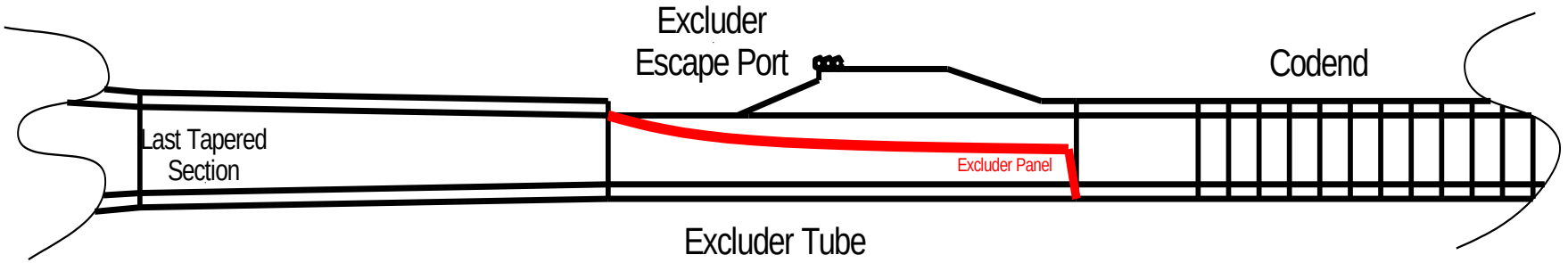
Salmon Excluder Update

February 2013

Salmon Excluder

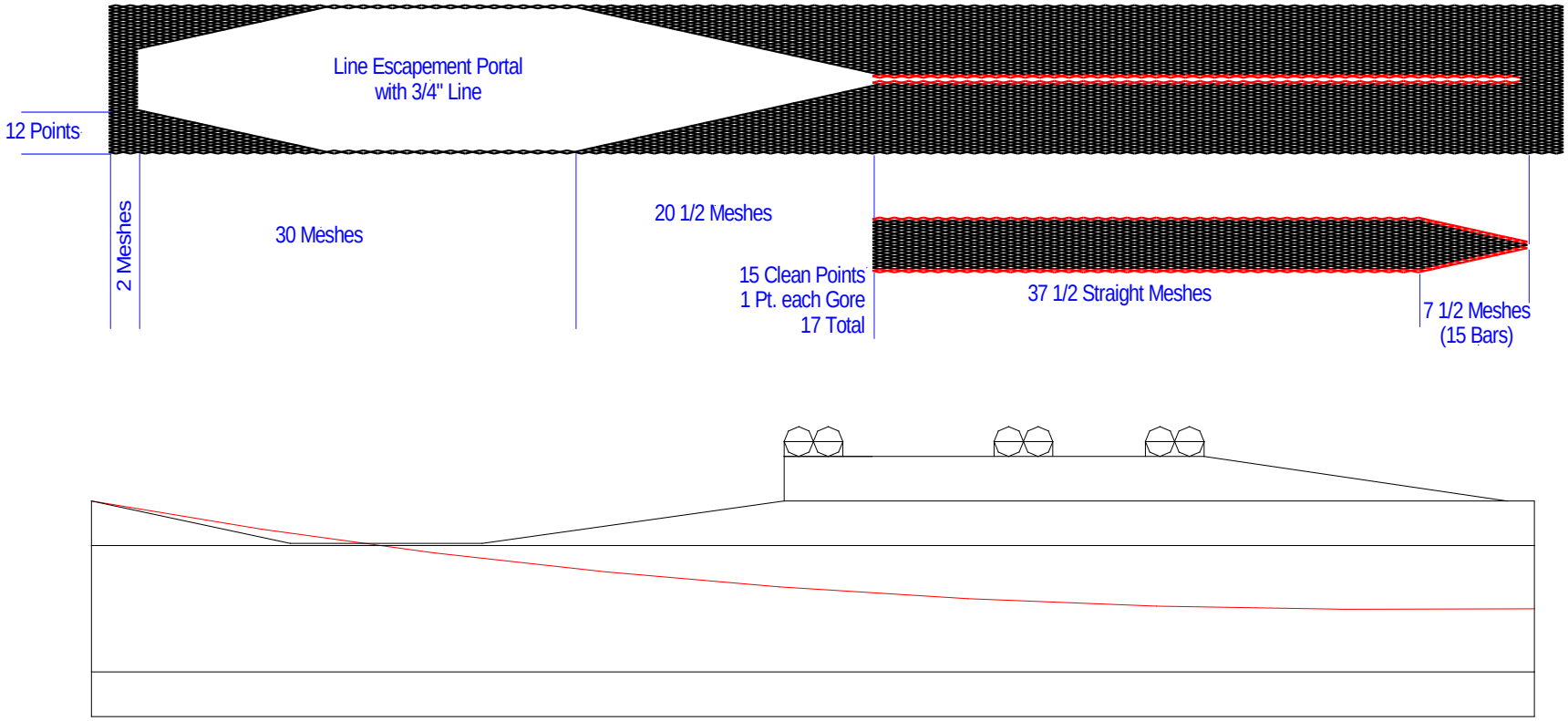


Excluder Location in a Midwater Trawl



2010 EFP Excluder

Tube Excluder Section
100 Meshes Long by 46 Points Wide



Model of 2010 Excluder in Flume Tank

Results of excluder testing on Chinook Escapement; 2009 - 2010

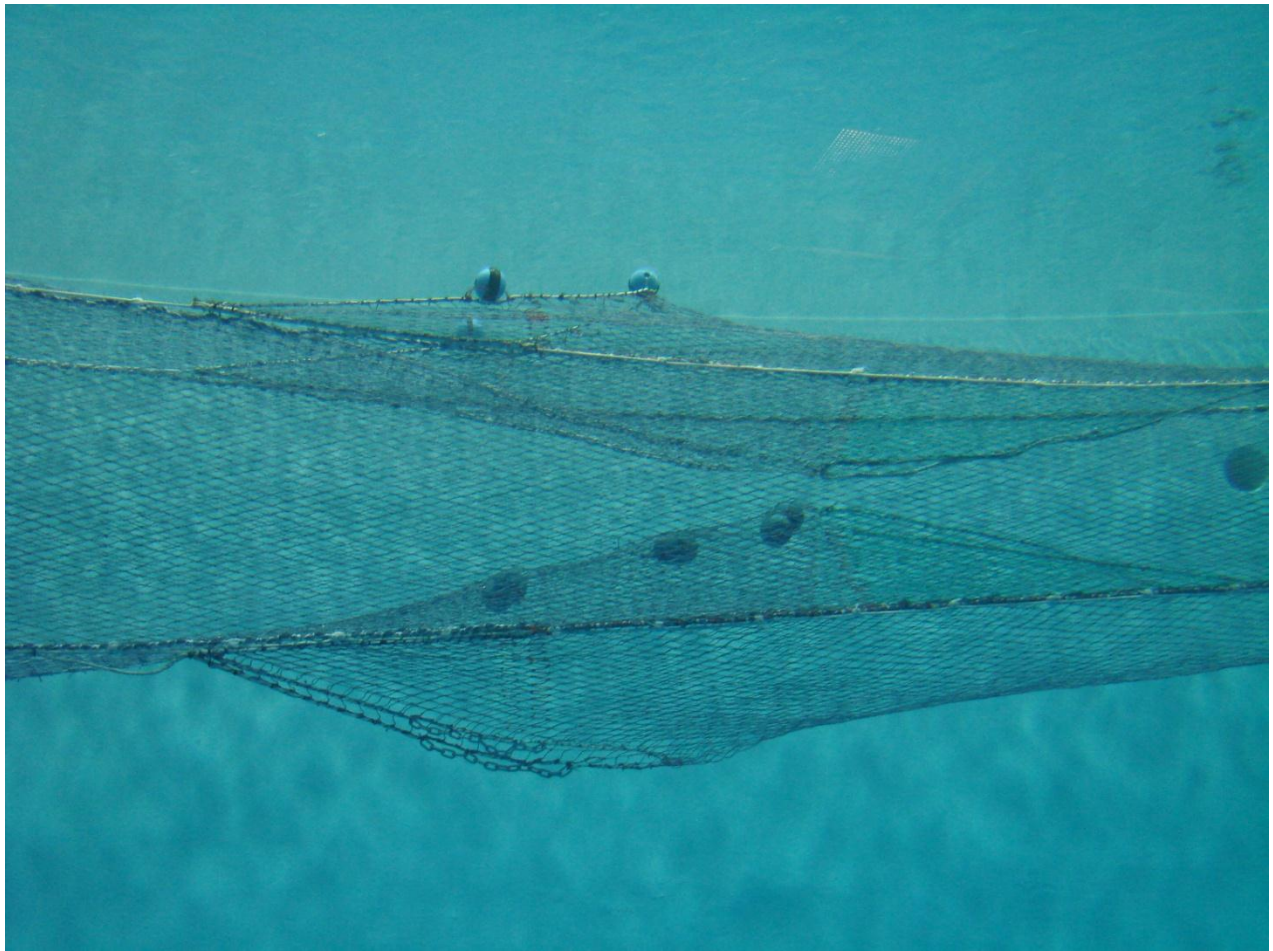
Test /date	Vessel	Codend salmon #	Recap salmon #	Salmon escape %
Winter 2009 P1	Pac Prince	726	91	11.1%
Winter 2009 P2	Pac Prince	1079	209	16.2%
Winter 2009	Starbound	720	70	8.9%
Fall 2009 P1 (chum)	Starbound	196	5	2.5%
Fall 2009 P2 (chum)	Starbound	643	34	5.0%
Winter 2010 P1	Pac Prince	122	62	33.7%
Winter 2010 P2	Pac Prince	37	25	40.3%
Winter 2010 P1	Starbound	150	49	24.6%
Winter 2010 P2	Starbound	38	21	35.6%

Future excluder design

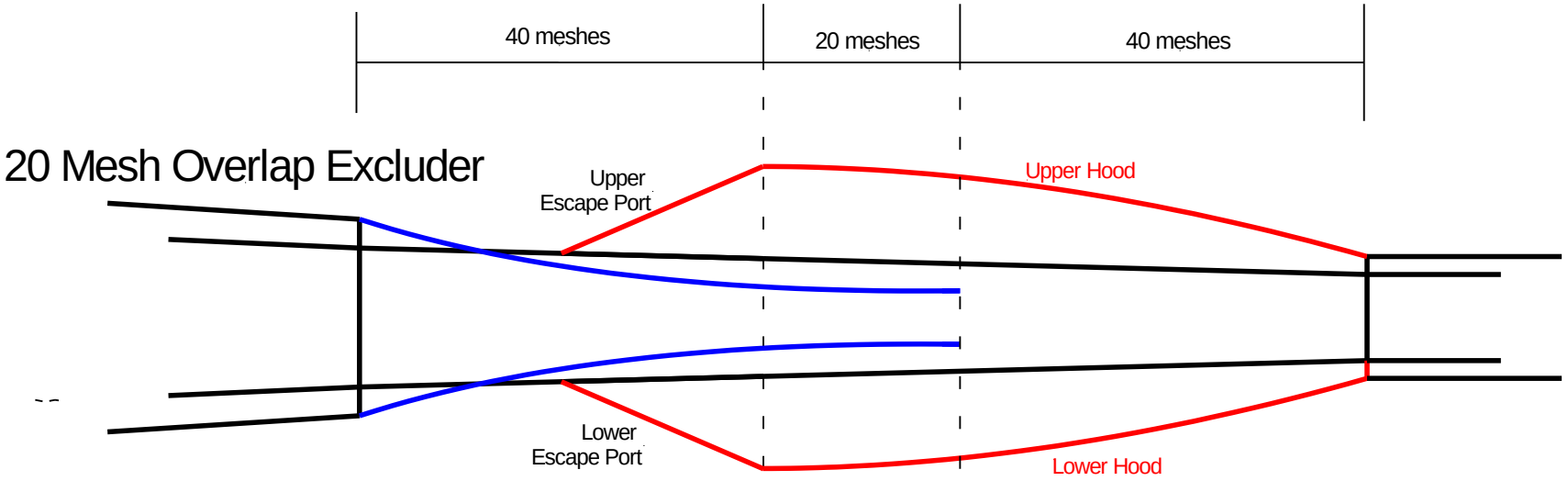
- Provide multiple escapement routes
- Increase both Chinook and chum salmon escapement rates
- Eliminate “touchy” excluder tuning issues
- Stabilize the design for wider horsepower ranges and fishing conditions.

Future excluder design – Over/Under Excluder Concept

Over/Under Excluder – 1:2 scale model in the flume tank. October 2011..



Over/Under Excluder Development

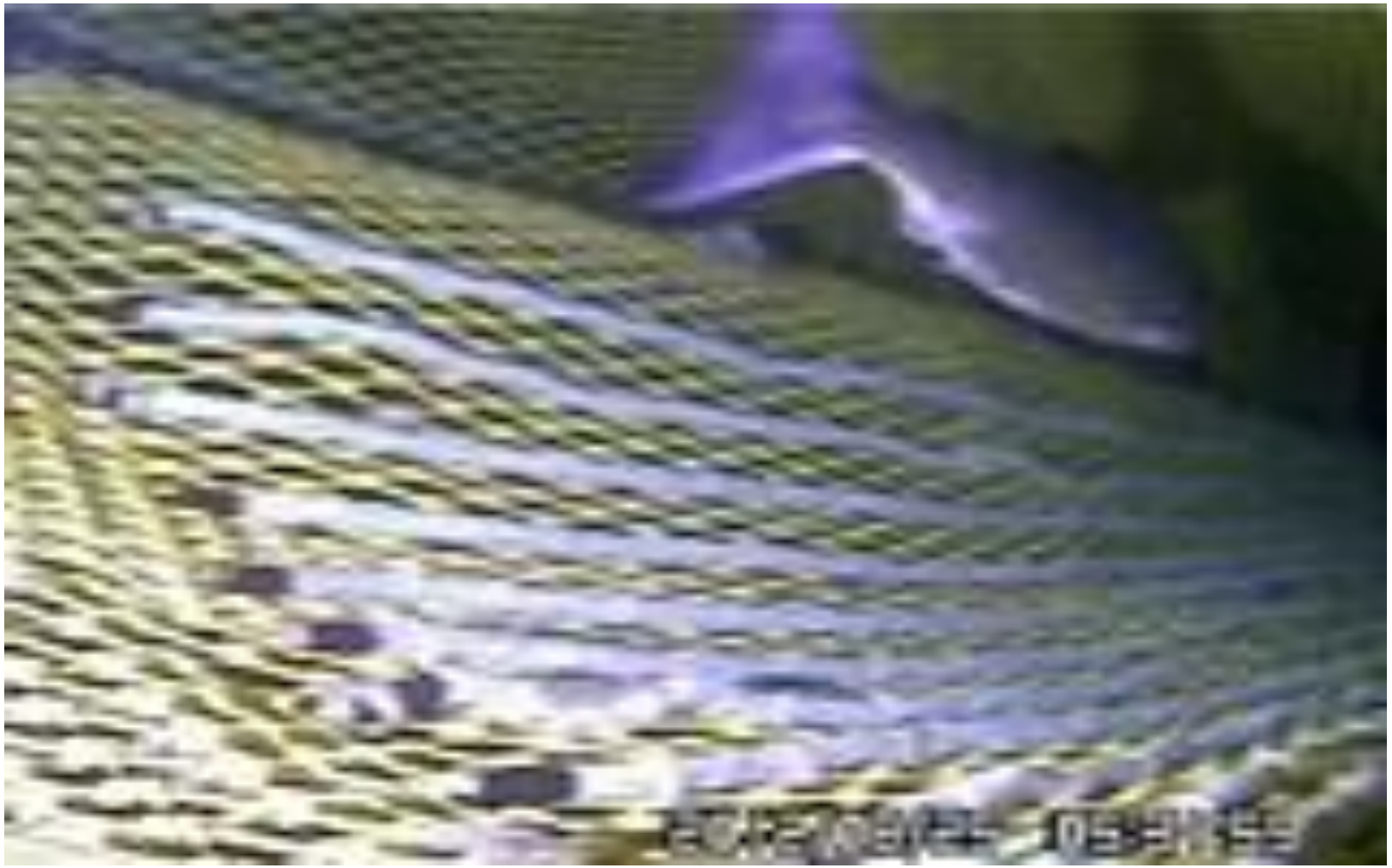


Over/Under Excluder Development

- Initial test fishing with the Over/Under Excluder took place during the 2012 B Season
- 2012 Test Goals:
  - Identify design flaws
  - Refine initial design characteristics
  - Obtain rough escapement estimates for both Chinook and chum salmon.

Over/Under Photos

Over/Under Photos



Over/Under Photos