

**DRAFT**

**SUPPLEMENTAL MATERIAL**

**UPDATE: Identification of river herring hotspots at sea using  
fisheries dependent and independent datasets**

**Prepared for the Atlantic Herring PDT**

**by**

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**August 2010**

<i>Jan-Feb</i>		Gear Category			
River Herring Weight (lbs)		OT	PR	PS	ALL
0		22	181	0	203
> 0.5 - 40		23	3	0	26
> 40 - 129		15	16	0	31
> 129 - 358		14	17	0	31
> 358 - 1233		16	12	0	28
> 1233 - 69004		10	21	0	31
maximum= 69,004	ALL	100	250	0	350

<i>Mar-Apr</i>		Gear Category			
River Herring Weight (lbs)		OT	PR	PS	ALL
none		4	94	0	98
> 0.5 - 40		0	5	0	5
> 40 - 129		0	5	0	5
> 129 - 358		0	9	0	9
> 358 - 1233		0	6	0	6
> 1233 - 69004		0	2	0	2
maximum= 12,339	ALL	4	121	0	125

<i>May-Jun</i>		Gear Category			
River Herring Weight (lbs)		OT	PR	PS	ALL
none		0	132	67	199
> 0.5 - 40		0	4	1	5
> 40 - 129		0	1	0	1
> 129 - 358		0	0	1	1
> 358 - 1233		0	1	0	1
> 1233 - 69004		0	0	0	0
maximum= 384	ALL	0	138	69	207

<i>Jul-Aug</i>		Gear Category			
River Herring Weight (lbs)		OT	PR	PS	ALL
none		21	154	147	322
> 0.5 - 40		13	1	0	14
> 40 - 129		0	0	3	3
> 129 - 358		0	0	2	2
> 358 - 1233		0	0	0	0
> 1233 - 69004		0	0	0	0
maximum= 358	ALL	34	155	152	341

<i>Sep-Oct</i>		Gear Category			
River Herring Weight (lbs)		OT	PR	PS	ALL
none		22	365	63	450
> 0.5 - 40		3	2	0	5
> 40 - 129		2	4	0	6
> 129 - 358		0	2	0	2
> 358 - 1233		0	4	0	4
> 1233 - 69004		0	5	0	5
maximum= 13,280	ALL	27	382	63	472

<i>Nov-Dec</i>		Gear Category			
River Herring Weight (lbs)		OT	PR	PS	ALL
none		11	184	4	199
> 0.5 - 40		0	6	0	6
> 40 - 129		1	14	0	15
> 129 - 358		1	15	0	16
> 358 - 1233		2	20	0	22
> 1233 - 69004		1	21	0	22
maximum= 19,680	ALL	16	260	4	280

Table S1: Frequency table of river herring bycatch (lbs) in observed hauls and sets for directed herring trips by gear type and bimonthly blocks. Gear categories include bottom otter-trawls (OT), purse seines (PS), and mid-water trawls-single and paired (PR). Directed herring trips are defined as 2,000 lbs of kept Atlantic herring on a trip. Note this table corresponds with the scaled pink circles in Appendix Figs. A1-A6. Source: NEFOP Database 2005-2009.

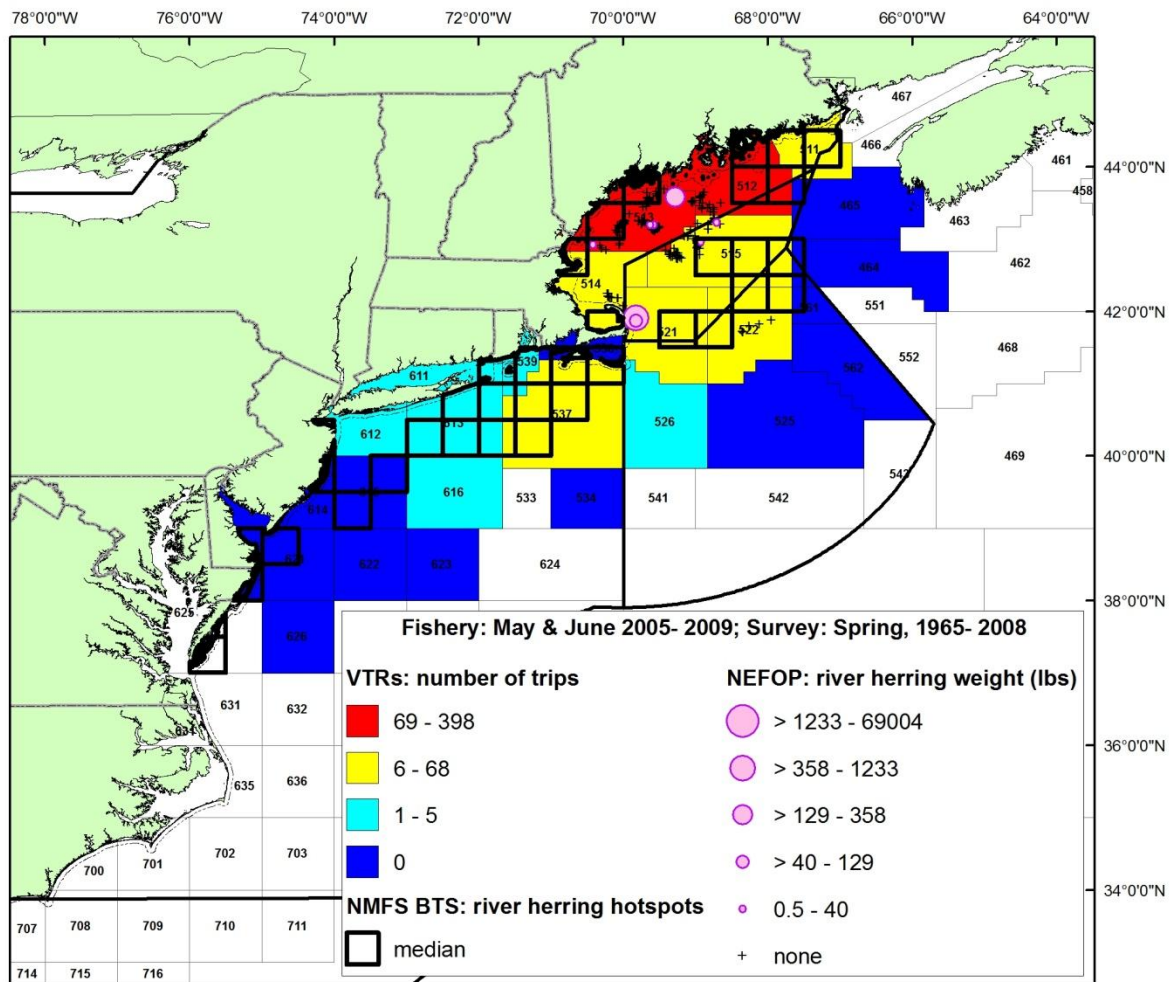


Figure S1: Reported trips (VTR) and observed hauls and sets (NEFOP) during May and June, 2005-2009 for directed herring trips by bottom otter-trawls, purse seines, and mid-water trawls (single and paired). Trips by statistical area are grouped from 69-398 (red), 6-68 (yellow), 1-5 (aqua), and 0 (dark blue) trips. Scaled pink circles represent river herring bycatch (lbs) in observed hauls and sets for directed herring trips. A "+" signifies that an observed haul or set did not catch river herring. Directed herring trips are defined as 2,000 lbs of kept Atlantic herring on a trip. Spring candidate river herring "hot spot" quarter degree squares identified as squares with percent occurrence and median catch in number  $\geq$  the 75th quantiles of both variables (bold outlined quarter degree squares). Sources: VTR Database 2005-2009, NEFOP Database 2005-2009, and Spring 1965-2008 NMFS bottom-trawl surveys.

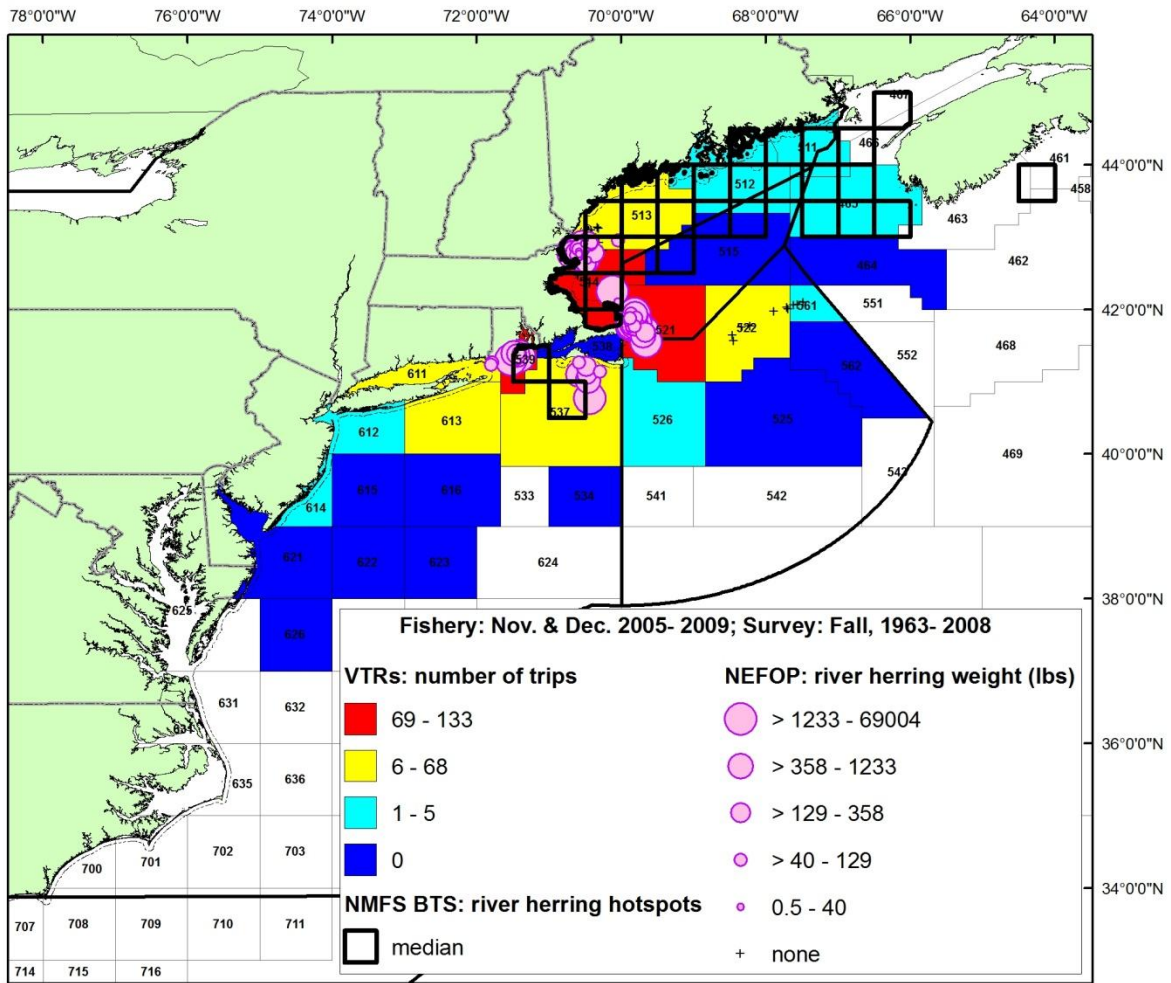


Figure S2: Reported trips (VTR) and observed hauls and sets (NEFOP) during November and December, 2005-2009 for directed herring trips by bottom otter-trawls, purse seines, and mid-water trawls (single and paired). Trips by statistical area are grouped from 69-133 (red), 6-68 (yellow), 1-5 (aqua), and 0 (dark blue) trips. Scaled pink circles represent river herring bycatch (lbs) in observed hauls and sets for directed herring trips. A "+" signifies that an observed haul or set did not catch river herring. Directed herring trips are defined as 2,000 lbs of kept Atlantic herring on a trip. Fall candidate river herring "hot spot" quarter degree squares identified as squares with percent occurrence and median catch in number  $\geq$  the 75th quantiles of both variables (bold outlined quarter degree squares). Sources: VTR Database 2005-2009, NEFOP Database 2005-2009, and Fall 1963-2008 NMFS bottom-trawl surveys.

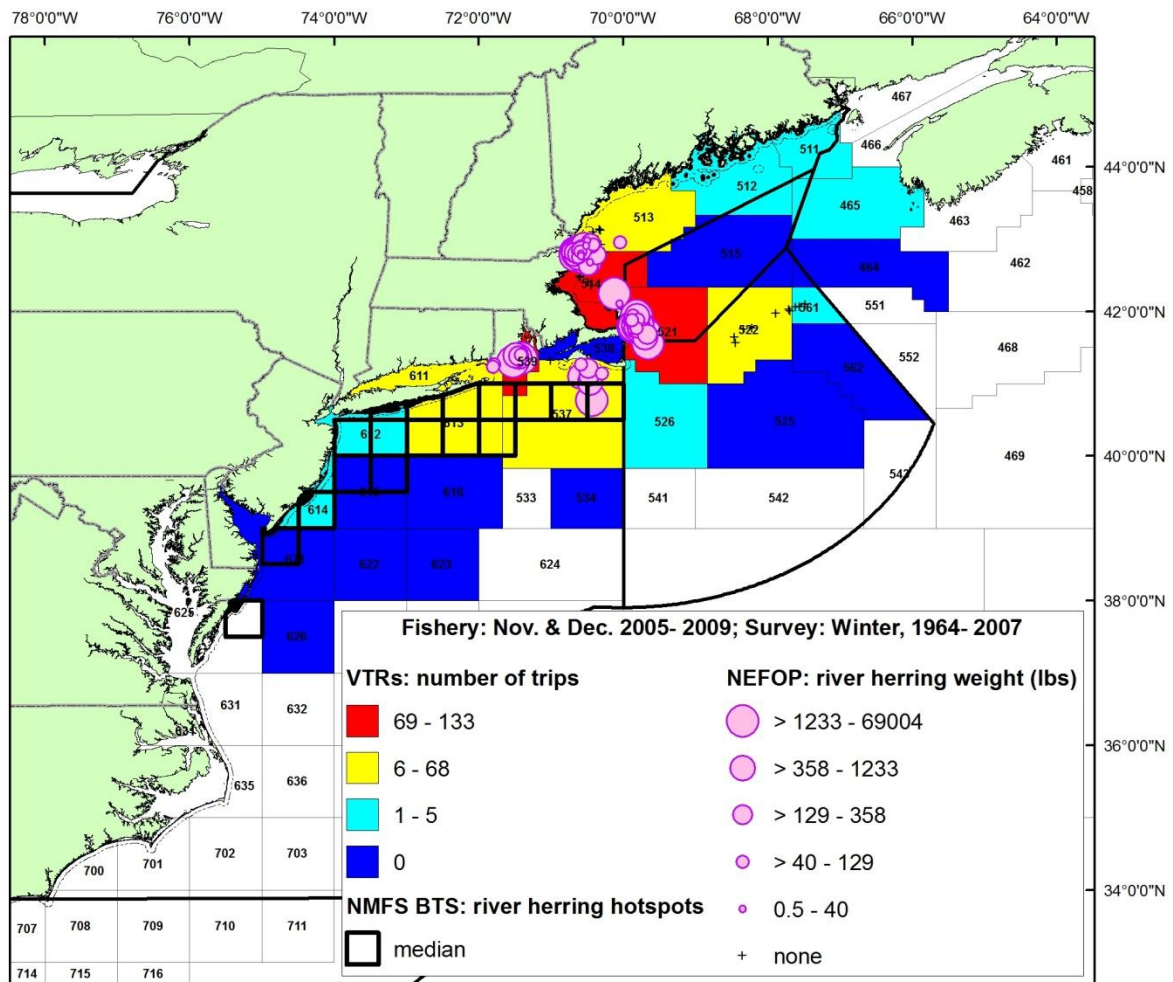


Figure S3: Reported trips (VTR) and observed hauls and sets (NEFOP) during November and December, 2005-2009 for directed herring trips by bottom otter-trawls, purse seines, and mid-water trawls (single and paired). Trips by statistical area are grouped from 69-133 (red), 6-68 (yellow), 1-5 (aqua), and 0 (dark blue) trips. Scaled pink circles represent river herring bycatch (lbs) in observed hauls and sets for directed herring trips. A "+" signifies that an observed haul or set did not catch river herring. Directed herring trips are defined as 2,000 lbs of kept Atlantic herring on a trip. Winter candidate river herring "hot spot" quarter degree squares identified as squares with percent occurrence and median catch in number  $\geq$  the 75th quantiles of both variables (bold outlined quarter degree squares). Sources: VTR Database 2005-2009, NEFOP Database 2005-2009, and Winter 1963-2007 NMFS bottom-trawl surveys.