Draft MAST Report Figure 1
7-21-2013

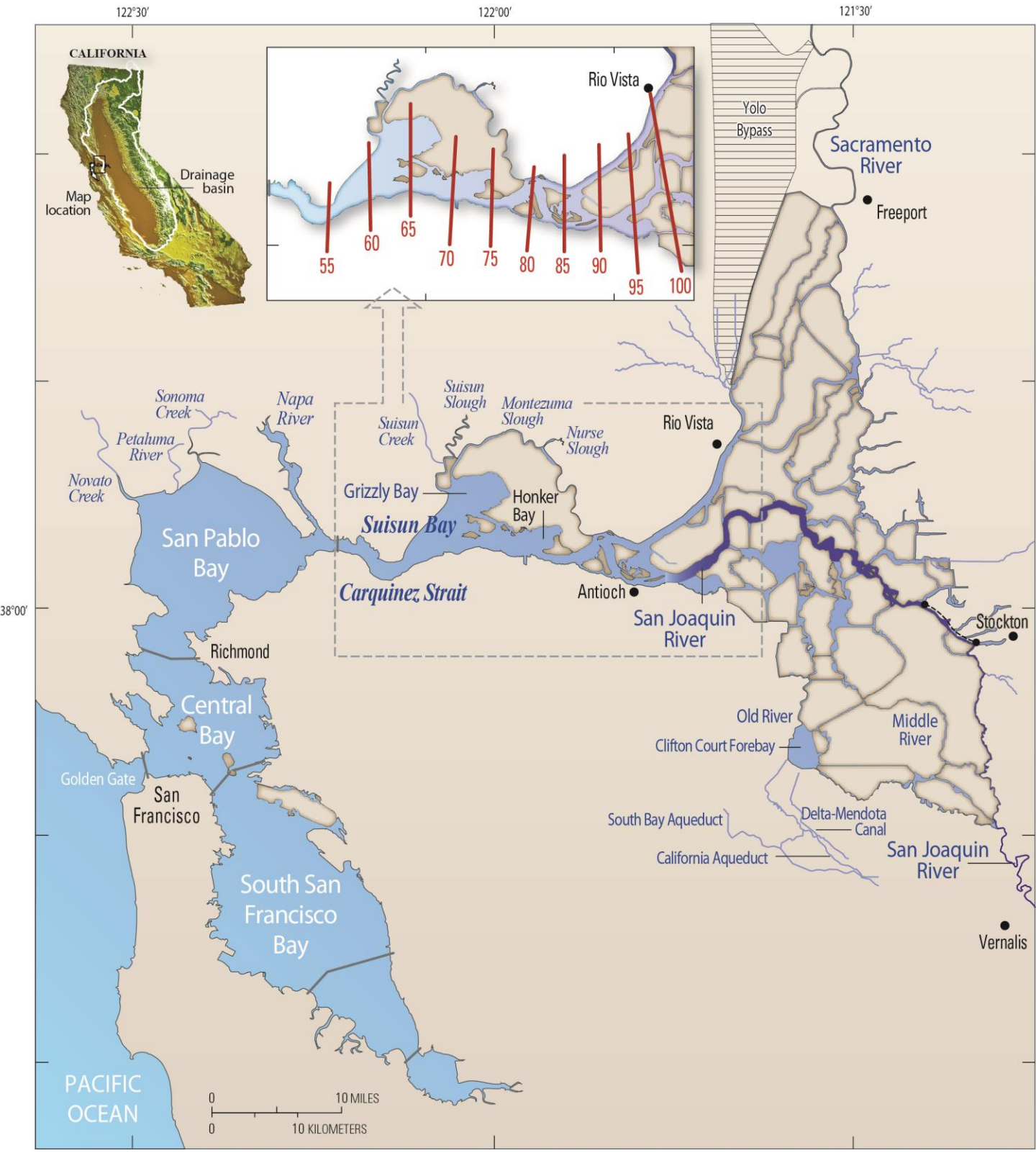
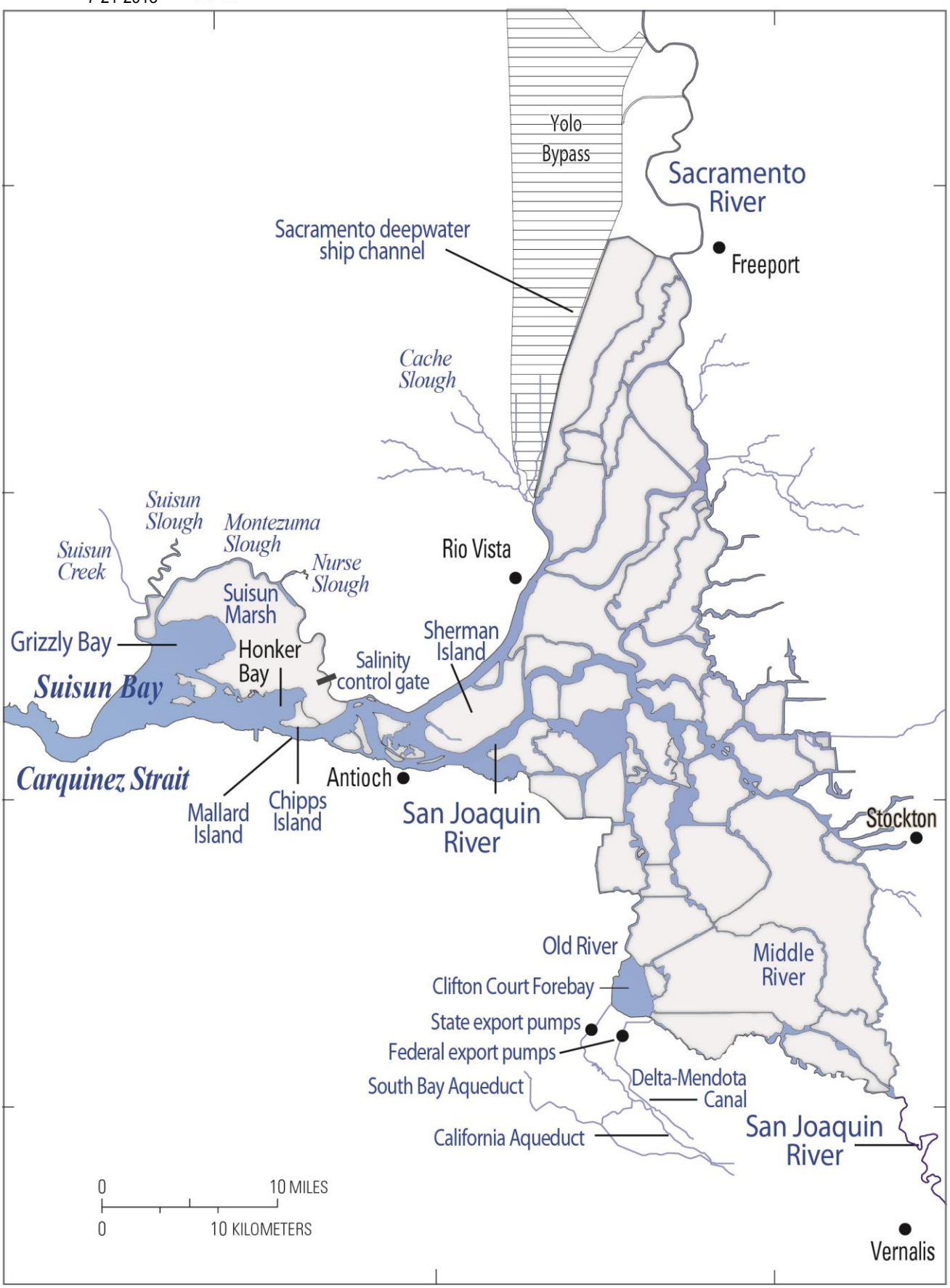
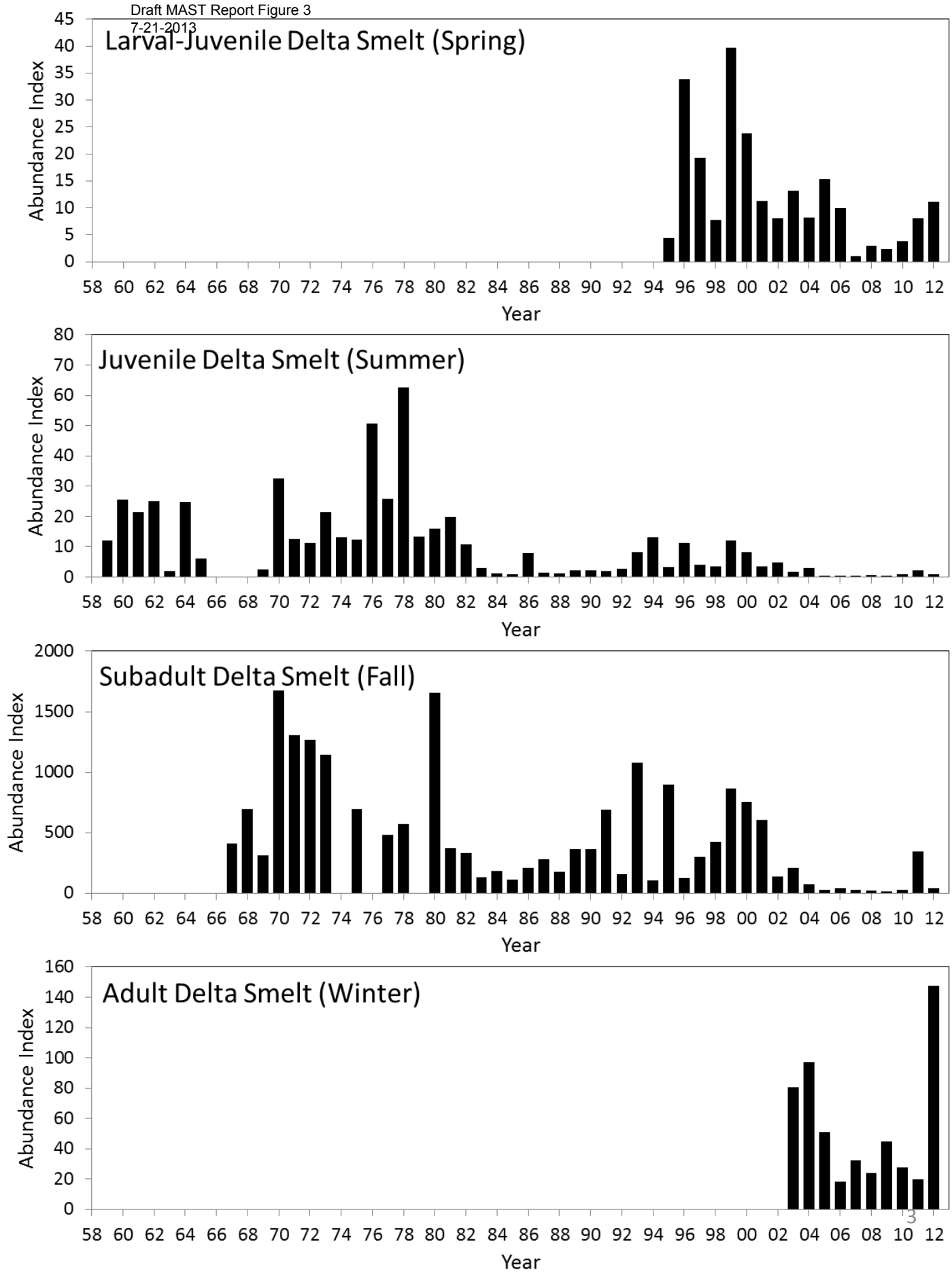


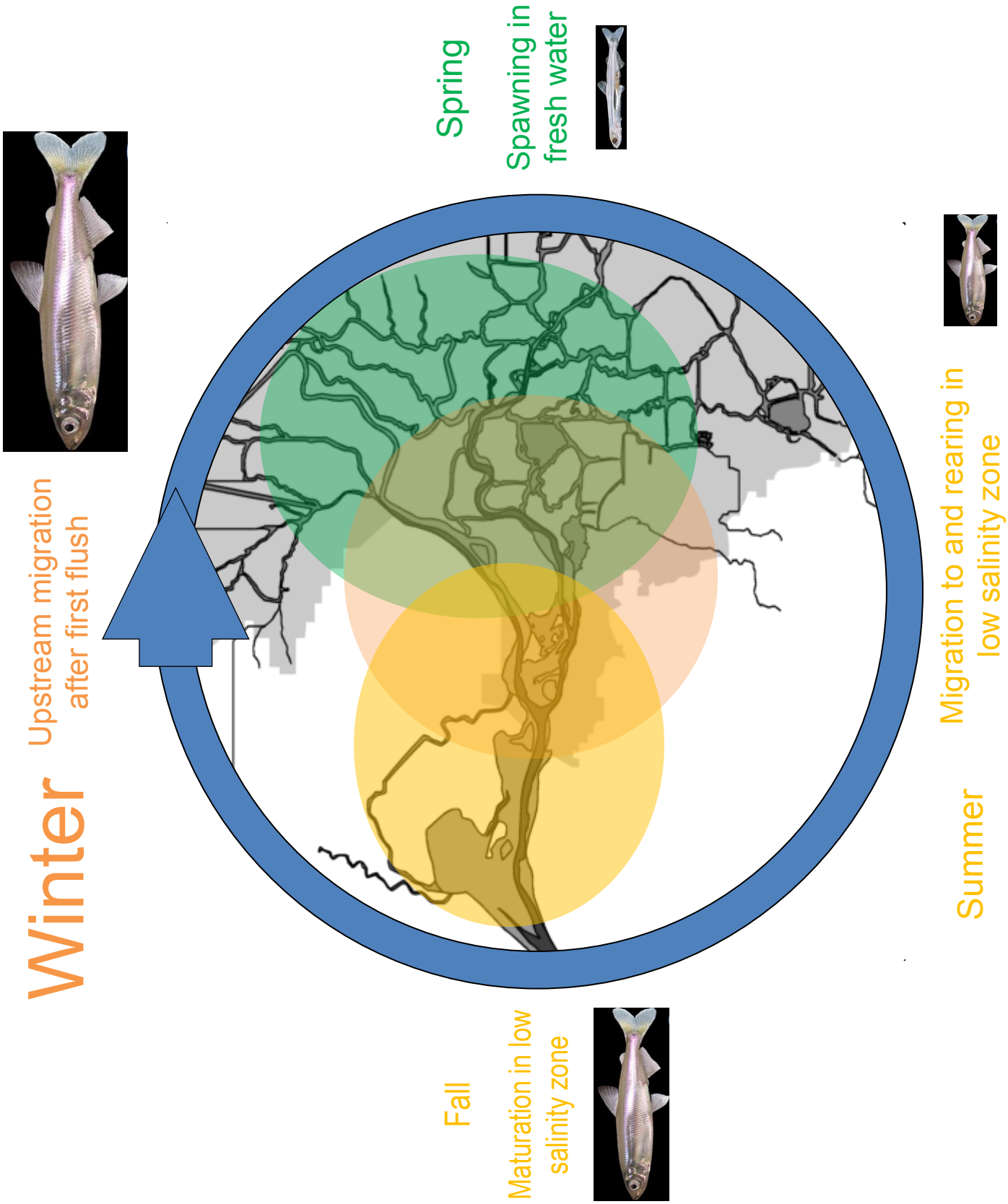
Fig. 3 Draft MAST Report Figure 2
7-21-2013



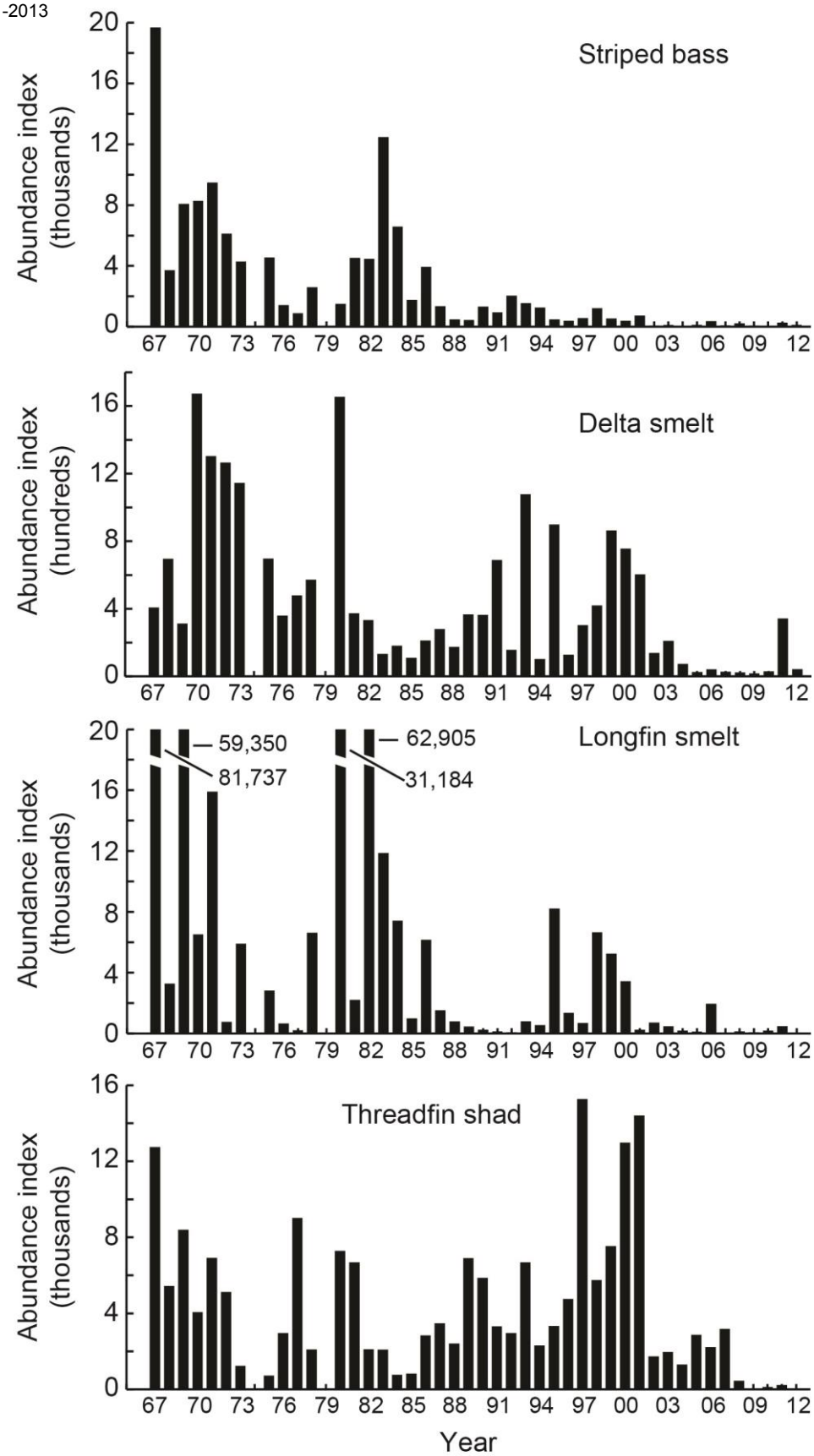
Draft MAST Report Figure 3
7-21-2013



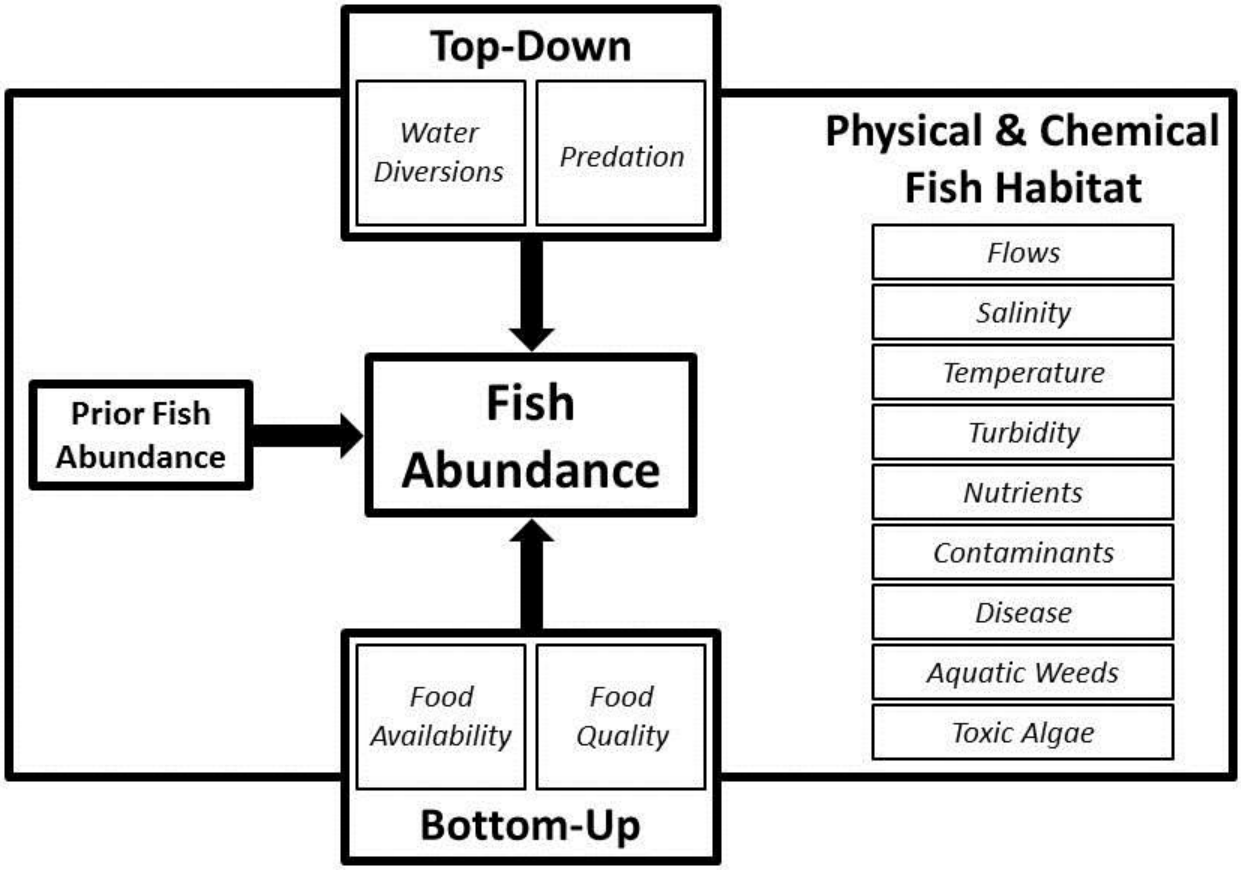
Draft MAST Report Figure 4
7-21-2013



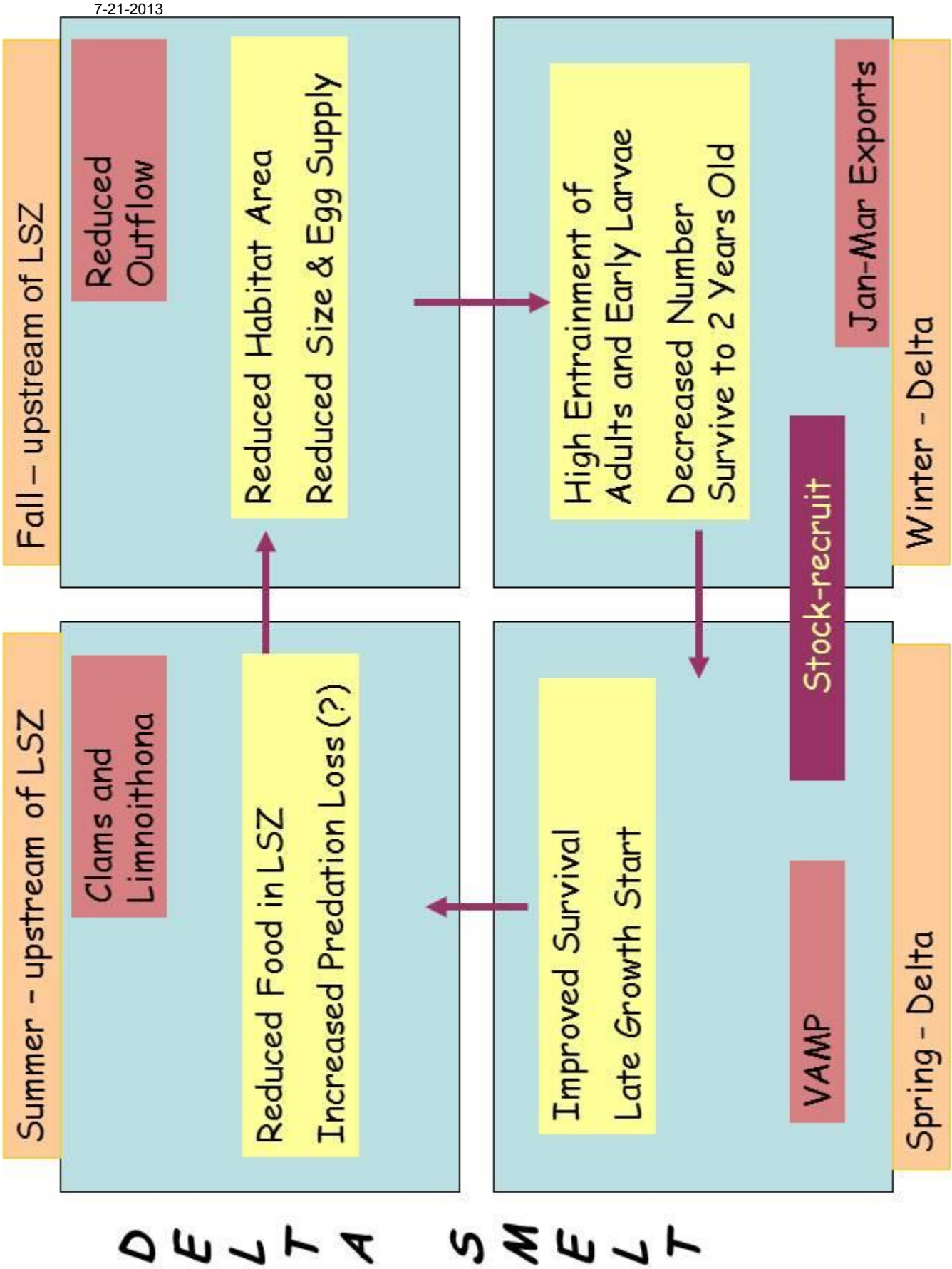
Draft MAST Report Figure 5
7-21-2013



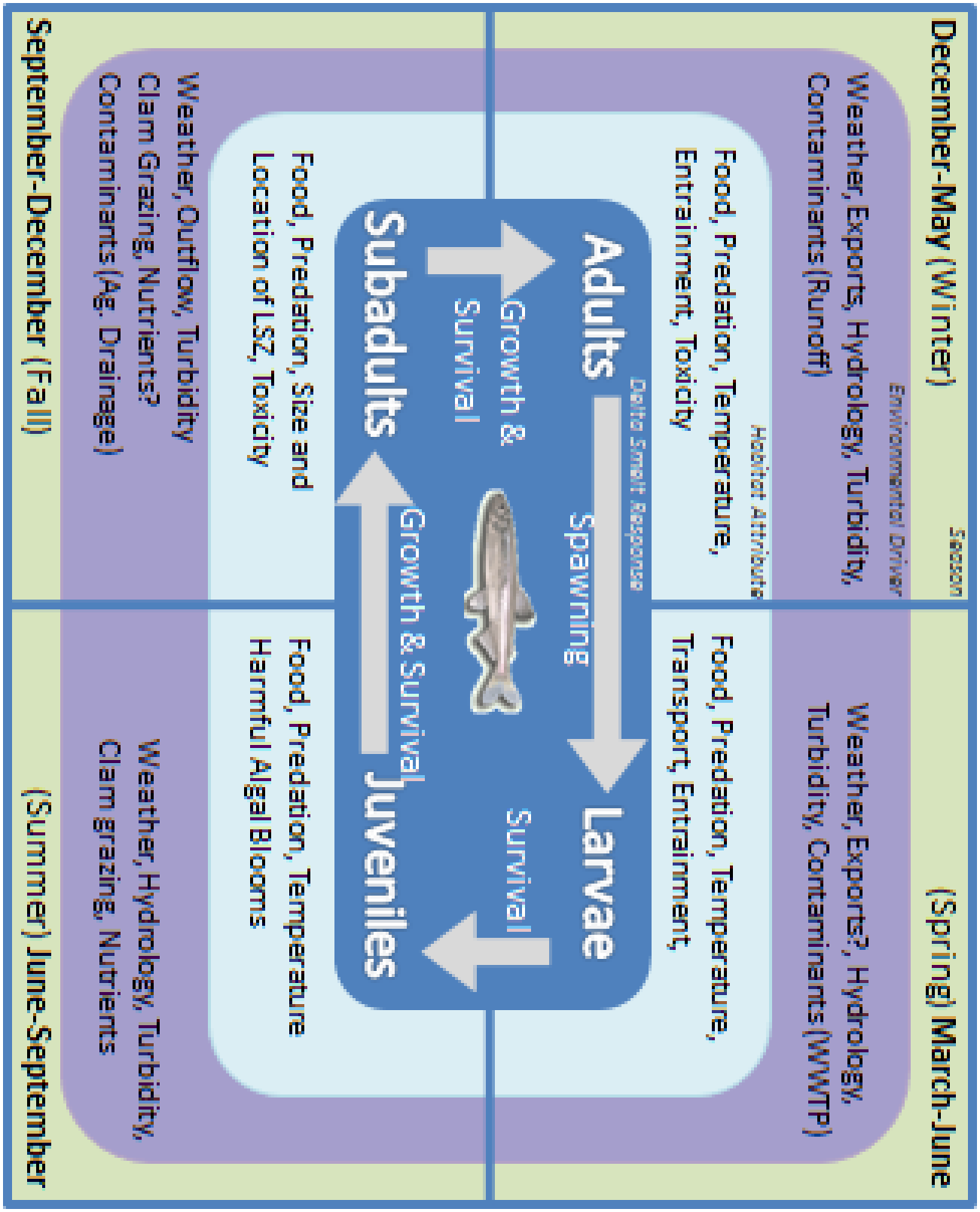
Draft MAST Report Figure 6
7-21-2013

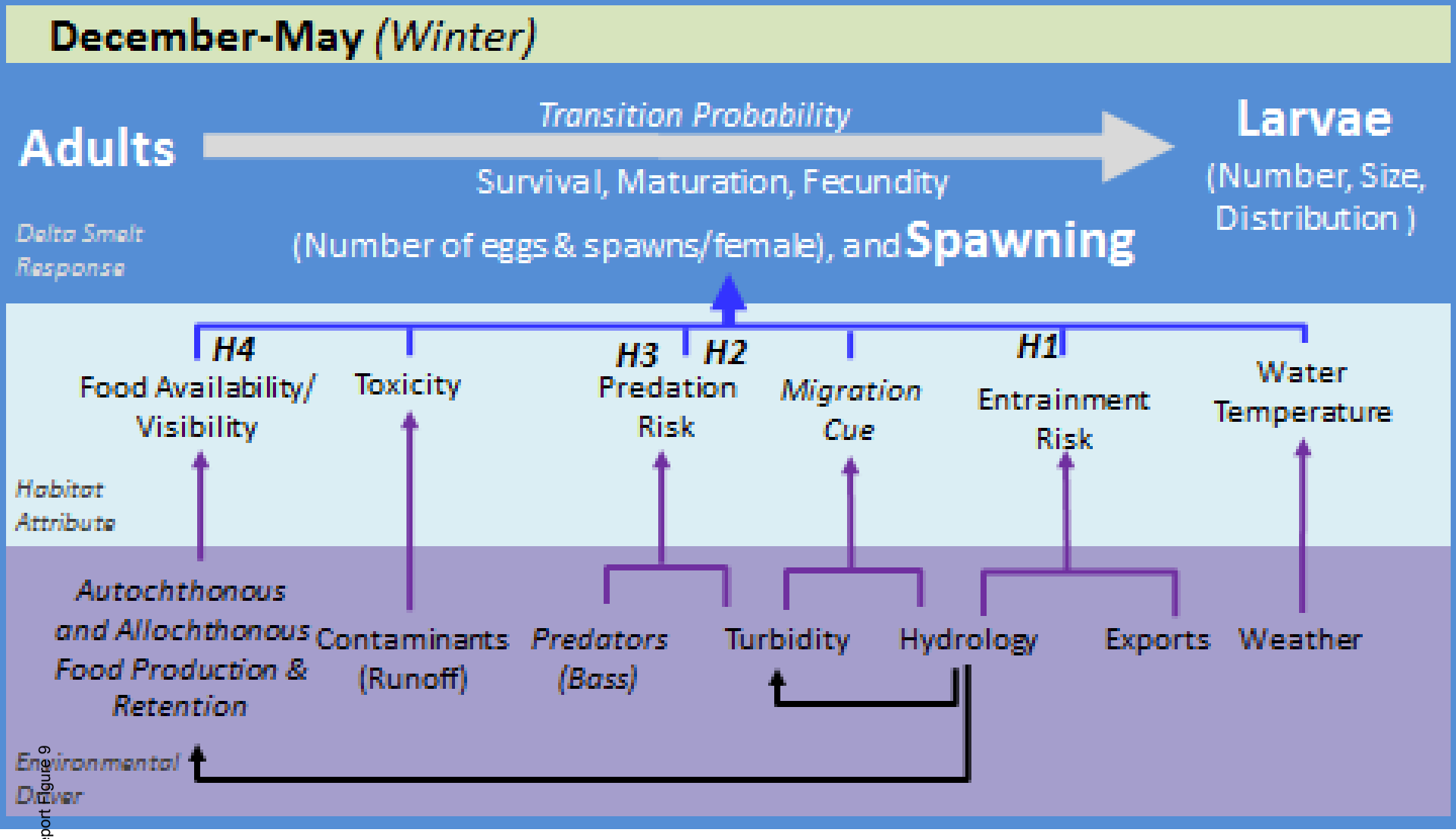


Draft MAST Report Figure 7
7-21-2013



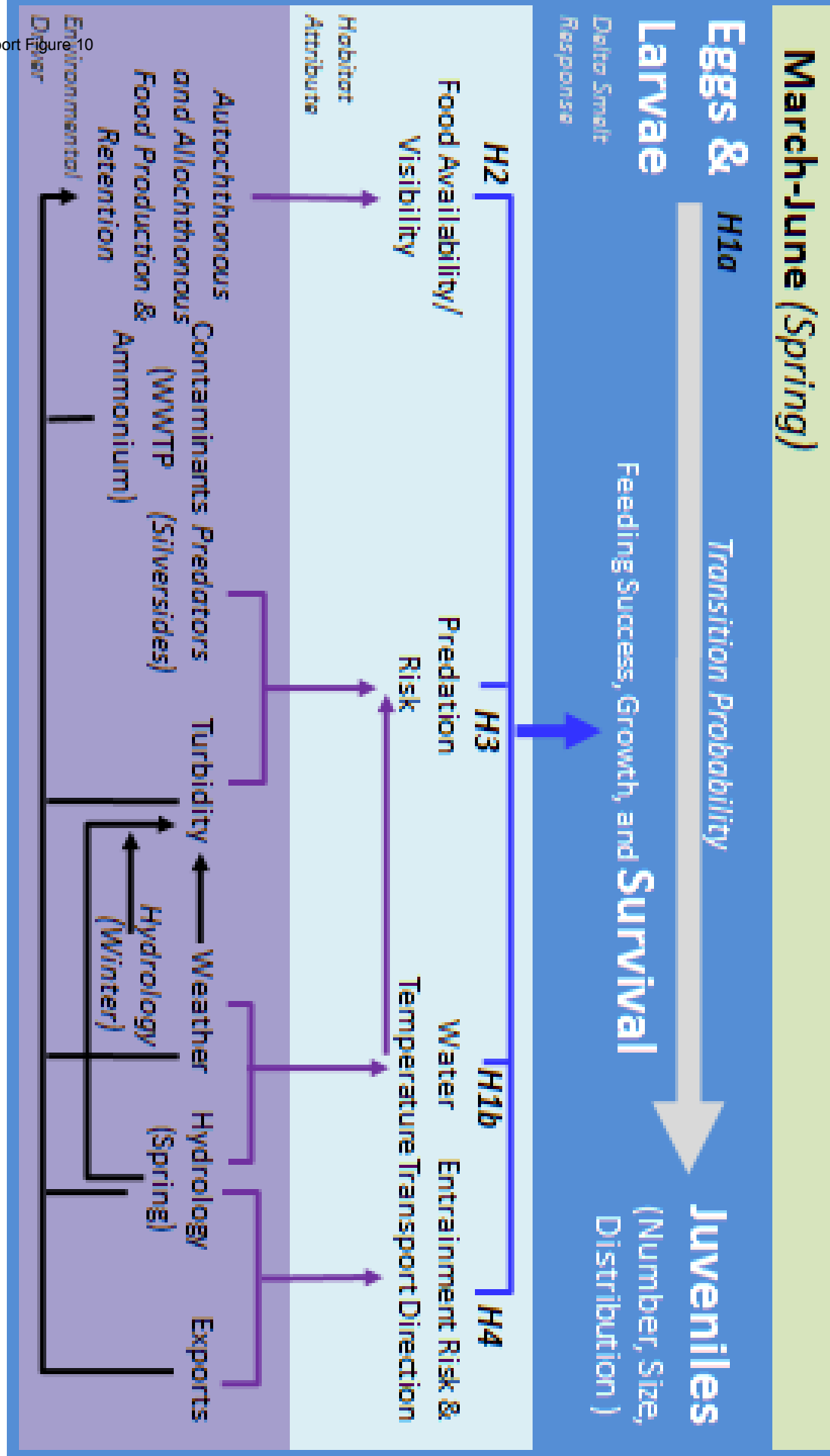
Draft MAST Report Figure 8
7-21-2013



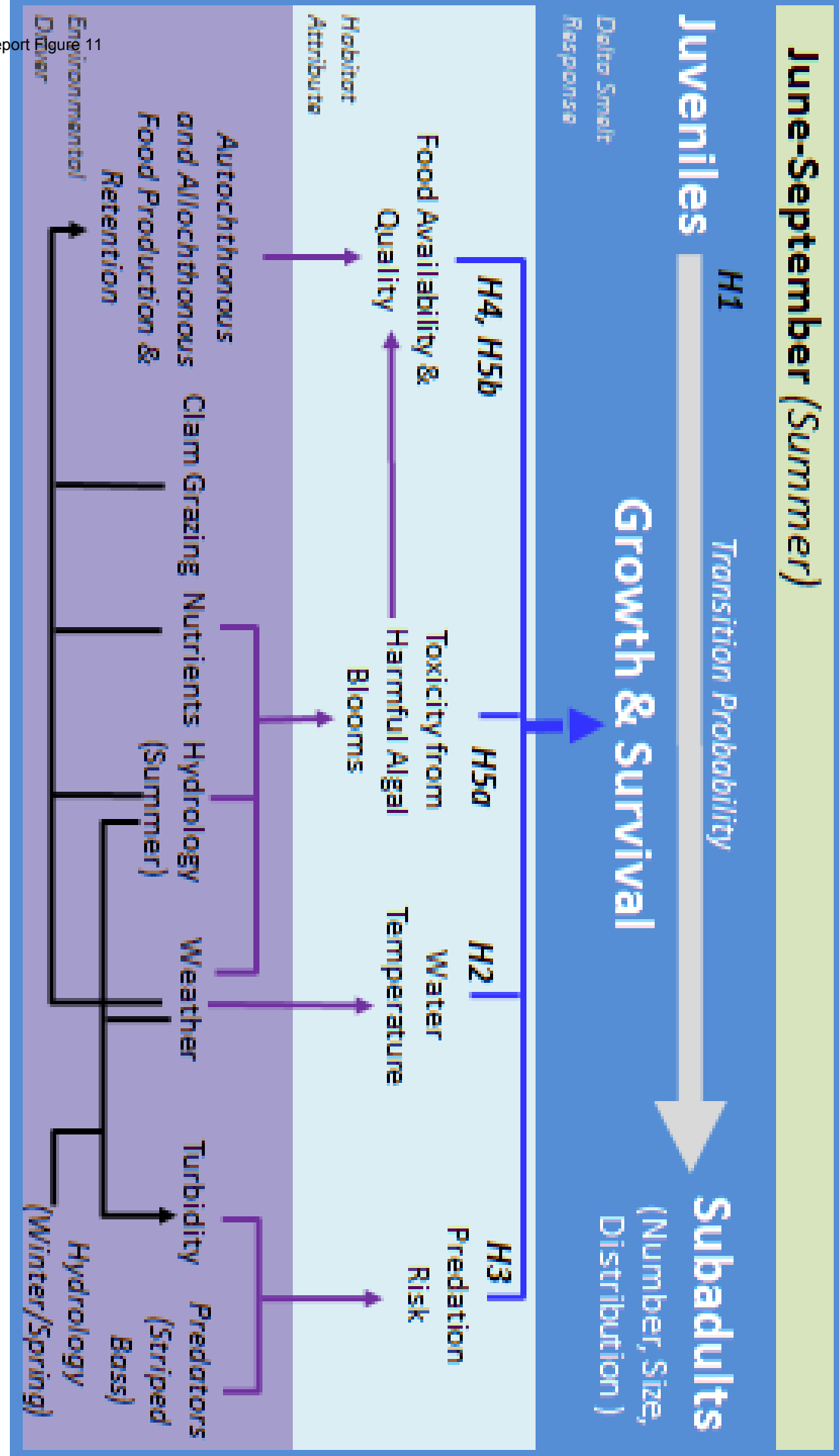


Draft MAST Report Figure 9
7-21-2013

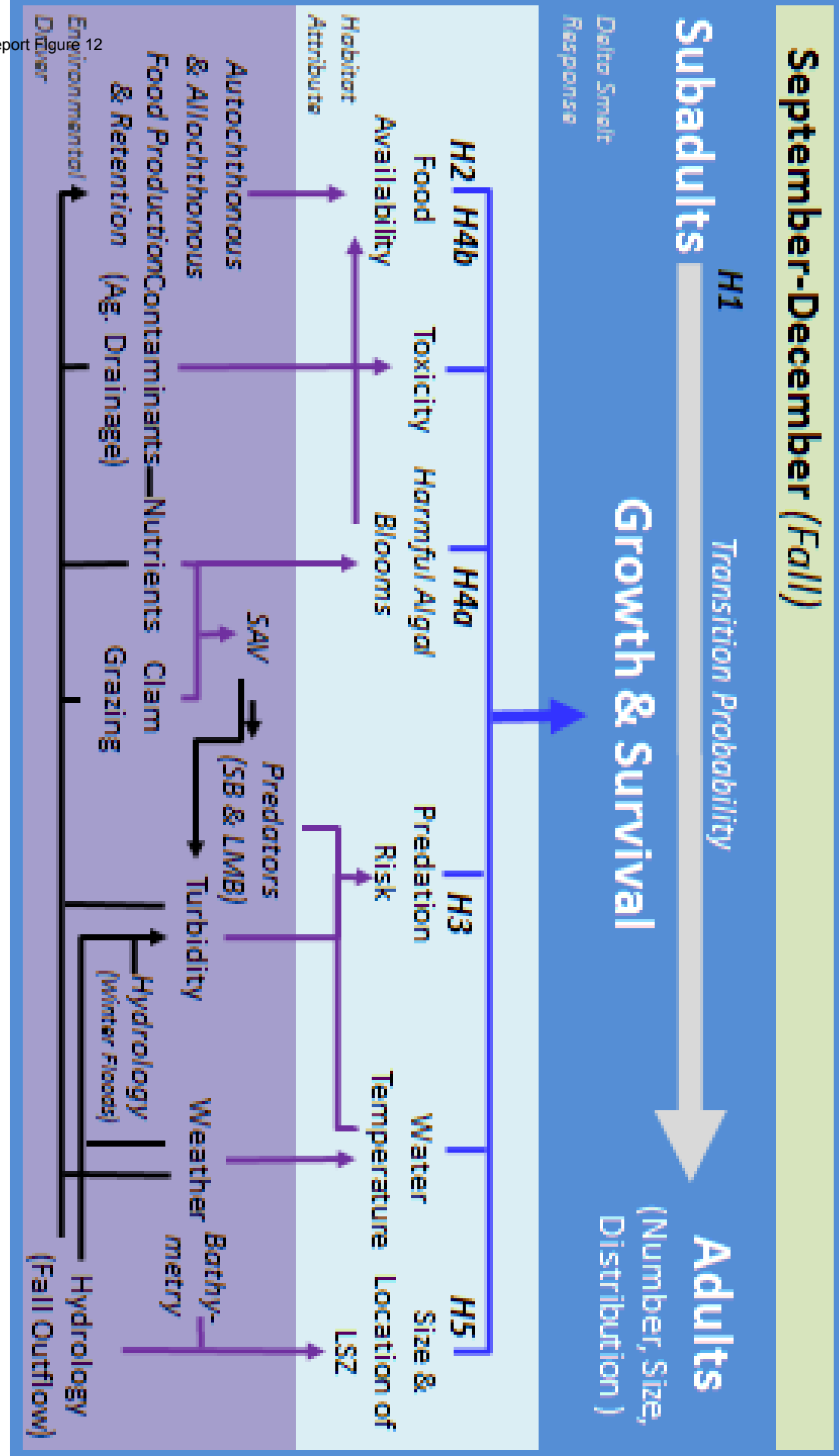
Draft MAST Report Figure 10
7-21-2013

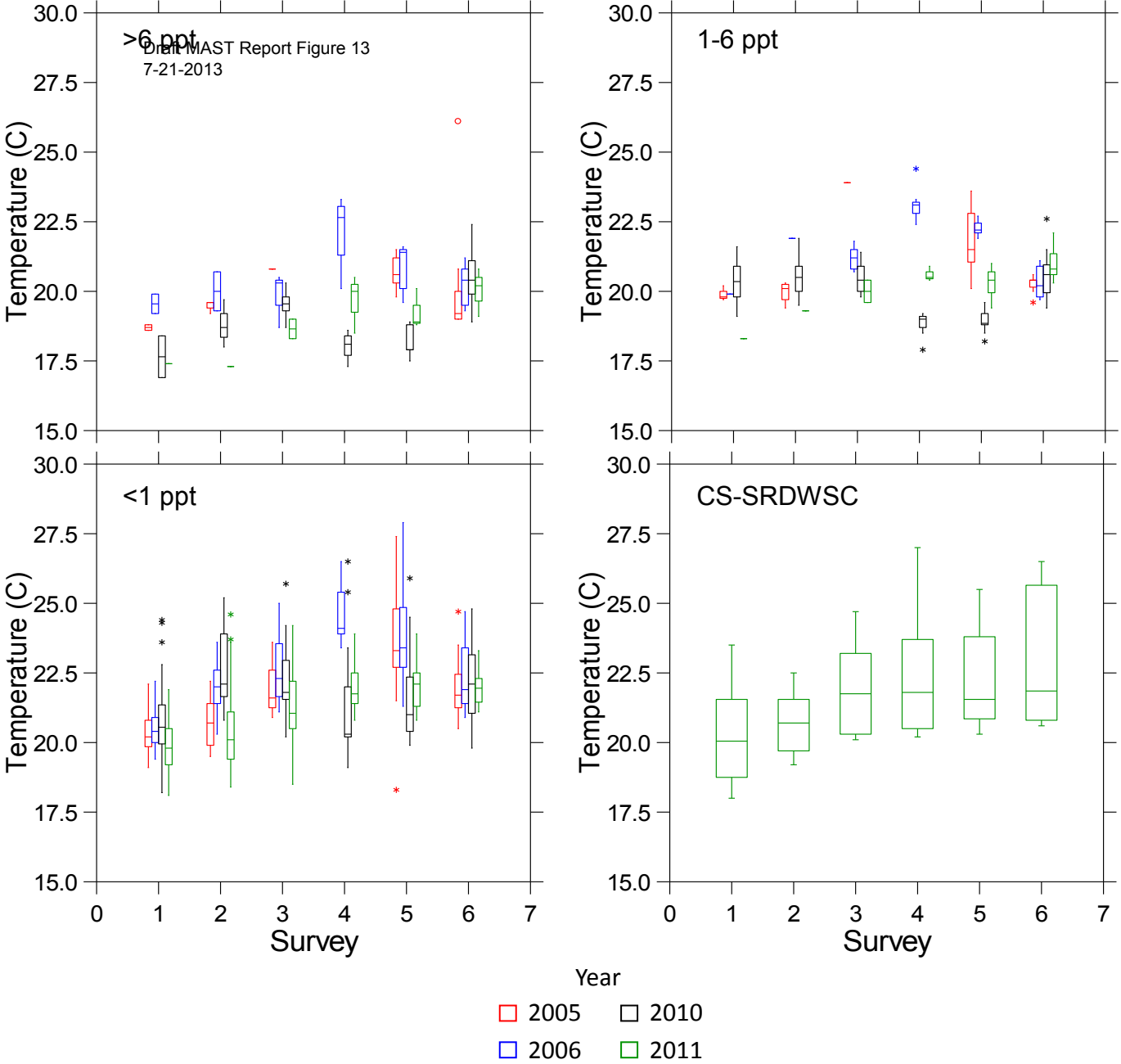


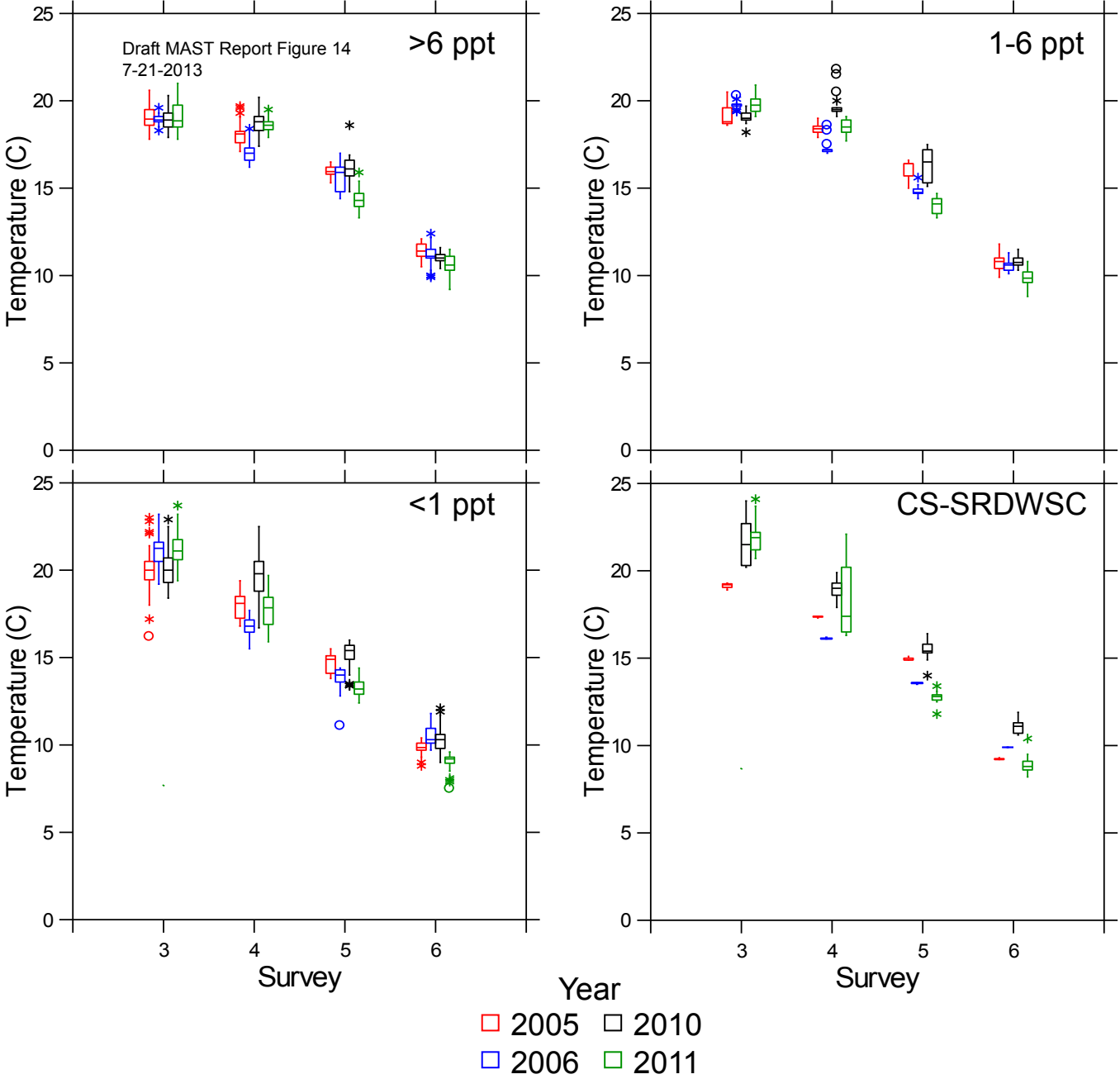
Draft MAST Report Figure 11
7-21-2013

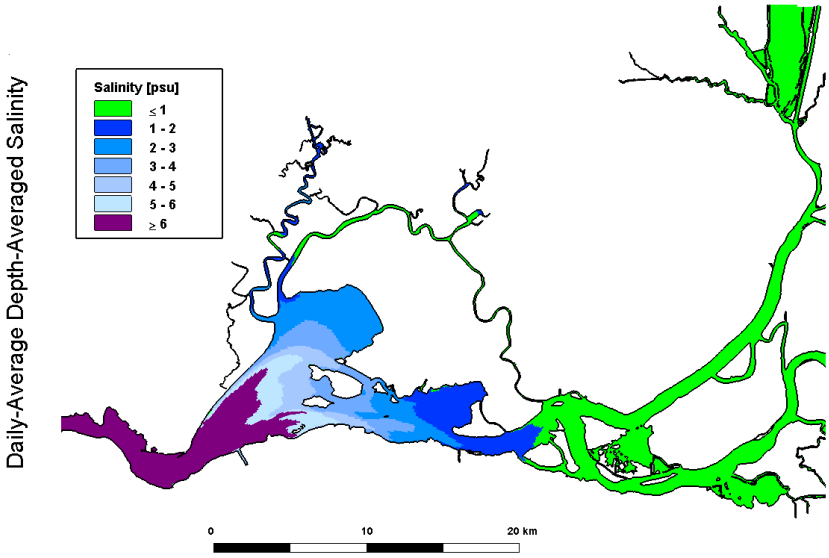


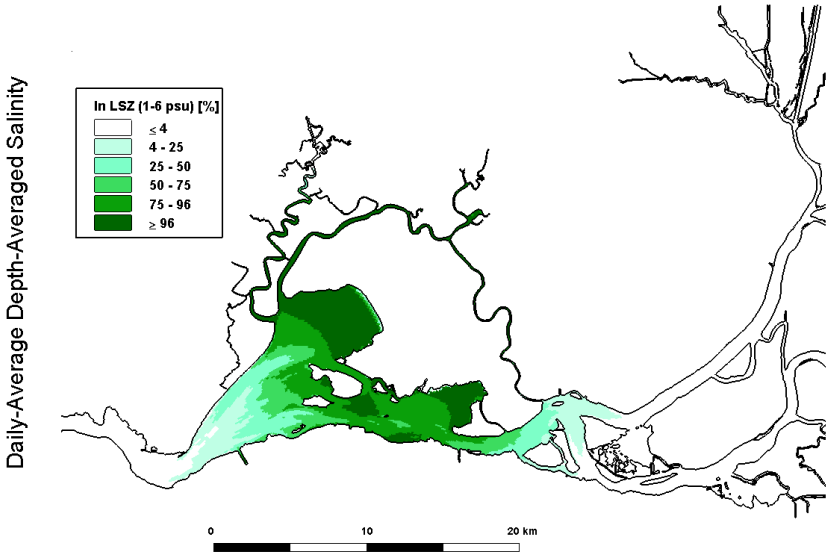
Draft MAST Report Figure 12
7-21-2013



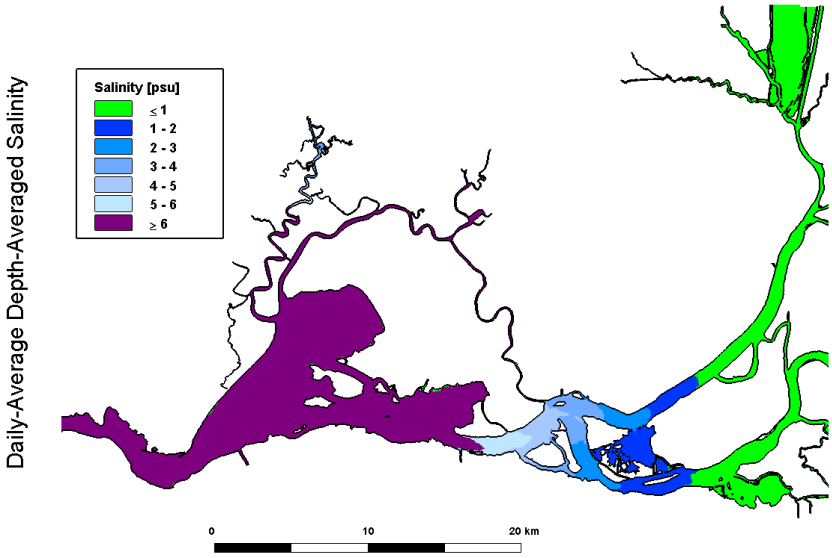

Draft MAST Report Figure 13
7-21-2013
>6 ppt
1-6 ppt
<1 ppt
CS-SRDWSC
Temperature (C)
Survey
30.0
27.5
25.0
22.5
20.0
17.5
15.0
0
1
2
3
4
5
6
7
Year
2005
2006
2010
2011

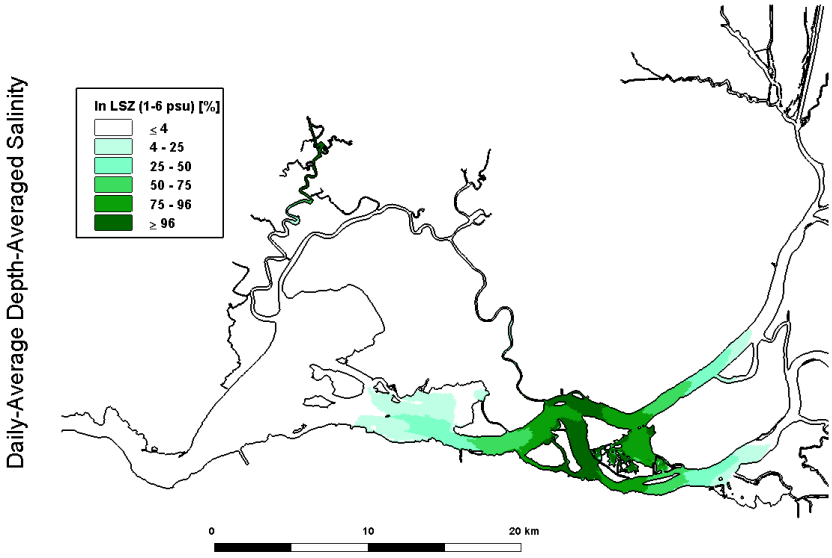

Draft MAST Report Figure 14
7-21-2013
>6 ppt
1-6 ppt
<1 ppt
CS-SRDWSC
Temperature (C)
Survey
Year
2005
2006
2010
2011


Daily-Average Depth-Averaged Salinity
Salinity [psu]
≤ 1
1 - 2
2 - 3
3 - 4
4 - 5
5 - 6
≥ 6
0
10
20 km

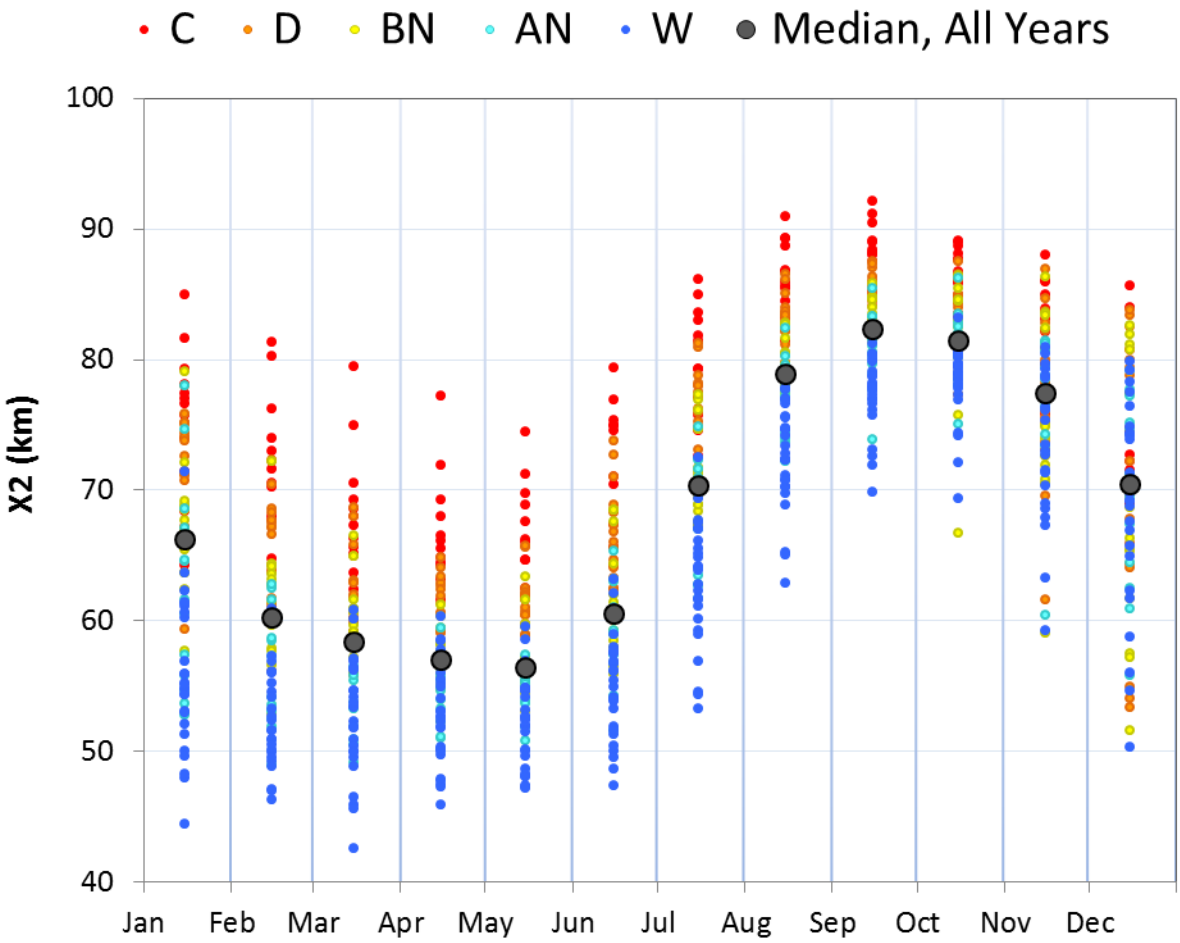

Daily-Average Depth-Averaged Salinity
In LSZ (1-6 psu) [%]
≤ 4
4 - 25
25 - 50
50 - 75
75 - 96
≥ 96
0
10
20 km

Draft MAST Report Figure 16
7-21-2013

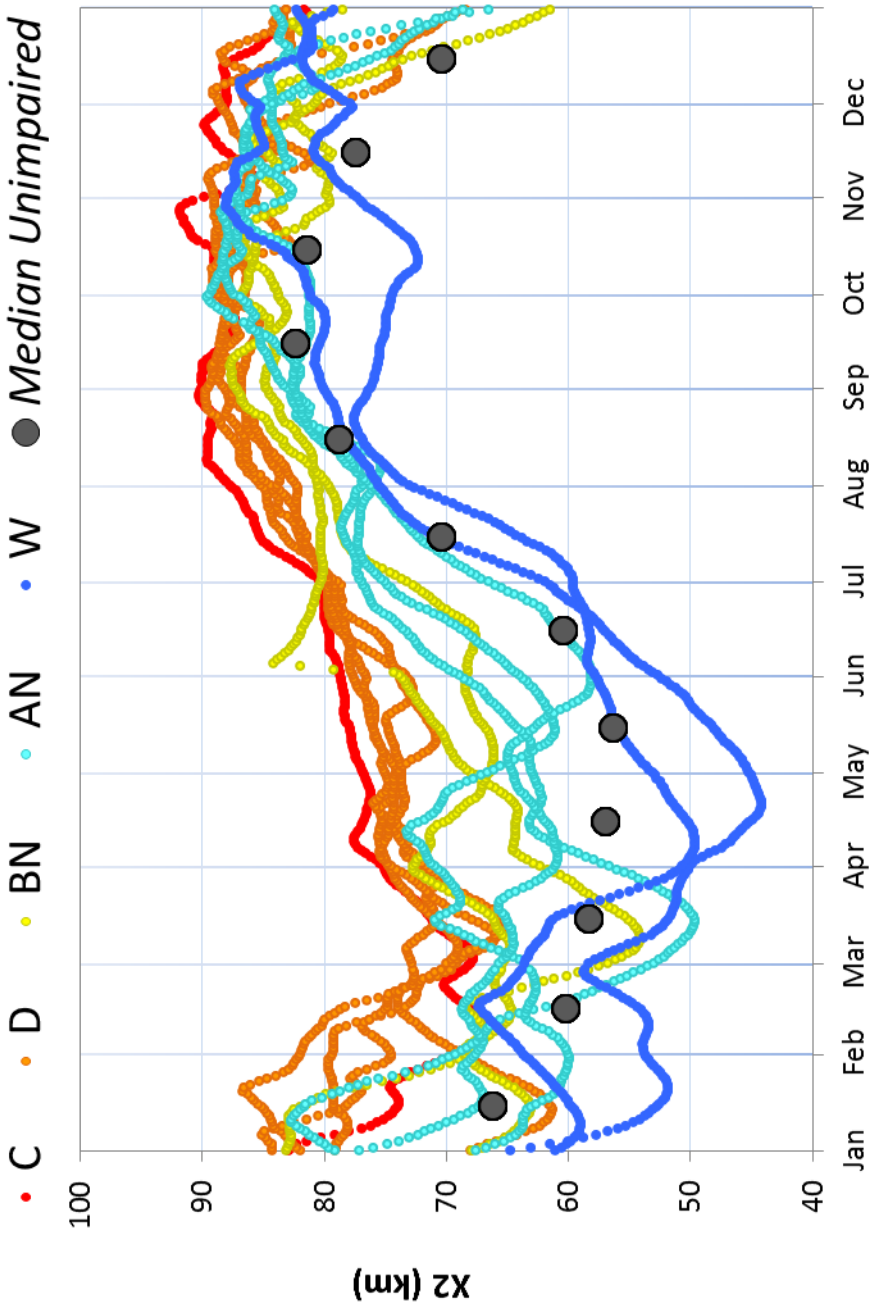




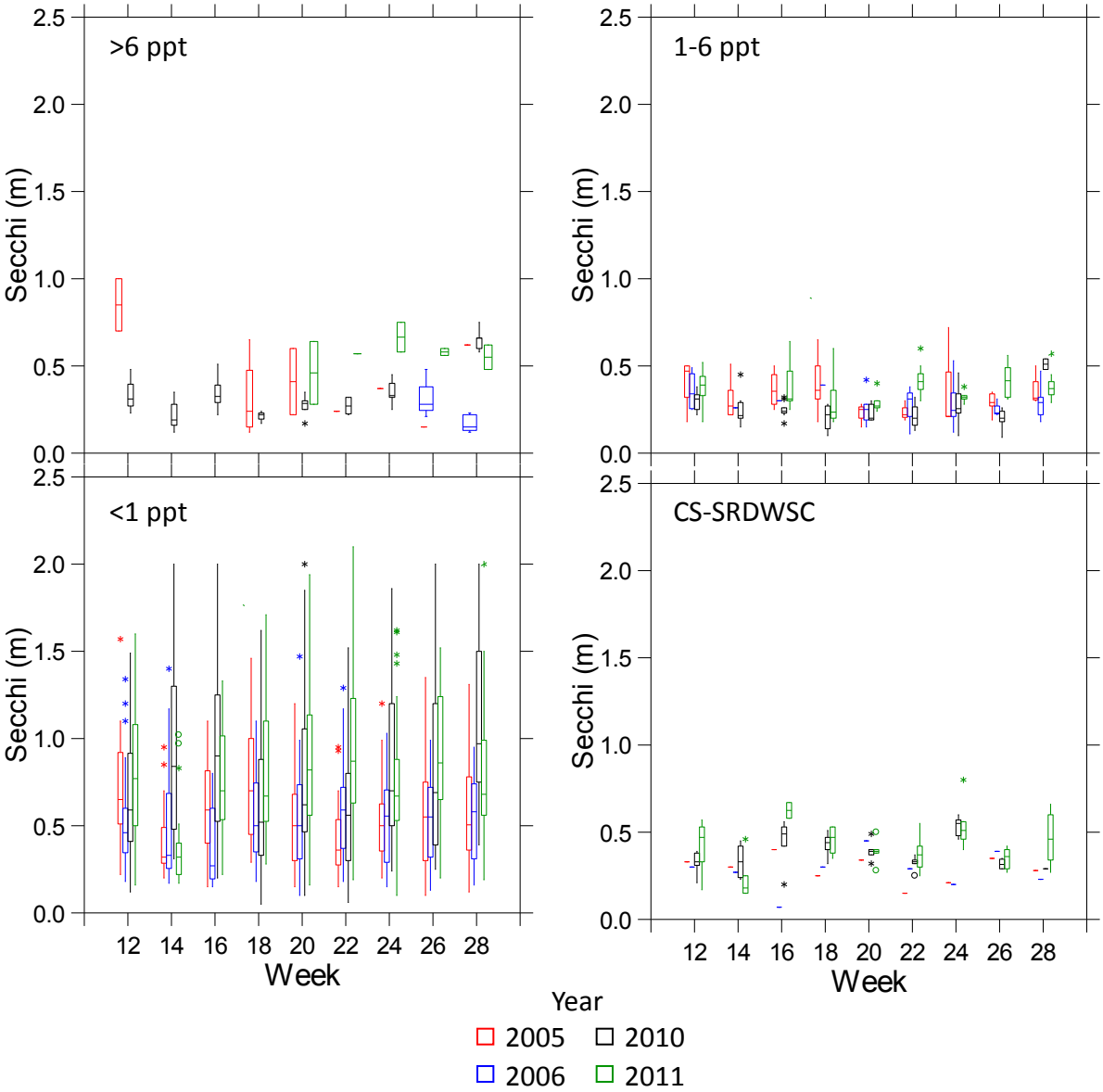
Draft MAST Report Figure 17
7-21-2013



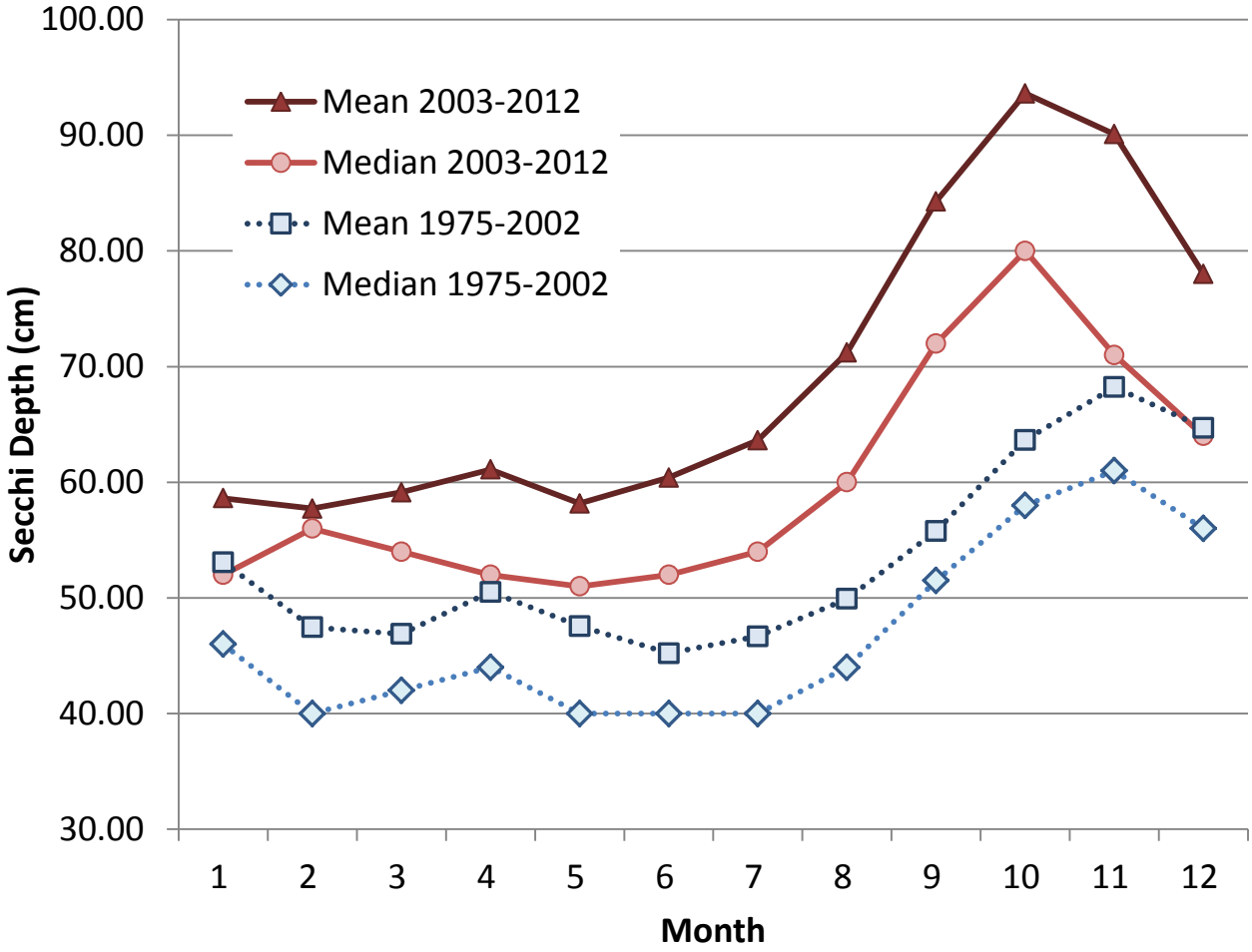
Draft MAST Report Figure 18
7-21-2013



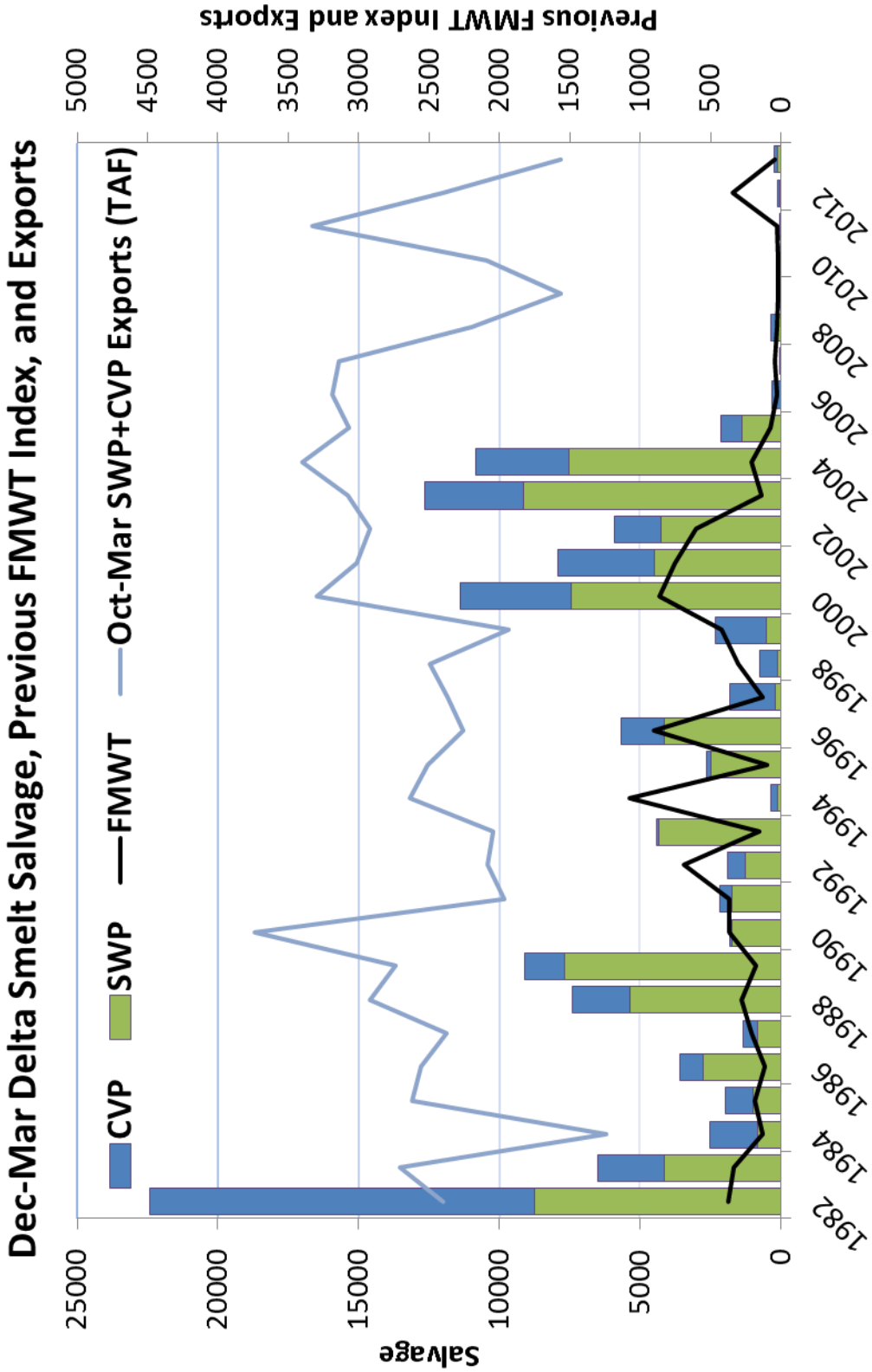
Draft MAST Report Figure 19
7-21-2013



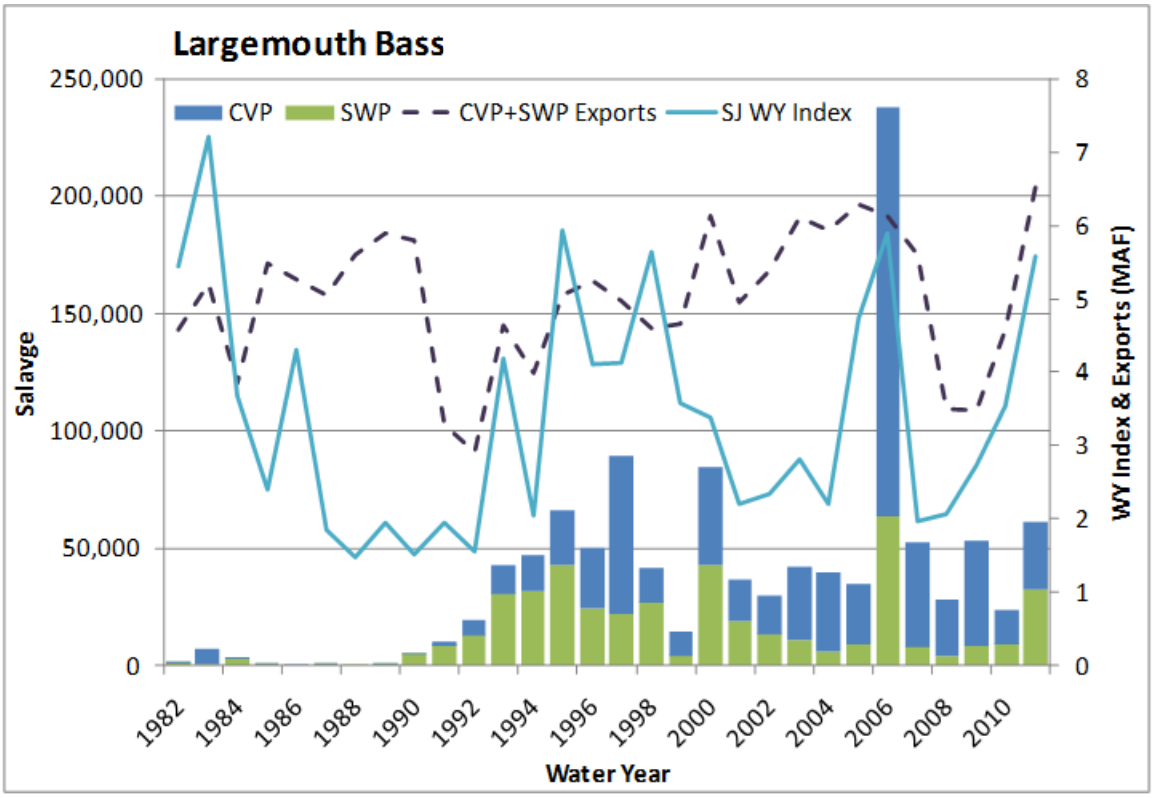
Draft MAST Report Figure 20
7-21-2013

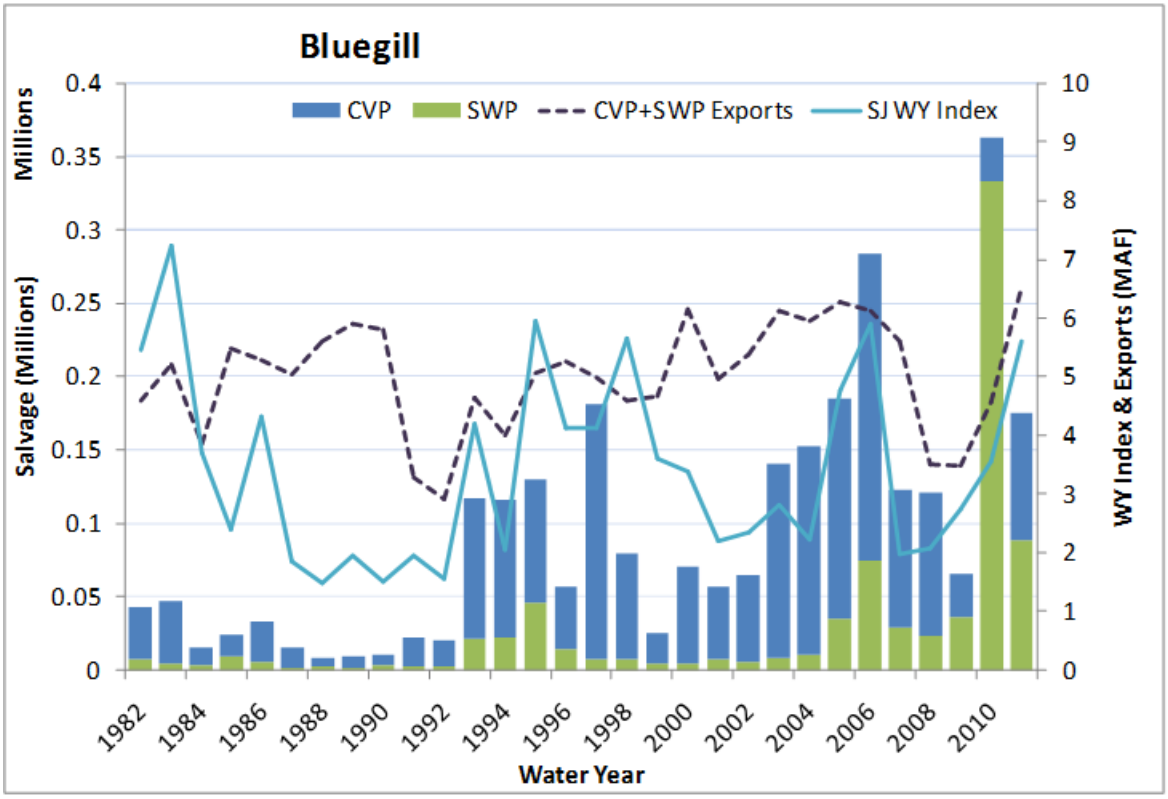


Draft MAST Report Figure 21
7-21-2013

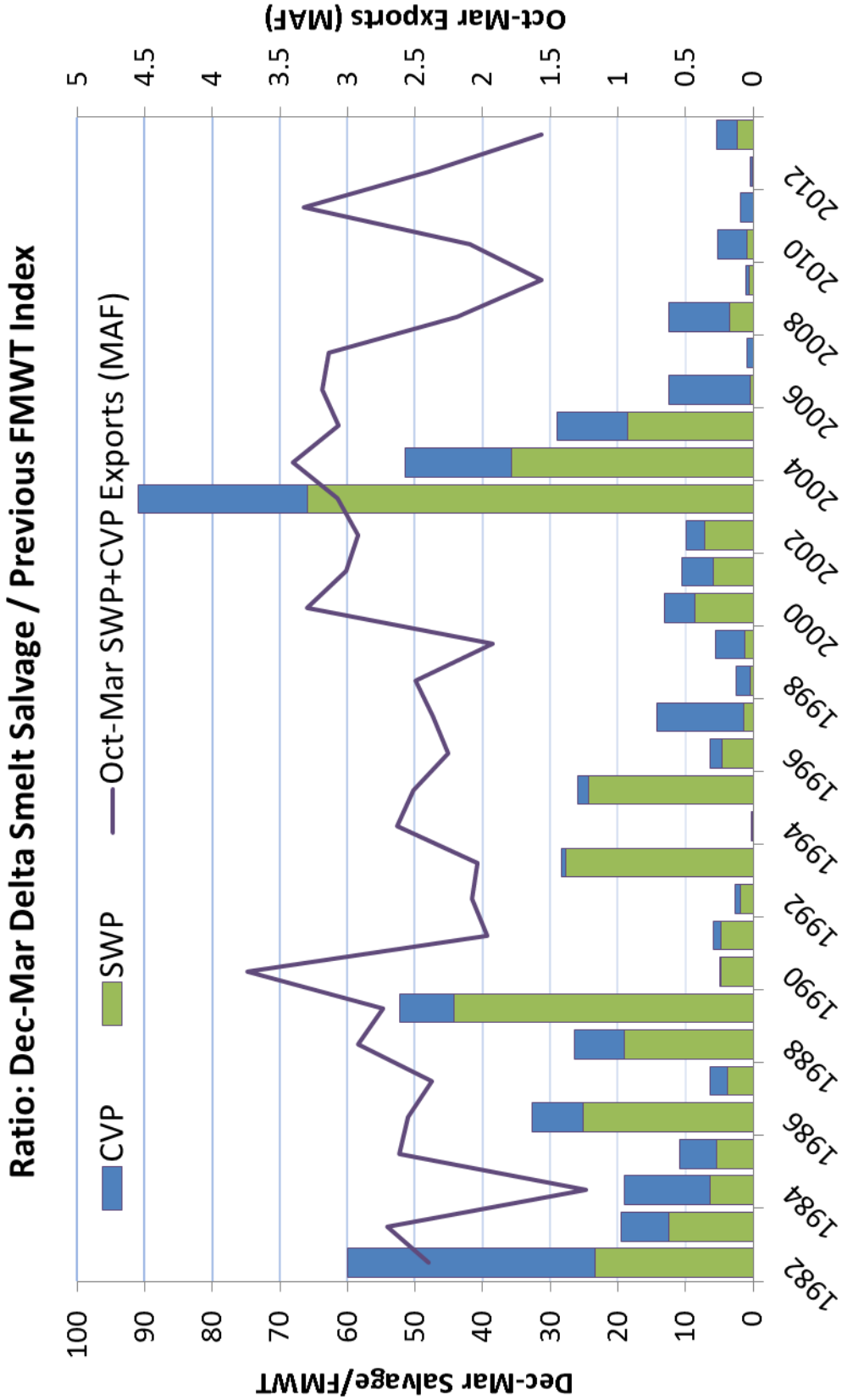


Draft MAST Report Figure 22
7-21-2013

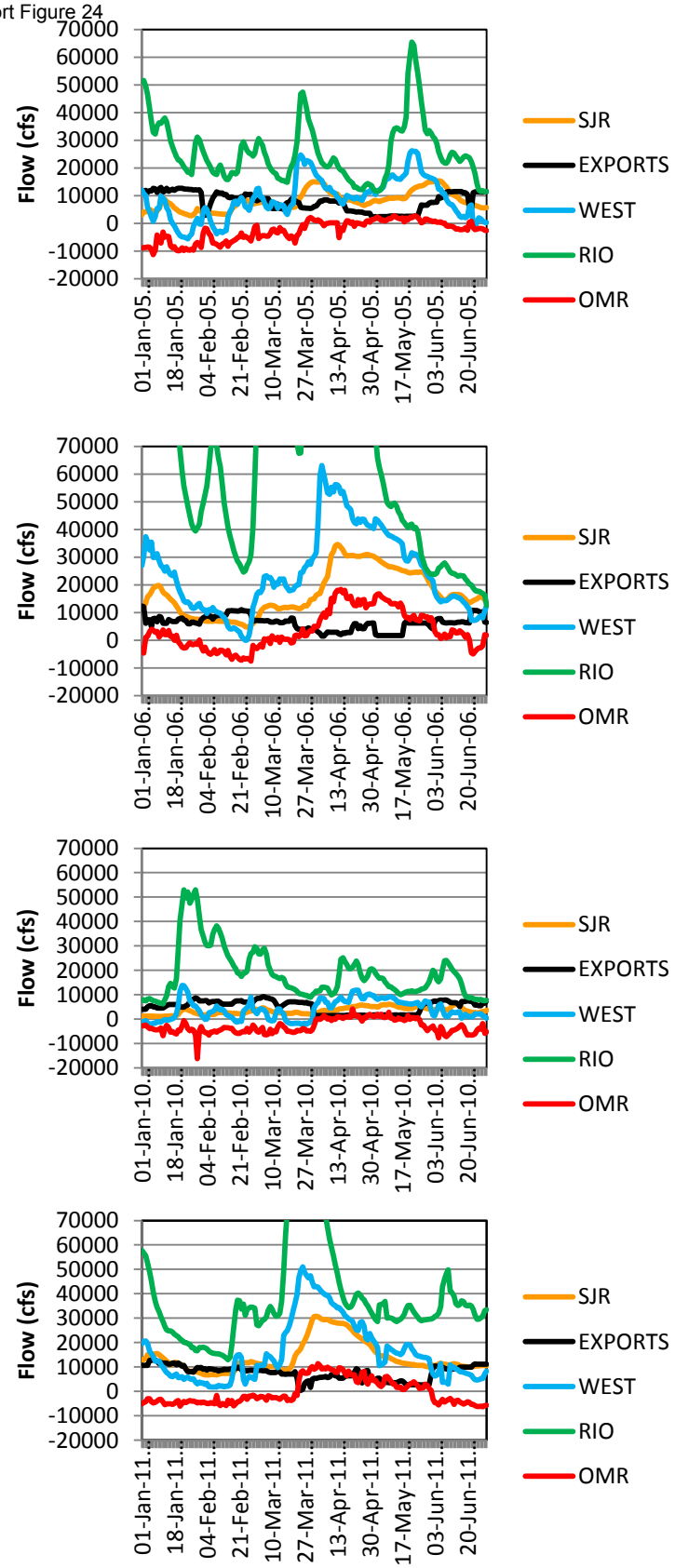




Draft MAST Report Figure 23
7-21-2013



Draft MAST Report Figure 24
7-21-2013



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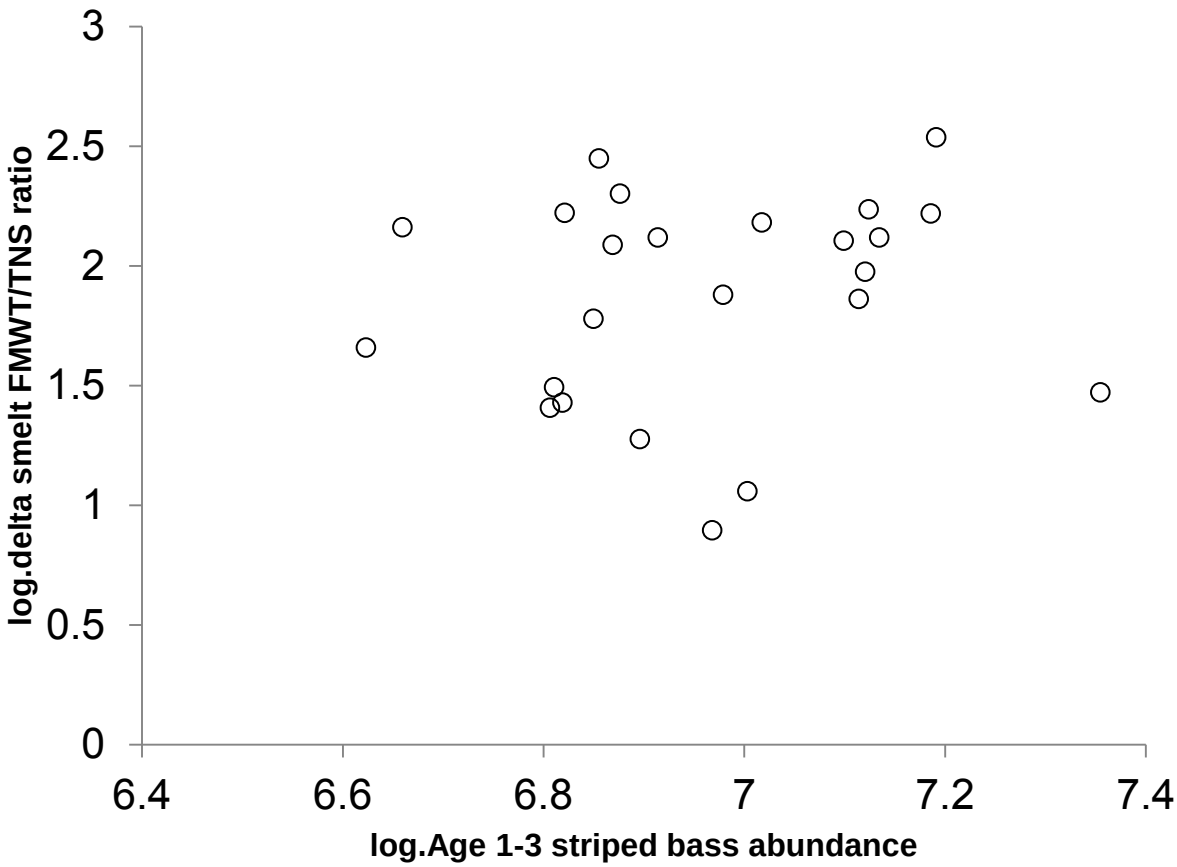
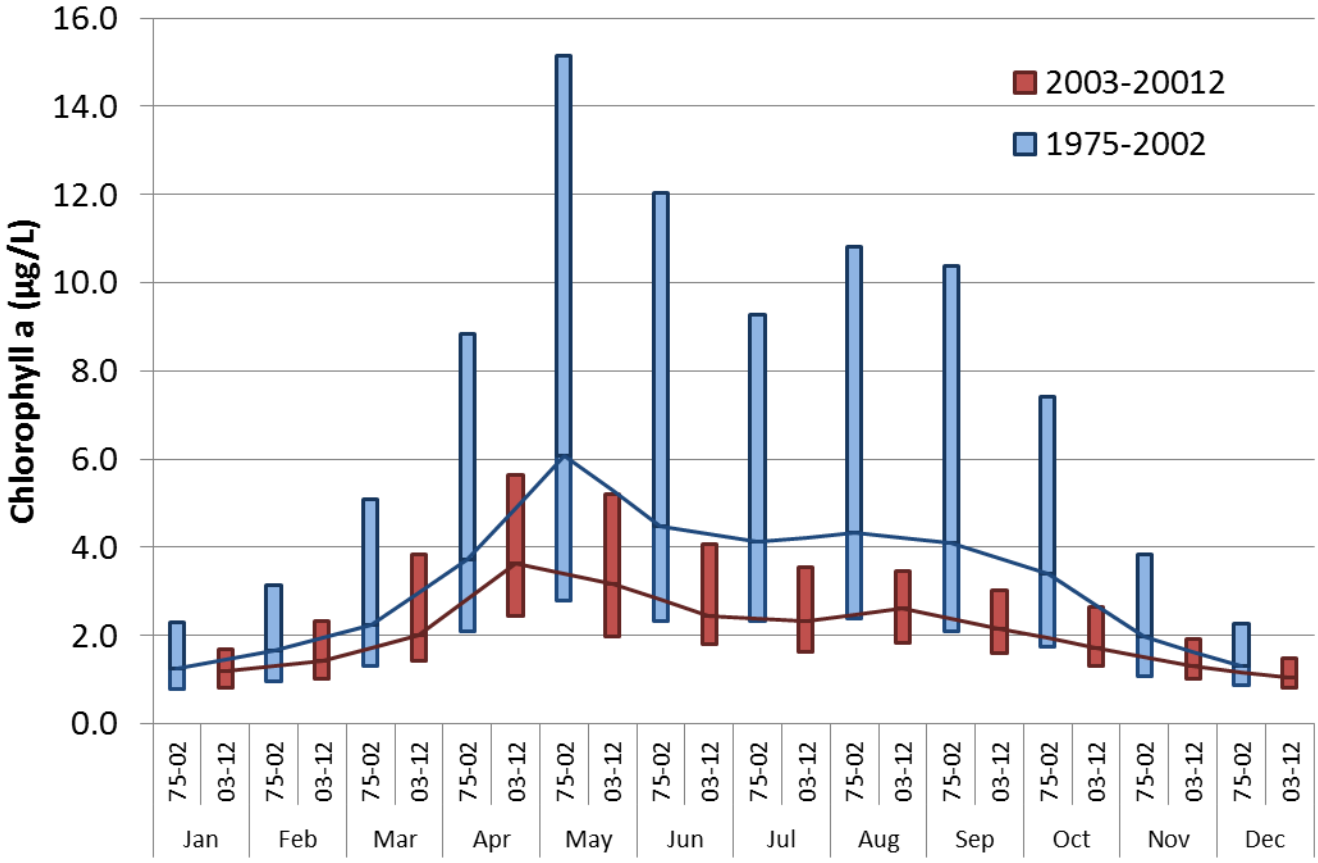
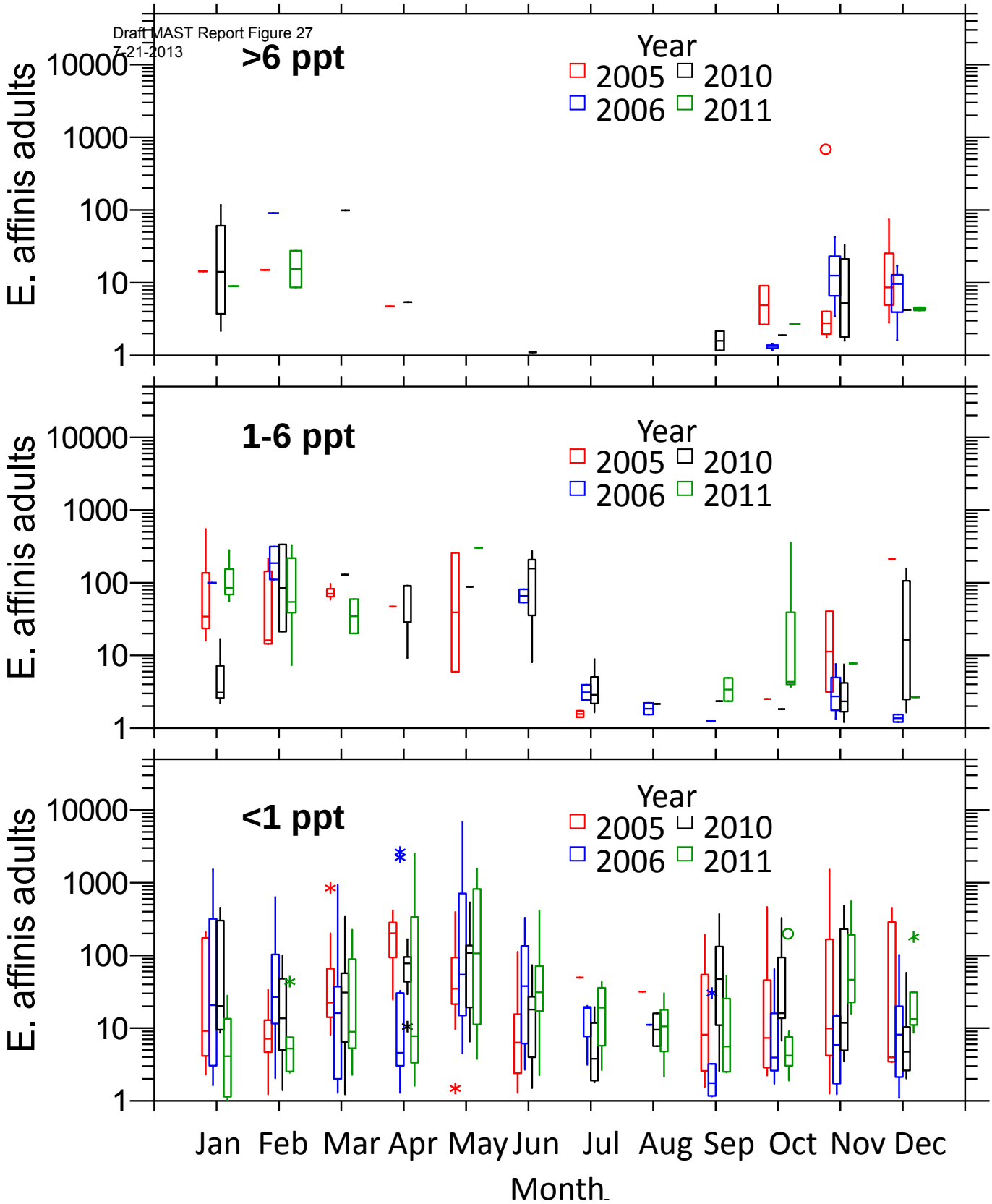
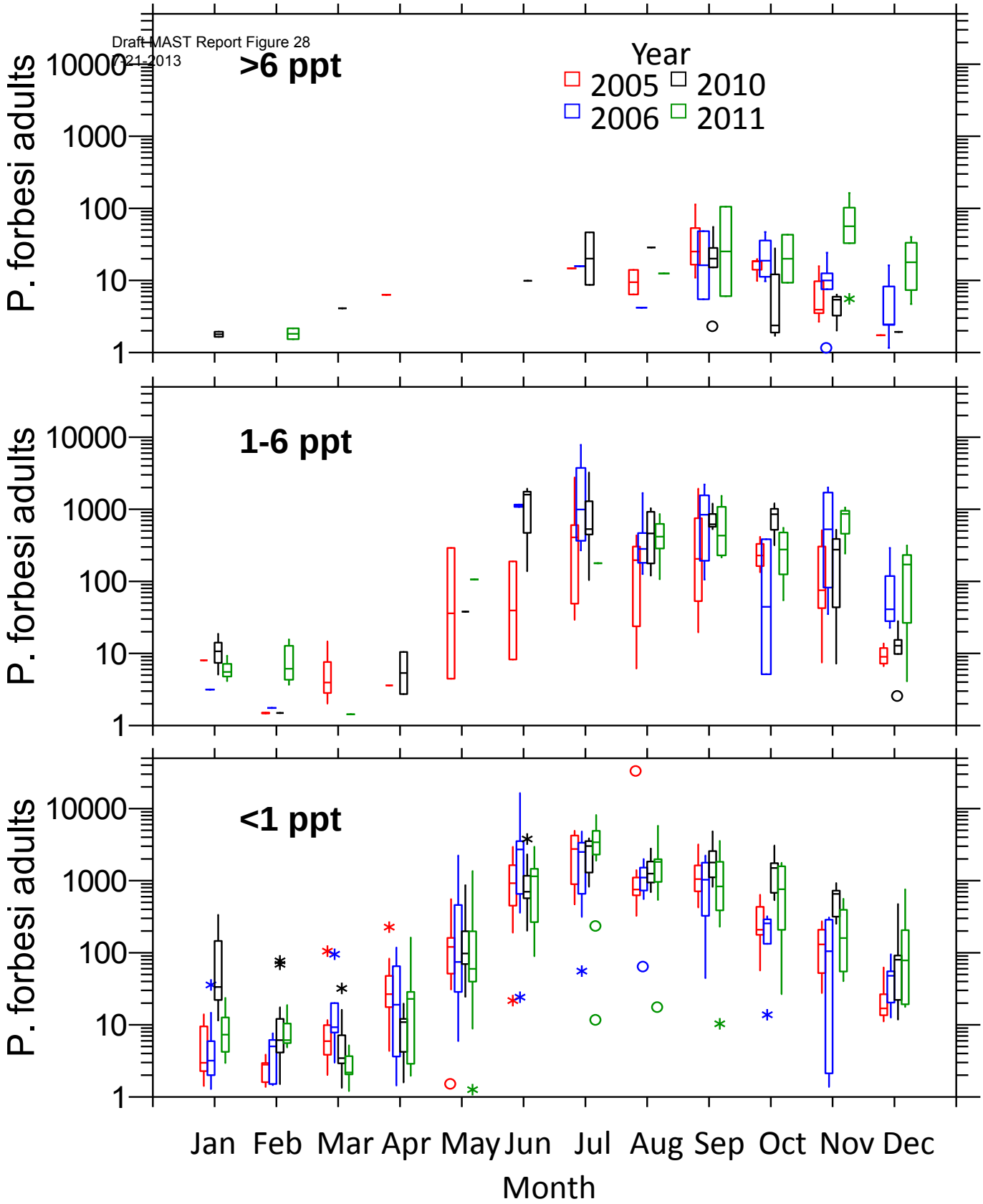


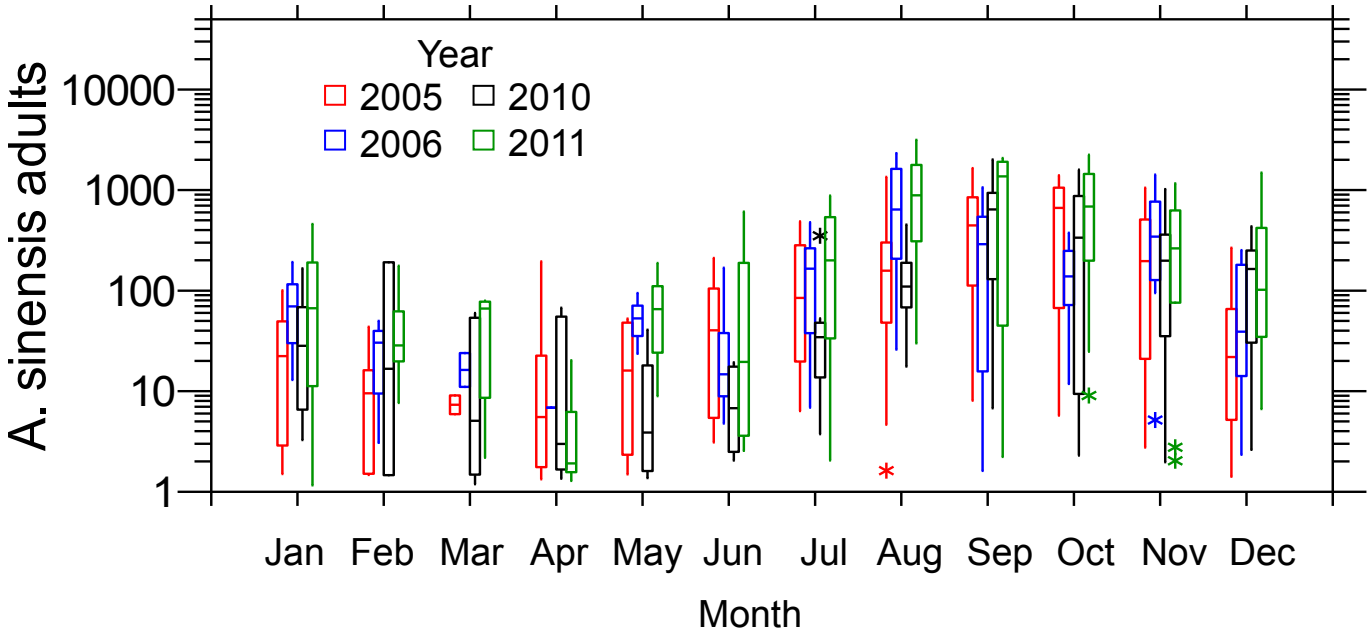
Draft MAST Report Figure 26
7-21-2013



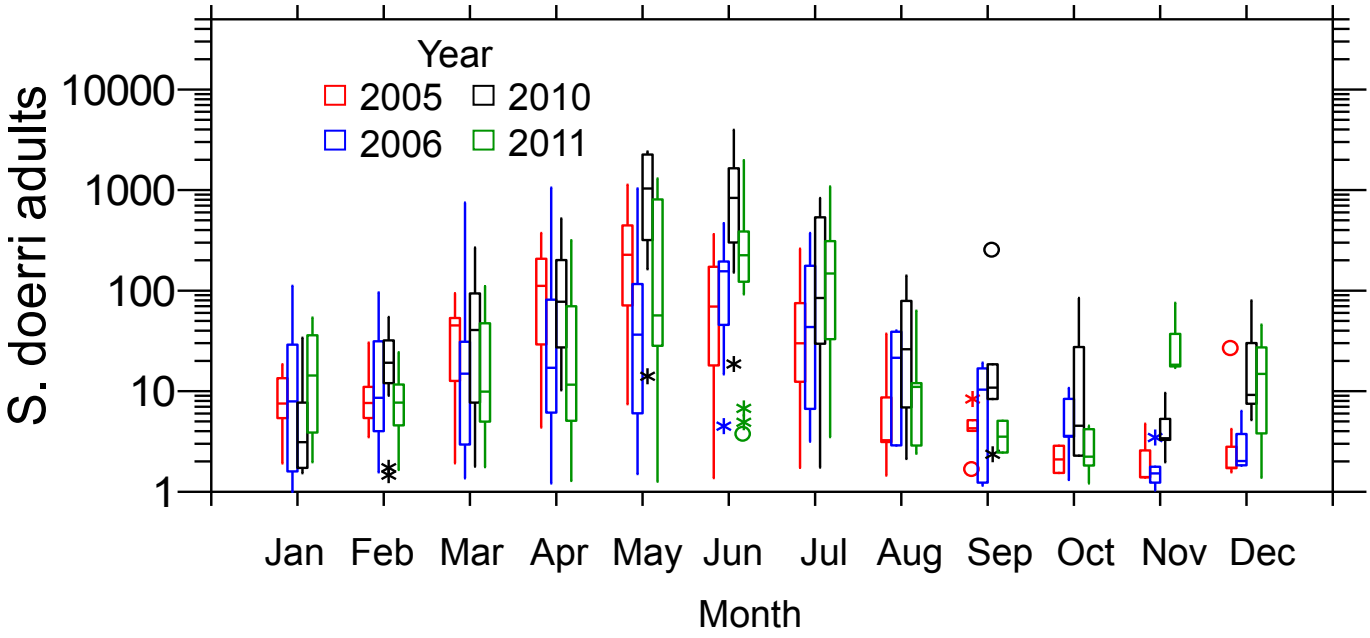

Draft MAST Report Figure 27
7-21-2013
>6 ppt
1-6 ppt
<1 ppt
Year
2005
2006
2010
2011
E. affinis adults
10000
1000
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Draft MAST Report Figure 28
7-21-2013
>6 ppt
1-6 ppt
<1 ppt
Year
2005
2006
2010
2011
P. forbesi adults
10000
1000
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

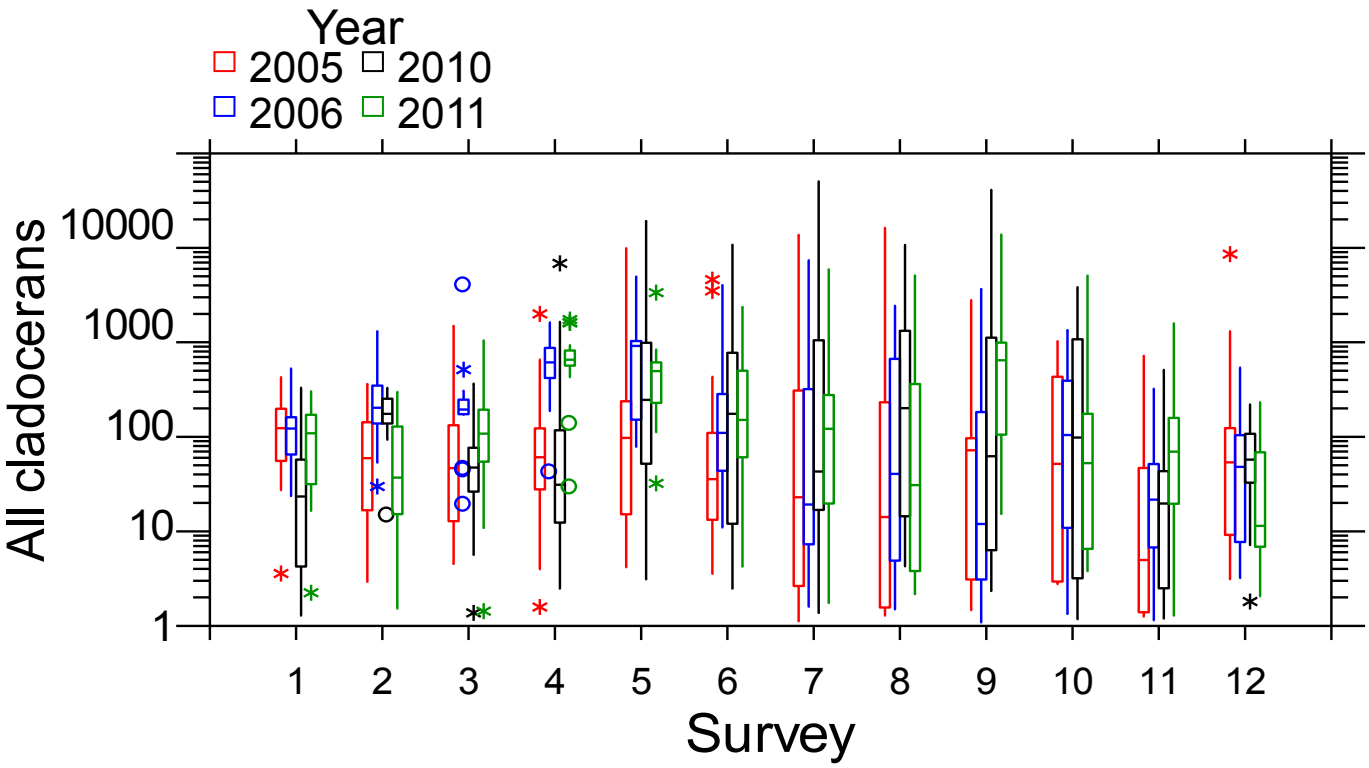
Draft MAST Report Figure 29
7-21-2013



Draft MAST Report Figure 30
7-21-2013



Draft MAST Report Figure 31
7-21-2013



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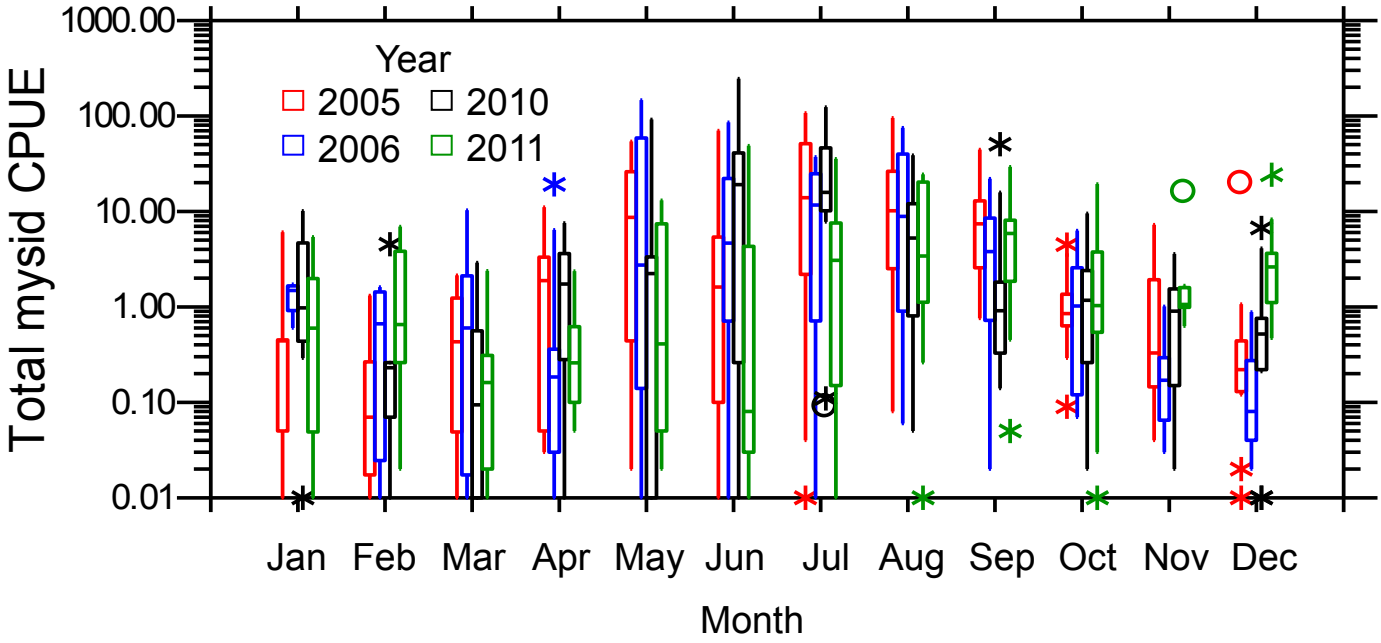
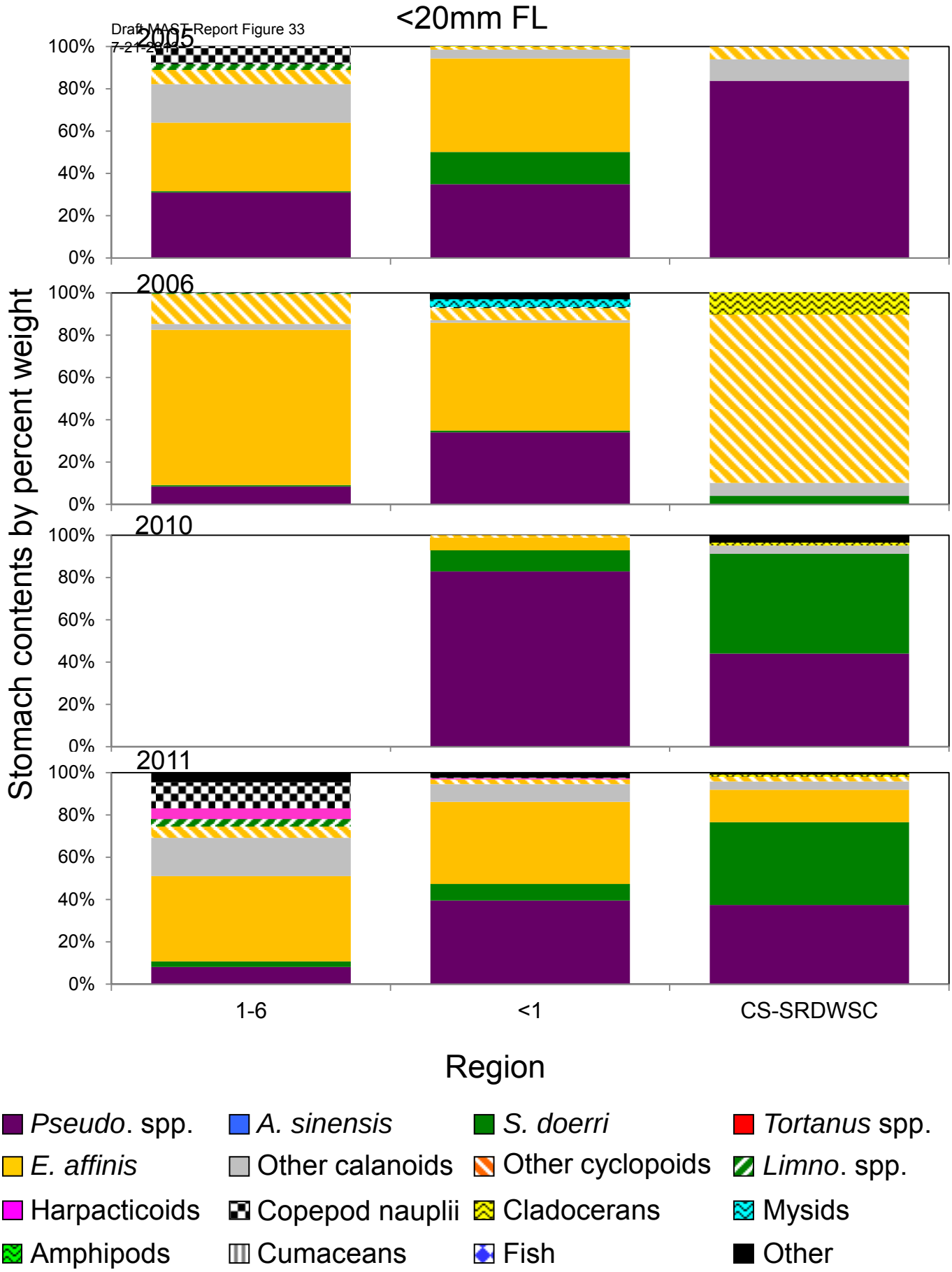
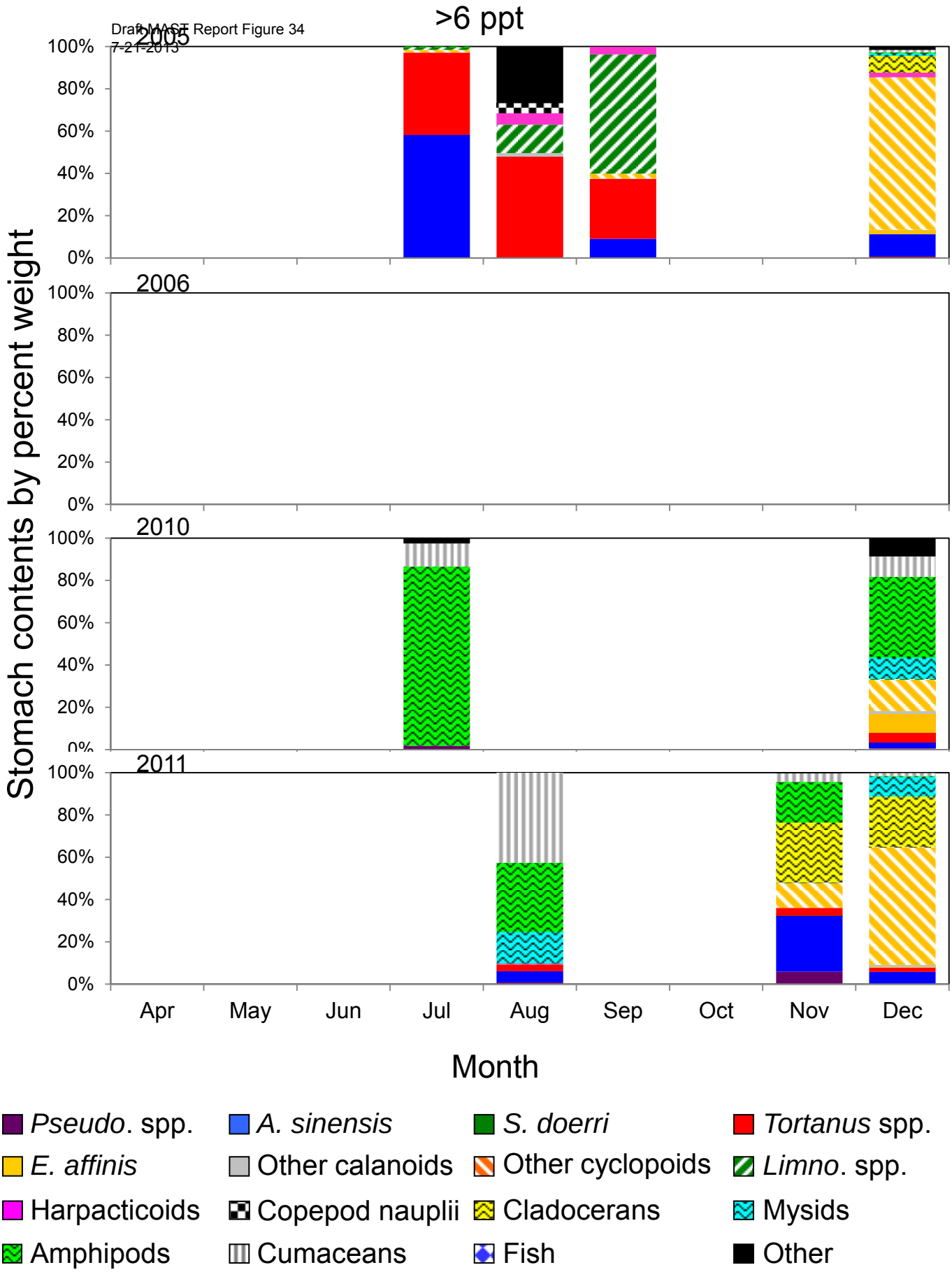
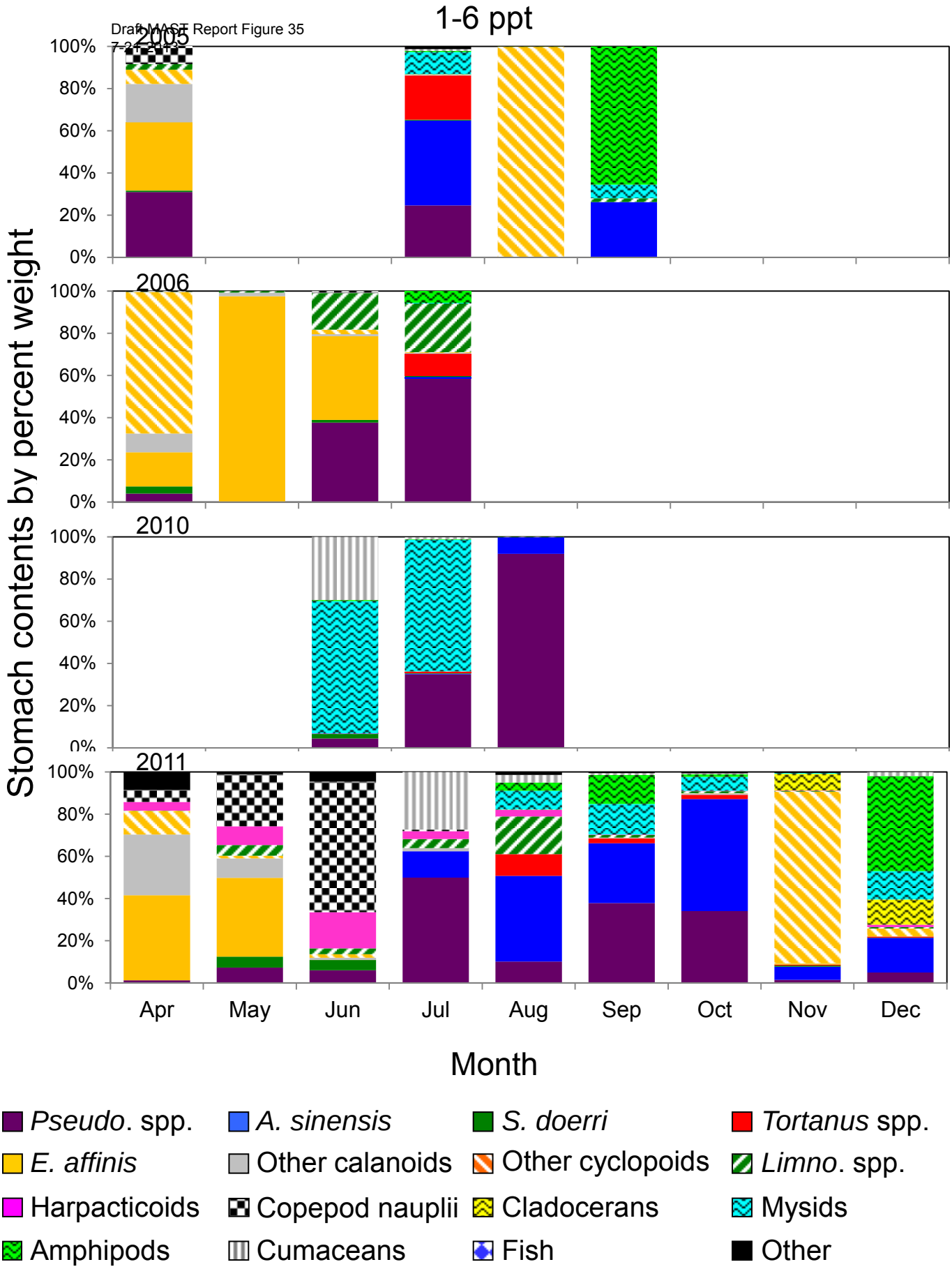
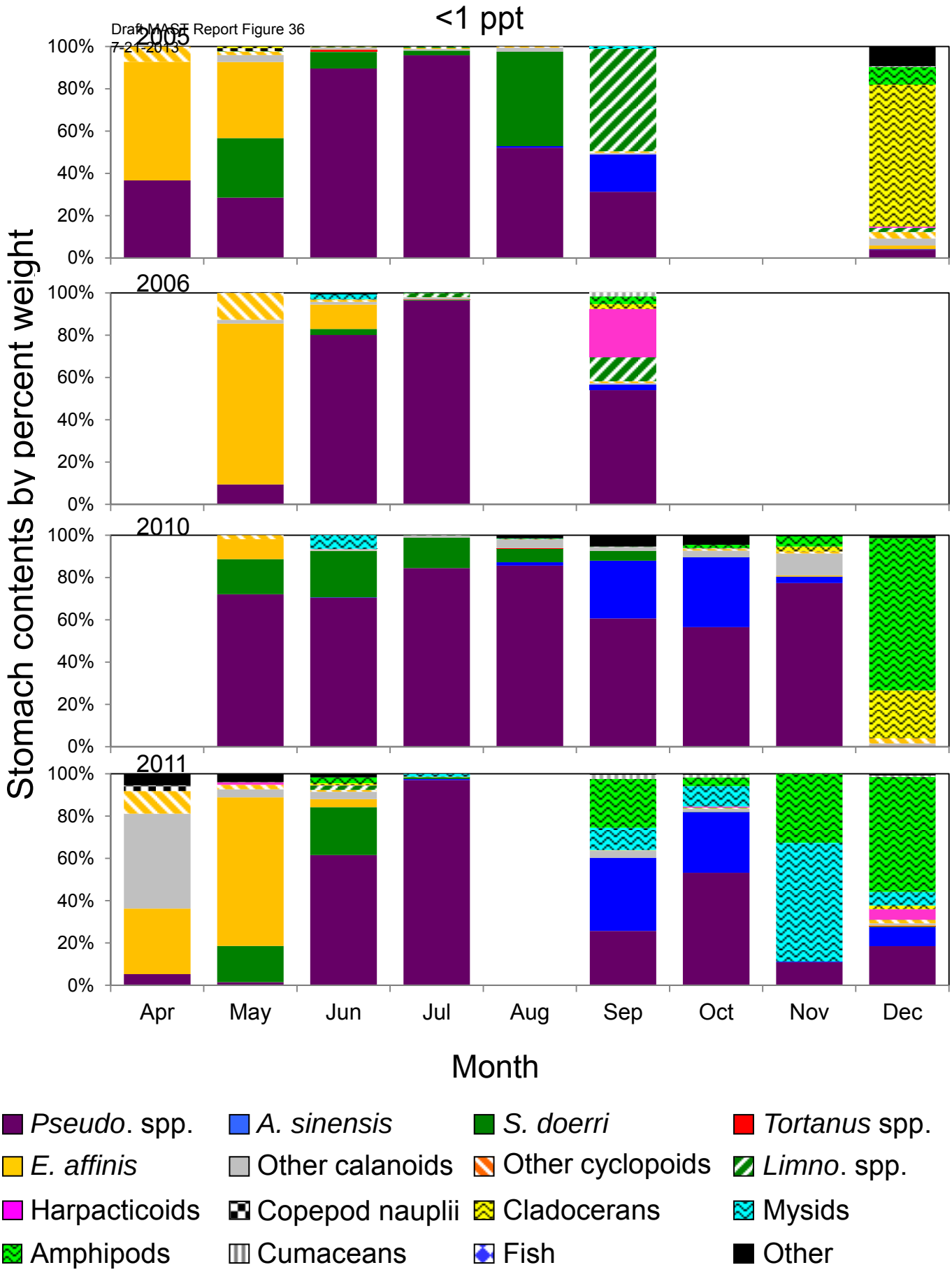
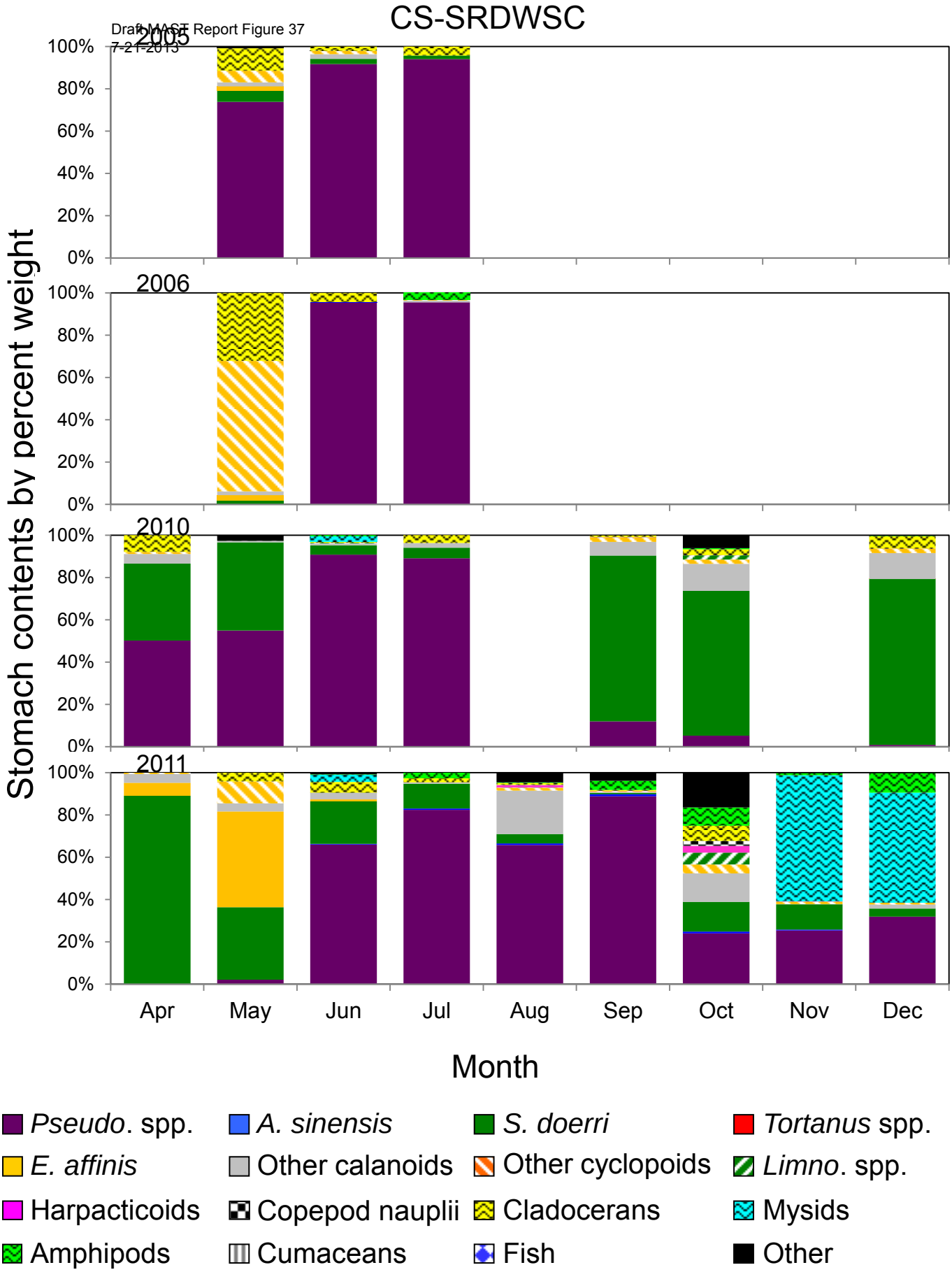


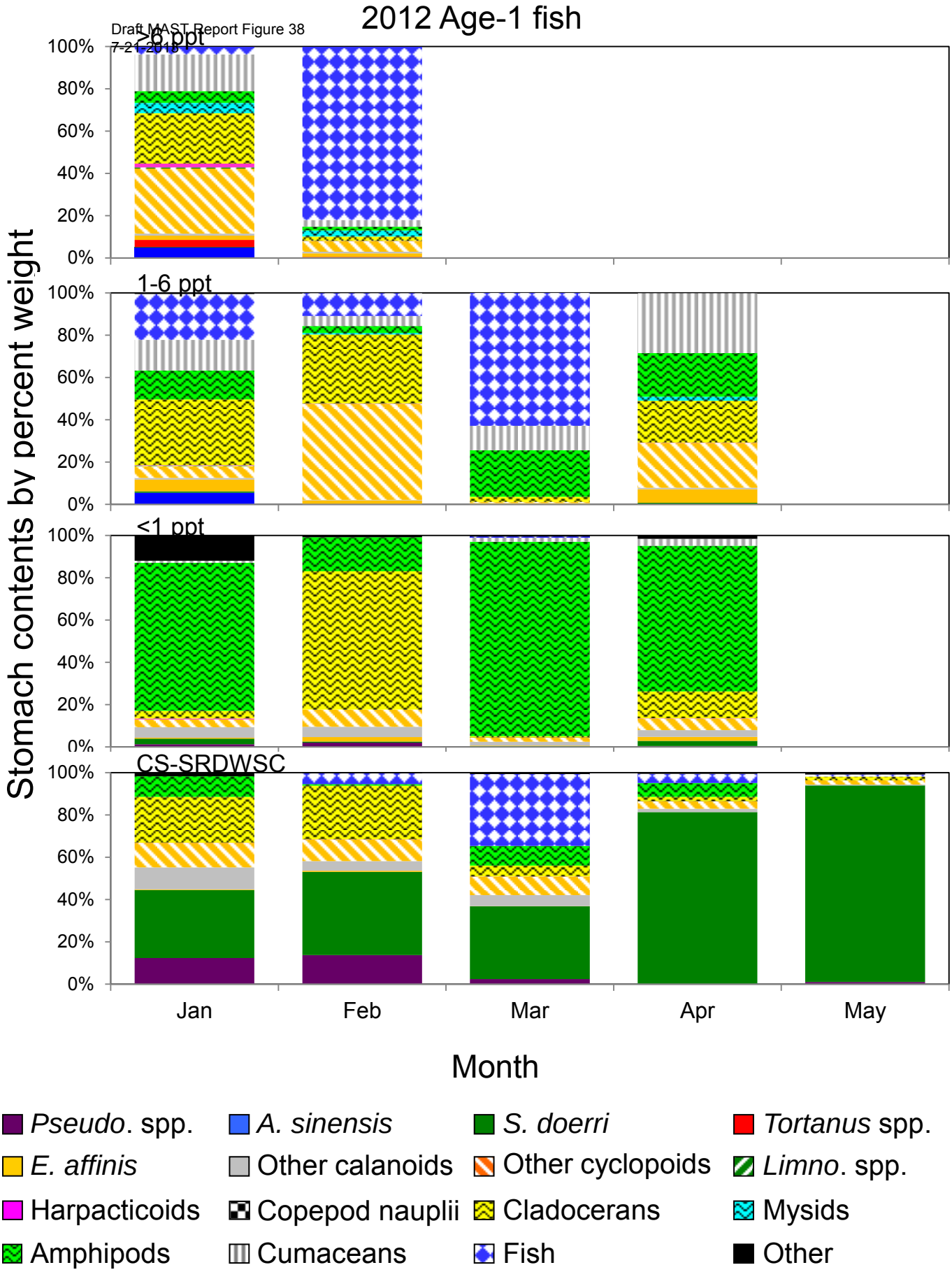

Draft MAST Report Figure 33
7-21-2015
<20mm FL
2005
2006
2010
2011
100%
80%
60%
40%
20%
0%
Stomach contents by percent weight
1-6
<1
CS-SRDWSC
Region
Pseudo. spp.
A. sinensis
S. doerri
Tortanus spp.
E. affinis
Other calanoids
Other cyclopoids
Limno. spp.
Harpacticoids
Copepod nauplii
Cladocerans
Mysids
Amphipods
Cumaceans
Fish
Other


Draft MAST Report Figure 34
7-21-2013
>6 ppt
2005
2006
2010
2011
100%
80%
60%
40%
20%
0%
Stomach contents by percent weight
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
Pseudo. spp.
A. sinensis
S. doerri
Tortanus spp.
E. affinis
Other calanoids
Other cyclopoids
Limno. spp.
Harpacticoids
Copepod nauplii
Cladocerans
Mysids
Amphipods
Cumaceans
Fish
Other

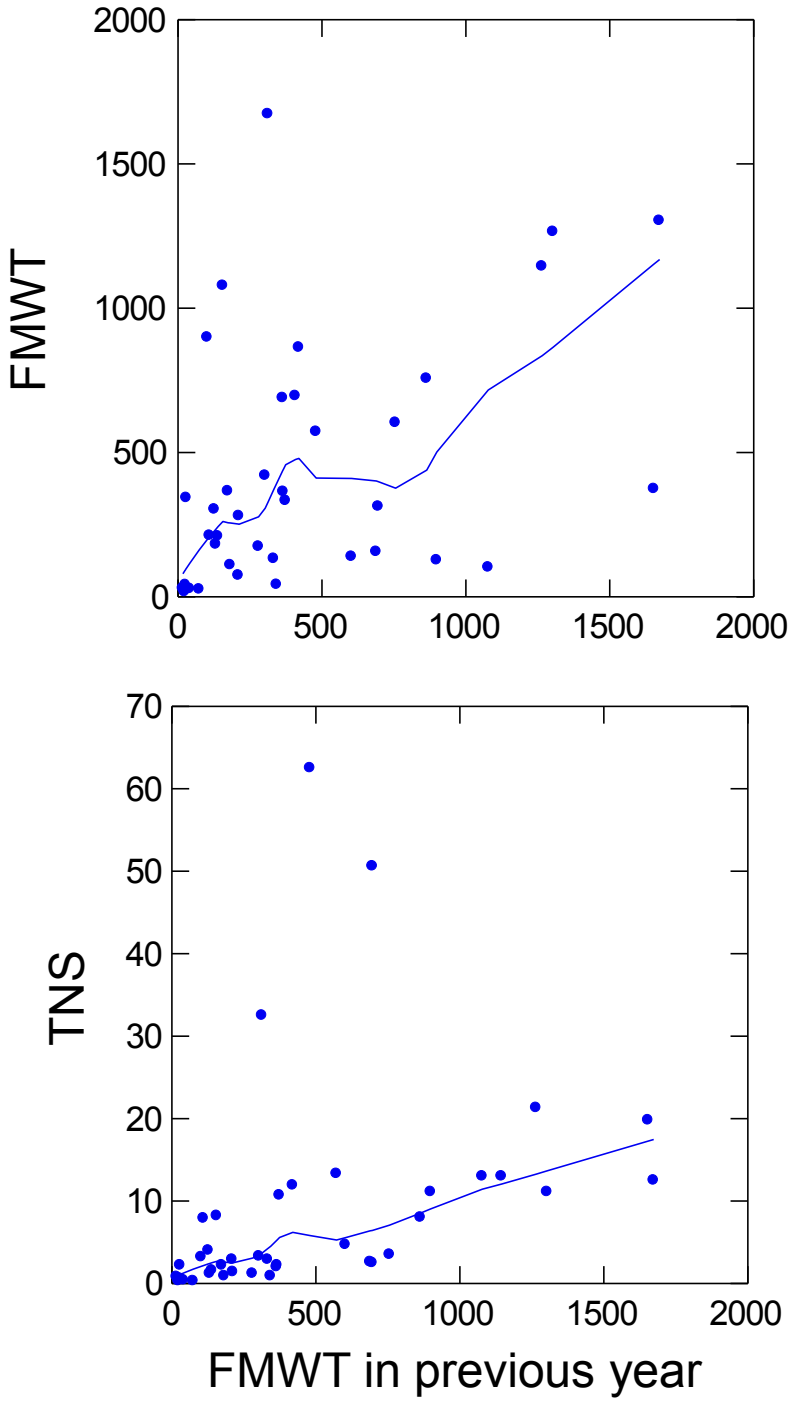

1-6 ppt
2005
2006
2010
2011
100%
80%
60%
40%
20%
0%
Stomach contents by percent weight
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
Pseudo. spp.
A. sinensis
S. doerri
Tortanus spp.
E. affinis
Other calanoids
Other cyclopoids
Limno. spp.
Harpacticoids
Copepod nauplii
Cladocerans
Mysids
Amphipods
Cumaceans
Fish
Other

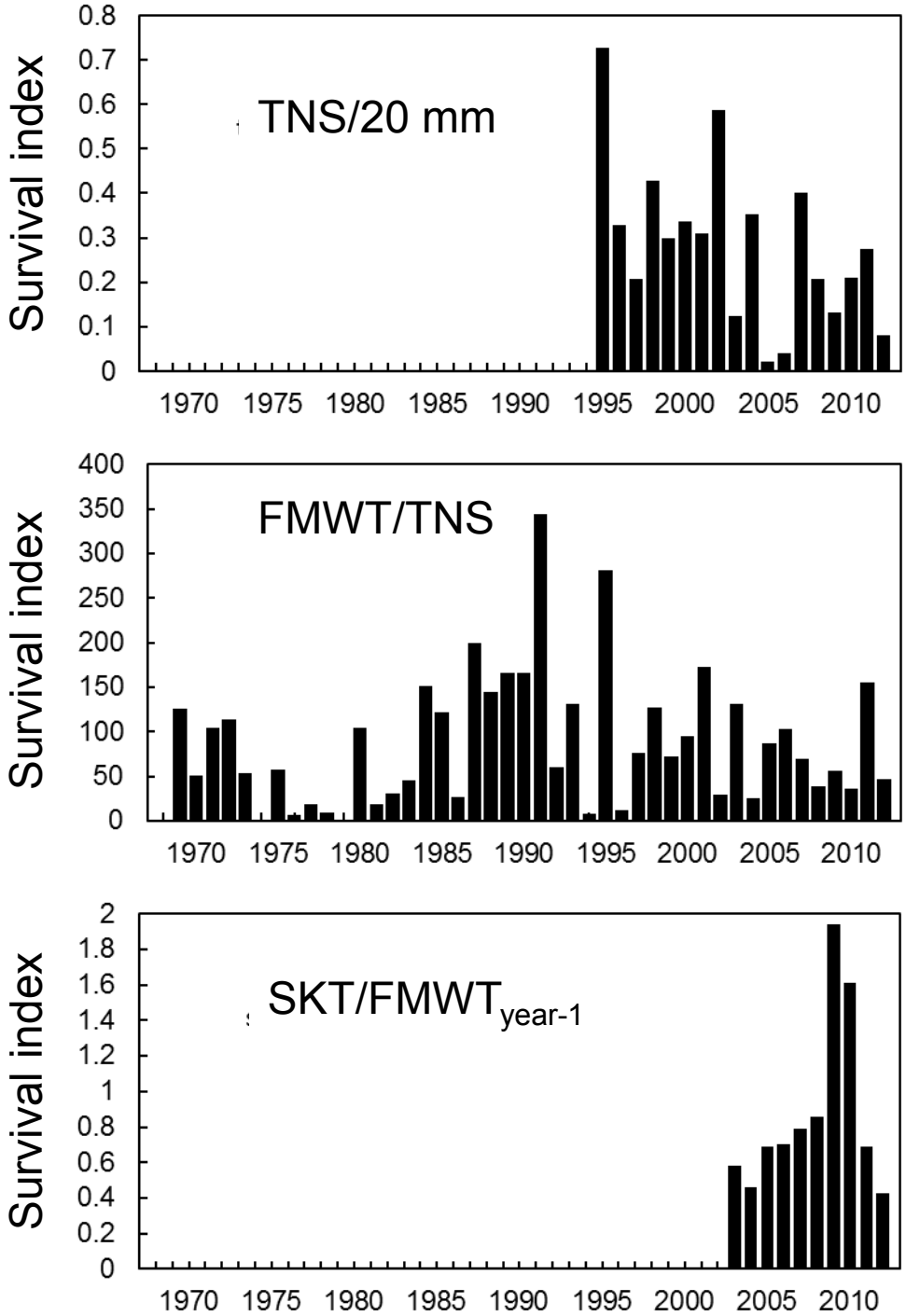

Draft MAST Report Figure 36
7-21-2013
<1 ppt
2005
2006
2010
2011
100%
80%
60%
40%
20%
0%
Stomach contents by percent weight
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
Pseudo. spp.
A. sinensis
S. doerri
Tortanus spp.
E. affinis
Other calanoids
Other cyclopoids
Limno. spp.
Harpacticoids
Copepod nauplii
Cladocerans
Mysids
Amphipods
Cumaceans
Fish
Other


CS-SRDWSC
Draft MAST Report Figure 37
7-21-2013
2005
2006
2010
2011
100%
80%
60%
40%
20%
0%
Stomach contents by percent weight
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
Pseudo. spp.
A. sinensis
S. doerri
Tortanus spp.
E. affinis
Other calanoids
Other cyclopoids
Limno. spp.
Harpacticoids
Copepod nauplii
Cladocerans
Mysids
Amphipods
Cumaceans
Fish
Other

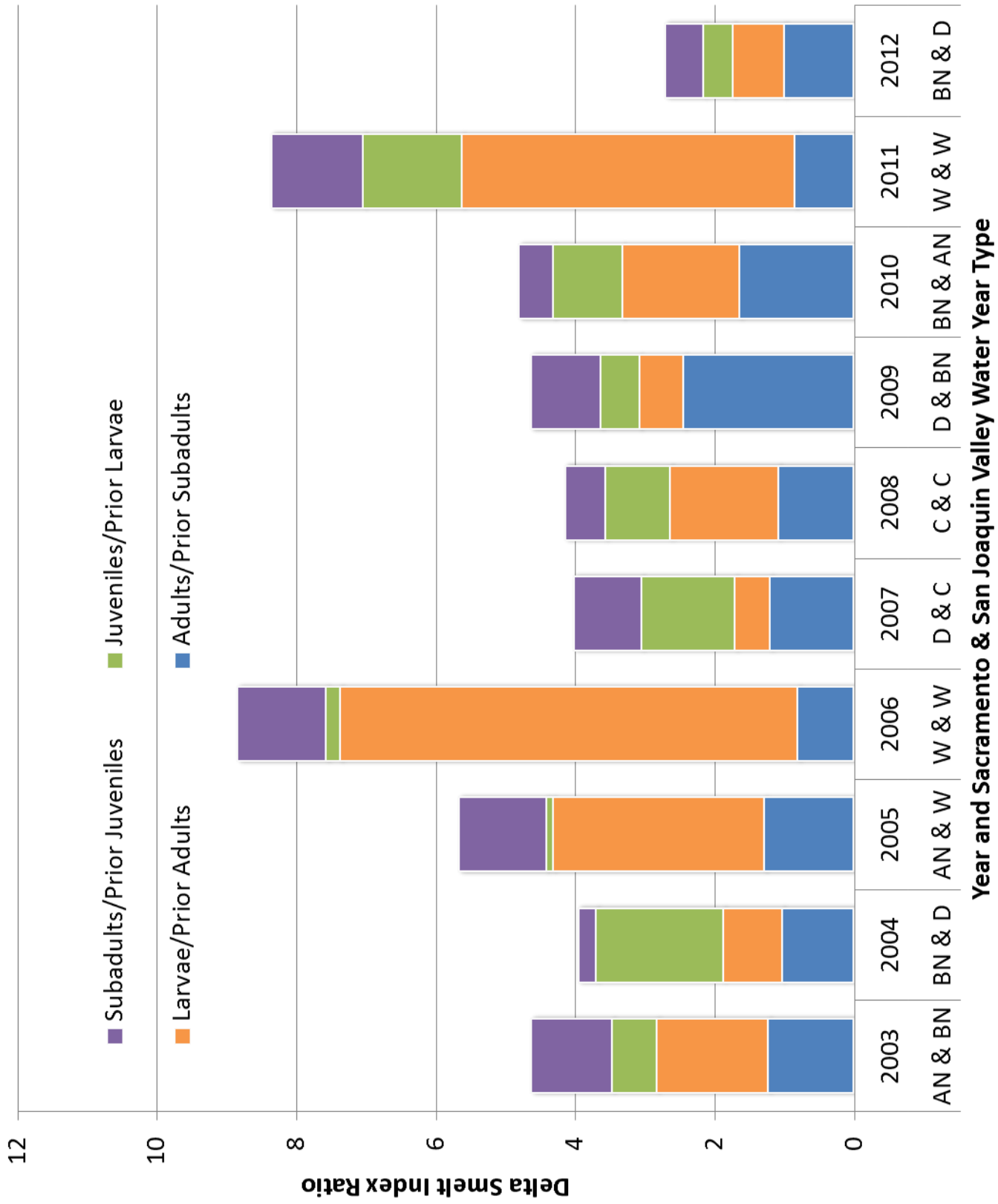

2012 Age-1 fish
Draft MAST Report Figure 38
7-21-2013
>6 ppt
1-6 ppt
<1 ppt
CS-SRDWSC
100%
80%
60%
40%
20%
0%
Stomach contents by percent weight
Jan
Feb
Mar
Apr
May
Month
Pseudo. spp.
A. sinensis
S. doerri
Tortanus spp.
E. affinis
Other calanoids
Other cyclopoids
Limno. spp.
Harpacticoids
Copepod nauplii
Cladocerans
Mysids
Amphipods
Cumaceans
Fish
Other

Draft MAST Report Figure 39
7-21-2013

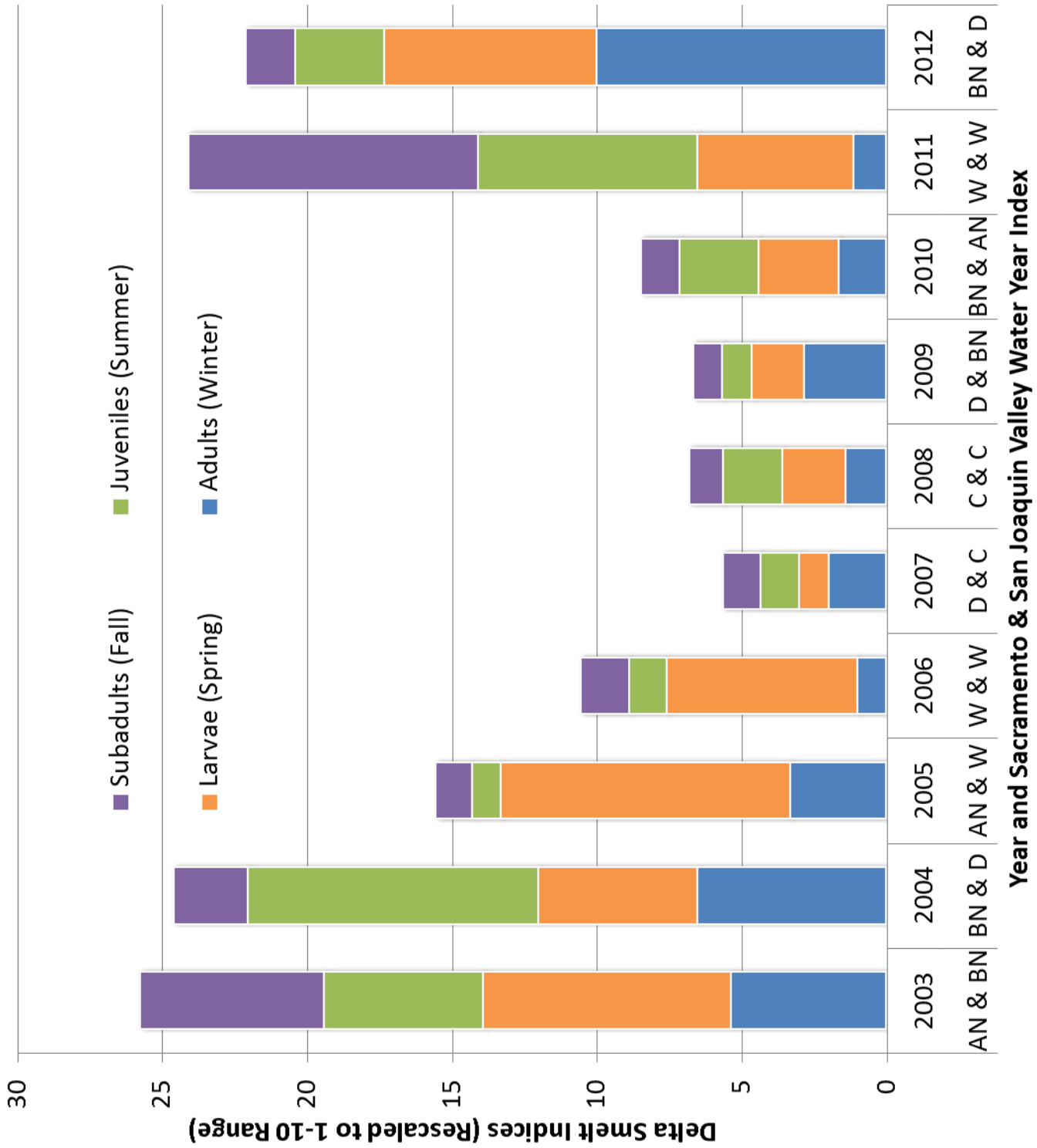



TNS/20 mm
Survival index
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1970 1975 1980 1985 1990 1995 2000 2005 2010
FMWT/TNS
Survival index
400
350
300
250
200
150
100
50
0
1970 1975 1980 1985 1990 1995 2000 2005 2010
SKT/FMWT year-1
Survival index
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1970 1975 1980 1985 1990 1995 2000 2005 2010

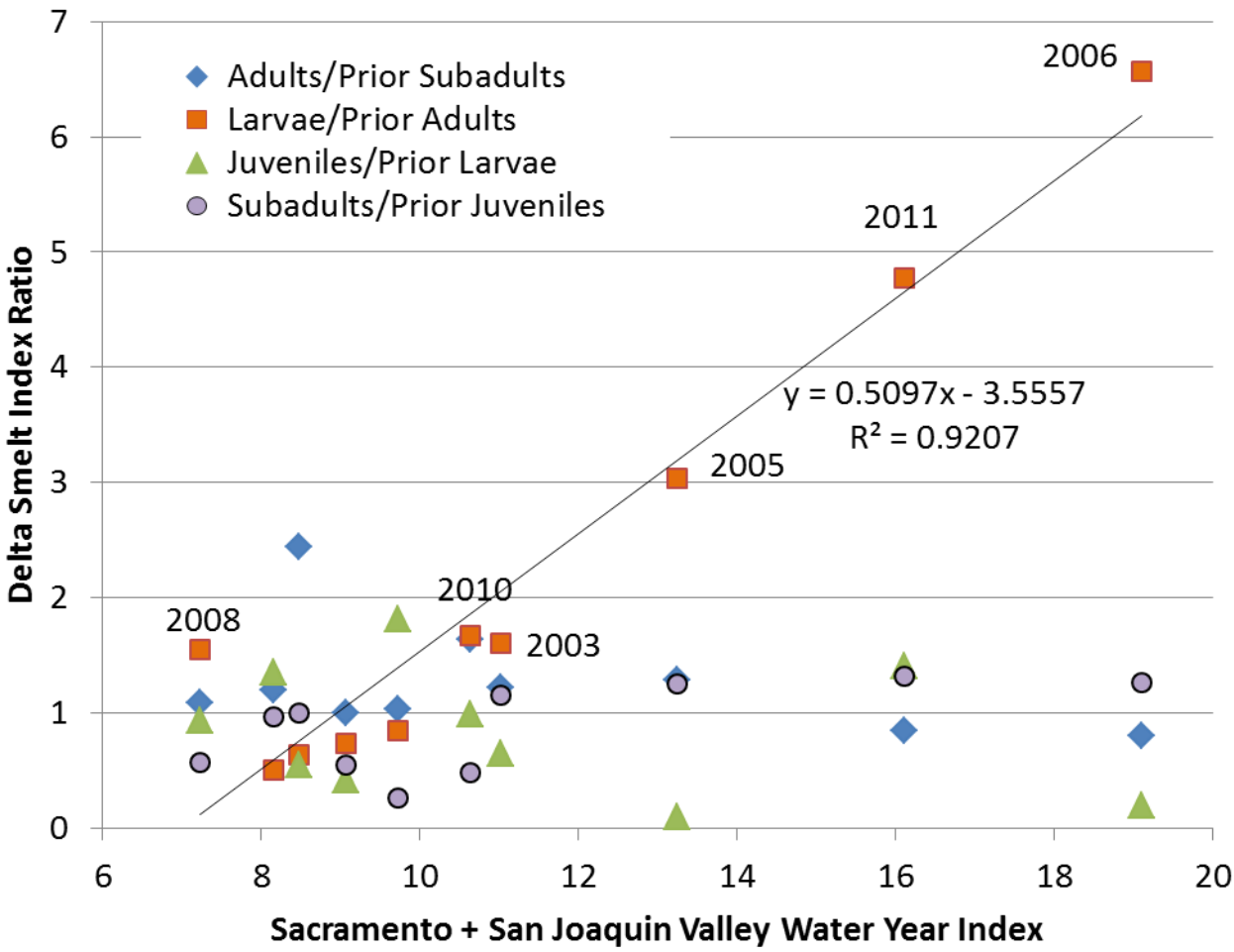
Draft MAST Report Figure 41
7-21-2013

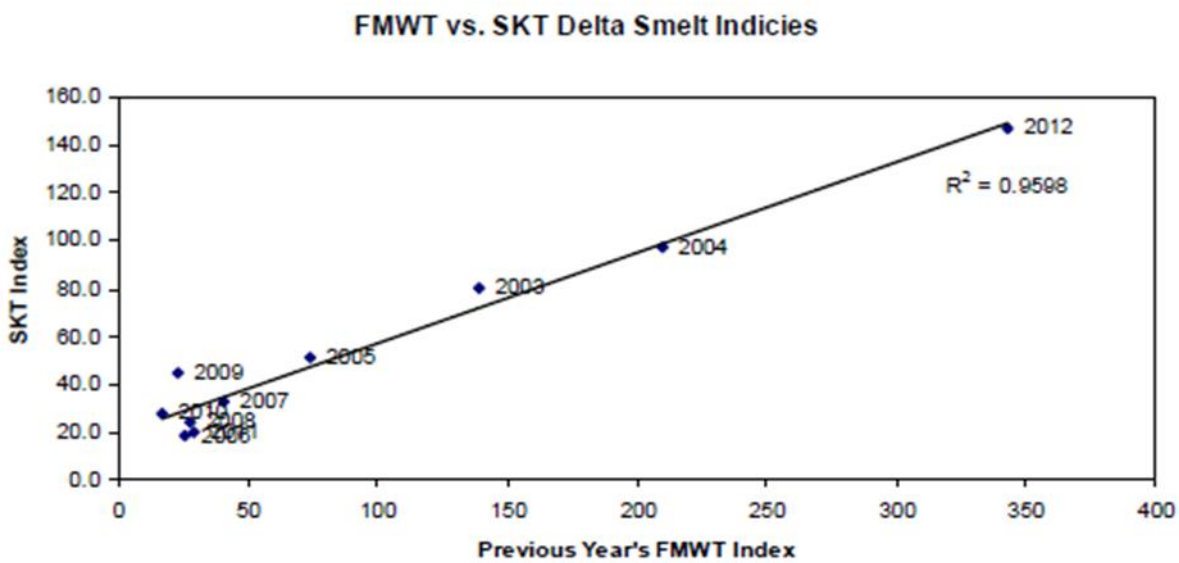


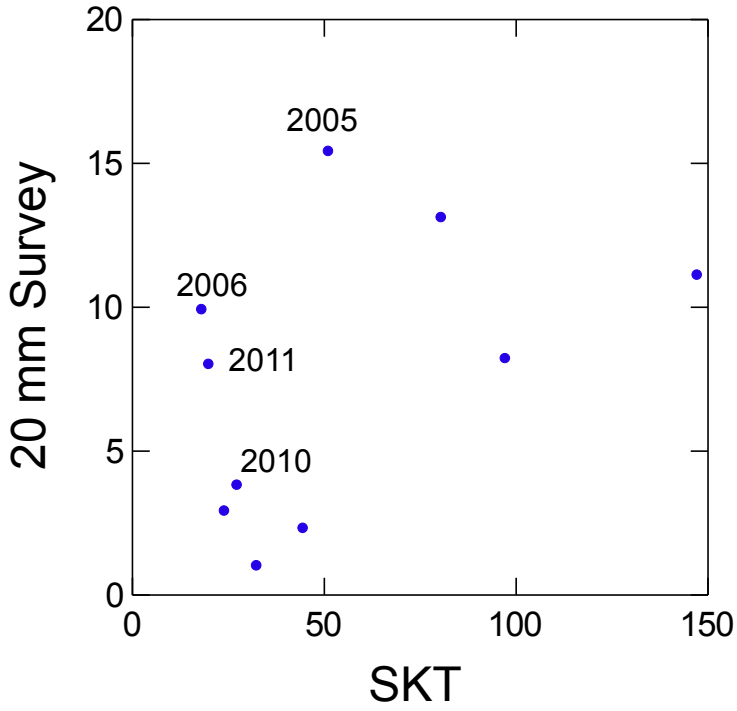
Draft MAST Report Figure 42
7-21-2013

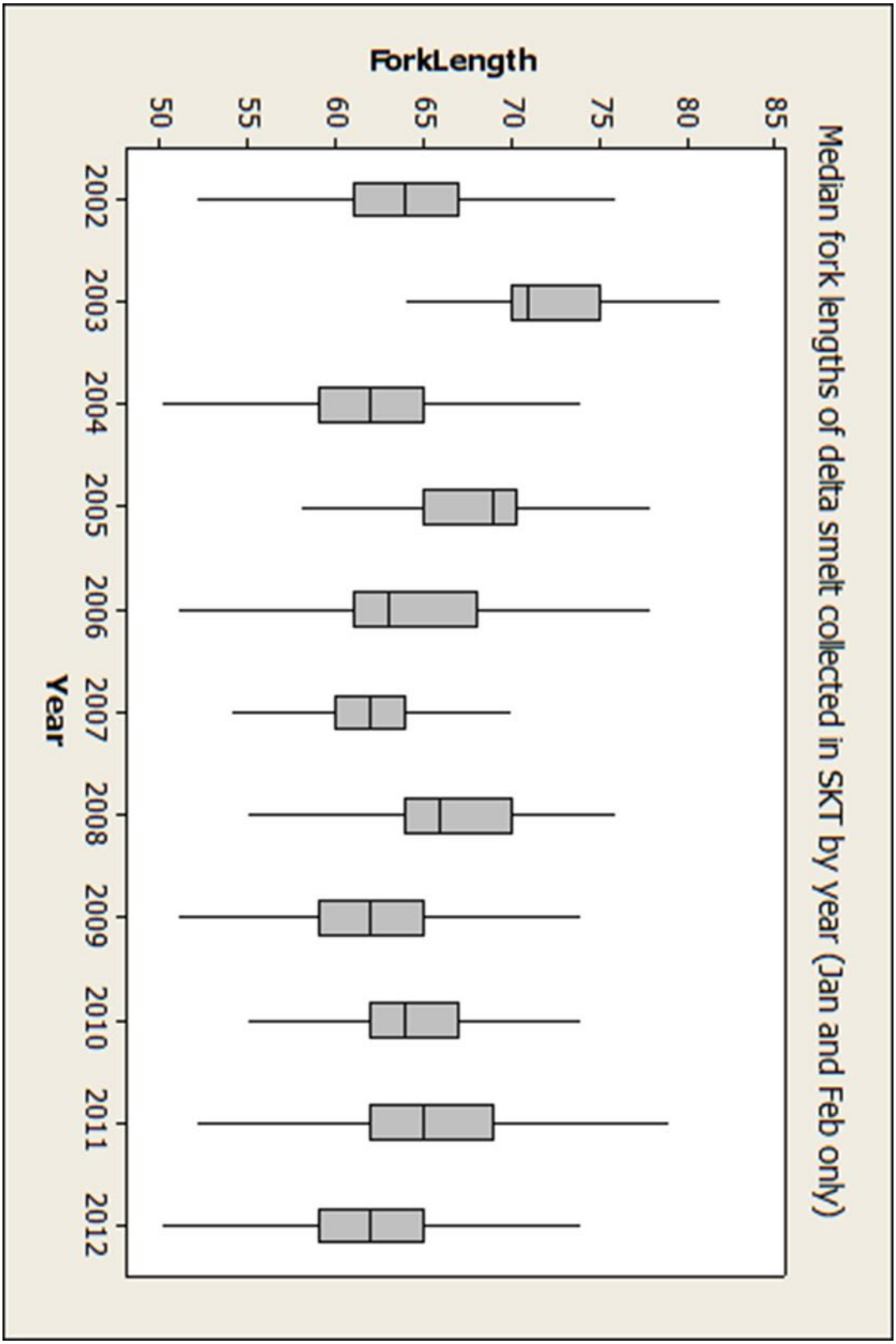


Draft MAST Report Figure 43
7-21-2013




FMWT vs. SKT Delta Smelt Indicies
SKT Index
Previous Year's FMWT Index
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
0
50
100
150
200
250
300
350
400
2012
R^2 = 0.9598
2004
2003
2005
2009
2007
2010
2008
2006
2011


20
15
10
5
0
0
50
100
150
20 mm Survey
SKT
2005
2006
2011
2010


Median fork lengths of delta smelt collected in SKT by year (Jan and Feb only)
ForkLength
85
80
75
70
65
60
55
50
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Year

Draft MAST Report Figure 47
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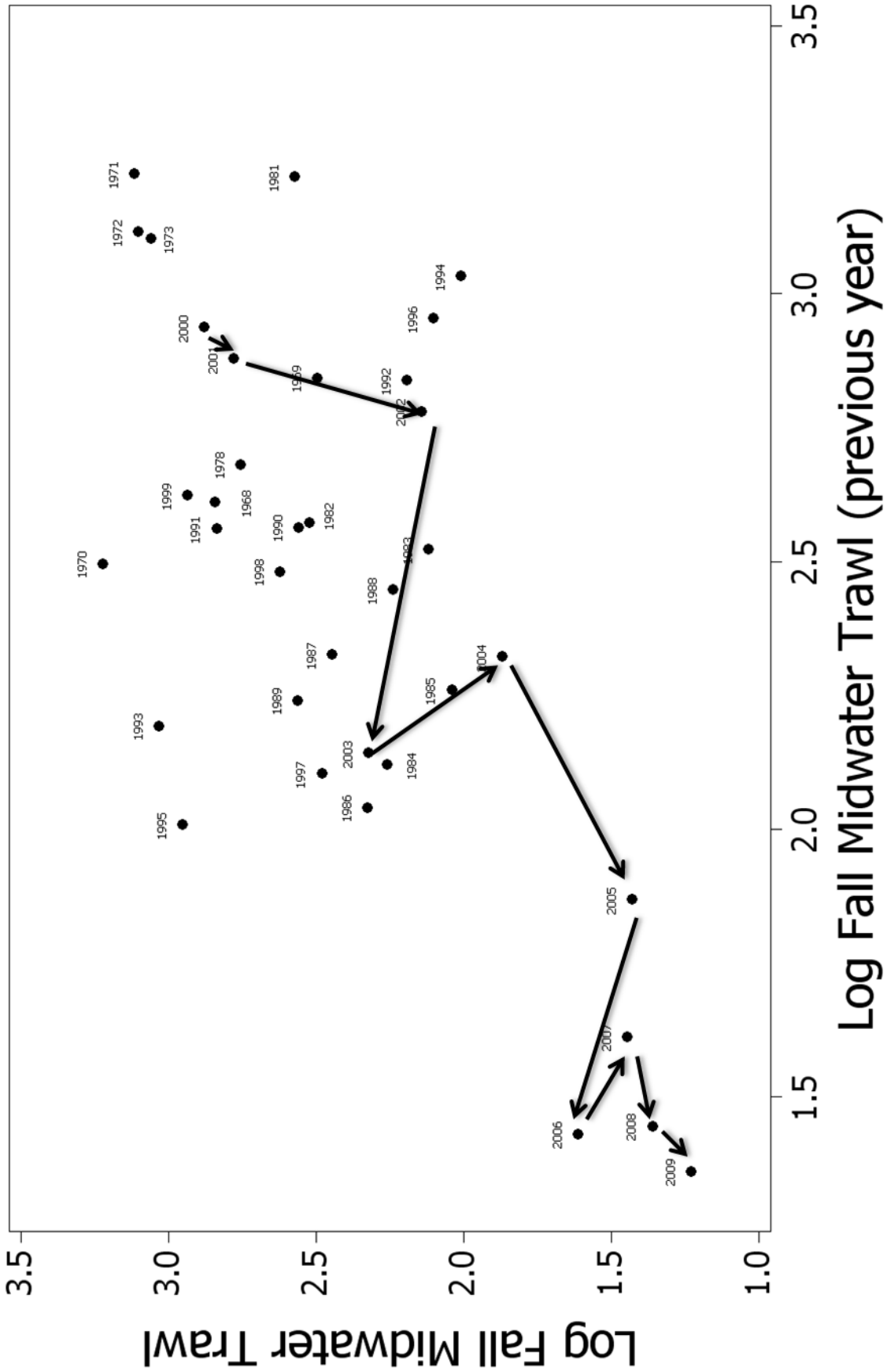
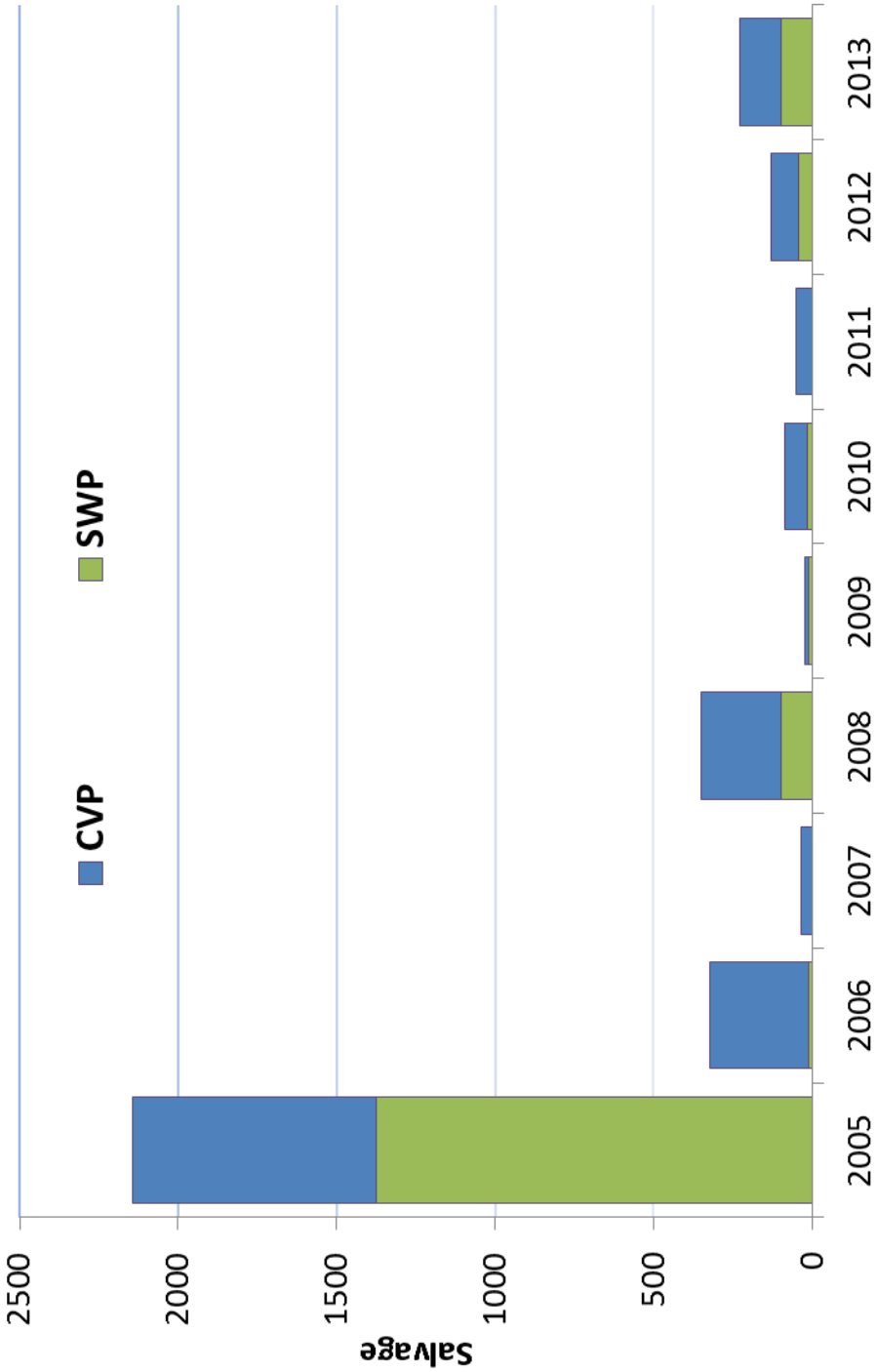
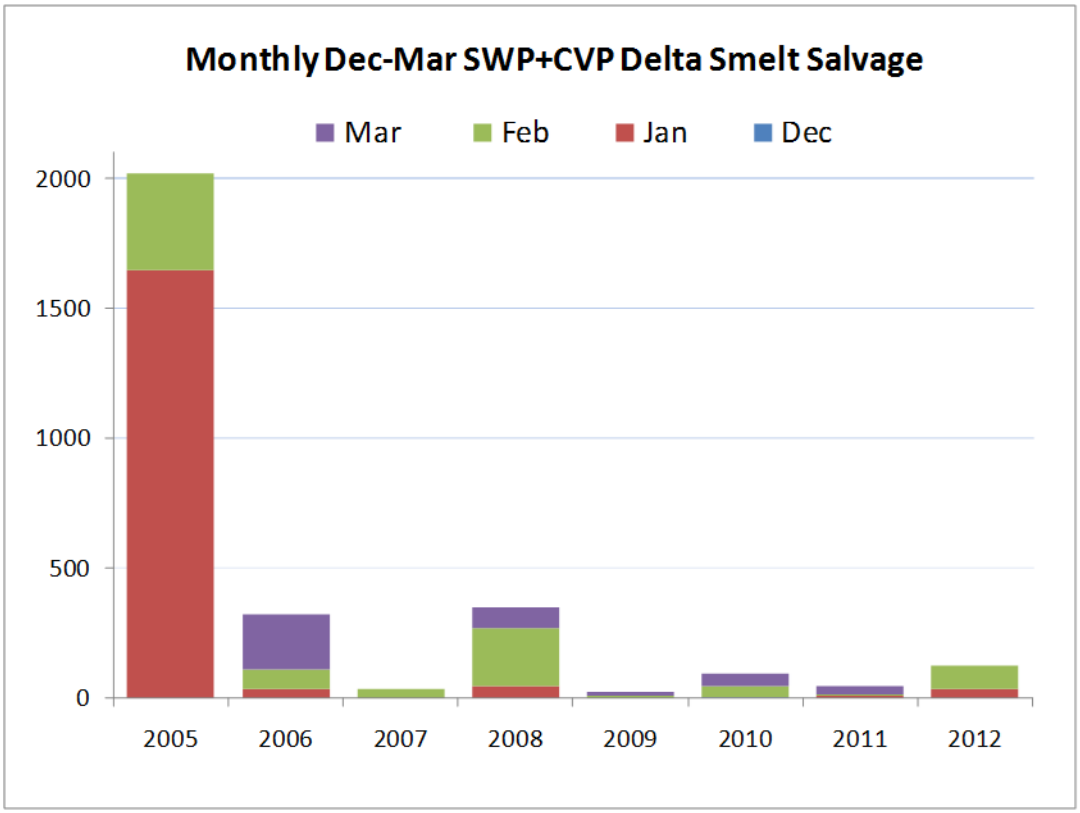
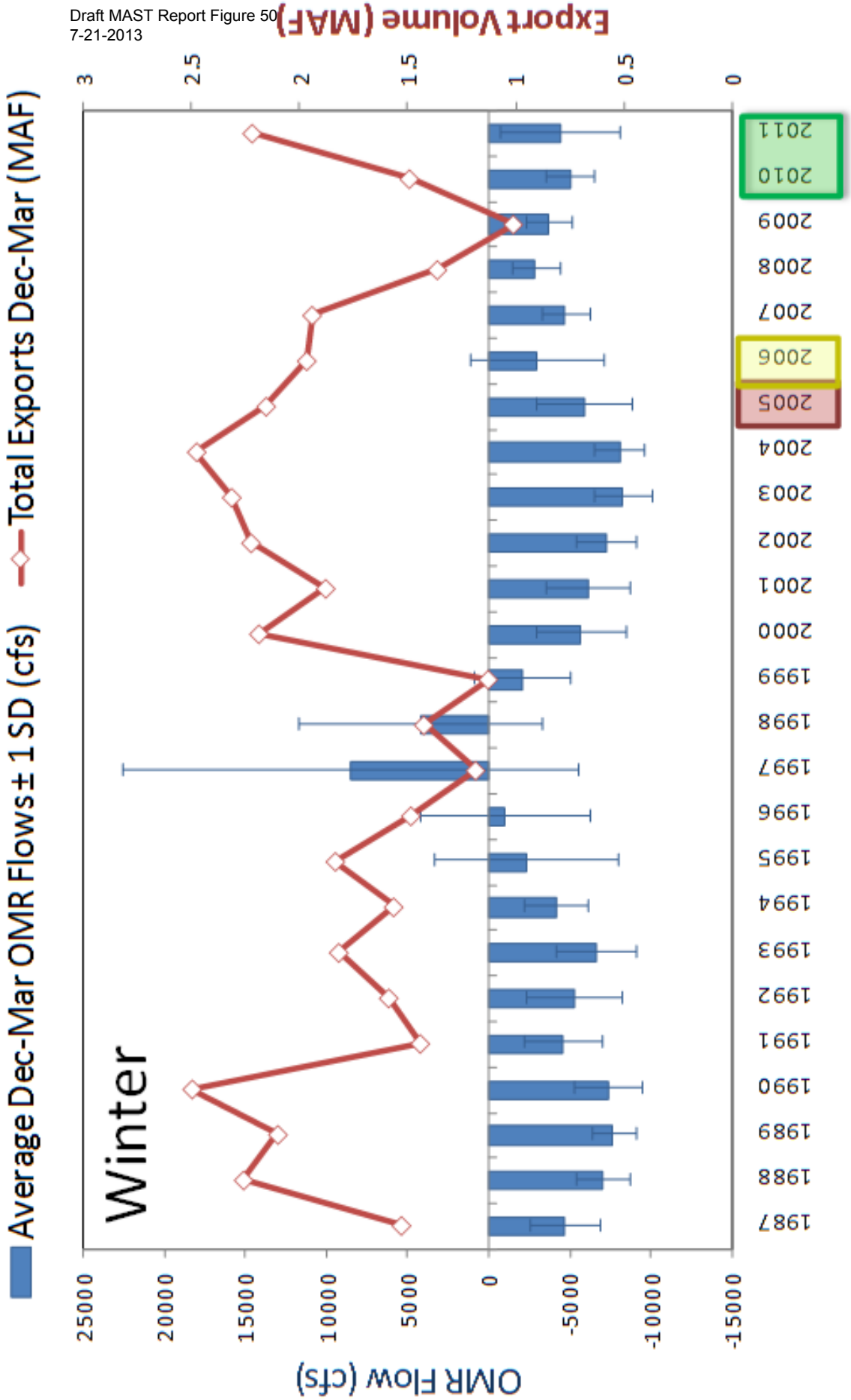
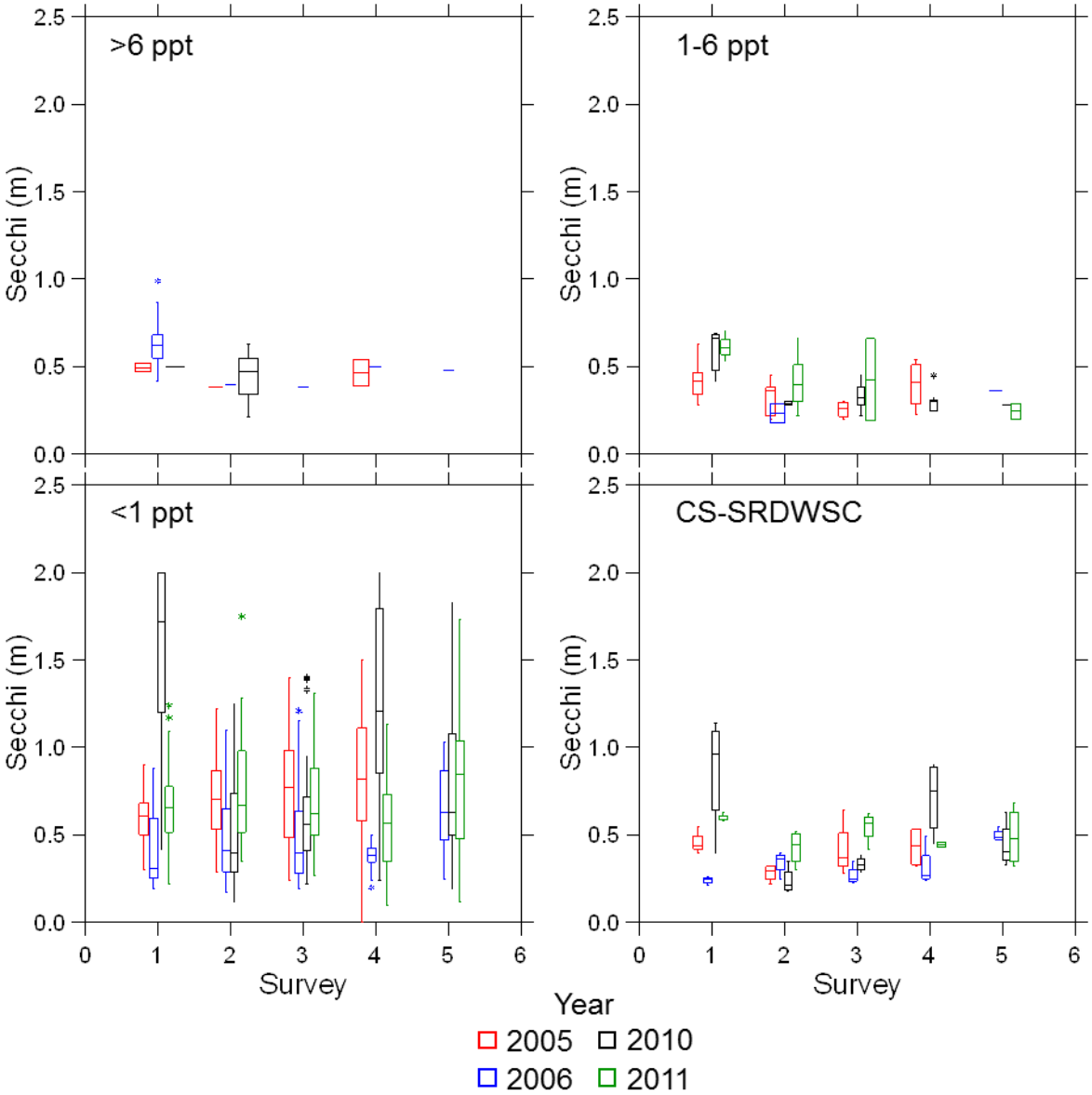



CVP
SWP
Salvage
2500
2000
1500
1000
500
0
2005
2006
2007
2008
2009
2010
2011
2012
2013

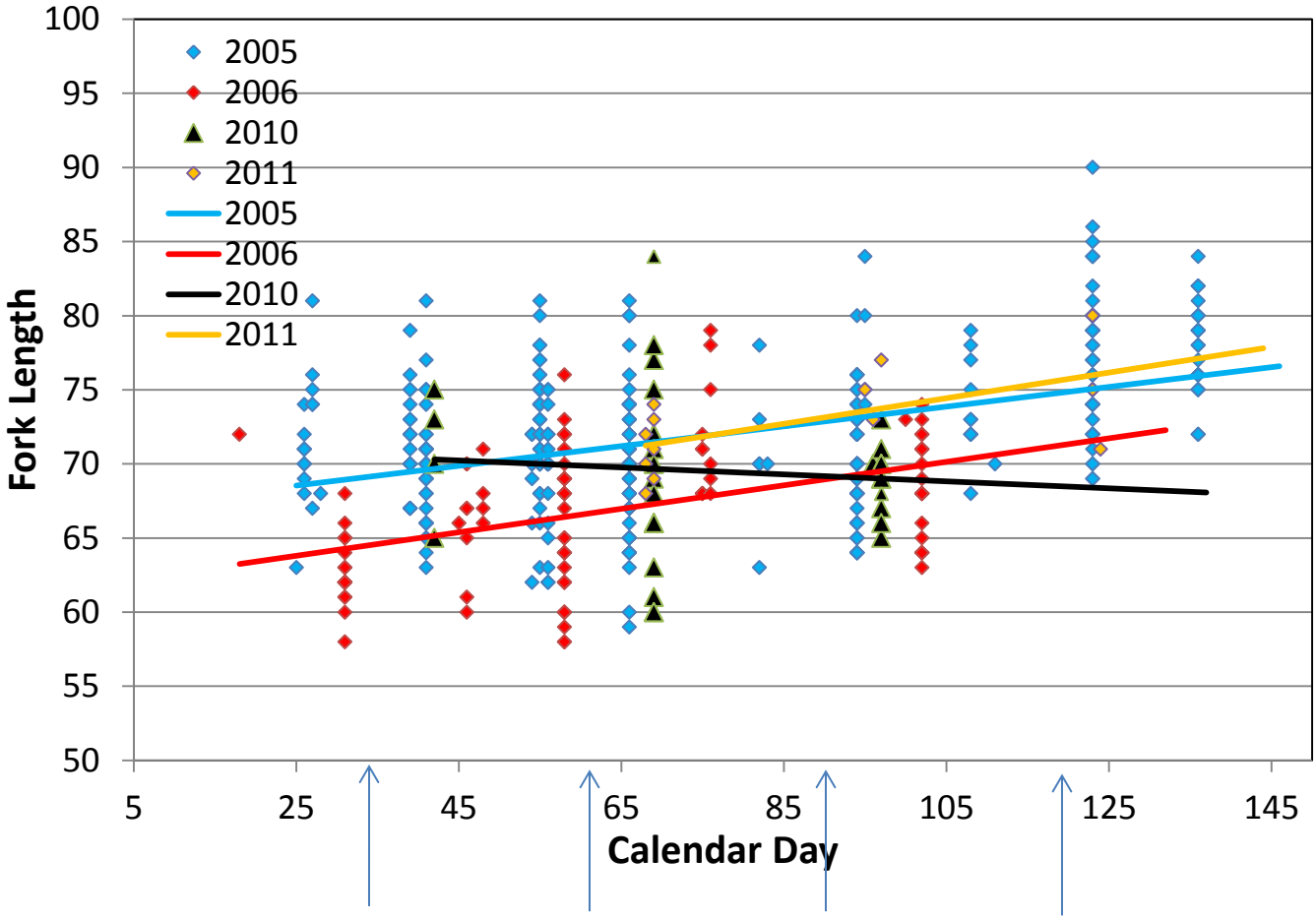

Monthly Dec-Mar SWP+CVP Delta Smelt Salvage
Mar
Feb
Jan
Dec
2000
1500
1000
500
0
2005
2006
2007
2008
2009
2010
2011
2012

Draft MAST Report Figure 50
7-21-2013

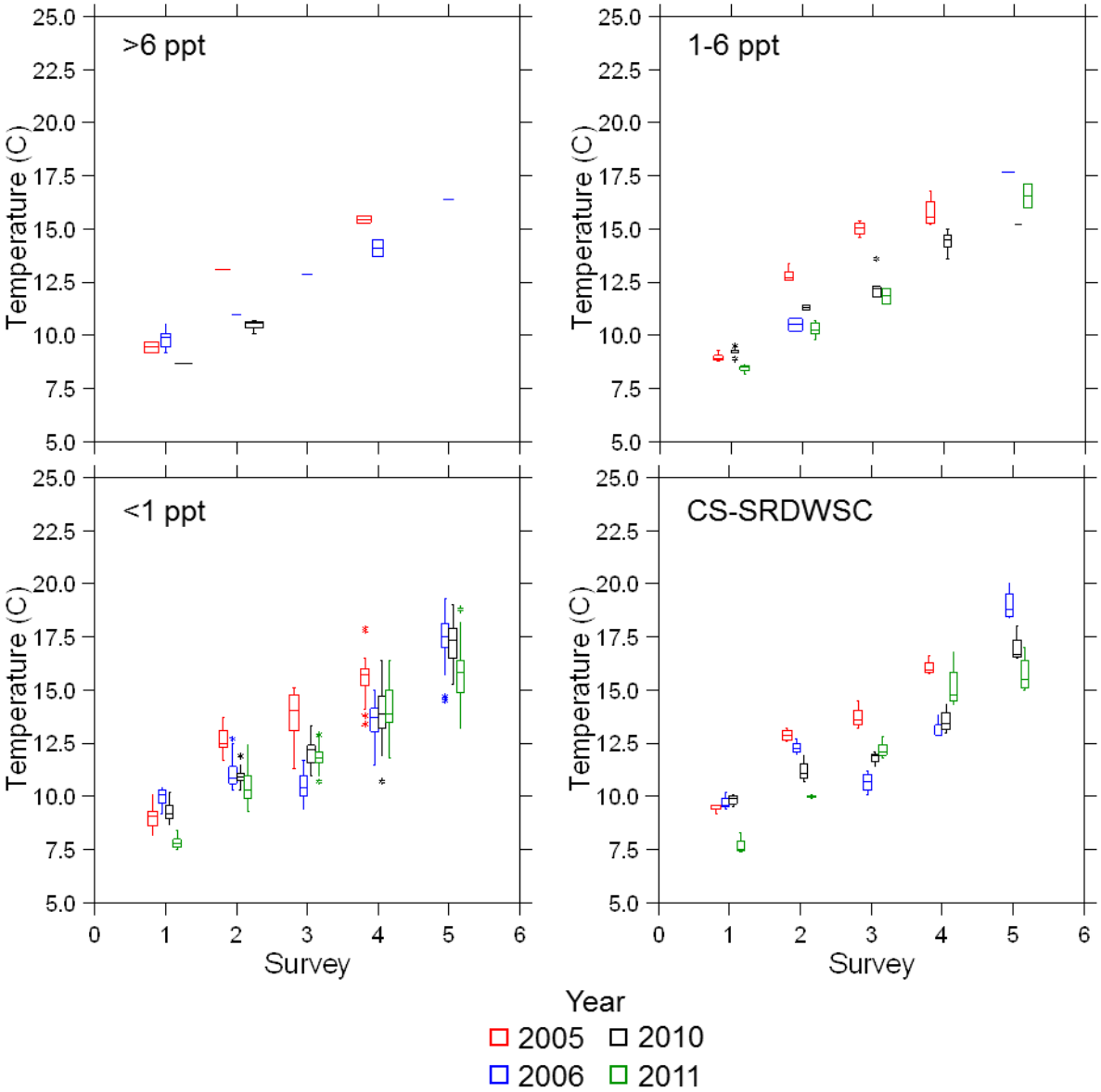



>6 ppt
1-6 ppt
<1 ppt
CS-SRDWSC
Secchi (m)
Survey
Year
2005
2006
2010
2011

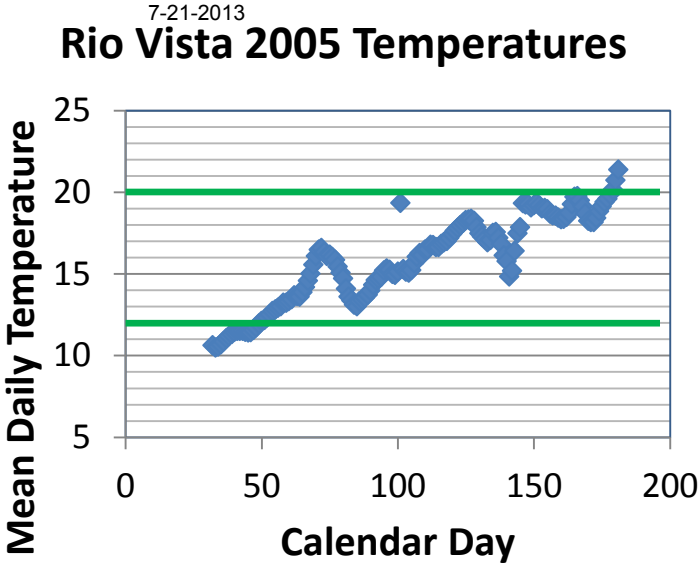
Draft MAST Report Figure 52
7-21-2013

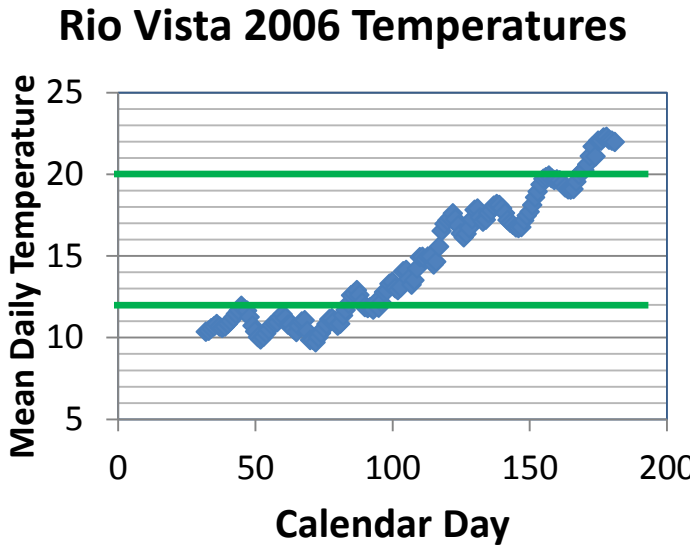


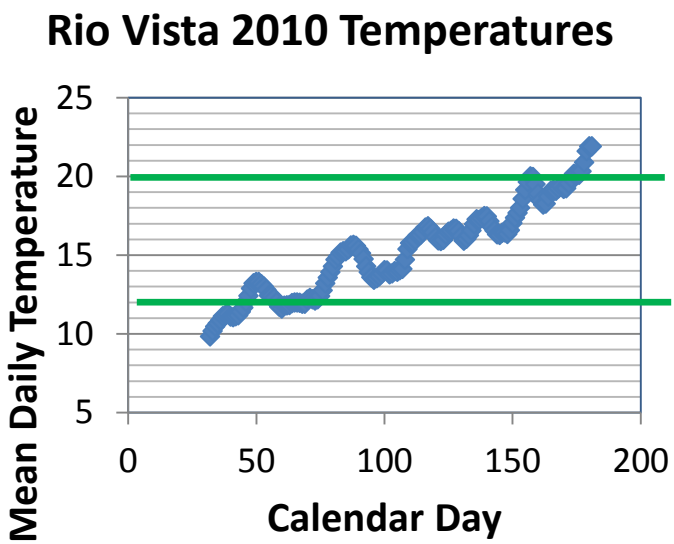
Draft MAST Report Figure 53
7-21-2013

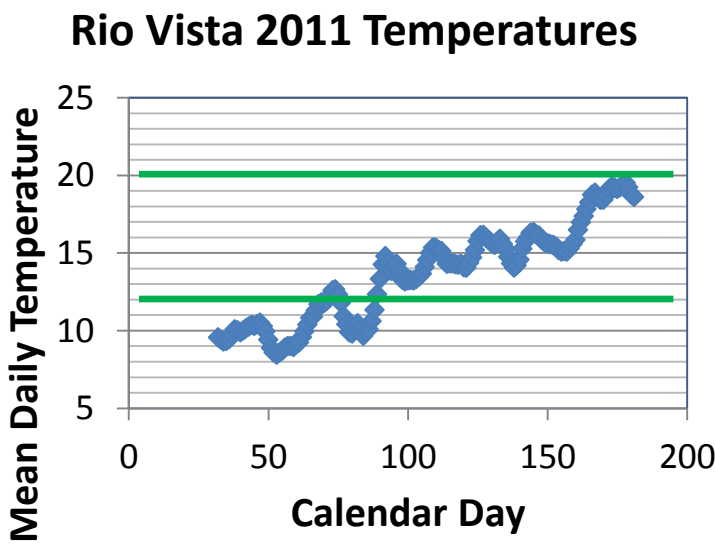


Draft MAST Report Figure 54
7-21-2013

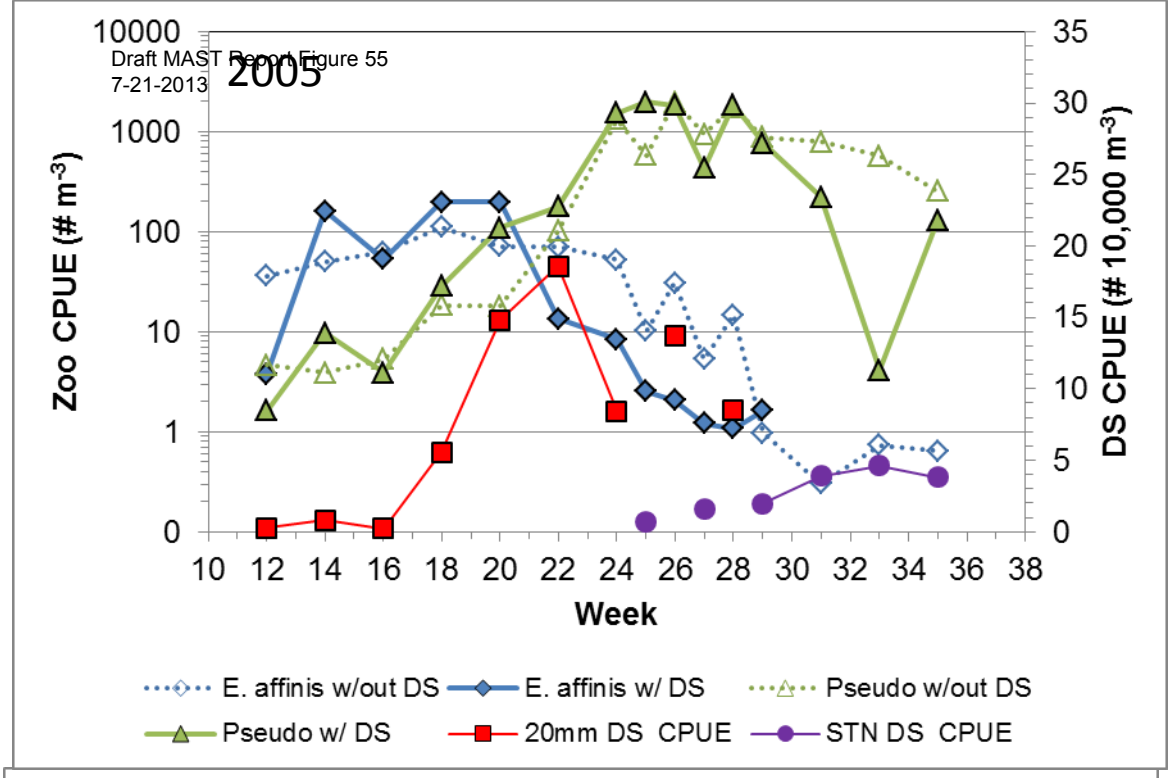


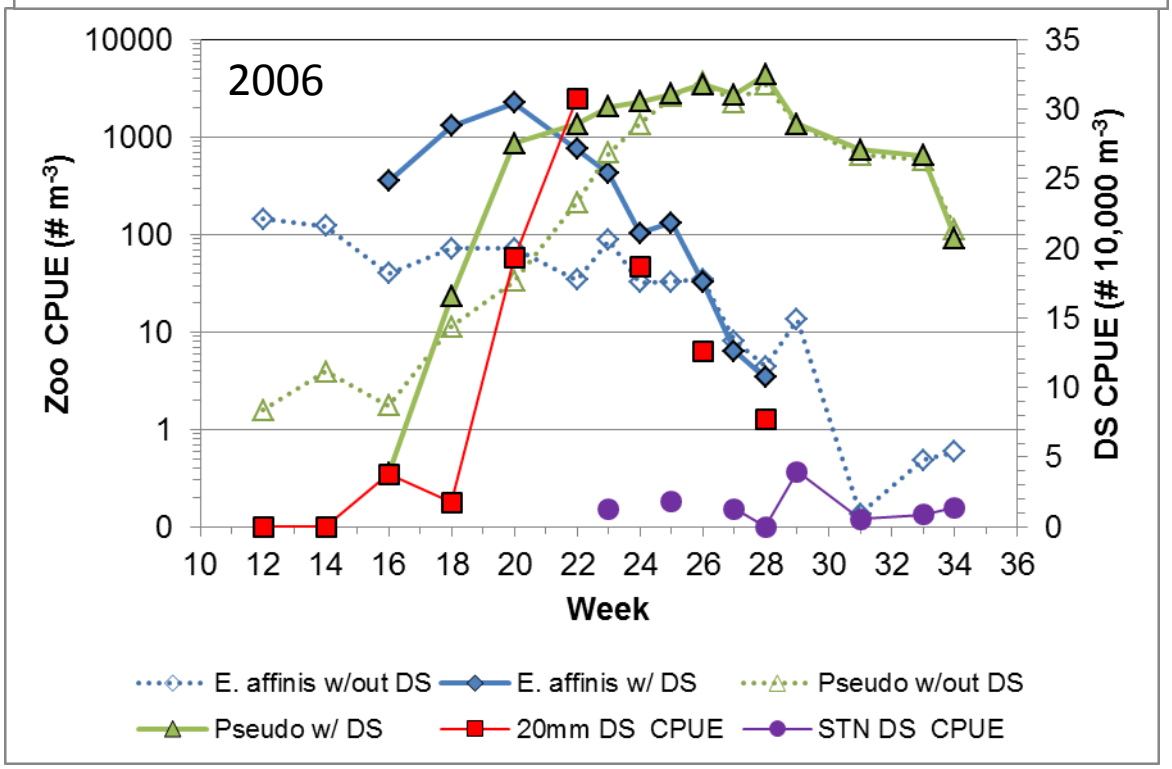


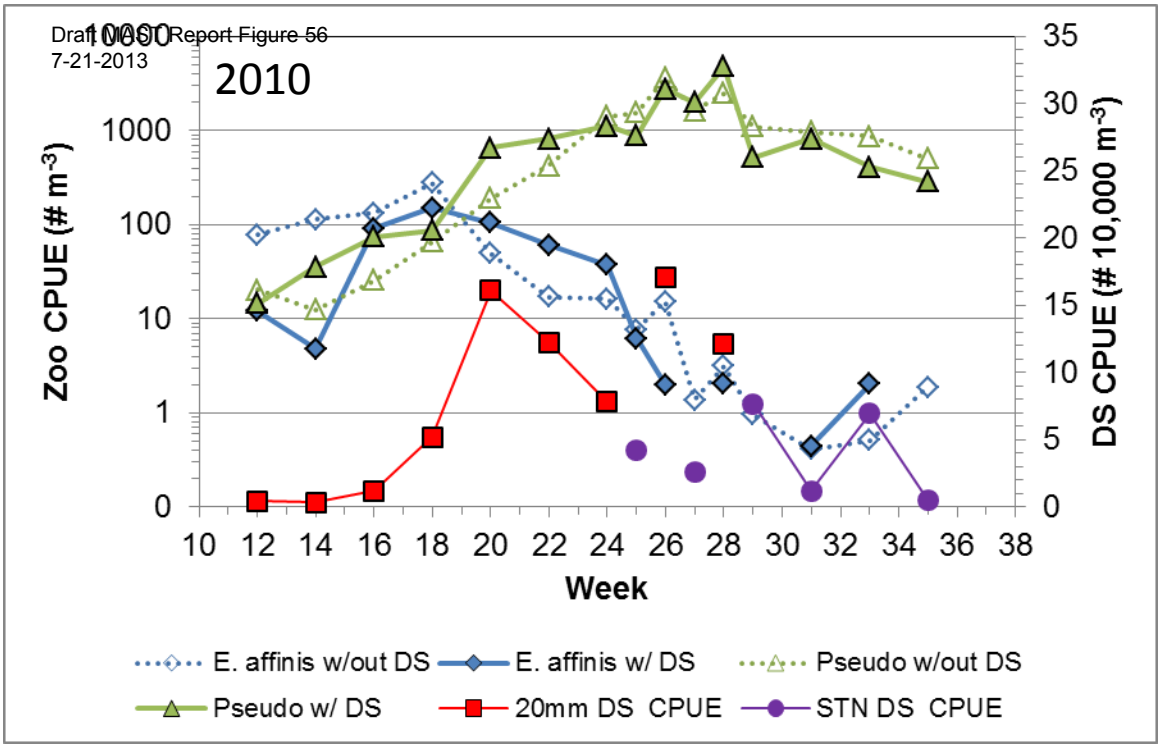


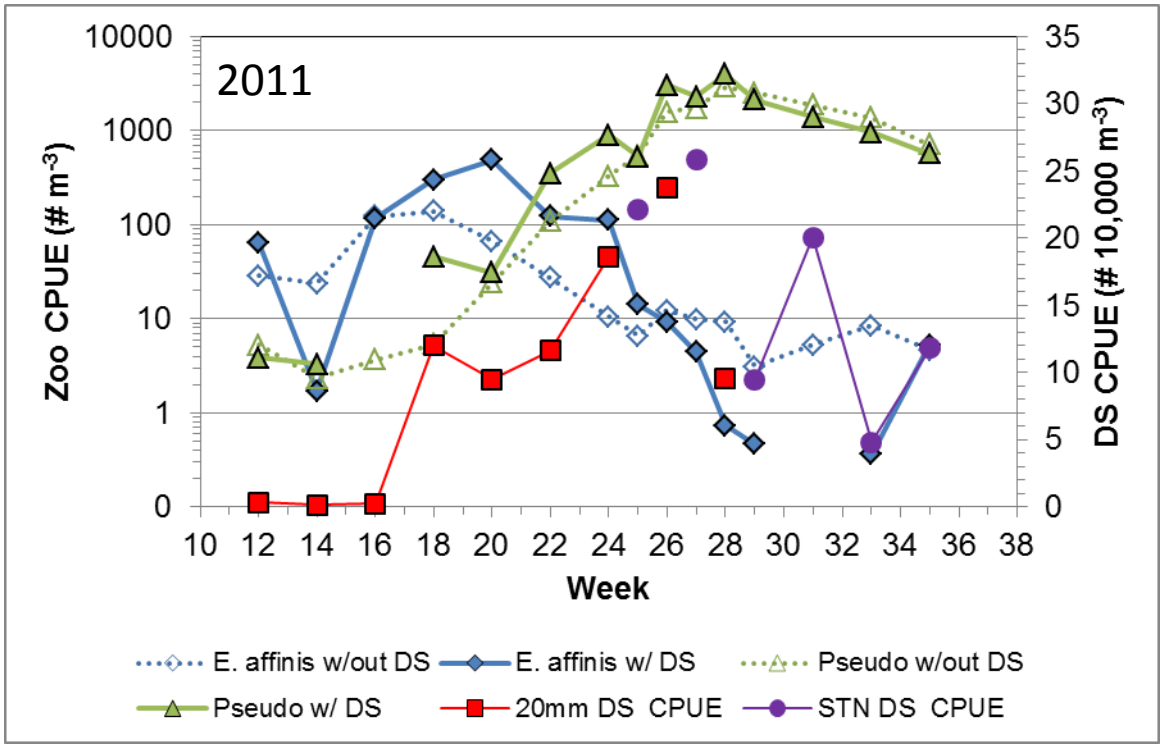


Draft MAST Report Figure 55
7-21-2013

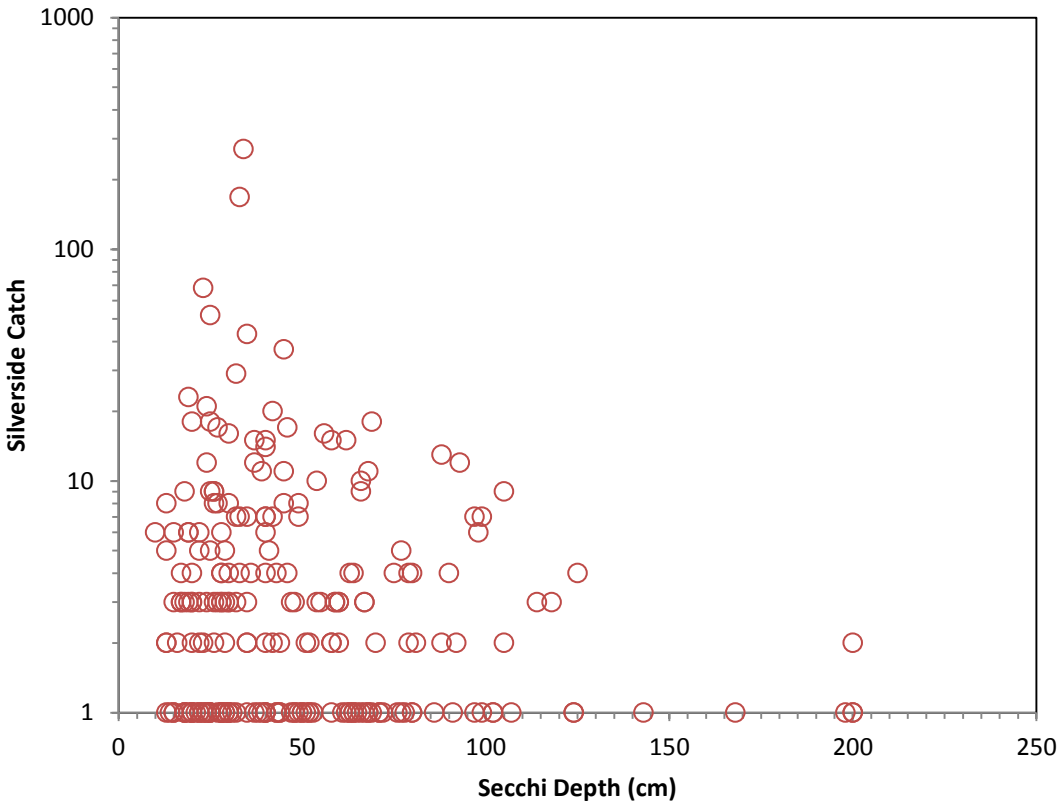




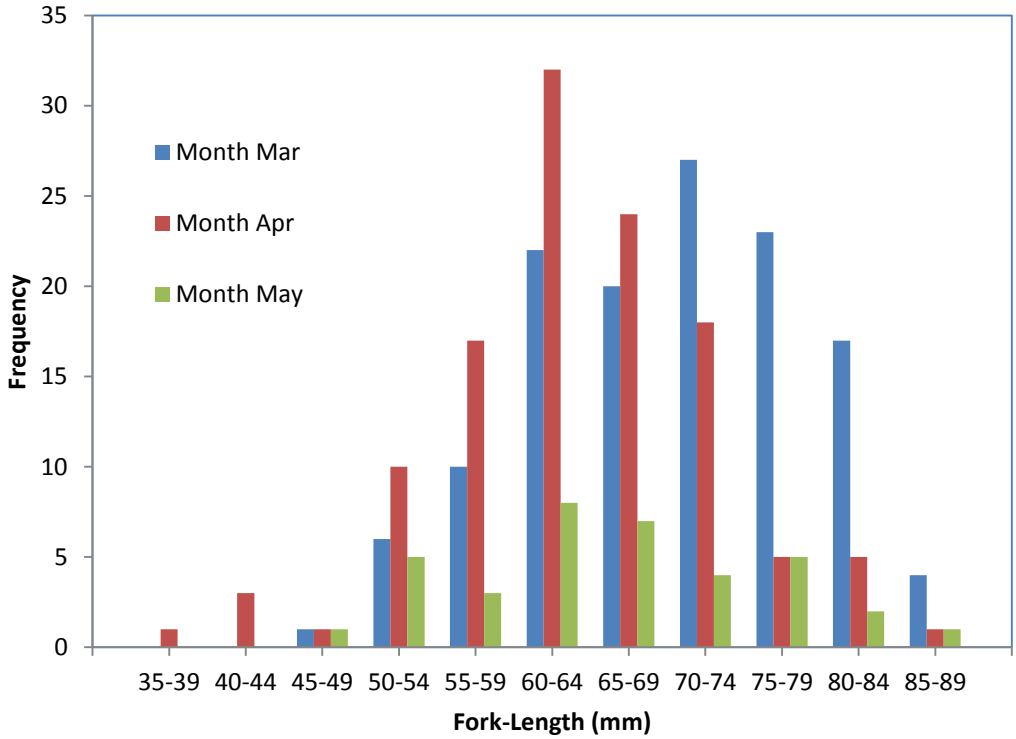

2010
Zoo CPUE (# m-3)
DS CPUE (# 10,000 m-3)
Week
E. affinis w/out DS
E. affinis w/ DS
Pseudo w/out DS
Pseudo w/ DS
20mm DS CPUE
STN DS CPUE


2011
Zoo CPUE (# m-3)
DS CPUE (# 10,000 m-3)
Week
E. affinis w/out DS
E. affinis w/ DS
Pseudo w/out DS
Pseudo w/ DS
20mm DS CPUE
STN DS CPUE

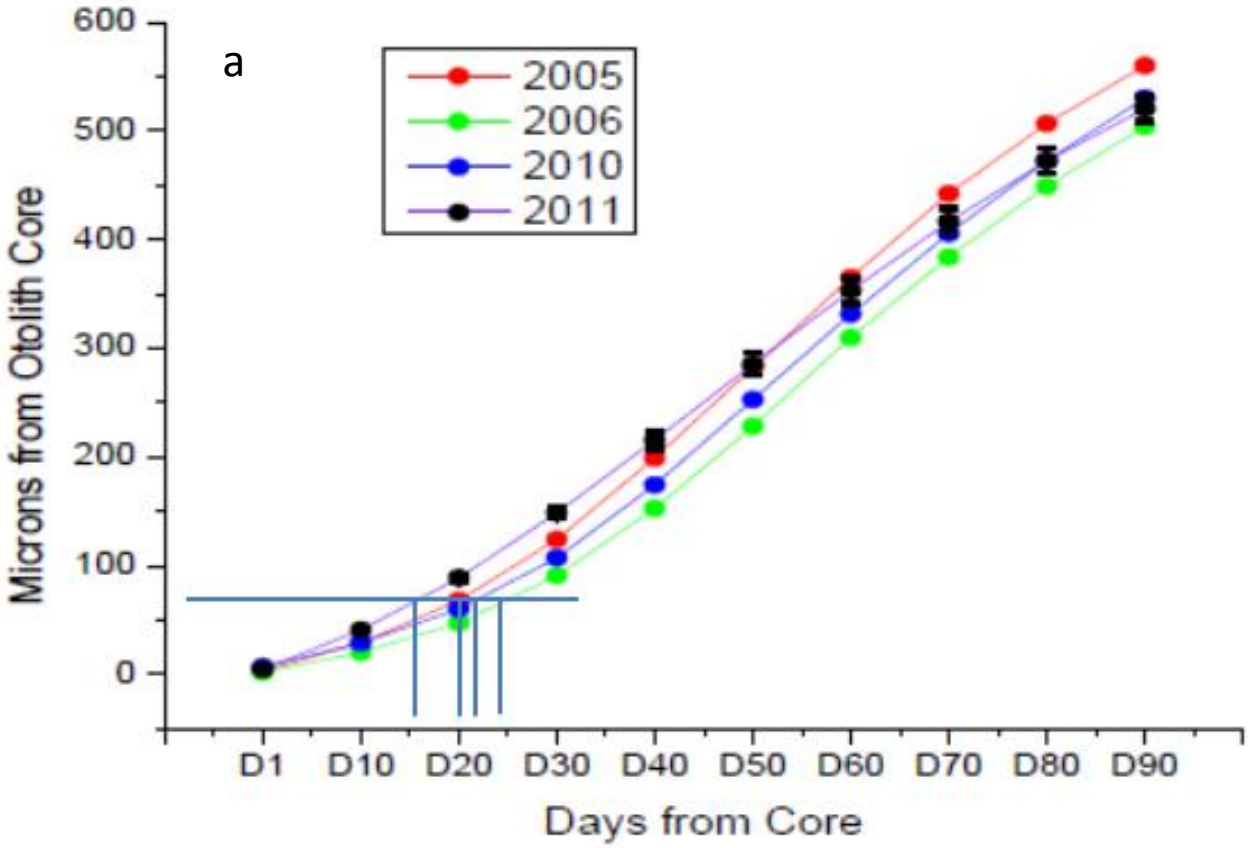
Draft MAST Report Figure 57
7-21-2013

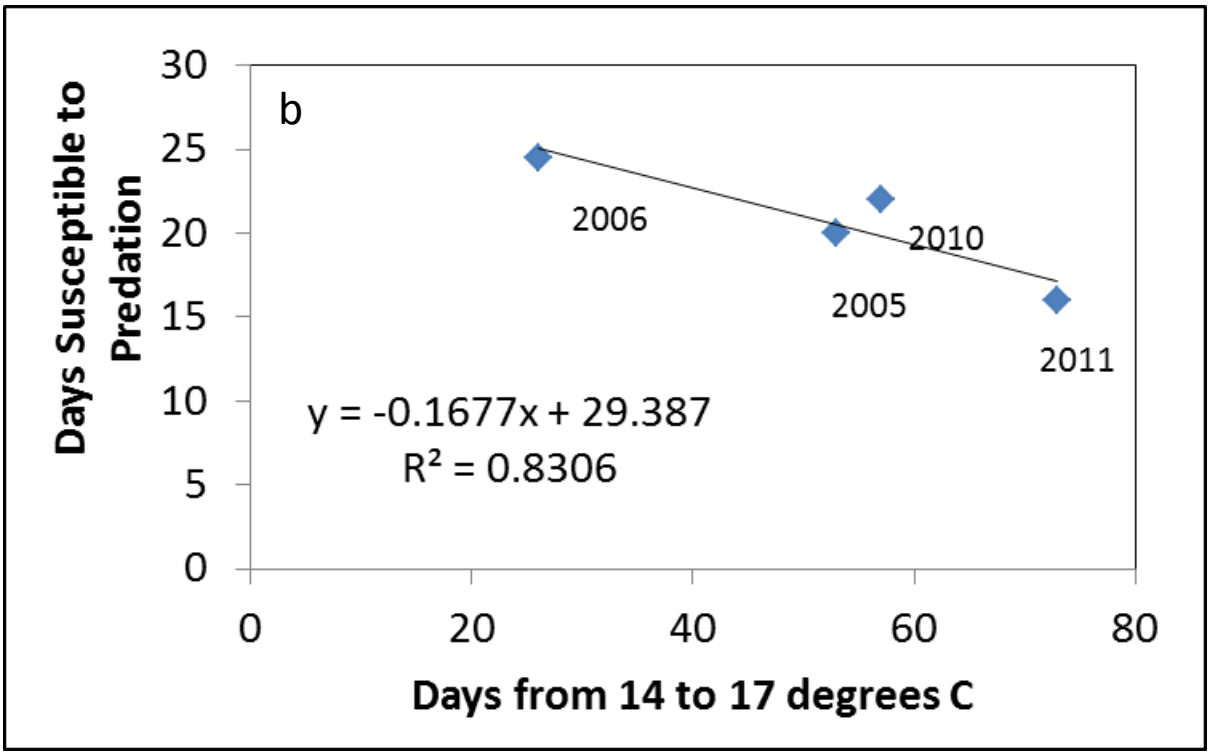


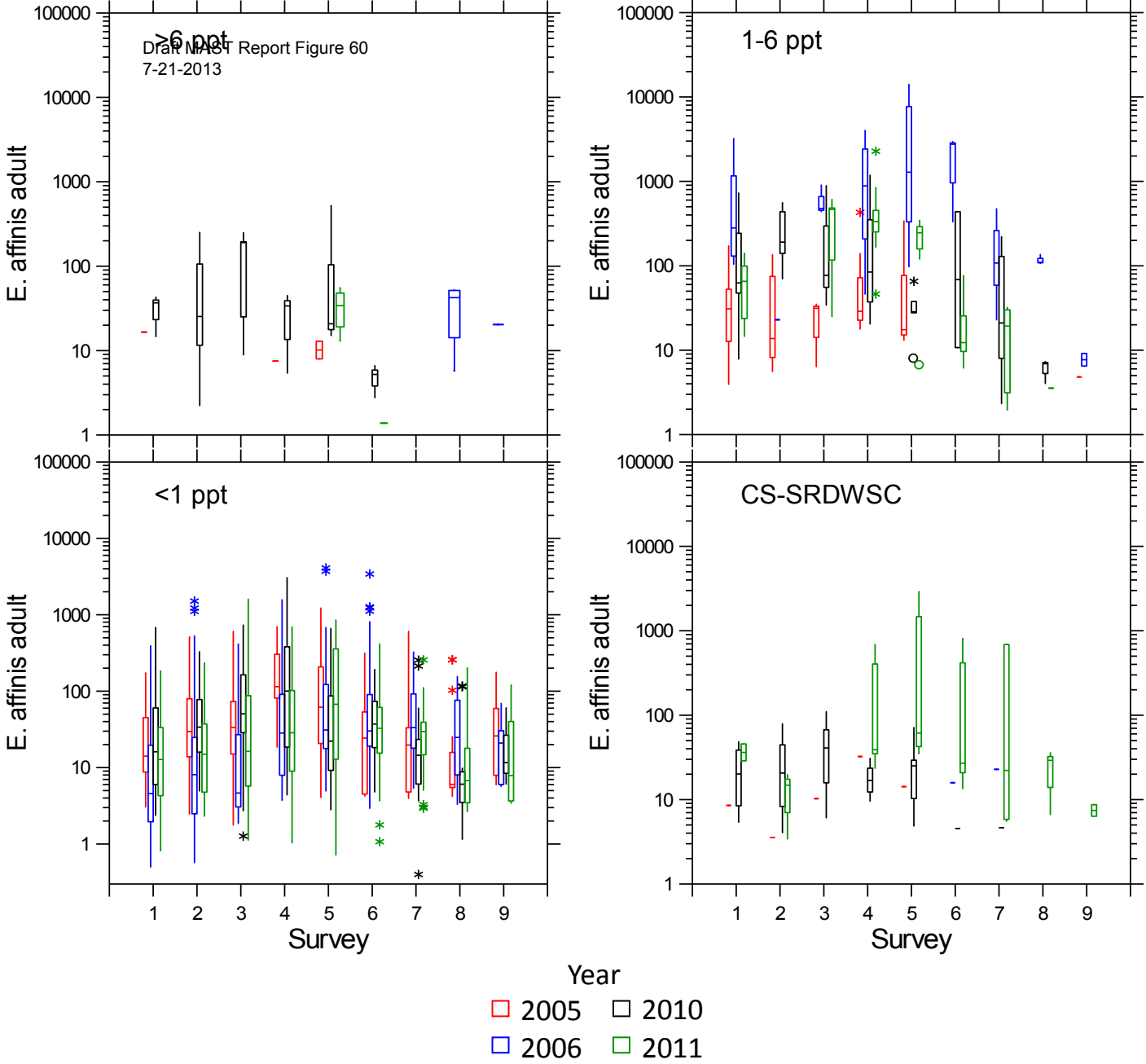
Draft MAST Report Figure 58
7-21-2013

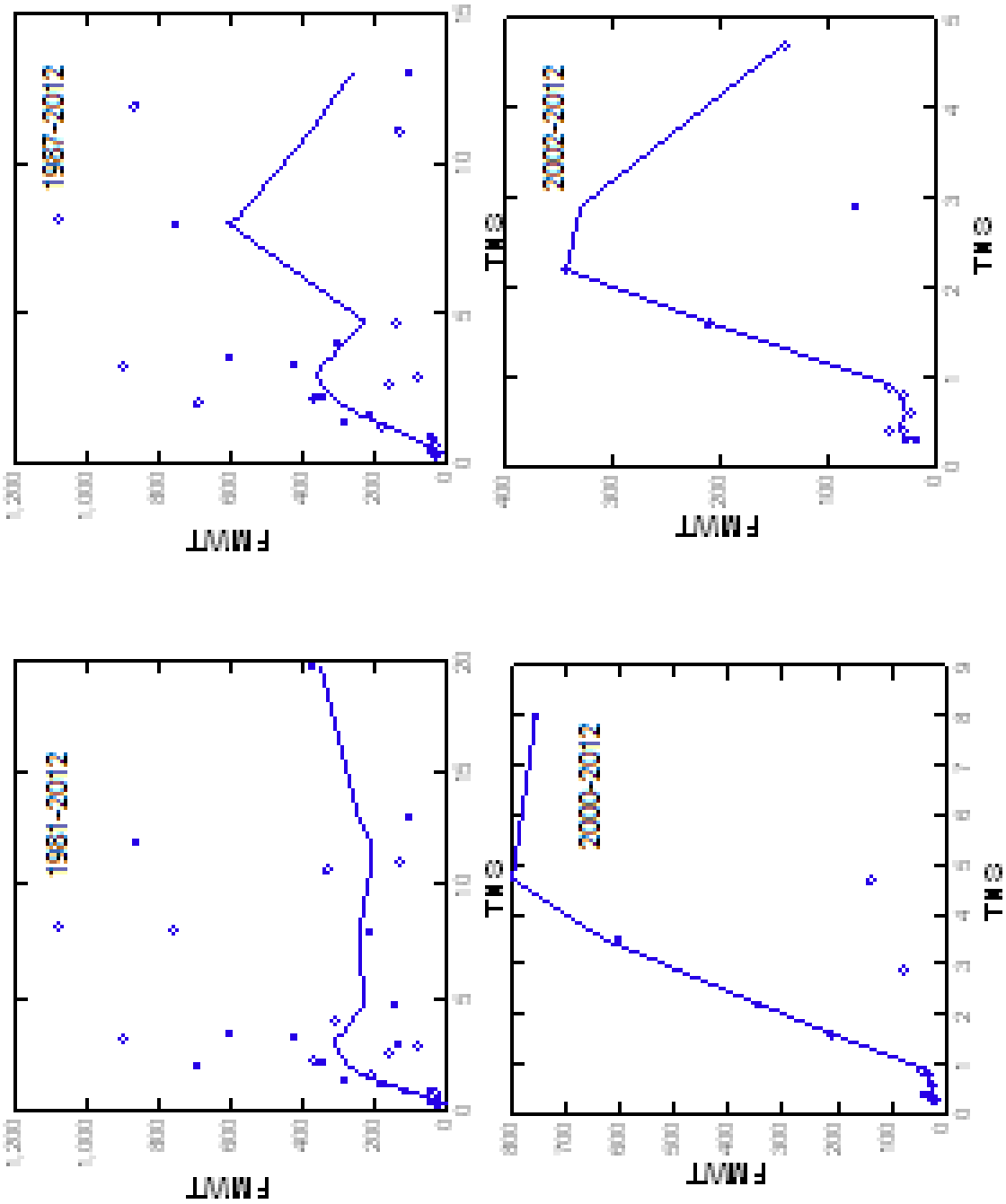


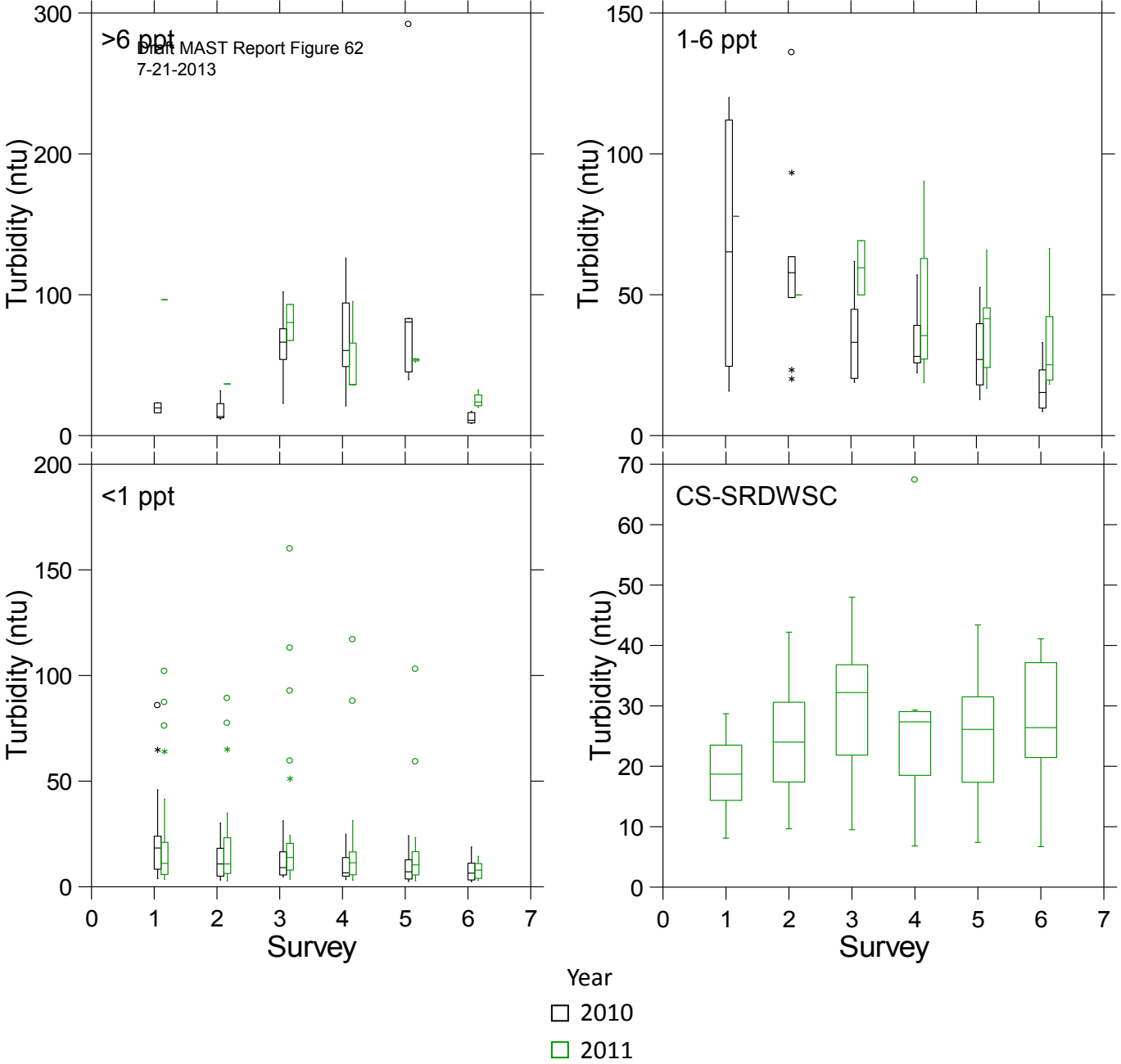
Draft MAST Report Figure 59
7-21-2013

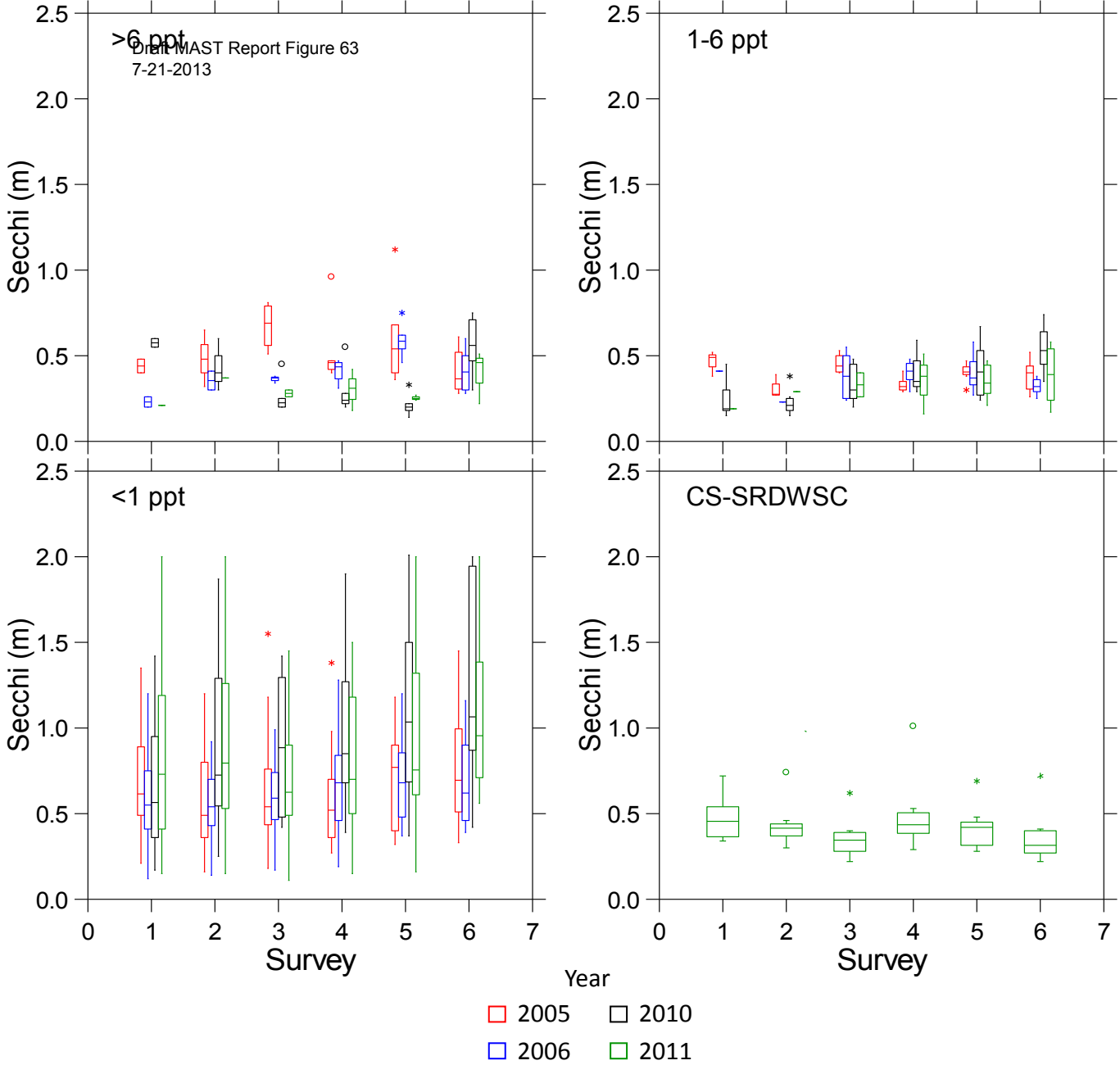





Draft MAST Report Figure 60
7-21-2013
>6 ppt
1-6 ppt
<1 ppt
CS-SRDWSC
E. affinis adult
100000
10000
1000
100
10
1
1 2 3 4 5 6 7 8 9
Survey
Year
2005
2010
2006
2011

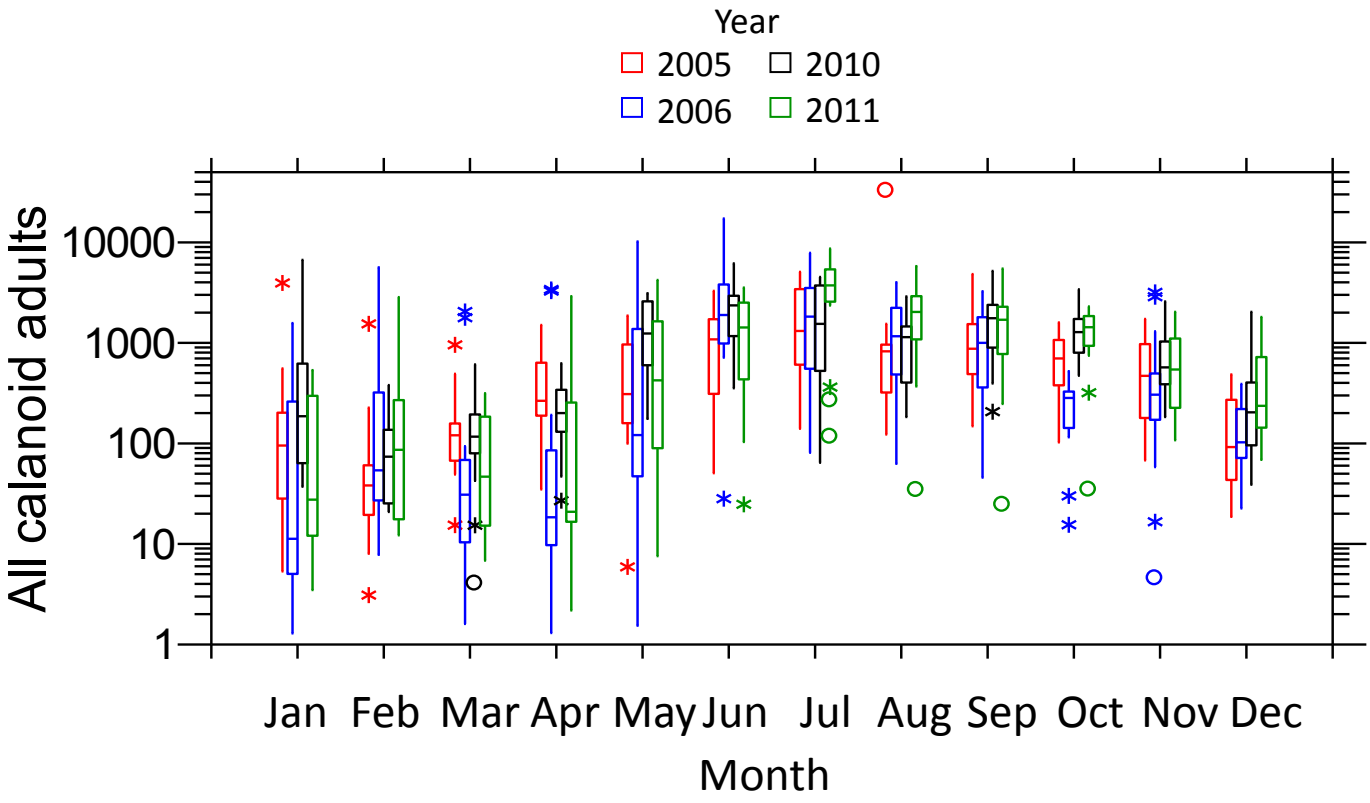

1987-2012
2002-2012
1981-2012
2000-2012
FMWT
TMS

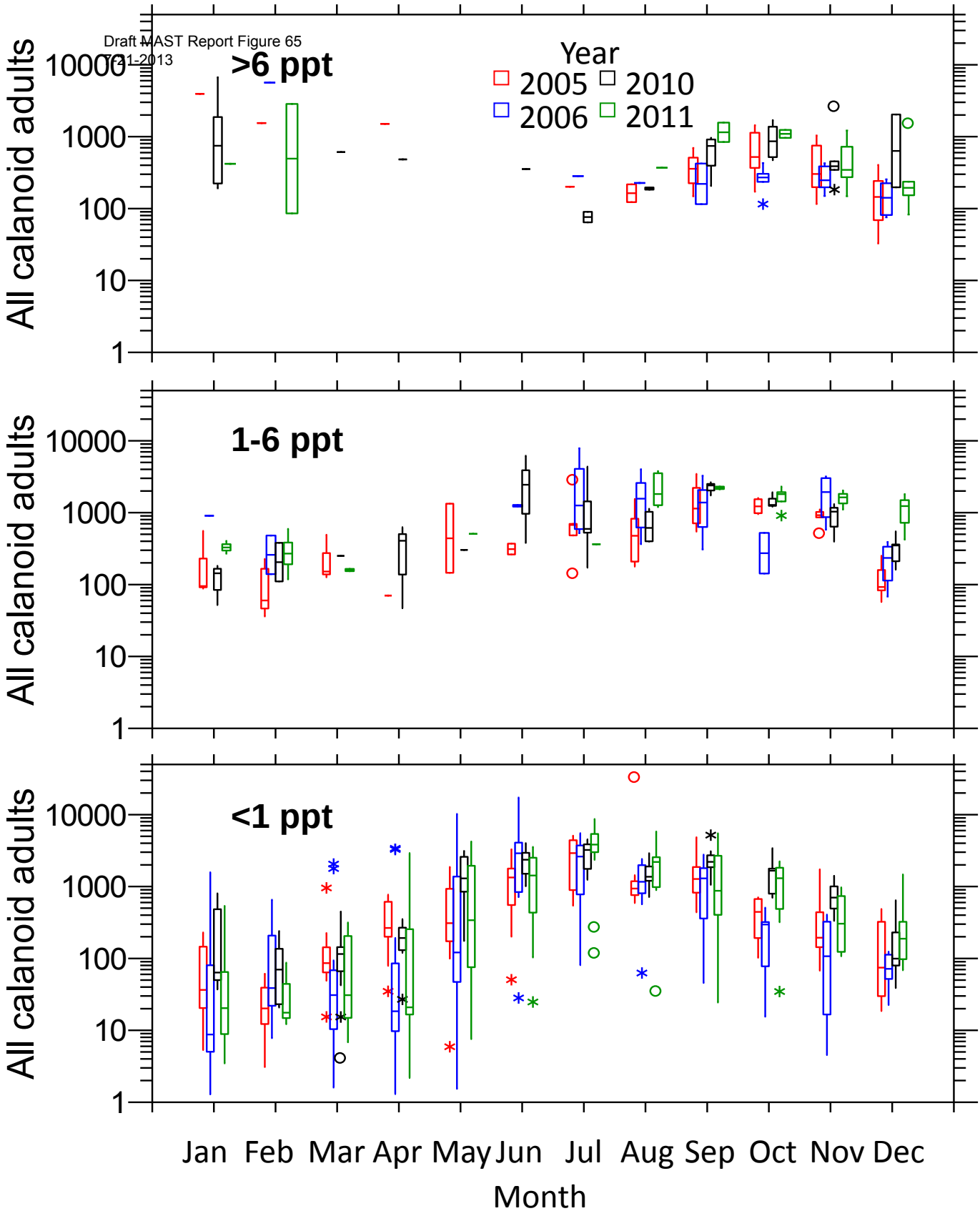

Draft MAST Report Figure 62
7-21-2013
>6 ppt
1-6 ppt
<1 ppt
CS-SRDWSC
Turbidity (ntu)
Survey
Year
2010
2011



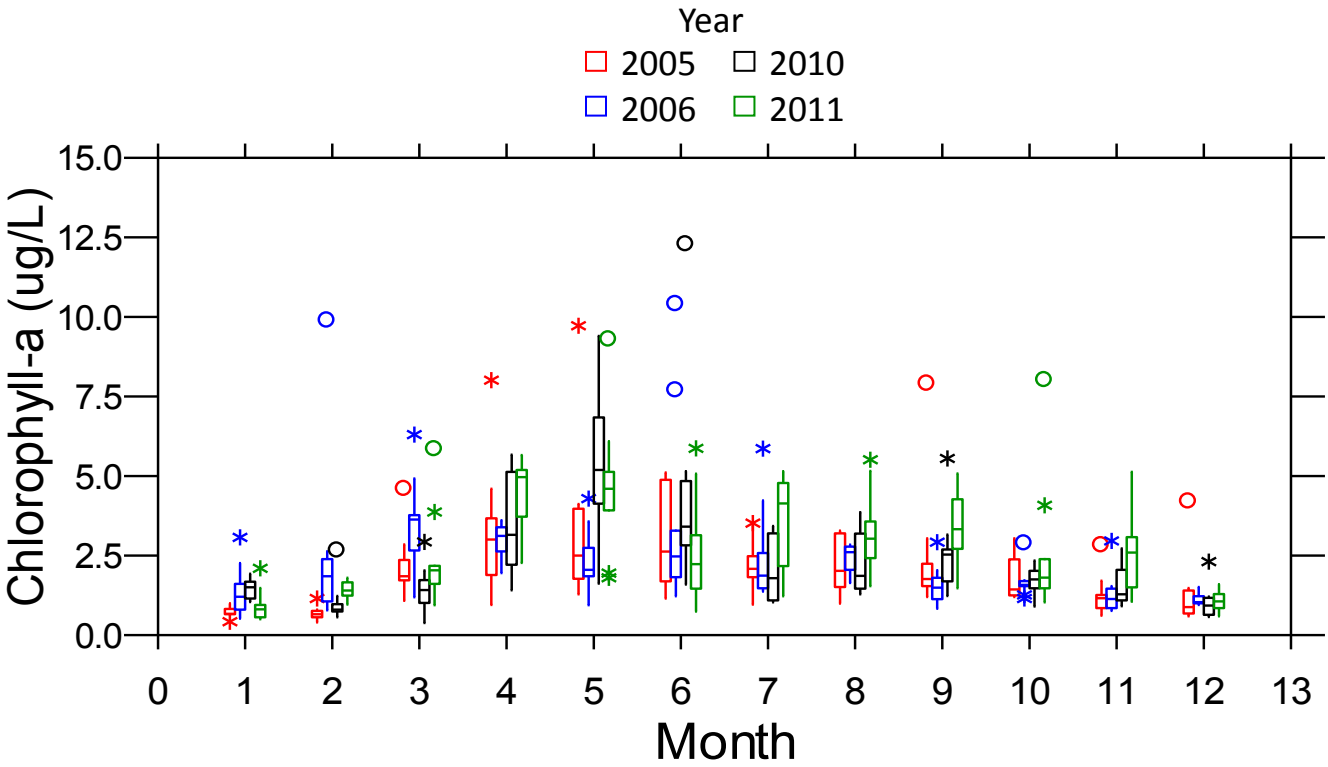
Secchi depth data collected during the Summer Townet Survey. Surveys are conducted biweekly June-August.

Draft MAST Report Figure 64
7-21-2013

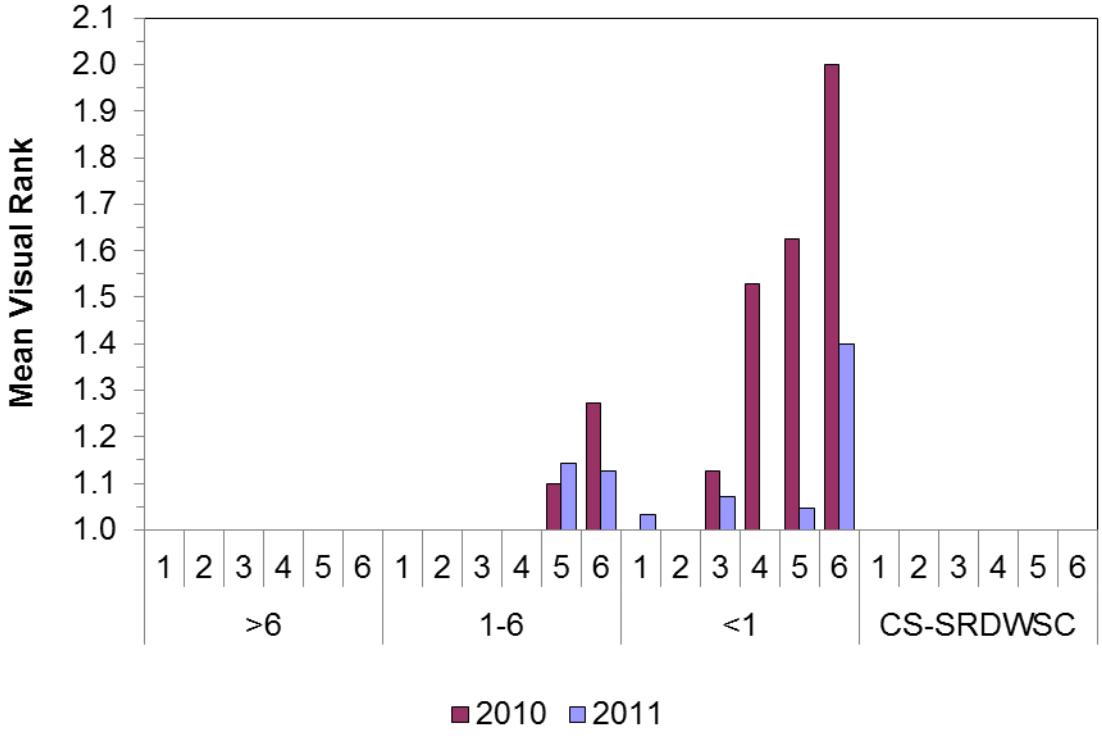


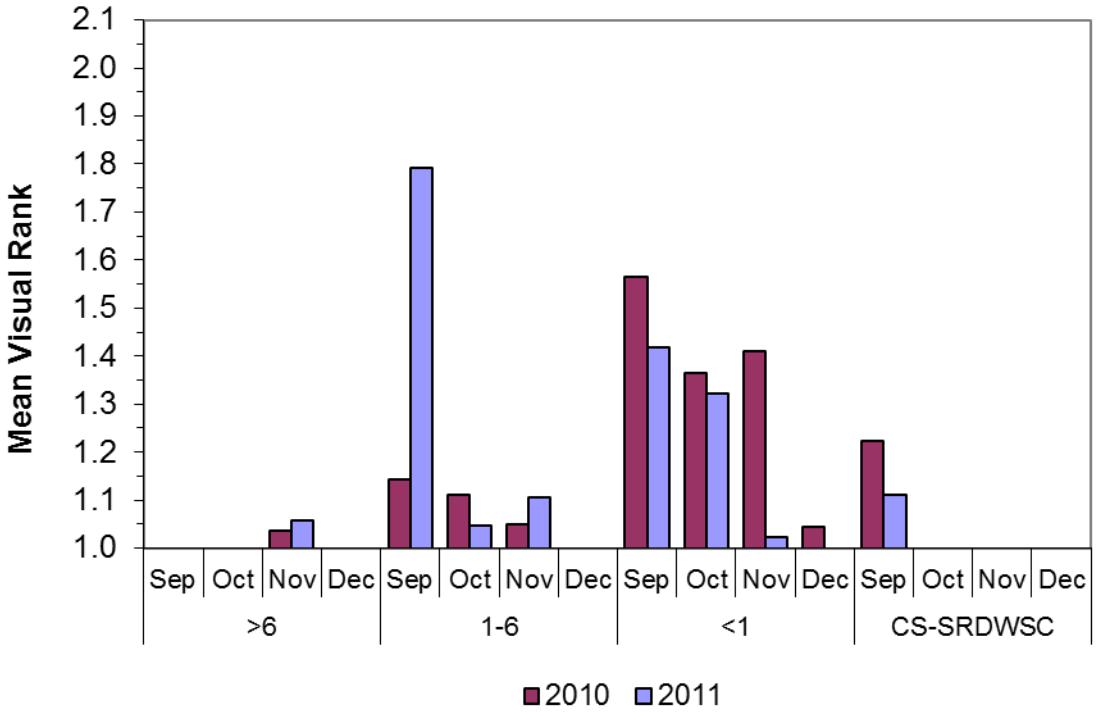

>6 ppt
1-6 ppt
<1 ppt
Year
2005
2006
2010
2011
All calanoid adults
10000
1000
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

Draft MAST Report Figure 66
7-21-2013



Draft MAST Report Figure 67
7-21-2013




Mean Visual Rank
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
Sep
Oct
Nov
Dec
>6
1-6
<1
CS-SRDWSC
2010
2011