Science, Service, Stewardship

Growth Study of Bay Scallops in a Floating Upweller System

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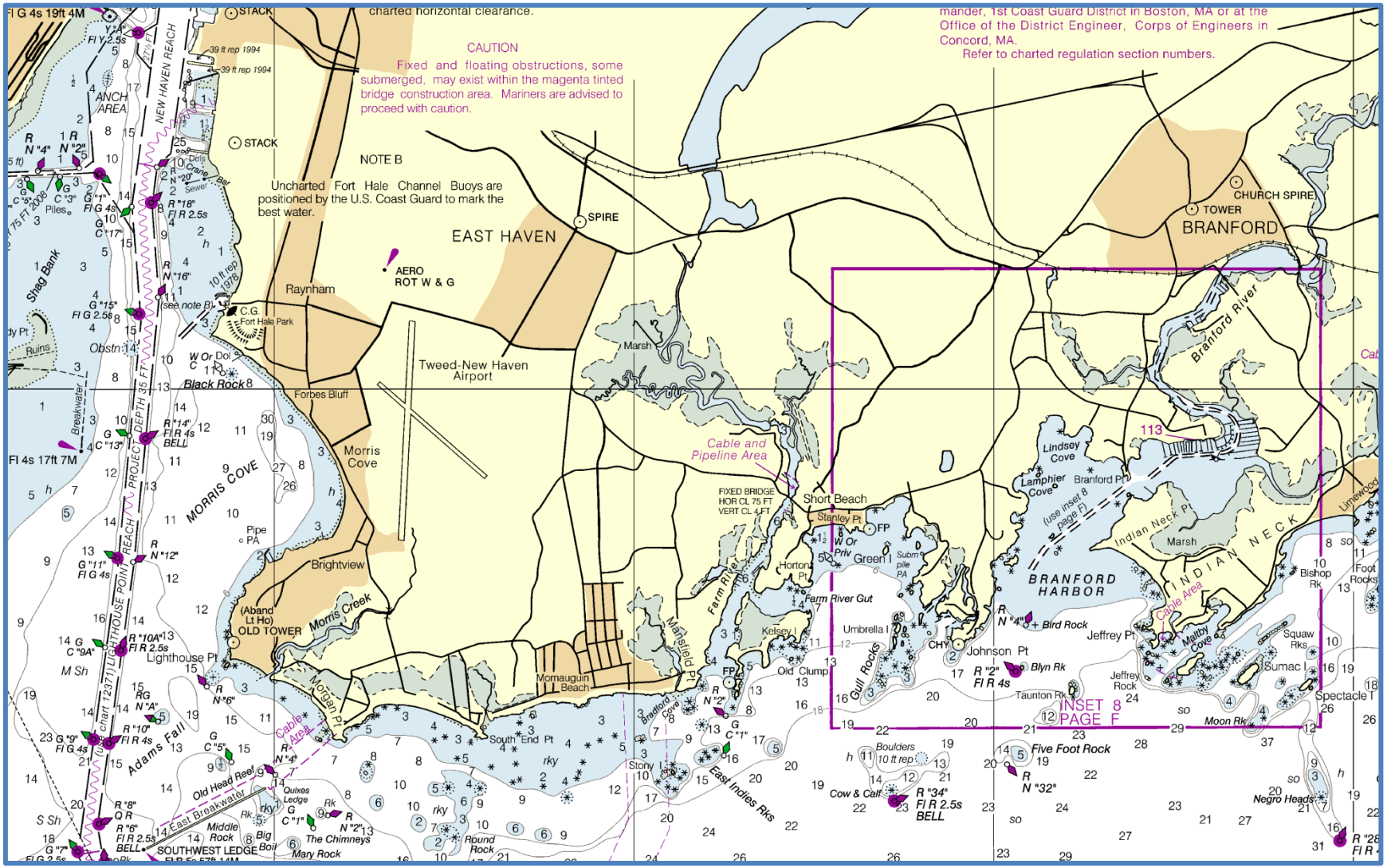
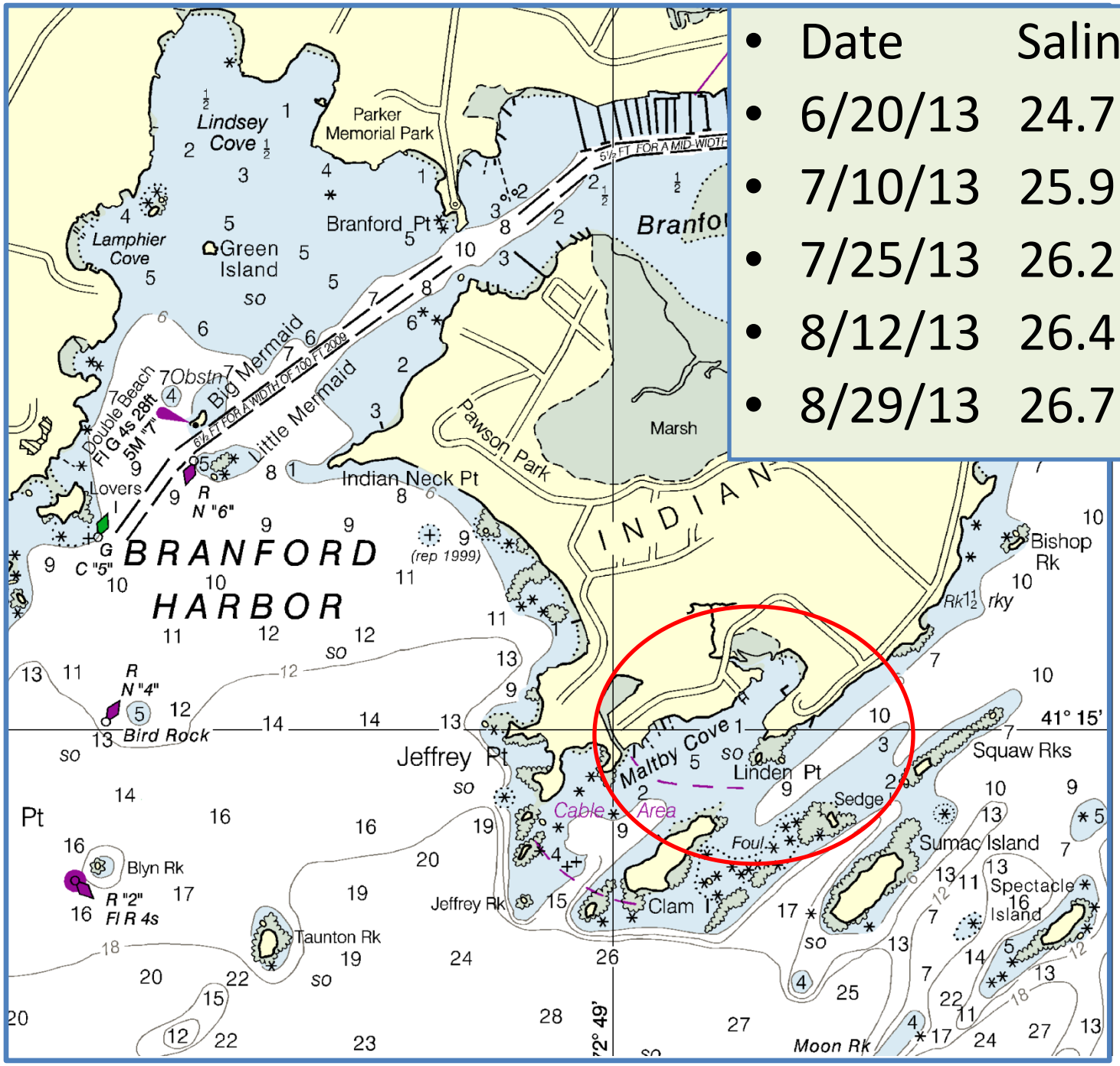
Goals of the Bay Scallop/Upweller Experiment

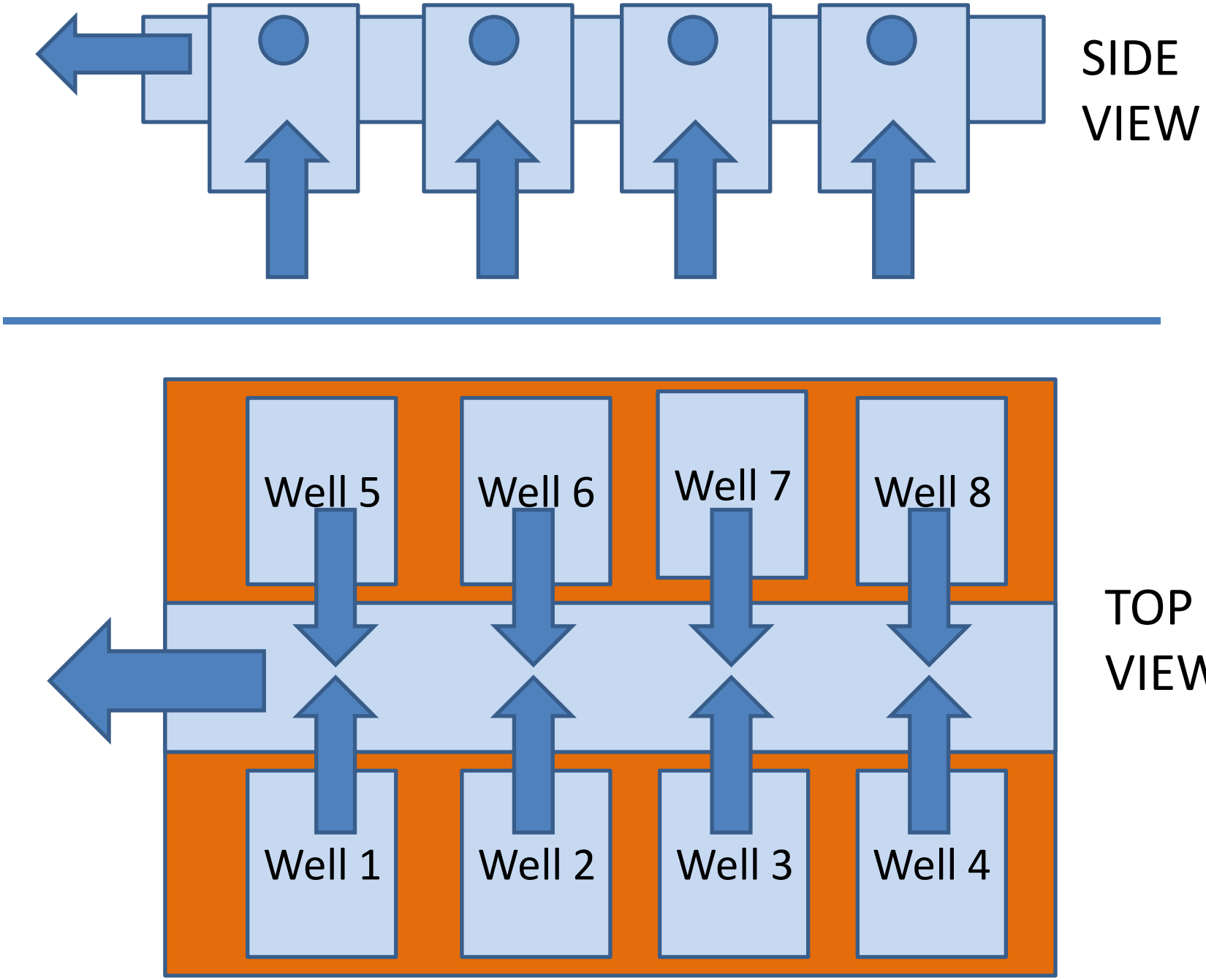
- We wanted to see how scallops would grow in the system
- Try to find the carrying capacity of the system that leads to beneficial growth and survival of juvenile scallops
- Determine when to transfer out of the FLUPSY and into grow-out cages



charted horizontal clearance.
CAUTION
Fixed and floating obstructions, some submerged, may exist within the magenta tinted bridge construction area. Mariners are advised to proceed with caution.
mander, 1st Coast Guard District in Boston, MA or at the Office of the District Engineer, Corps of Engineers in Concord, MA.
Refer to charted regulation section numbers.
NOTE B
Uncharted Fort Hale Channel Buoys are positioned by the U.S. Coast Guard to mark the best water.
EAST HAVEN
BRANFORD
CHURCH SPIRE
TOWER
SPIRE
AERO ROT W & G
Raynham
Tweed-New Haven Airport
Forbes Bluff
Morris Cove
MORRIS COVE
Brightview
Morris Creek
OLD TOWER
Lighthouse Pt
Morgan Pt
Adams Fall
Old Head Reef
East Breakwater
SOUTHWEST LEDGE
Middle Rock
Big Boil
Quixes Ledge
The Chimneys
Mary Rock
Round Rock
South End Pt
Momauguin Beach
Mansfield Pt
Farm River
Cable and Pipeline Area
FIXED BRIDGE HOR CL 75 FT VERT CL 4 FT
Short Beach
Stanley Pt
Green I
Horton Pt
Farm River Gut
Kelsey I
Old Clump
Umbrella I
Gull Rocks
Johnson Pt
Blyn Rk
Taunton Rk
INSET 8 PAGE F
Five Foot Rock
Cow & Calf
Boulders 10 ft rep
Stony I
East Indies Rks
Bradford Cove
Branford River
Lindsey Cove
Lamphier Cove
Branford Pt
Indian Neck Pt
Marsh
BRANFORD HARBOR
INDIAN NECK
Bird Rock
Jeffrey Pt
Jeffrey Rock
Maltby Cove
Squaw Rks
Sumac I
Spectacle I
Moon Rk
Negro Heads
Bishop Rk
Foot Rocks
Limewood
Shag Bank
Breakwater
Black Rock
Fort Hale Park
NEW HAVEN REACH
ANCH AREA
Crane Bar
Sewer
Piles
Obstn
Ruins
Fl 4s 17ft 7M
Fl G 4s 19ft 4M
39 ft rep 1994
10 ft rep 1978
(see note B)
(use chart 12371) LIGHTHOUSE POINT REACH PROJECT DEPTH 35 FT



Date	Salinity	Temp
6/20/13	24.7 ppt	18.8°C
7/10/13	25.9 ppt	23.2°C
7/25/13	26.2 ppt	21.6°C
8/12/13	26.4 ppt	23.5°C
8/29/13	26.7 ppt	24.1°C


SIDE VIEW
Well 5
Well 6
Well 7
Well 8
TOP VIEW
Well 1
Well 2
Well 3
Well 4

CLASS OF
2013

UNITED STATES OF AMERICA
LIBERTY
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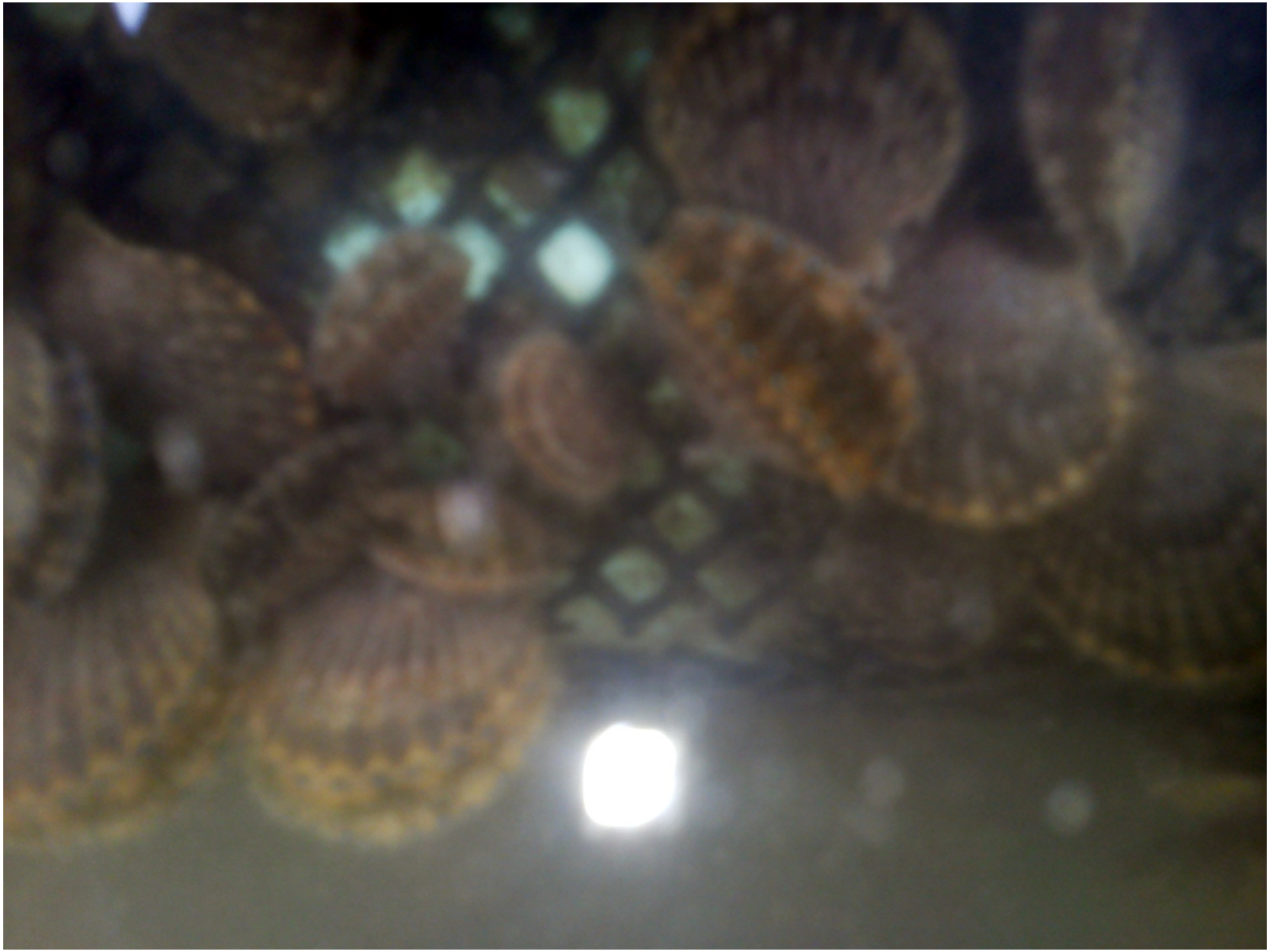
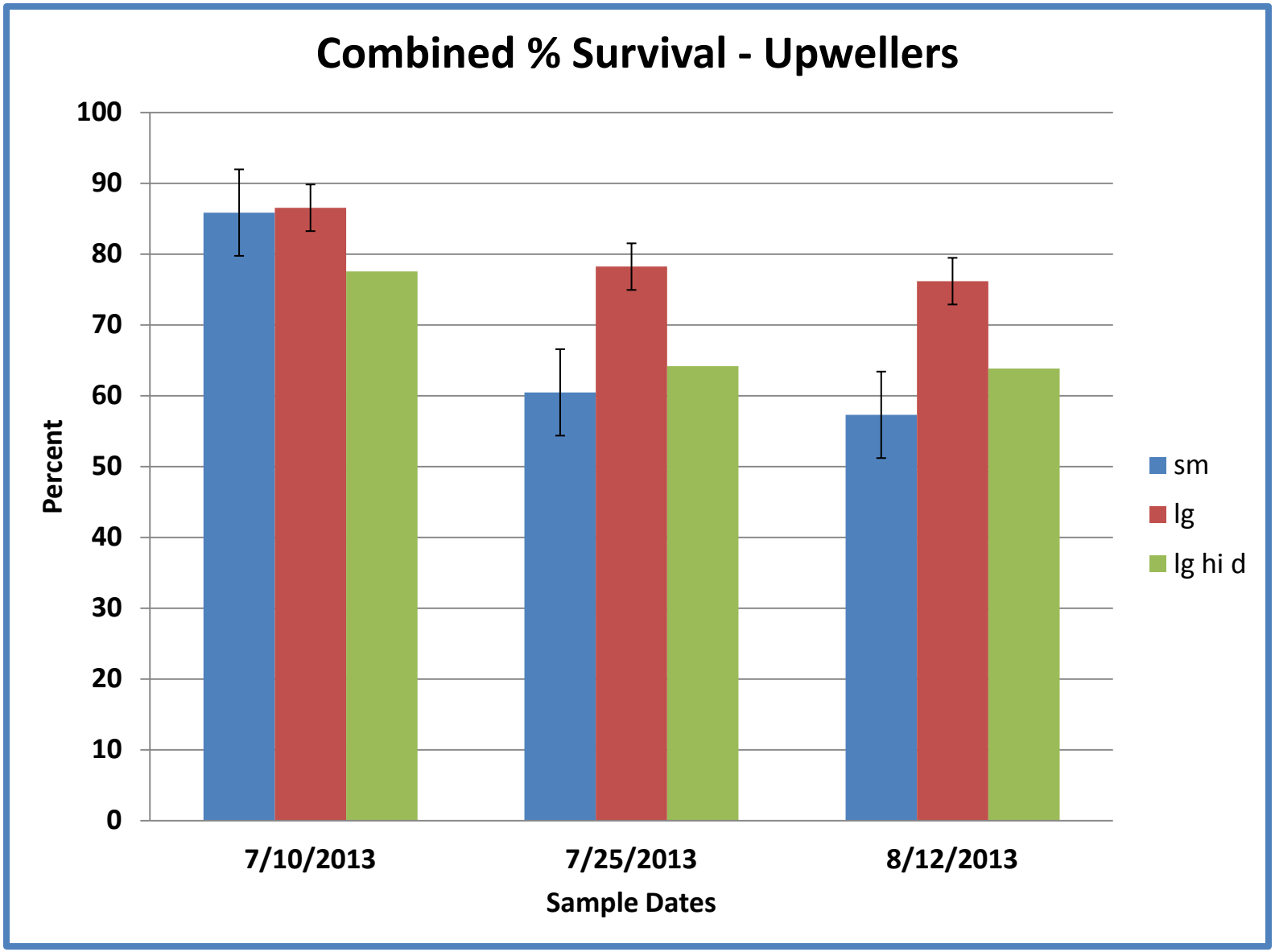
QUARTER DOLLAR

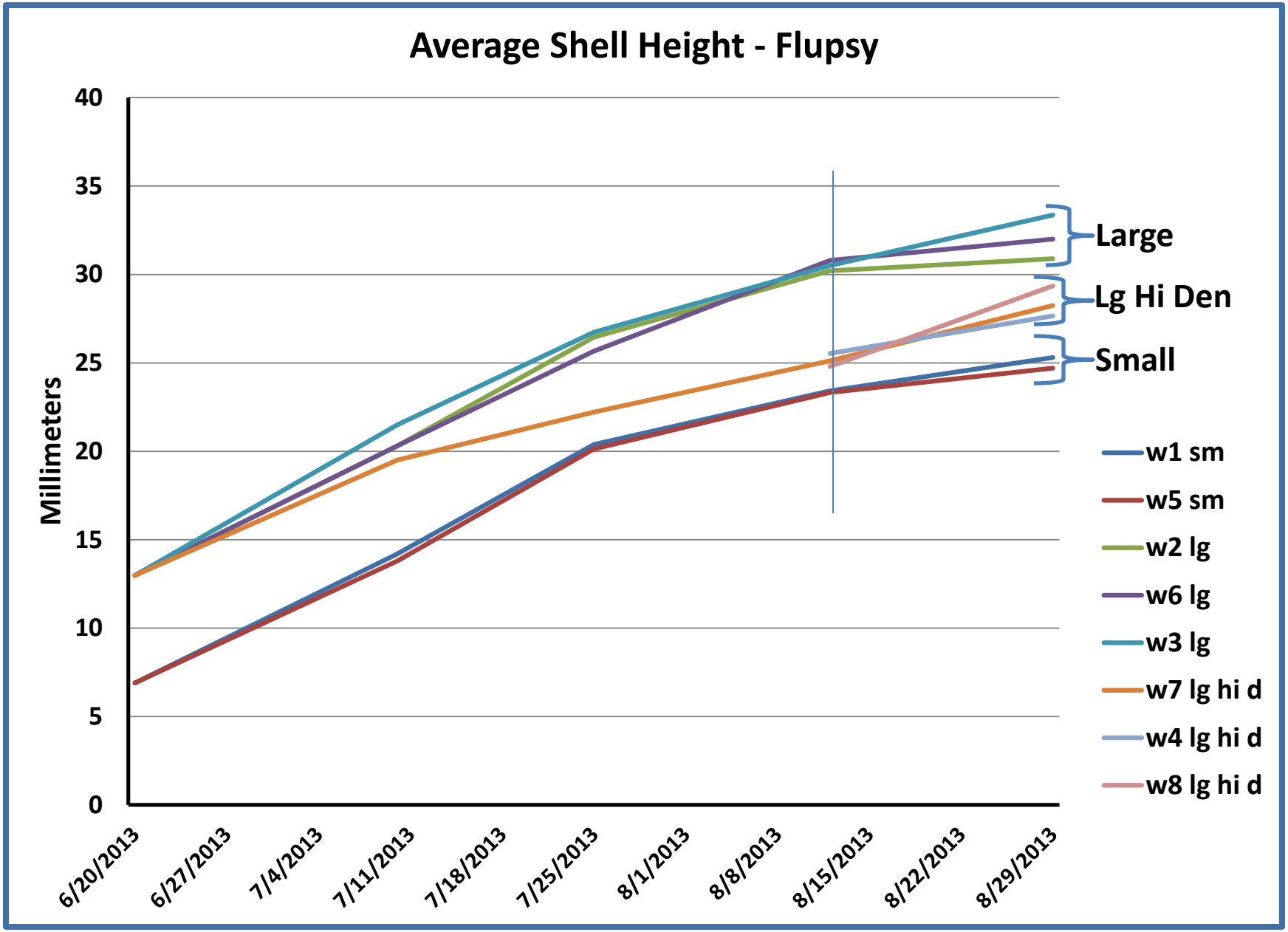
6/20/13 24.7 ppt, 18.8°C

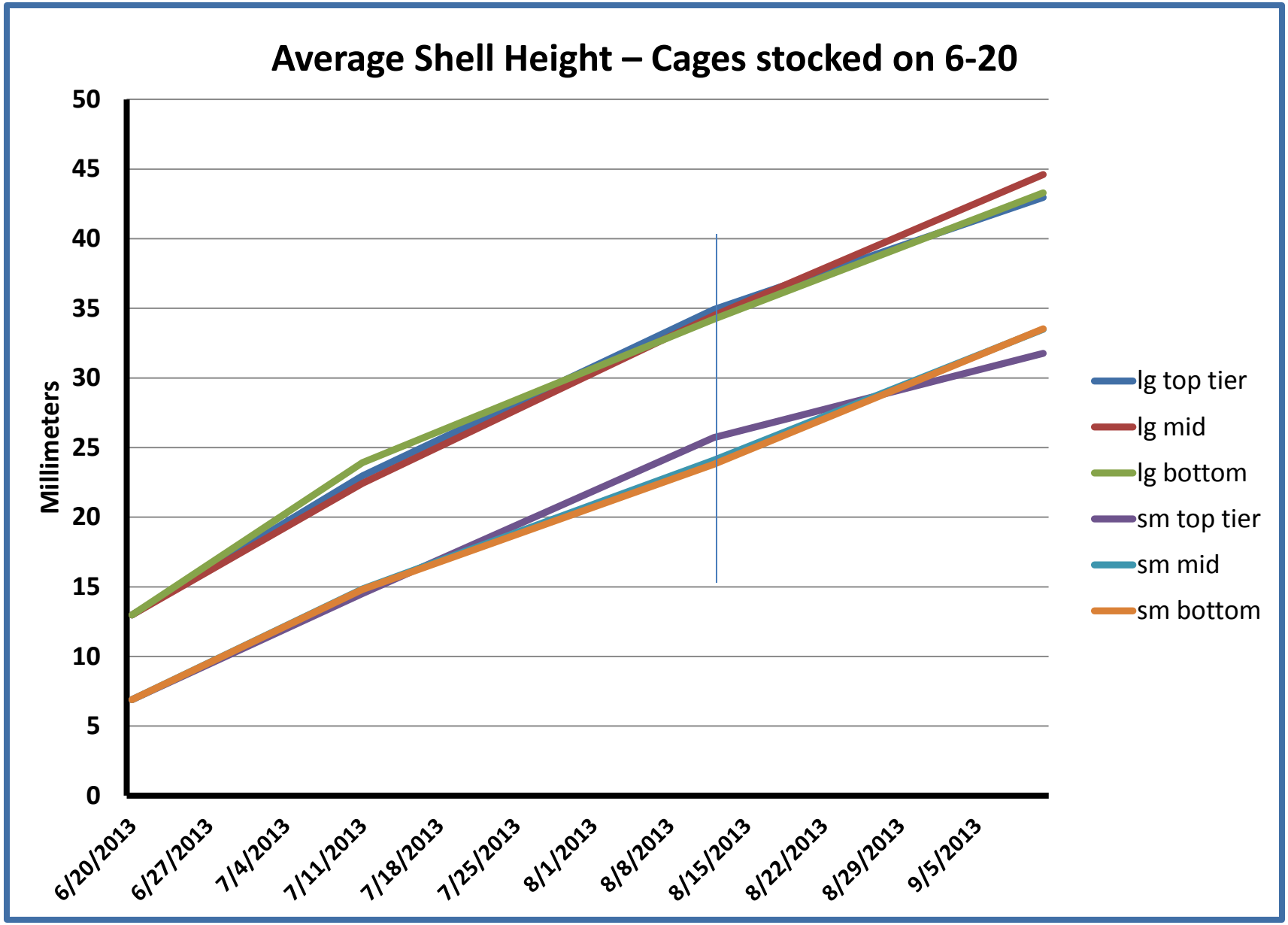
5	6	7	8
6mm mesh Ms13-1 Small < 8mm 400mls 2588 scallops	12mm mesh Ms13-1 Large > 8mm 500mls 785 scallops	12mm mesh Ms13-1 Large > 8mm 3L 4710 scallops	12 mm mesh empty

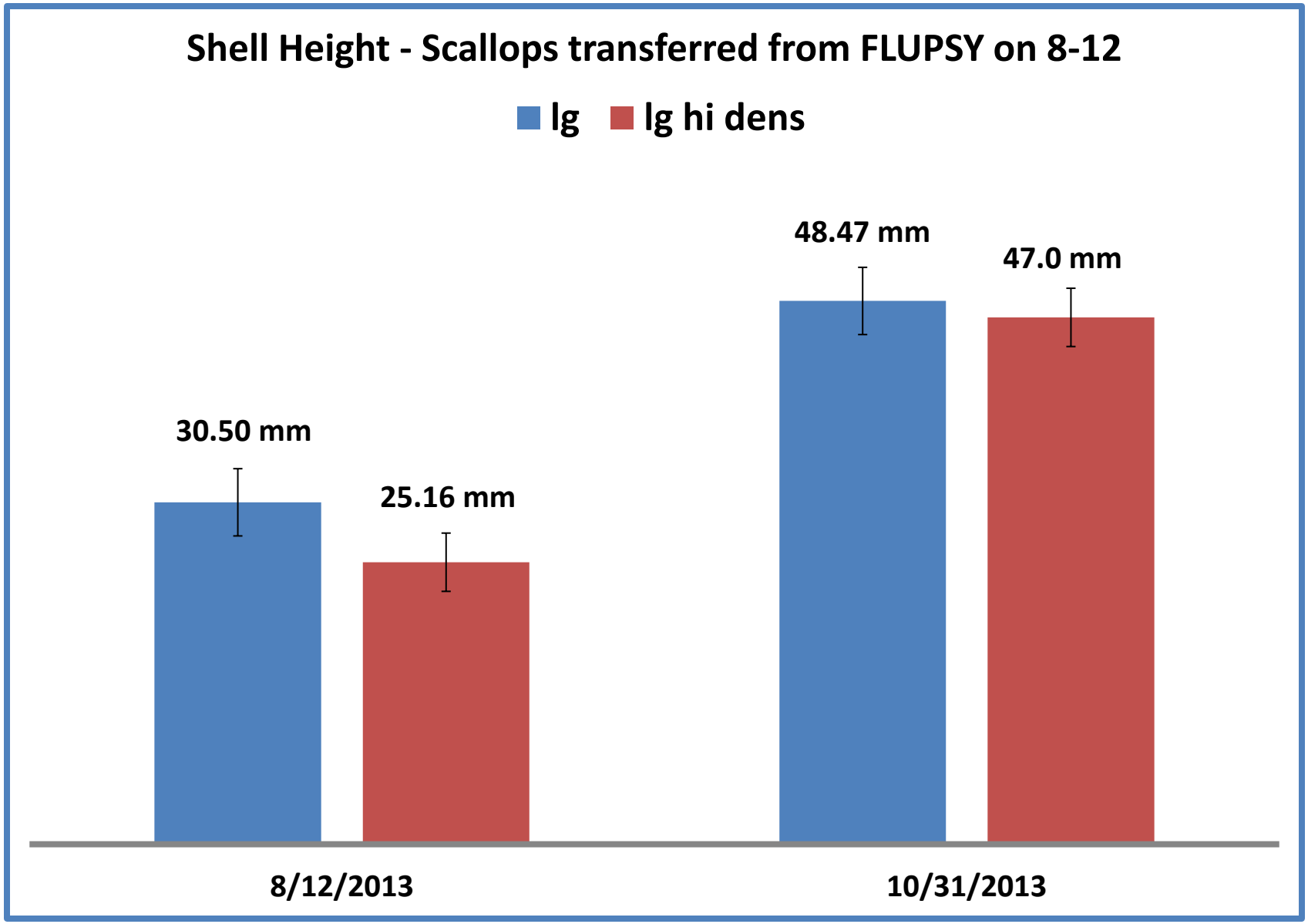
1	2	3	4
6mm mesh Ms13-1 Small < 8mm 400mls 2588	12mm mesh Ms13-1 Large > 8mm 500mls 785 scallops	12 mm mesh Ms13-1 Large > 8mm 500mls 785 scallops	12 mm mesh empty




Combined % Survival - Upwellers
100
90
80
70
60
50
40
30
20
10
0
Percent
7/10/2013
7/25/2013
8/12/2013
Sample Dates
sm
lg
lg hi d


Average Shell Height - Flupsy
Millimeters
40
35
30
25
20
15
10
5
0
6/20/2013
6/27/2013
7/4/2013
7/11/2013
7/18/2013
7/25/2013
8/1/2013
8/8/2013
8/15/2013
8/22/2013
8/29/2013
Large
Lg Hi Den
Small
w1 sm
w5 sm
w2 lg
w6 lg
w3 lg
w7 lg hi d
w4 lg hi d
w8 lg hi d


Average Shell Height – Cages stocked on 6-20
Millimeters
50
45
40
35
30
25
20
15
10
5
0
6/20/2013
6/27/2013
7/4/2013
7/11/2013
7/18/2013
7/25/2013
8/1/2013
8/8/2013
8/15/2013
8/22/2013
8/29/2013
9/5/2013
lg top tier
lg mid
lg bottom
sm top tier
sm mid
sm bottom


Shell Height - Scallops transferred from FLUPSY on 8-12
lg
lg hi dens
30.50 mm
25.16 mm
48.47 mm
47.0 mm
8/12/2013
10/31/2013

Manostat

NOAA
FISHERIES
SERVICE

Acknowledgements:

Capt. Werner Shreiner

DJ King’s crew

Dylan Redman