Update on the
New Nauset Breach
April 2007 to July 2008

“Patriots Day” Storm
April 2007
PictureTheCape.com

“Patriots Day” Storm
April 2007
PictureTheCape.com

N

Aerial Photo: June 2005

April 20, 2007
April 23, 2007
June 18, 2007
August 29, 2007

October 31, 2007

July 10, 2008
©Kelsey-Kennard Airview
www.capecodphotos.com

July 10, 2008
3,600 Ft.
2,300 Ft.
1,100 Ft.
©Kelsey-Kennard Airview
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1
2
3
4
5
October 31, 2007

1
2
2
3
4
5 (?)
4
November 6, 2007

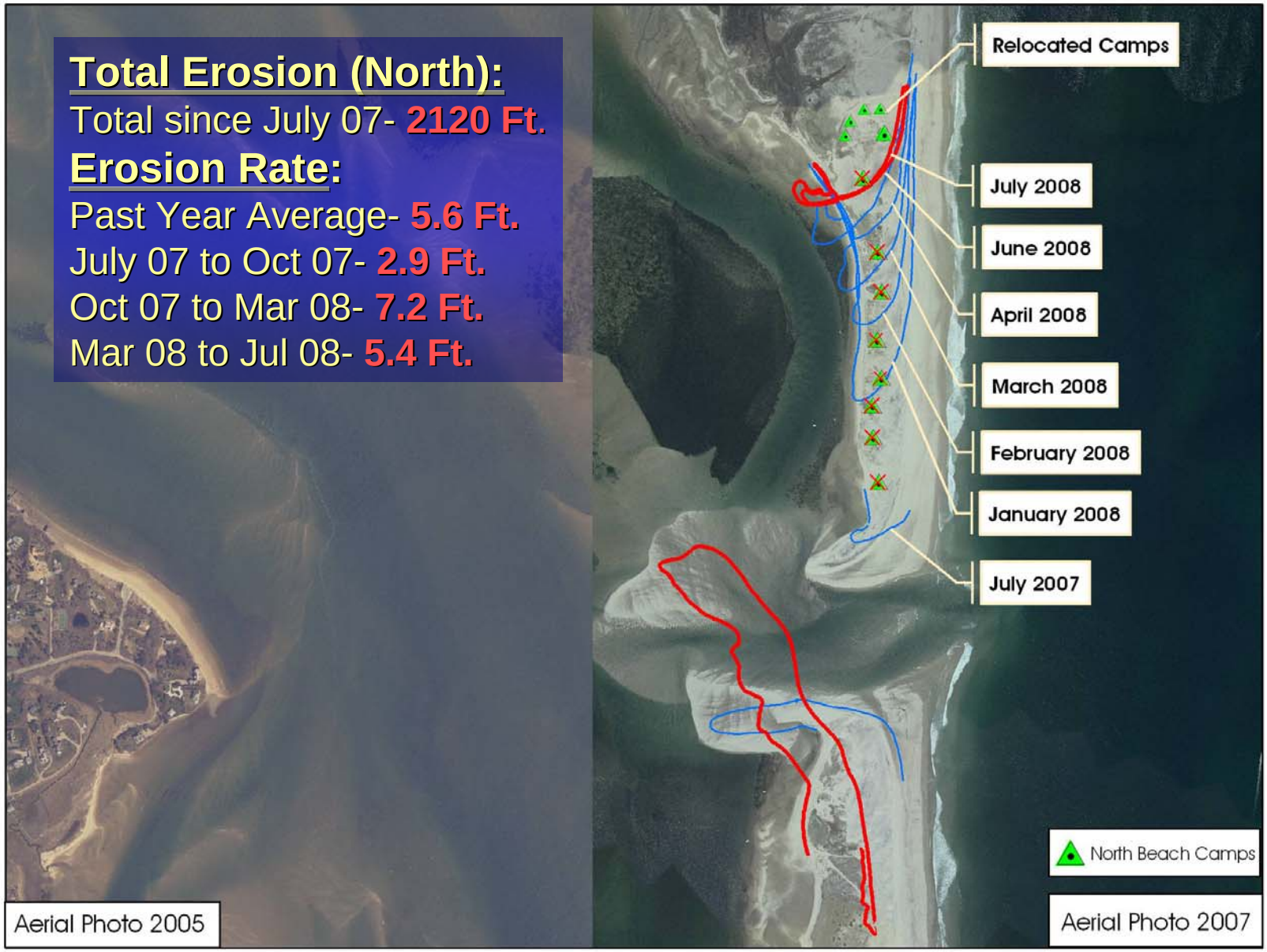
DEERE

September 26, 2006

2008-01-14 15:52:38
16 months later…
January 14, 2008

DEERE
DEERE
DEERE
350
January 18, 2008

April 25, 2008
©Kelsey-Kennard Photo
www.capecodphotos.com


Total Erosion (North):
Total since July 07- 2120 Ft.
Erosion Rate:
Past Year Average- 5.6 Ft.
July 07 to Oct 07- 2.9 Ft.
Oct 07 to Mar 08- 7.2 Ft.
Mar 08 to Jul 08- 5.4 Ft.
Relocated Camps
July 2008
June 2008
April 2008
March 2008
February 2008
January 2008
July 2007
North Beach Camps
Aerial Photo 2005
Aerial Photo 2007

Mainland Impacts

- Higher Tides
- More Frequent High Water Events
  - Prone to meteorological influences
- No “Significant” Erosion or Waves
- Readjustment of Shoreline Profile
  - Similar response following 1987 breach

Navigation Impacts

- Large Influx of Sediment
- “Less Water” at Low Tide
- Change in Current Velocities
  - Increase north of Minister’s Pt., Upper Bay
    - Some movement of existing shoals
  - Decrease in Chatham Harbor

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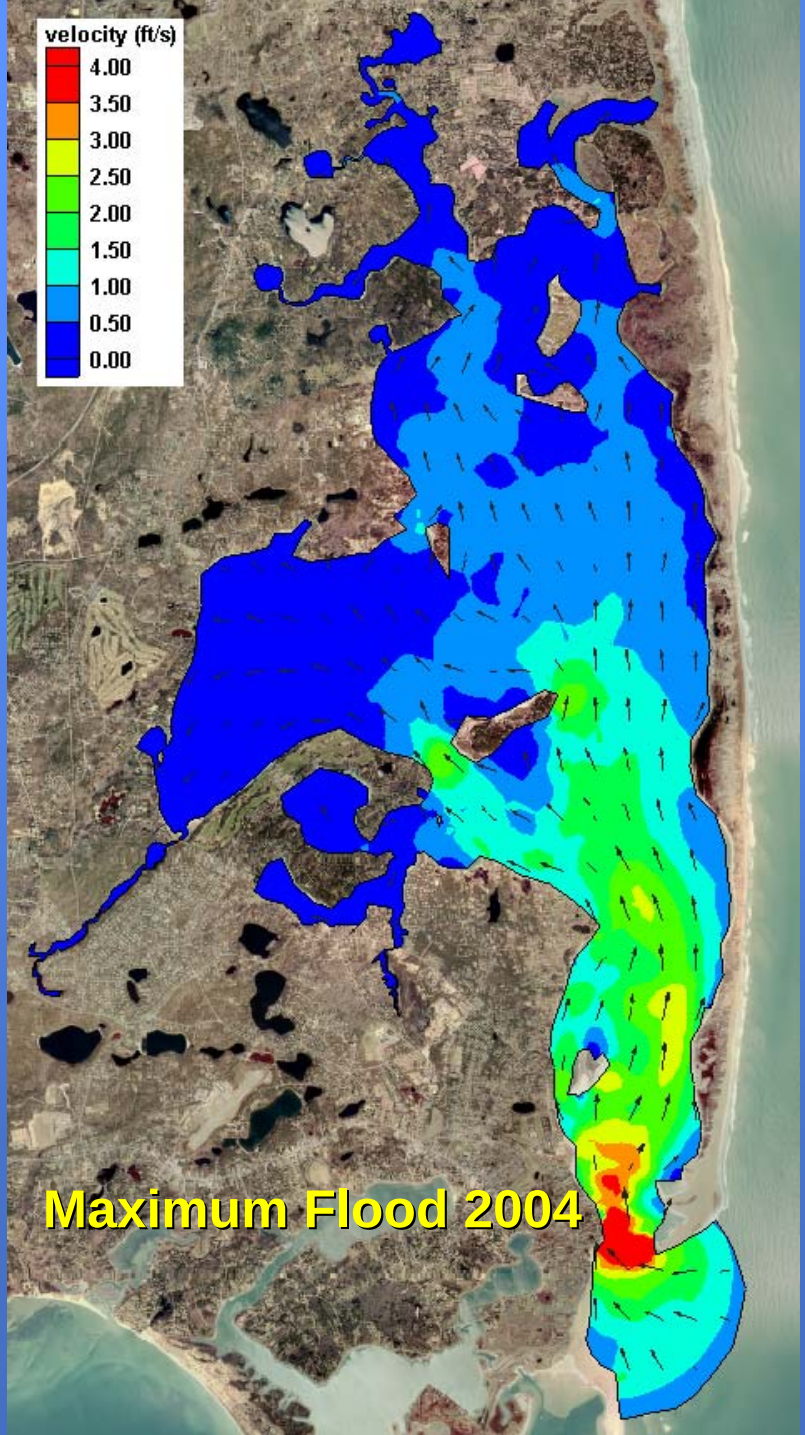
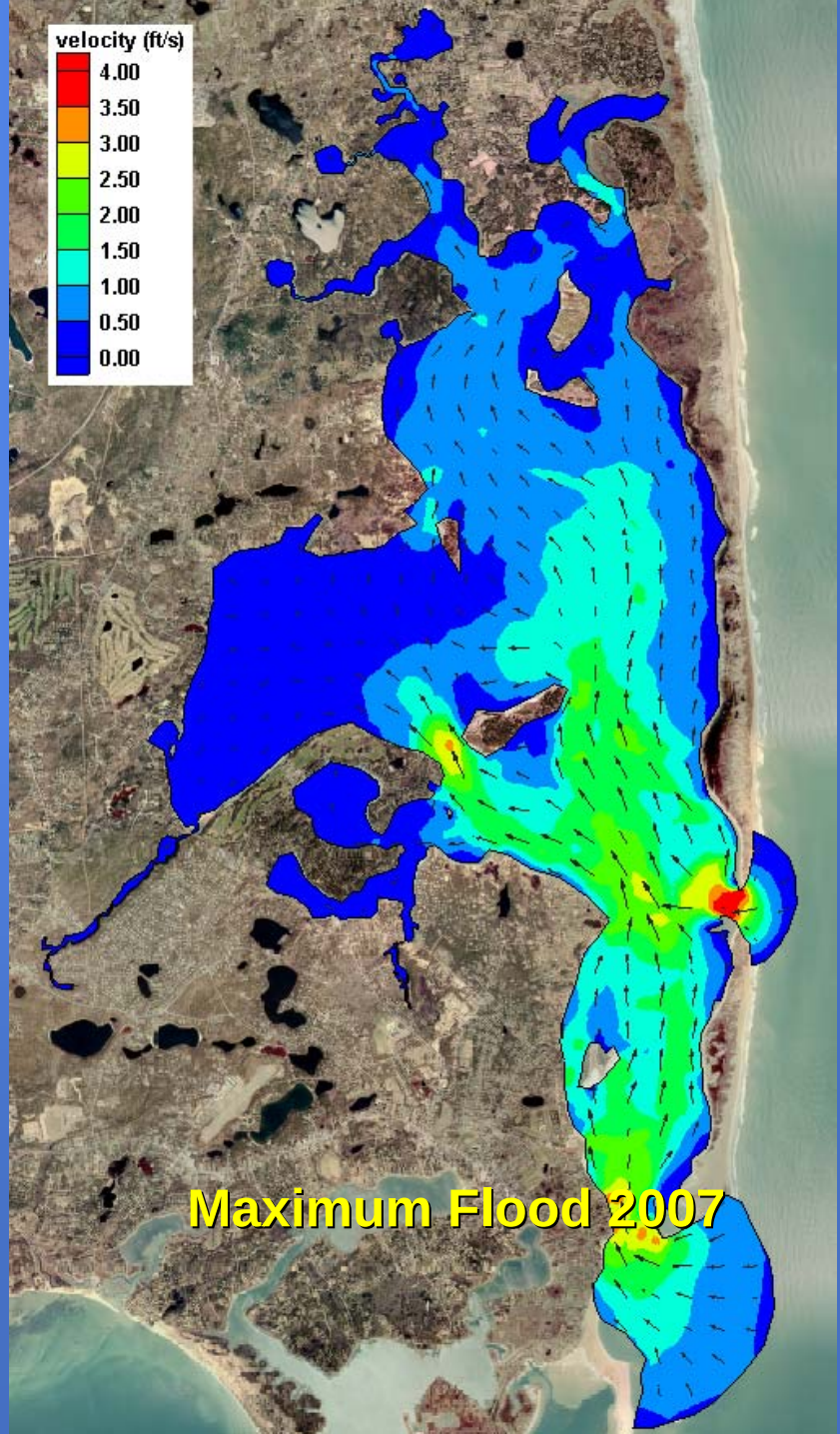
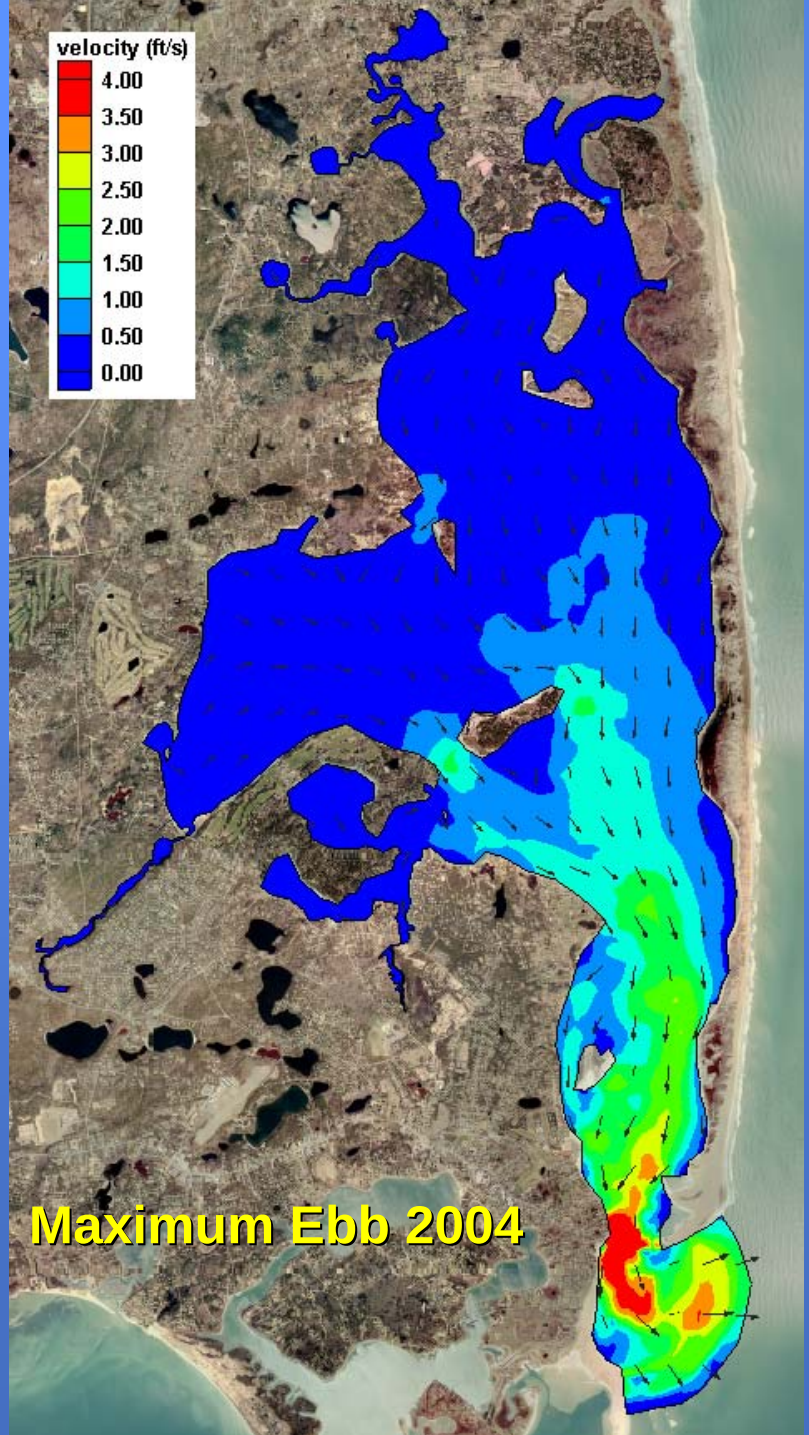
Changes in tide characteristics: Pre- and Post- breach

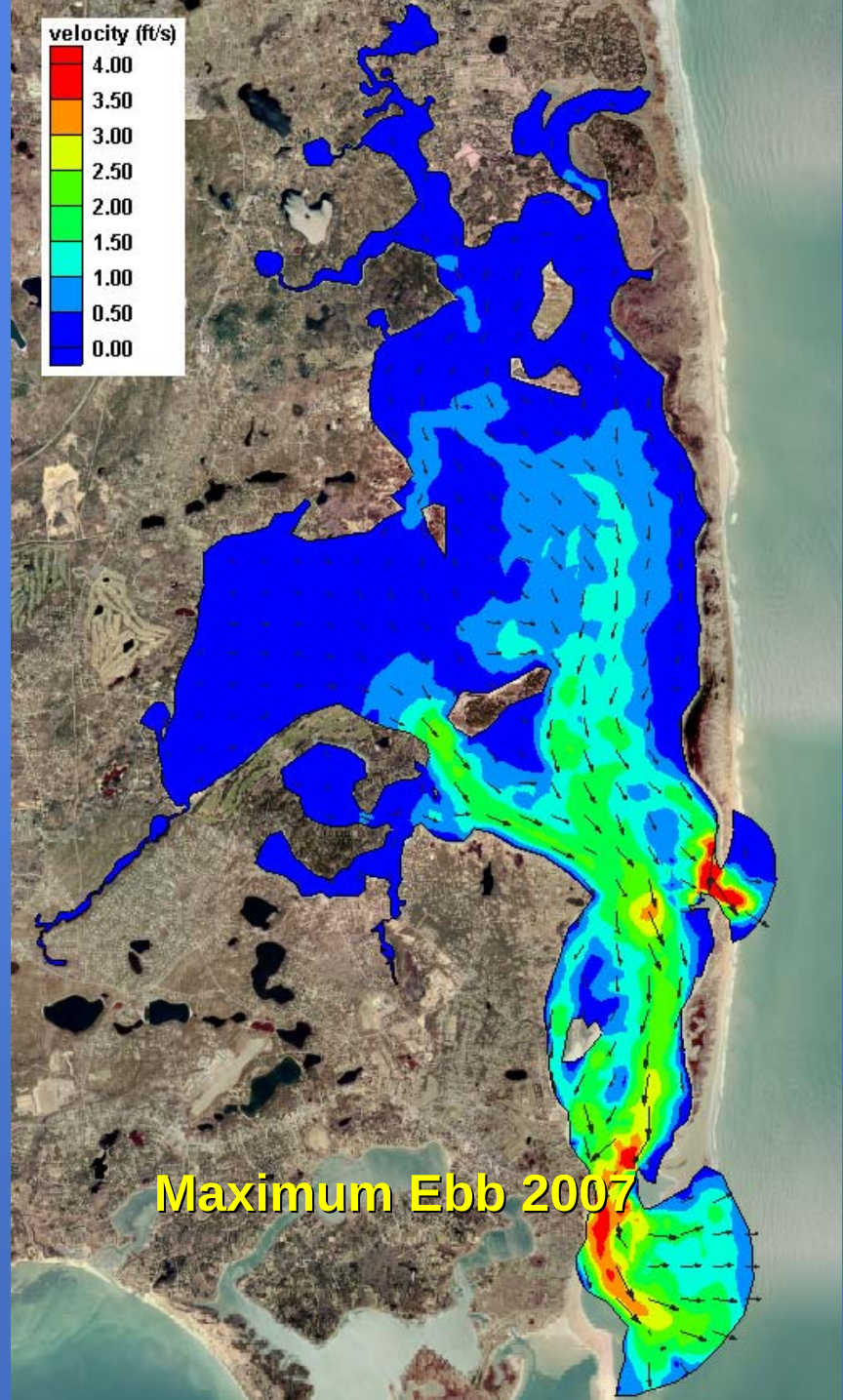
2004 (pre-) vs. October 2007 (post-) modeled inlet configurations

Station Location	MHW Change feet	MLW Change feet	Total Range Change feet			
Chatham Fish Pier	+0.4	-0.8	+1.2			
Ryder Cove	+0.3	-0.6	+0.9			
Western Pleasant Bay	+0.3	-0.3	+0.7			
Little Pleasant Bay	+0.4	-0.3	+0.6			
Arey's Pond	+0.4	-0.3	+0.7			
Meeting House Pond	+0.4	-0.3	+0.7			


velocity (ft/s)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Maximum Flood 2004


velocity (ft/s)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Maximum Flood 2007


velocity (ft/s)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Maximum Ebb 2004


velocity (ft/s)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Maximum Ebb 2007

“Pending” Issues of Inlet Development

- Potential future dredging/disposal needs
  - Pleasant Bay ACEC “prohibition”
  - Funding implications: Federal involvement?
  - Where put the material??
- Shoreline change/erosion impacts
- Pro-active planning for fishing fleet

South-Side Beaches

- Erosion of Primary Public Beaches
  - Continued sediment deficit
  - Need for future nourishment
- Maintaining flow/flushing
  - Mill Creek/Taylor's Pond
  - Buck's Creek

Article 11
Mill Creek Dredging

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- Spencer Kennard- Kelsey-Kennard Airviews
- Thadd Eldredge- Eldredge Surveying
- Paul Lagg- Town of Chatham

Photo Courtesy of Paul Lagg