APPENDIX B
ENGINEERING REPORT

SUB-APPENDIX B

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DELFT3D MODEL RESULTS

TABLE B-1

ALTERNATIVES SIMULATED

Alternative	Project
2	Abandon/Retreat (Without-Project)
3	Rich Inlet Management and Beach Fill
4	Beach Fill without Management of Rich Inlet (same beach fill as Alternative 3)
4a	Beach Fill without Management of Rich Inlet (same beach fill as Alternative 5a)
5a-1	Terminal Groin (700 ft) with Beach Fill from Nixon Channel
5a-2	Terminal Groin (1,200 ft) with Beach Fill from Nixon Channel
5a-3 (700ft)	Terminal Groin (700 ft) without Oceanfront Beach Fill
5a-3 (1,200ft)	Terminal Groin (1,200 ft) without Oceanfront Beach Fill
5a-2-10°	Alt. 5a-2 with 10° oblique terminal groin (1,200 ft)
5a-2-20°	Alt. 5a-2 with 20° oblique terminal groin (1,200 ft)
5a-2-30°	Alt. 5a-2 with 30° oblique terminal groin (1,200 ft)

NOTE: The length of each groin above is the length relative to the April 2007 shoreline position, and does not include the landward segment of the structure.

This document provides the following figures:

1) Bathymetry maps (year 0, 2 and 5) for each alternative.

2) Erosion/sedimentation maps (year 2 and 5) for each alternative. Erosion is indicated by the red or negative tones, and deposition is indicated by the green or positive tones.

3) Maps of differences between the bathymetry of each alternative at year 0, 2 and 5 and the initial bathymetry of Alternative 2. Along the fill areas, these maps indicate the amount of fill remaining.

4) Maps of differences between the bathymetry of each alternative at year 0, 2 and 5 and the bathymetry of Alternative 2 at year 0, 2 and 5, respectively. These maps indicate the impacts and benefits of each alternative. Along the oceanfront beaches and the southeastern shoreline of Nixon Channel, red or negative tones indicate impacts, and green or positive tones indicate benefits.

All elevations are shown in feet NGVD.

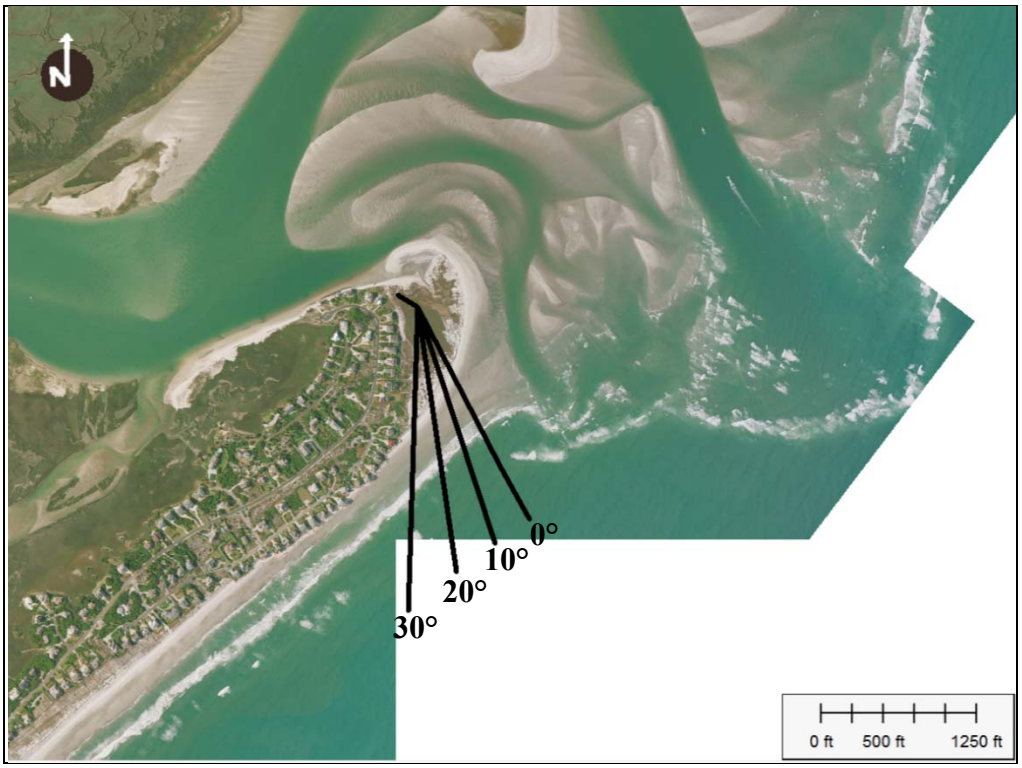


Figure 1: 10, 20 and 30 degrees angled groins in relation to the predefined groin position.

Alternative 2 - Abandon/Retreat (Without-Project)

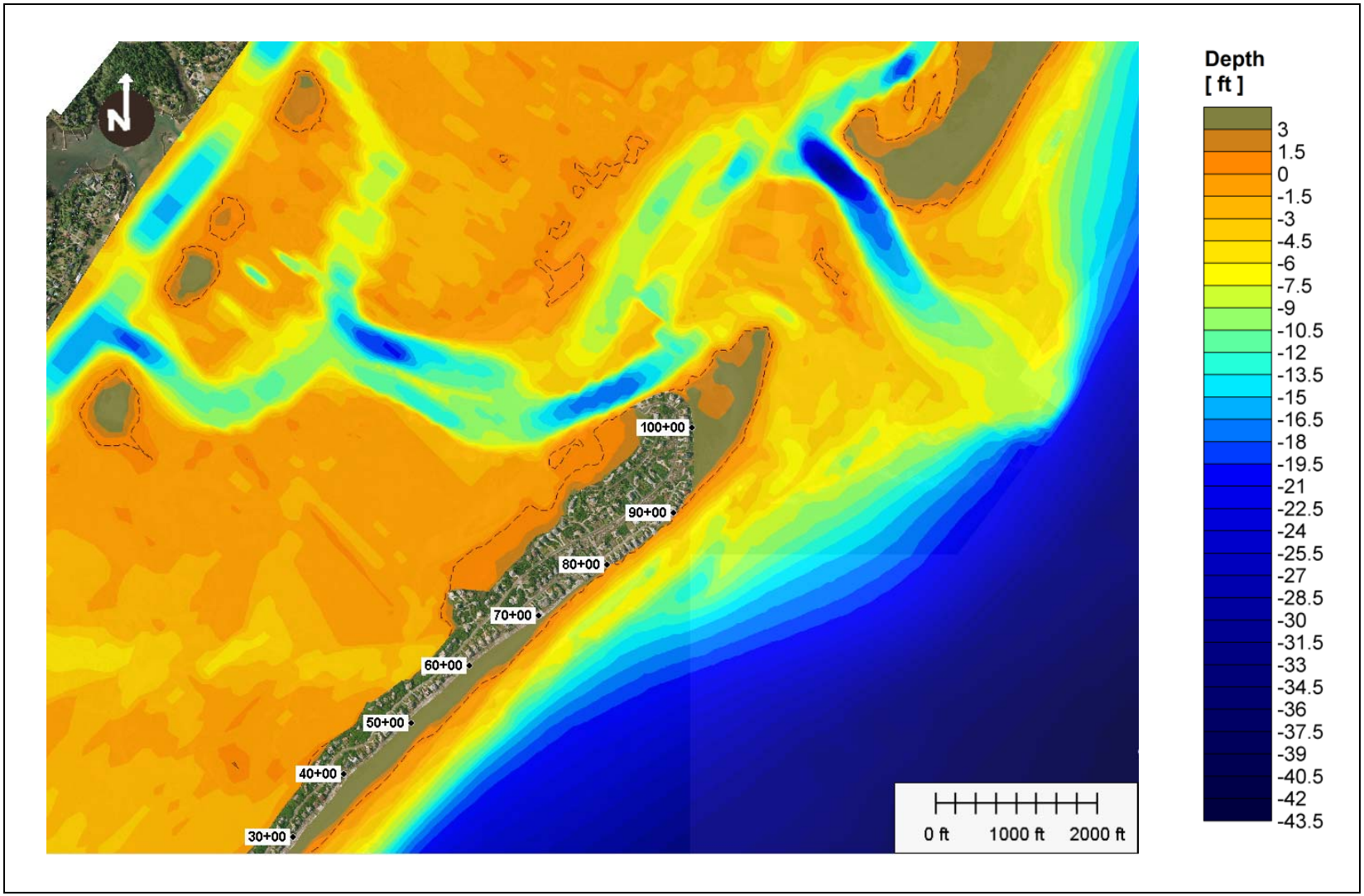


Figure 2: Alternative 2, initial bathymetry.

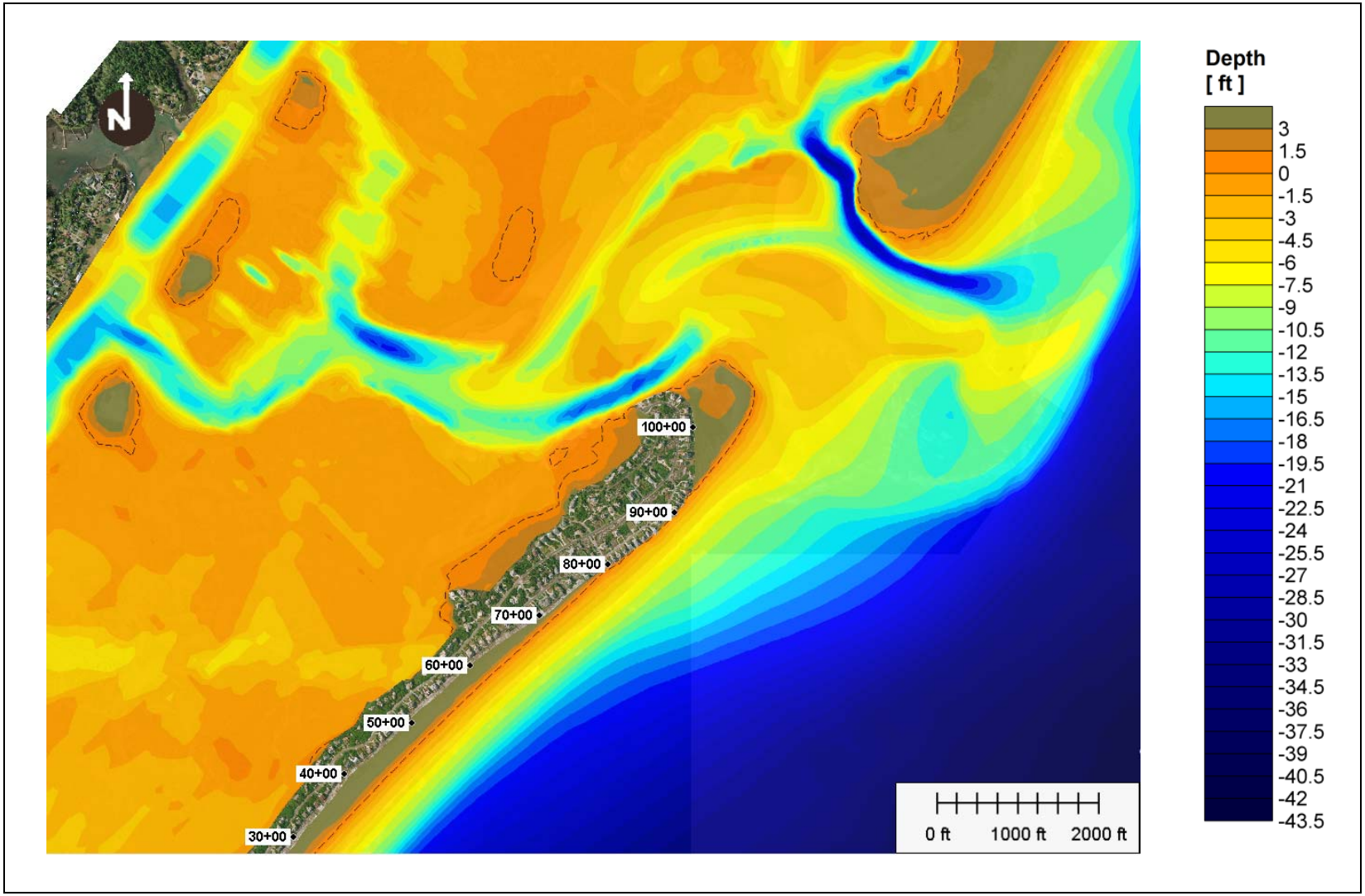


Figure 3: Alternative 2, bathymetry after 2 years simulation.

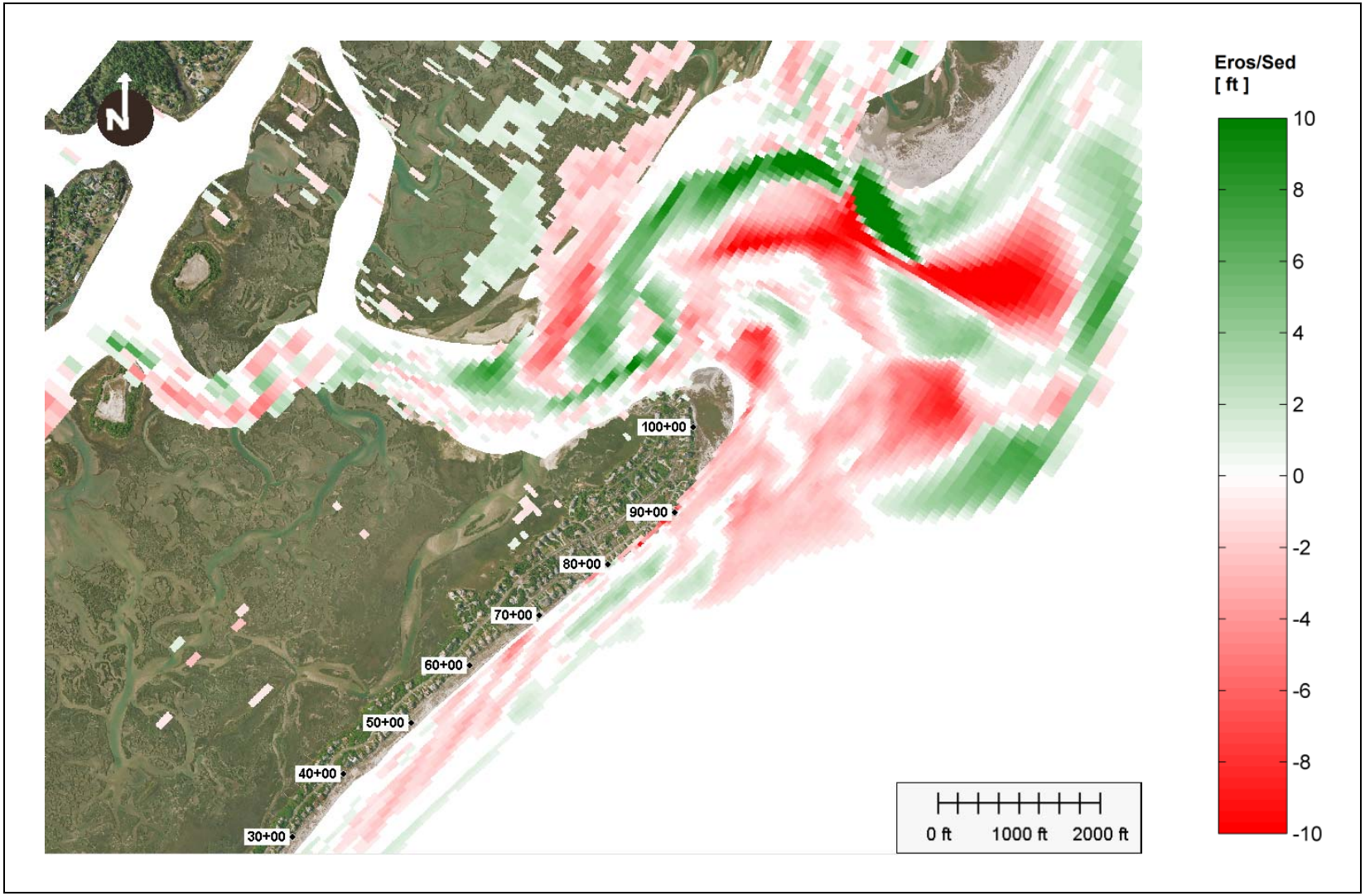


Figure 4: Alternative 2, erosion/sedimentation after 2 years simulation.

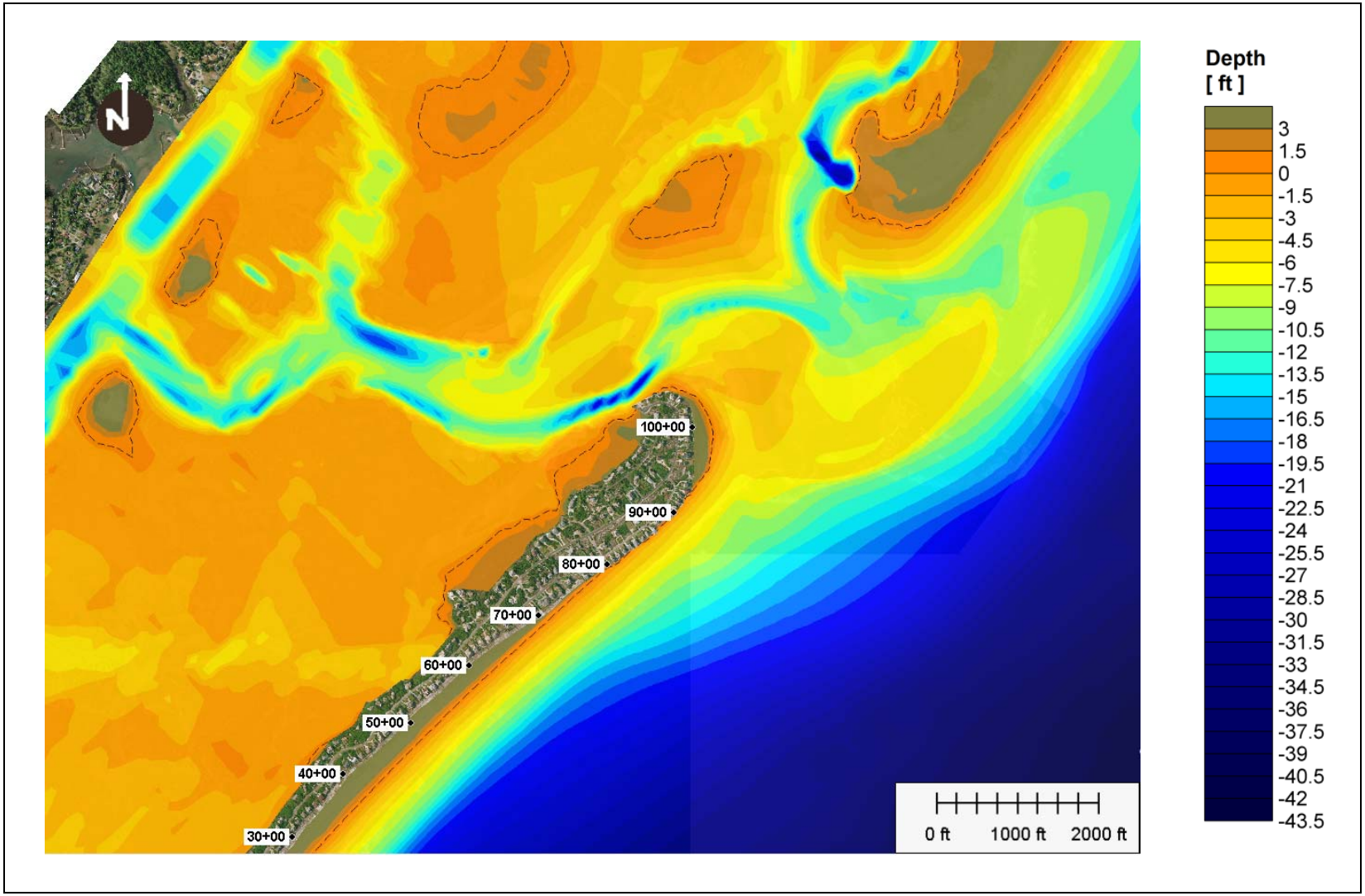


Figure 5: Alternative 2, bathymetry after 5 years simulation.

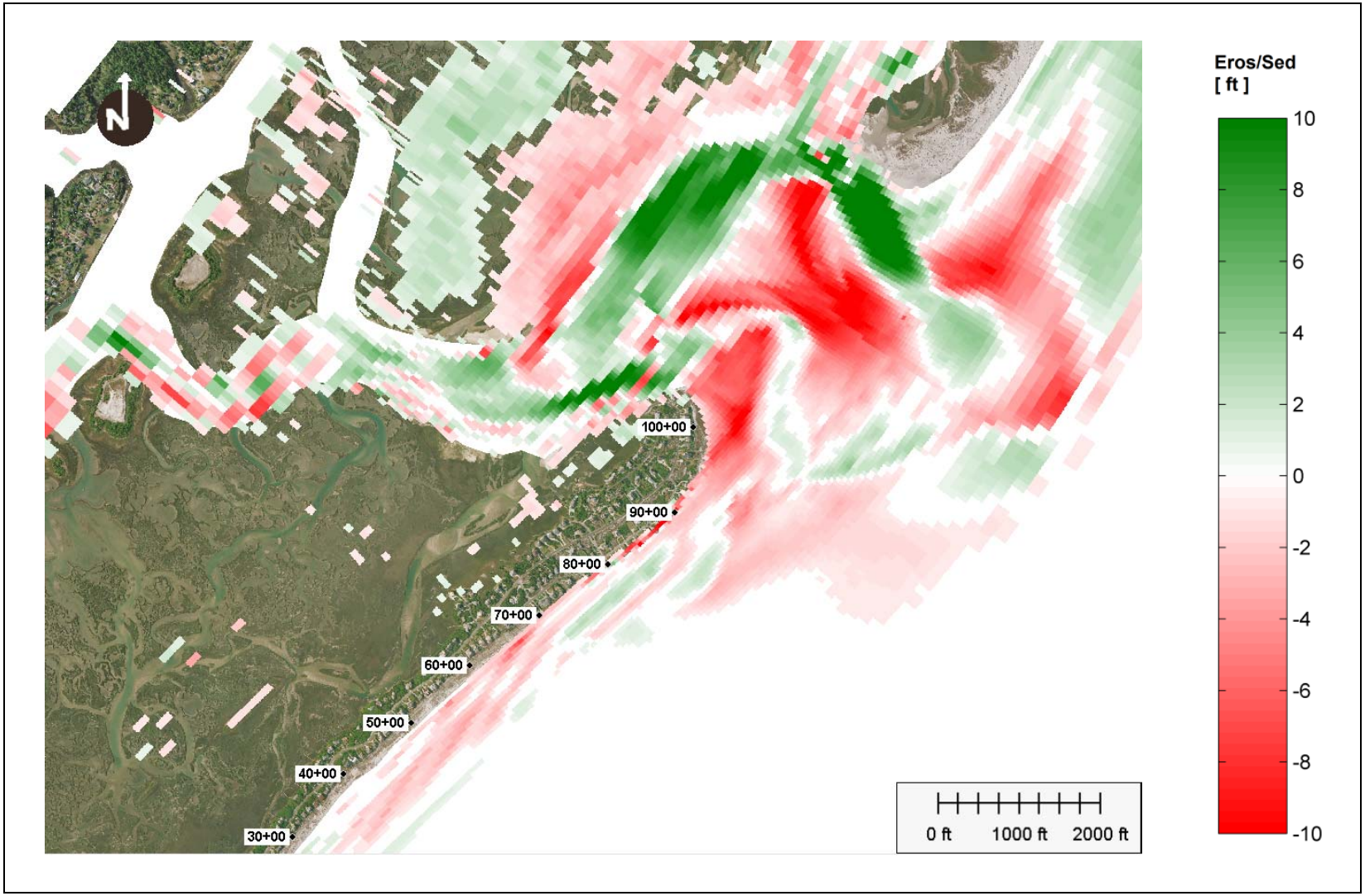


Figure 6: Alternative 2, erosion/sedimentation after 5 year simulation.

Alternative 3 - Rich Inlet Management and Beach Fill

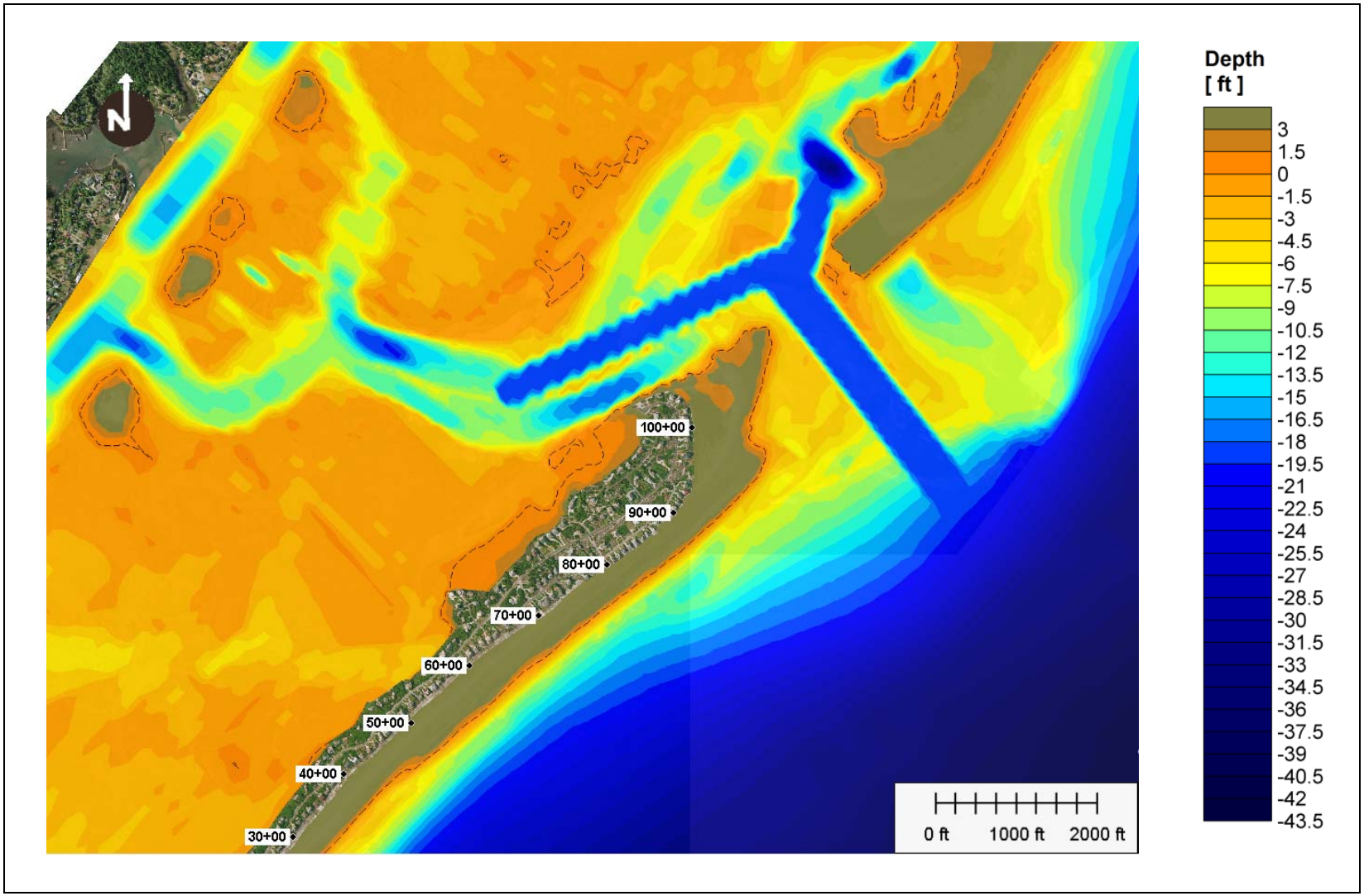


Figure 7: Alternative 3, initial bathymetry.

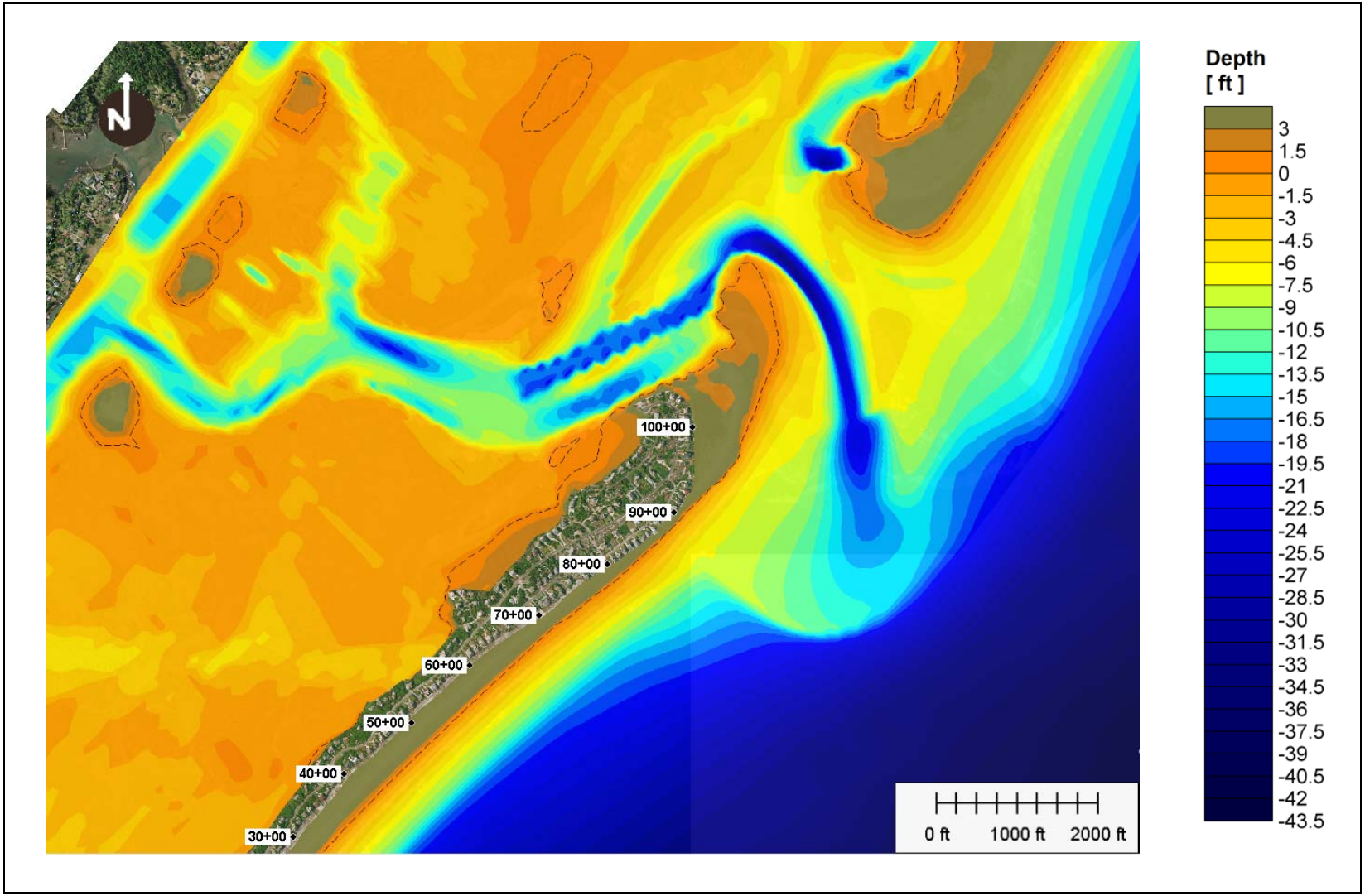


Figure 8: Alternative 3, bathymetry after 2 years simulation.

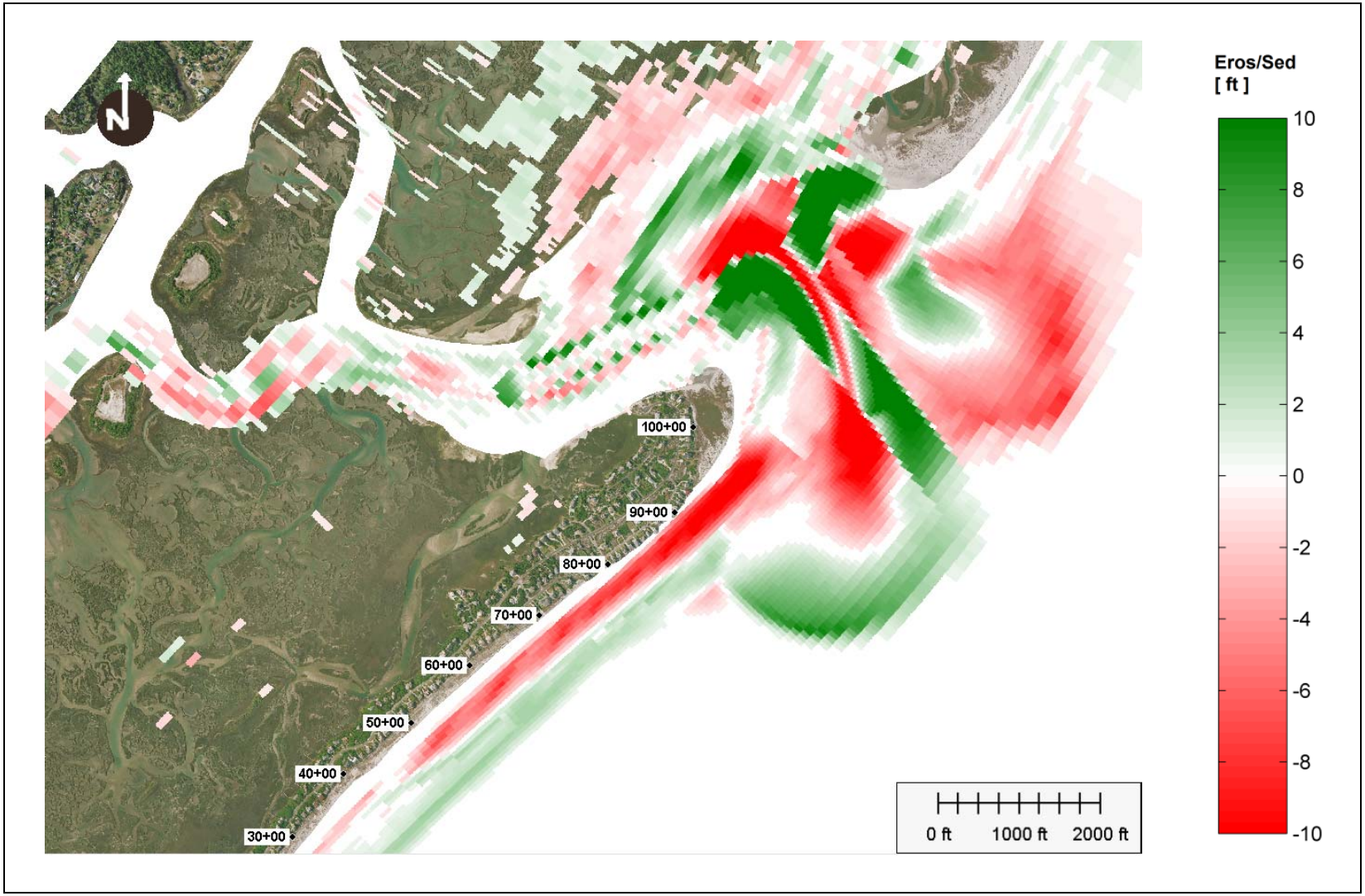


Figure 9: Alternative 3, erosion/sedimentation after 2 years simulation.

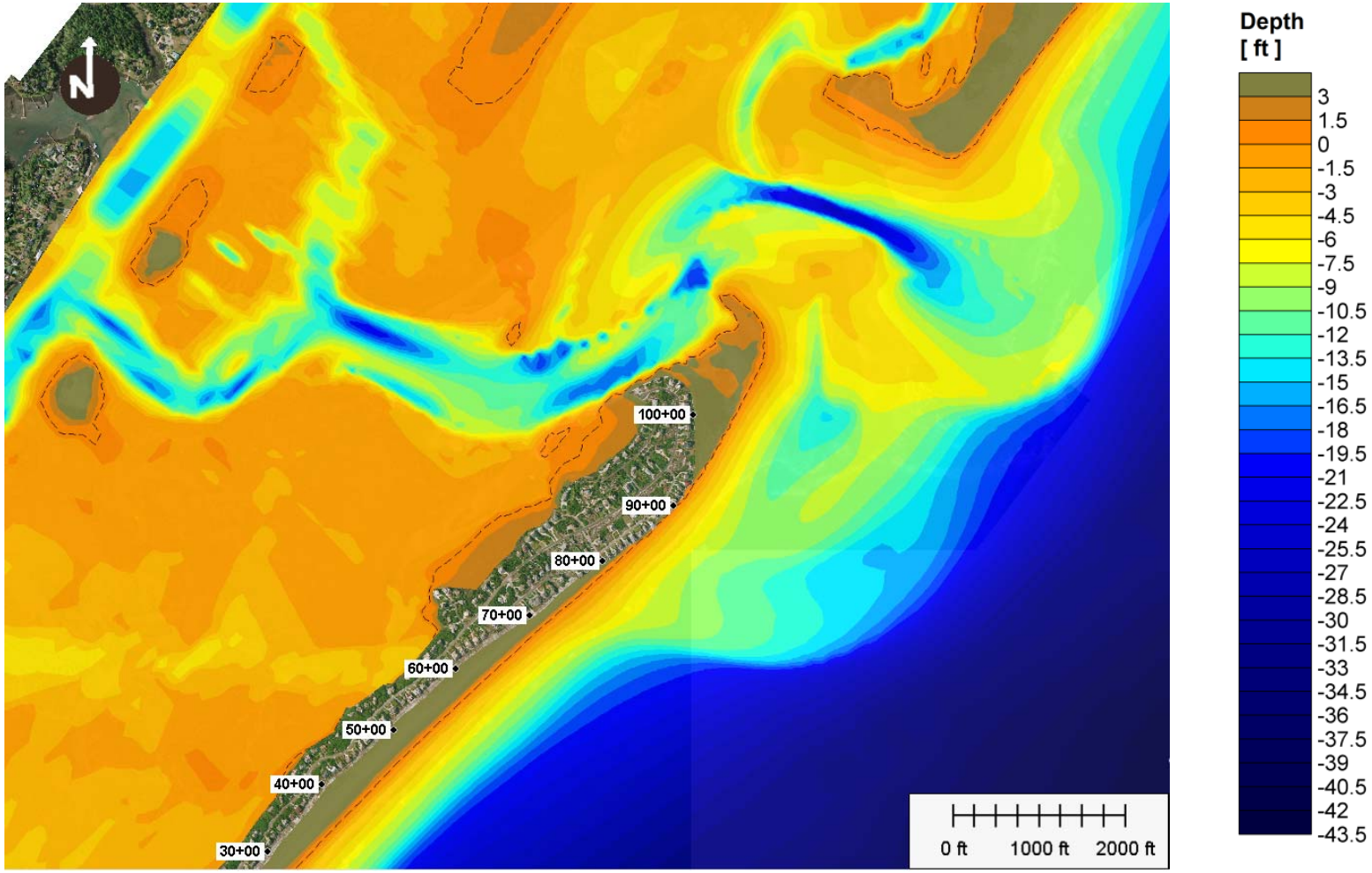


Figure 10: Alternative 3, bathymetry after 5 years simulation.

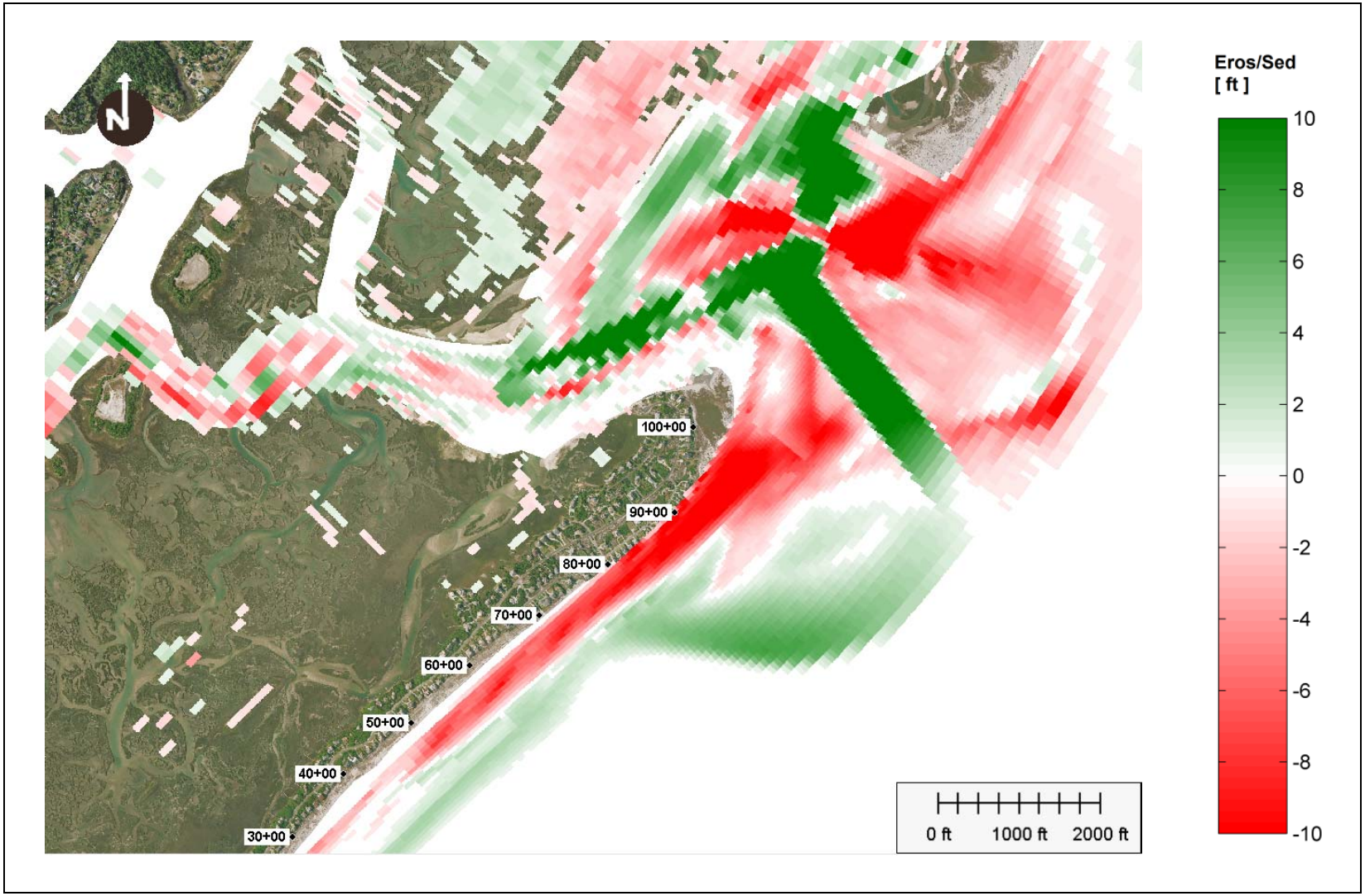


Figure 11: Alternative 3, erosion/sedimentation after 5 year simulation.

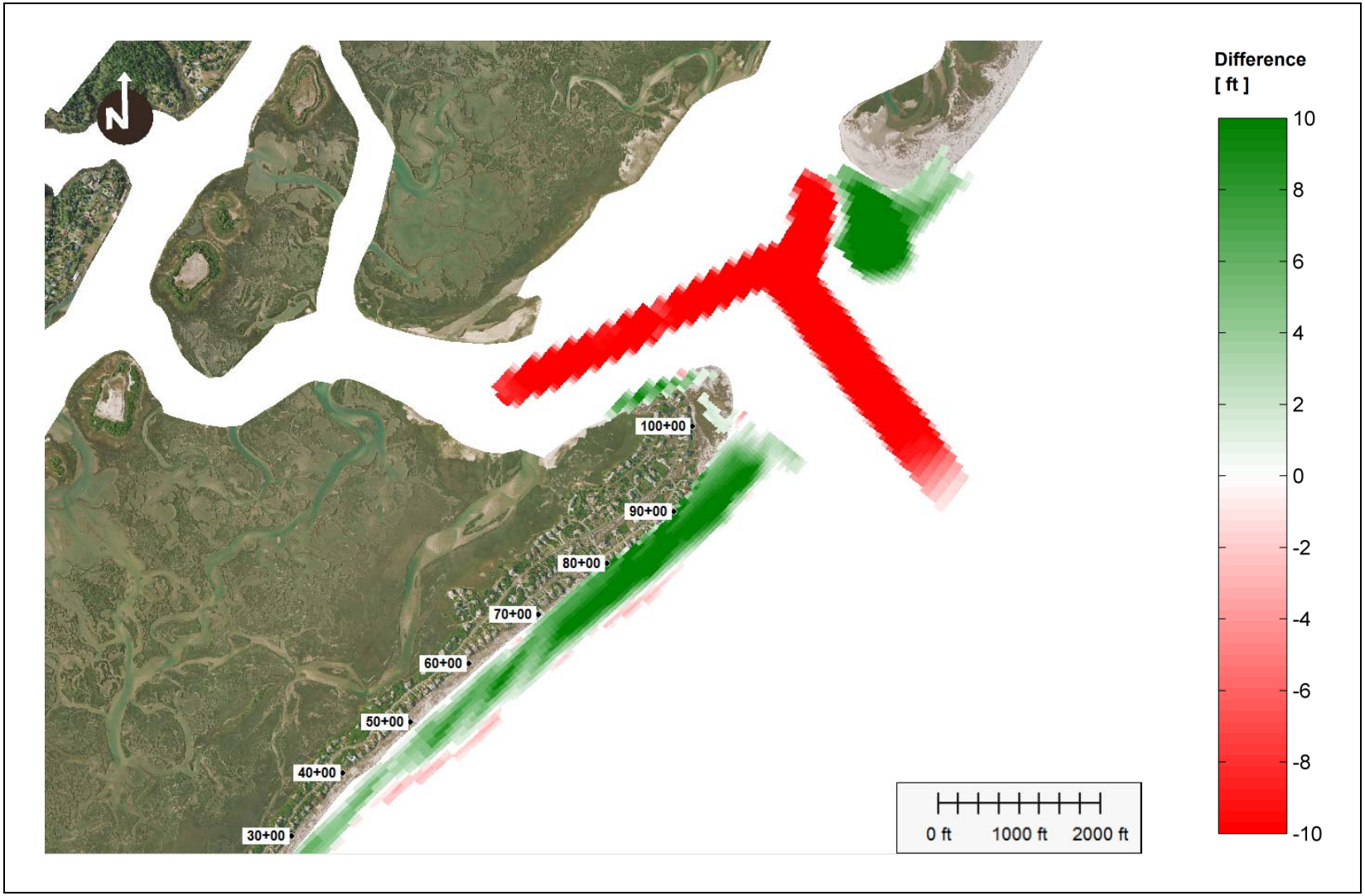


Figure 12: difference between initial bathymetries of Alternative 3 and Alternative 2.

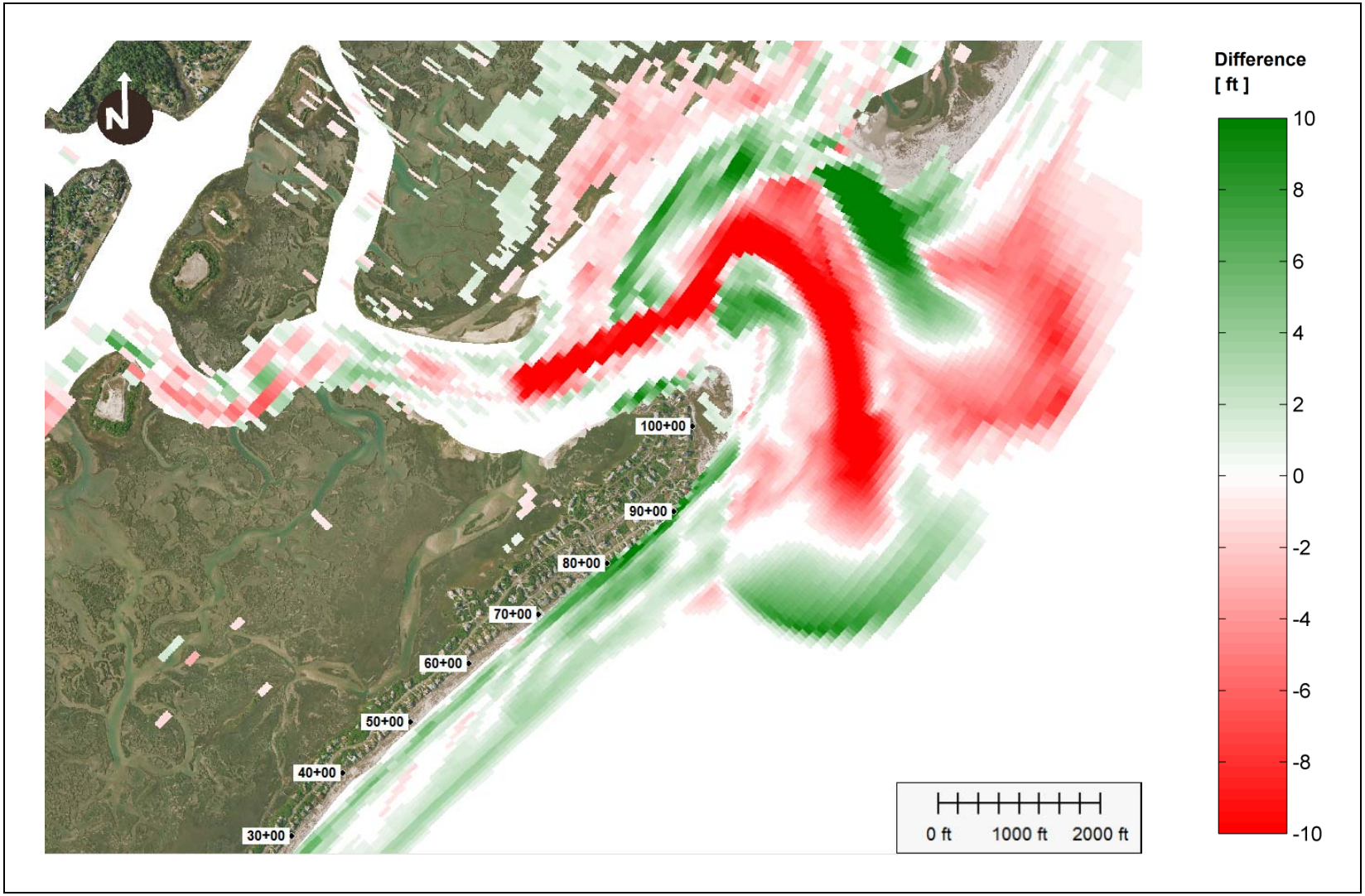


Figure 13: difference between bathymetry of Alternative 3 after 2 years simulation and initial bathymetry of Alternative 2.

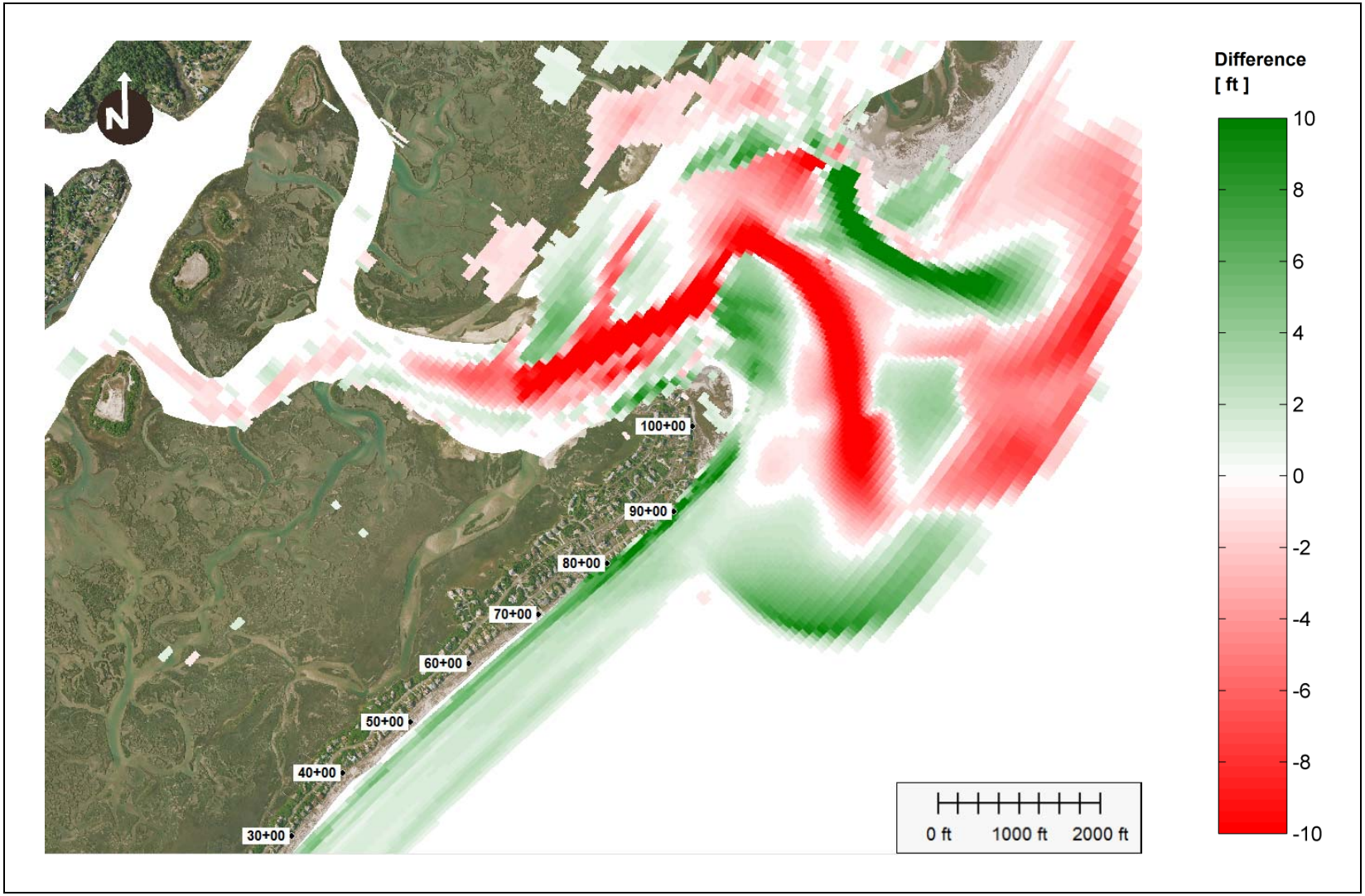


Figure 14: difference between bathymetries of Alternative 3 and Alternative 2 after 2 years simulation.

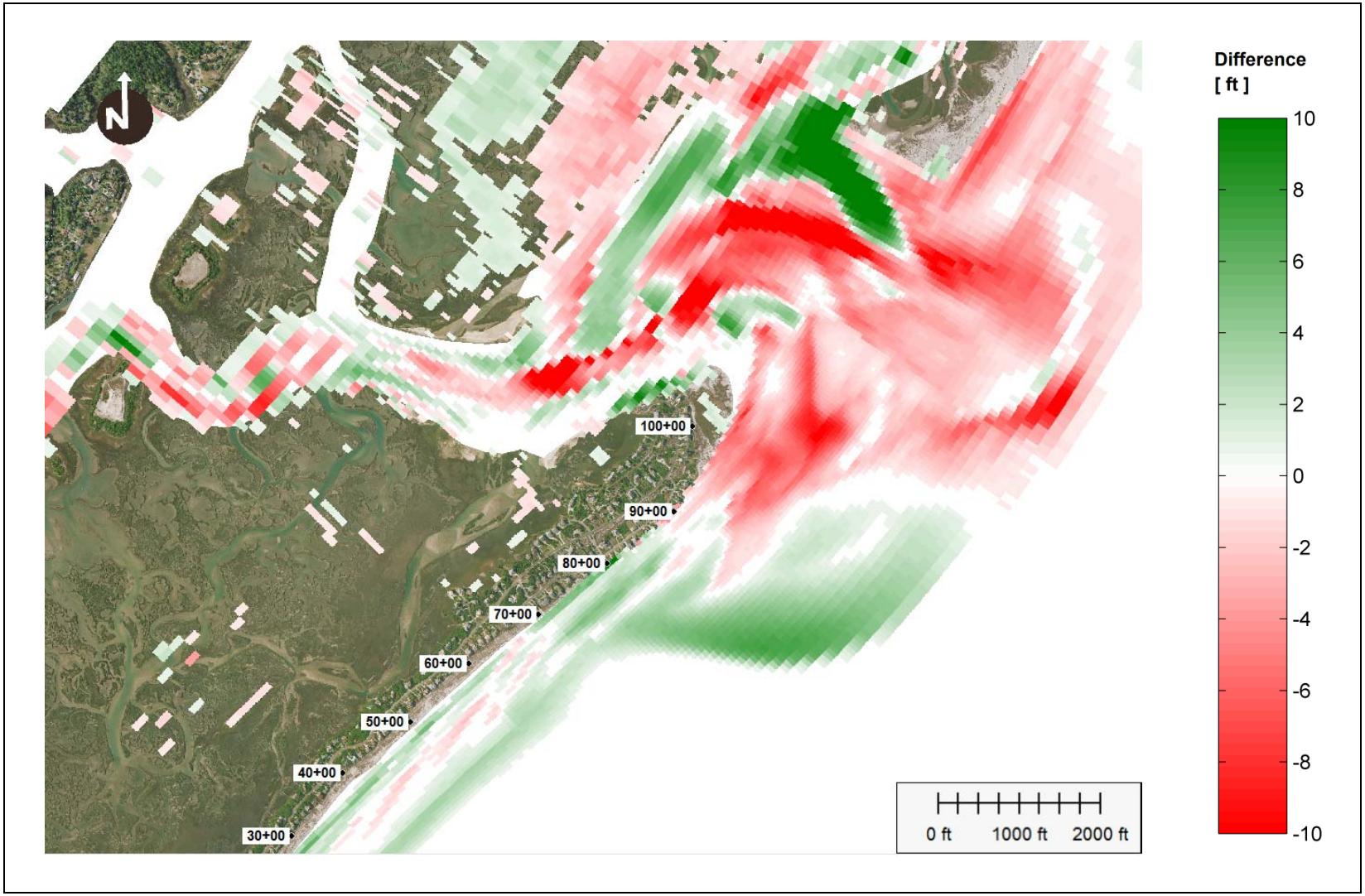


Figure 15: difference between bathymetry of Alternative 3 after 5 years simulation and initial bathymetry of Alternative 2.

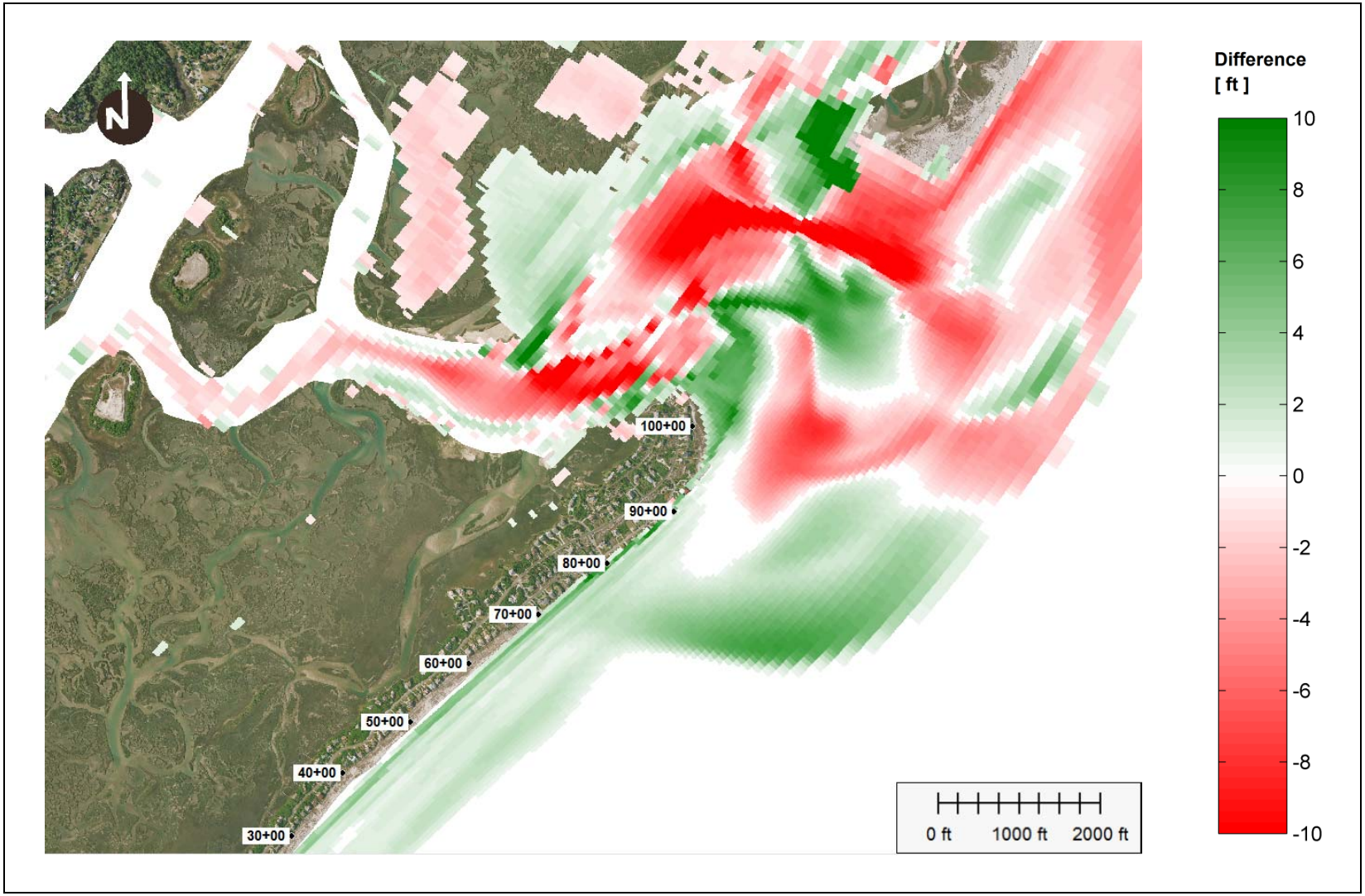


Figure 16: difference between bathymetries of Alternative 3 and Alternative 2 after 5 years simulation.

Alternative 4 - Beach Fill without Management of Rich Inlet (same beach fill layout as Alternative 3)

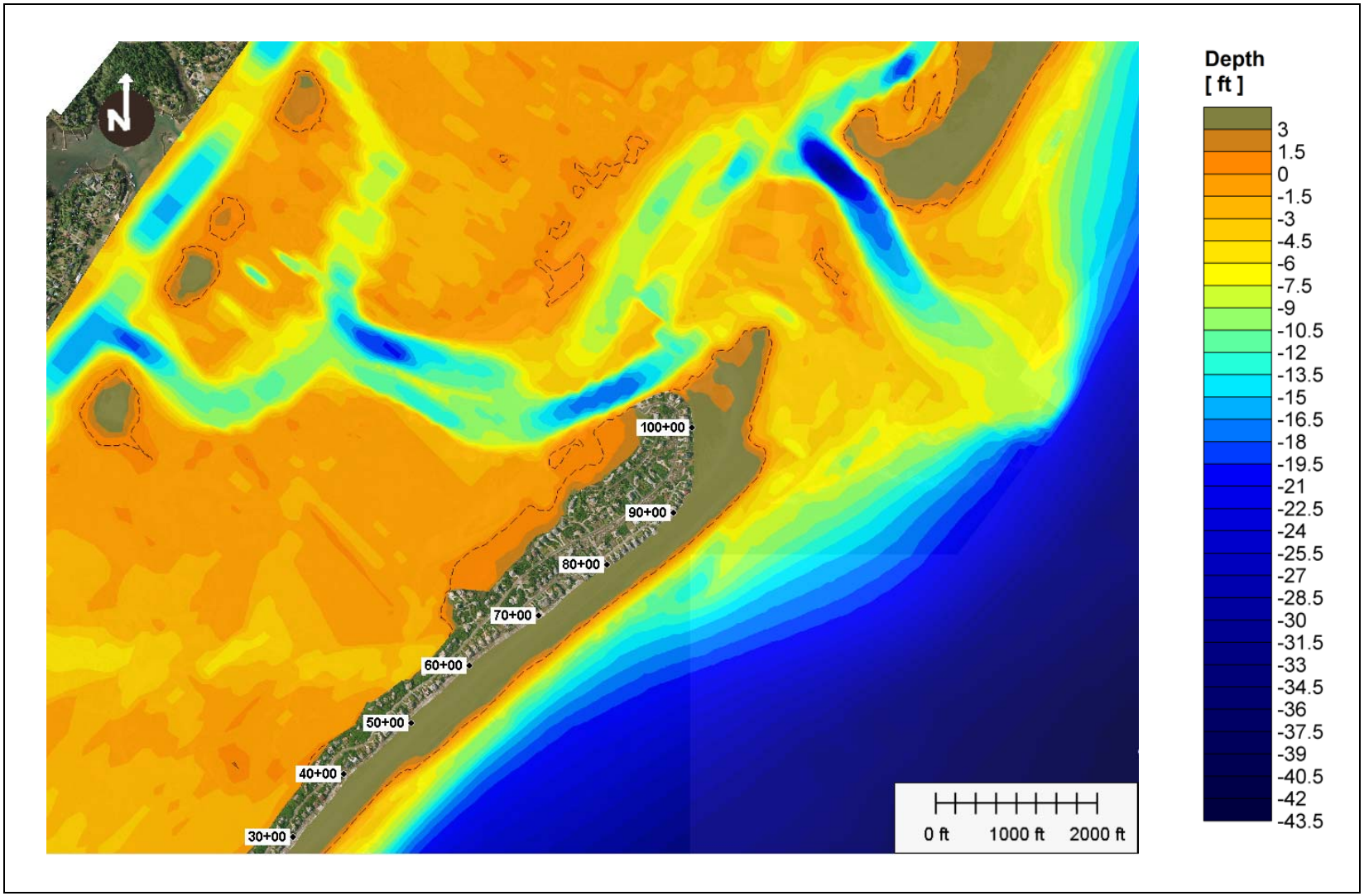


Figure 17: Alternative 4, initial bathymetry.

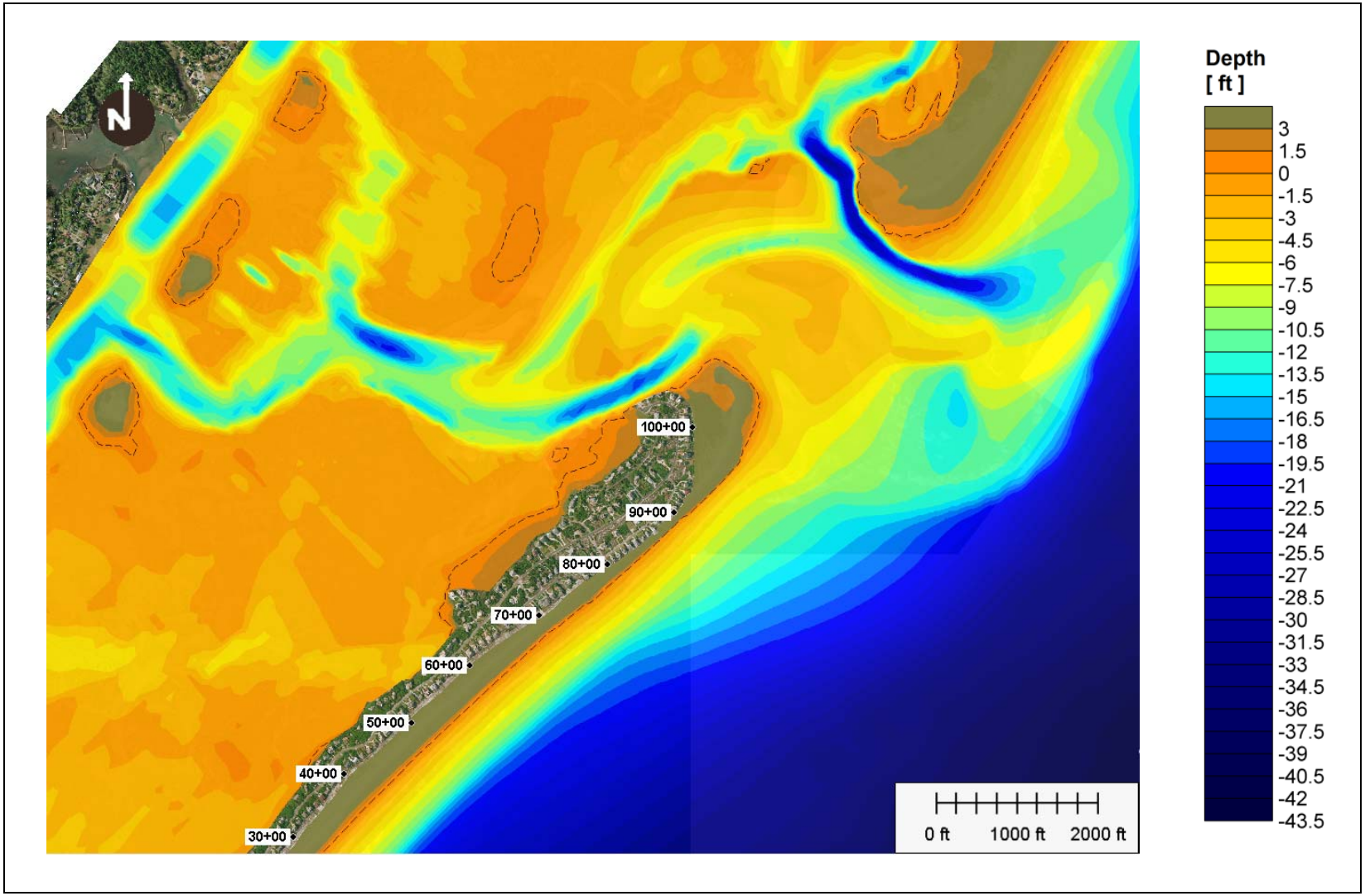


Figure 18: Alternative 4, bathymetry after 2 years simulation.

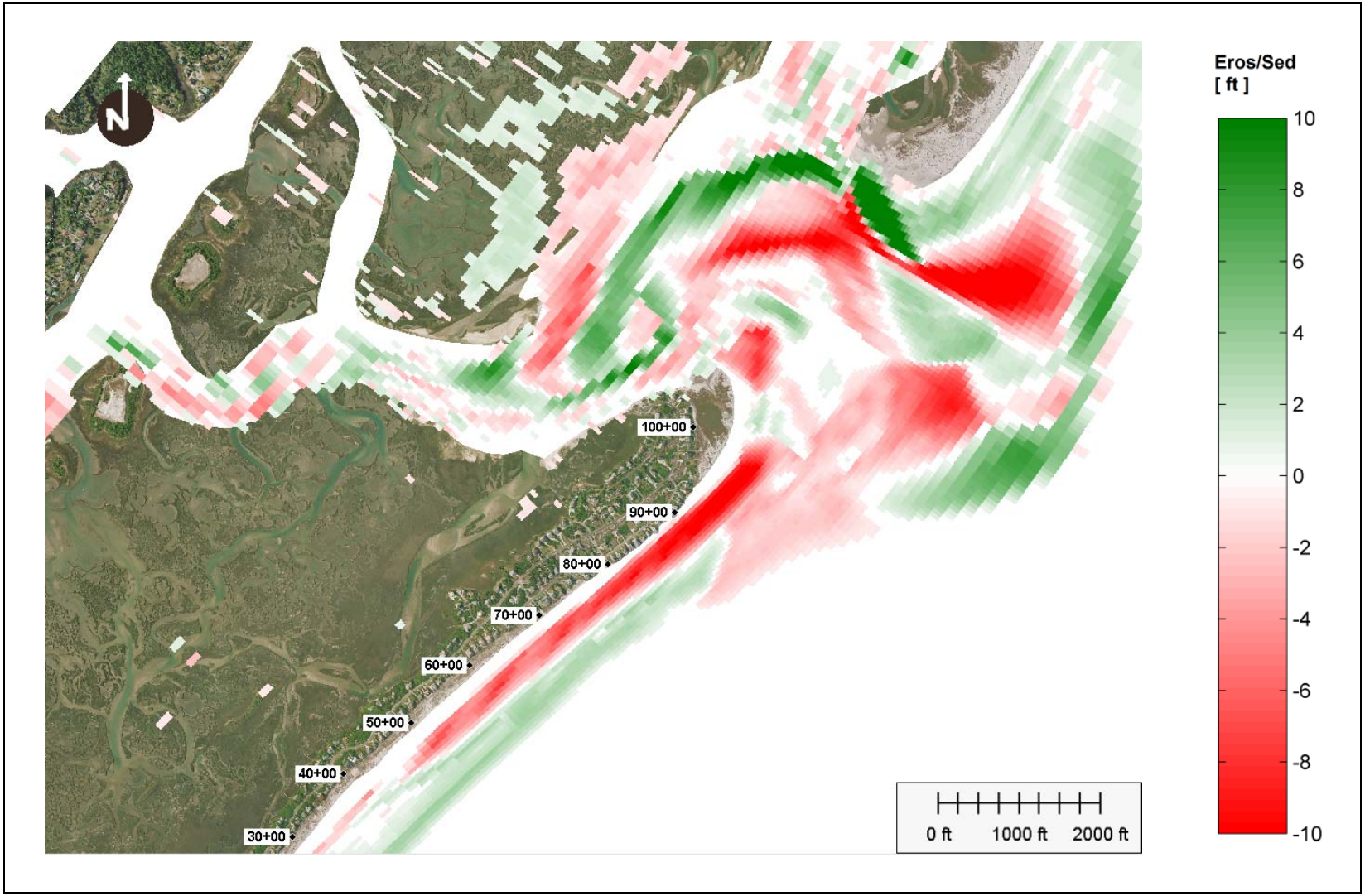


Figure 19: Alternative 4, erosion/sedimentation after 2 years simulation.

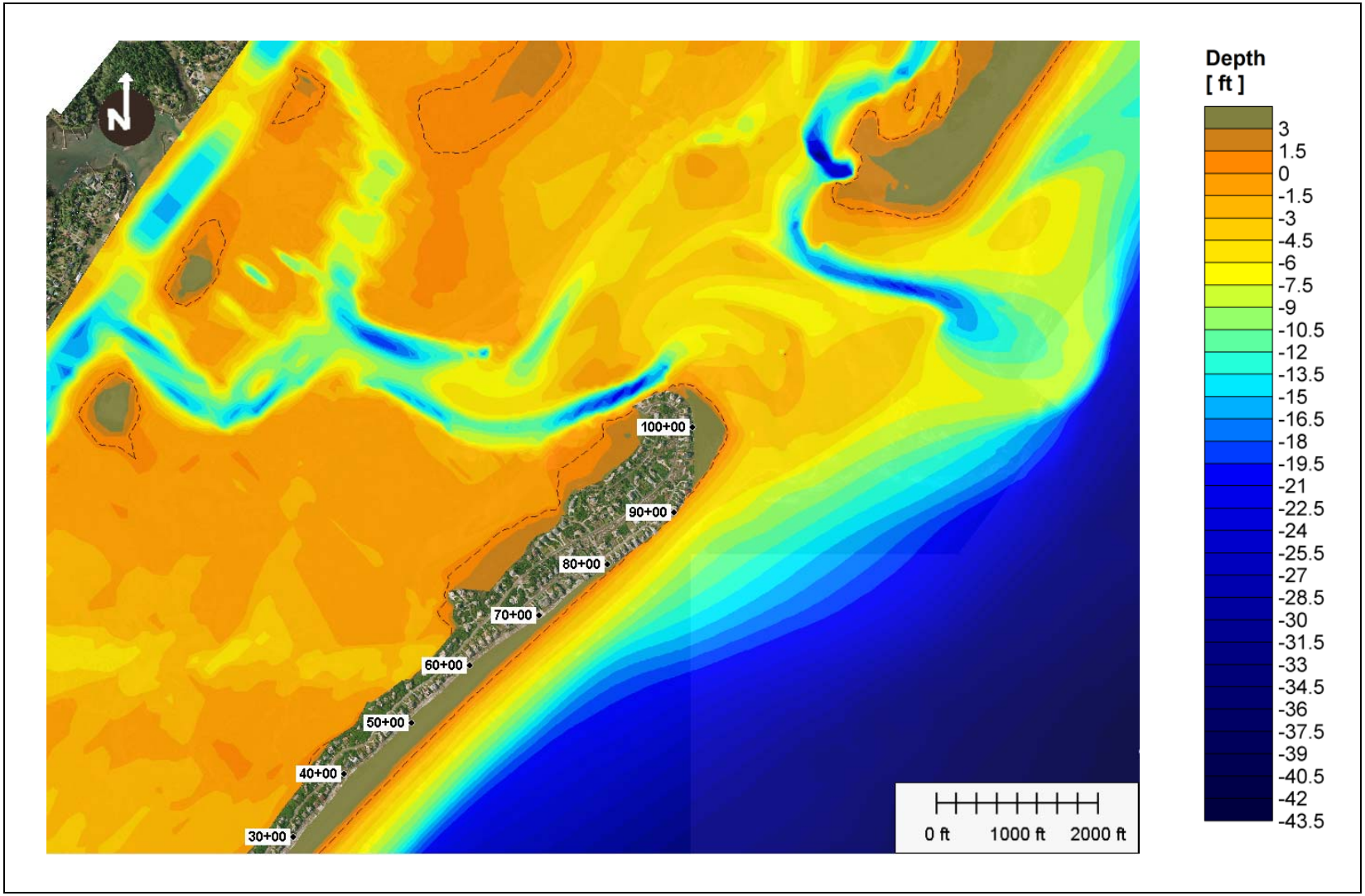


Figure 20: Alternative 4, bathymetry after 5 years simulation.

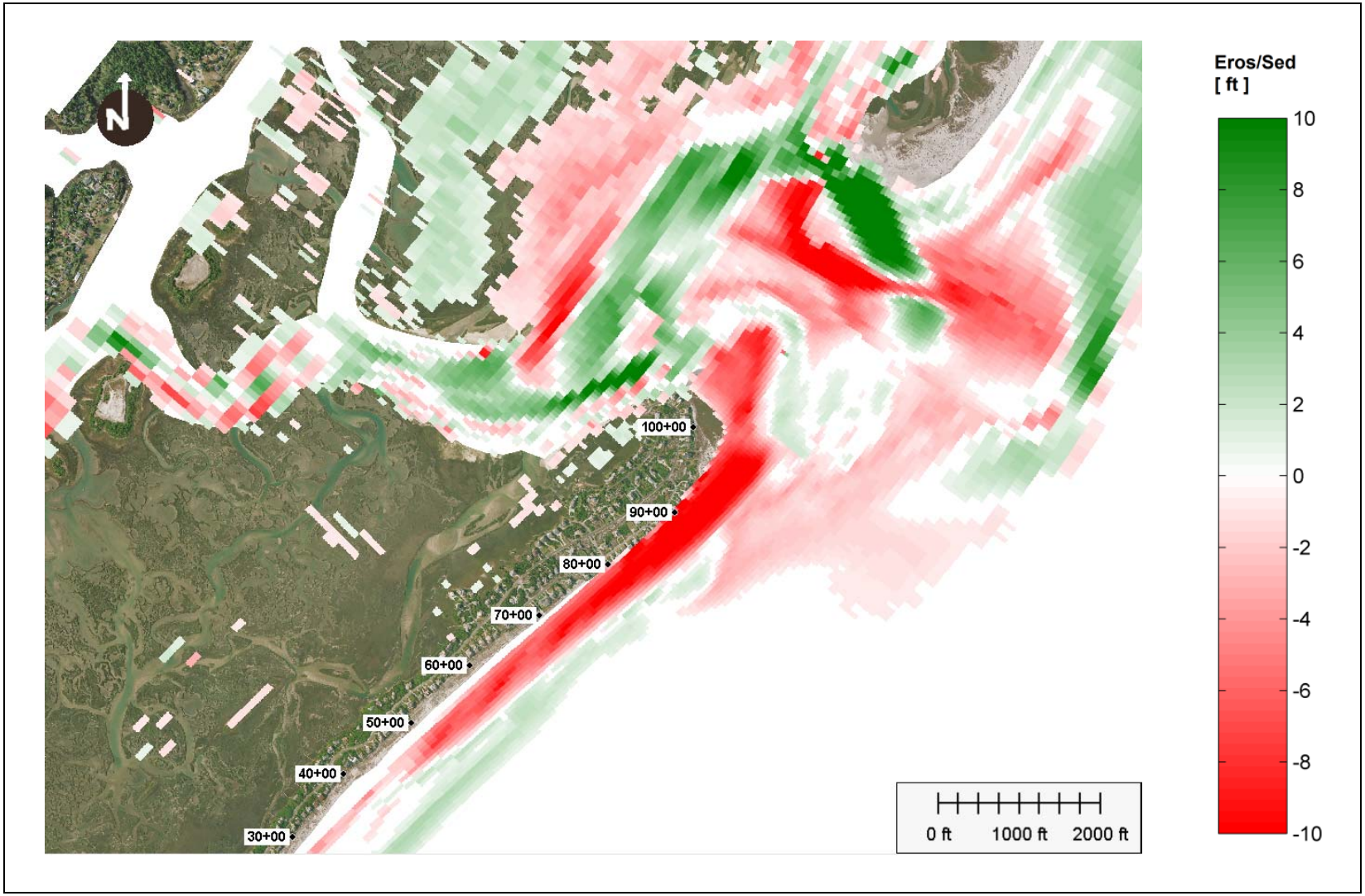


Figure 21: Alternative 4, erosion/sedimentation after 5 year simulation.

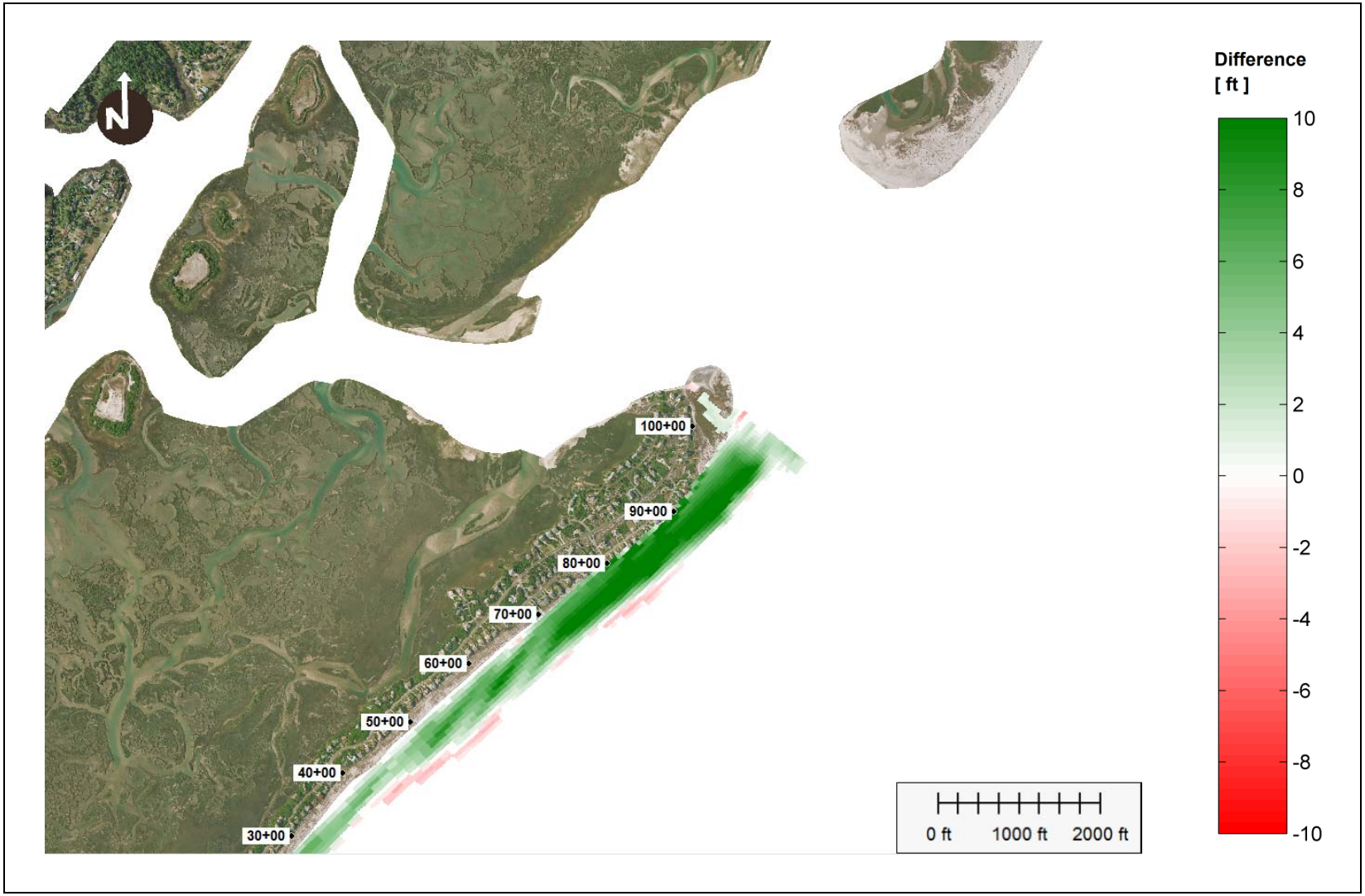


Figure 22: difference between initial bathymetries of Alternative 4 and Alternative 2.

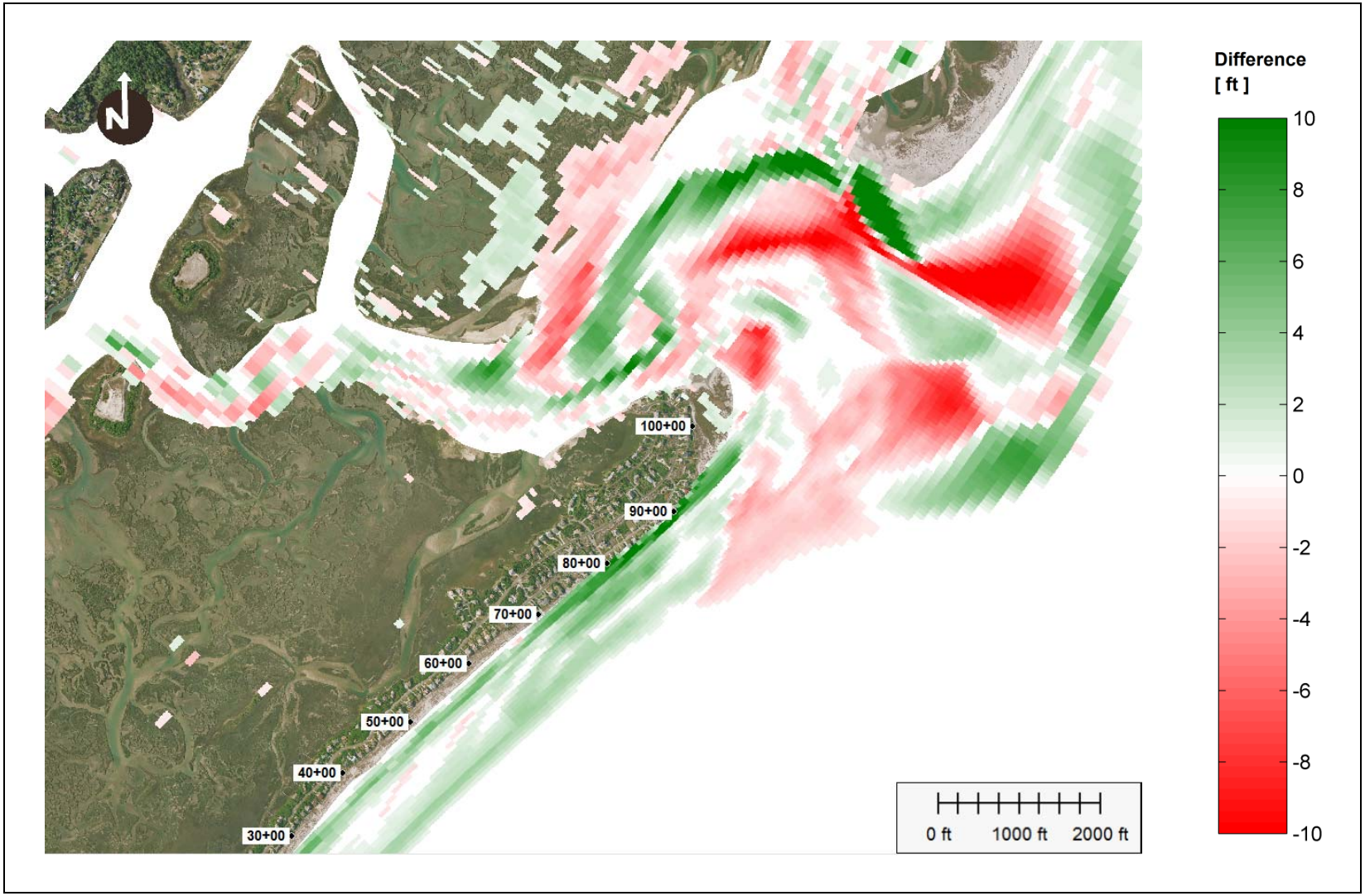


Figure 23: difference between bathymetry of Alternative 4 after 2 years simulation and initial bathymetry of Alternative 2.

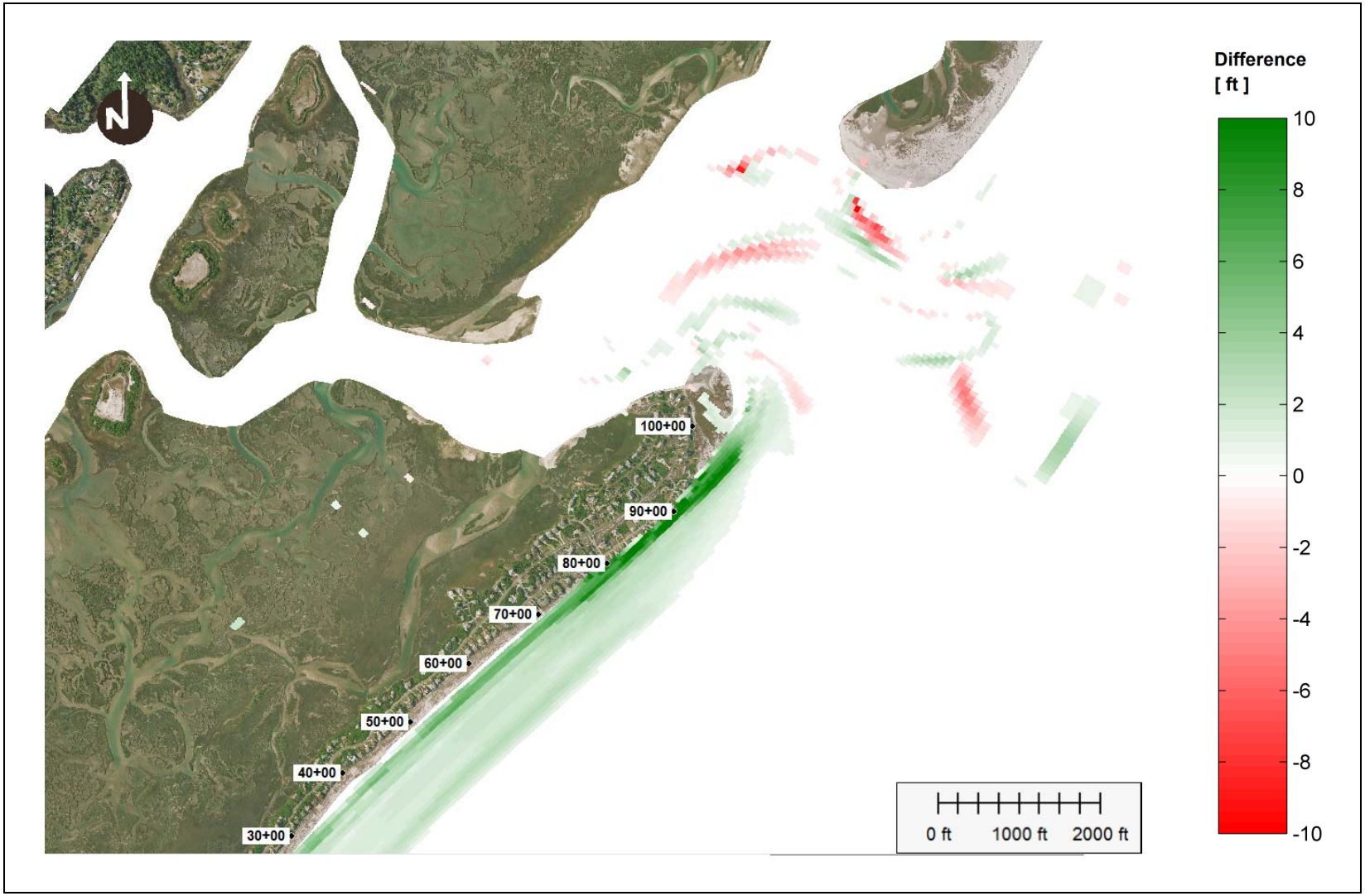


Figure 24: difference between bathymetries of Alternative 4 and Alternative 2 after 2 years simulation.

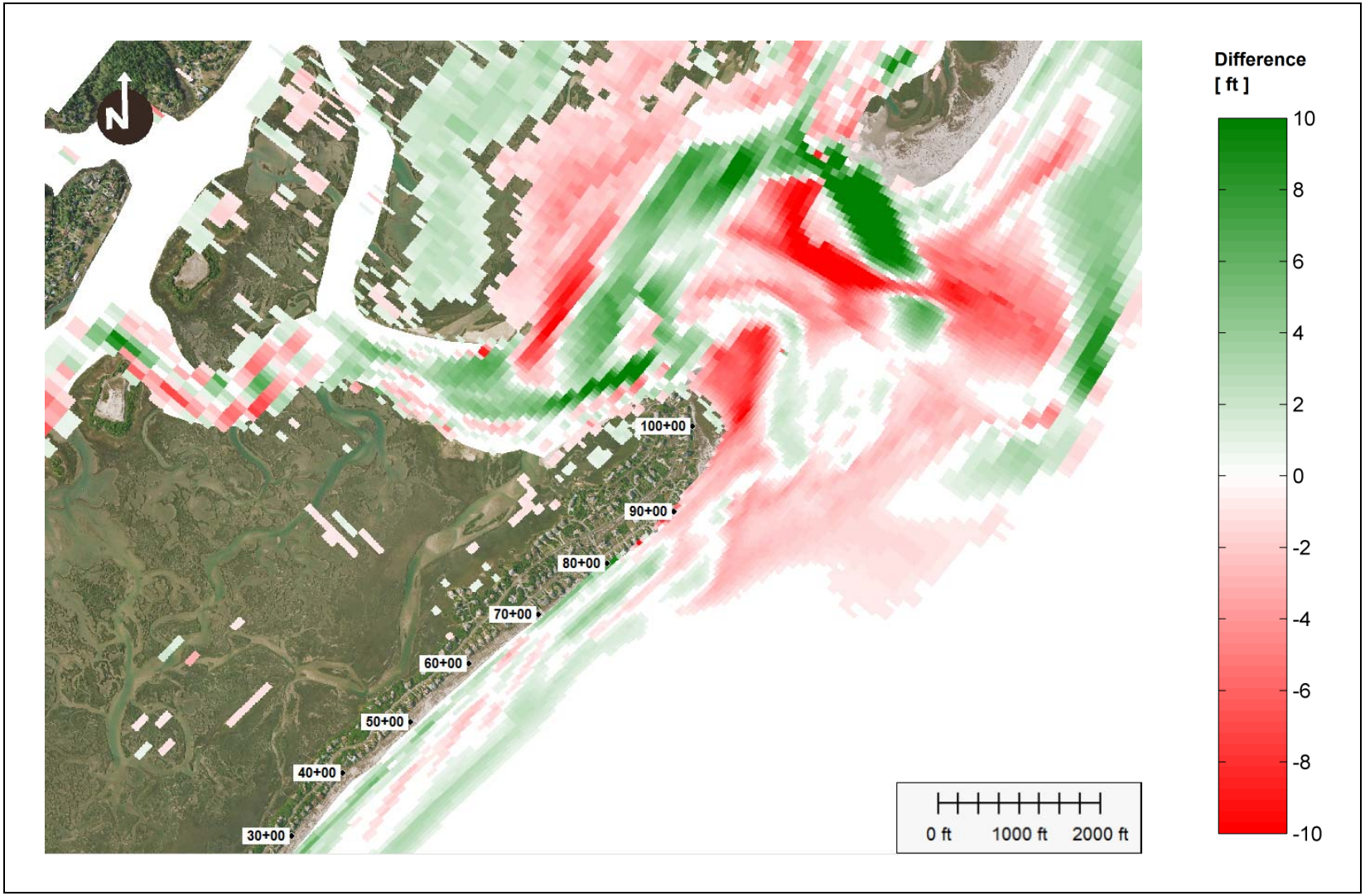


Figure 25: difference between bathymetry of Alternative 4 after 5 years simulation and initial bathymetry of Alternative 2.

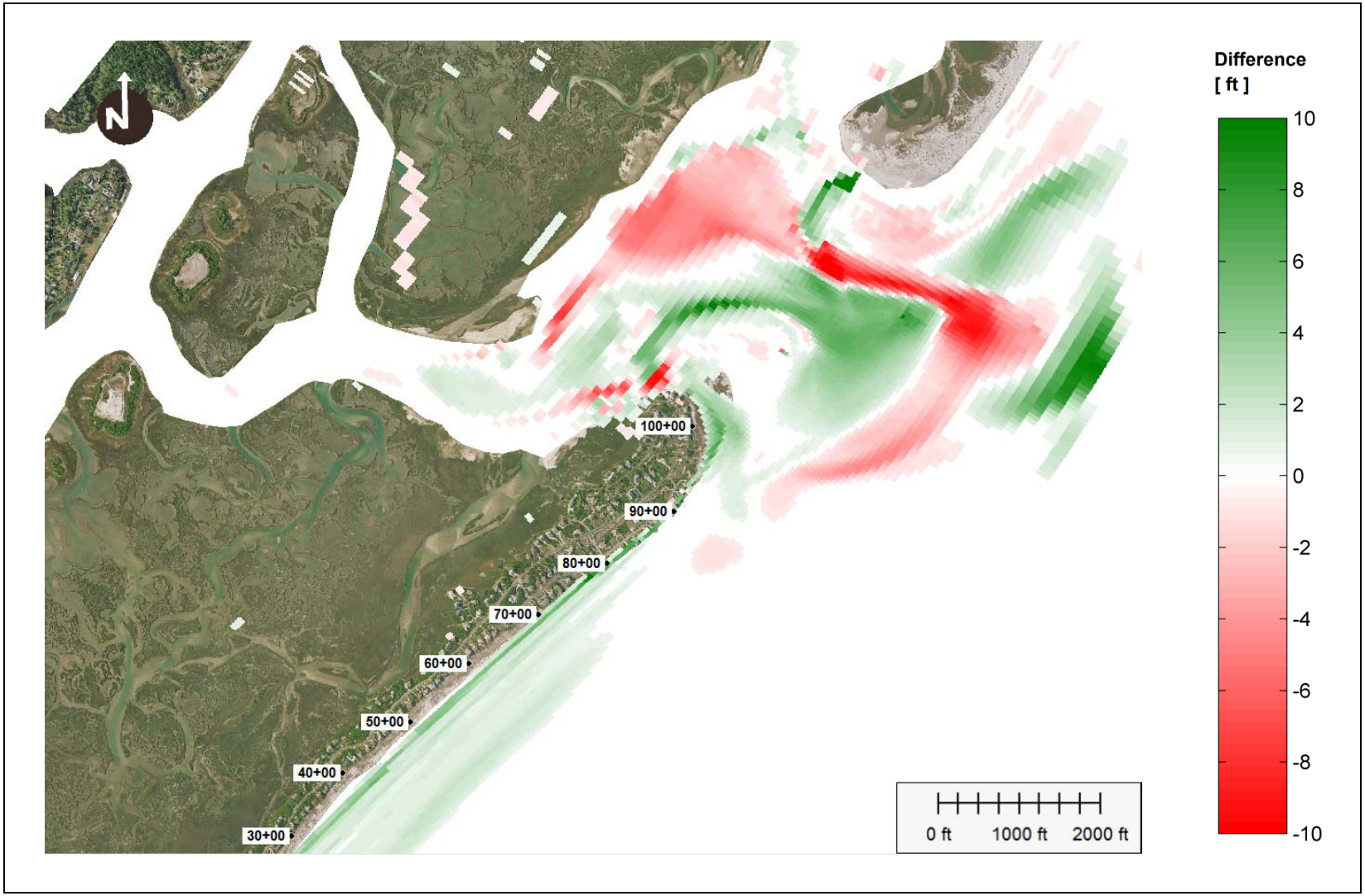


Figure 26: difference between bathymetries of Alternative 4 and Alternative 2 after 5 years simulation.

Alternative 4a - Beach Fill without Management of Rich Inlet (same beach fill as Alternative 5a)

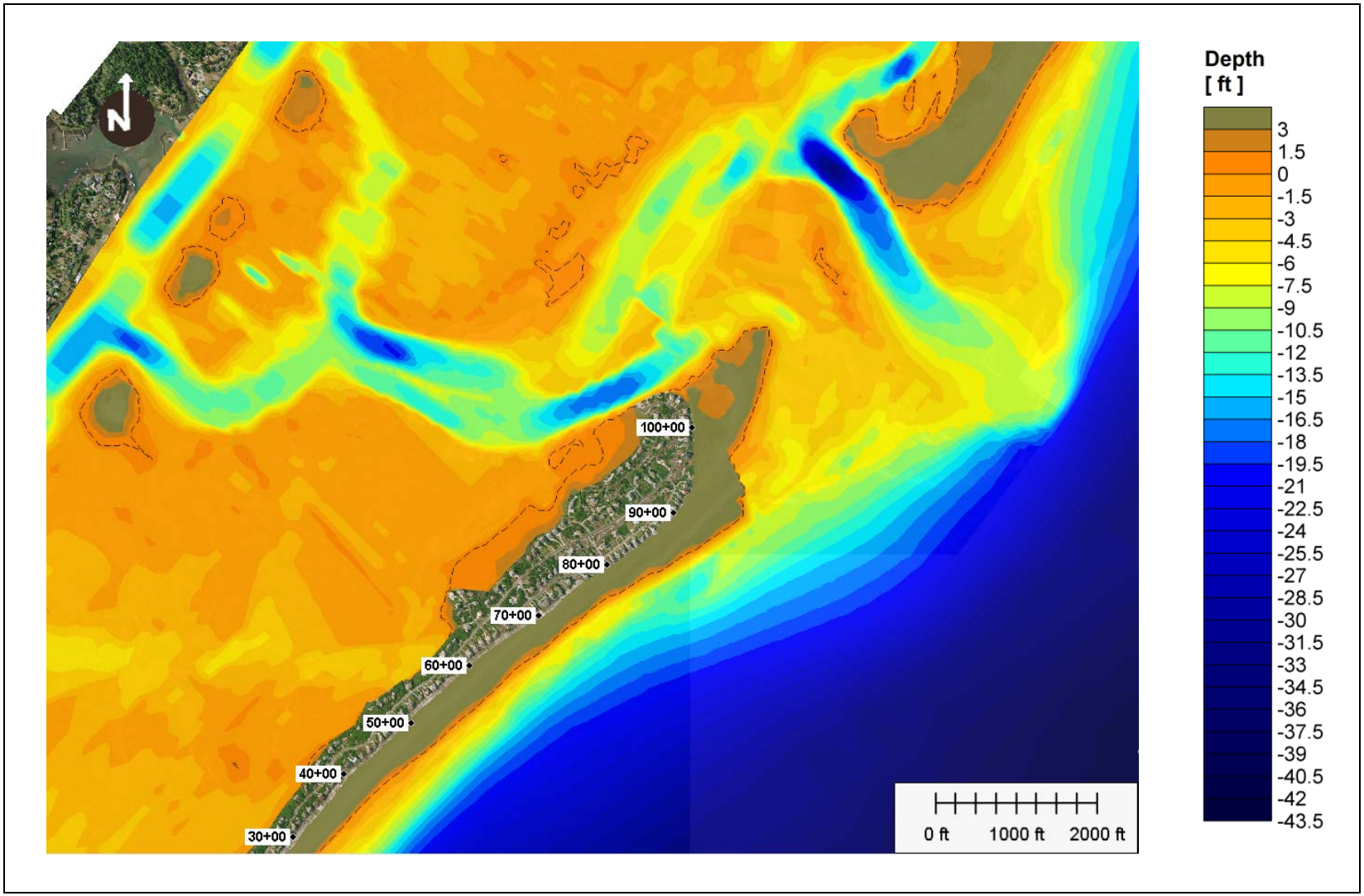


Figure 27: Alternative 4a, initial bathymetry.

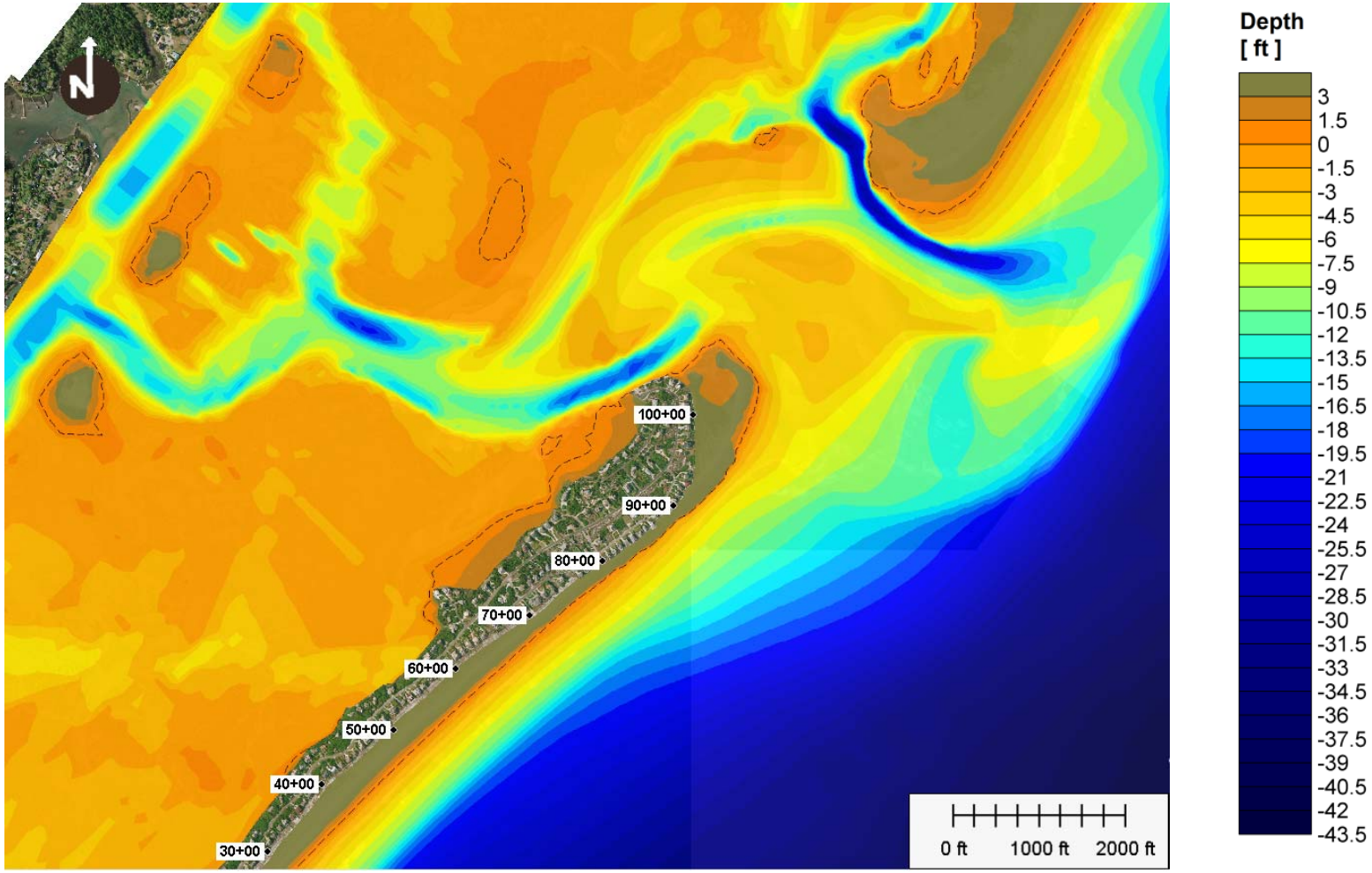


Figure 28: Alternative 4a, bathymetry after 2 years simulation.

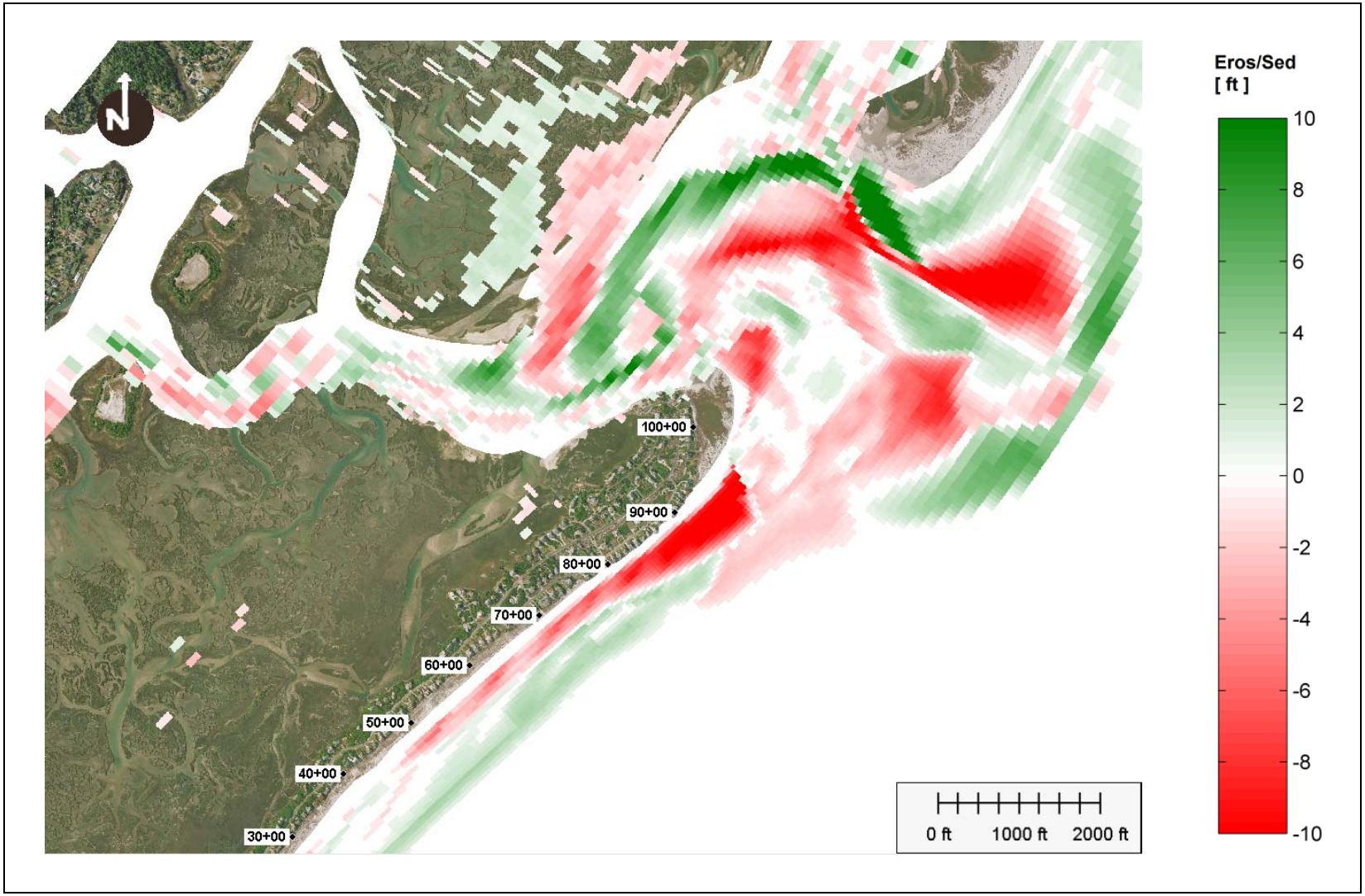


Figure 29: Alternative 4a, erosion/sedimentation after 2 years simulation.

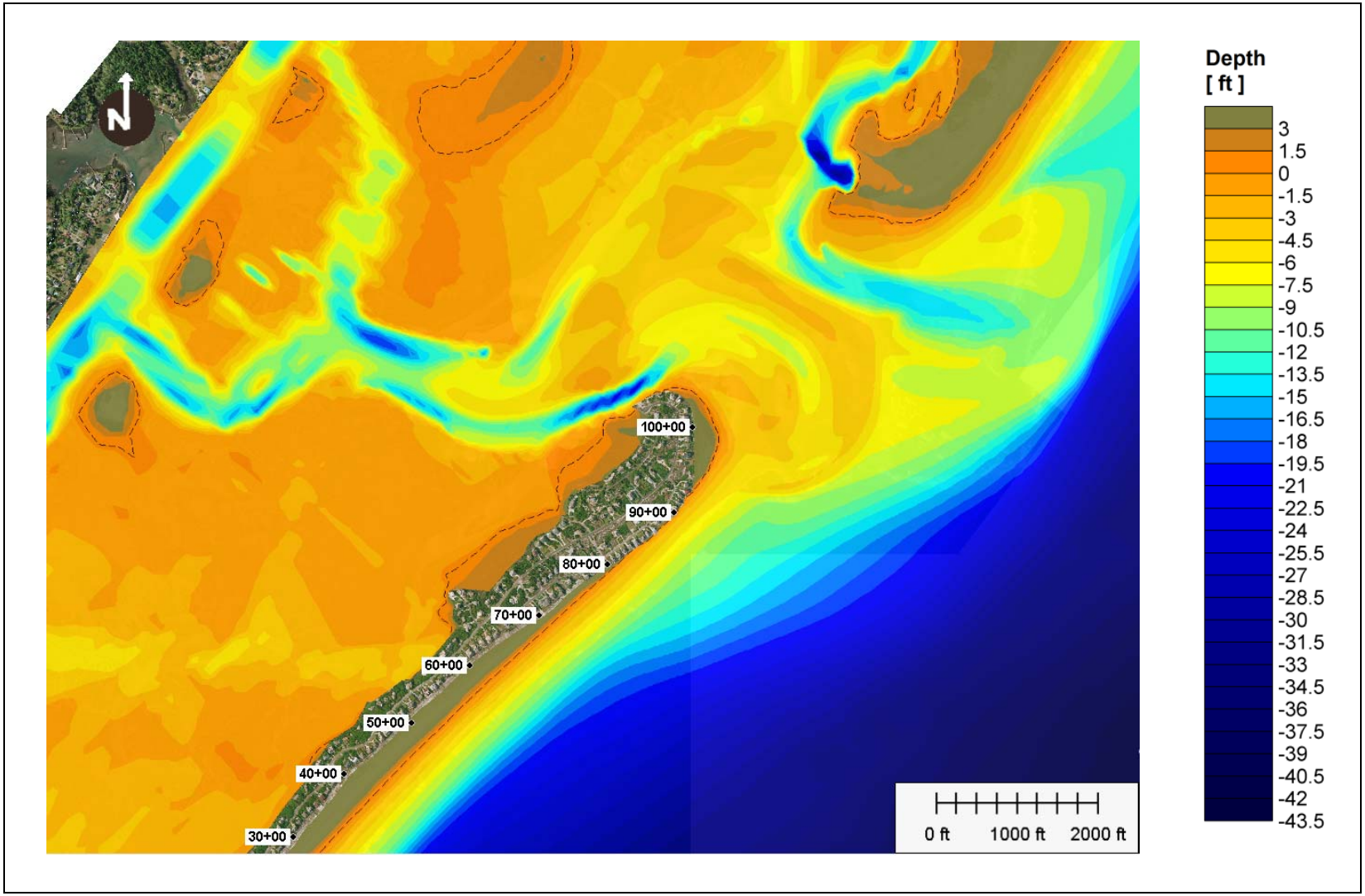


Figure 30: Alternative 4a, bathymetry after 5 years simulation.

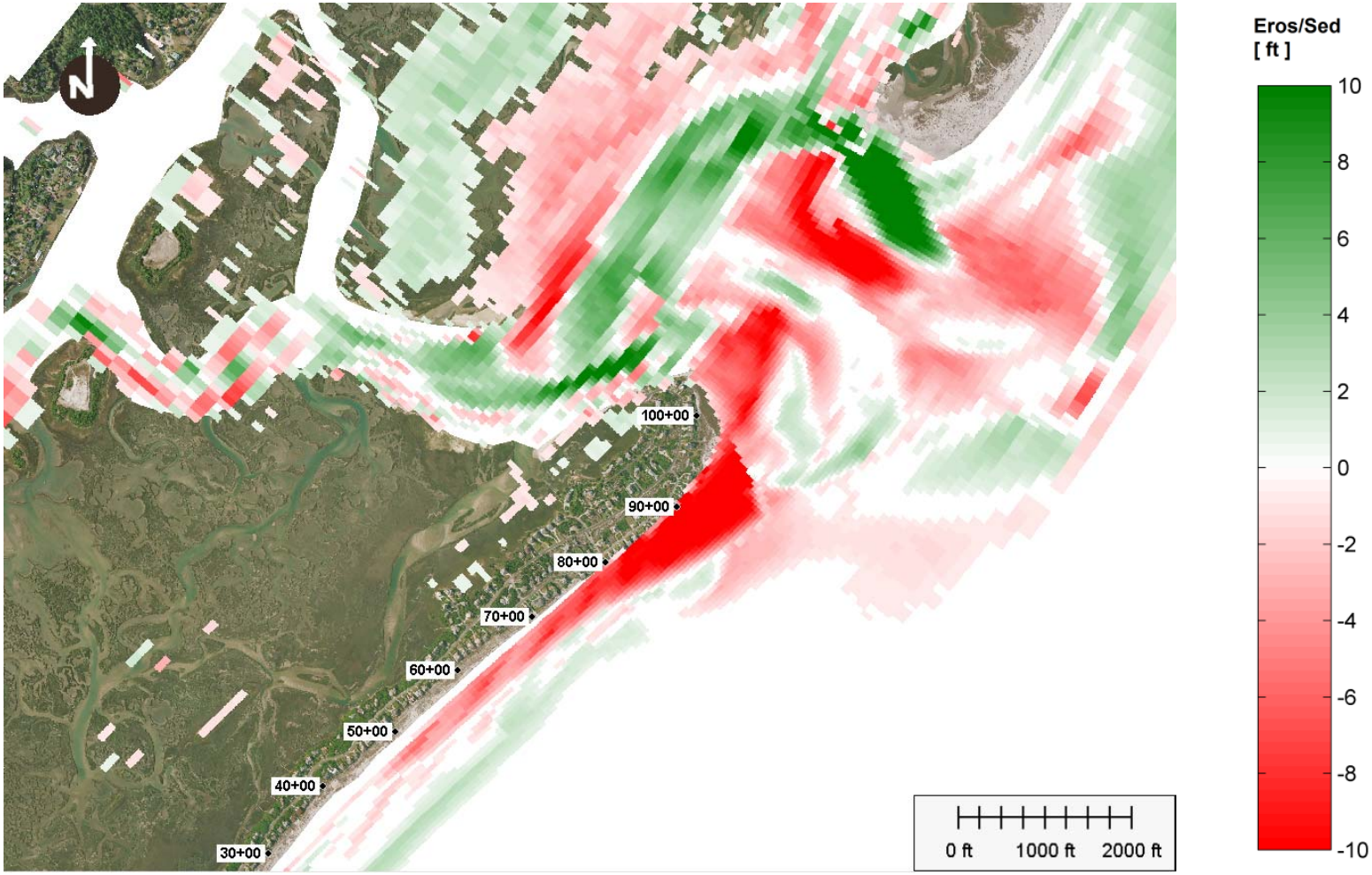


Figure 31: Alternative 4a, erosion/sedimentation after 5 year simulation.

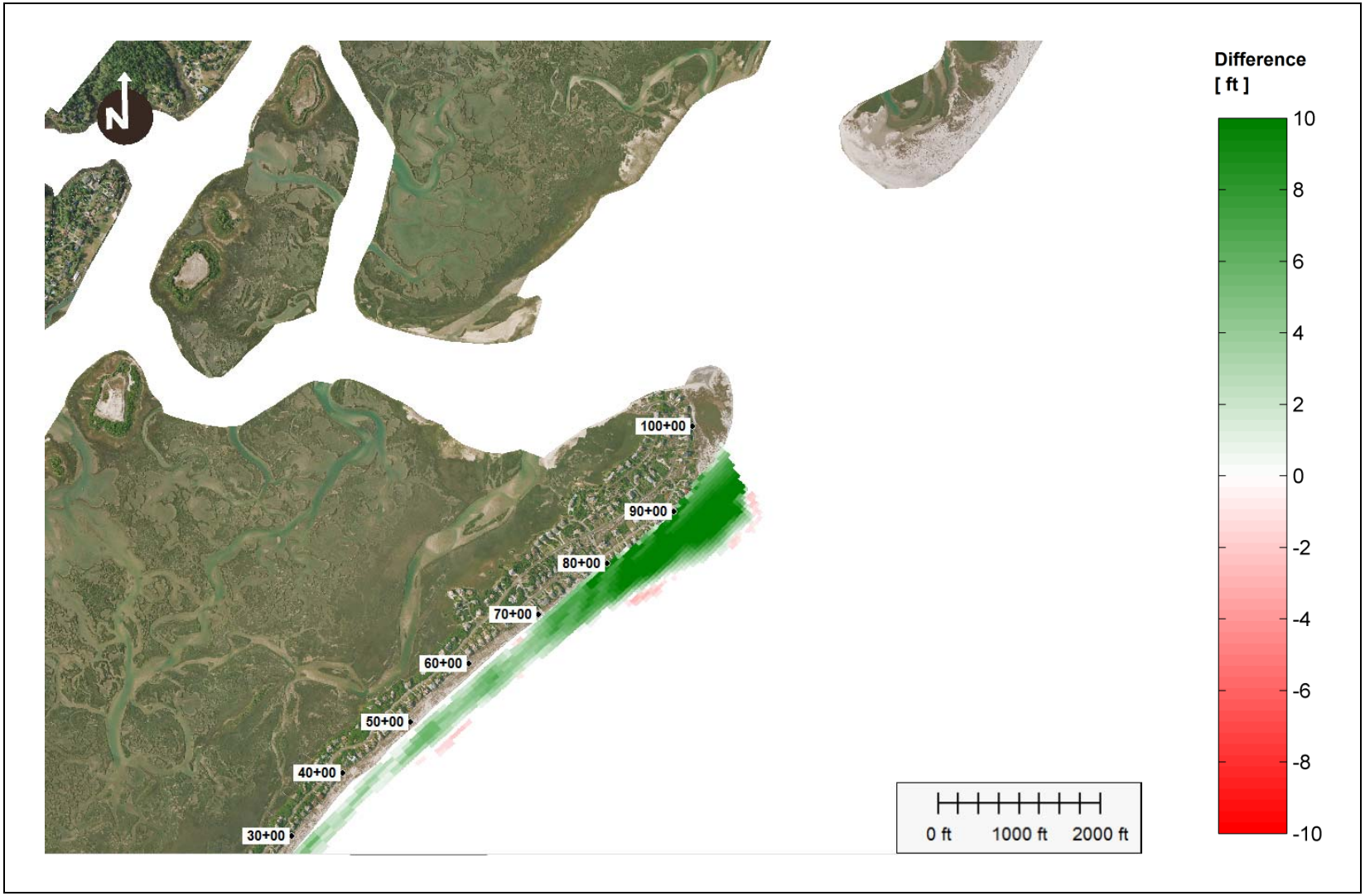


Figure 32: difference between initial bathymetries of Alternative 4a and Alternative 2.

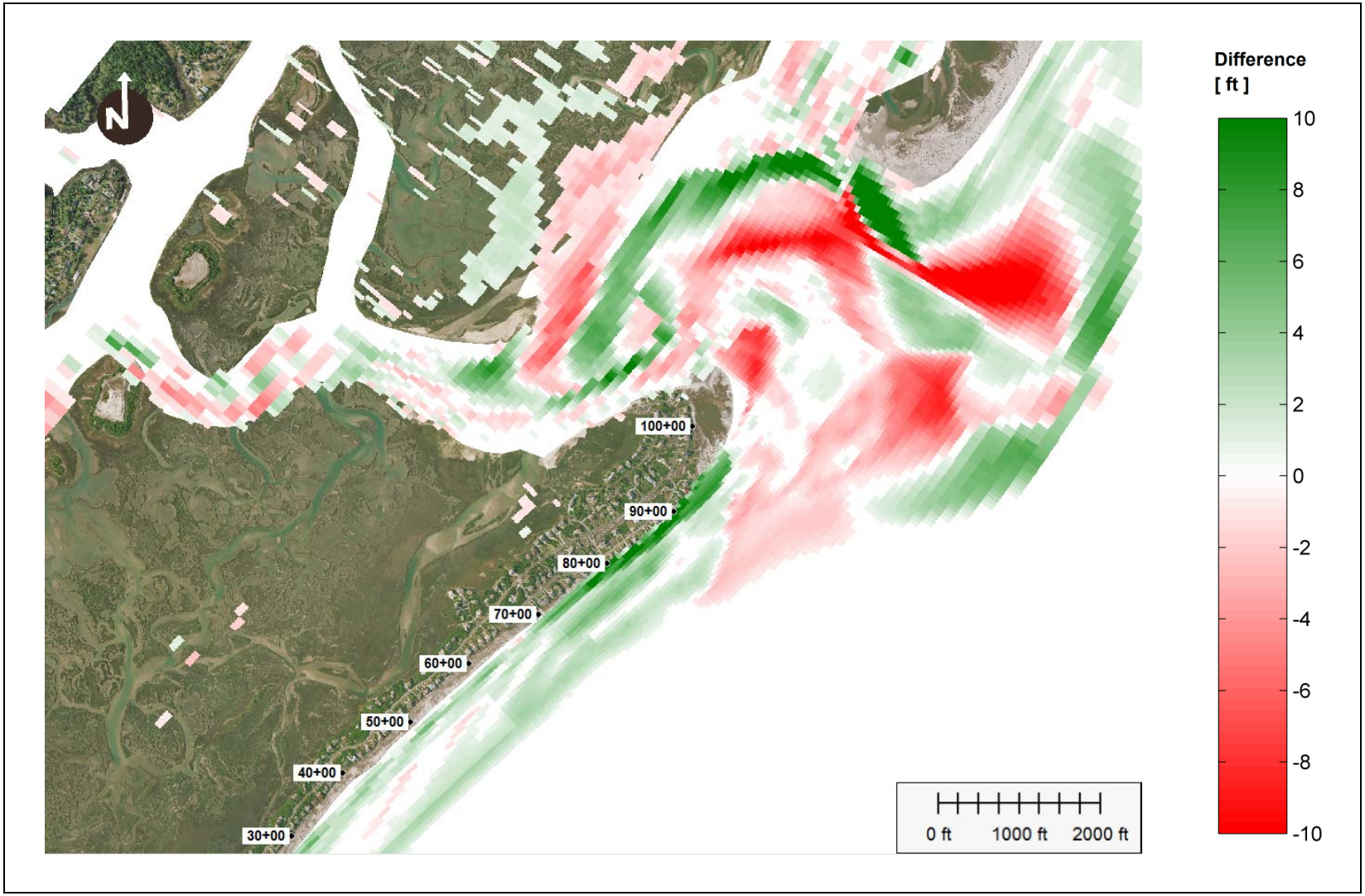


Figure 33: difference between bathymetry of Alternative 4a after 2 years simulation and initial bathymetry of Alternative 2.

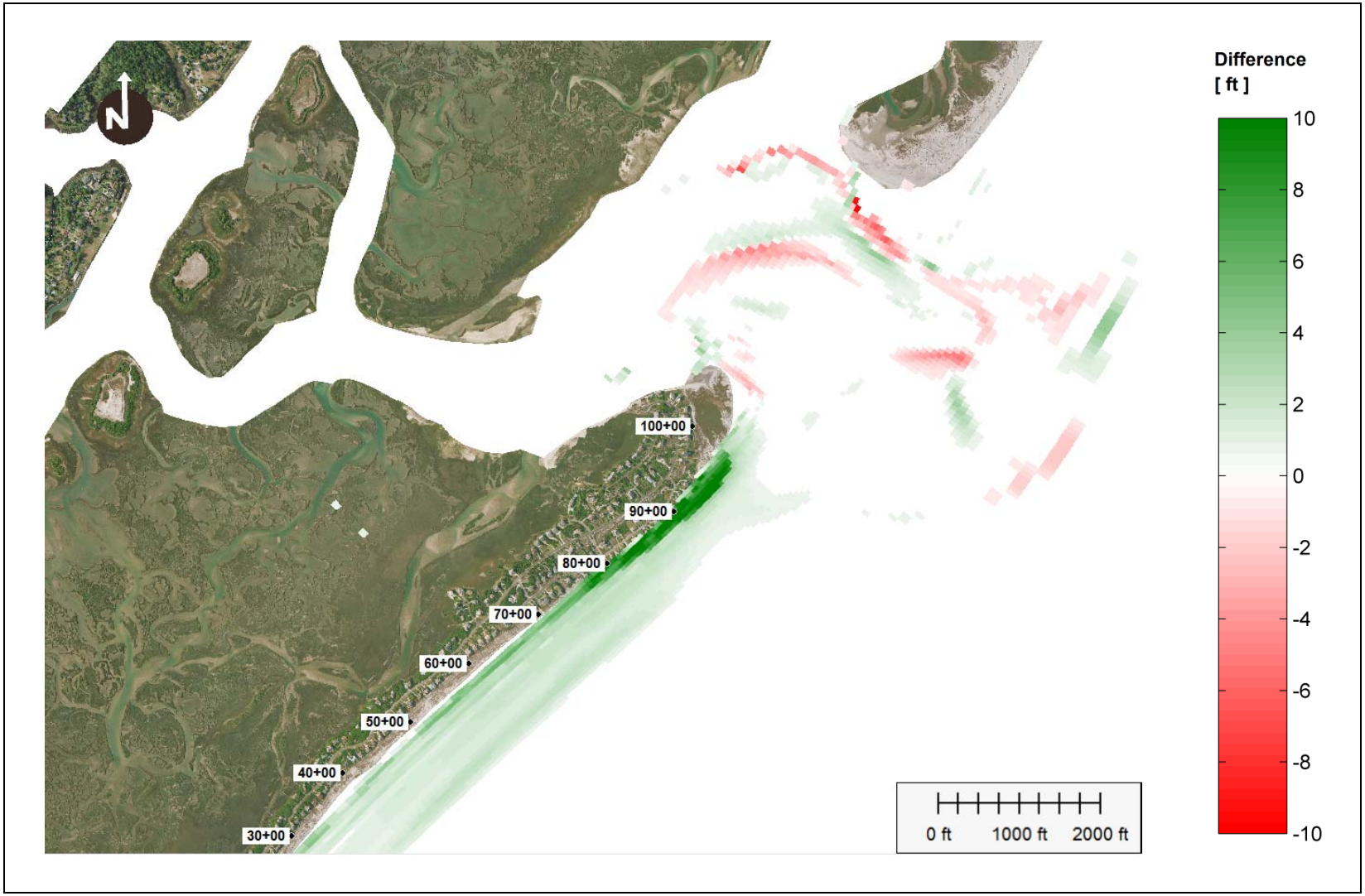


Figure 34: difference between bathymetries of Alternative 4a and Alternative 2 after 2 years simulation.

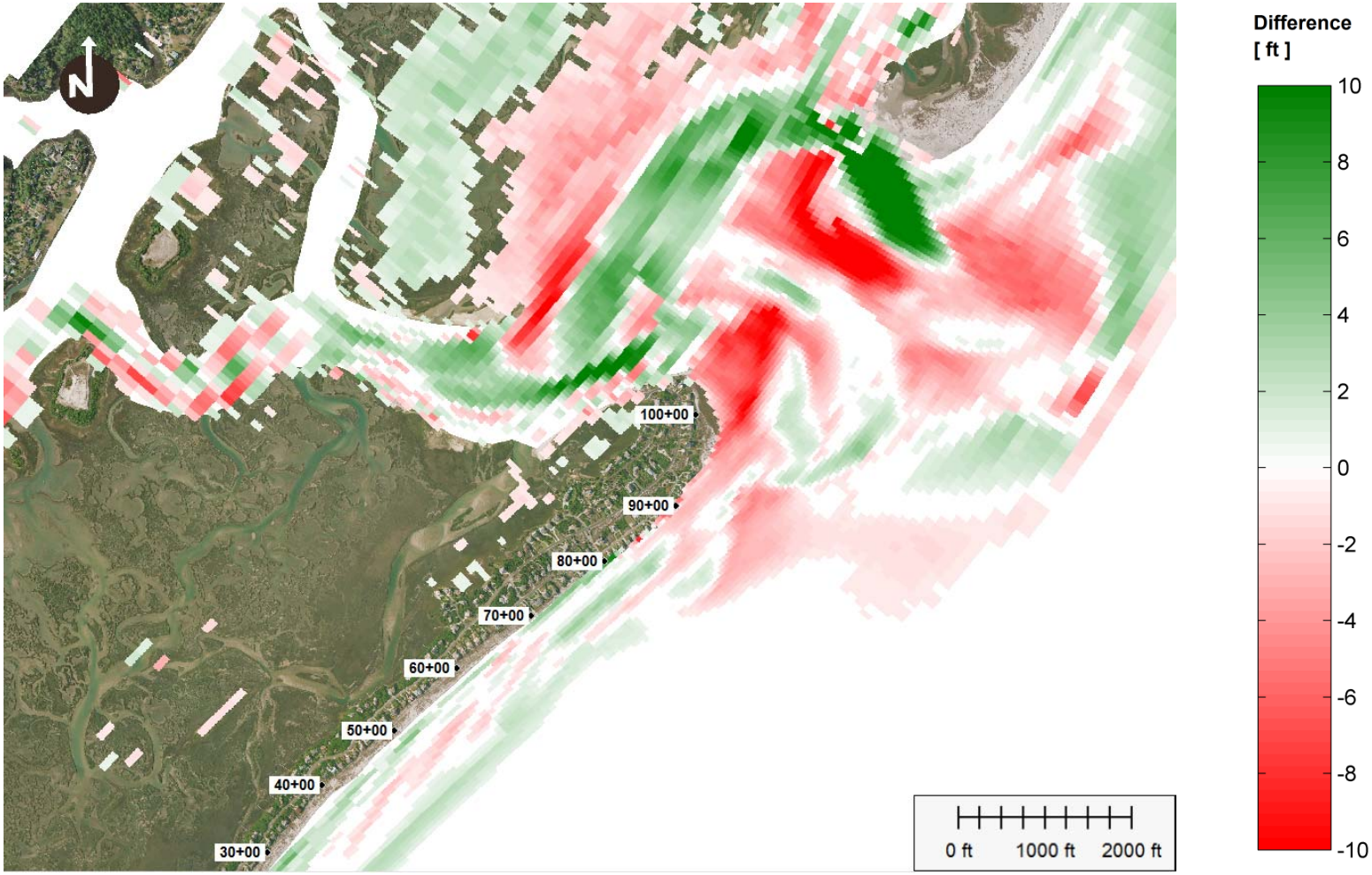


Figure 35: difference between bathymetry of Alternative 4a after 5 years simulation and initial bathymetry of Alternative 2.

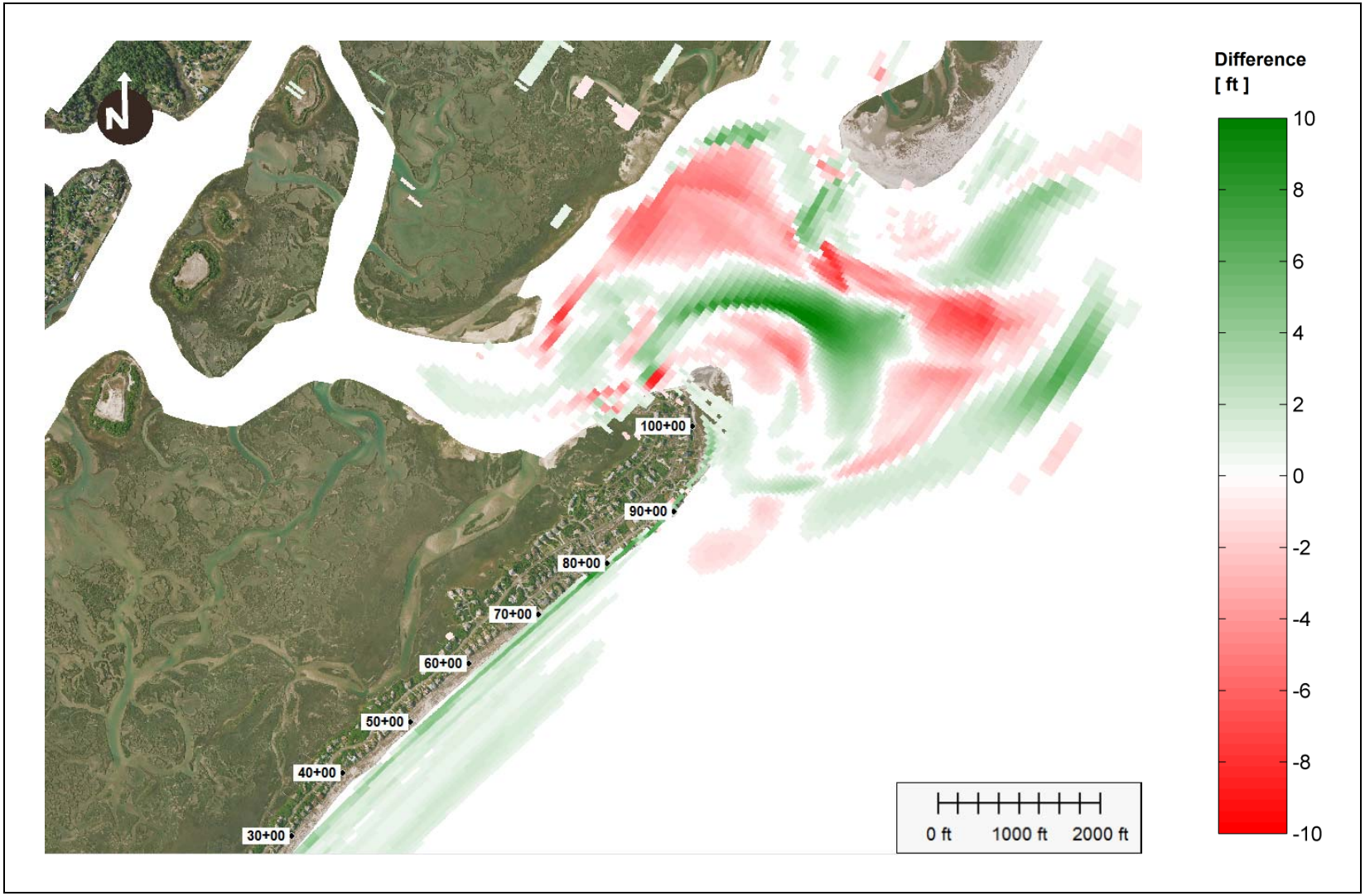


Figure 36: difference between bathymetries of Alternative 4a and Alternative 2 after 5 years simulation.

Alternative 5a-1 - Terminal Groin (700 ft) with Beach Fill from Nixon Channel

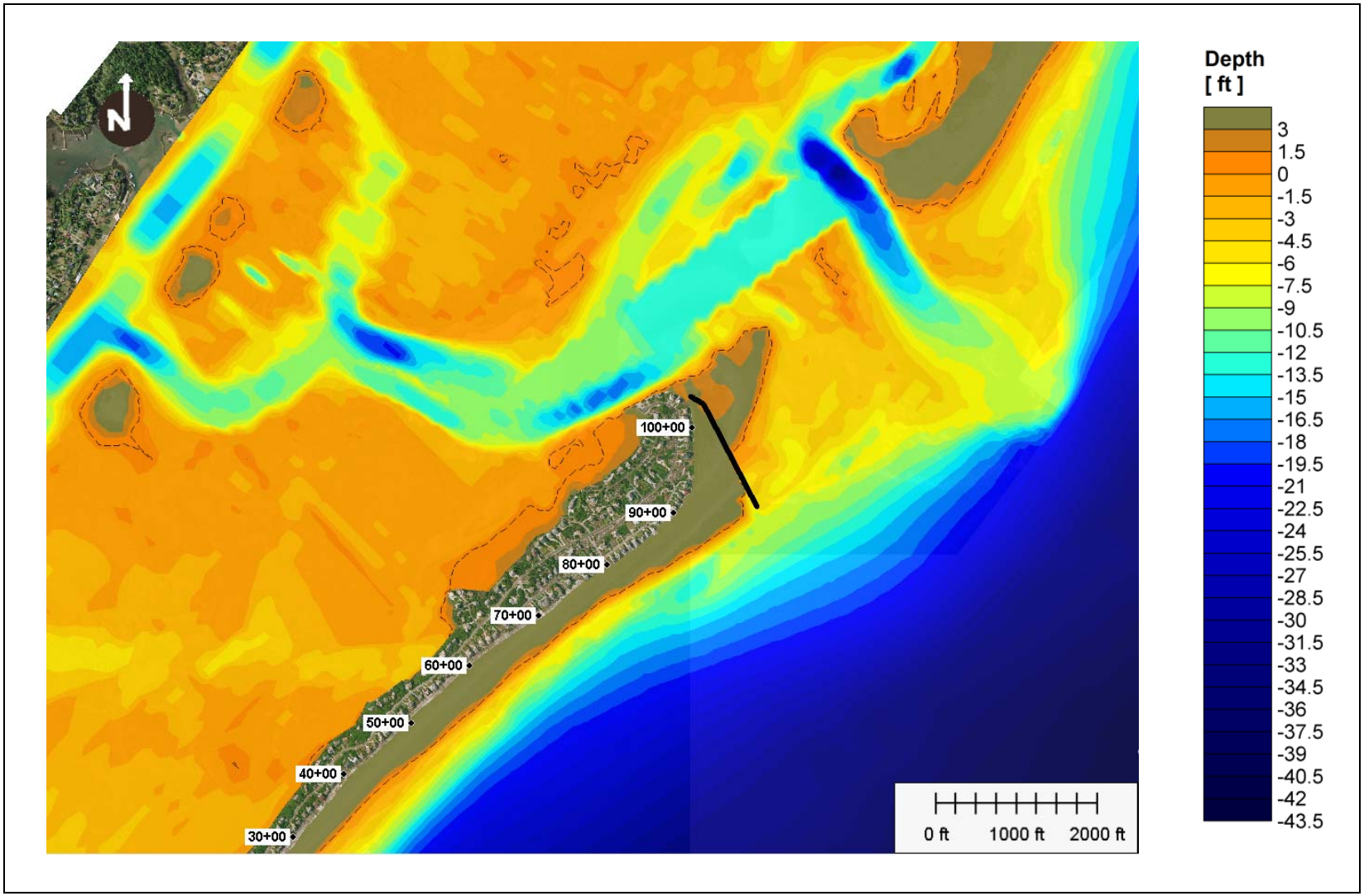


Figure 37: Alternative 5a-1, initial bathymetry.

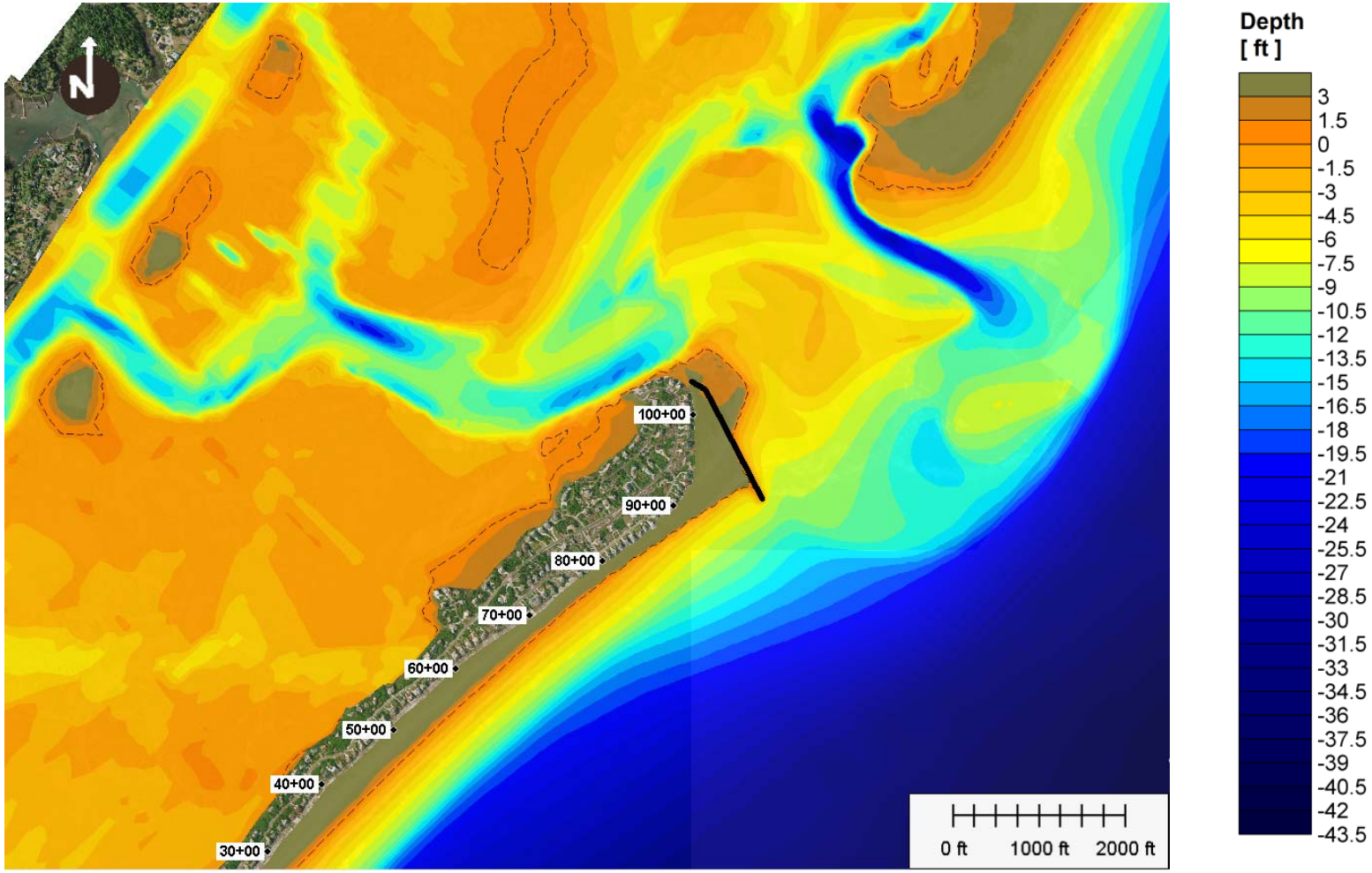


Figure 38: Alternative 5a-1, bathymetry after 2 years simulation.

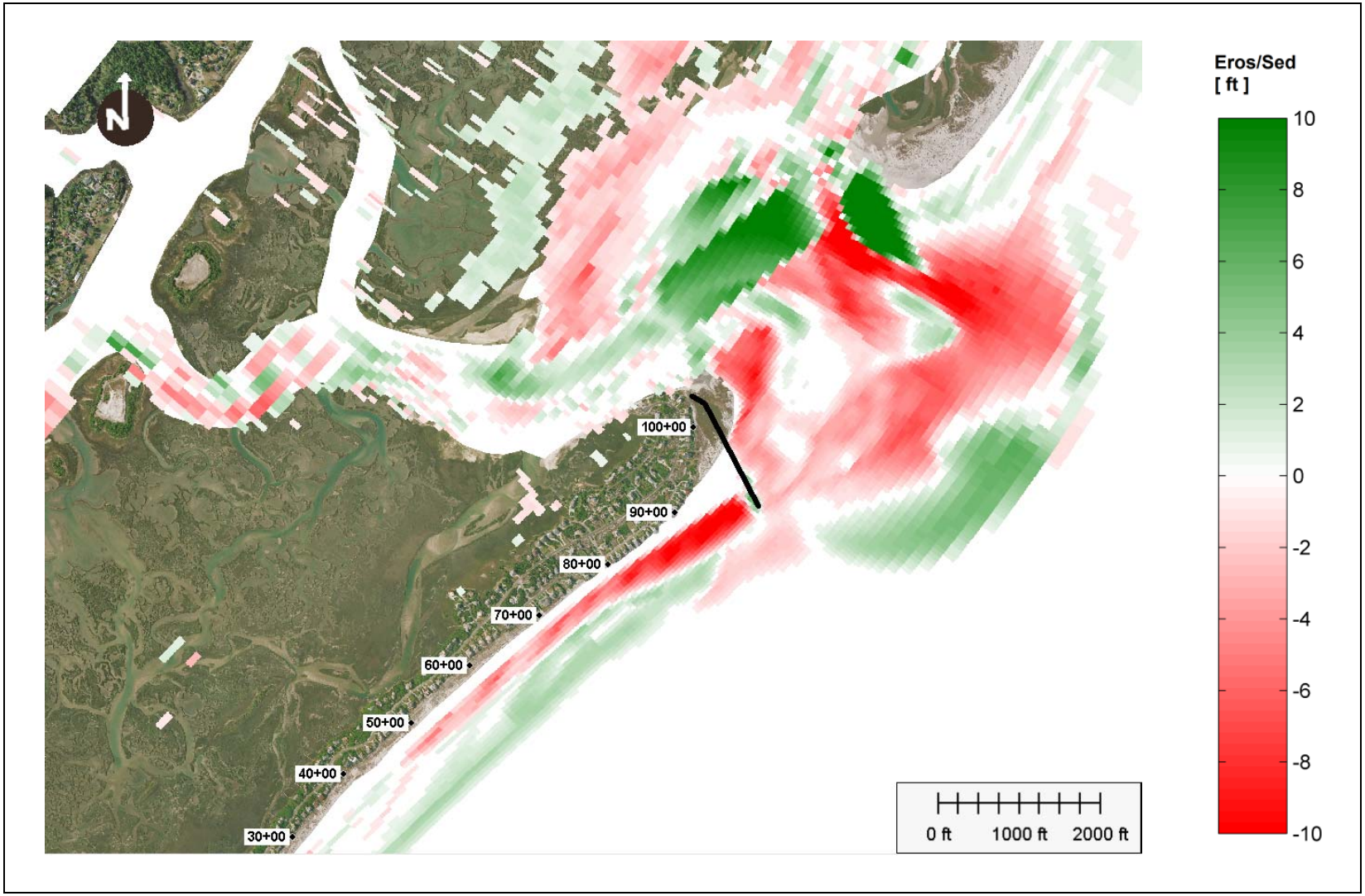


Figure 39: Alternative 5a-1, erosion/sedimentation after 2 years simulation.

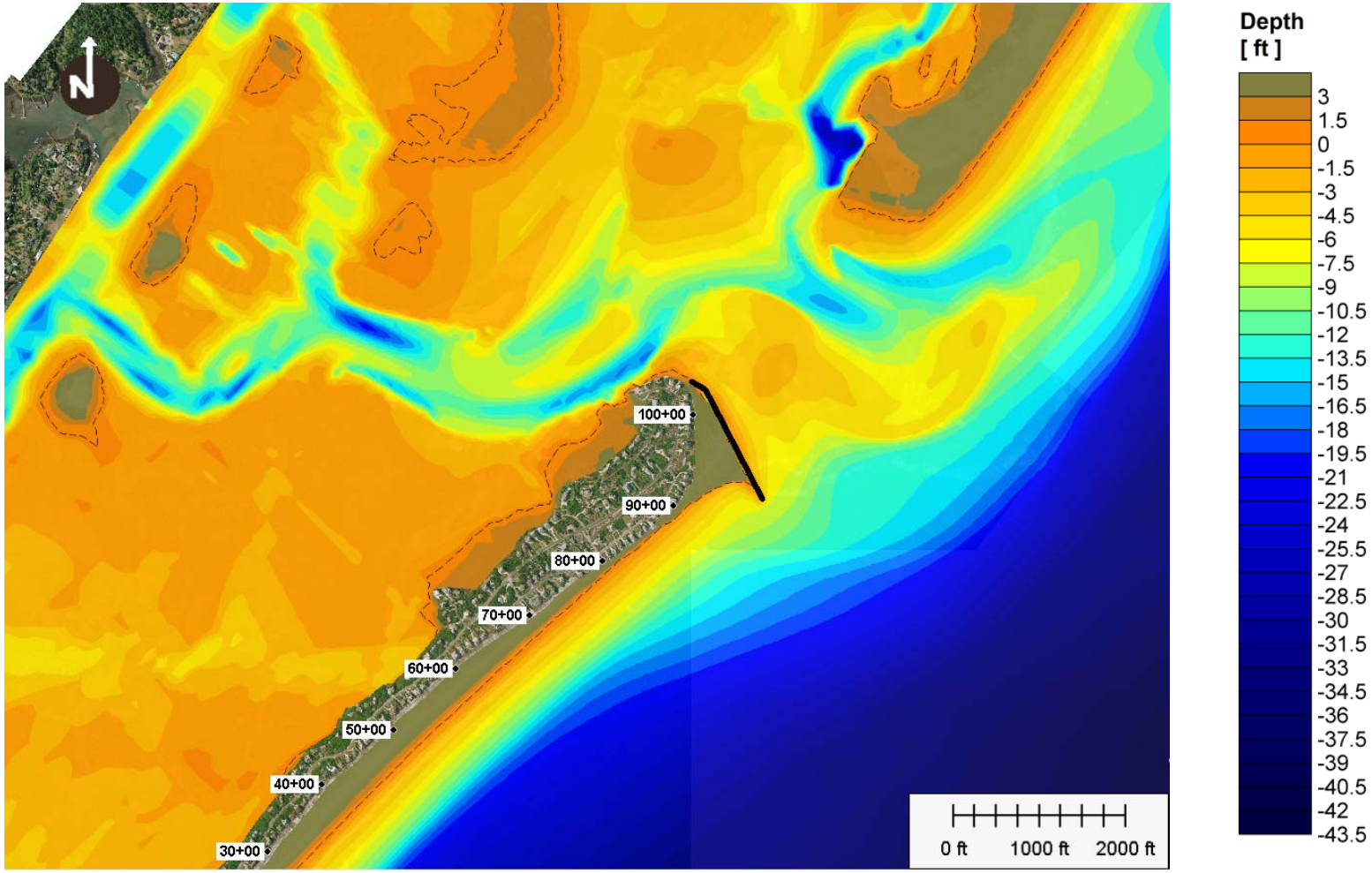


Figure 40: Alternative 5a-1, bathymetry after 5 years simulation.

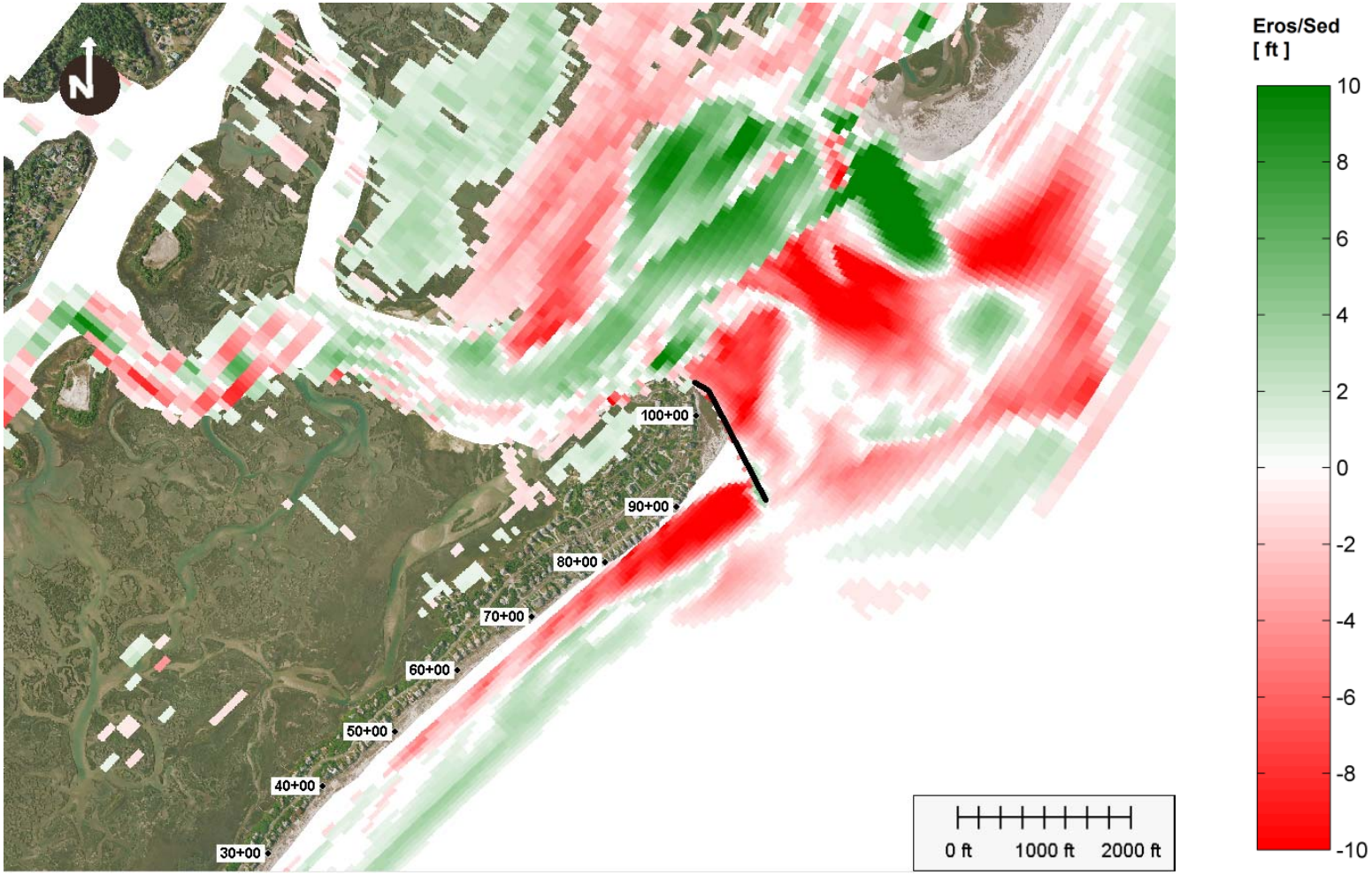


Figure 41: Alternative 5a-1, erosion/sedimentation after 5 year simulation.

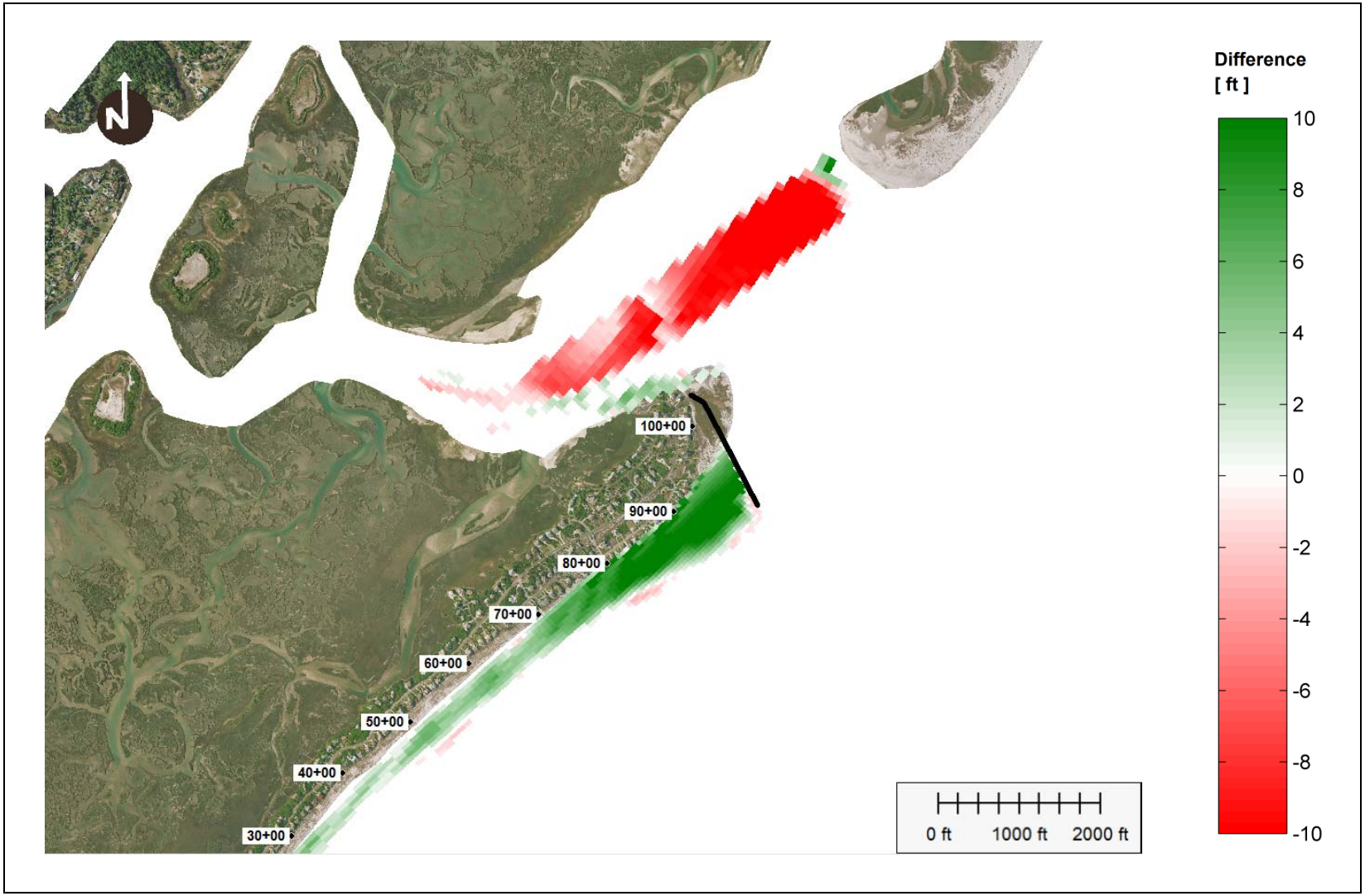


Figure 42: difference between initial bathymetries of Alternative 5a-1 and Alternative 2.

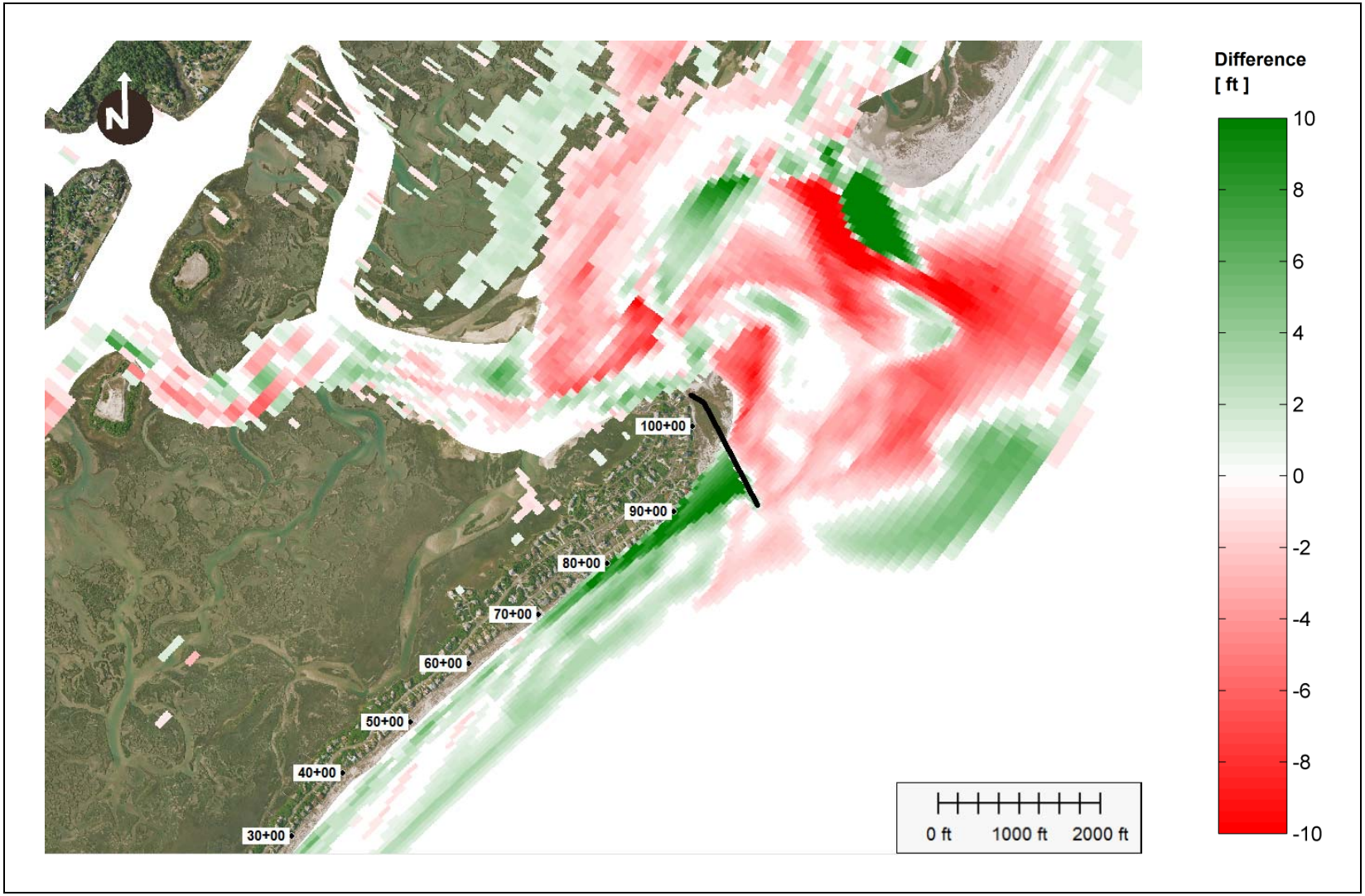


Figure 43: difference between bathymetry of Alternative 5a-1 after 2 years simulation and initial bathymetry of Alternative 2.

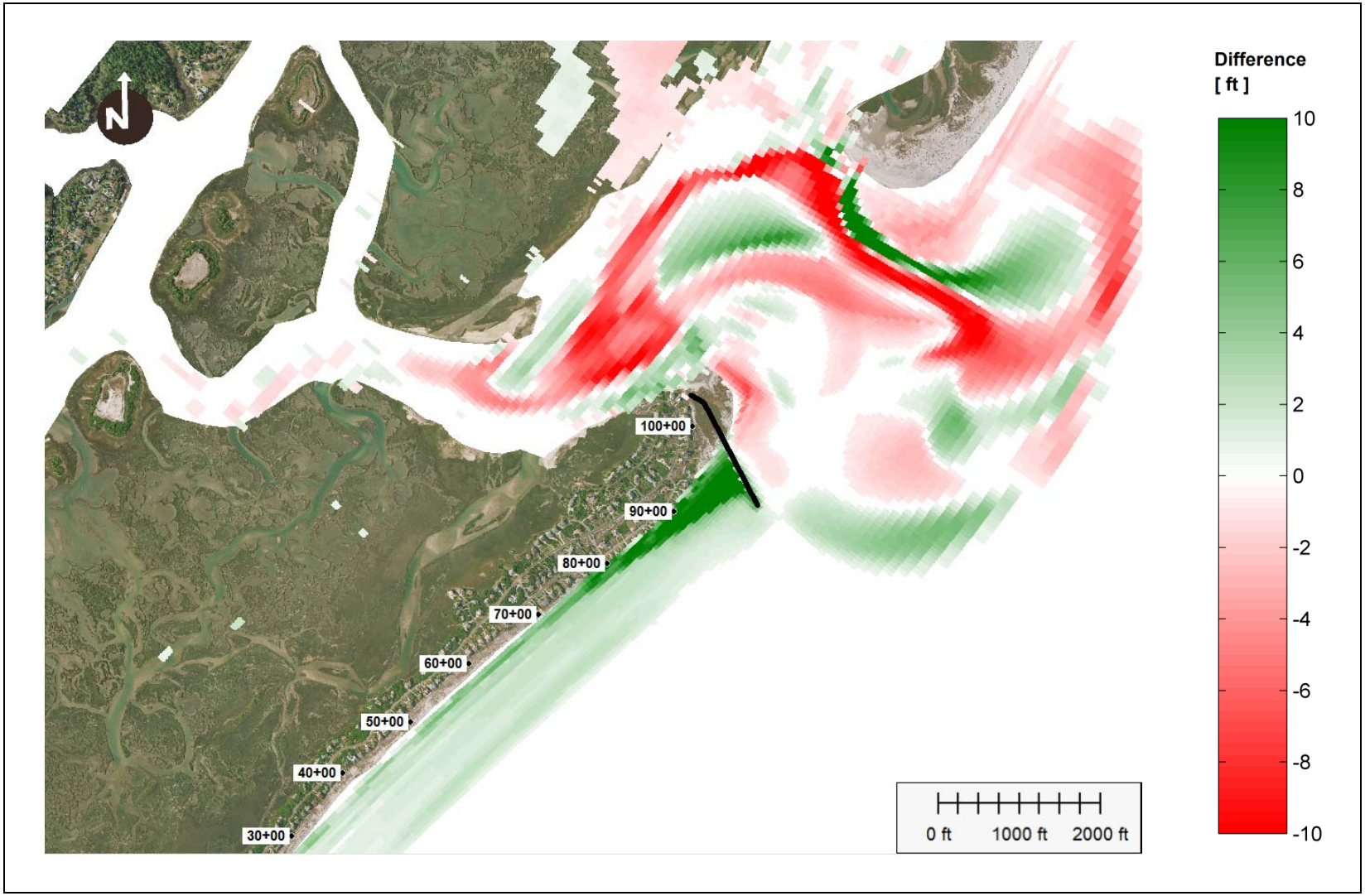


Figure 44: difference between bathymetries of Alternative 5a-1 and Alternative 2 after 2 years simulation.

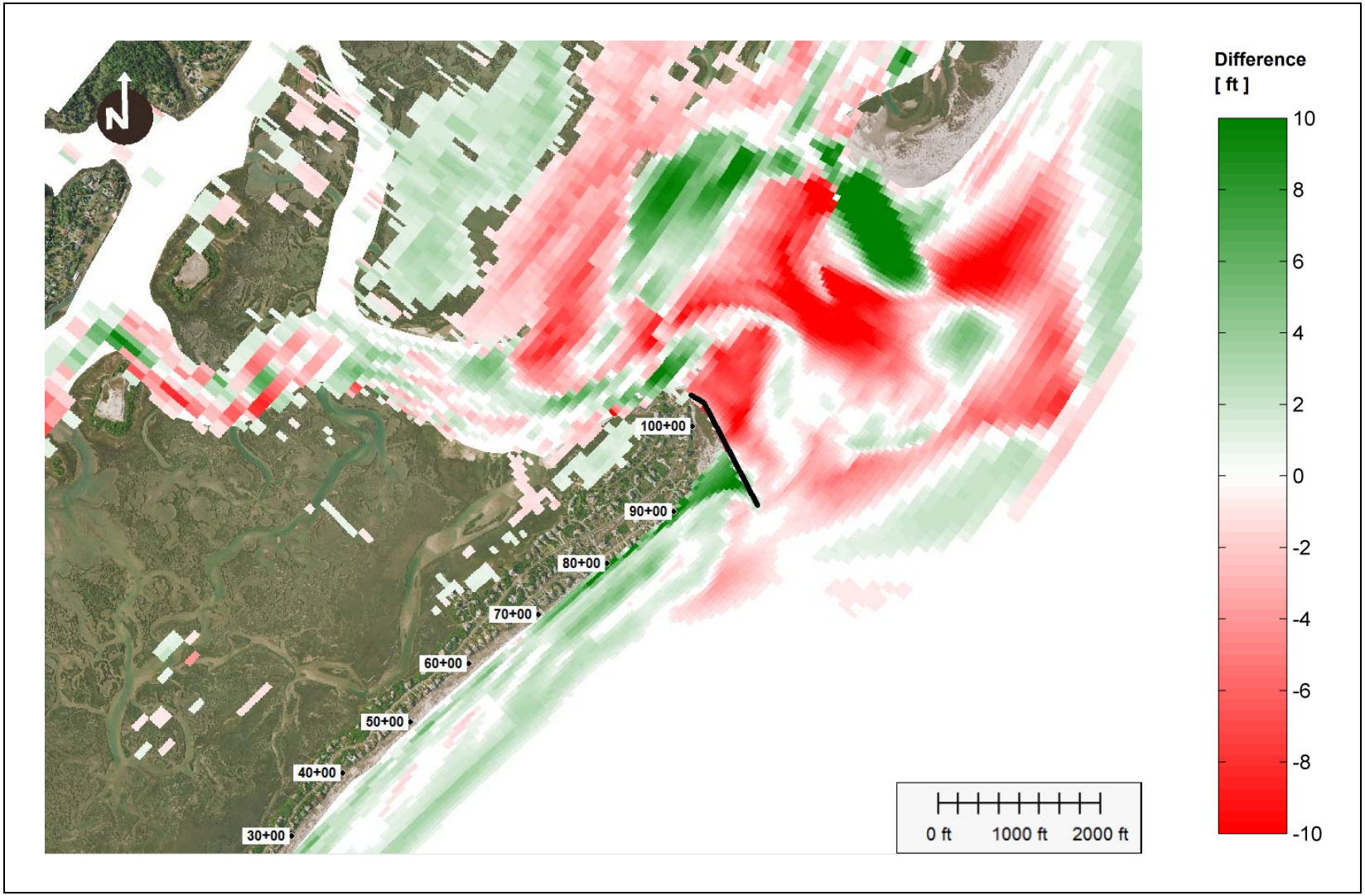


Figure 45: difference between bathymetry of Alternative 5a-1 after 5 years simulation and initial bathymetry of Alternative 2.

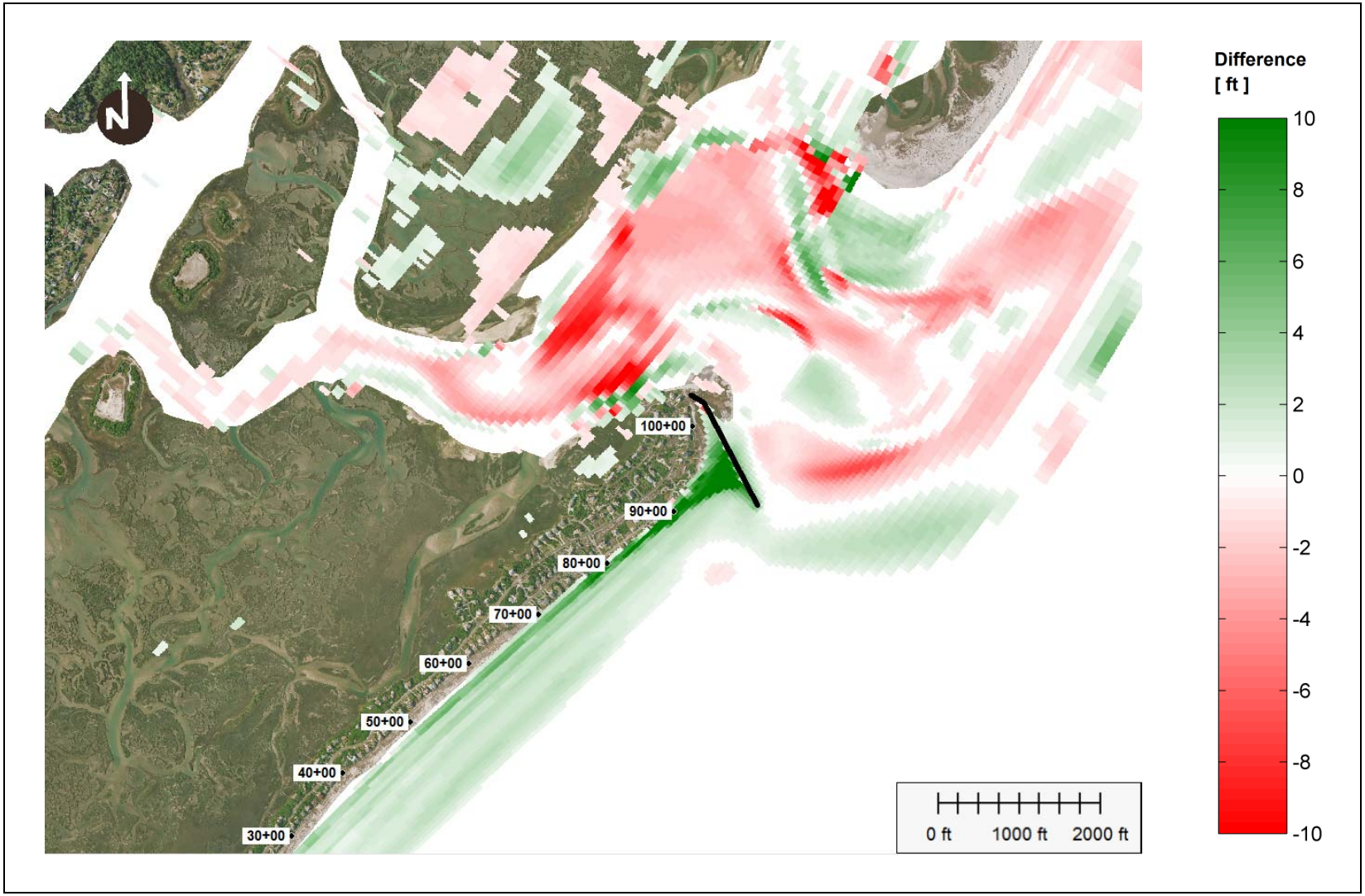


Figure 46: difference between bathymetries of Alternative 5a-1 and Alternative 2 after 5 years simulation.

Alternative 5a-2 - Terminal Groin (1,200 ft) with Beach Fill from Nixon Channel

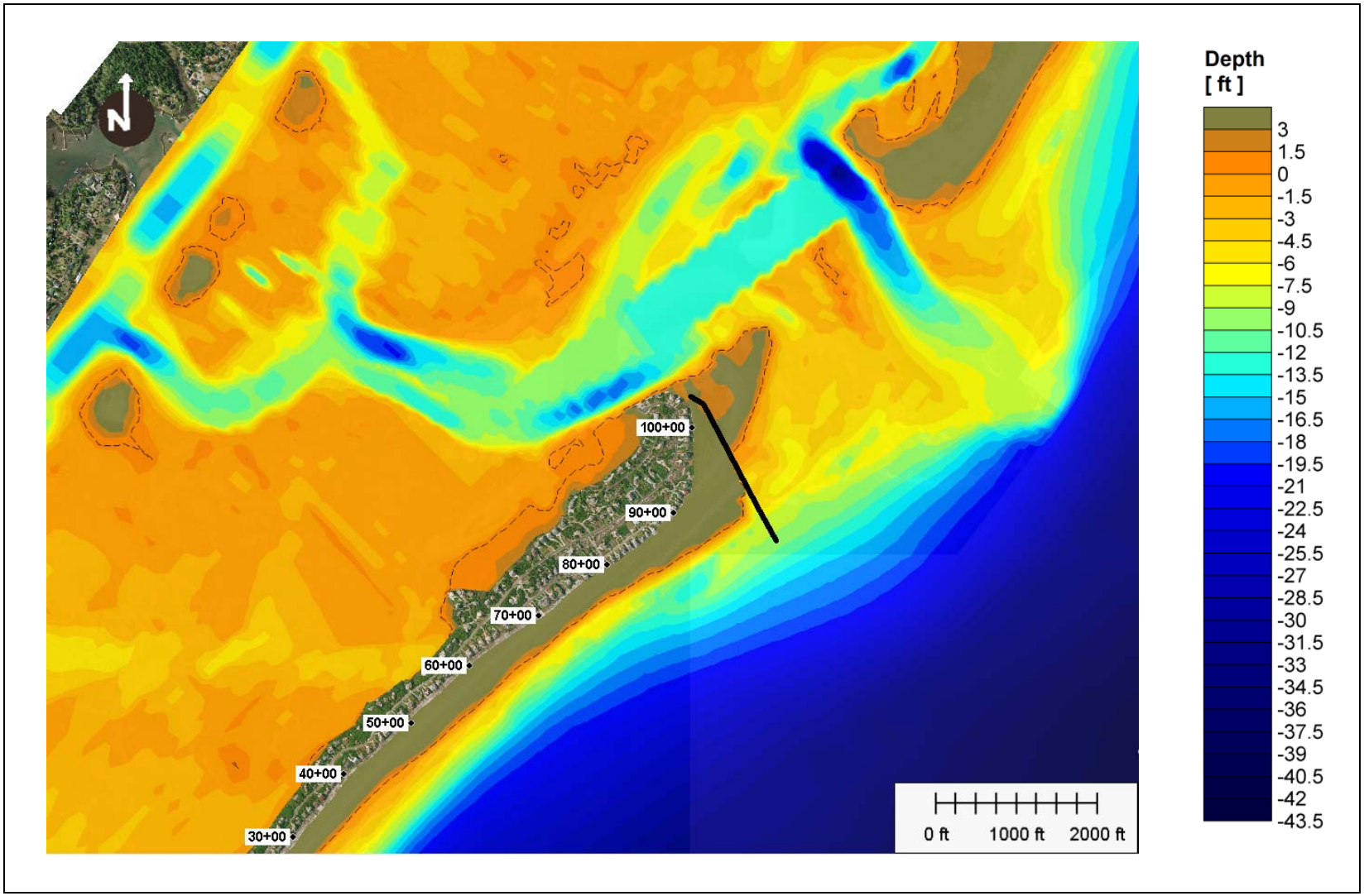


Figure 47: Alternative 5a-2, initial bathymetry.

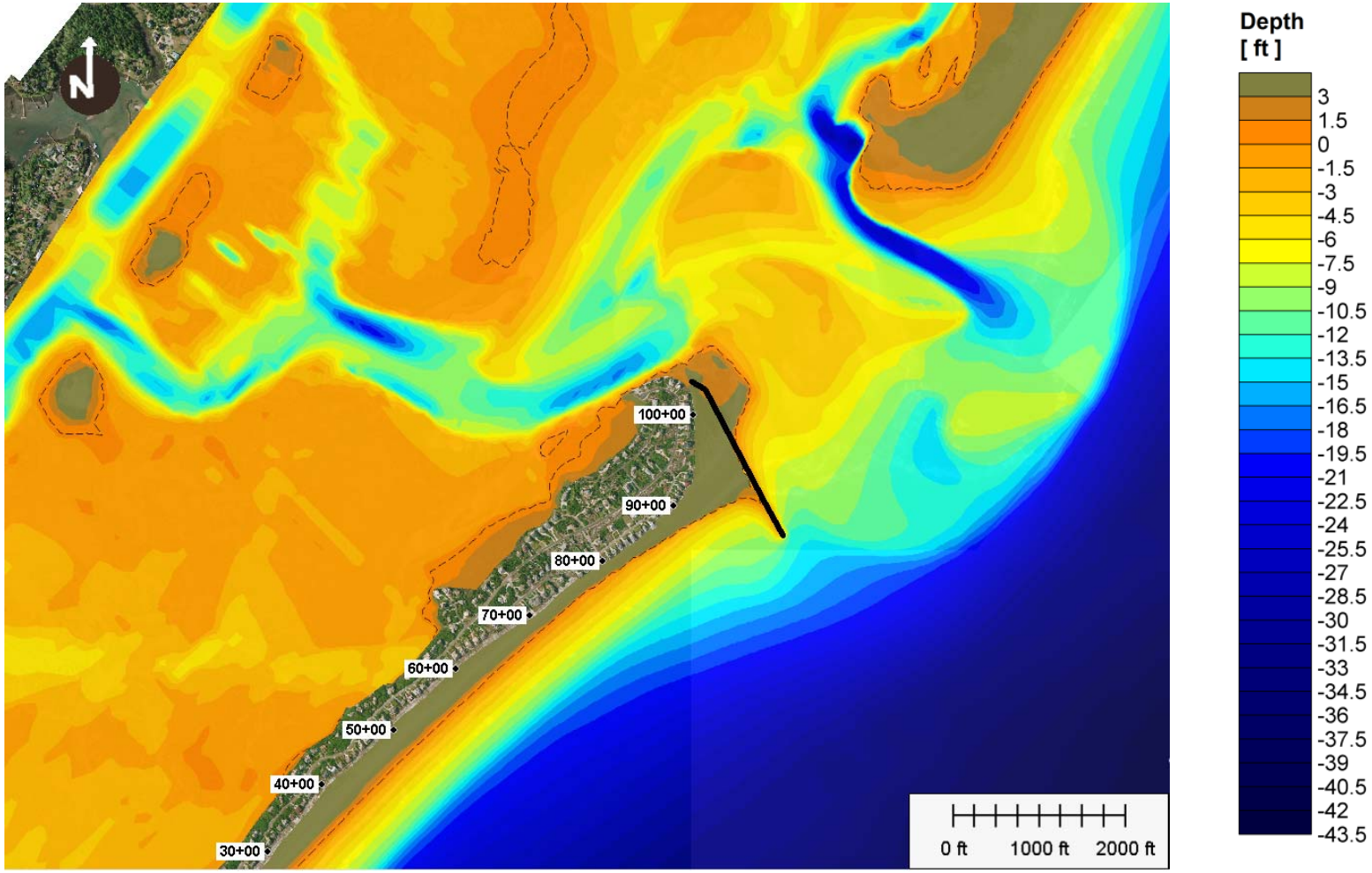


Figure 48: Alternative 5a-2, bathymetry after 2 years simulation.

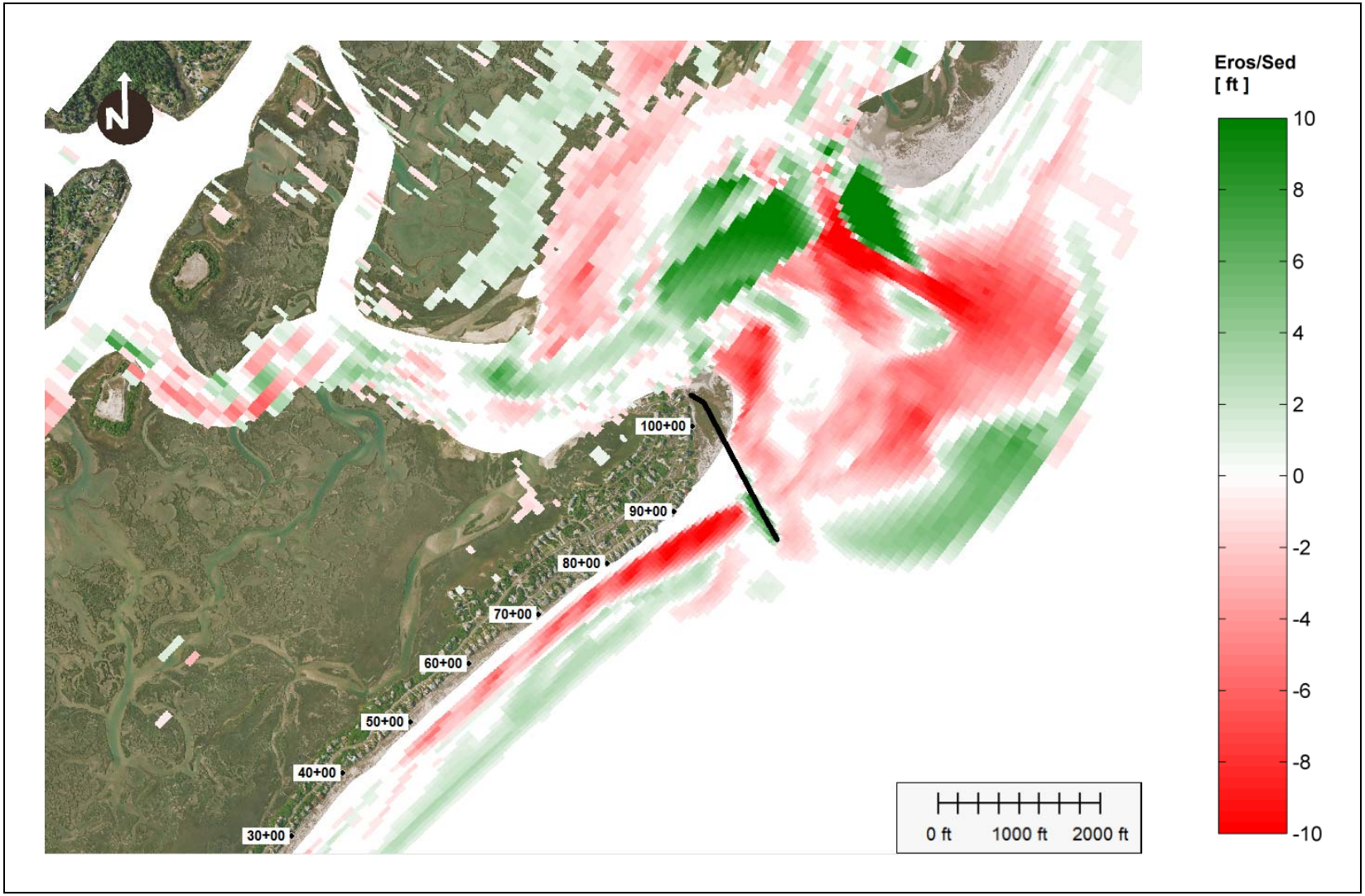


Figure 49: Alternative 5a-2, erosion/sedimentation after 2 years simulation.

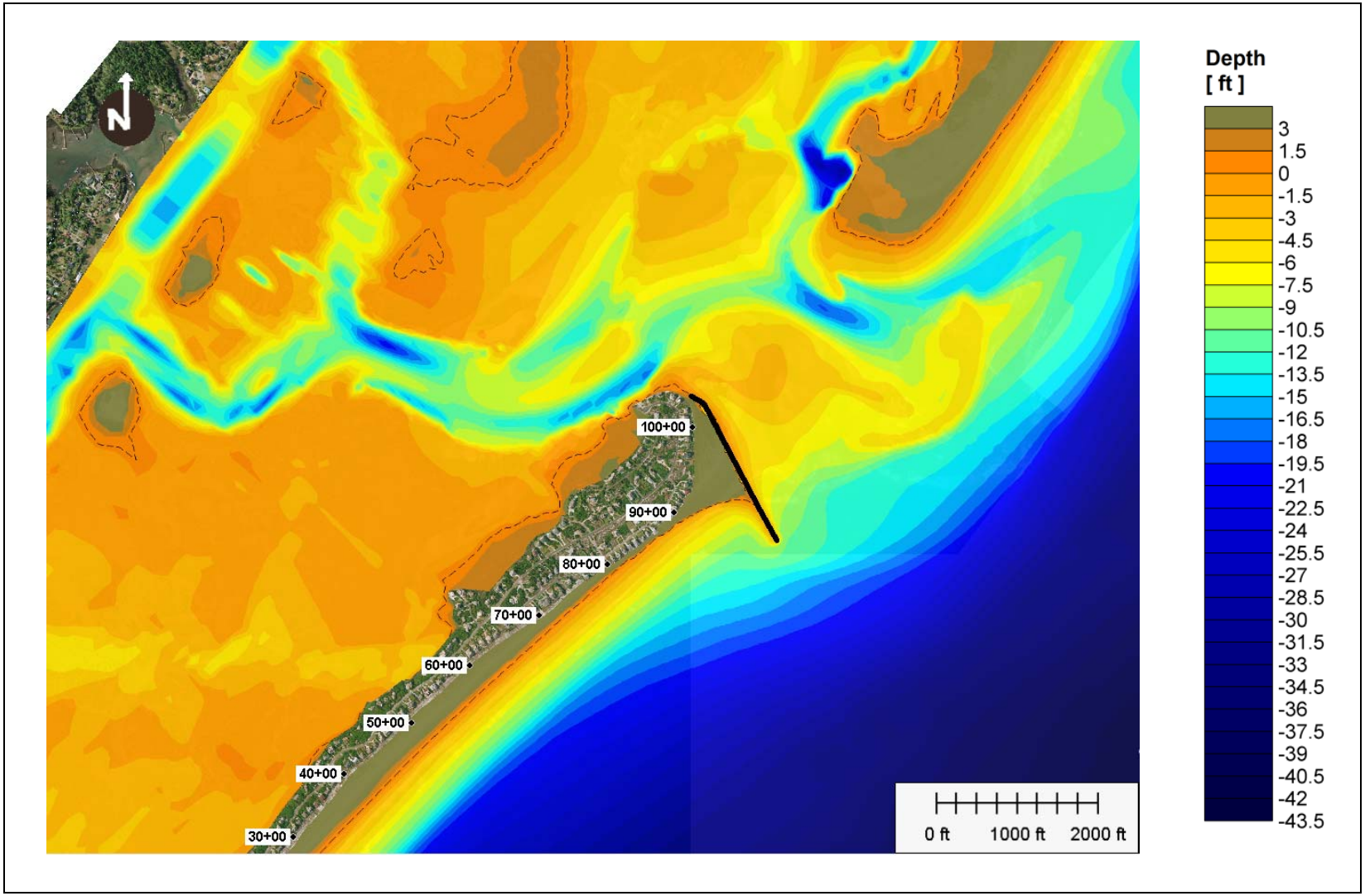


Figure 50: Alternative 5a-2, bathymetry after 5 years simulation.

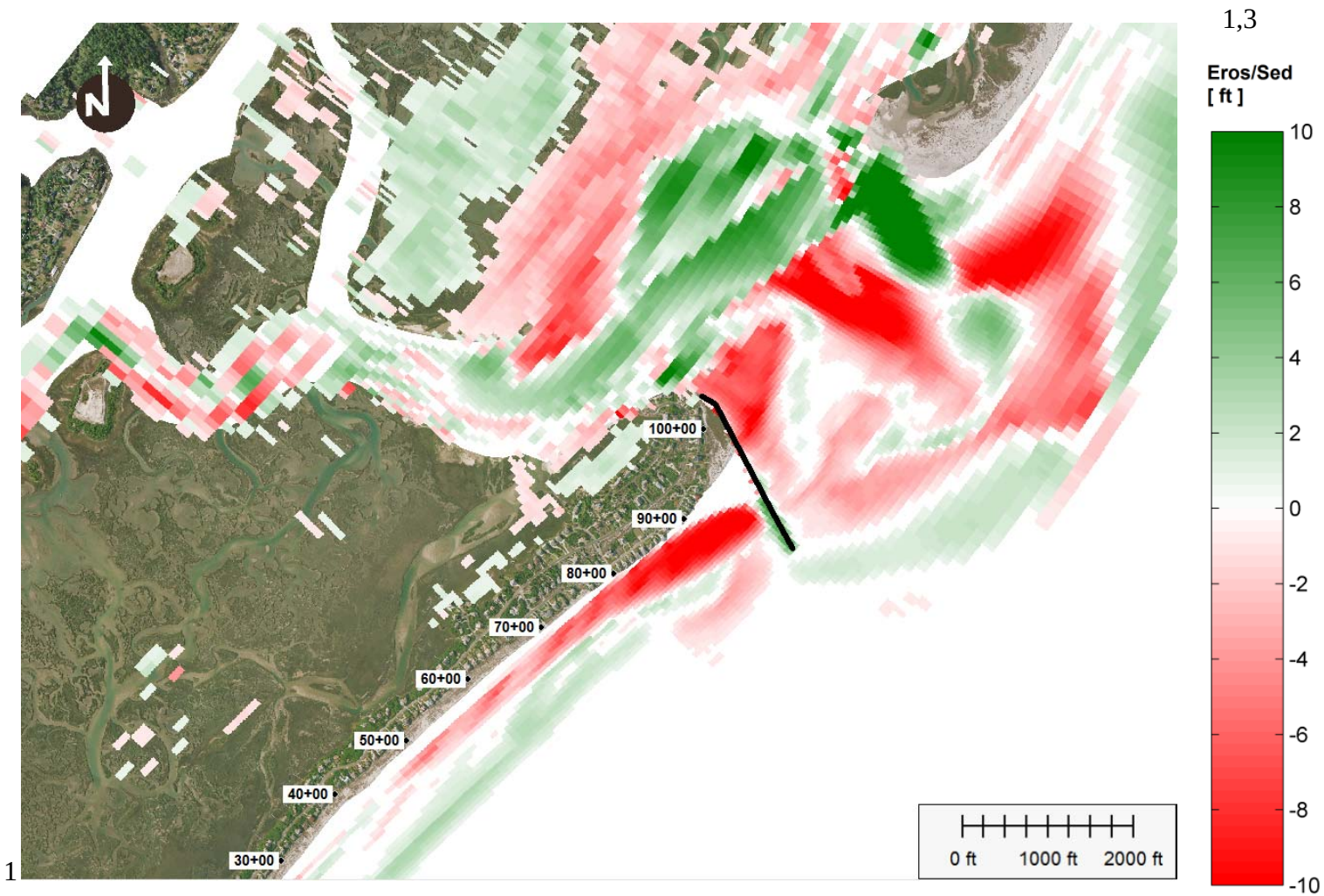


Figure 51: Alternative 5a-2, erosion/sedimentation after 5 year simulation.

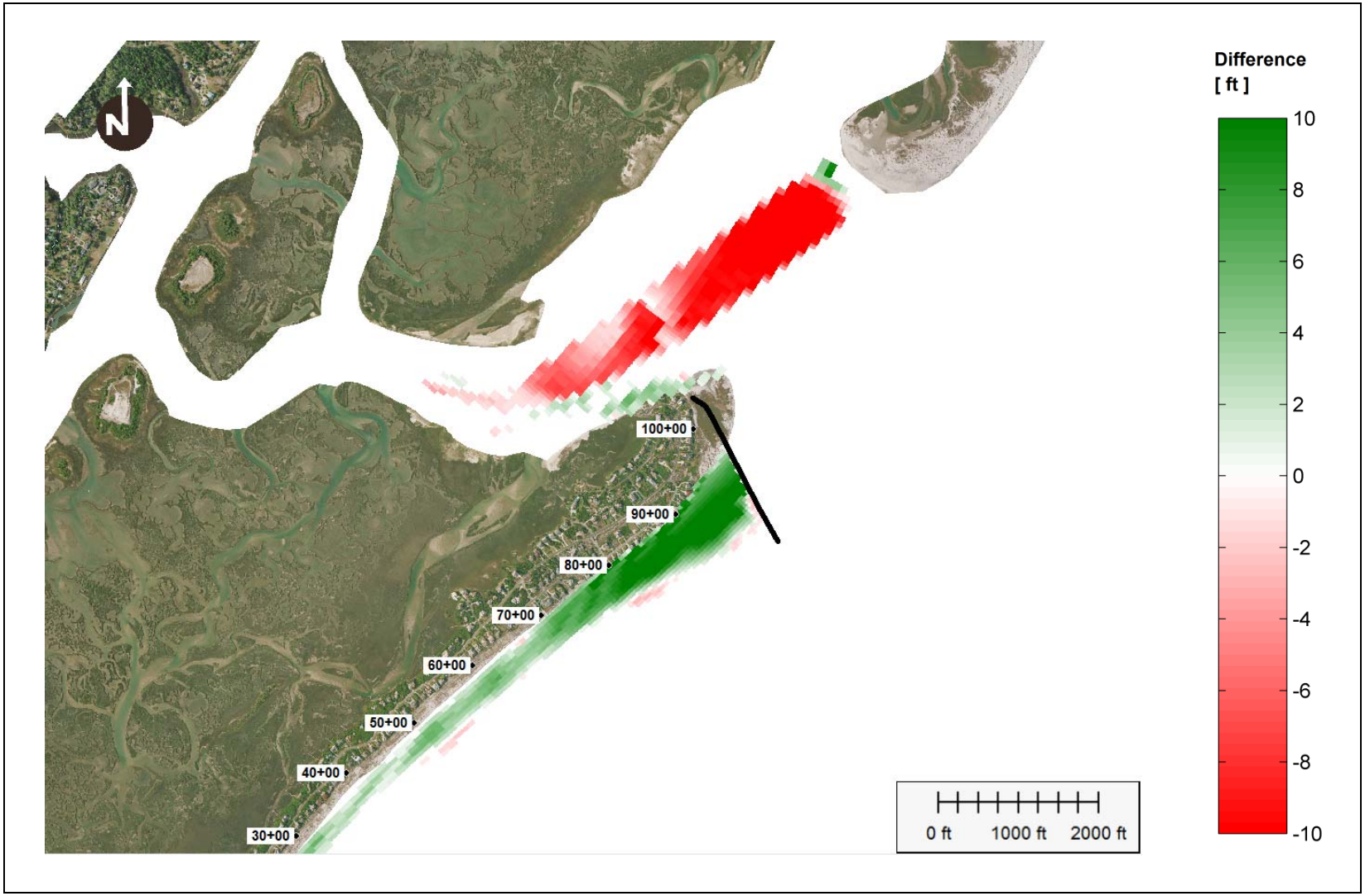


Figure 52: difference between initial bathymetries of Alternative 5a-2 and Alternative 2.

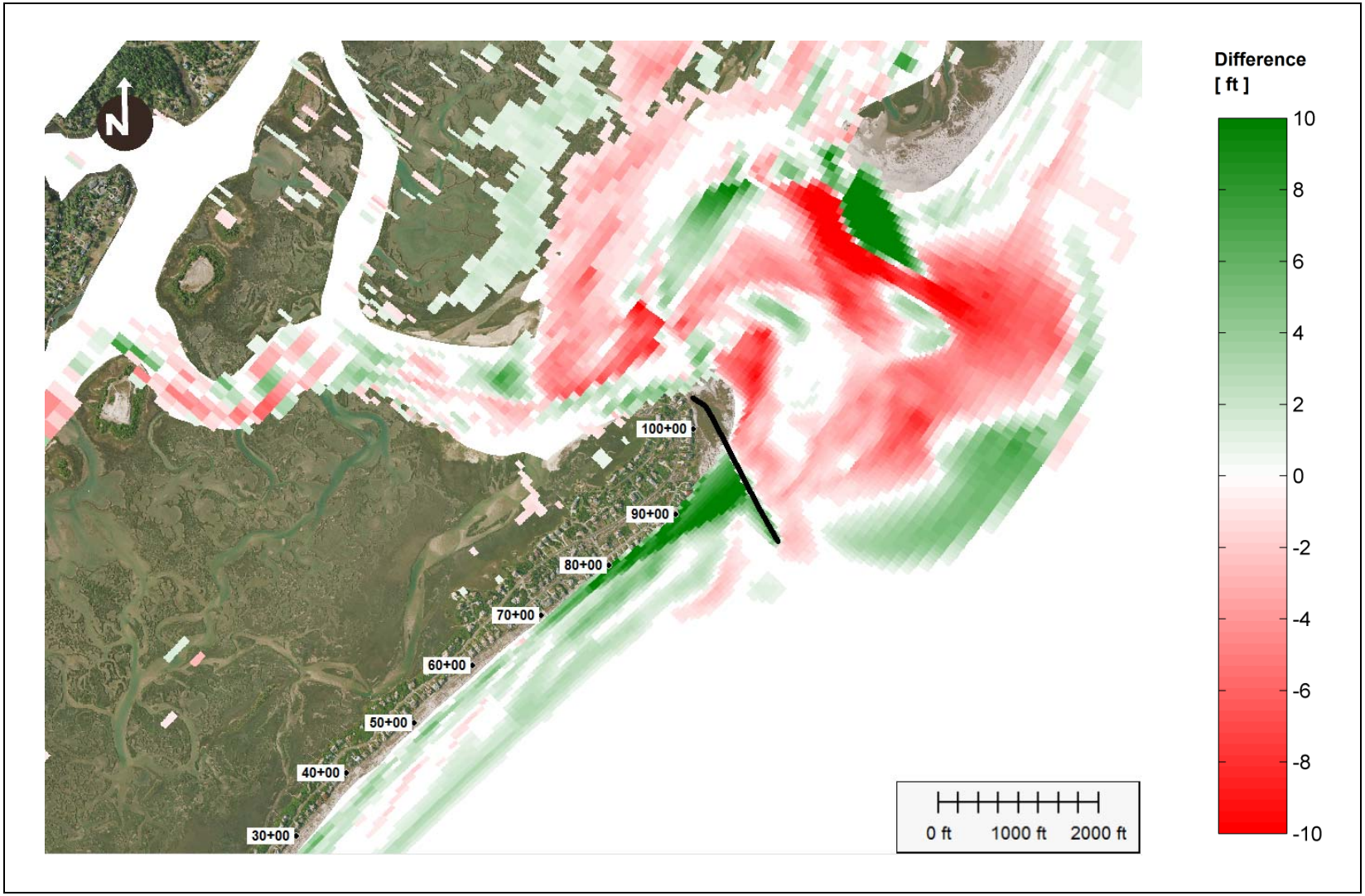


Figure 53: difference between bathymetry of Alternative 5a-2 after 2 years simulation and initial bathymetry of Alternative 2.

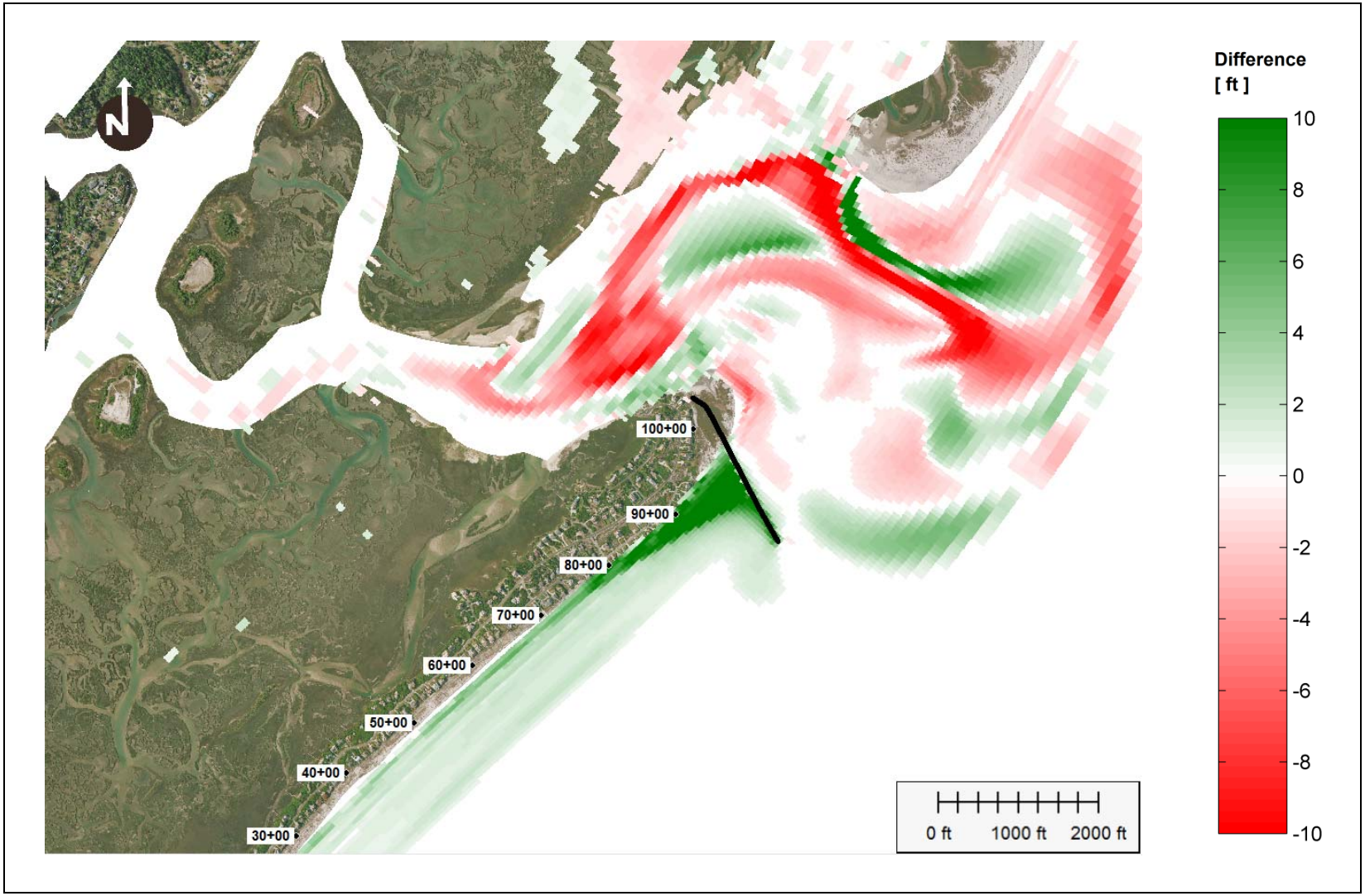


Figure 54: difference between bathymetries of Alternative 5a-2 and Alternative 2 after 2 years simulation.

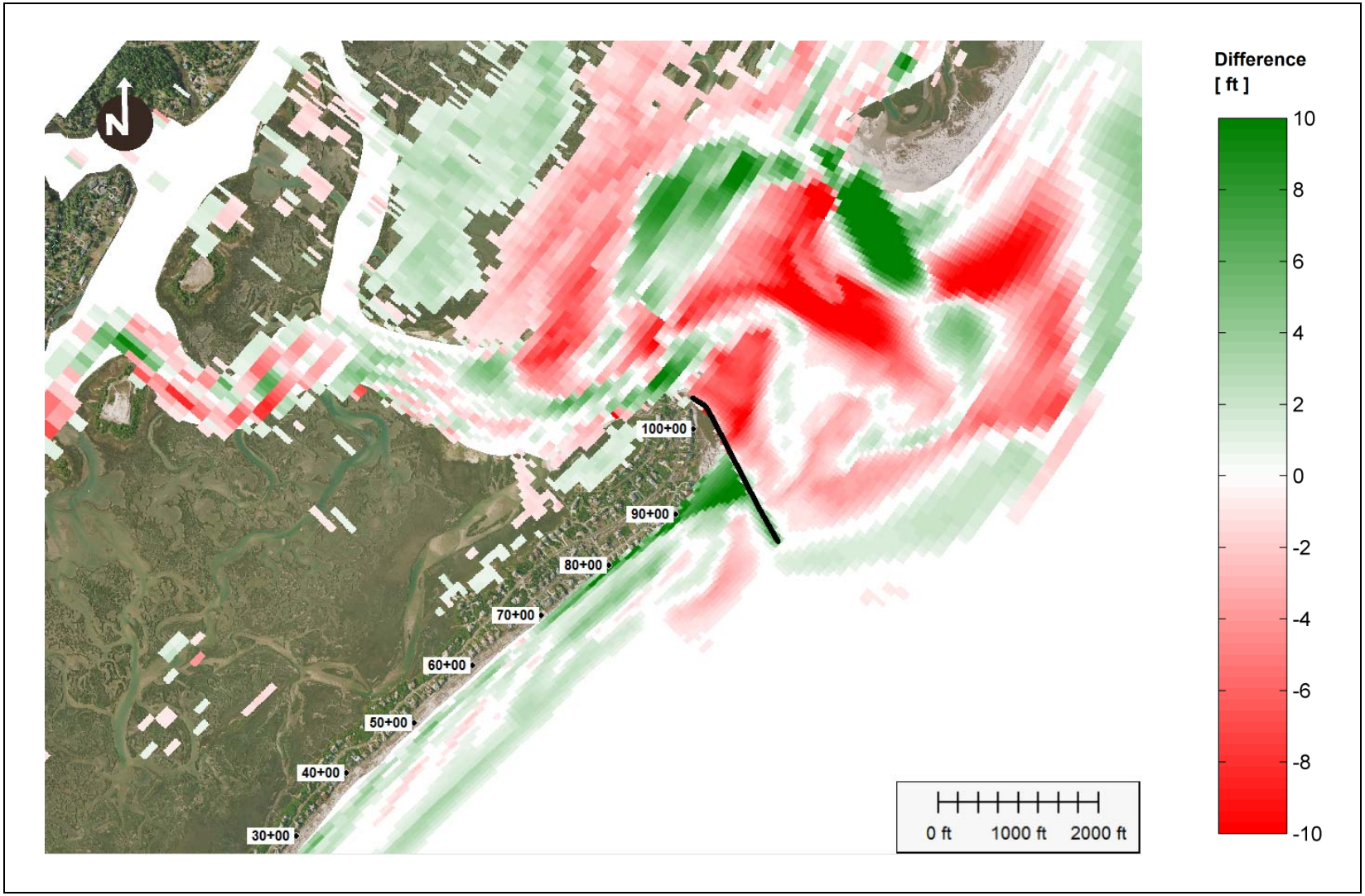


Figure 55: difference between bathymetry of Alternative 5a-2 after 5 years simulation and initial bathymetry of Alternative 2.

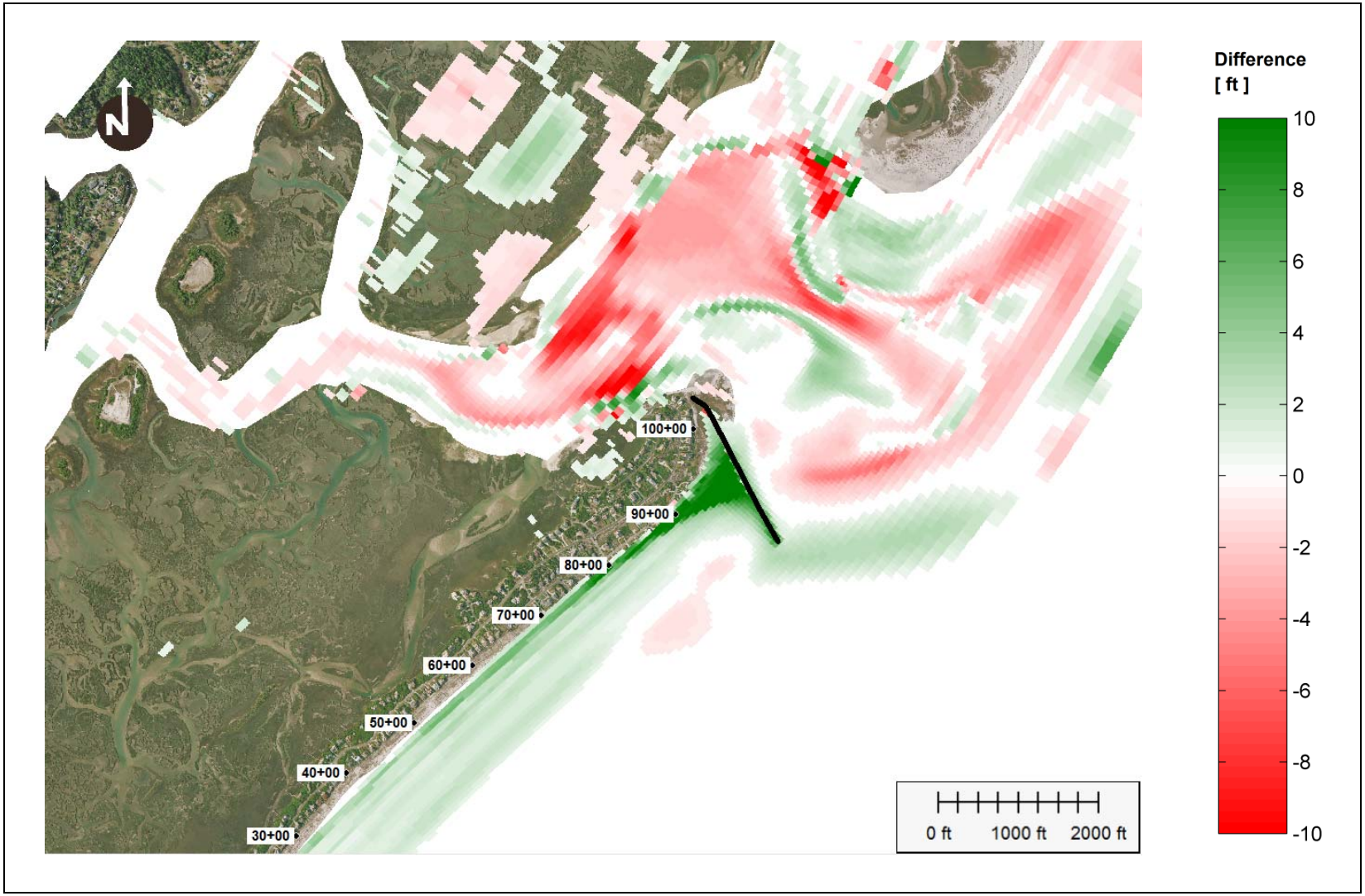


Figure 56: difference between bathymetries of Alternative 5a-2 and Alternative 2 after 5 years simulation.

Alternative 5a-3 - Terminal Groin (700 ft) without Oceanfront Beach Fill

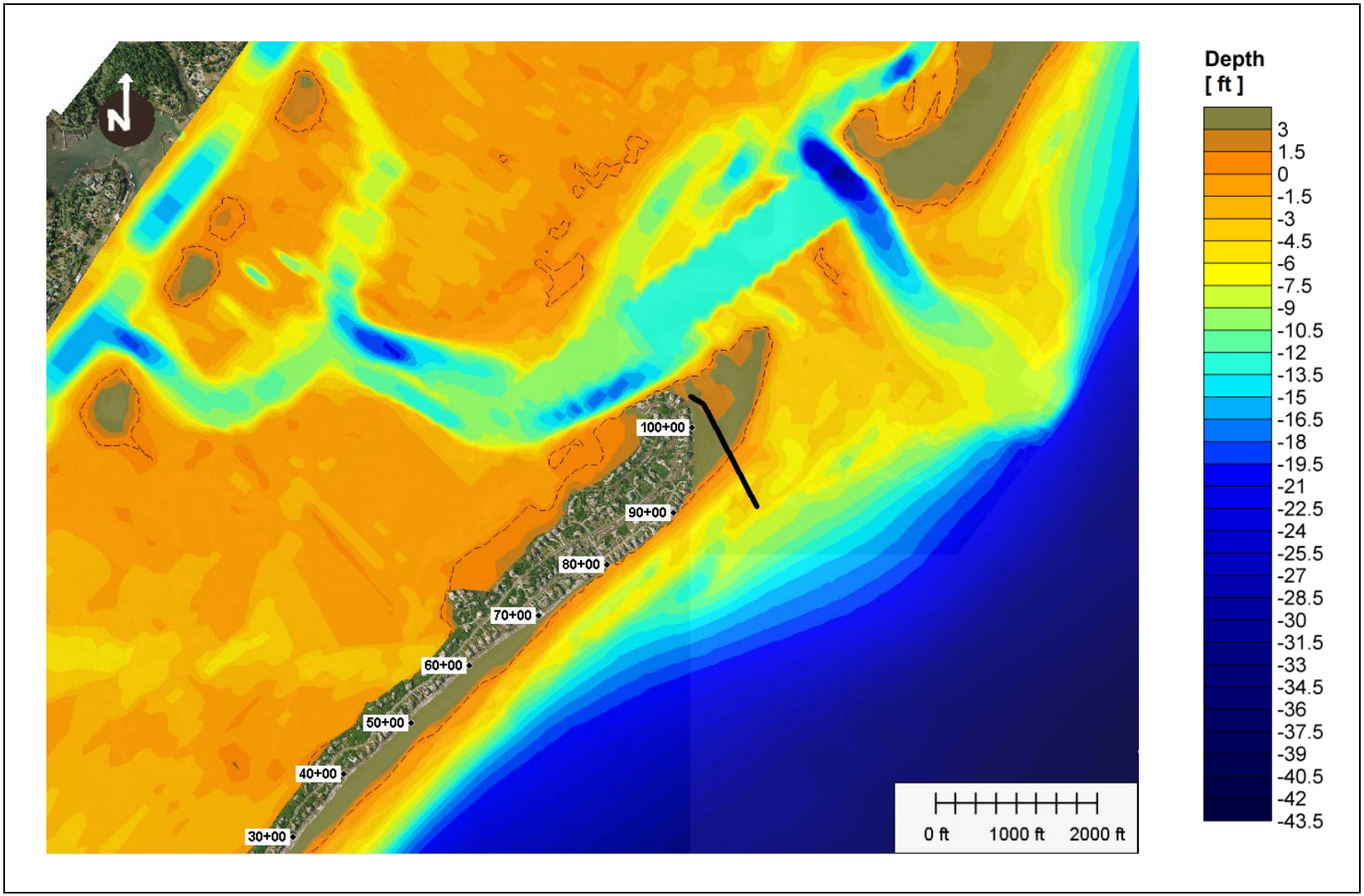


Figure 57: Alternative 5a-3 (700 ft groin), initial bathymetry.

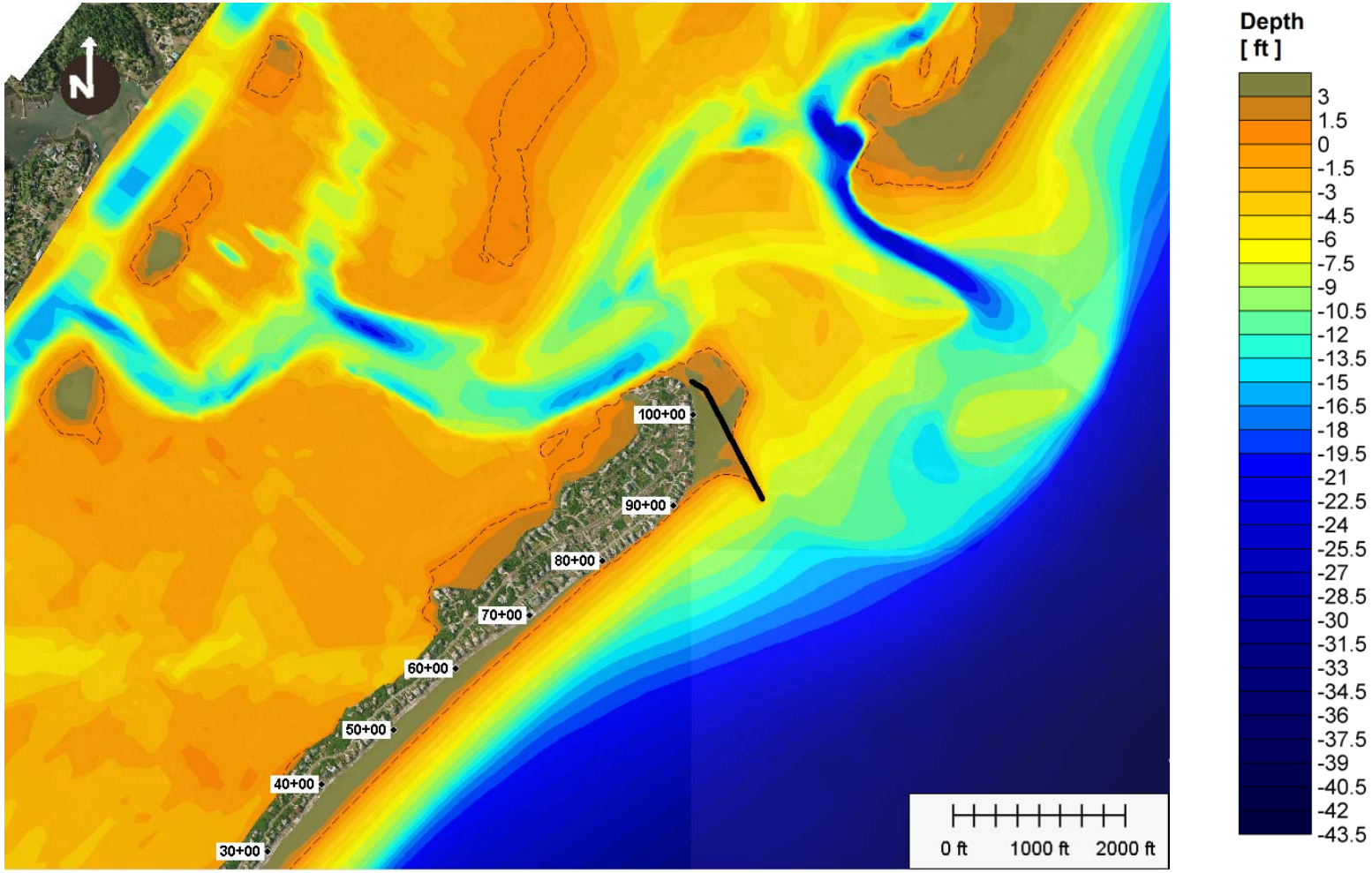


Figure 58: Alternative 5a-3 (700 ft groin), bathymetry after 2 years simulation.

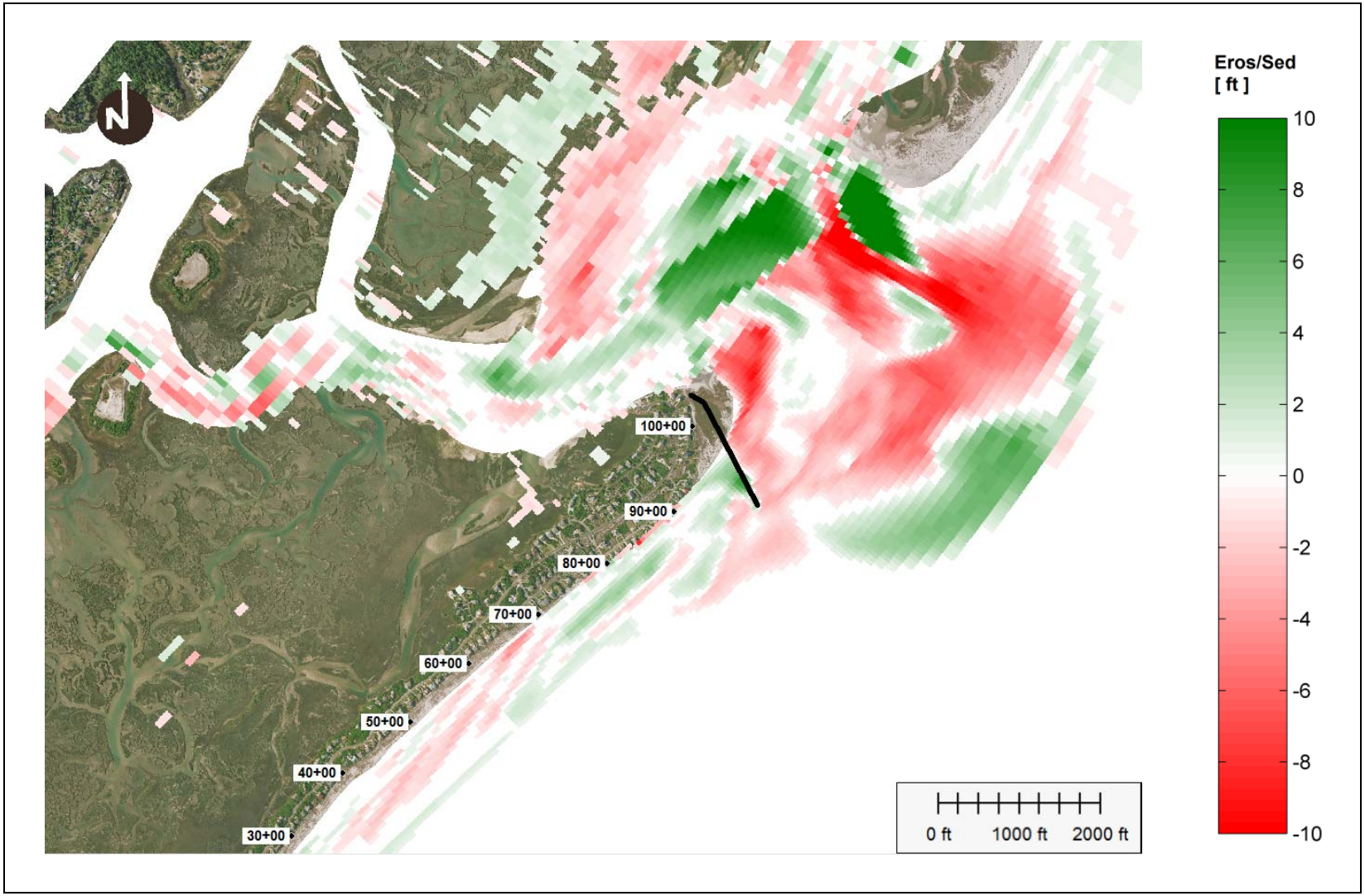


Figure 59: Alternative 5a-3 (700 ft groin), erosion/sedimentation after 2 years simulation.

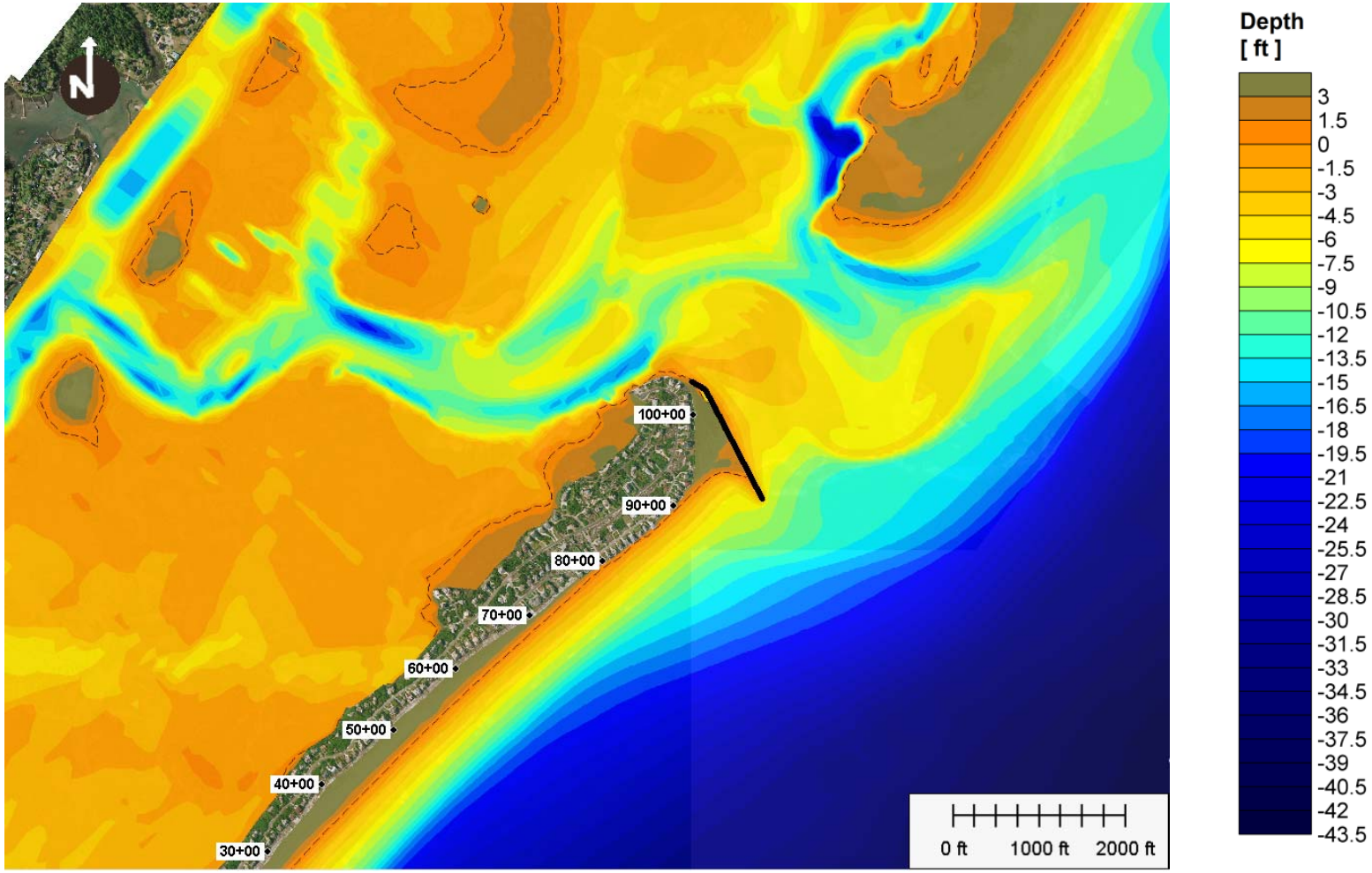


Figure 60: Alternative 5a-3 (700 ft groin), bathymetry after 5 years simulation.

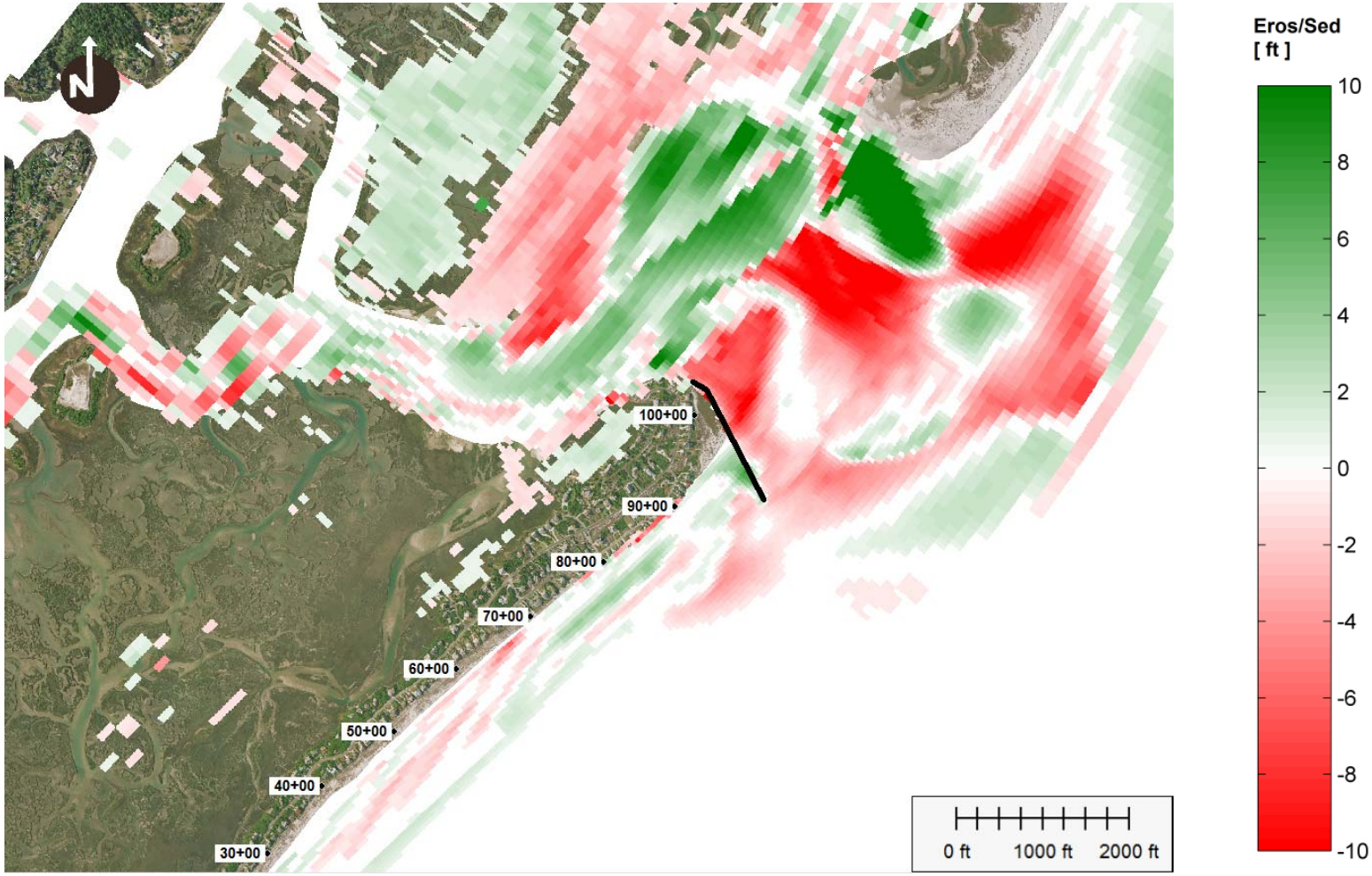


Figure 61: Alternative 5a-3 (700 ft groin), erosion/sedimentation after 5 year simulation.

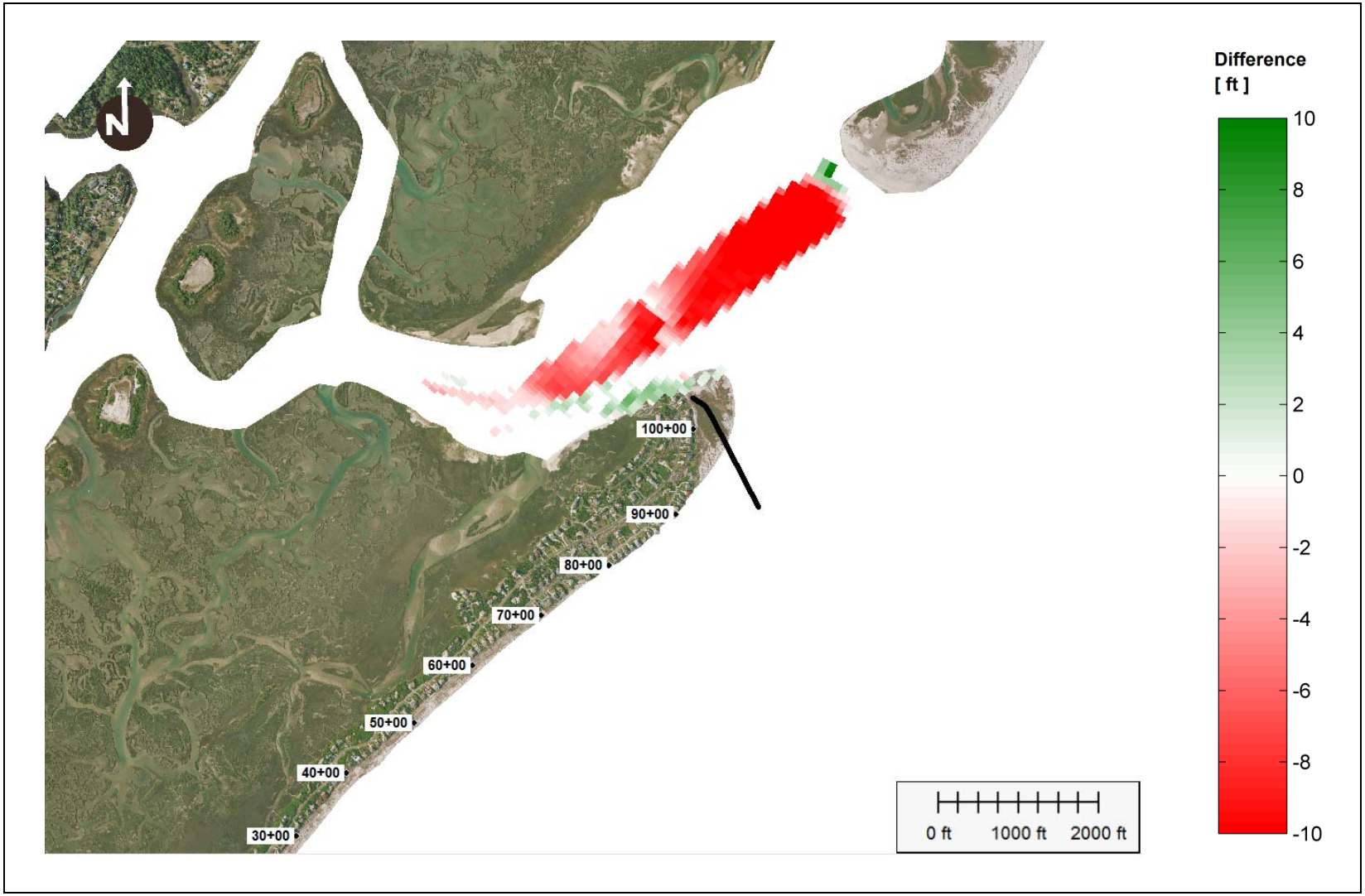


Figure 62: difference between initial bathymetries of Alternative 5a-3 (700 ft groin) and Alternative 2.

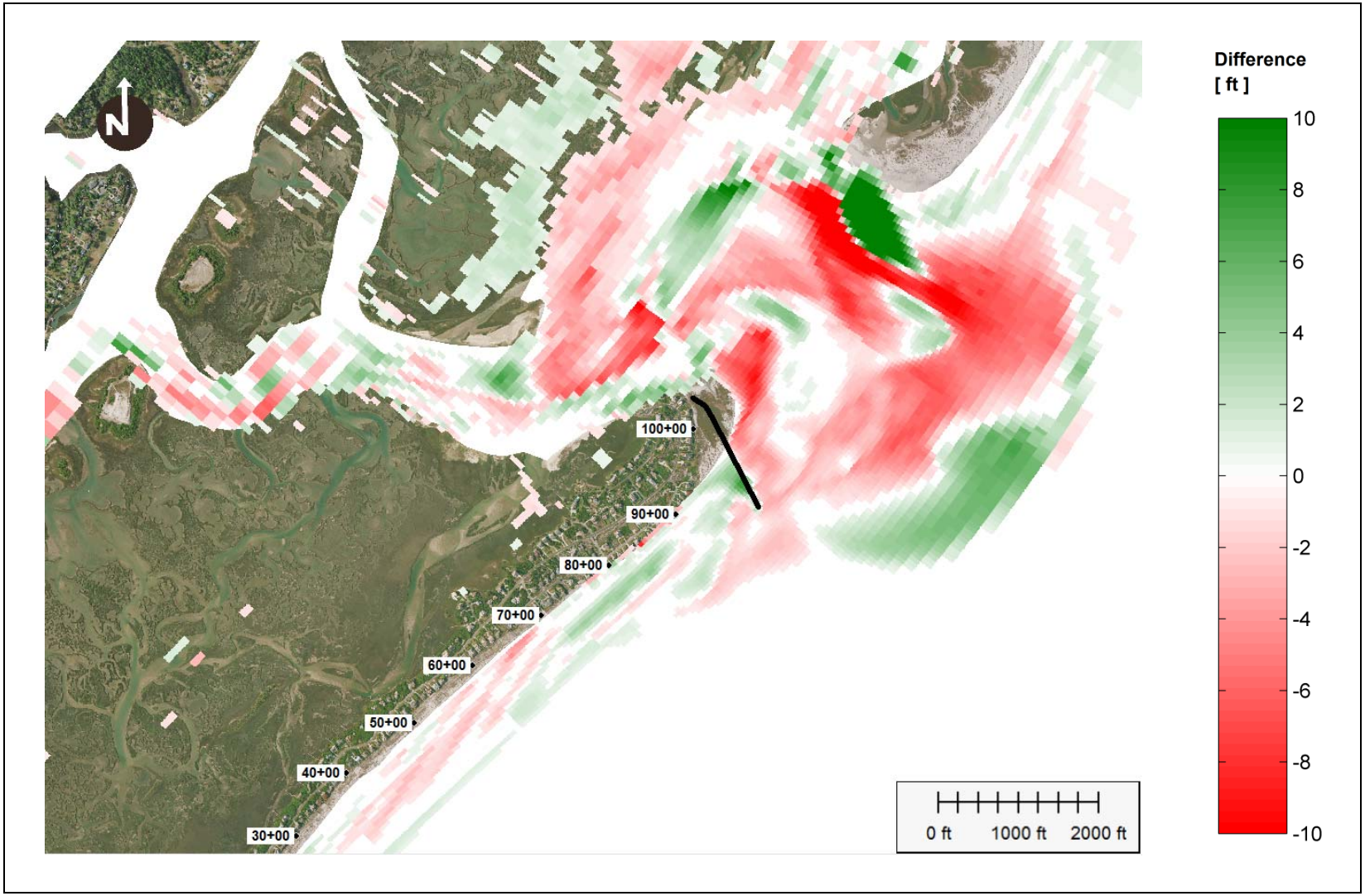


Figure 63: difference between bathymetry of Alternative 5a-3 (700 ft groin) after 2 years simulation and initial bathymetry of Alternative 2.

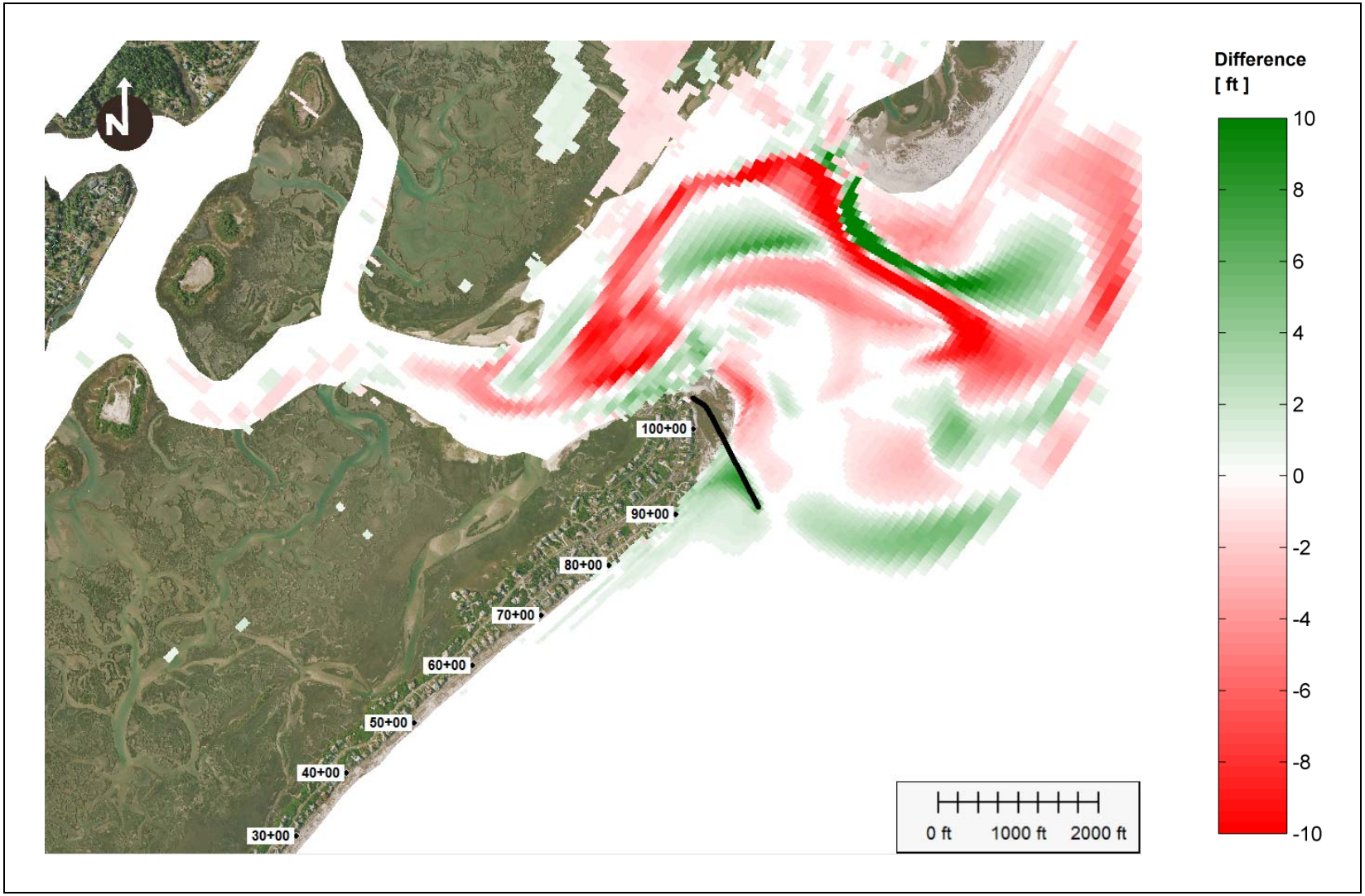


Figure 64: difference between bathymetries of Alternative 5a-3 (700 ft groin) and Alternative 2 after 2 years simulation.

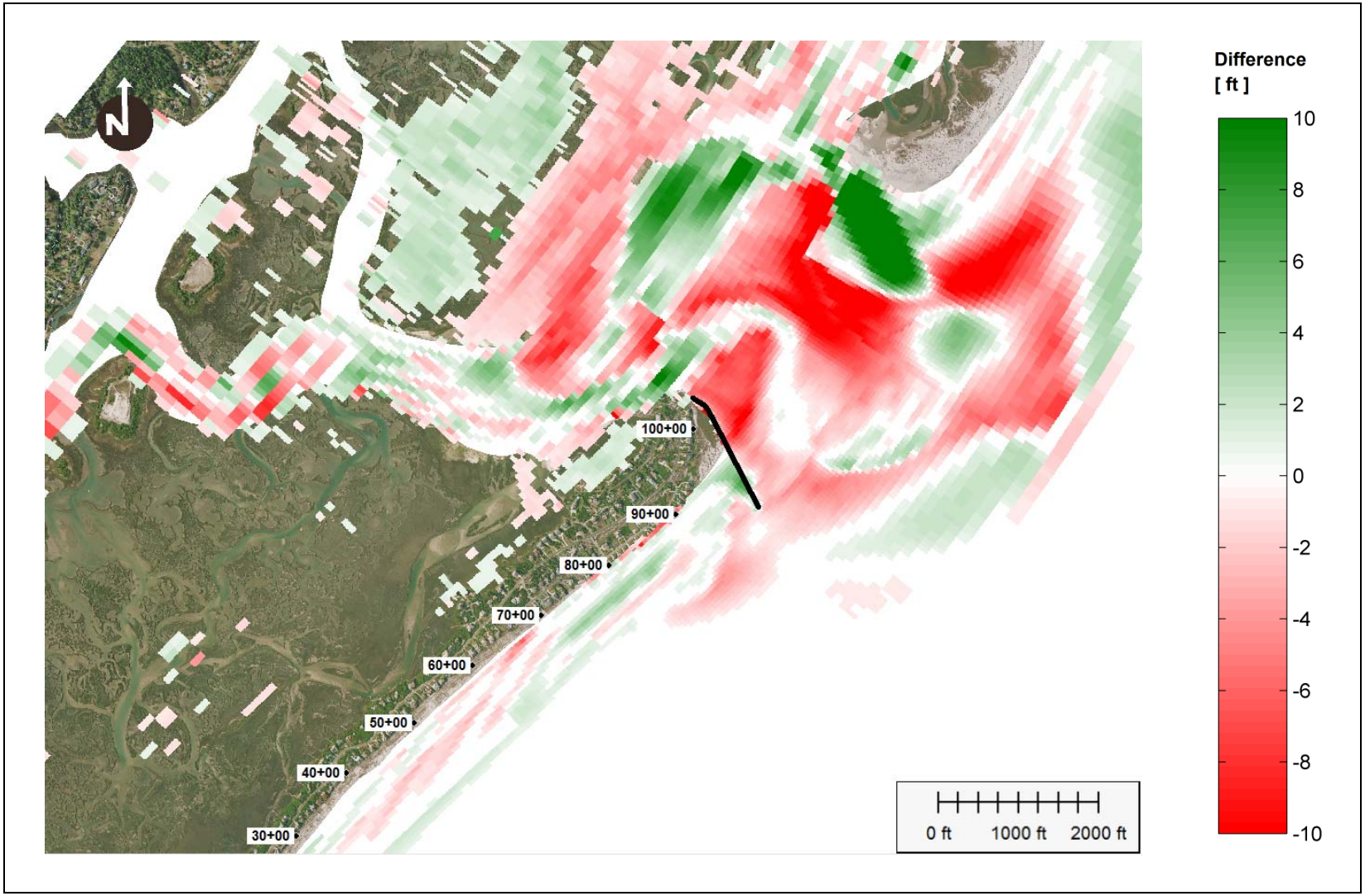


Figure 65: difference between bathymetry of Alternative 5a-3 (700 ft groin) after 5 years simulation and initial bathymetry of Alternative 2.

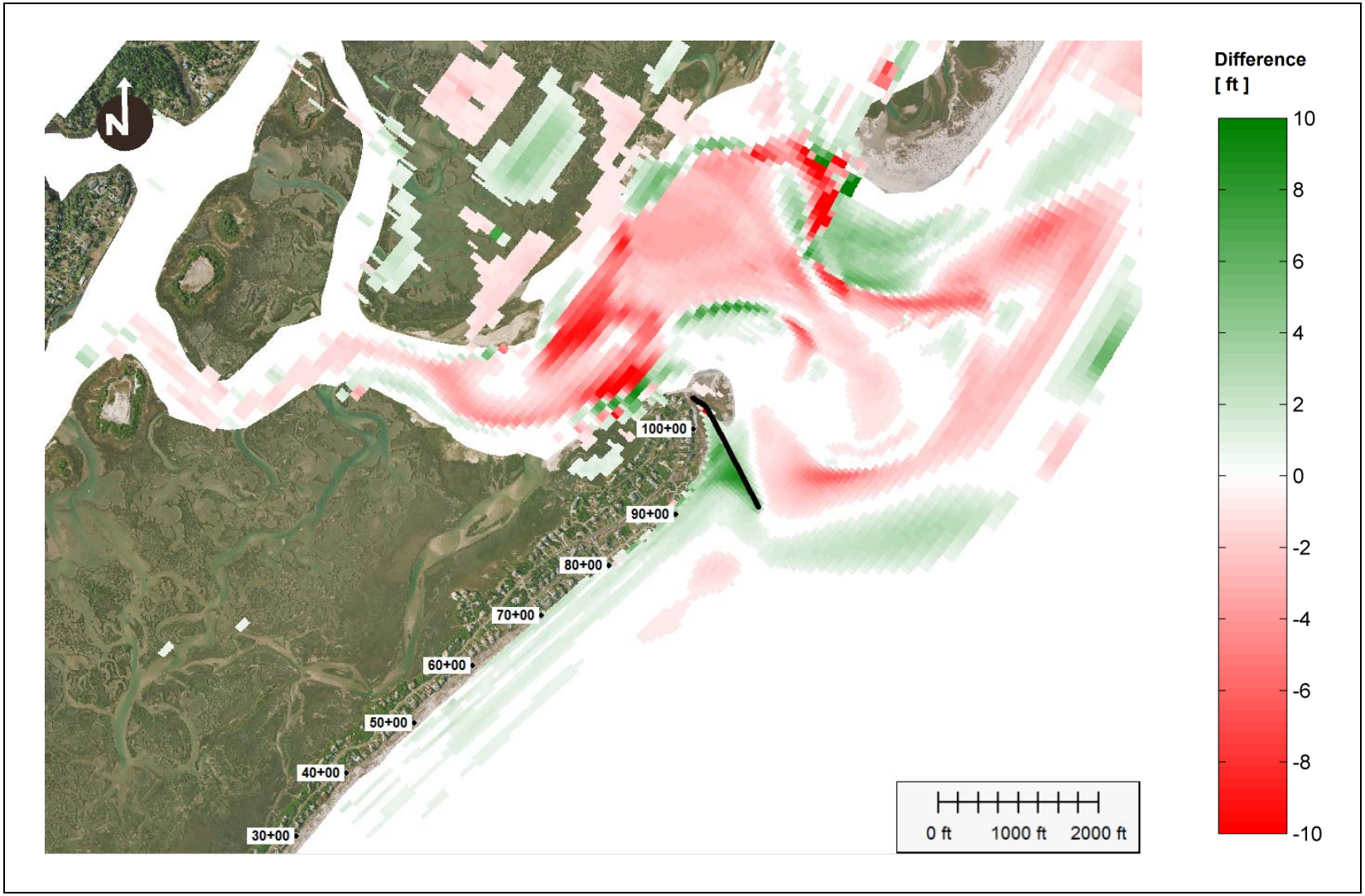


Figure 66: difference between bathymetries of Alternative 5a-3 (700 ft groin) and Alternative 2 after 5 years simulation.

Alternative 5a-3 - Terminal Groin (1,200 ft) without Oceanfront Beach Fill

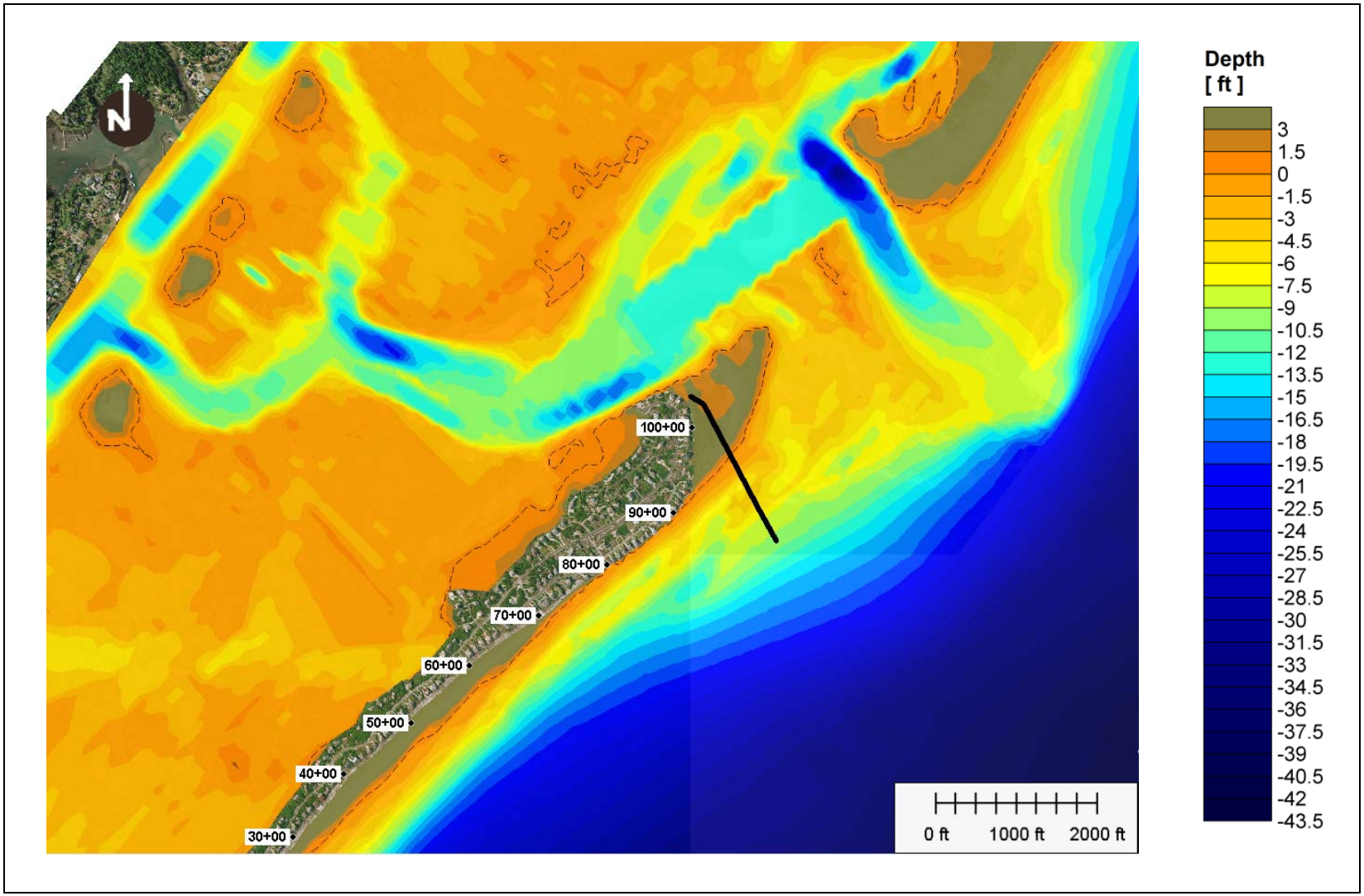


Figure 67: Alternative 5a-3 (1,200 ft groin), initial bathymetry.

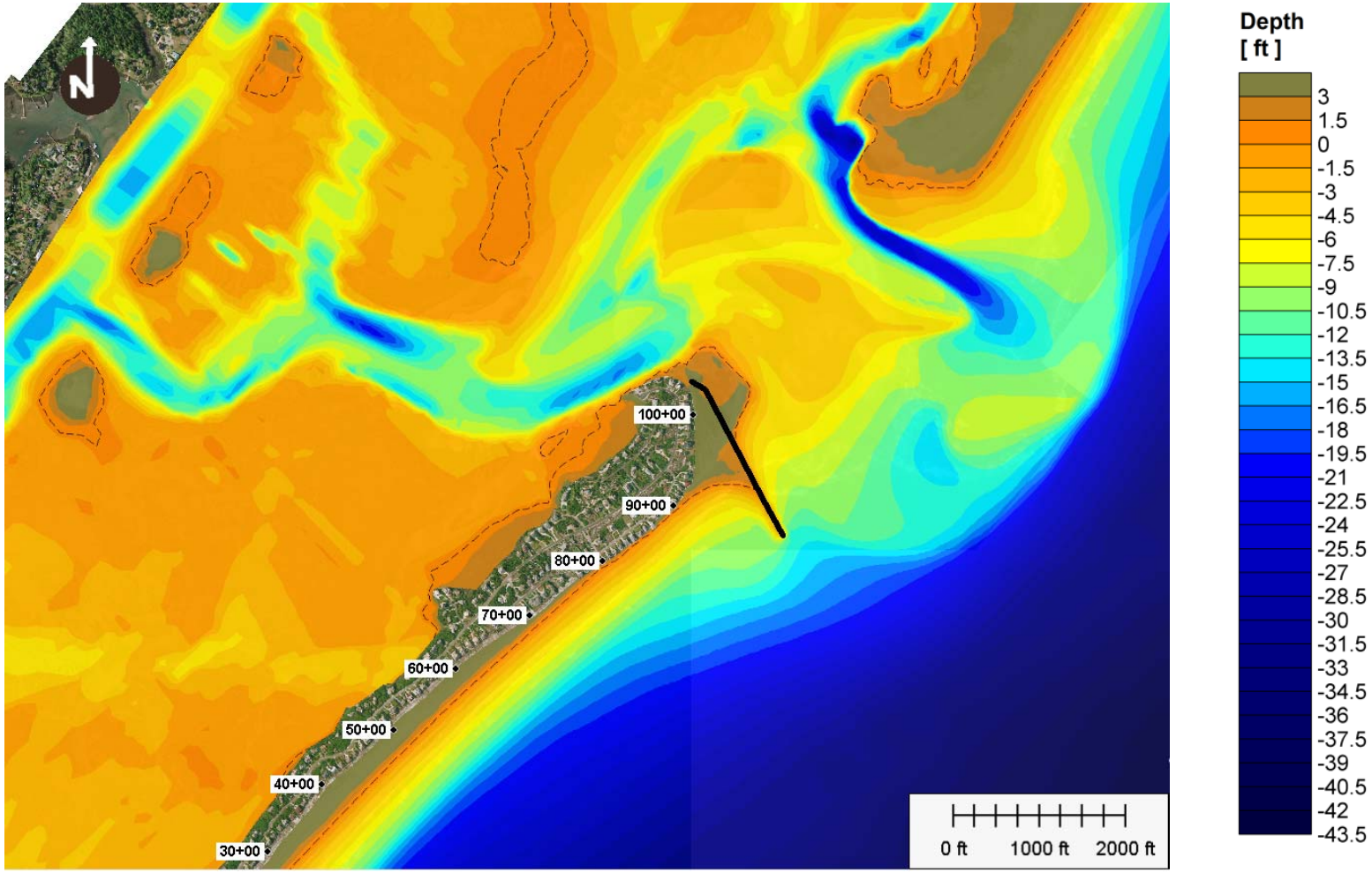


Figure 68: Alternative 5a-3 (1,200 ft groin), bathymetry after 2 years simulation.

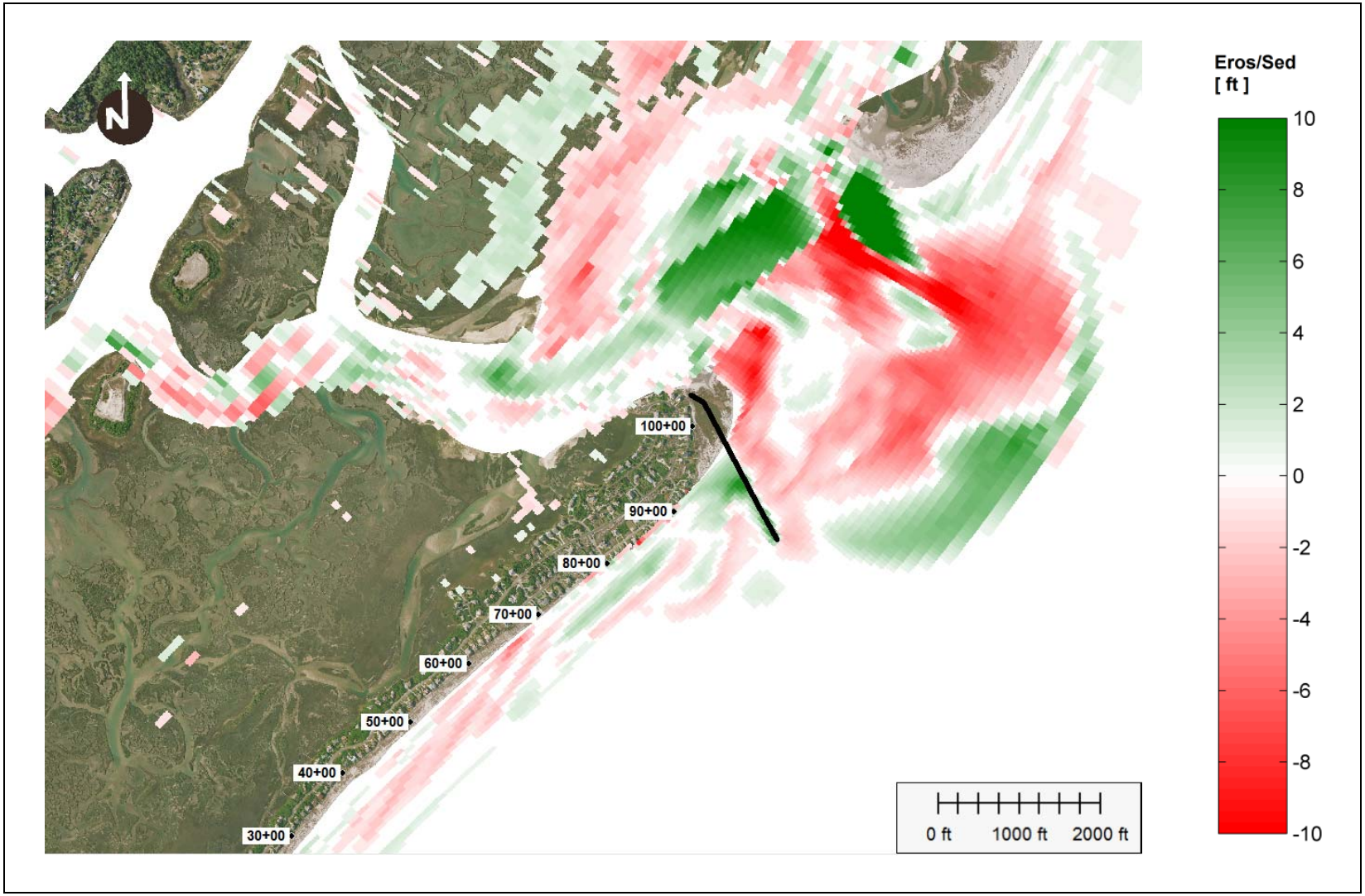


Figure 69: Alternative 5a-3 (1,200 ft groin), erosion/sedimentation after 2 years simulation.

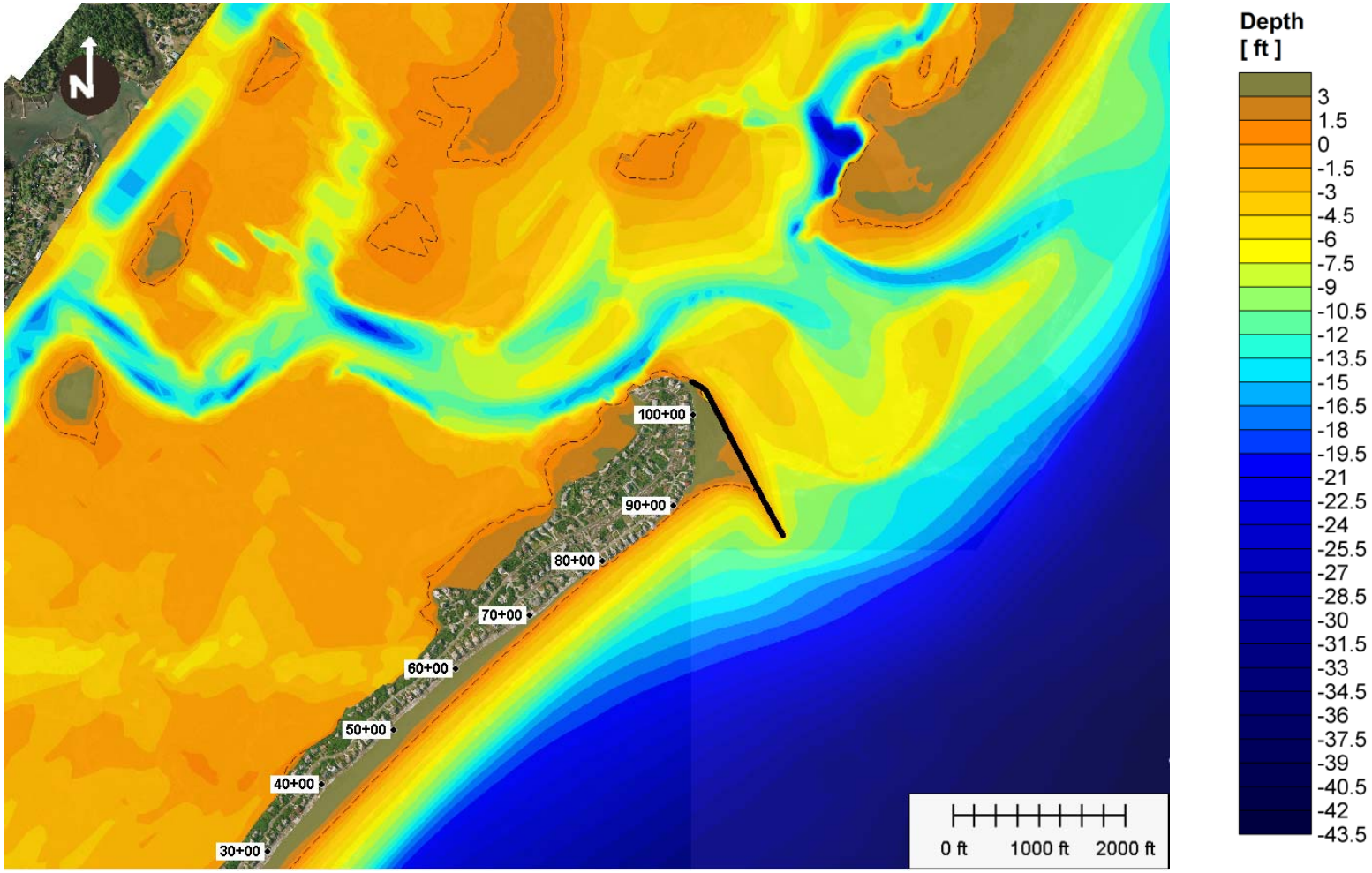


Figure 70: Alternative 5a-3 (1,200 ft groin), bathymetry after 5 years simulation.

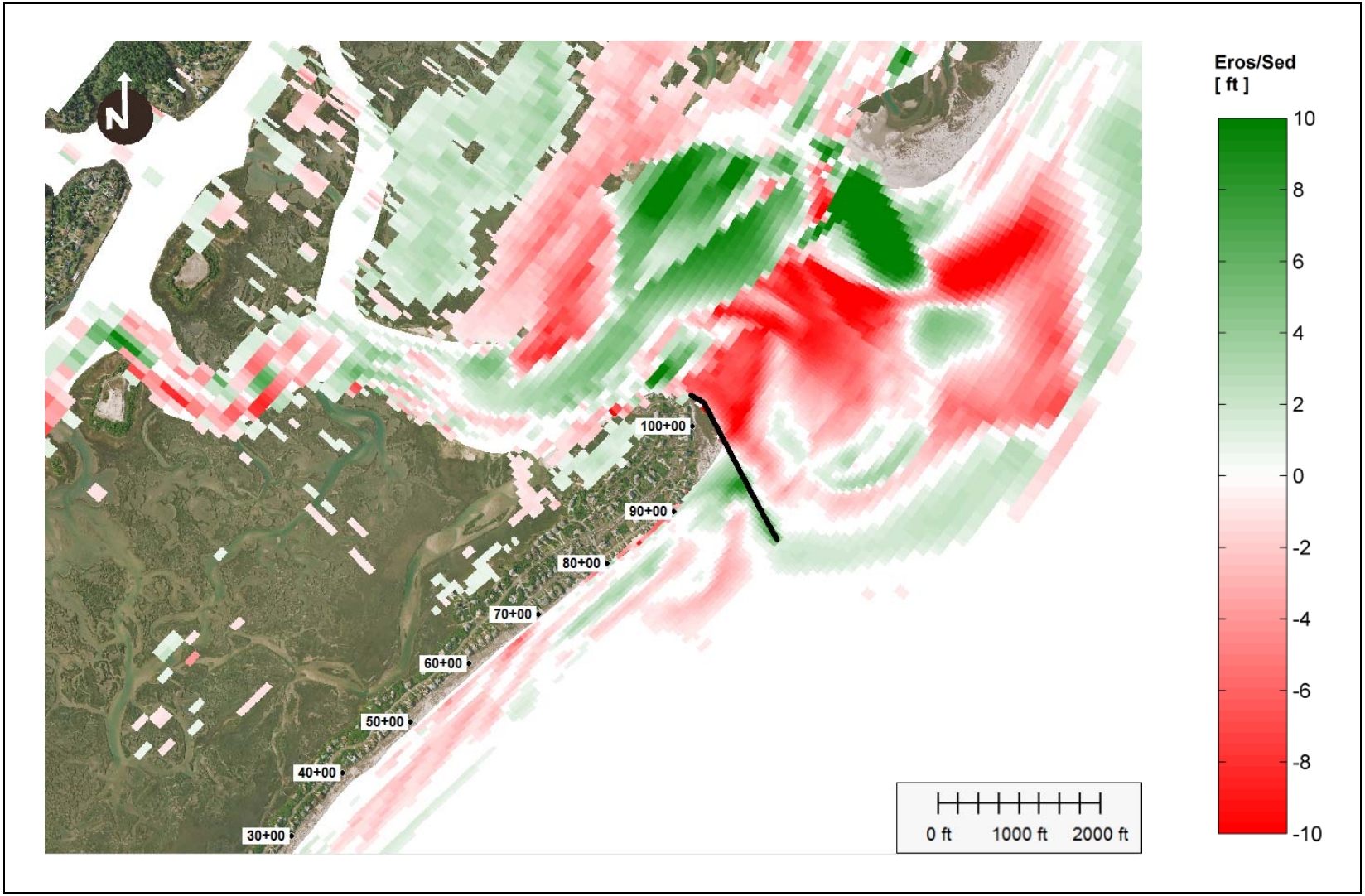


Figure 71: Alternative 5a-3 (1,200 ft groin), erosion/sedimentation after 5 year simulation.

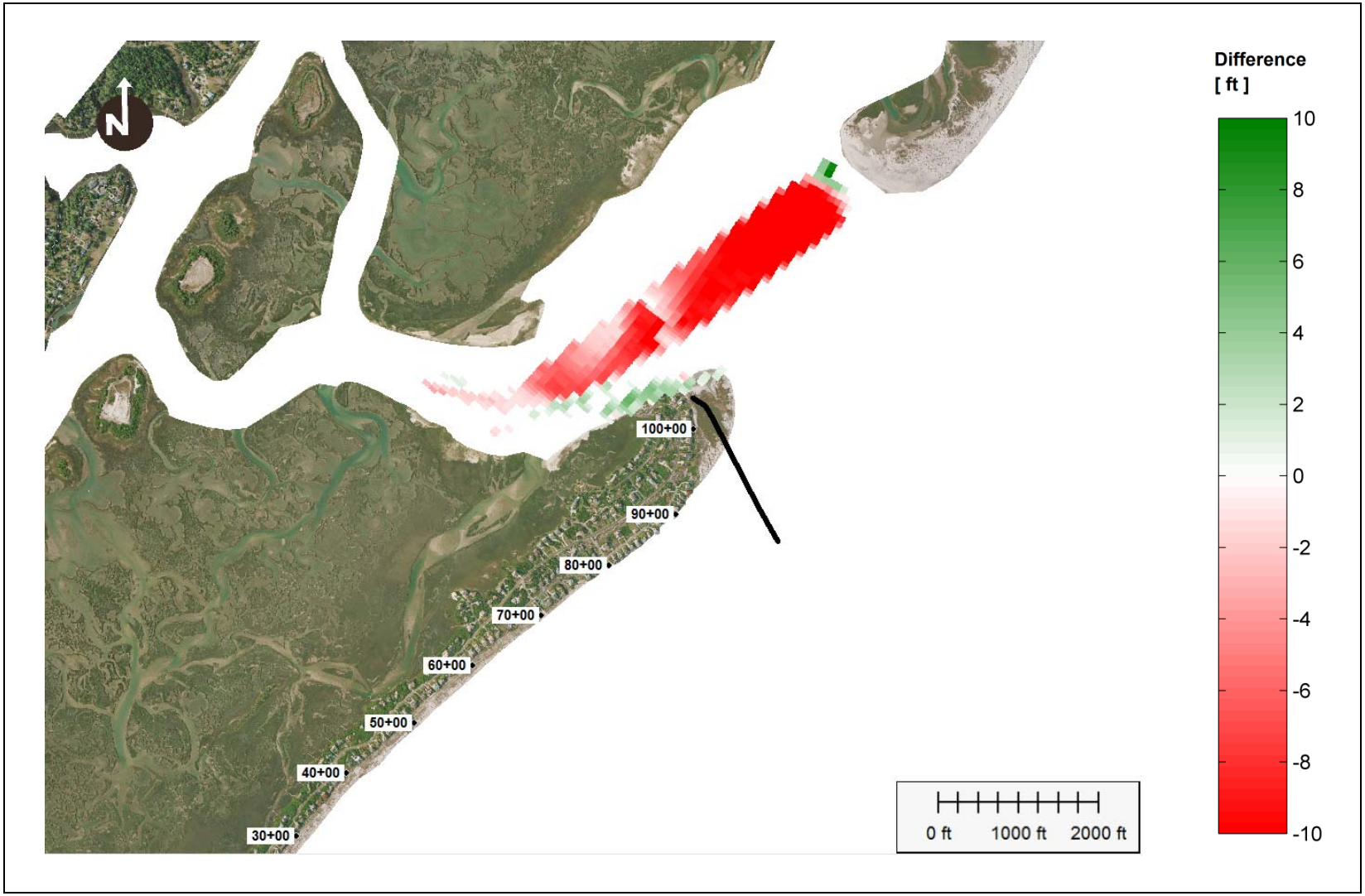


Figure 72: difference between initial bathymetries of Alternative 5a-3 (1,200 ft groin) and Alternative 2.

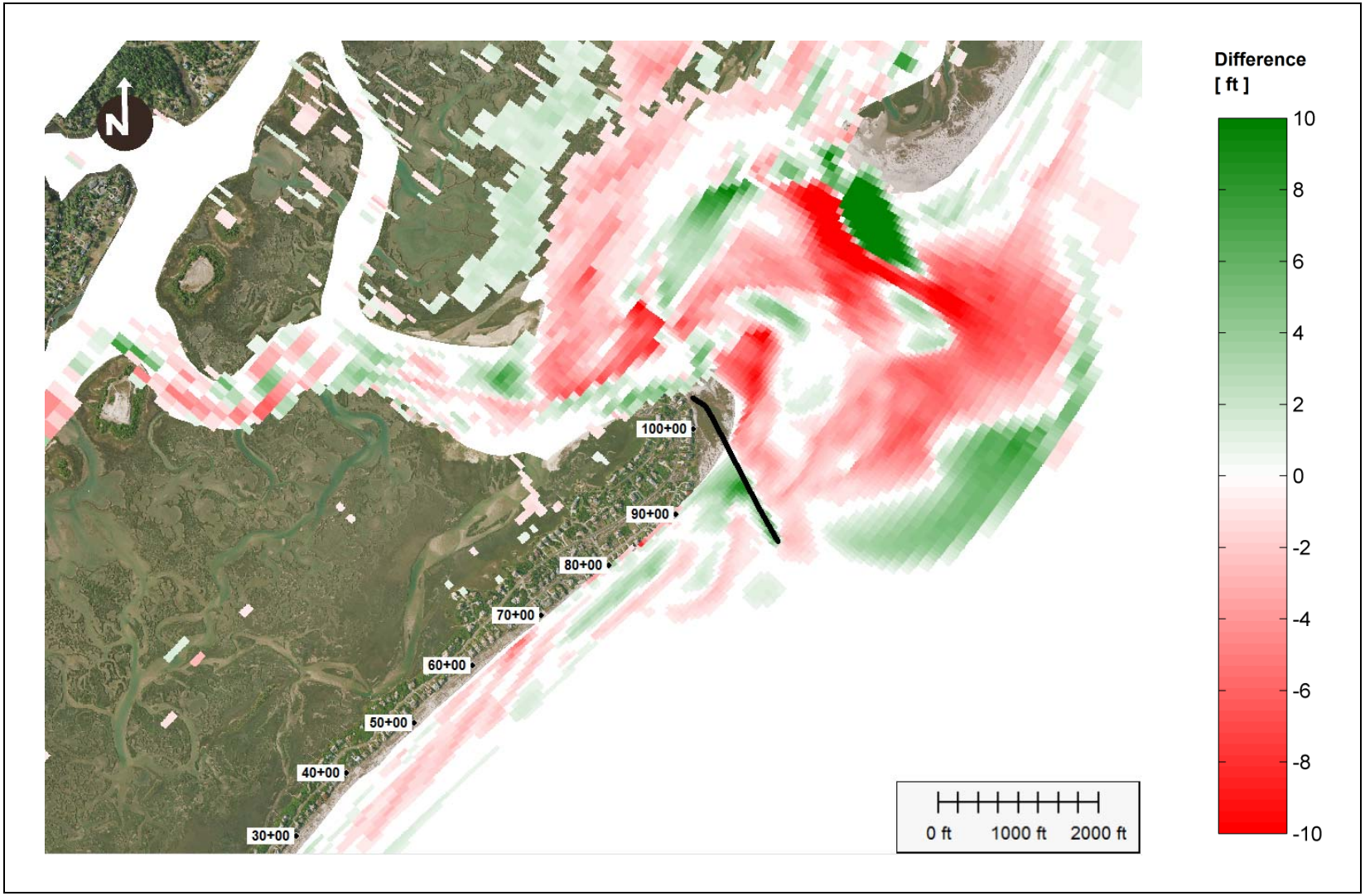


Figure 73: difference between bathymetry of Alternative 5a-3 (1,200 ft groin) after 2 years simulation and initial bathymetry of Alternative 2.

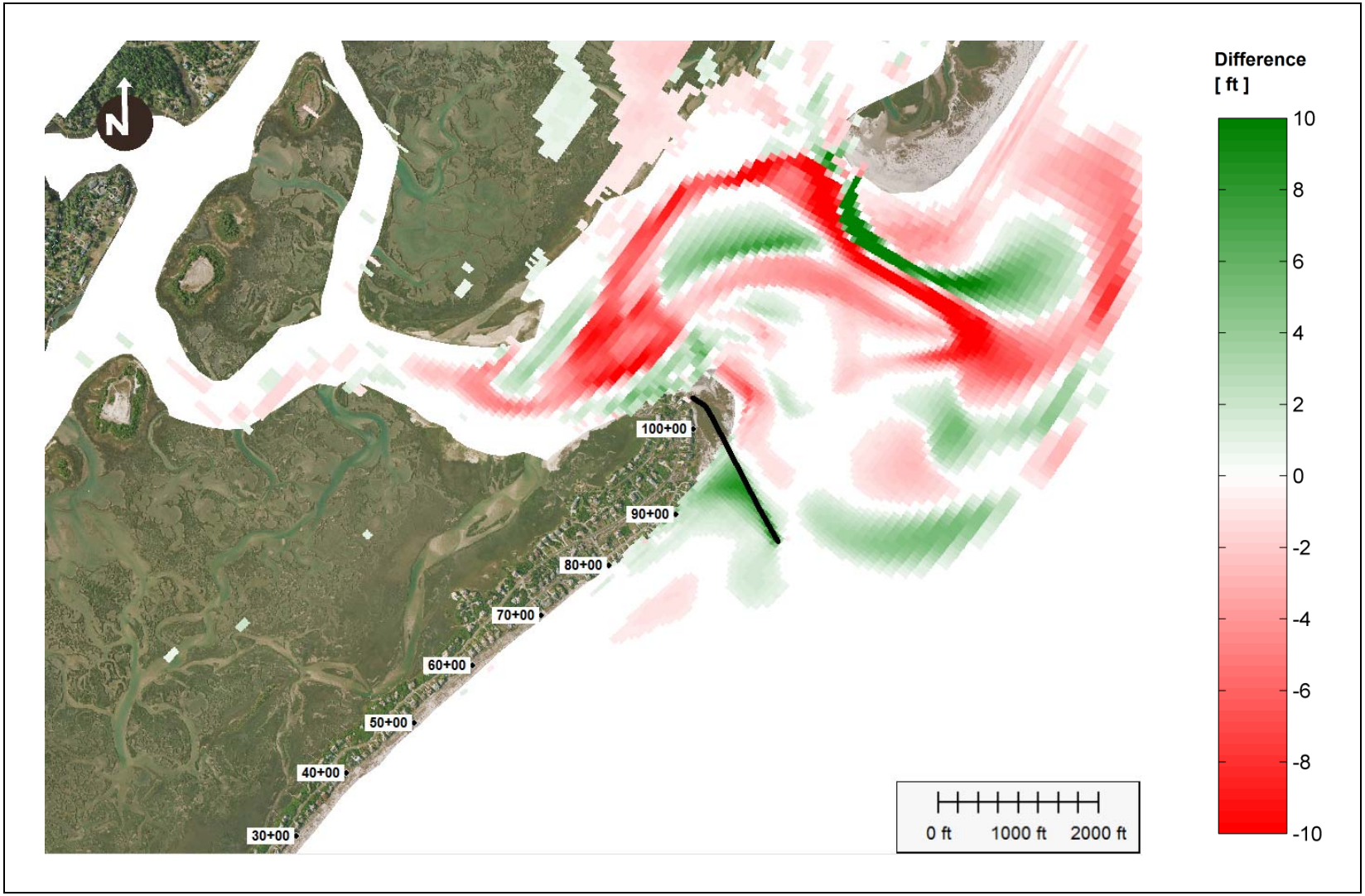


Figure 74: difference between bathymetries of Alternative 5a-3 (1,200 ft groin) and Alternative 2 after 2 years simulation.

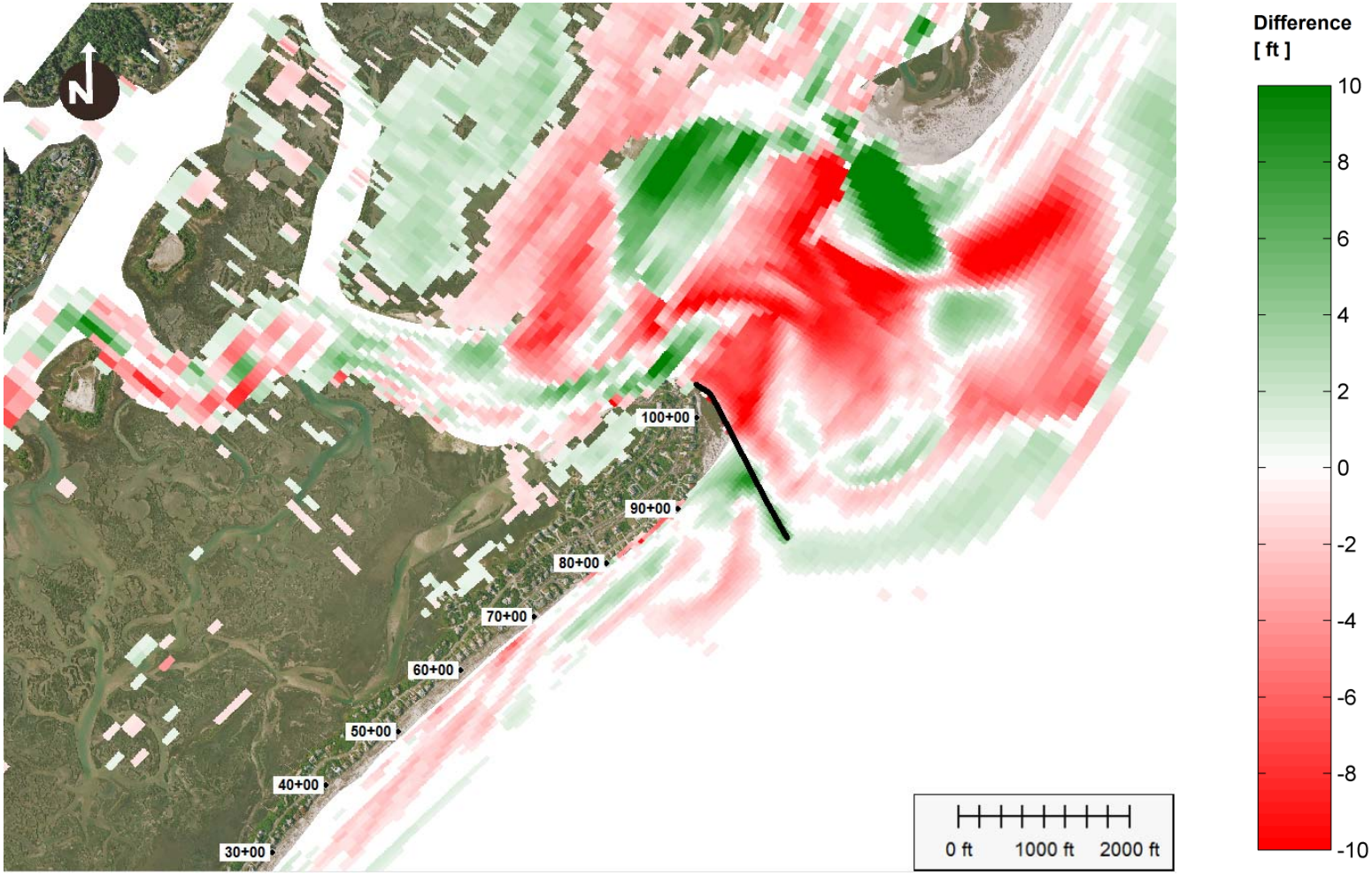


Figure 75: difference between bathymetry of Alternative 5a-3 (1,200 ft groin) after 5 years simulation and initial bathymetry of Alternative 2.

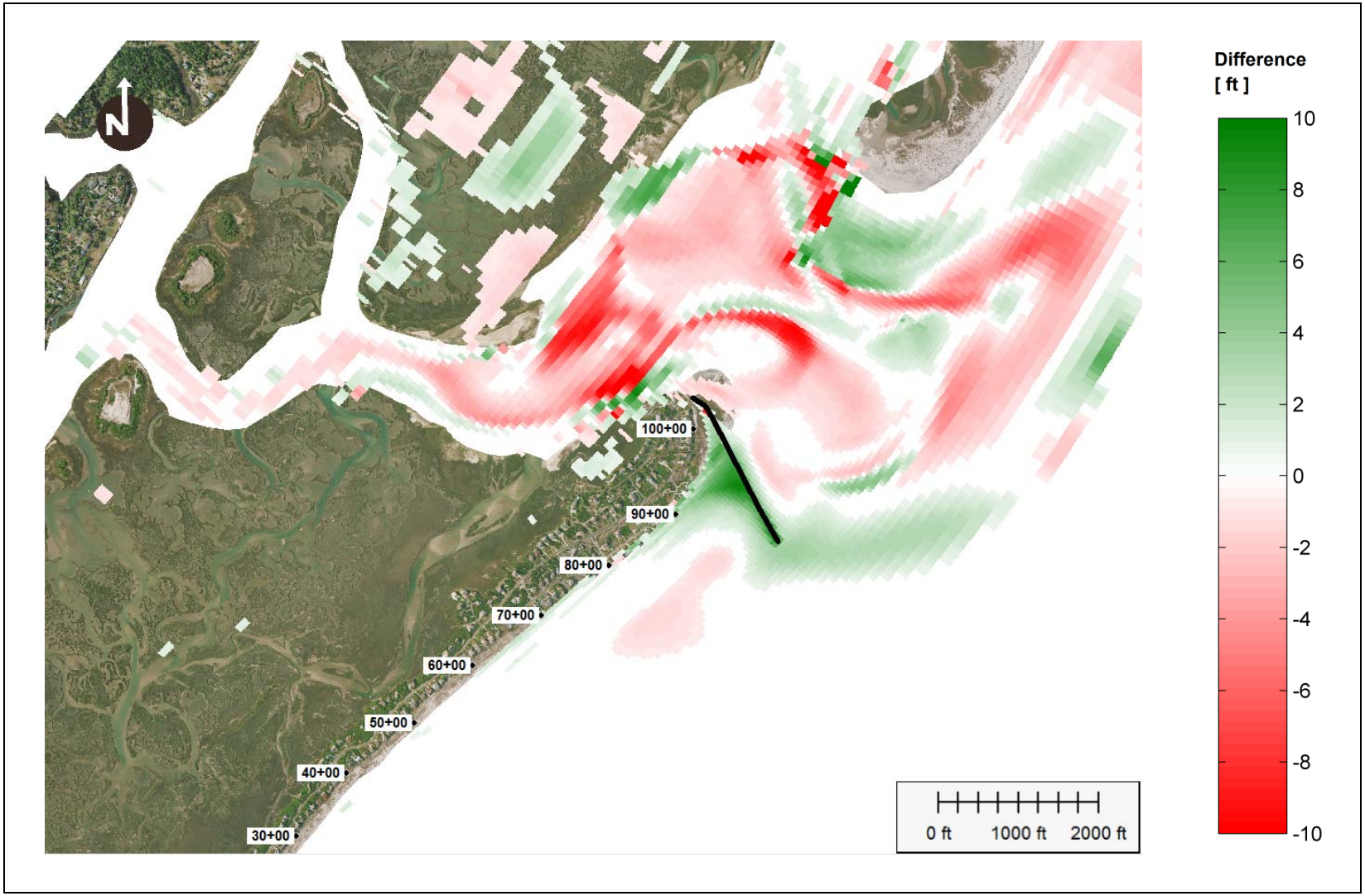


Figure 76: difference between bathymetries of Alternative 5a-3 (1,200 ft groin) and Alternative 2 after 5 years simulation.

Alternative 5a-2-10° - Alt. 5a-2 with 10° oblique terminal groin (1,200 ft)

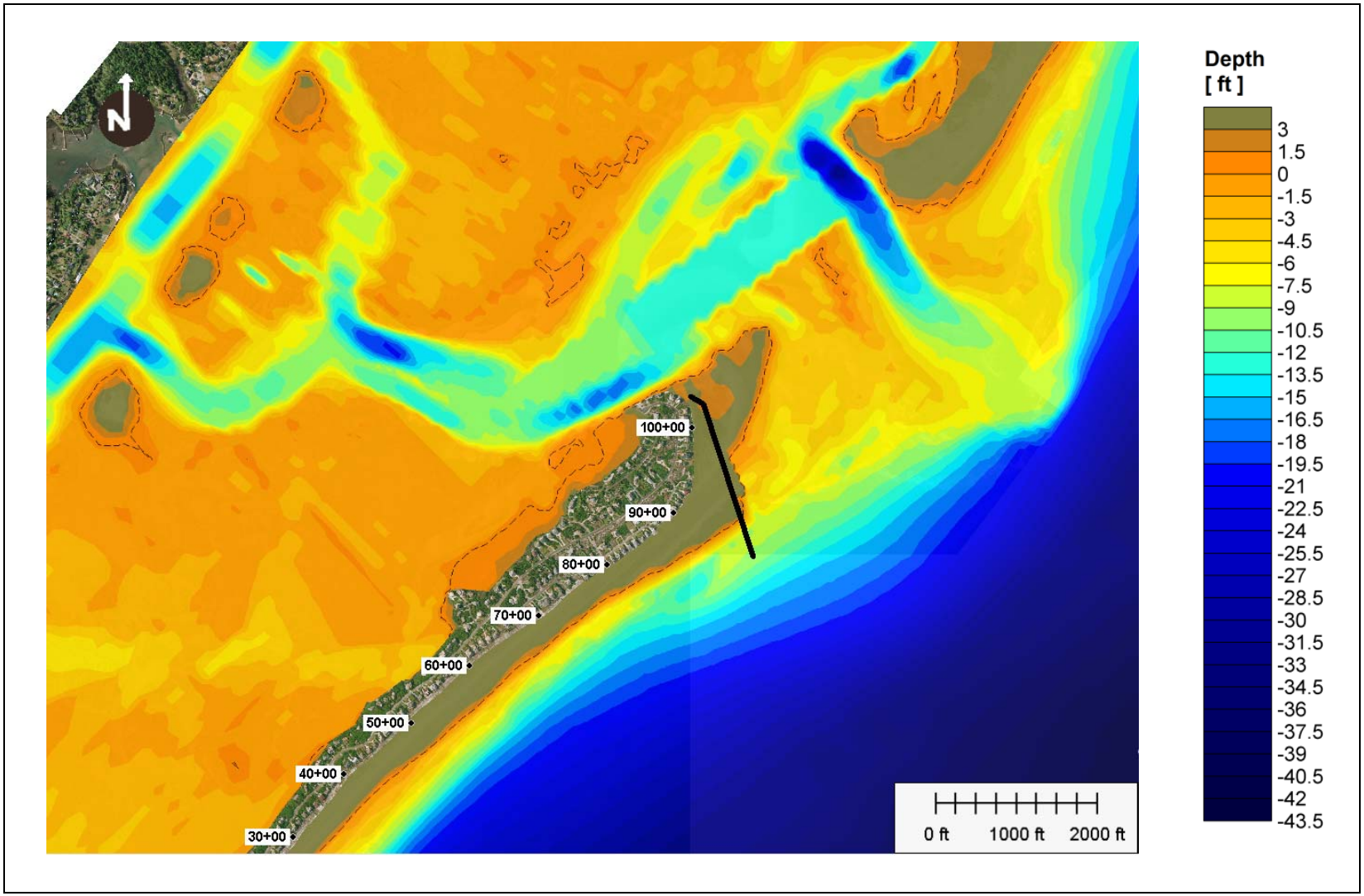


Figure 77: Alternative 5a-2 (10 deg), initial bathymetry.

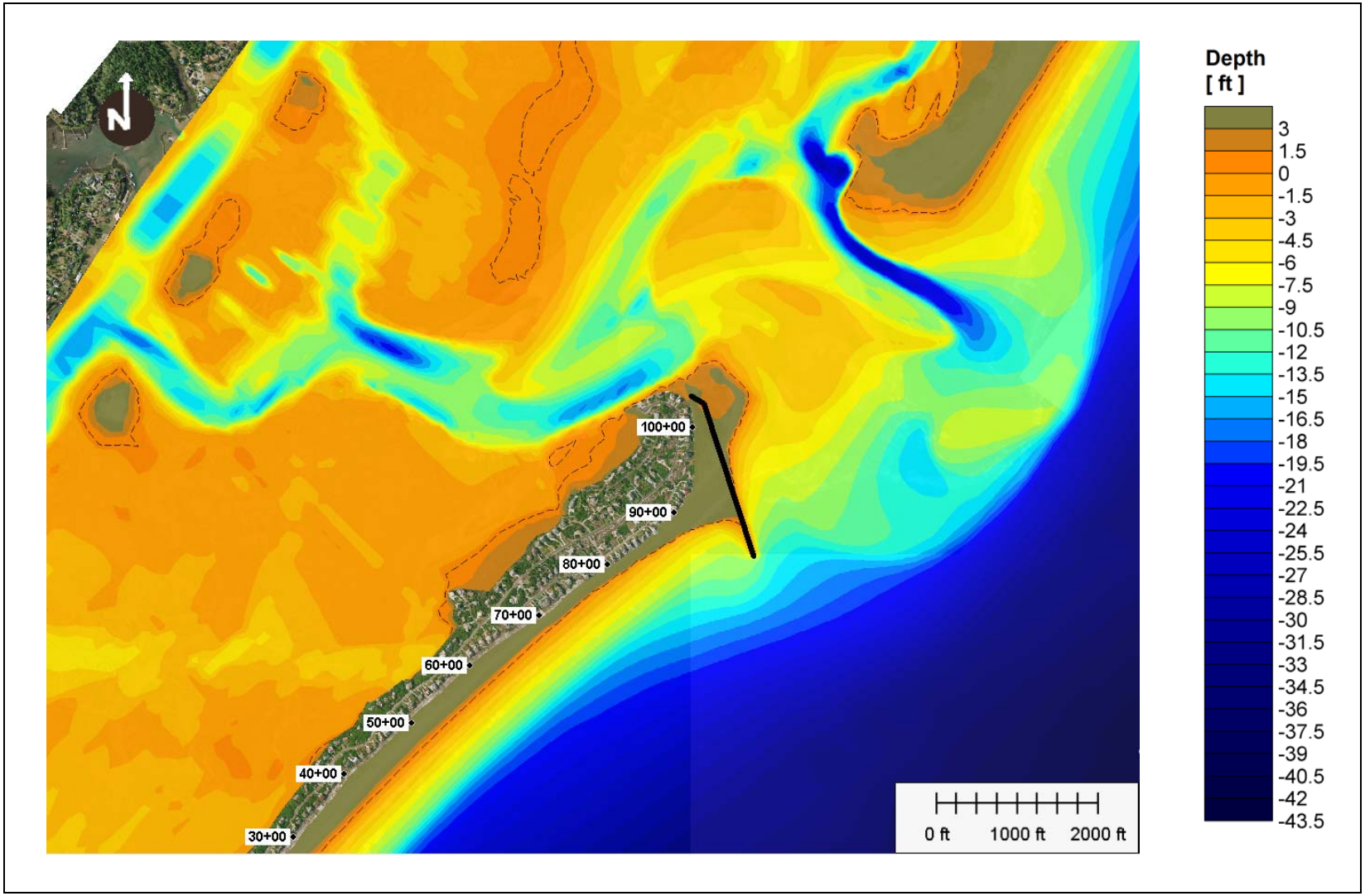


Figure 78: Alternative 5a-2 (10 deg), bathymetry after 2 years simulation.

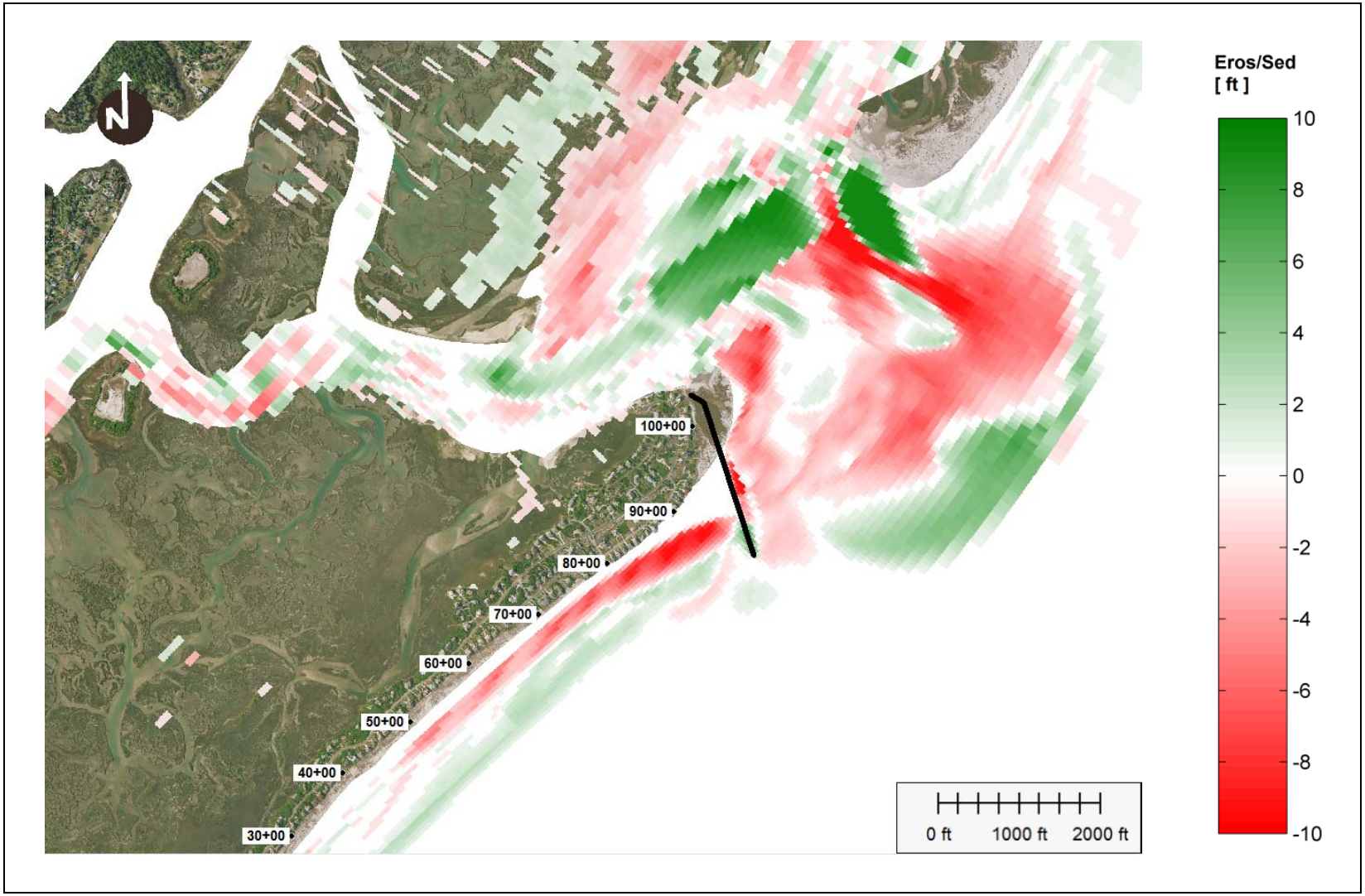


Figure 79: Alternative 5a-2 (10 deg), erosion/sedimentation after 2 years simulation.

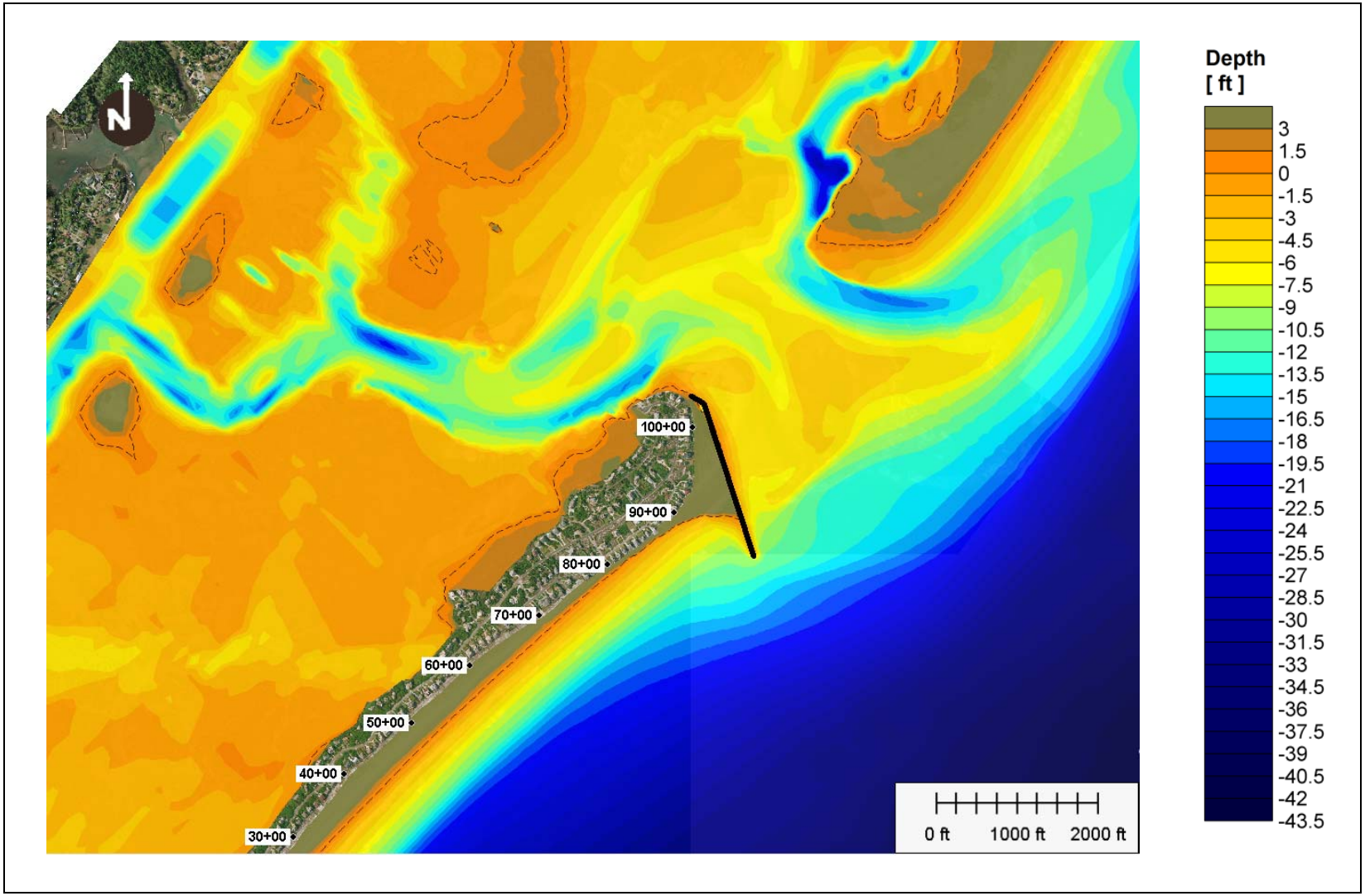


Figure 80: Alternative 5a-2 (10 deg), bathymetry after 5 years simulation.

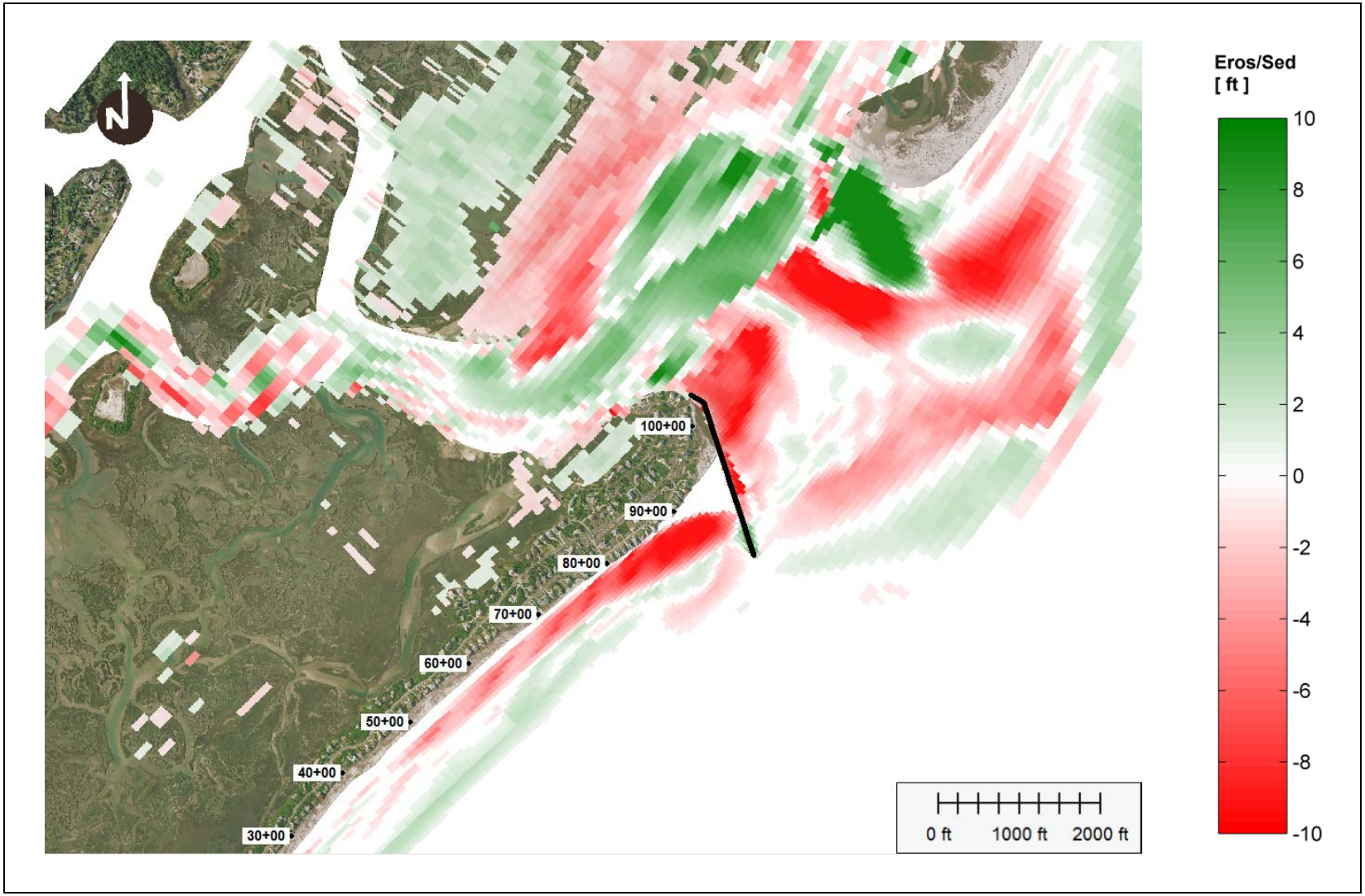


Figure 81: Alternative 5a-2 (10 deg), erosion/sedimentation after 5 year simulation.

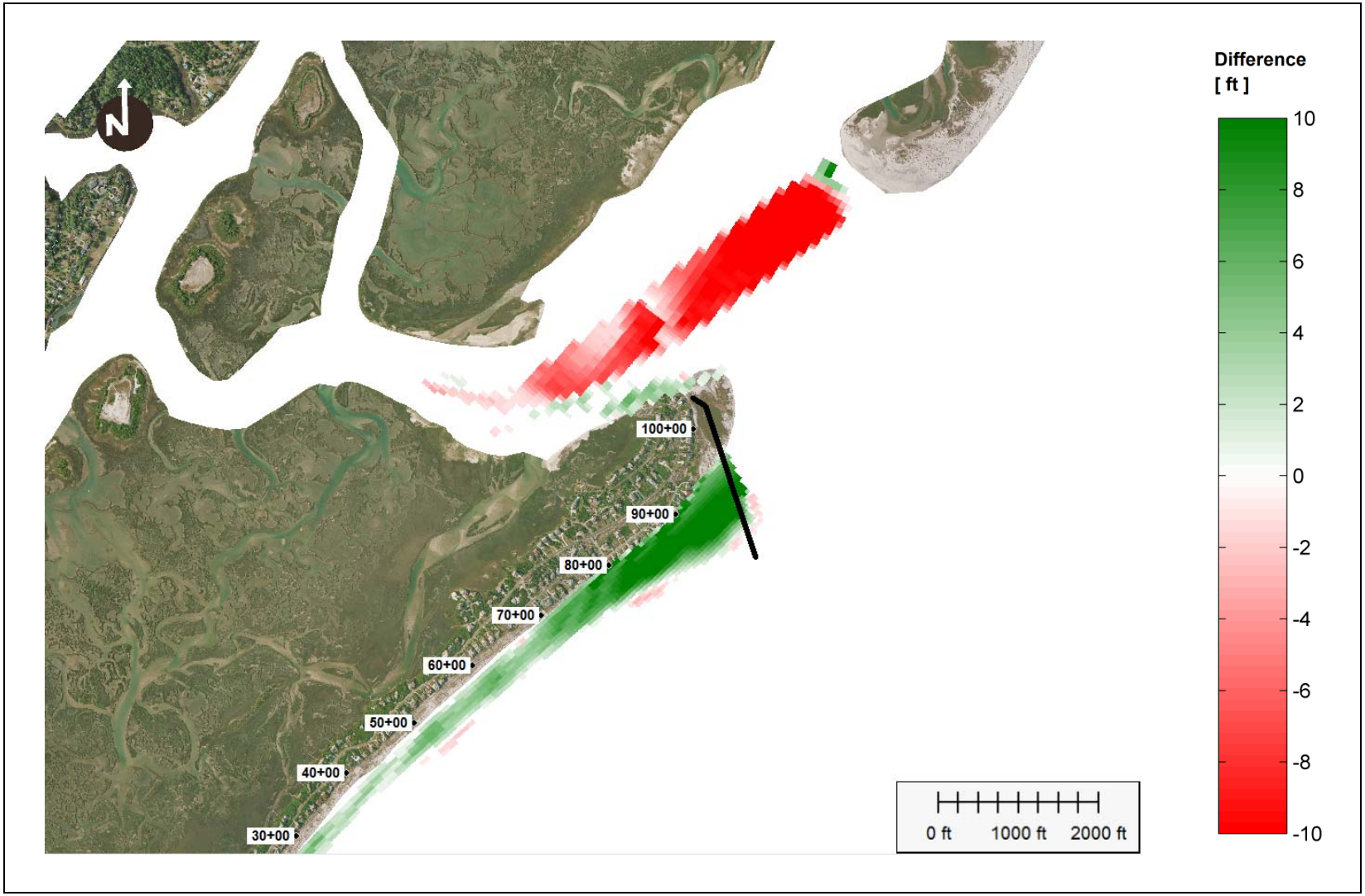


Figure 82: difference between initial bathymetries of Alternative 5a-2 (10 deg) and Alternative 2.

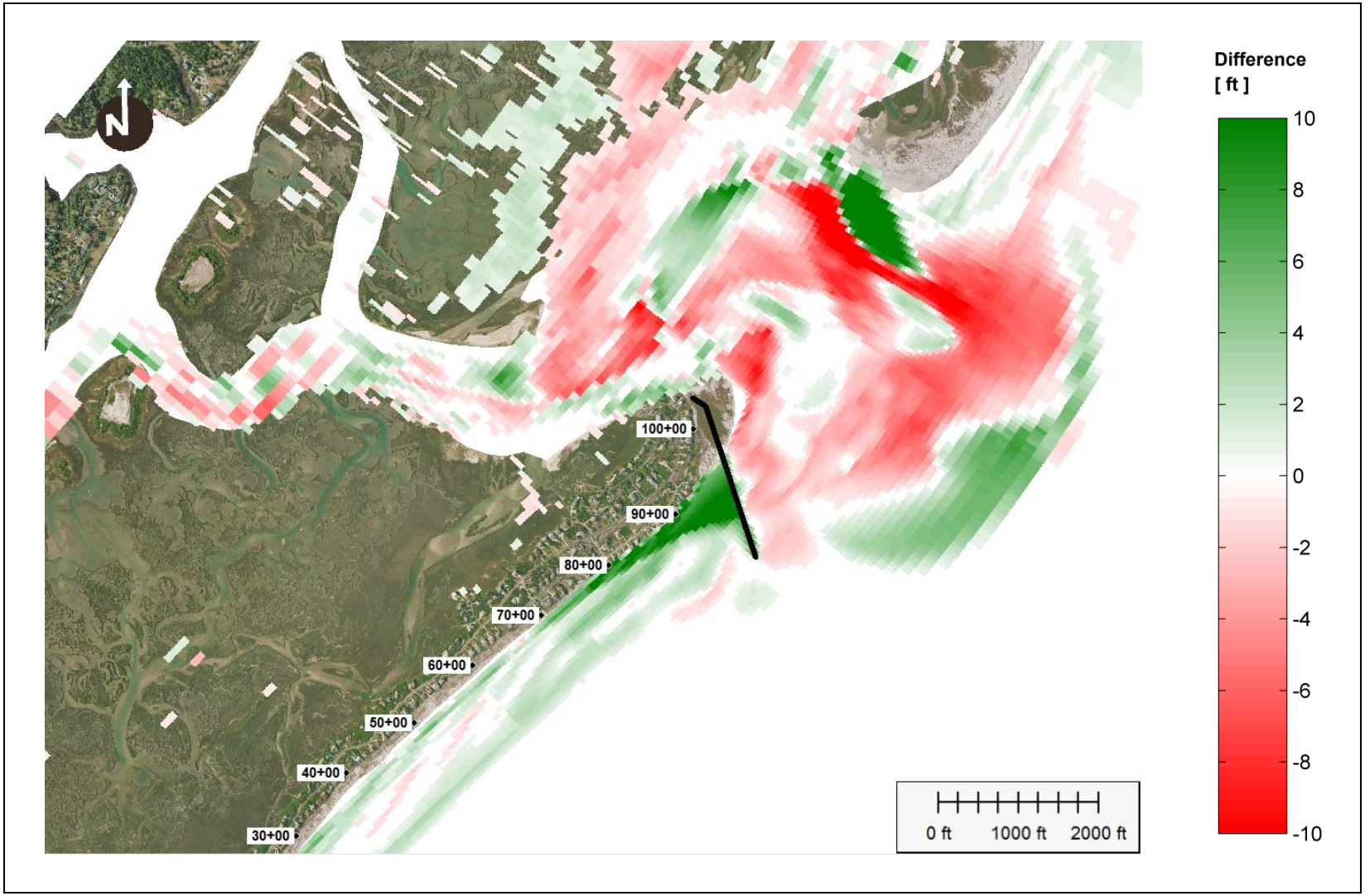


Figure 83: difference between bathymetry of Alternative 5a-2 (10 deg) after 2 years simulation and initial bathymetry of Alternative 2.

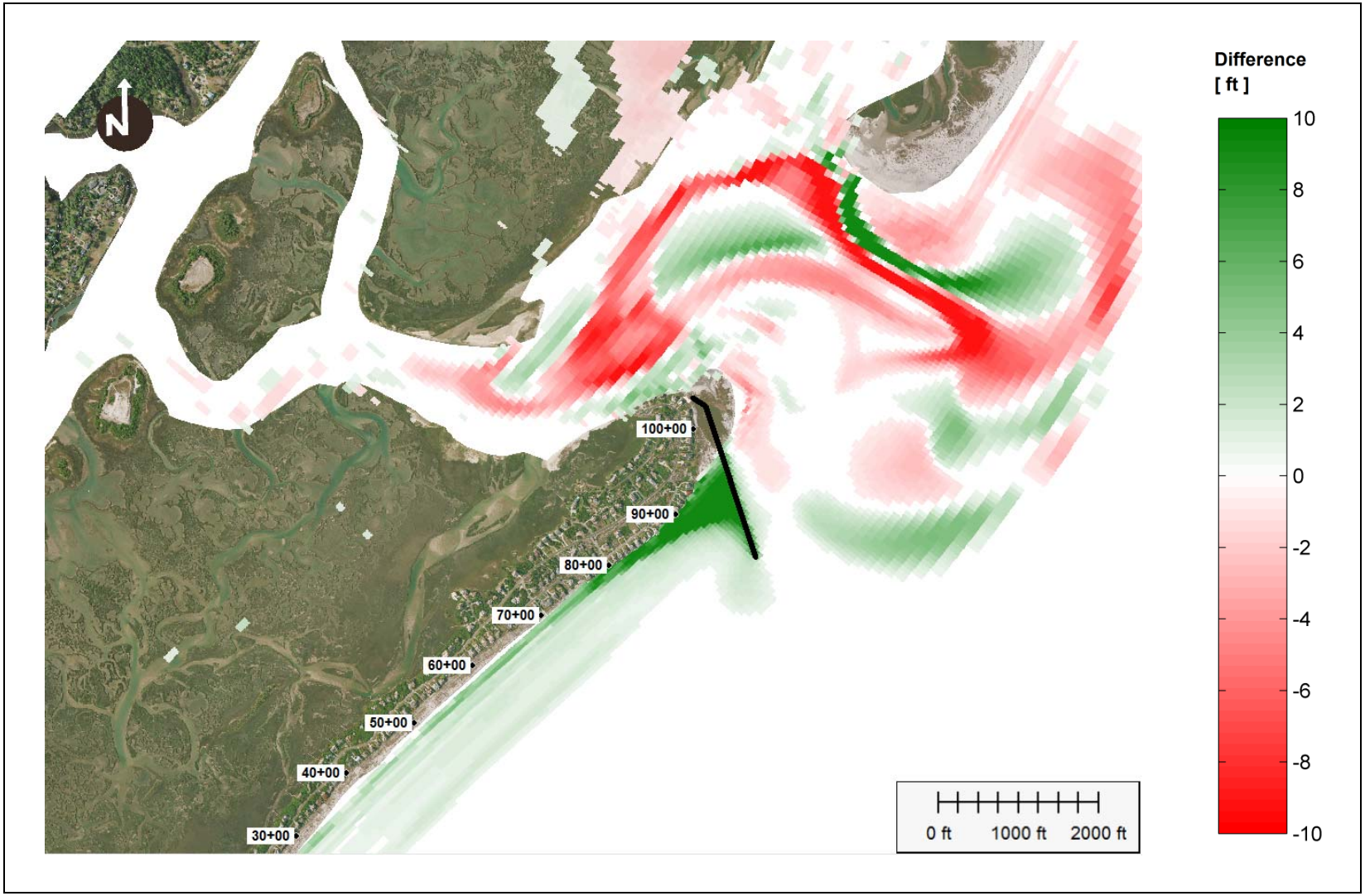


Figure 84: difference between bathymetries of Alternative 5a-2 (10 deg) and Alternative 2 after 2 years simulation.

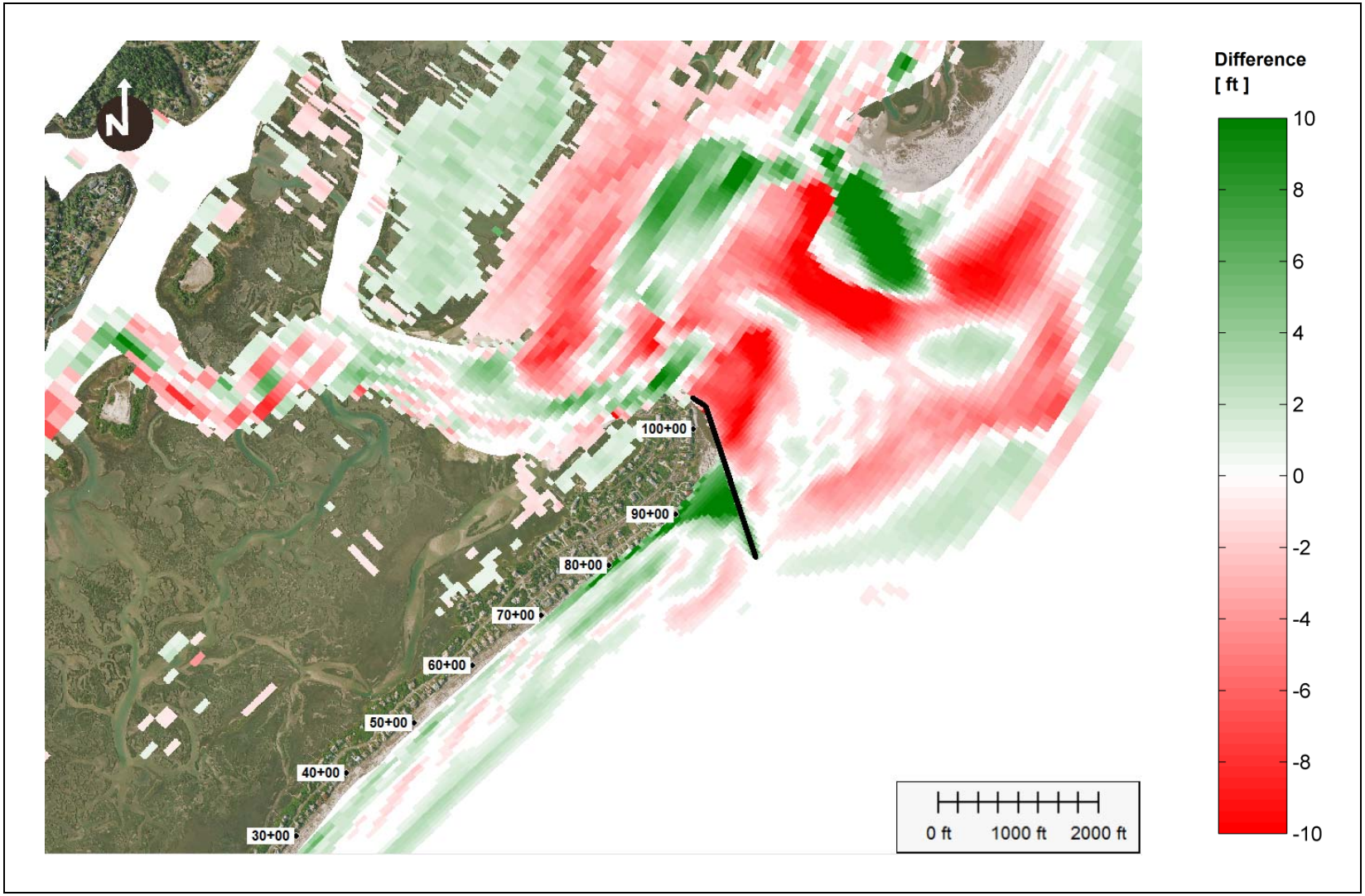


Figure 85: difference between bathymetry of Alternative 5a-2 (10 deg) after 5 years simulation and initial bathymetry of Alternative 2.

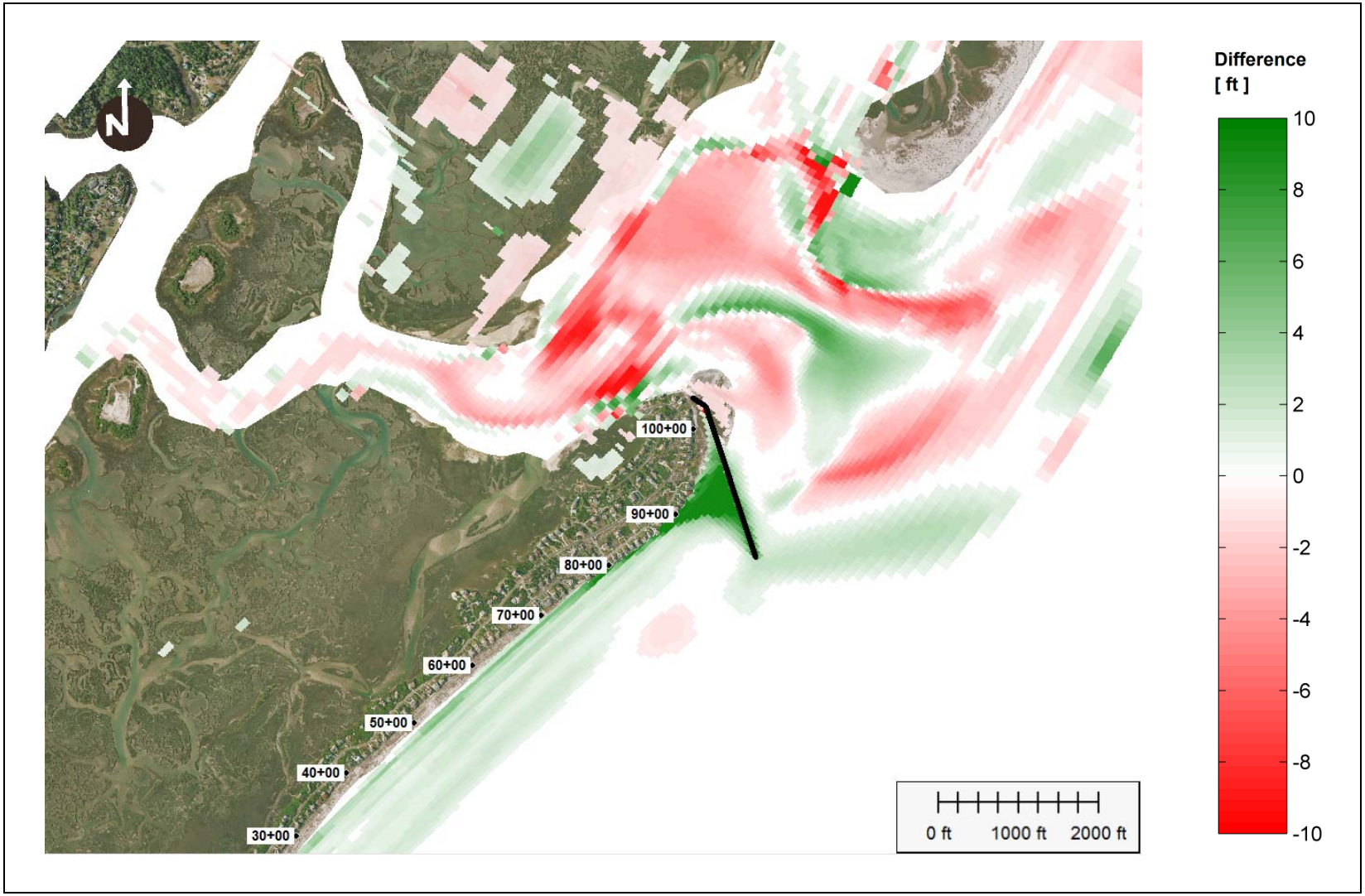


Figure 86: difference between bathymetries of Alternative 5a-2 (10 deg) and Alternative 2 after 5 years simulation.

Alternative 5a-2-20° - Alt. 5a-2 with 20° oblique terminal groin (1,200 ft)

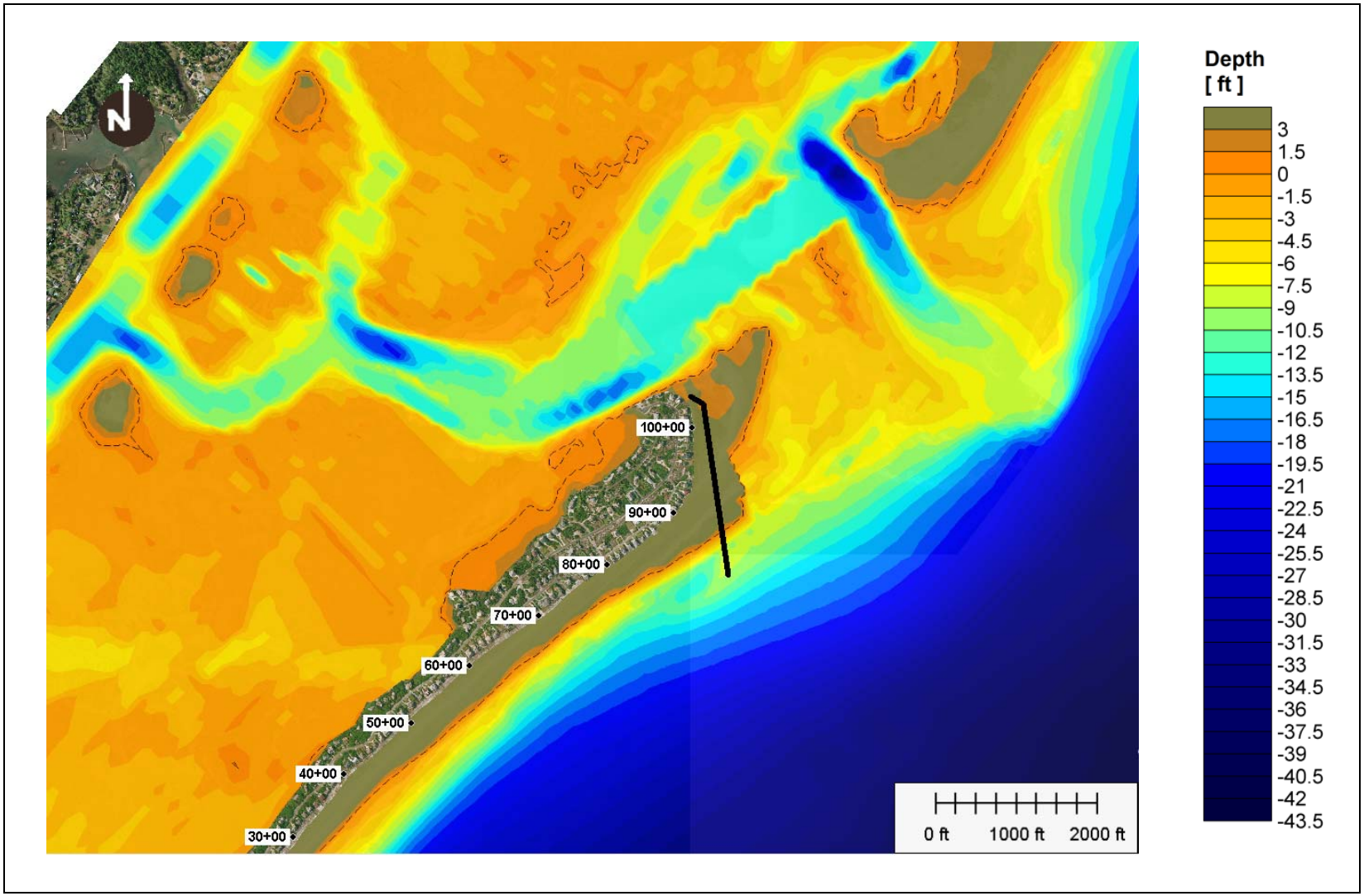


Figure 87: Alternative 5a-2 (20 deg), initial bathymetry.

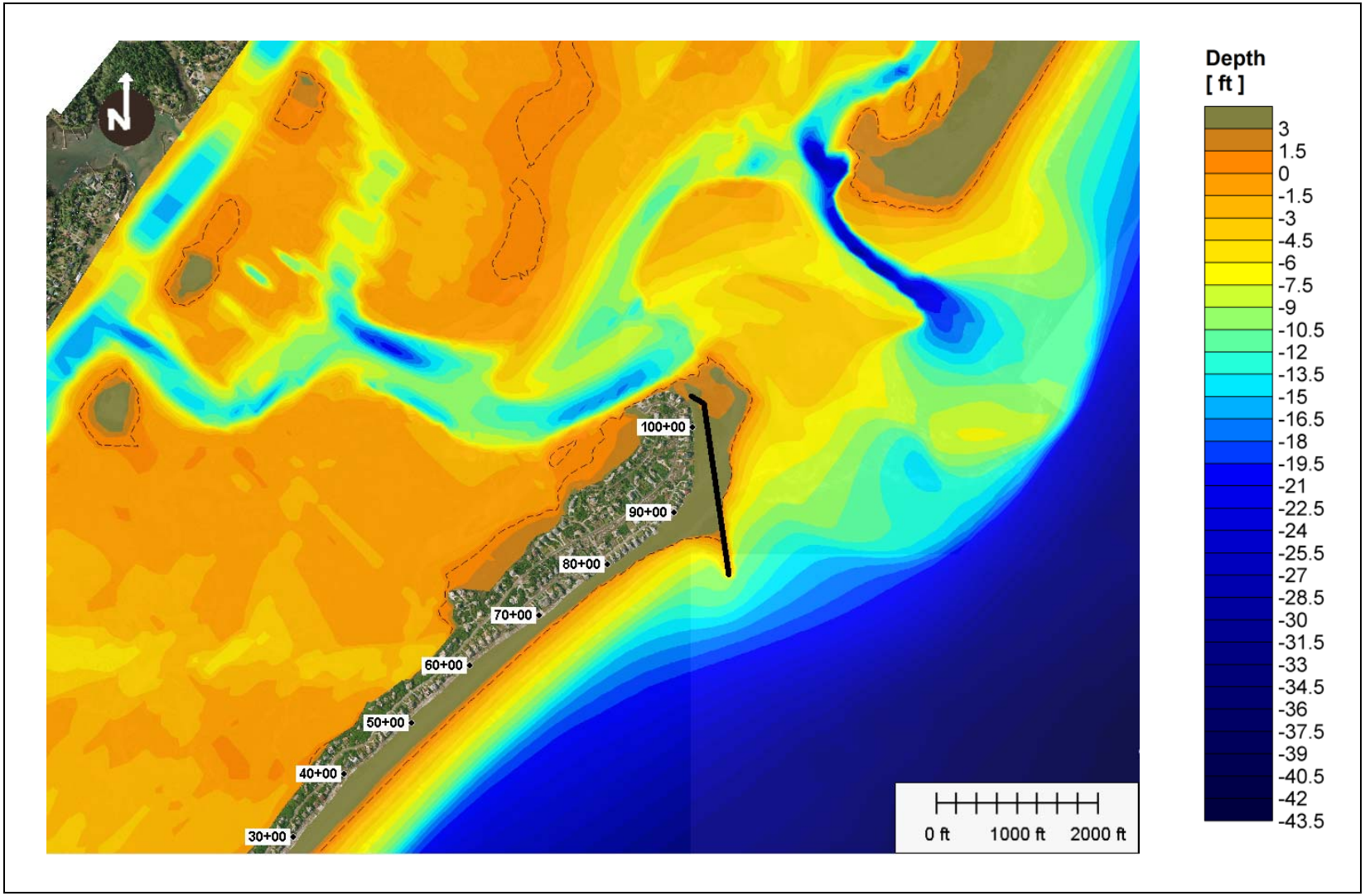


Figure 88: Alternative 5a-2 (20 deg), bathymetry after 2 years simulation.

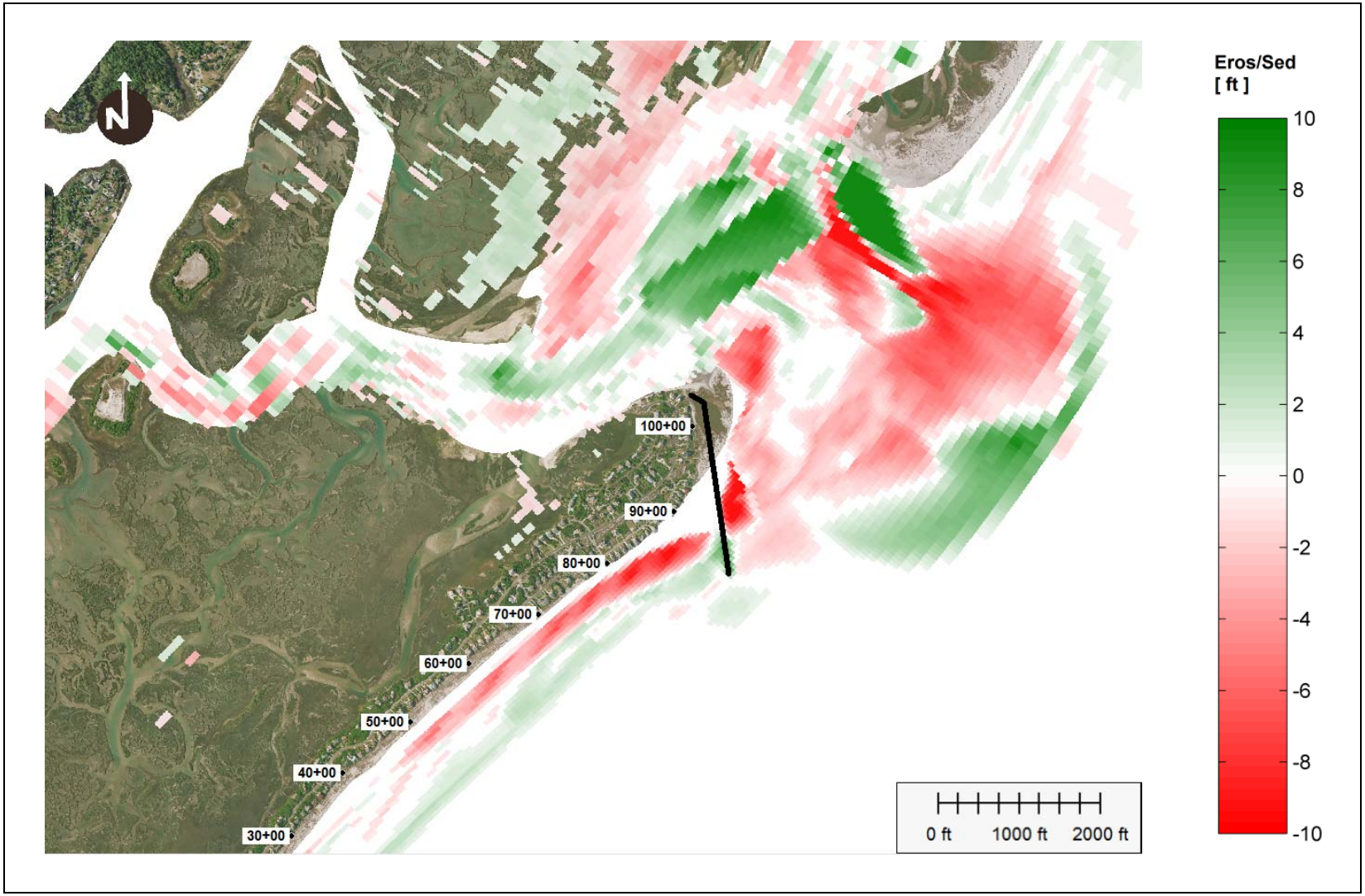


Figure 89: Alternative 5a-2 (20 deg), erosion/sedimentation after 2 years simulation.

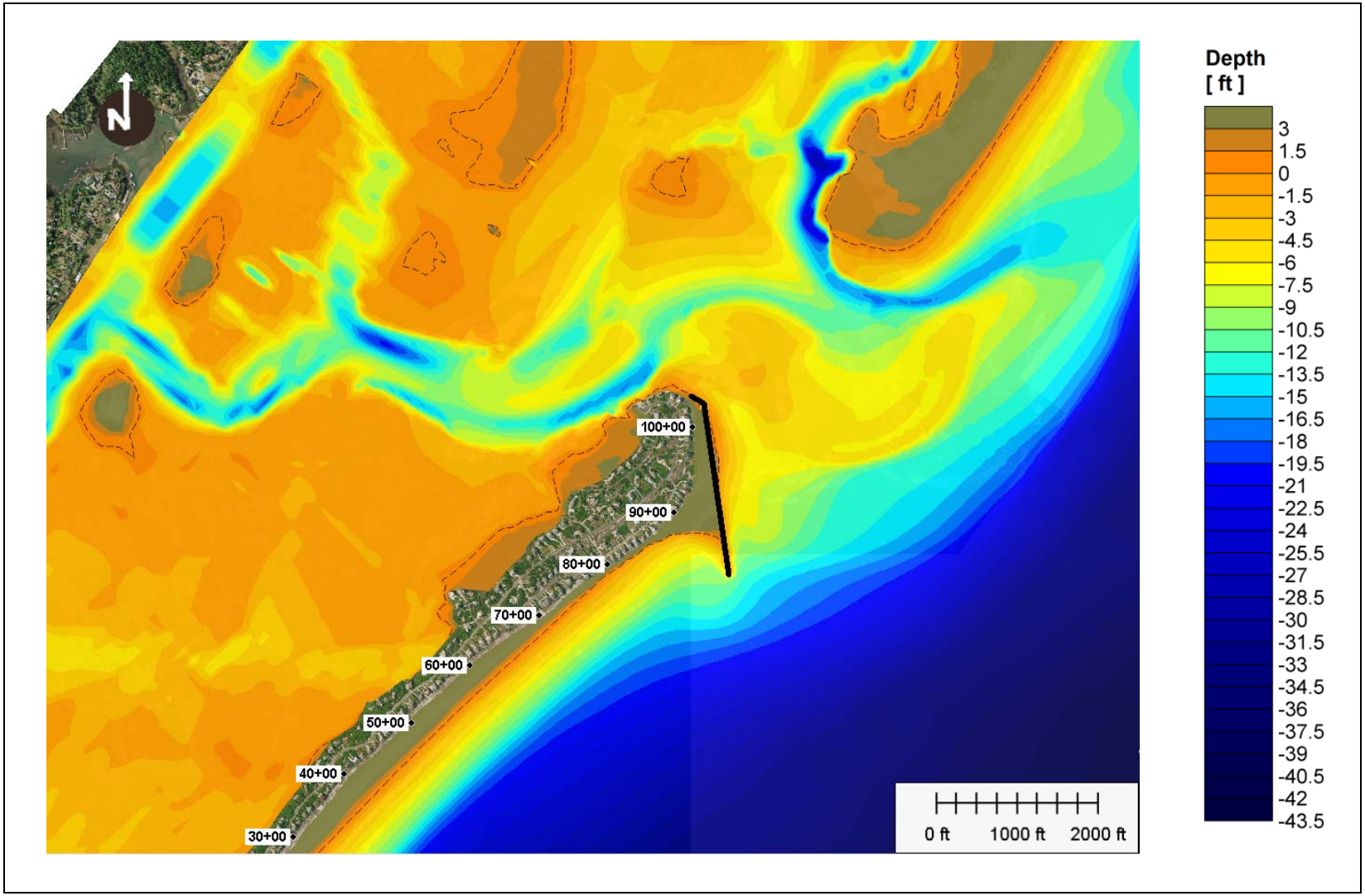


Figure 90: Alternative 5a-2 (20 deg), bathymetry after 5 years simulation.

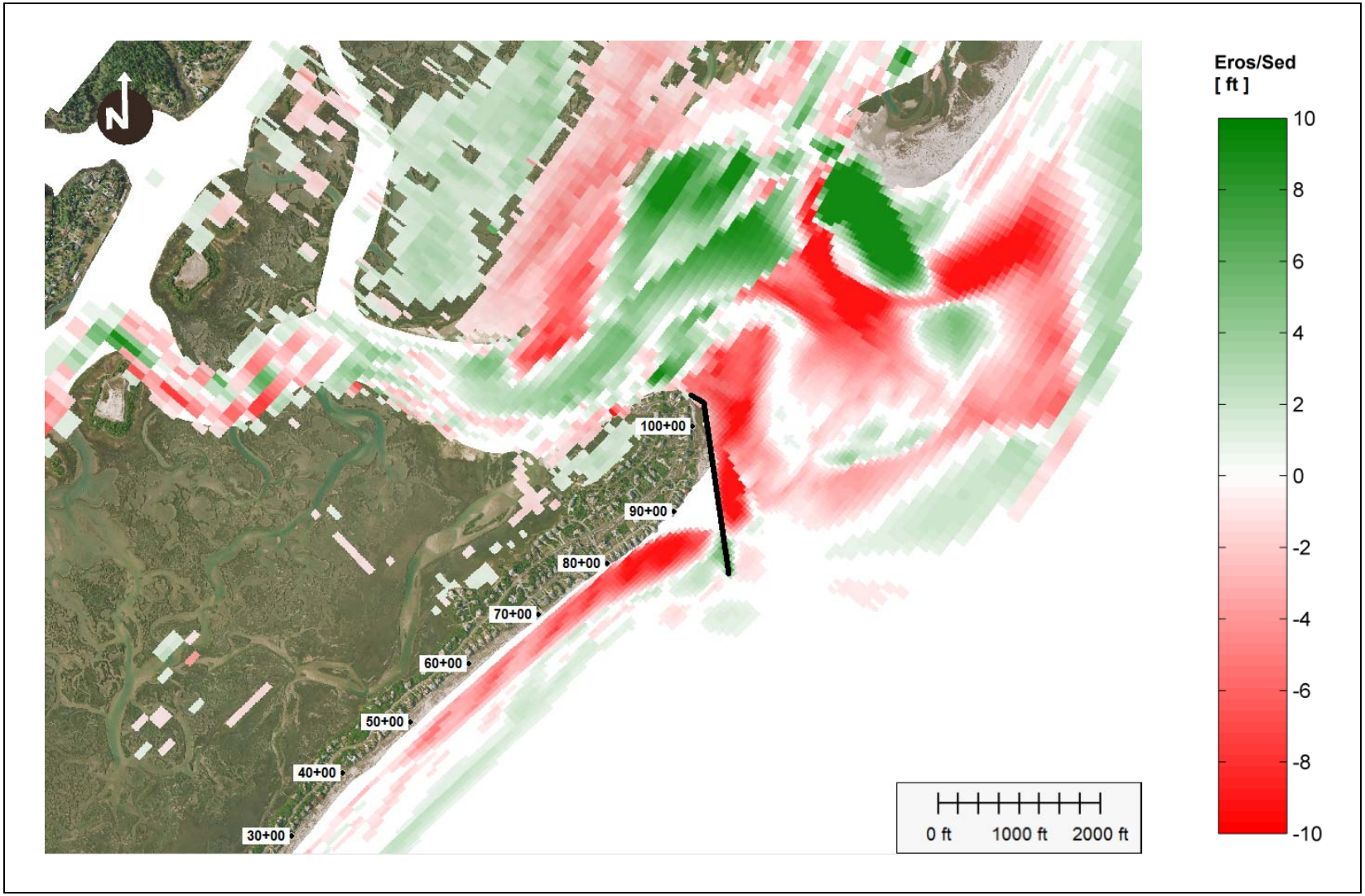


Figure 91: Alternative 5a-2 (20 deg), erosion/sedimentation after 5 year simulation.

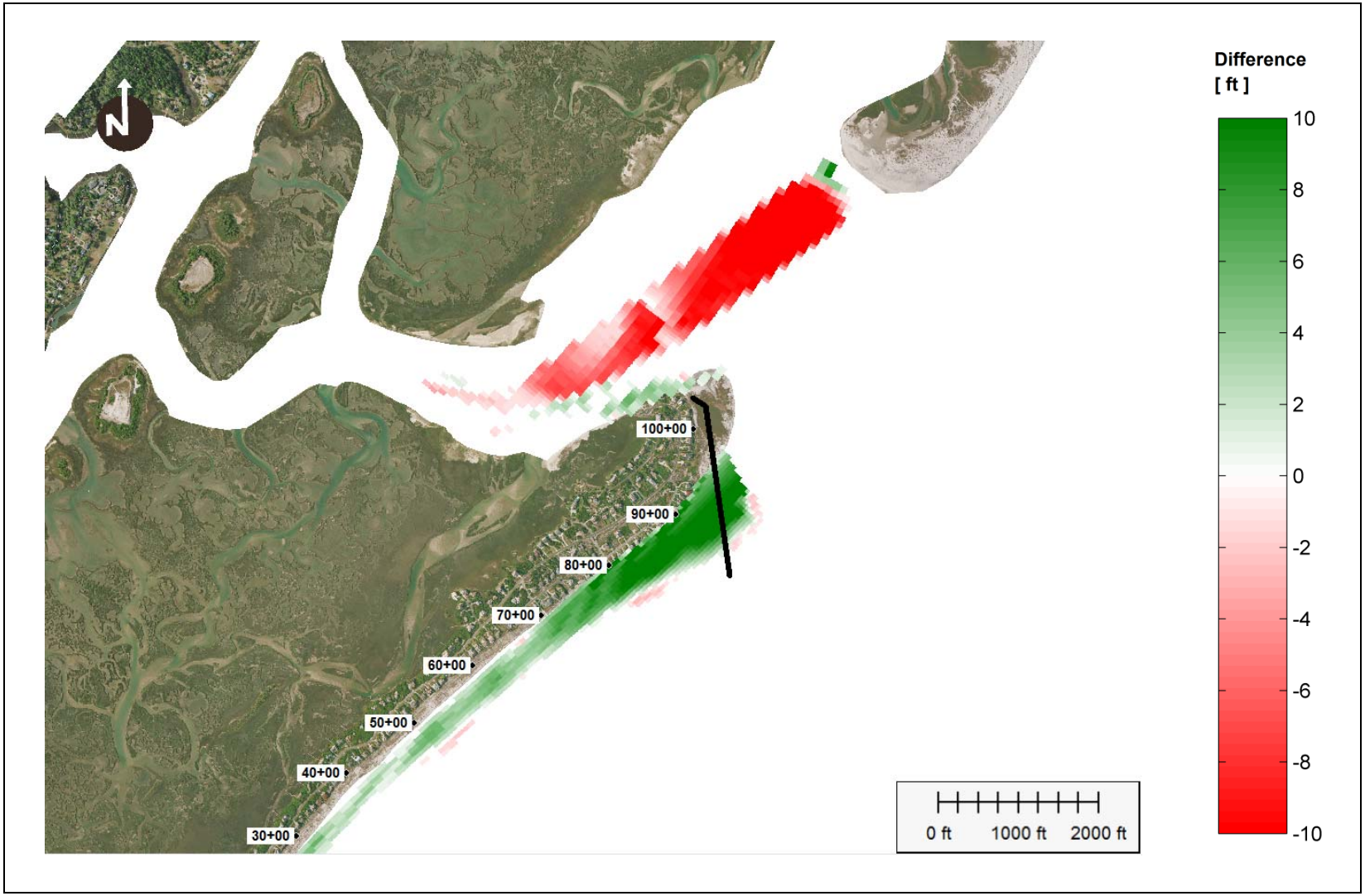


Figure 92: difference between initial bathymetries of Alternative 5a-2 (20 deg) and Alternative 2.

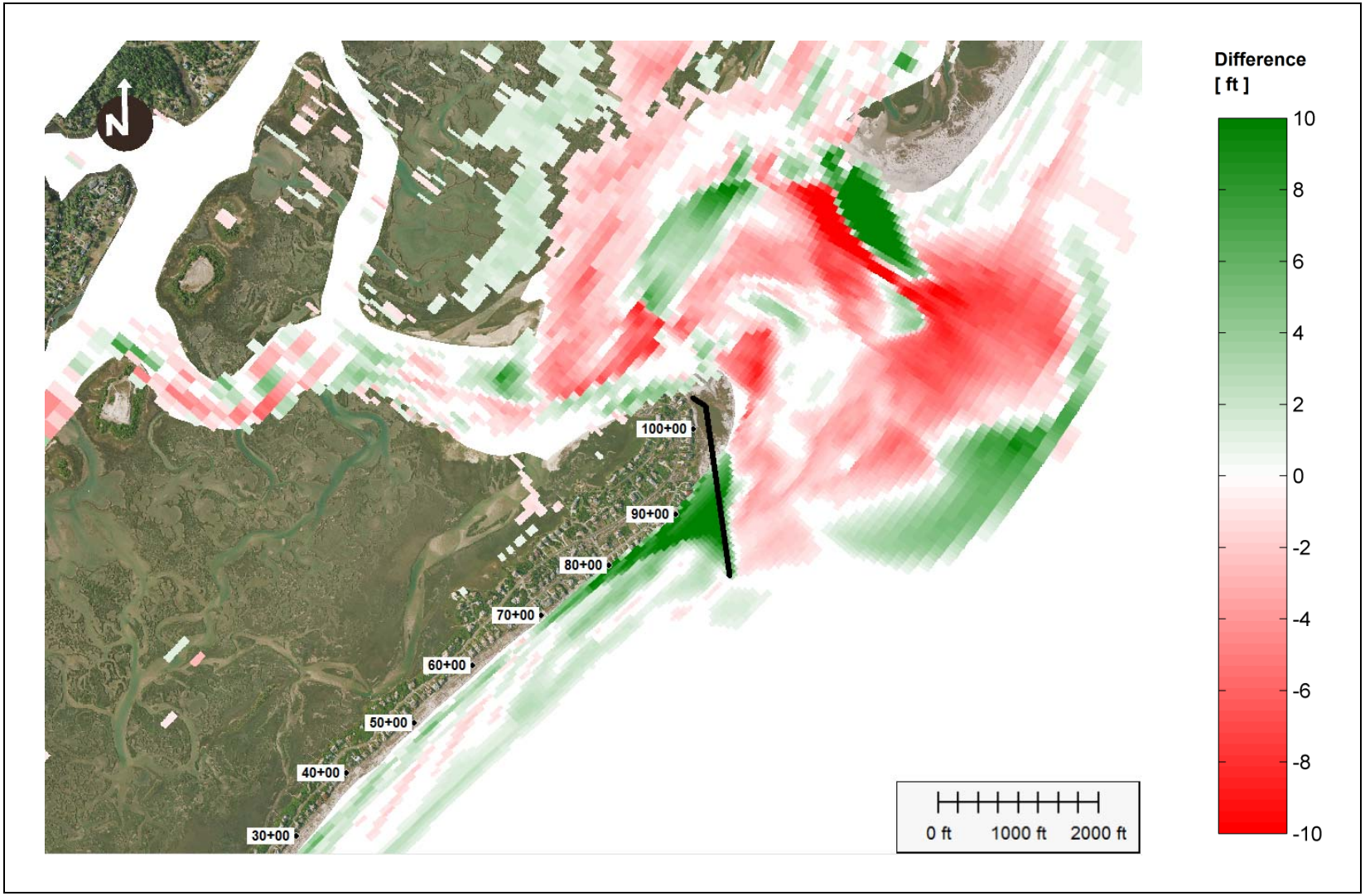


Figure 93: difference between bathymetry of Alternative 5a-2 (20 deg) after 2 years simulation and initial bathymetry of Alternative 2.

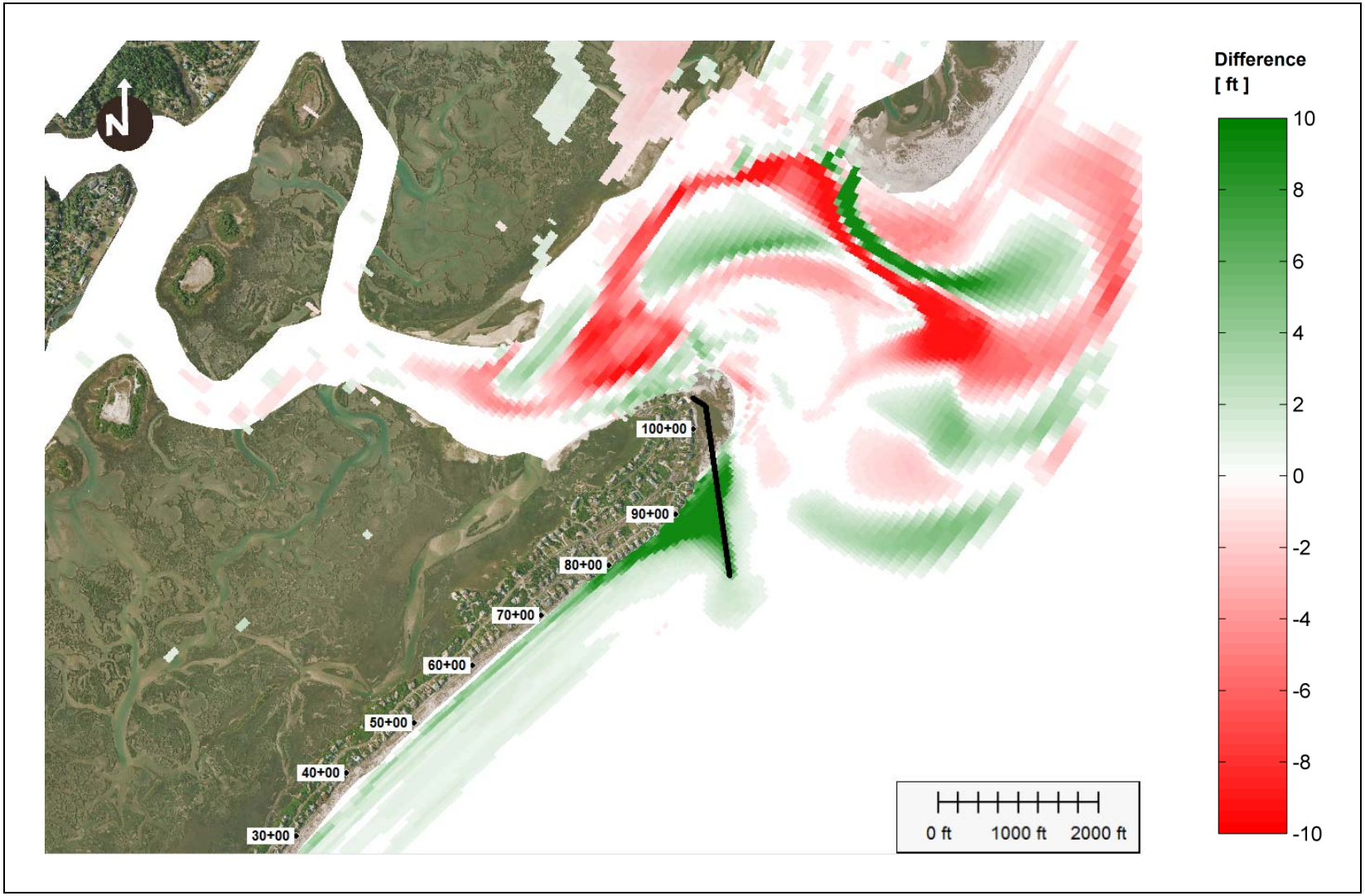


Figure 94: difference between bathymetries of Alternative 5a-2 (20 deg) and Alternative 2 after 2 years simulation.

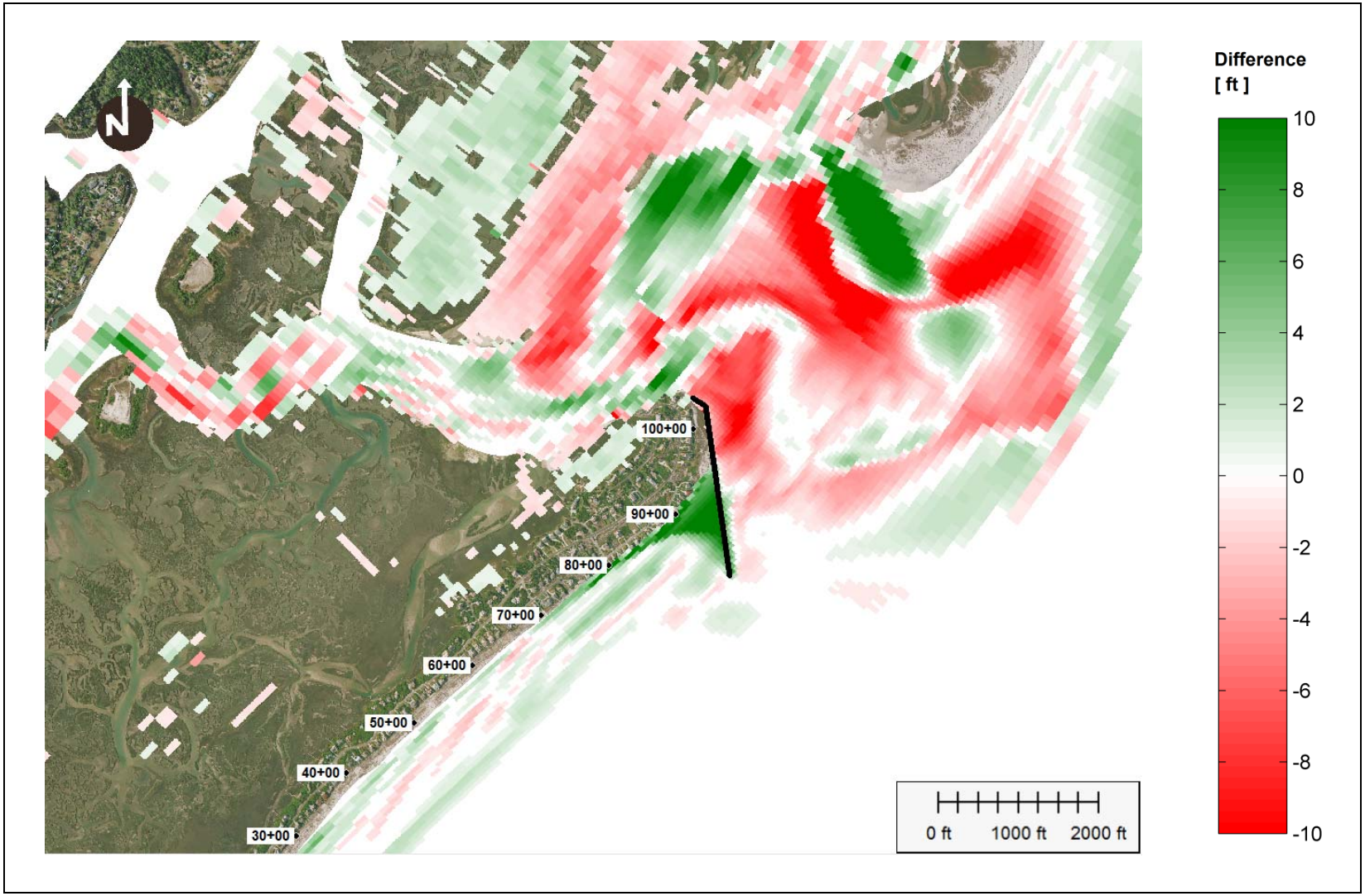


Figure 95: difference between bathymetry of Alternative 5a-2 (20 deg) after 5 years simulation and initial bathymetry of Alternative 2.

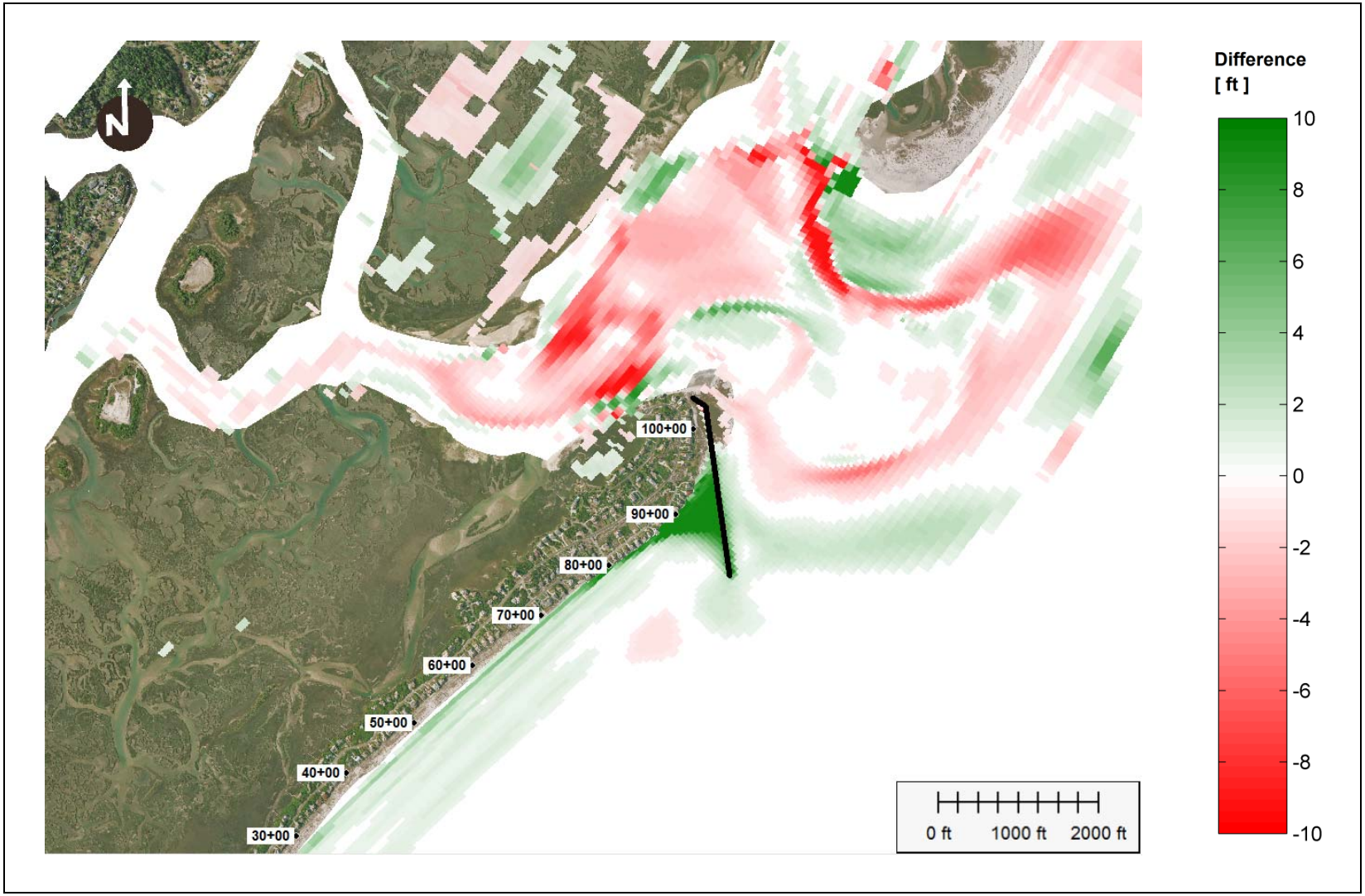


Figure 96: difference between bathymetries of Alternative 5a-2 (20 deg) and Alternative 2 after 5 years simulation.

Alternative 5a-2-30° - Alt. 5a-2 with 30° oblique terminal groin (1,200 ft)

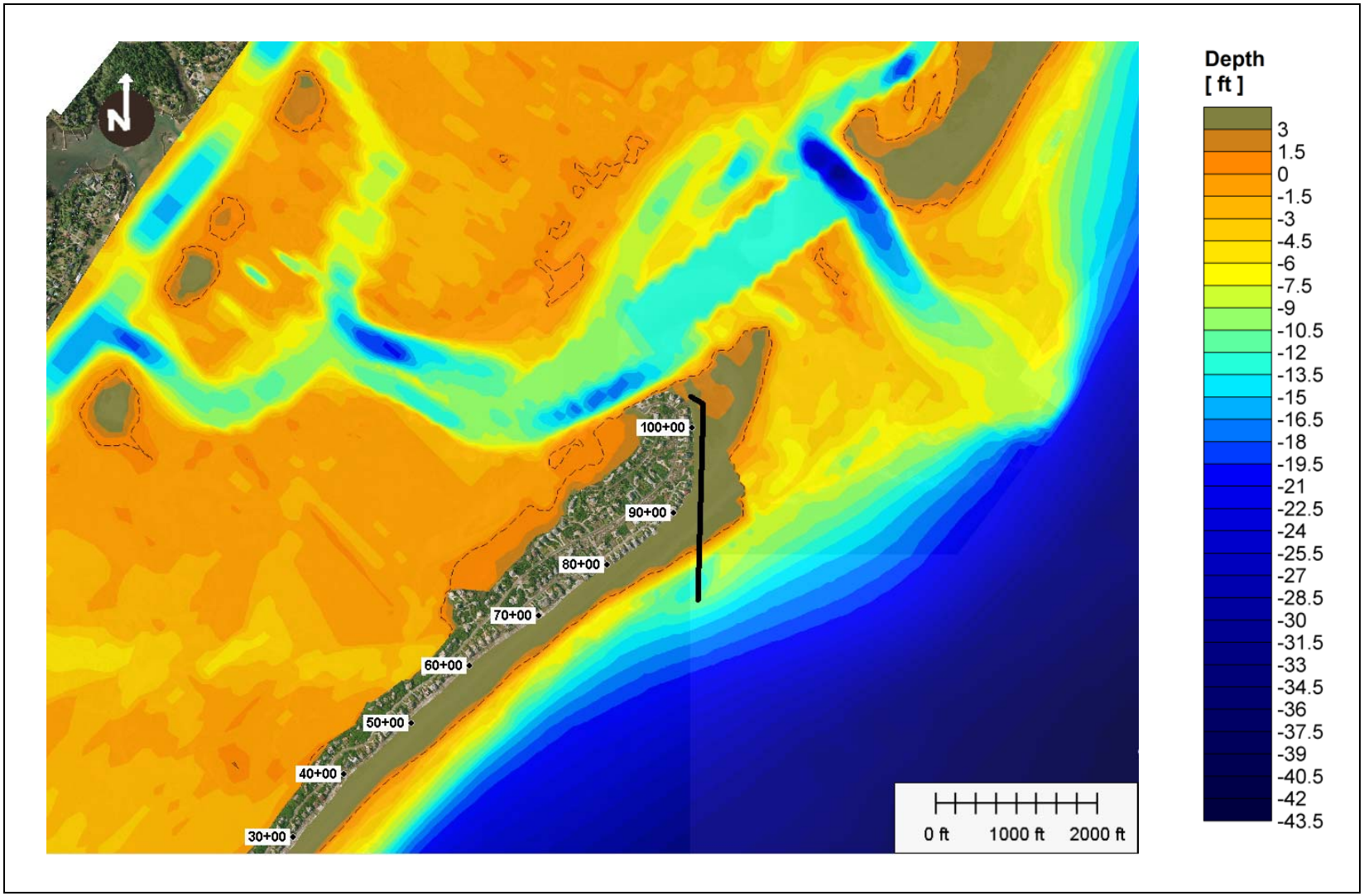


Figure 97: Alternative 5a-2 (30 deg), initial bathymetry.

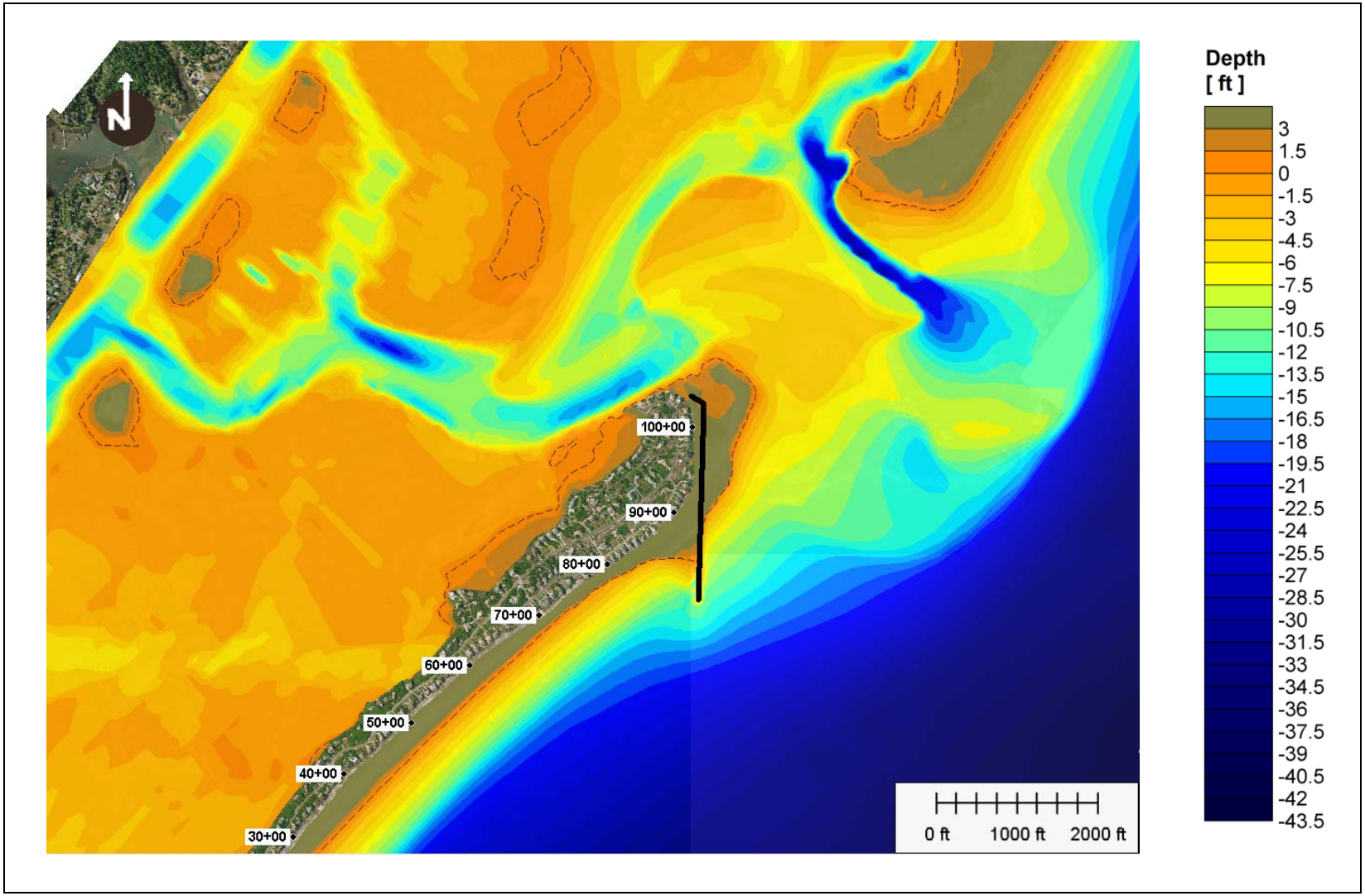


Figure 98: Alternative 5a-2 (30 deg), bathymetry after 2 years simulation.

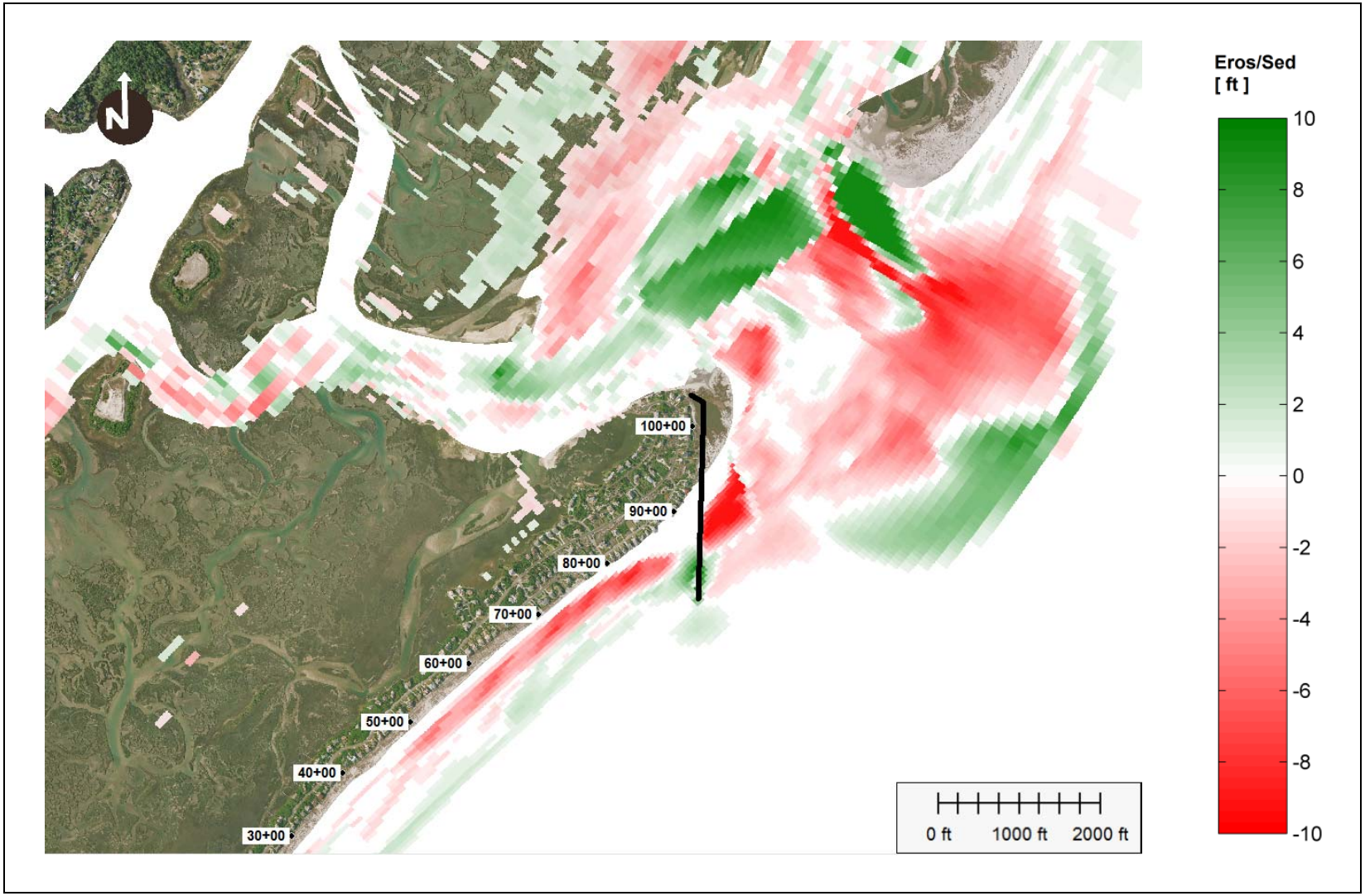


Figure 99: Alternative 5a-2 (30 deg), erosion/sedimentation after 2 years simulation.

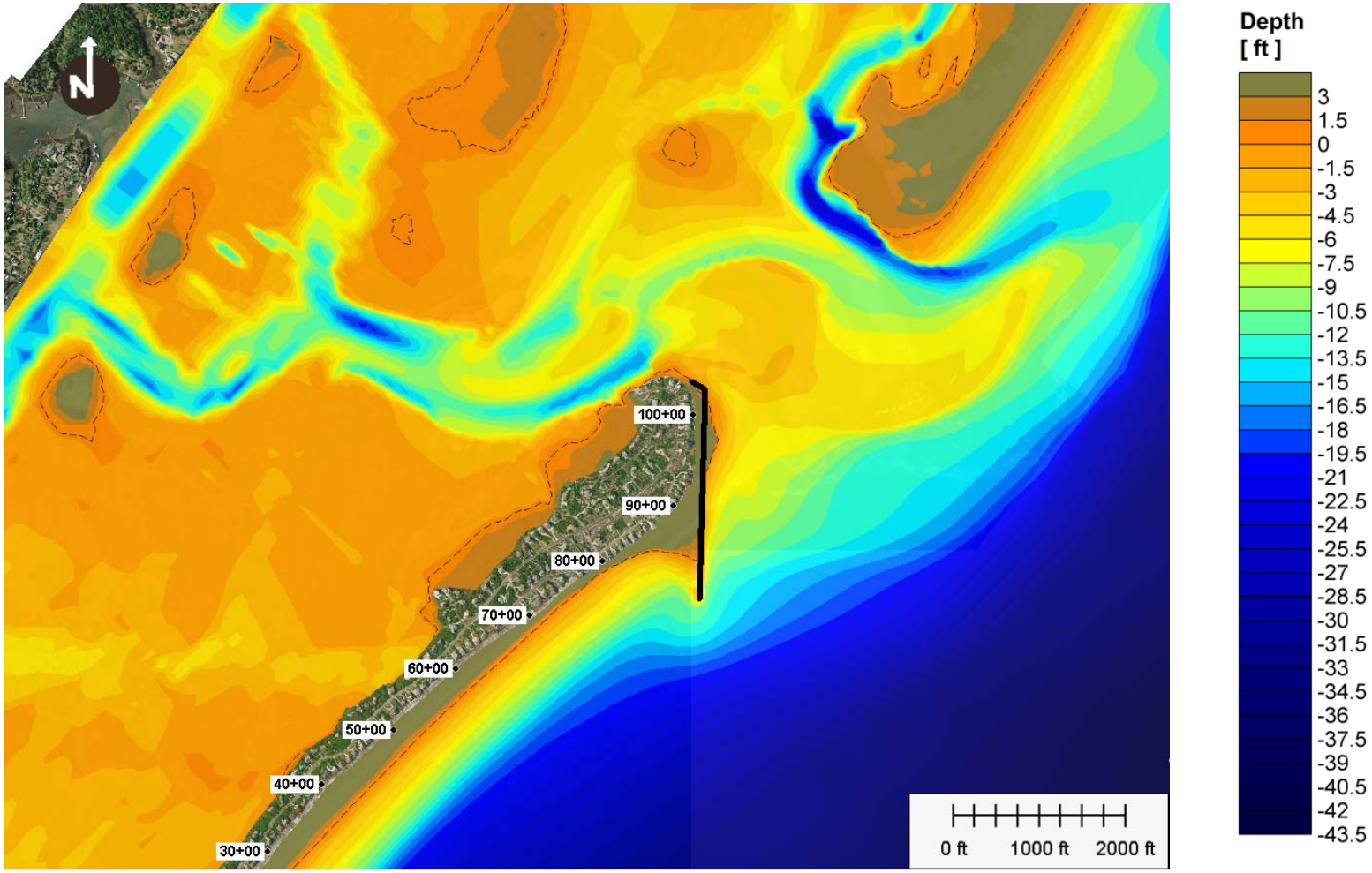


Figure 100: Alternative 5a-2 (30 deg), bathymetry after 5 years simulation.

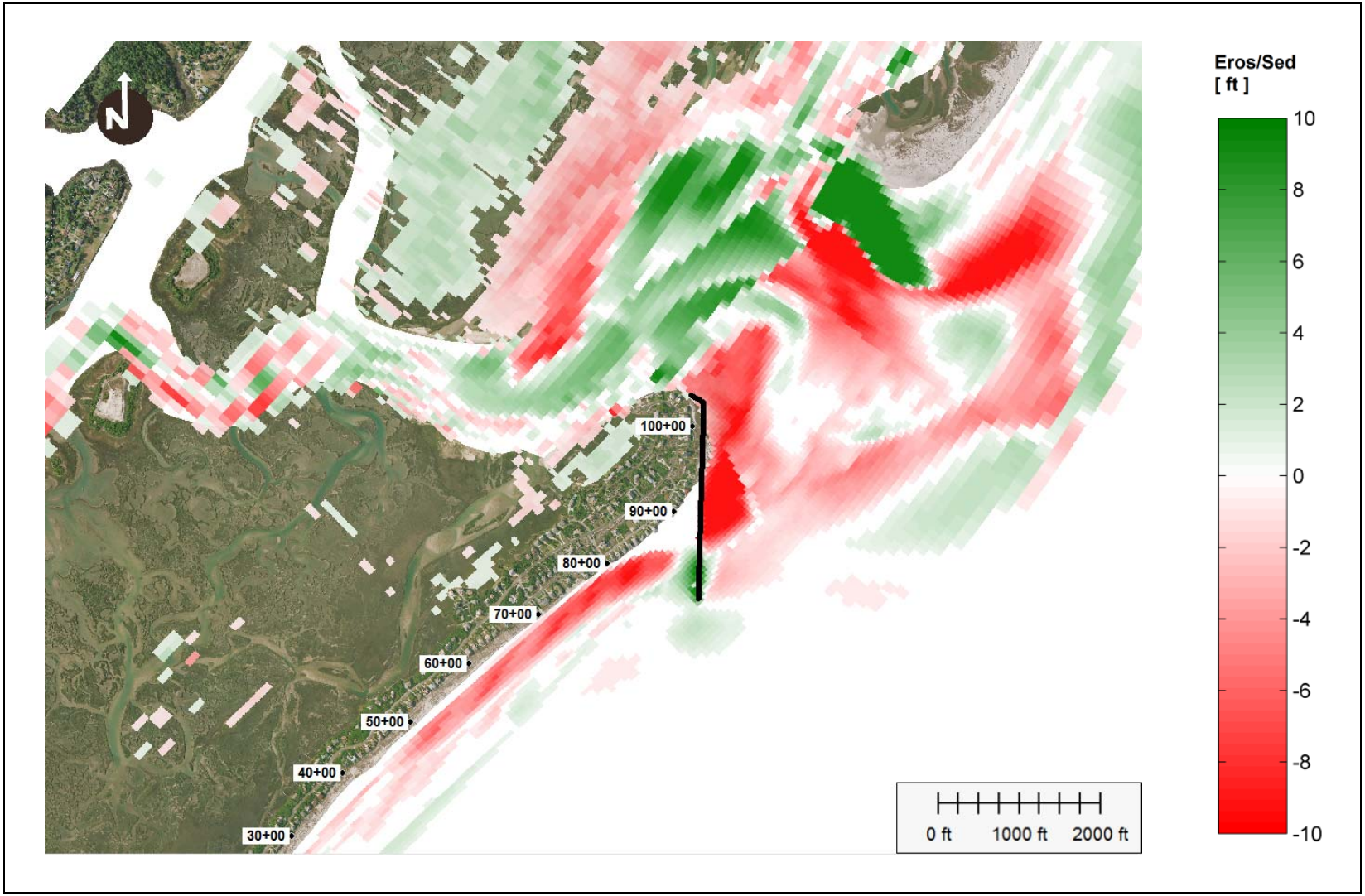


Figure 101: Alternative 5a-2 (30 deg), erosion/sedimentation after 5 year simulation.

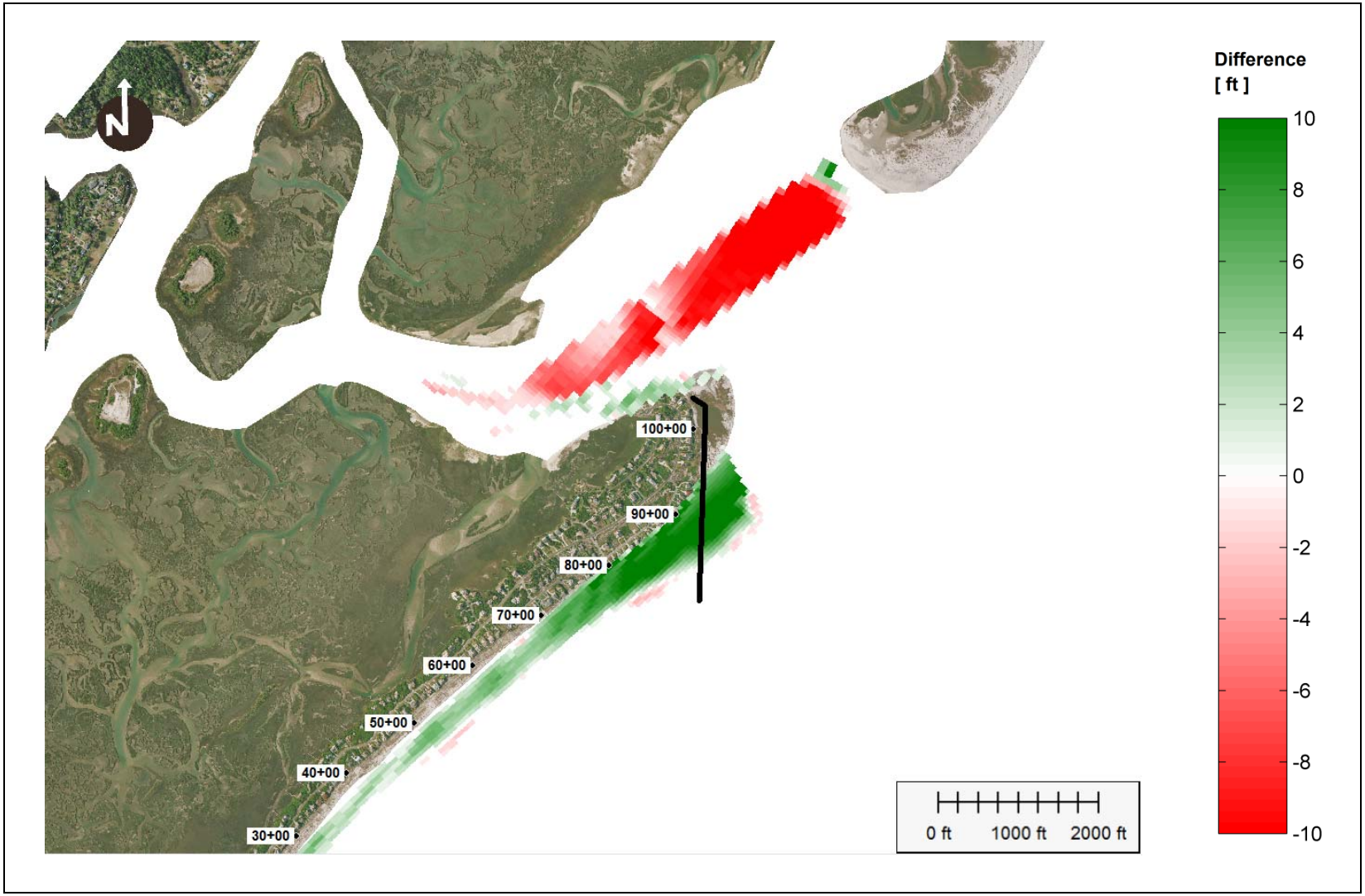


Figure 102: difference between initial bathymetries of Alternative 5a-2 (30 deg) and Alternative 2.

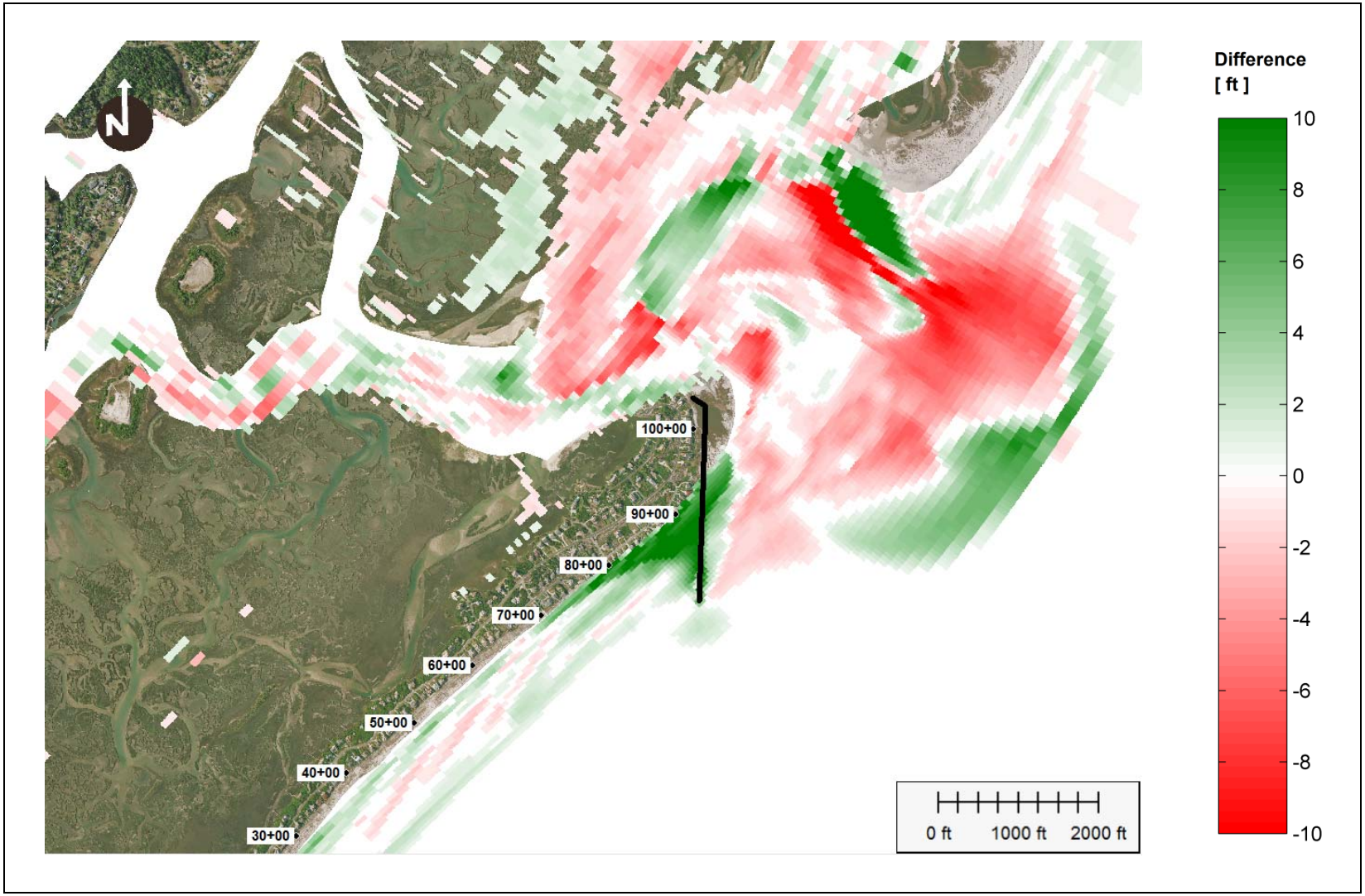


Figure 103: difference between bathymetry of Alternative 5a-2 (30 deg) after 2 years simulation and initial bathymetry of Alternative 2.

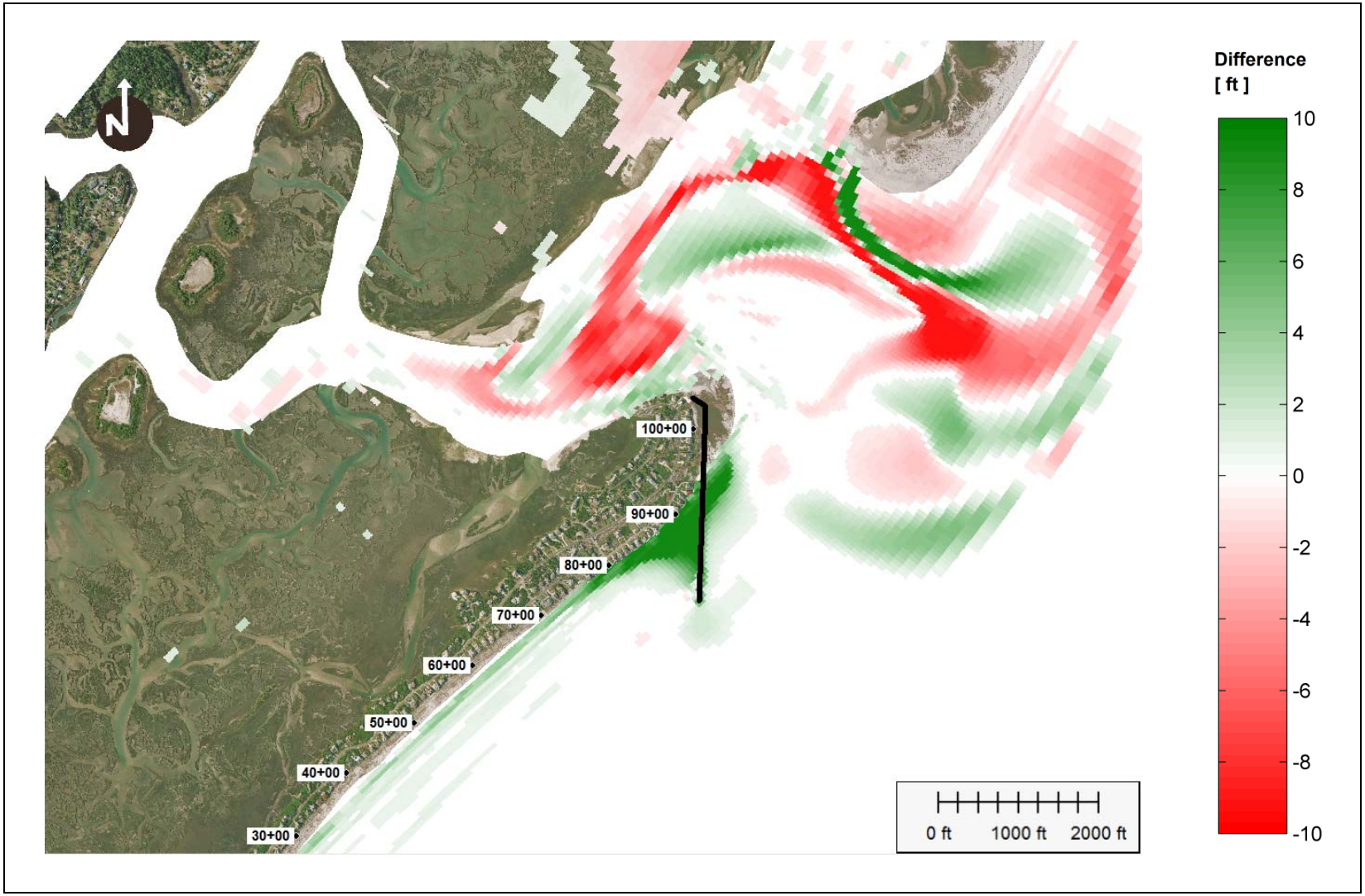


Figure 104: difference between bathymetries of Alternative 5a-2 (30 deg) and Alternative 2 after 2 years simulation.

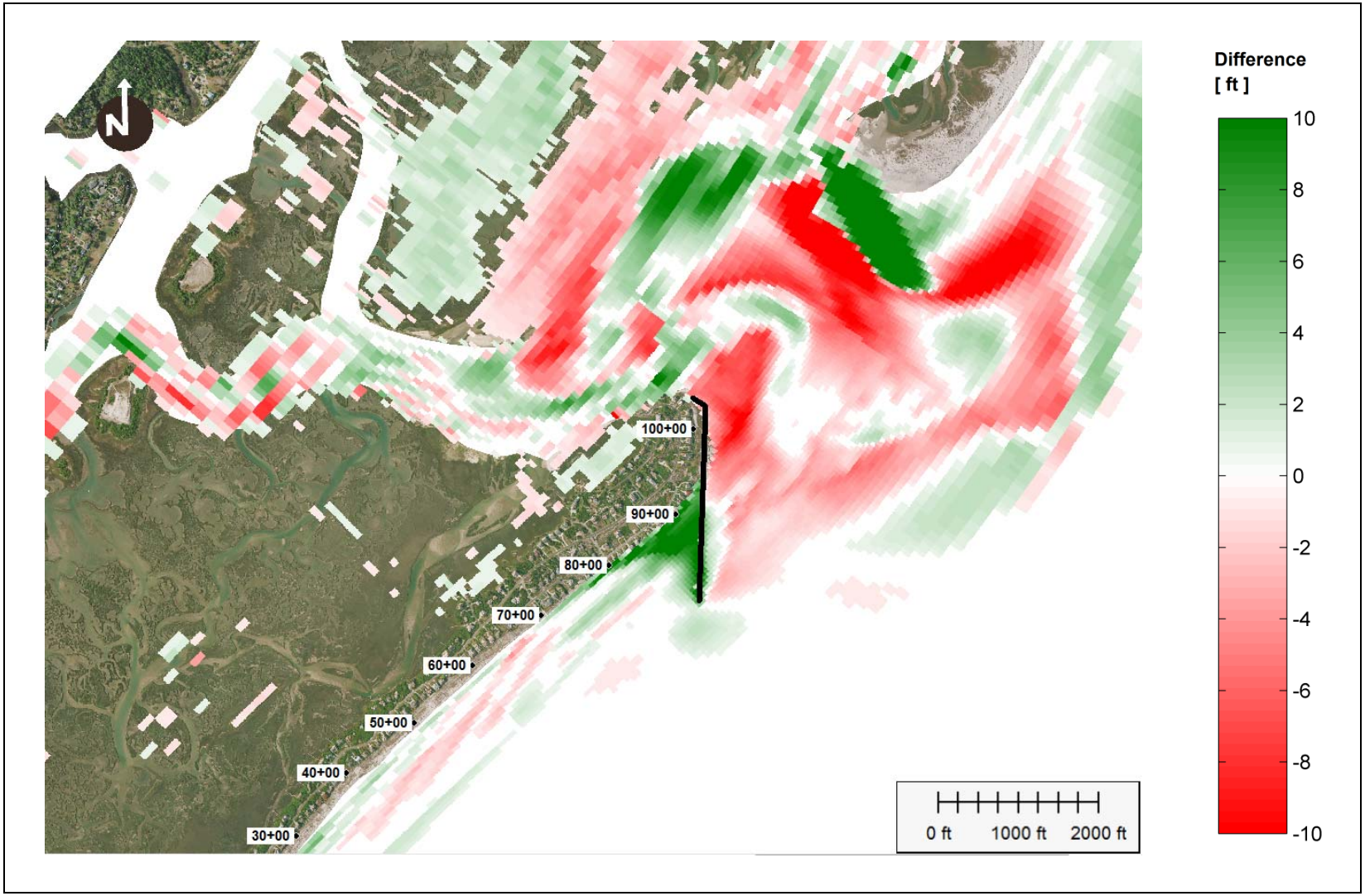


Figure 105: difference between bathymetry of Alternative 5a-2 (30 deg) after 5 years simulation and initial bathymetry of Alternative 2.

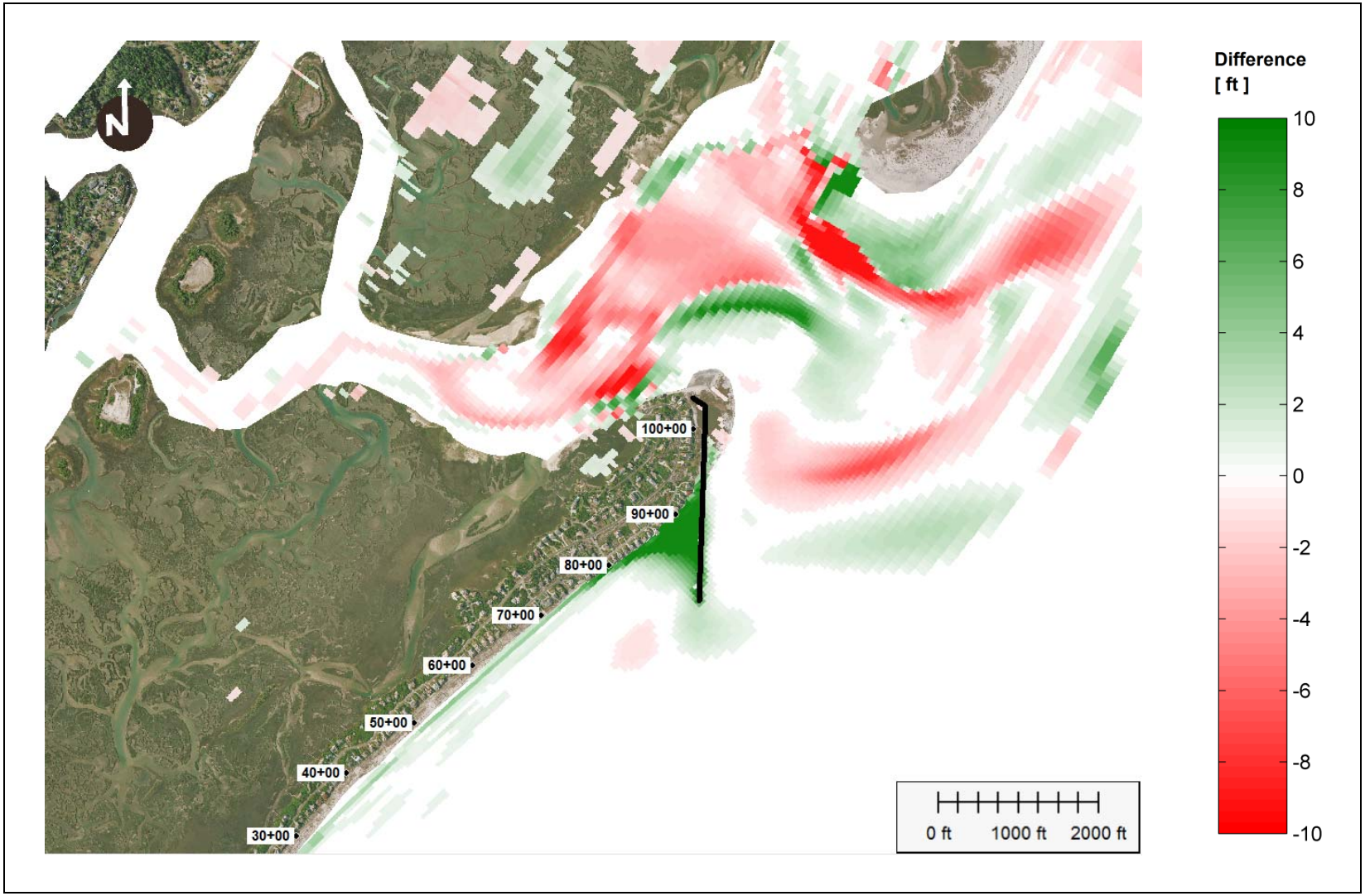


Figure 106: difference between bathymetries of Alternative 5a-2 (30 deg) and Alternative 2 after 5 years simulation.

APPENDIX B
ENGINEERING REPORT

SUB-APPENDIX B1

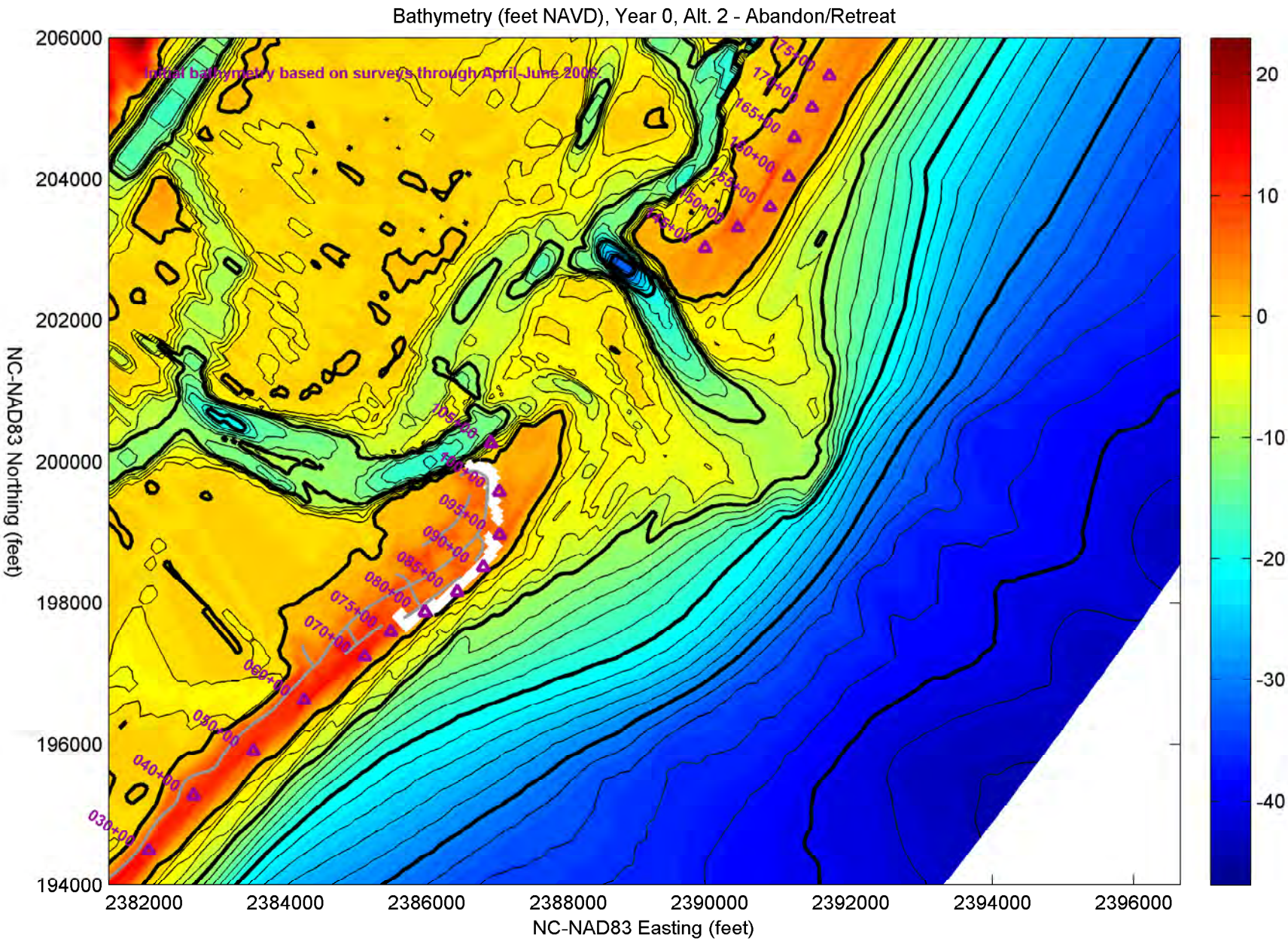
APPENDIX B
ENGINEERING REPORT

SUB-APPENDIX B1

Sub-Appendix B-1

Delft3D Model Results

Part 1 – Model Results Given April-June 2006 Eroded Conditions


Bathymetry (feet NAVD), Year 0, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2005
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
20
10
0
-10
-20
-30
-40
175+00
170+00
165+00
160+00
155+00
150+00
145+00
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090+00
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060+00
050+00
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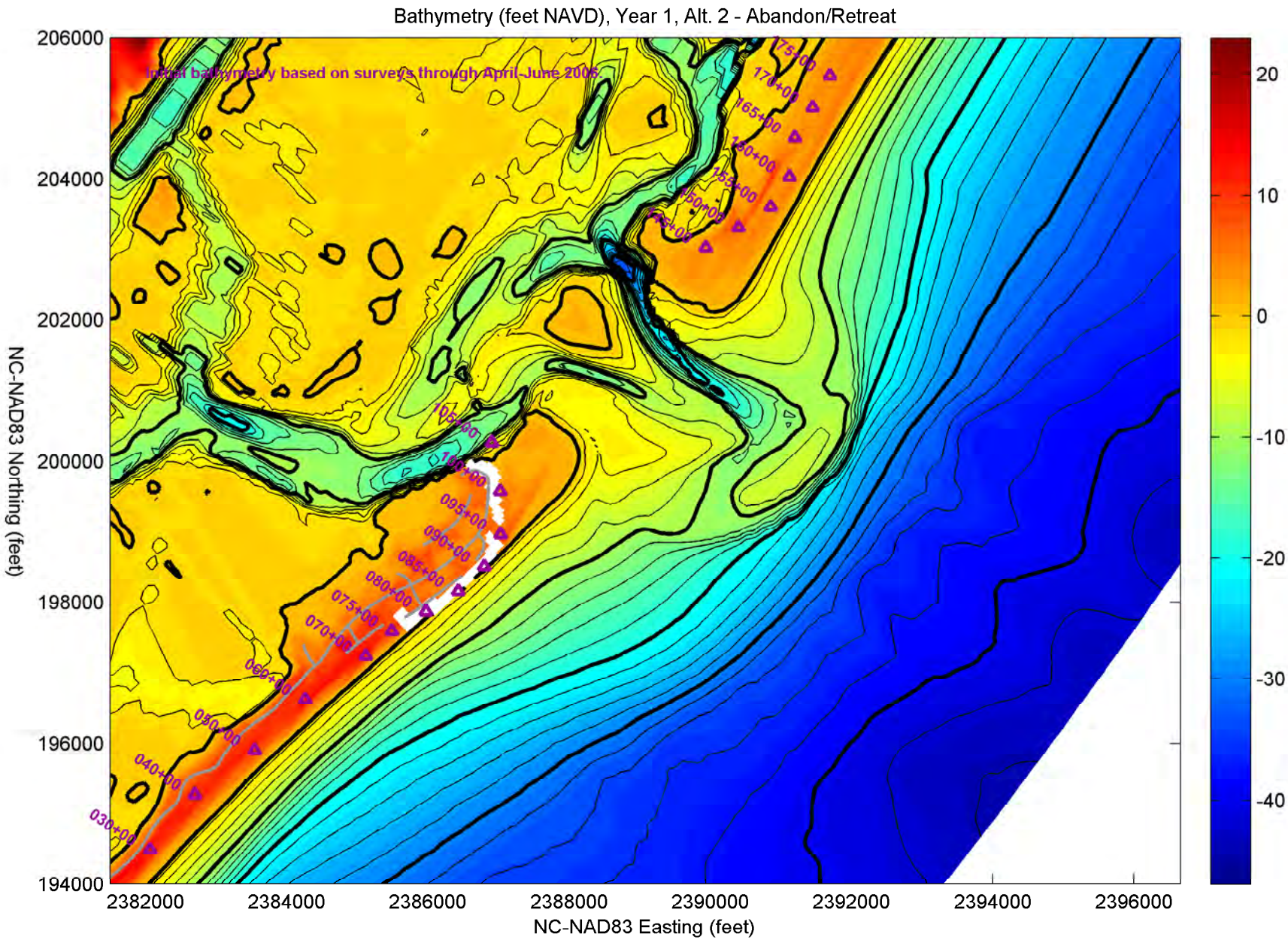
030+00


Bathymetry (feet NAVD), Year 1, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2005
206000
204000
202000
200000
198000
196000
194000
NC-NAD83 Northing (feet)
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
NC-NAD83 Easting (feet)
20
10
0
-10
-20
-30
-40
175+00
170+00
165+00
160+00
155+00
150+00
145+00
105+00
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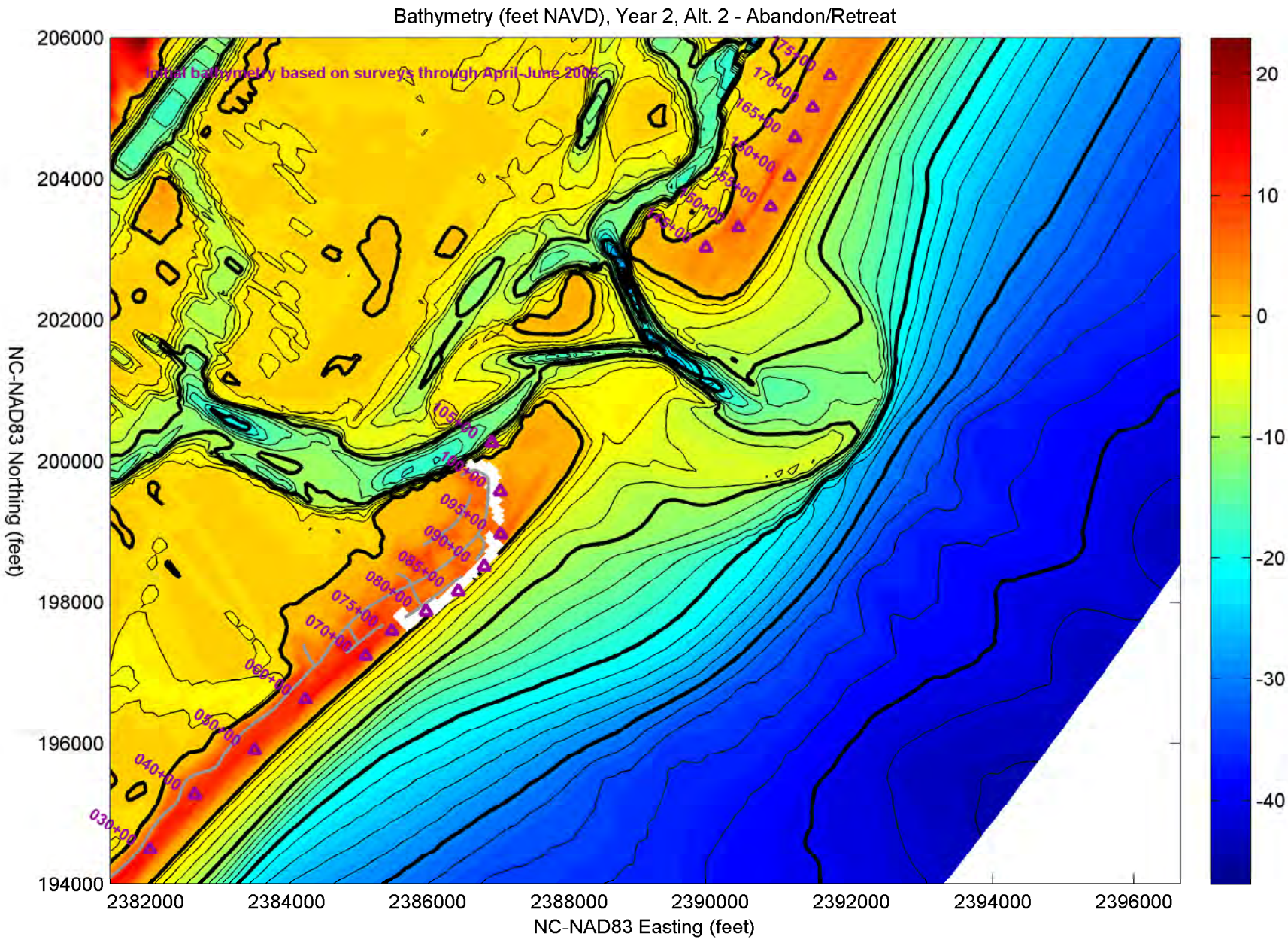
Bathymetry (feet NAVD), Year 2, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2006
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
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194000
2382000
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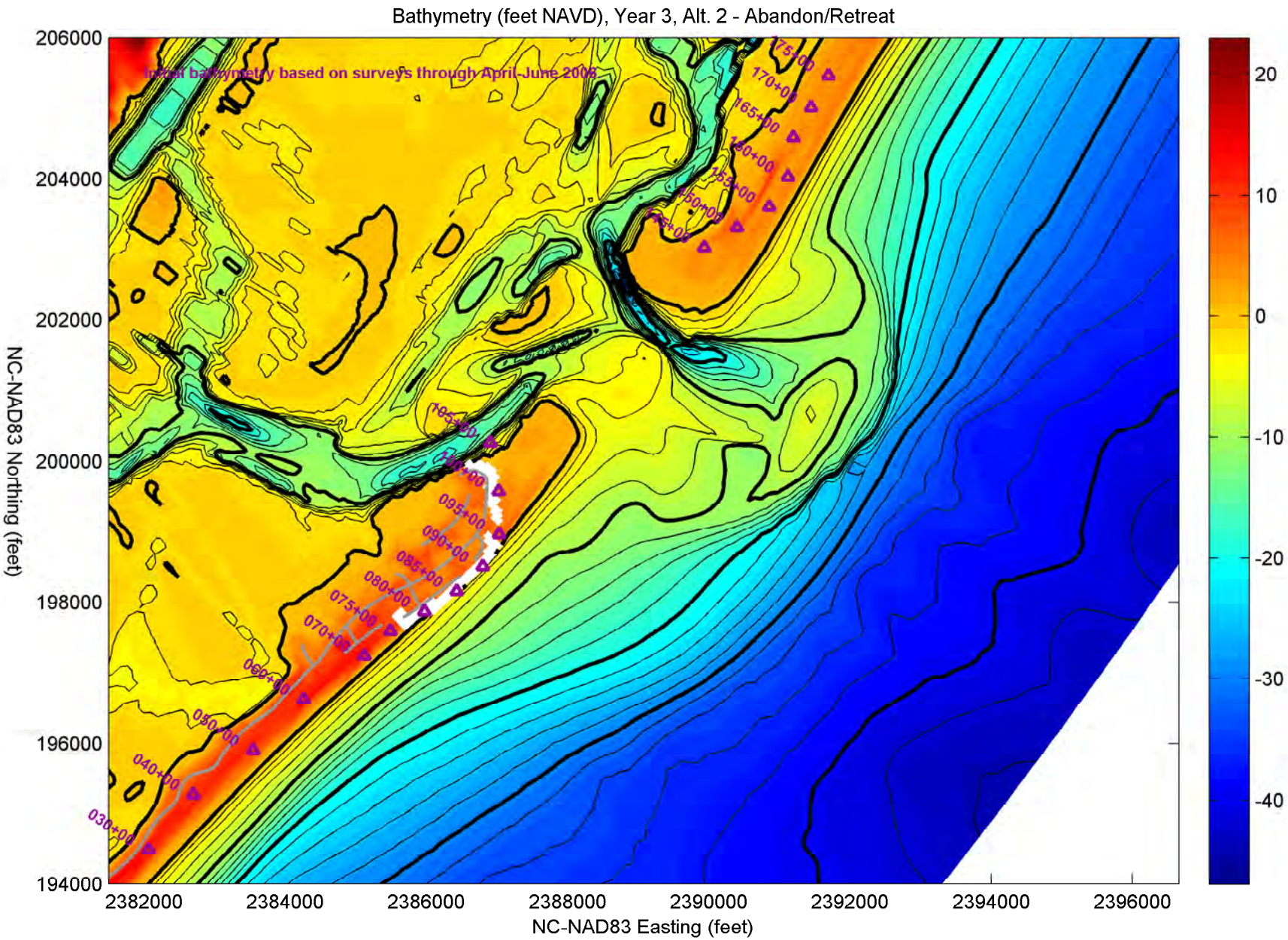
Bathymetry (feet NAVD), Year 3, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2006
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
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2382000
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2388000
2390000
2392000
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2396000
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175+00
170+00
165+00
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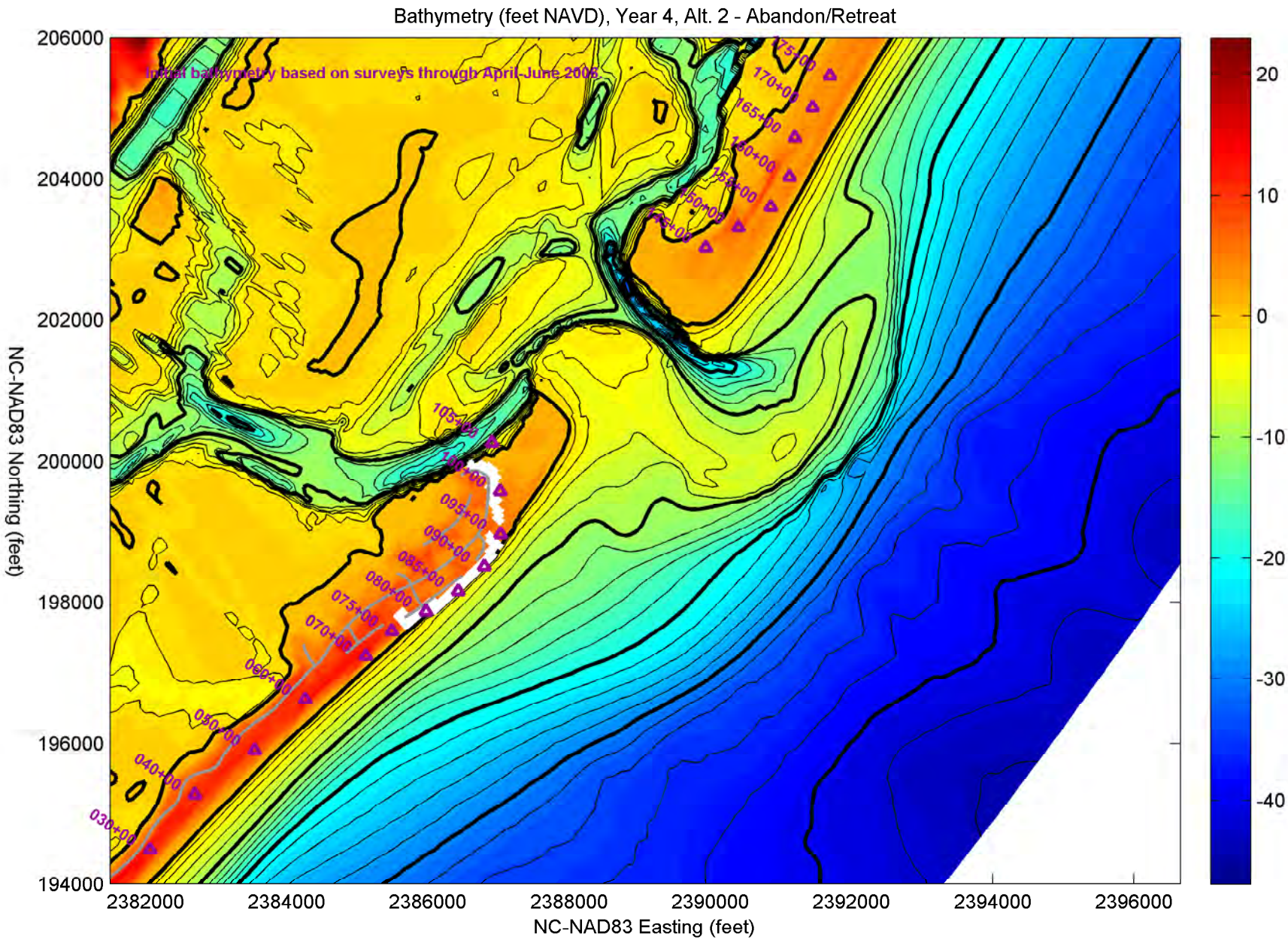
Bathymetry (feet NAVD), Year 4, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2008.
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
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194000
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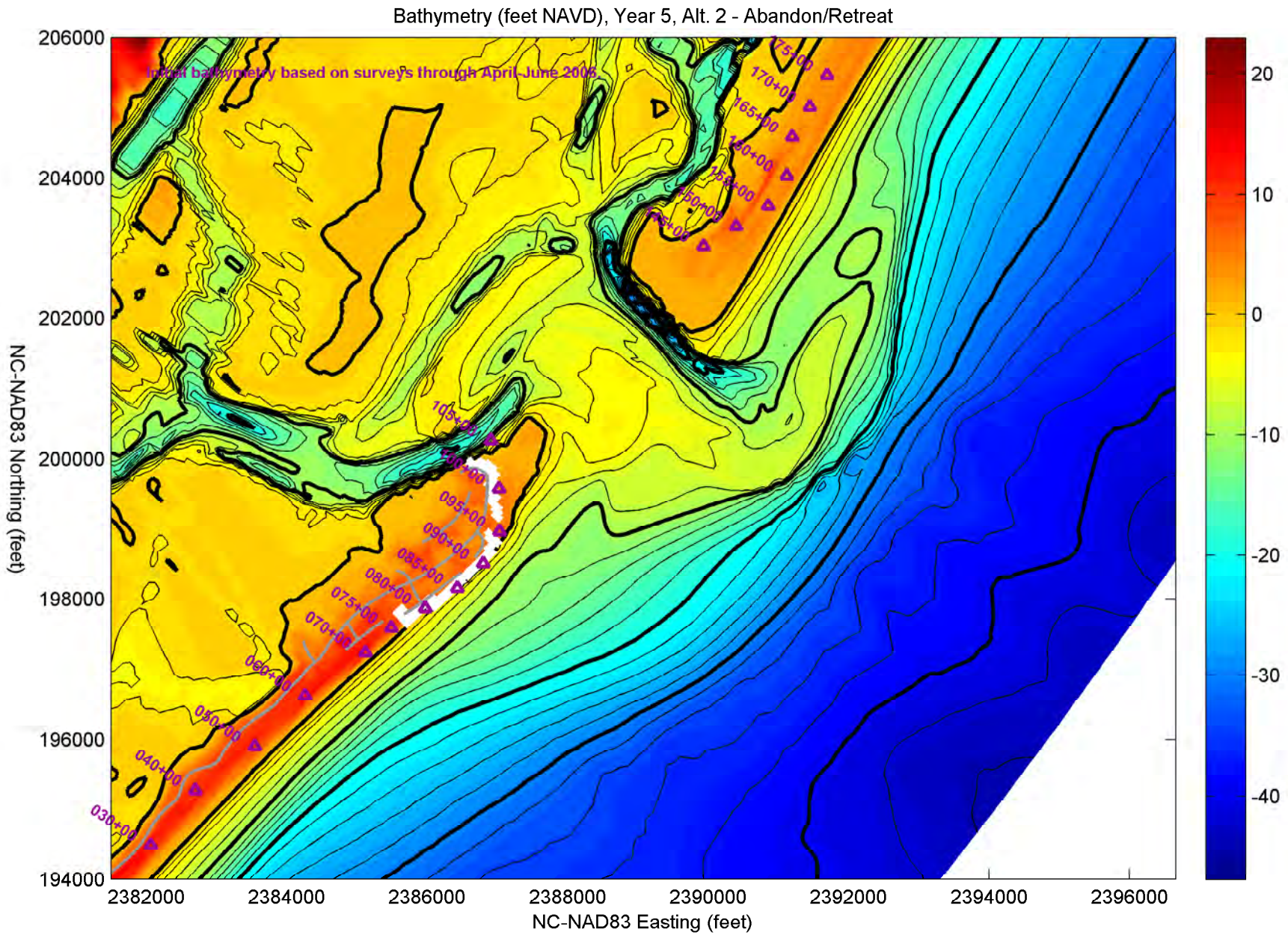
Bathymetry (feet NAVD), Year 5, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2005
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
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2382000
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-30
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175+00
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165+00
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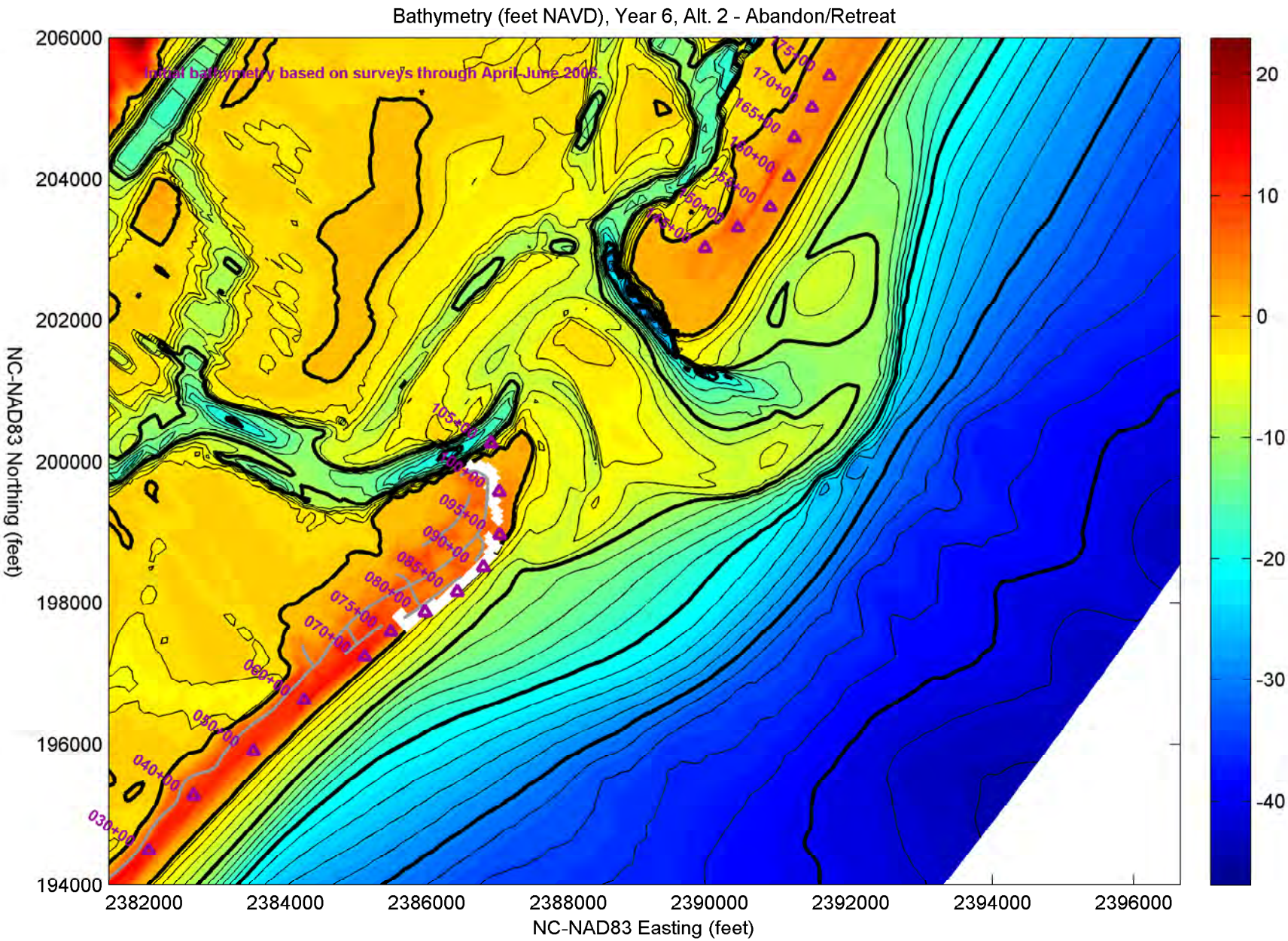
Bathymetry (feet NAVD), Year 6, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2006.
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
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2396000
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10
0
-10
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-30
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175+00
170+00
165+00
160+00
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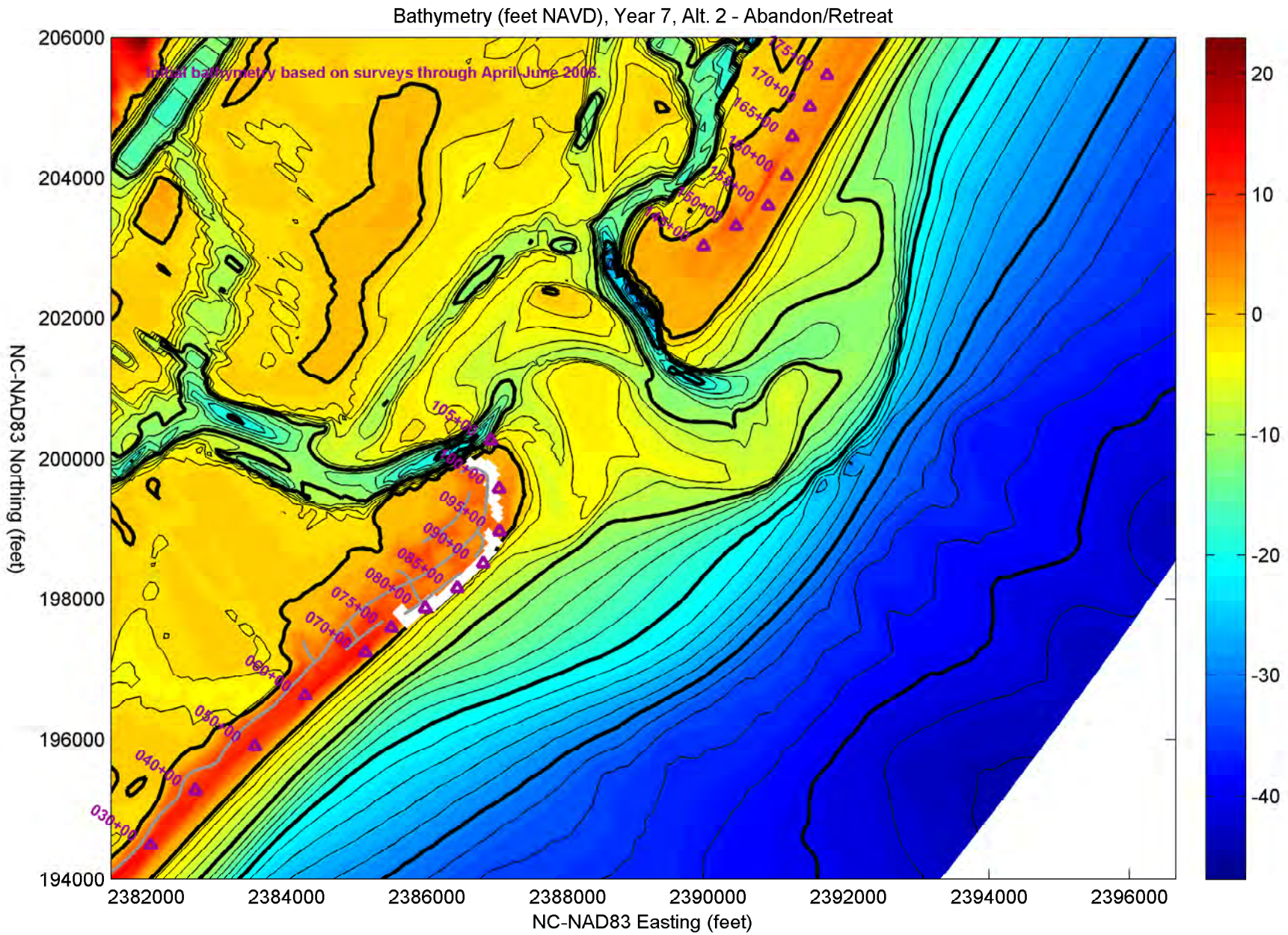
Bathymetry (feet NAVD), Year 7, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2005.
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
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2390000
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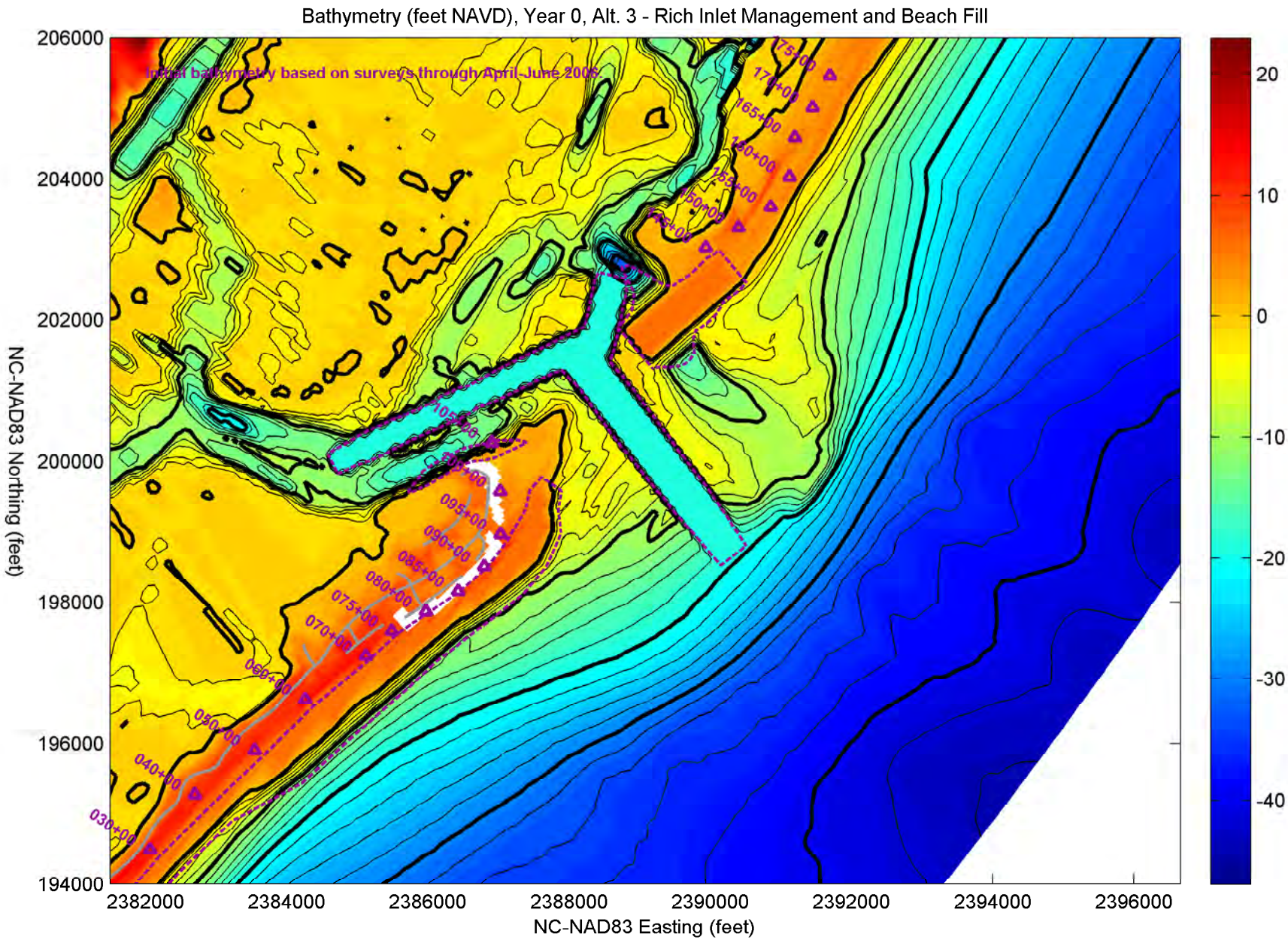
Bathymetry (feet NAVD), Year 0, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2005
206000
204000
202000
200000
198000
196000
194000
NC-NAD83 Northing (feet)
2382000
2384000
2386000
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2394000
2396000
NC-NAD83 Easting (feet)
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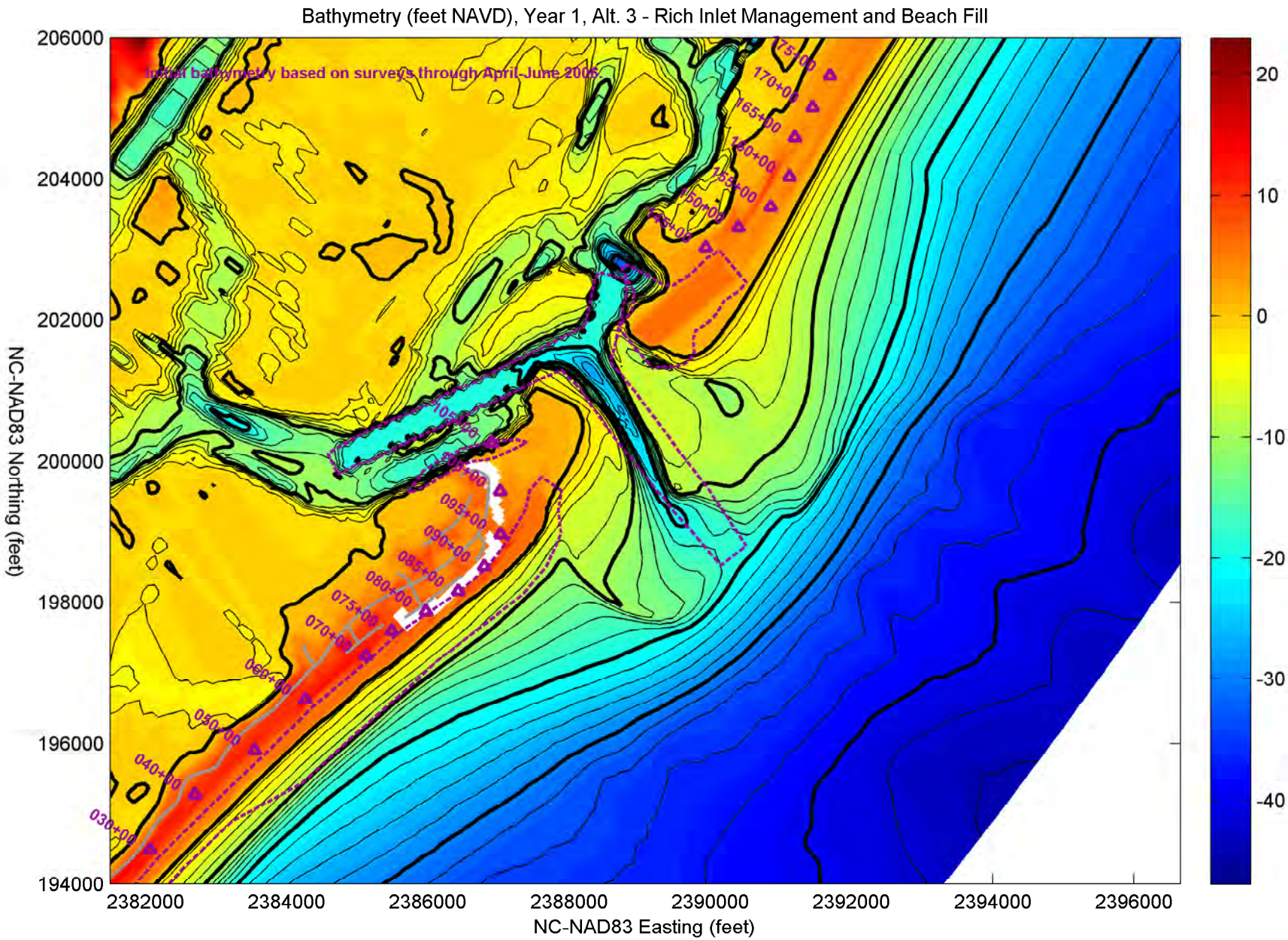
Bathymetry (feet NAVD), Year 1, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2005
206000
204000
202000
200000
198000
196000
194000
NC-NAD83 Northing (feet)
2382000
2384000
2386000
2388000
2390000
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2394000
2396000
NC-NAD83 Easting (feet)
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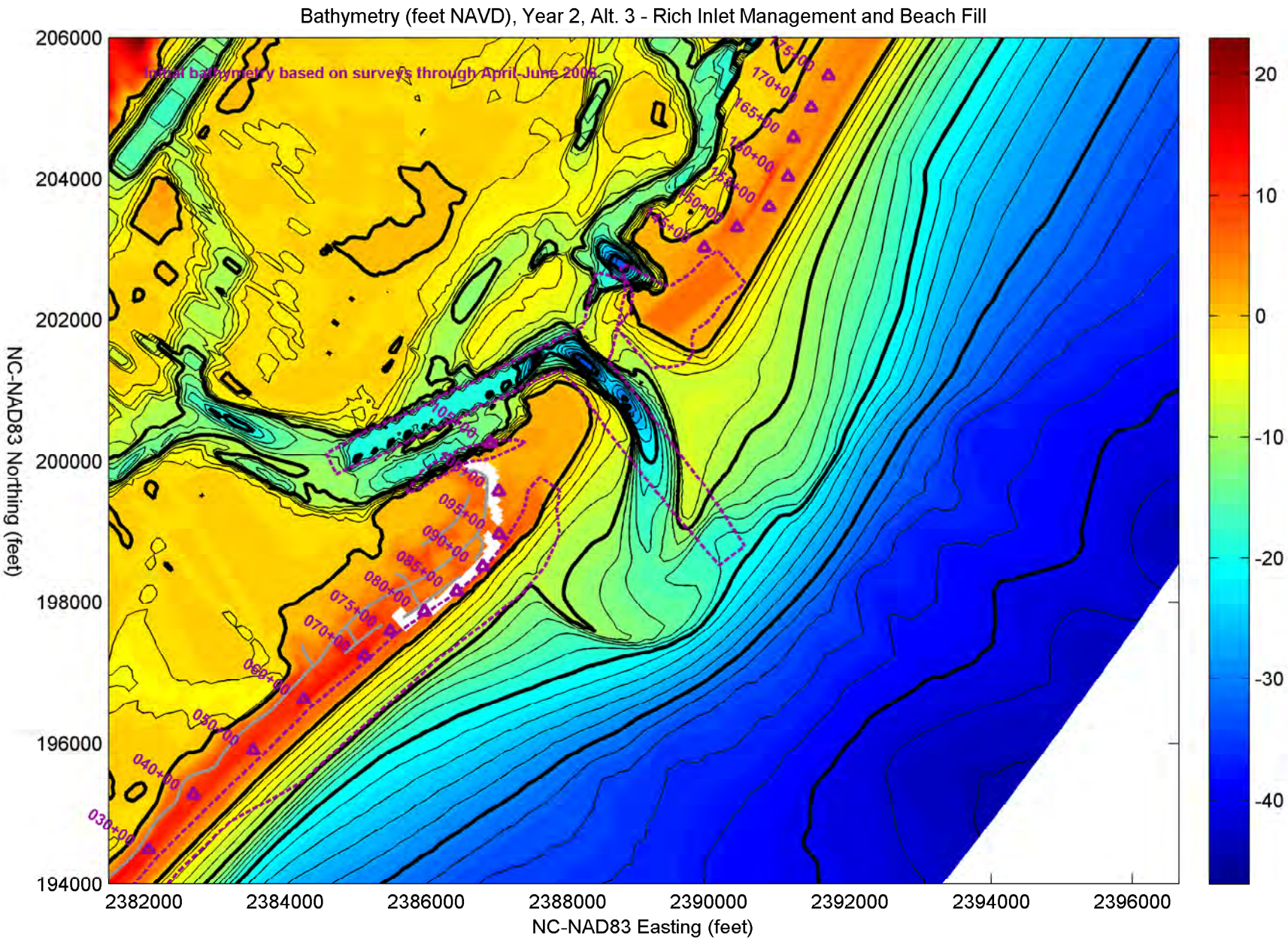
170+00
175+00


Bathymetry (feet NAVD), Year 2, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2005
206000
204000
202000
200000
198000
196000
194000
NC-NAD83 Northing (feet)
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
NC-NAD83 Easting (feet)
20
10
0
-10
-20
-30
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030+00
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070+00
075+00
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115+00
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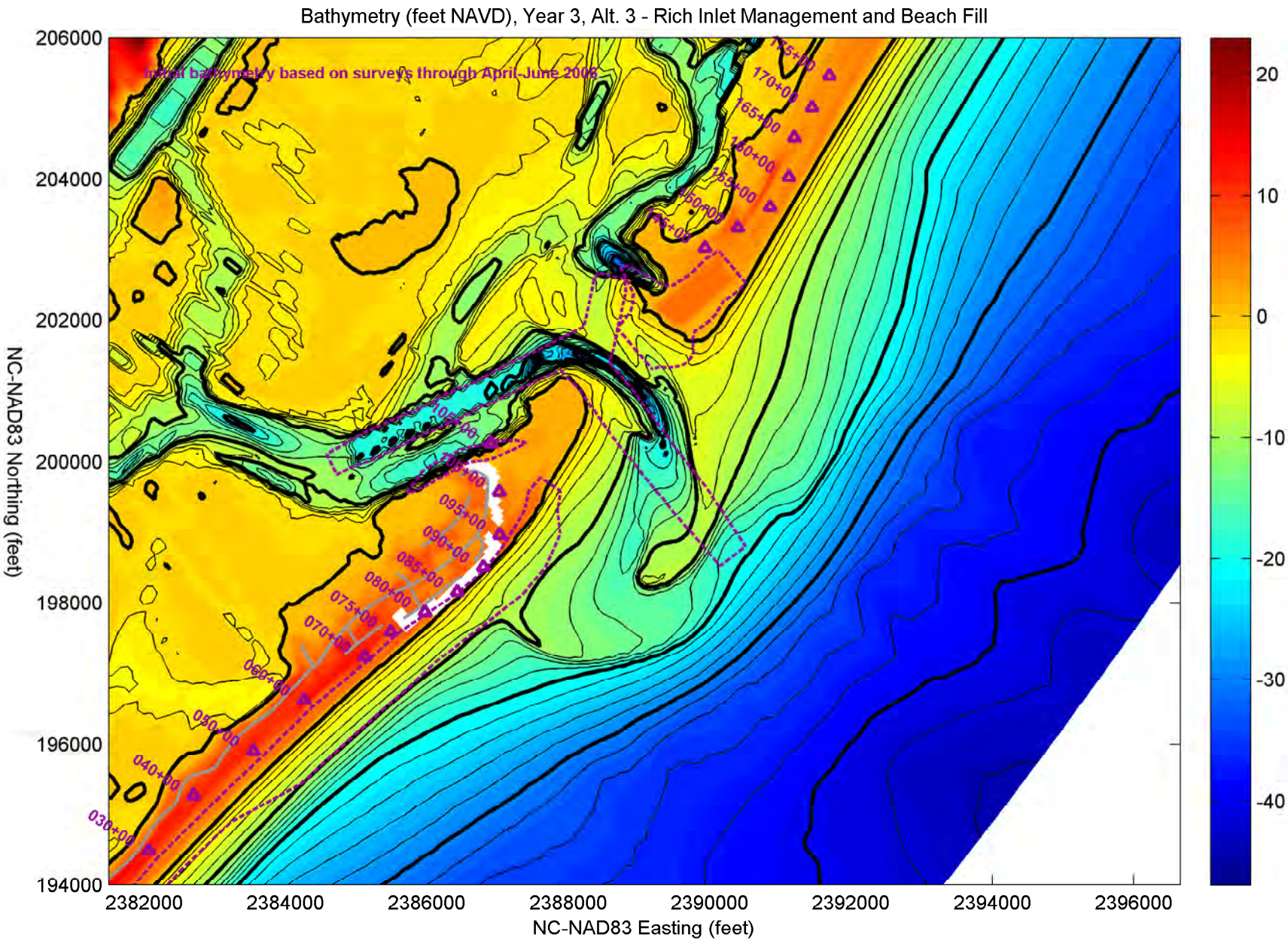
175+00


Bathymetry (feet NAVD), Year 3, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2005
206000
204000
202000
200000
198000
196000
194000
NC-NAD83 Northing (feet)
2382000
2384000
2386000
2388000
2390000
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2396000
NC-NAD83 Easting (feet)
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160+00
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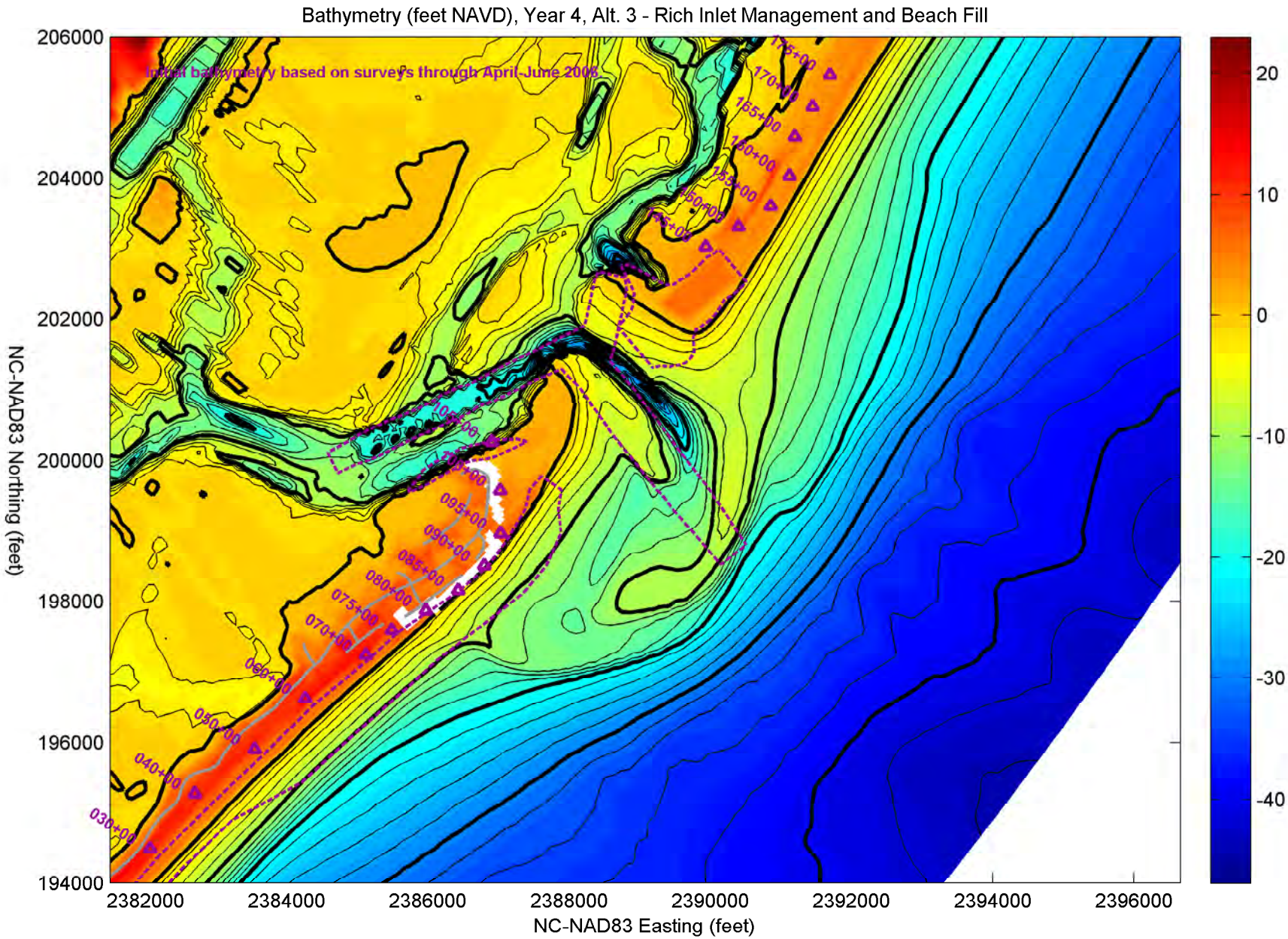
175+00


Bathymetry (feet NAVD), Year 4, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2006
206000
204000
202000
200000
198000
196000
194000
NC-NAD83 Northing (feet)
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
NC-NAD83 Easting (feet)
20
10
0
-10
-20
-30
-40
030+00
040+00
050+00
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075+00
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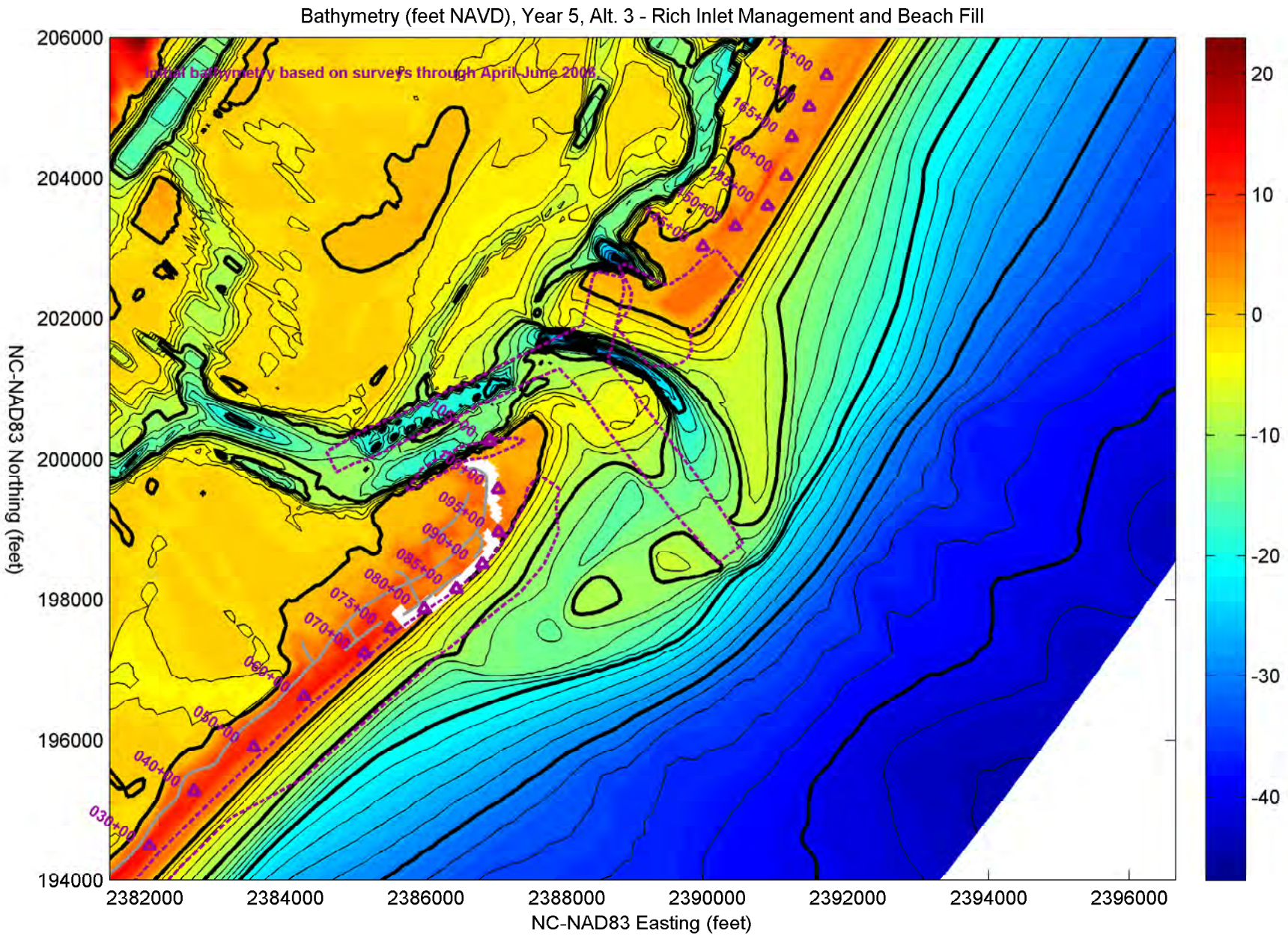
Bathymetry (feet NAVD), Year 5, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2005
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
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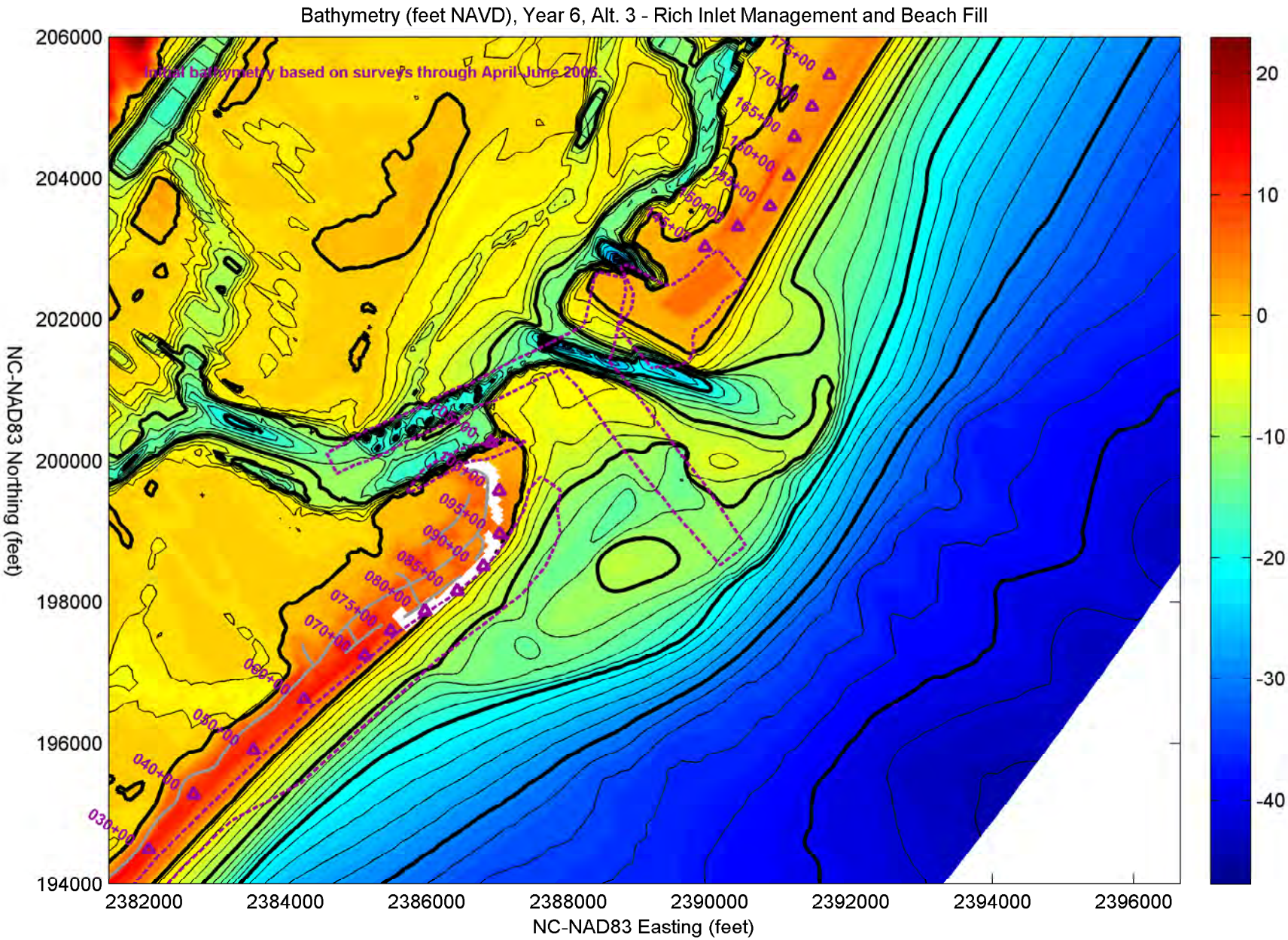
170+00
175+00


Bathymetry (feet NAVD), Year 6, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2005.
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
2392000
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2396000
20
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-30
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175+00
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165+00
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155+00
150+00
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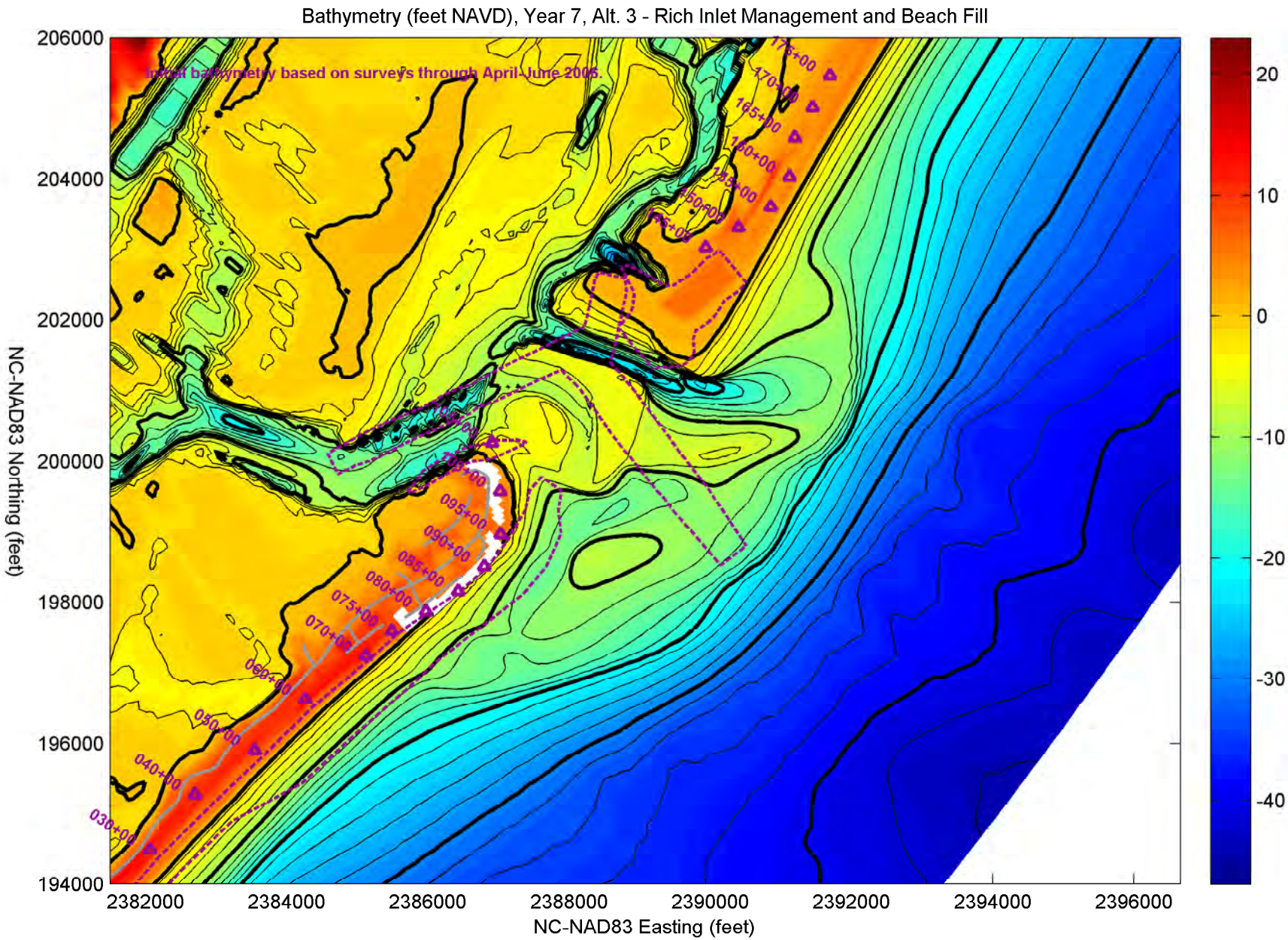
Bathymetry (feet NAVD), Year 7, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2005.
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
2392000
2394000
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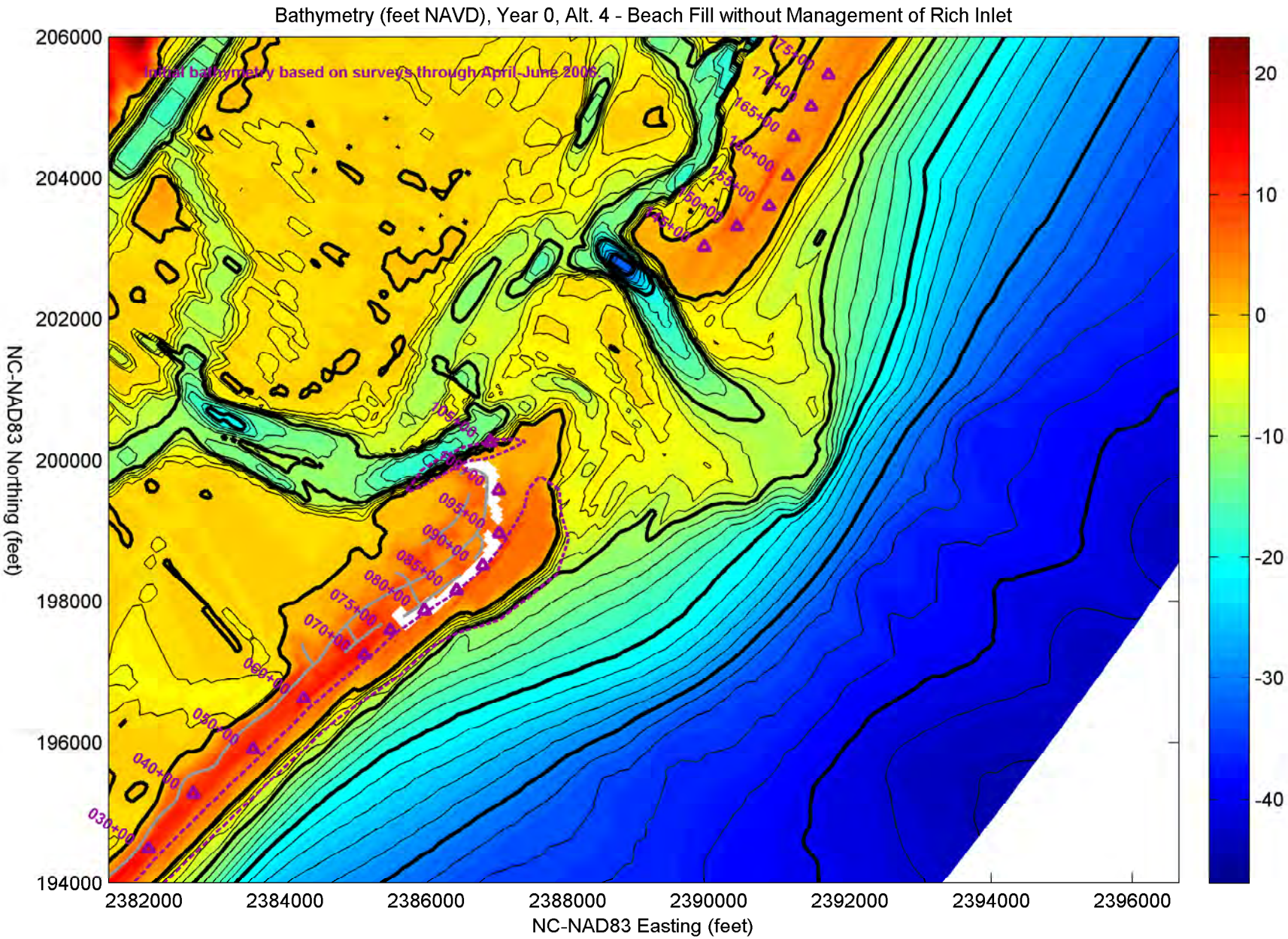
170+00
175+00


Bathymetry (feet NAVD), Year 0, Alt. 4 - Beach Fill without Management of Rich Inlet
Initial bathymetry based on surveys through April-June 2005
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
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2390000
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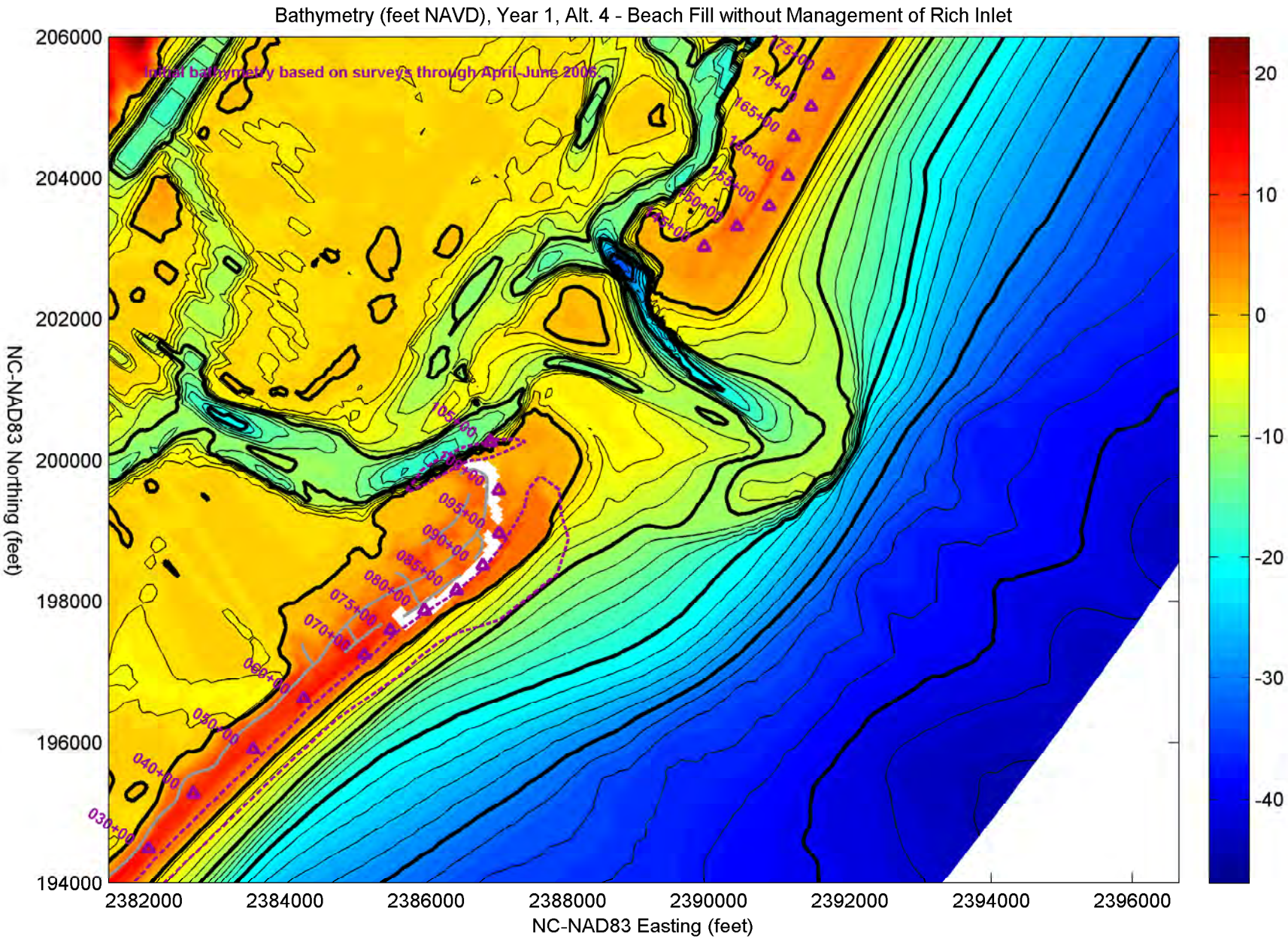
Bathymetry (feet NAVD), Year 1, Alt. 4 - Beach Fill without Management of Rich Inlet
Initial bathymetry based on surveys through April-June 2005
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
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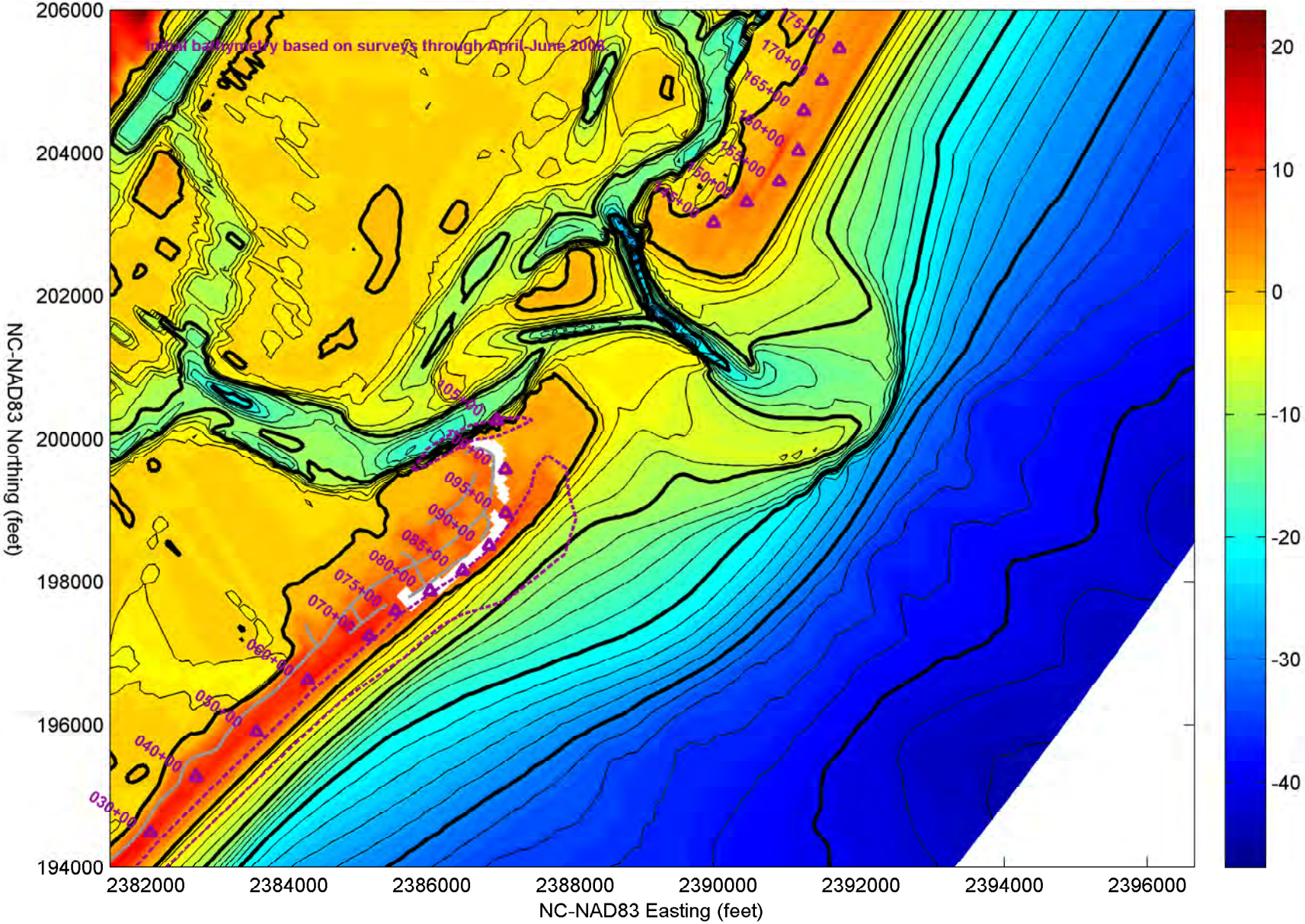
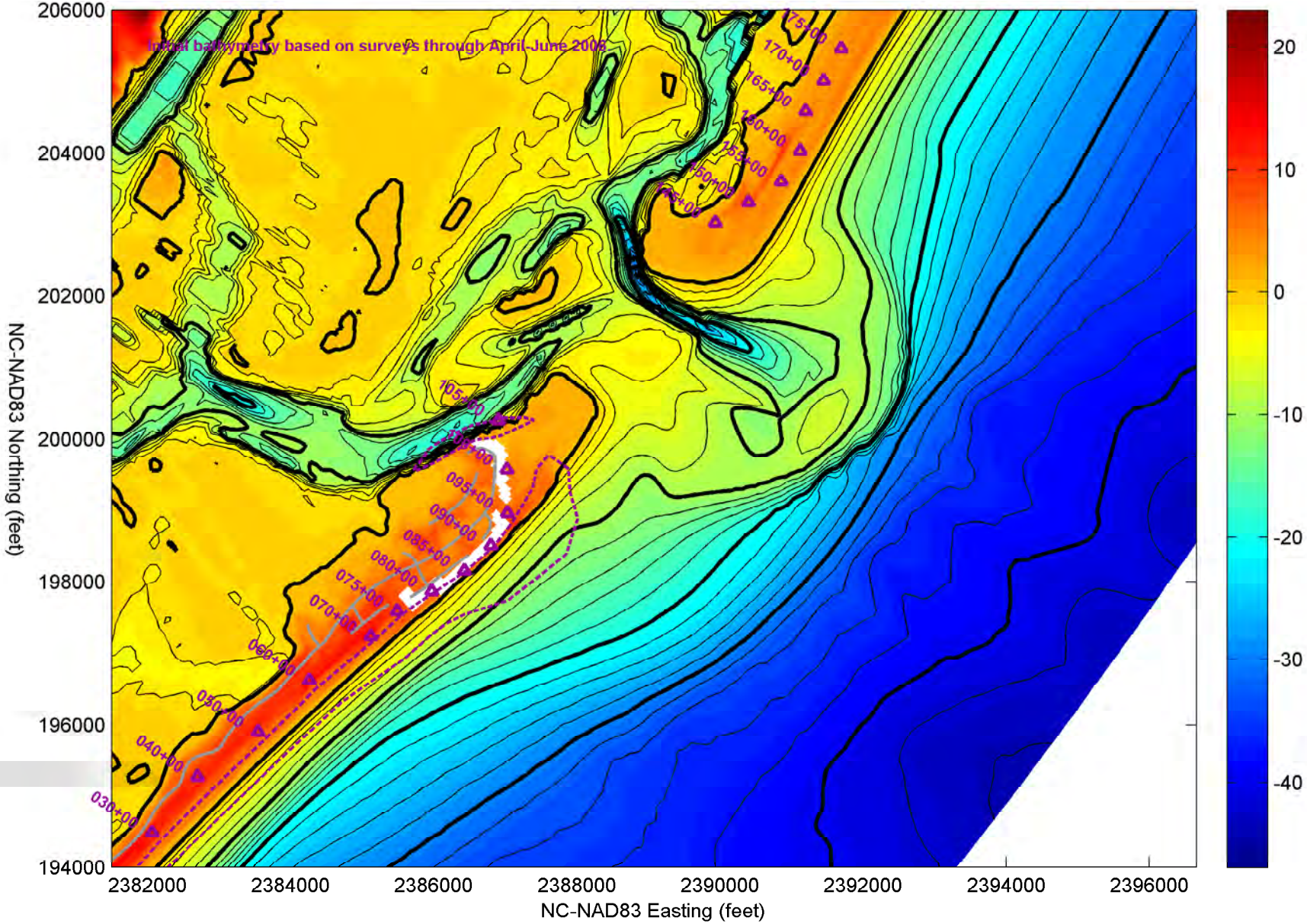
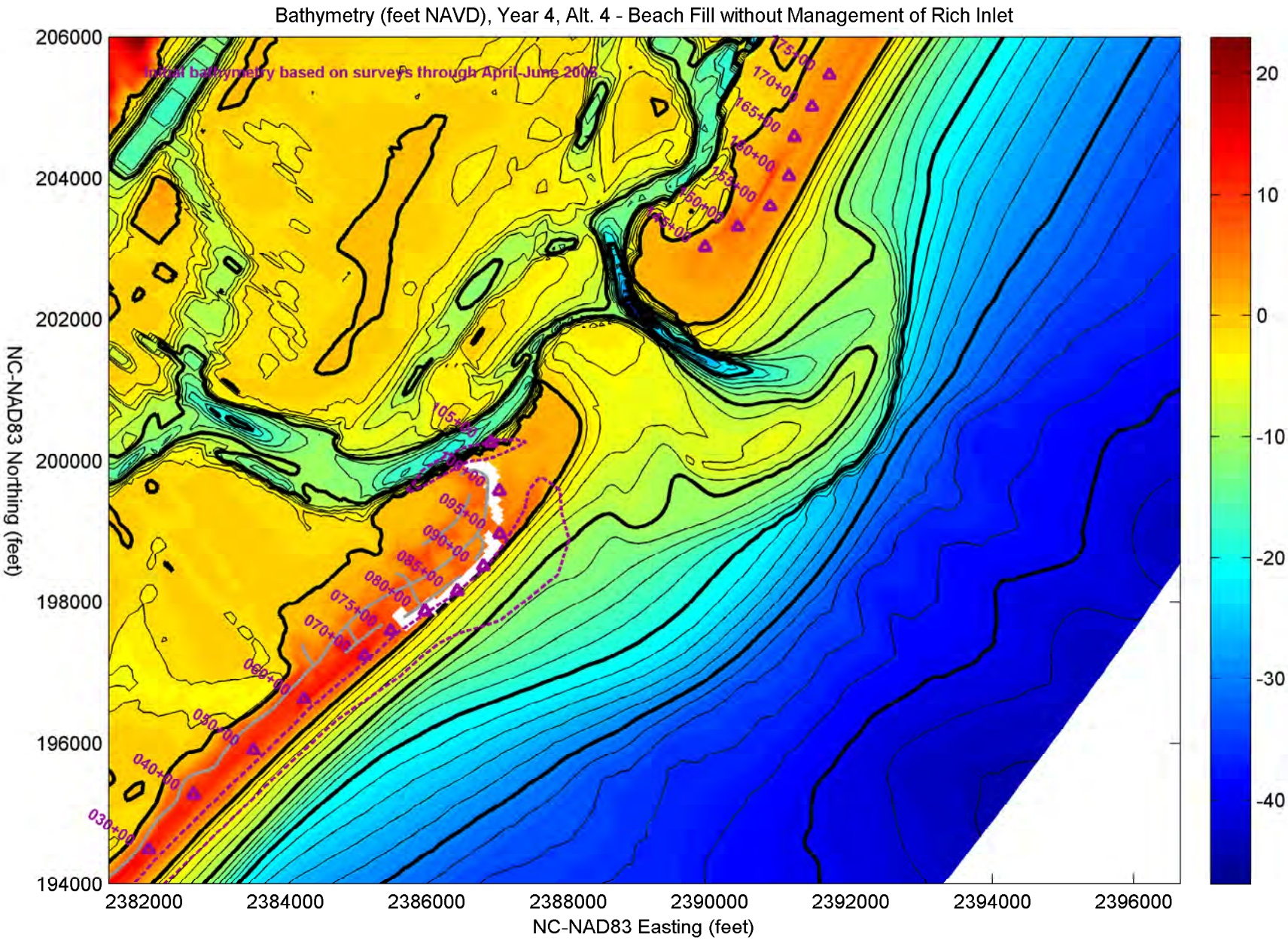
Bathymetry (feet NAVD), Year 2, Alt. 4 - Beach Fill without Management of Rich Inlet



Bathymetry (feet NAVD), Year 3, Alt. 4 - Beach Fill without Management of Rich Inlet




Bathymetry (feet NAVD), Year 4, Alt. 4 - Beach Fill without Management of Rich Inlet
Initial bathymetry based on surveys through April-June 2006
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
20
10
0
-10
-20
-30
-40
175+00
170+00
165+00
160+00
155+00
150+00
145+00
105+00
100+00
095+00
090+00
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080+00
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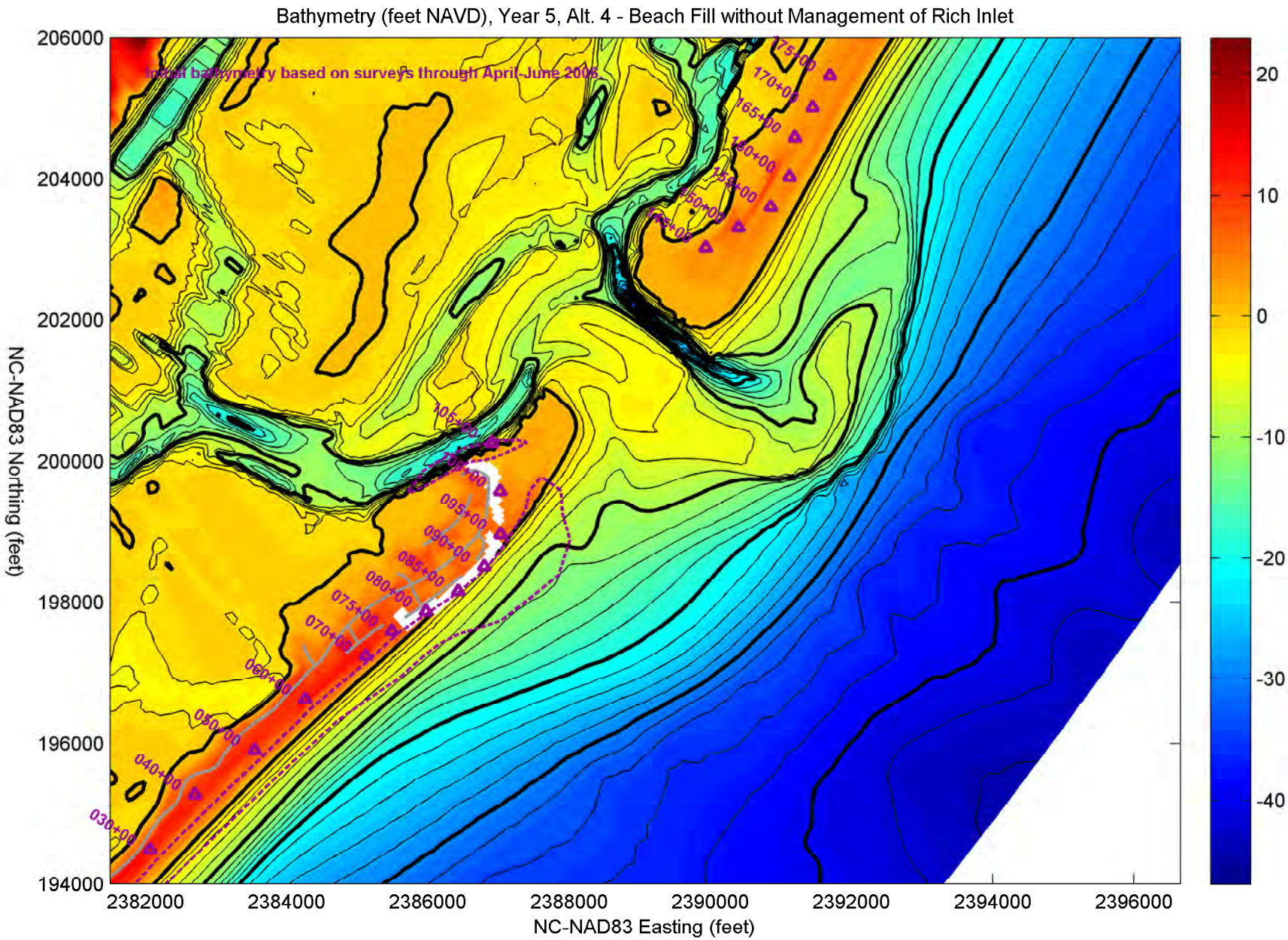
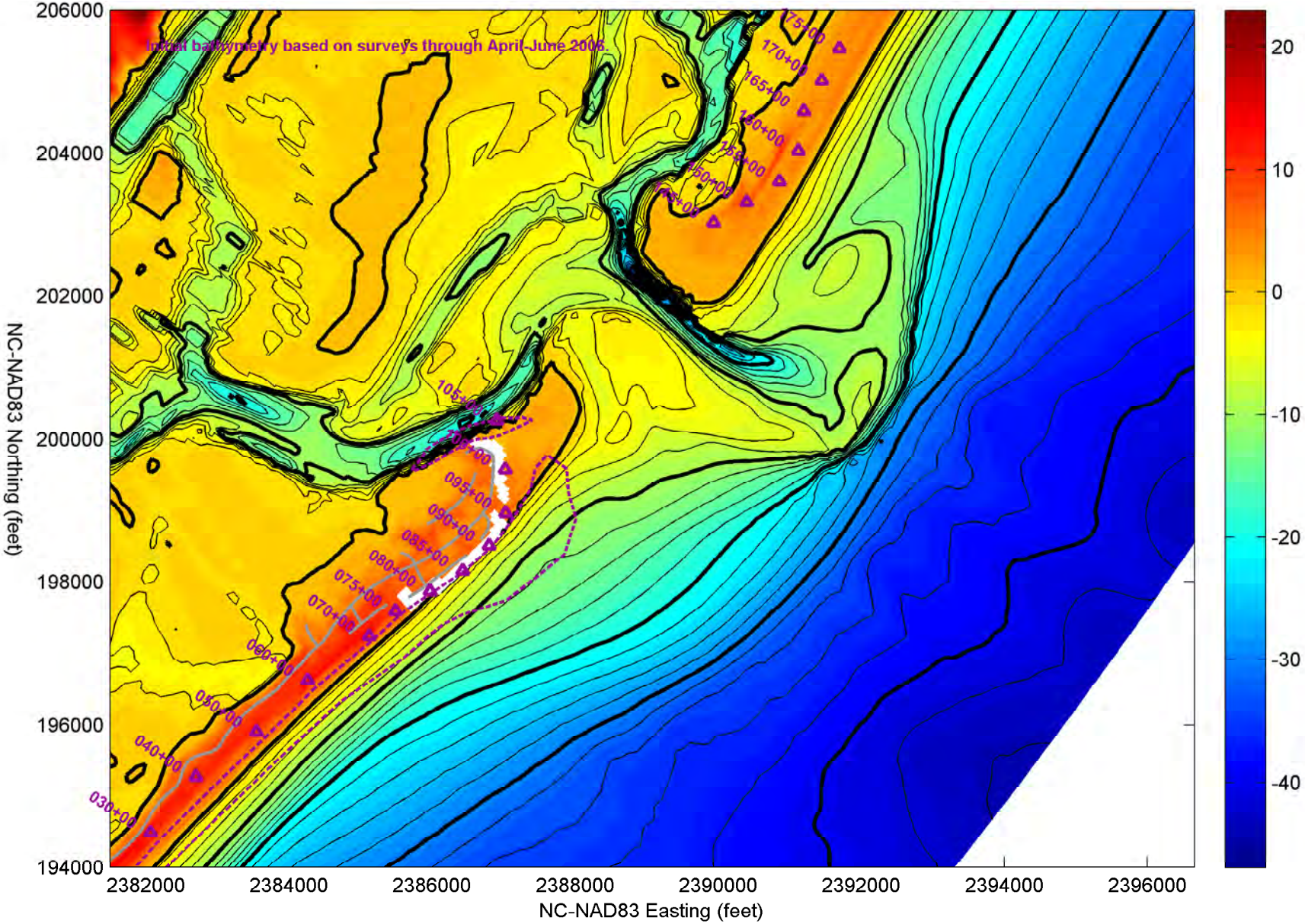
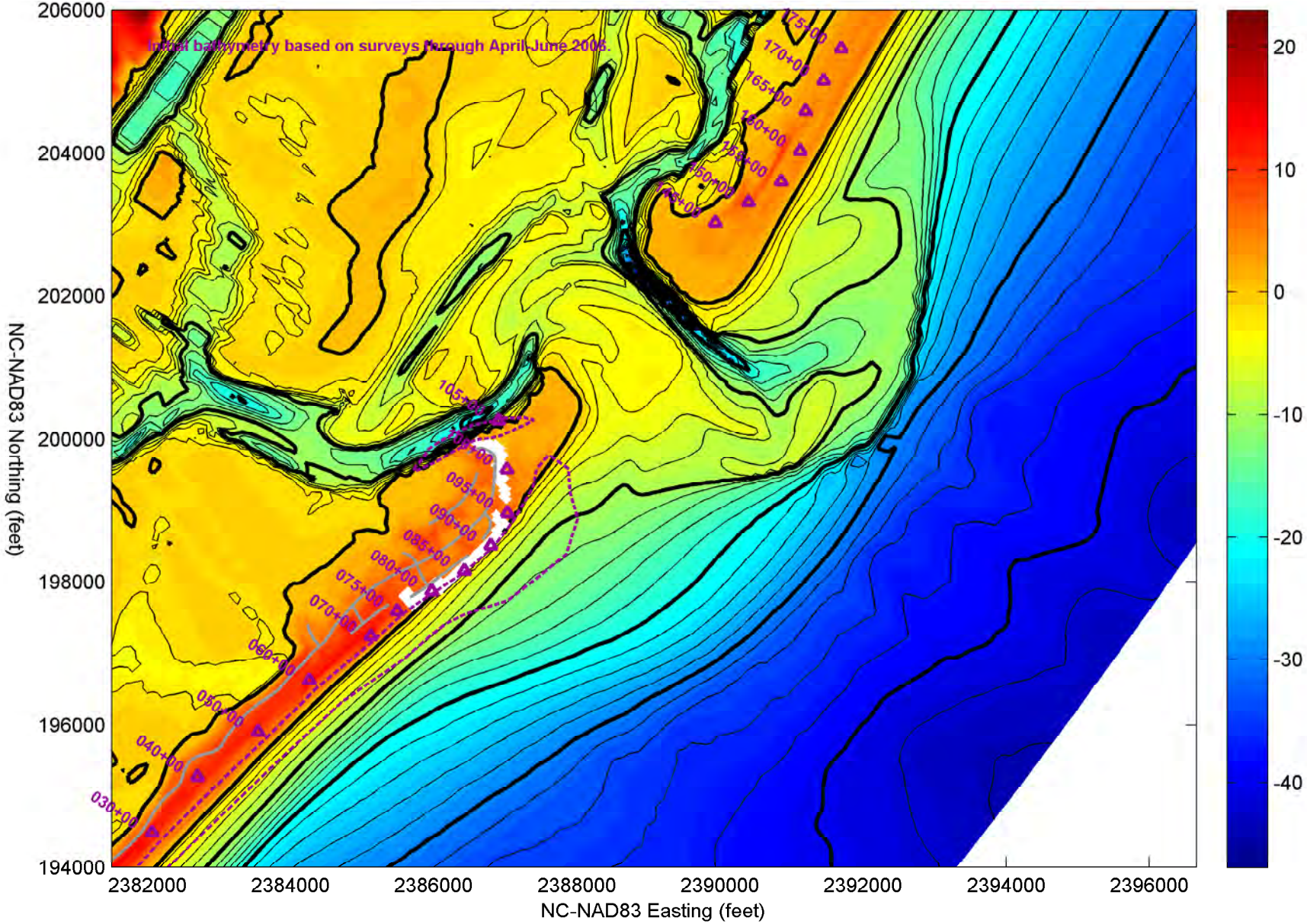
070+00
060+00
050+00
040+00
030+00


Bathymetry (feet NAVD), Year 5, Alt. 4 - Beach Fill without Management of Rich Inlet
Initial bathymetry based on surveys through April-June 2005
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
20
10
0
-10
-20
-30
-40
030+00
040+00
050+00
060+00
070+00
075+00
080+00
085+00
090+00
095+00
100+00
105+00
150+00
155+00
160+00
165+00
170+00
175+00

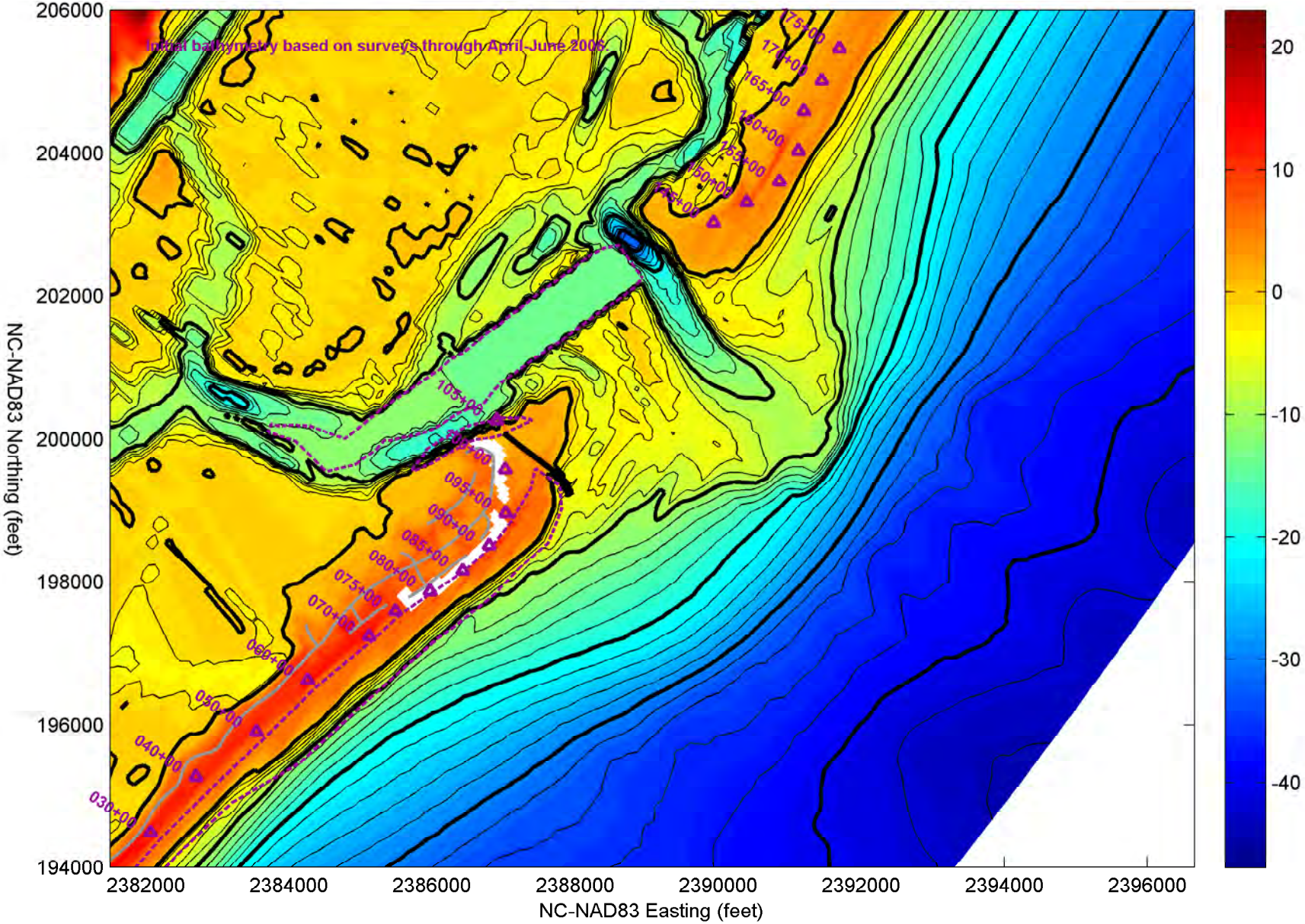
Bathymetry (feet NAVD), Year 6, Alt. 4 - Beach Fill without Management of Rich Inlet



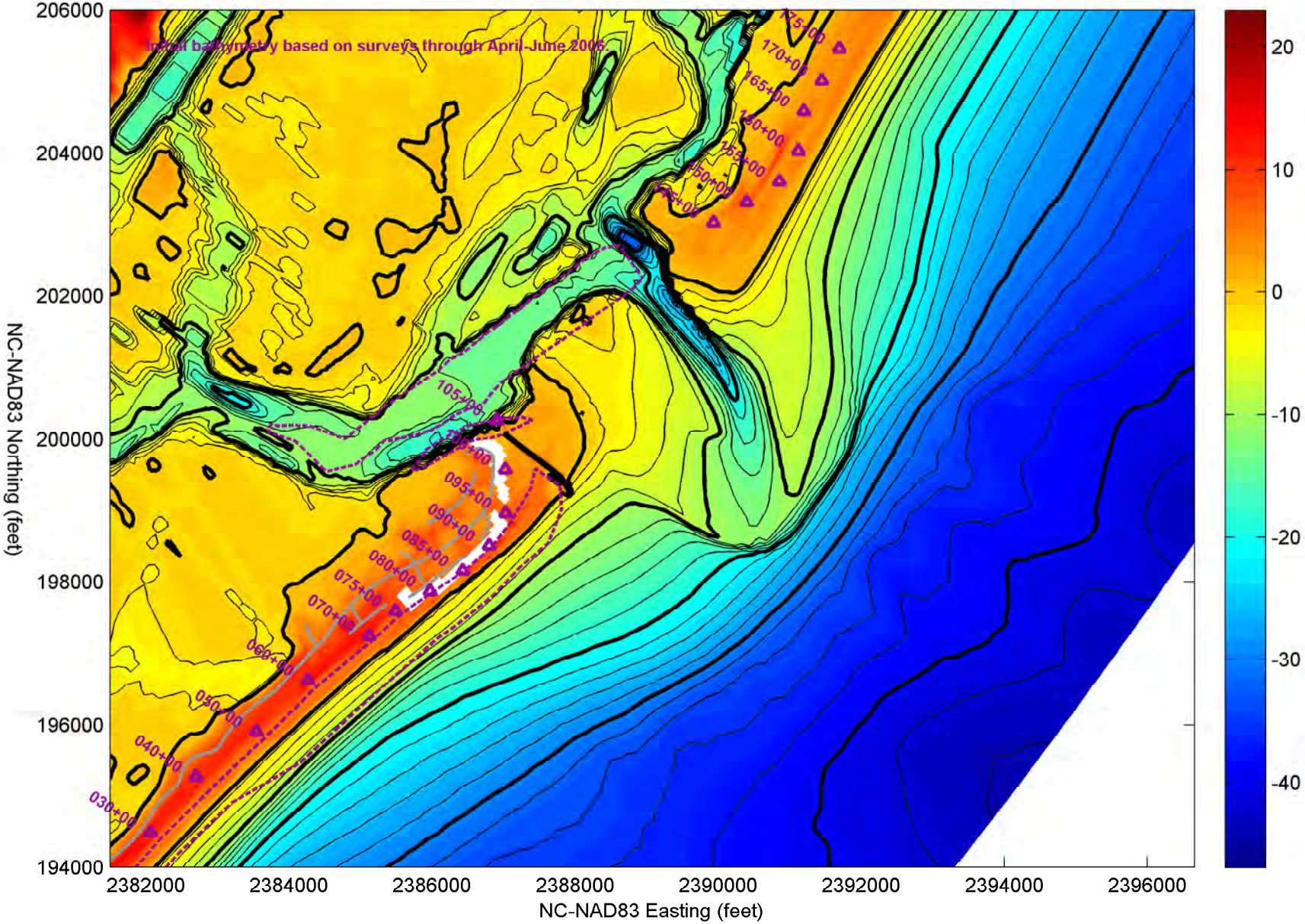
Bathymetry (feet NAVD), Year 7, Alt. 4 - Beach Fill without Management of Rich Inlet



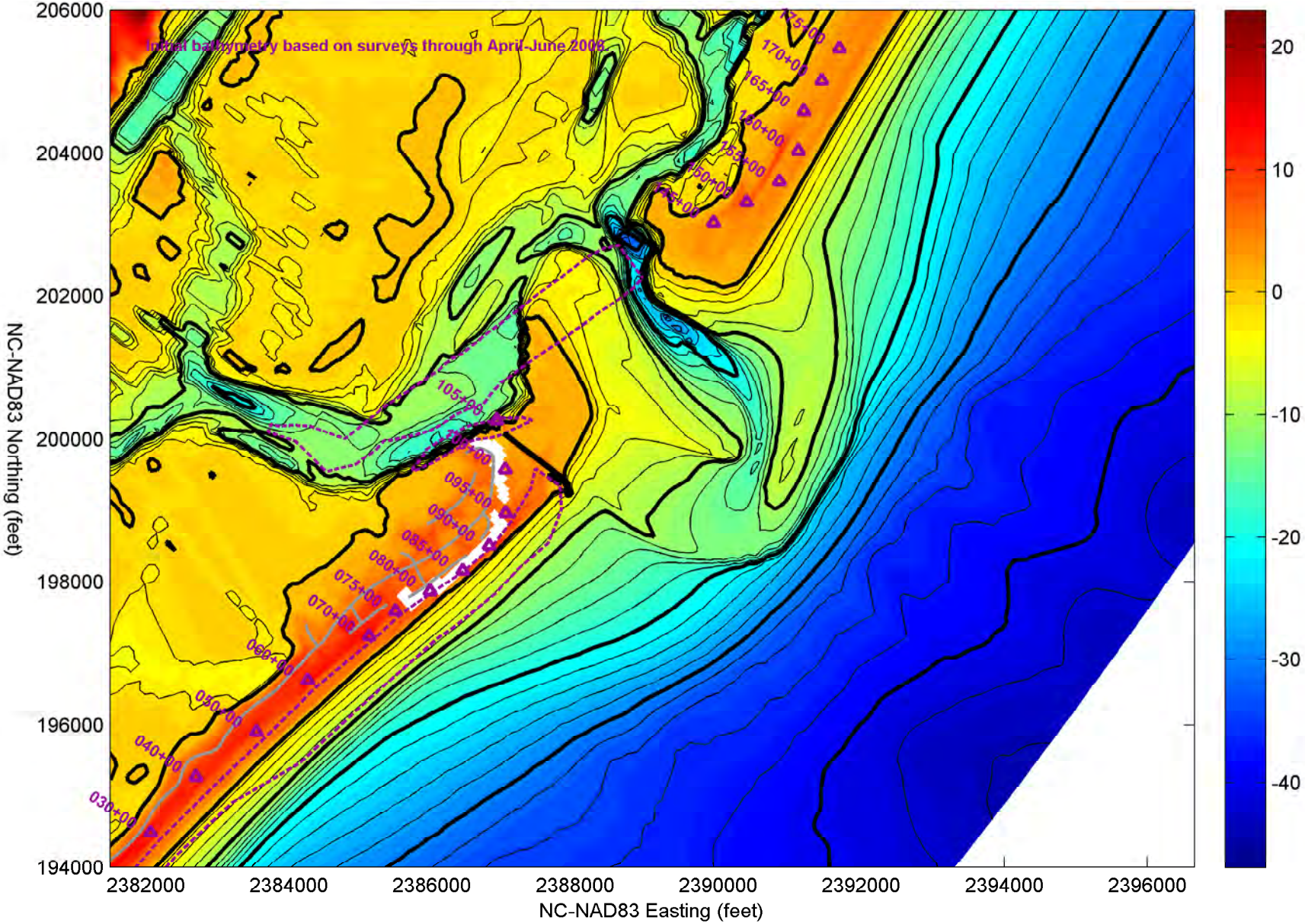
Bathymetry (feet NAVD), Year 0, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



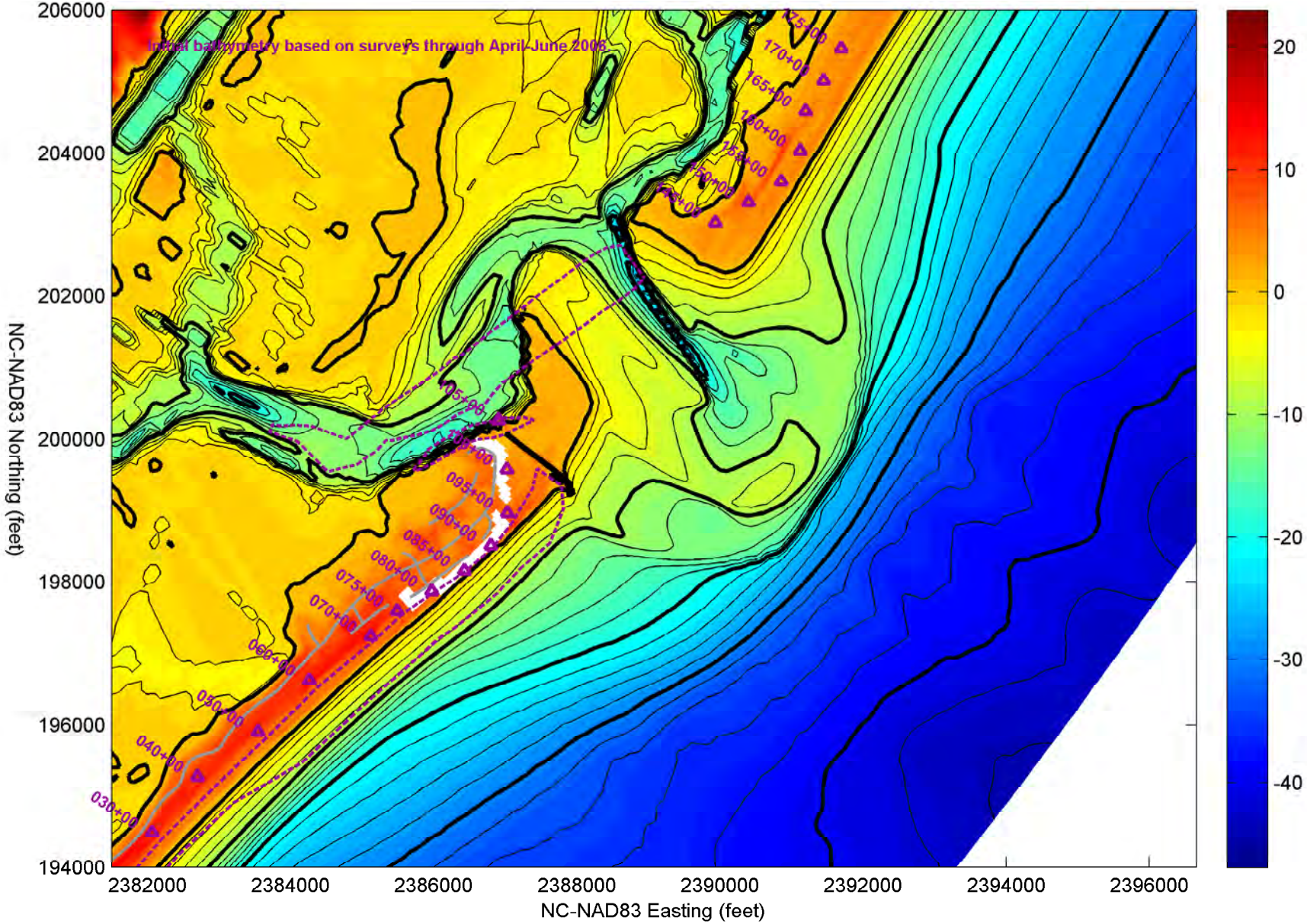
Bathymetry (feet NAVD), Year 1, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



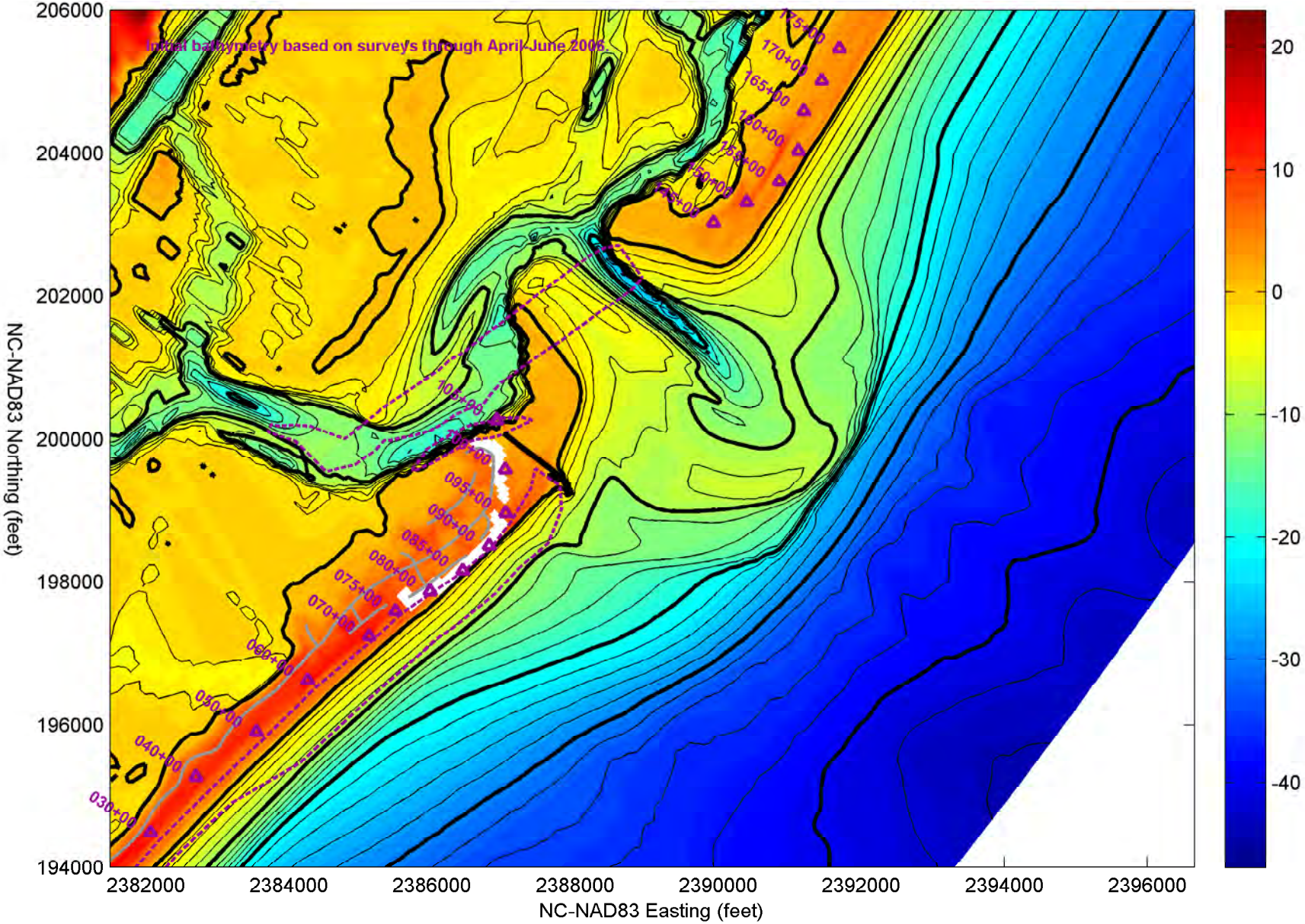
Bathymetry (feet NAVD), Year 2, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



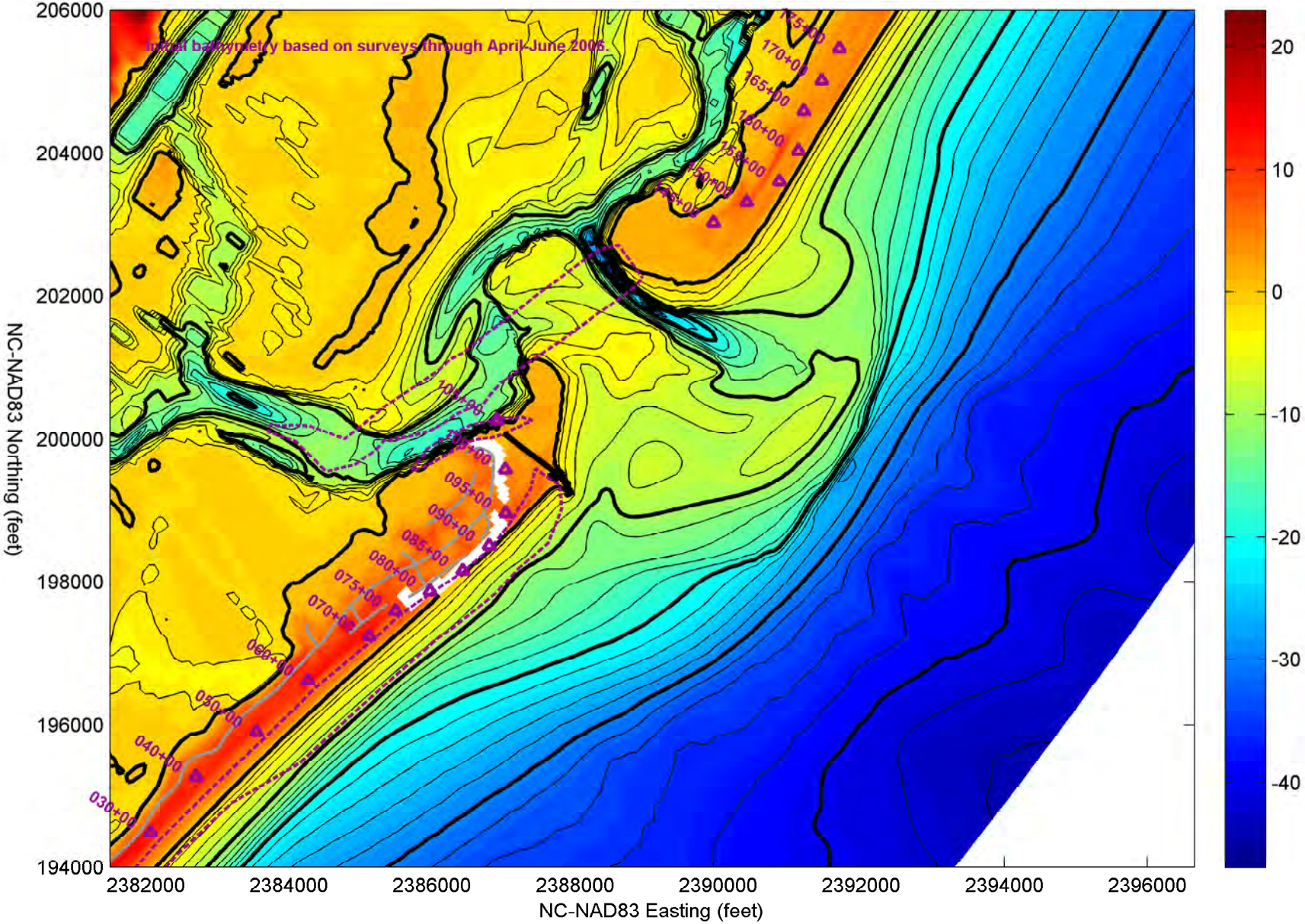
Bathymetry (feet NAVD), Year 3, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



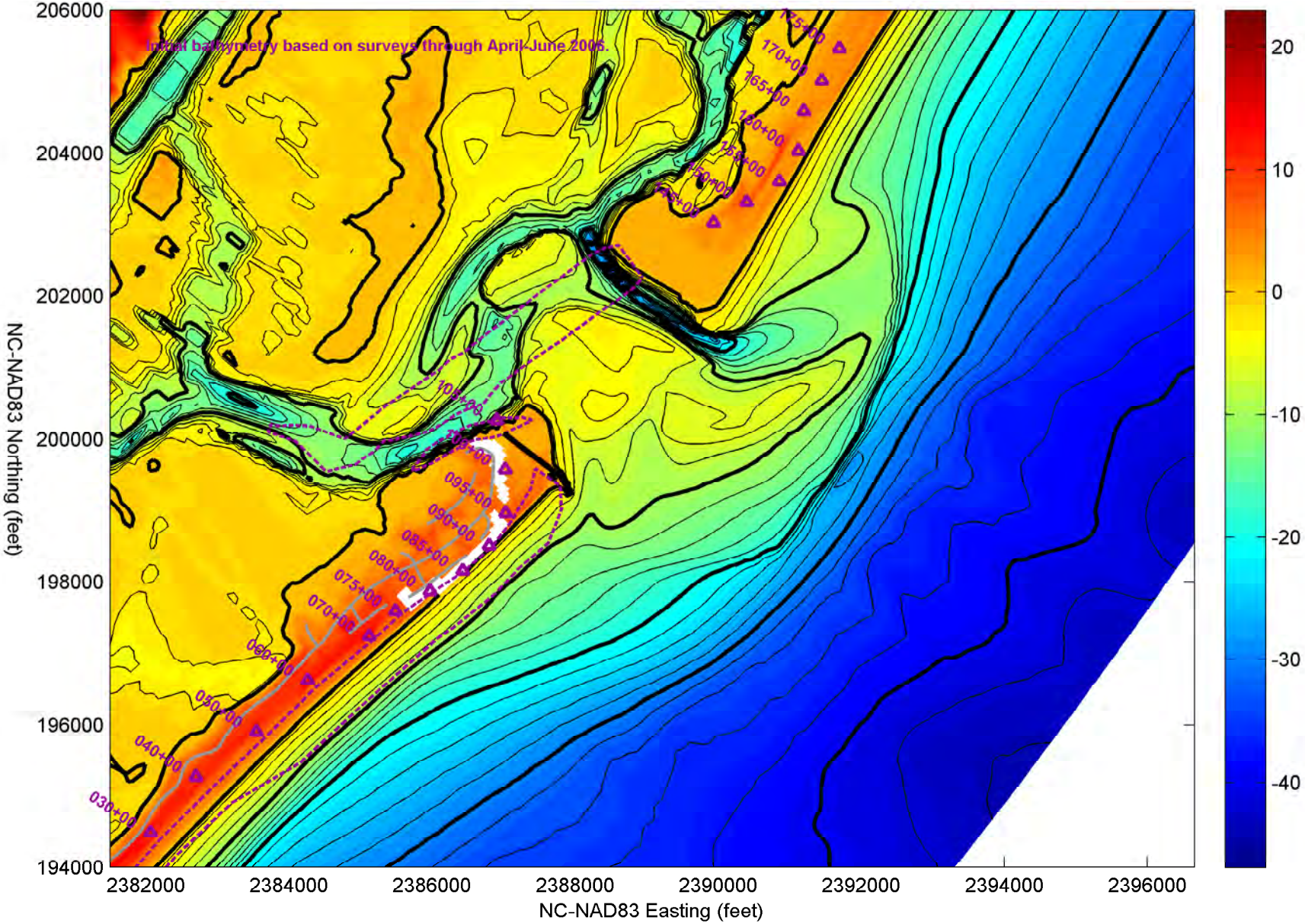
Bathymetry (feet NAVD), Year 4, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



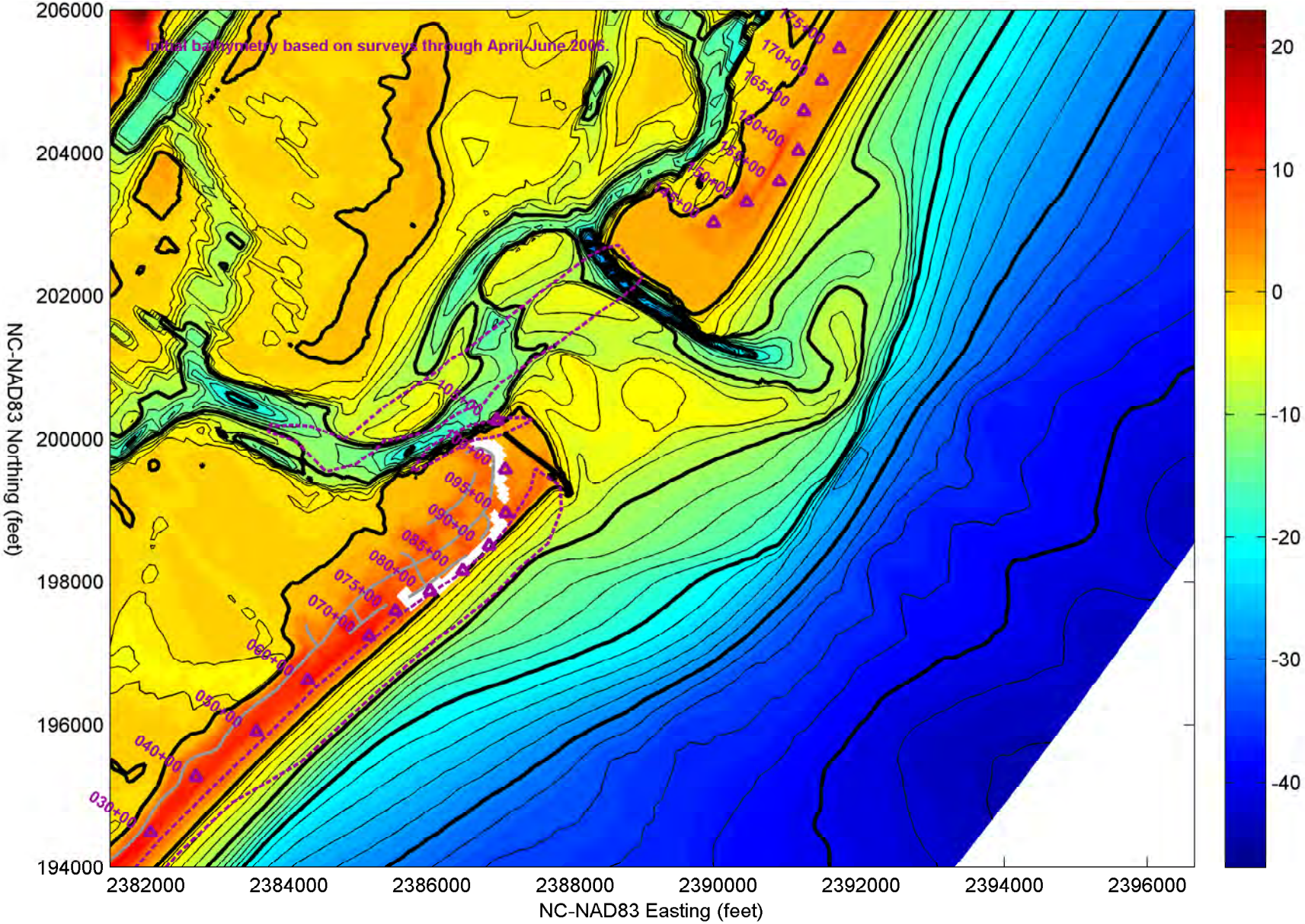
Bathymetry (feet NAVD), Year 5, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



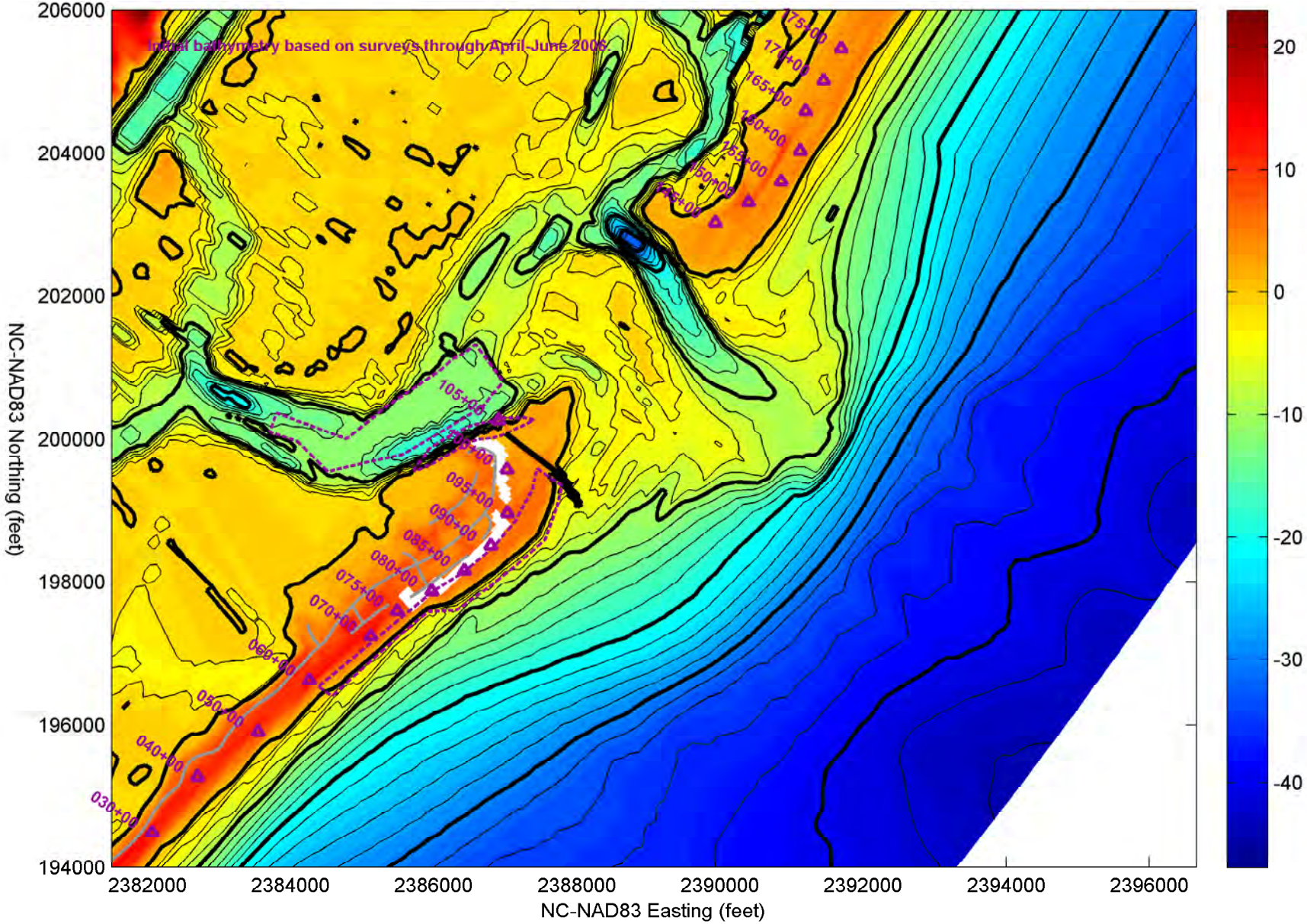
Bathymetry (feet NAVD), Year 6, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



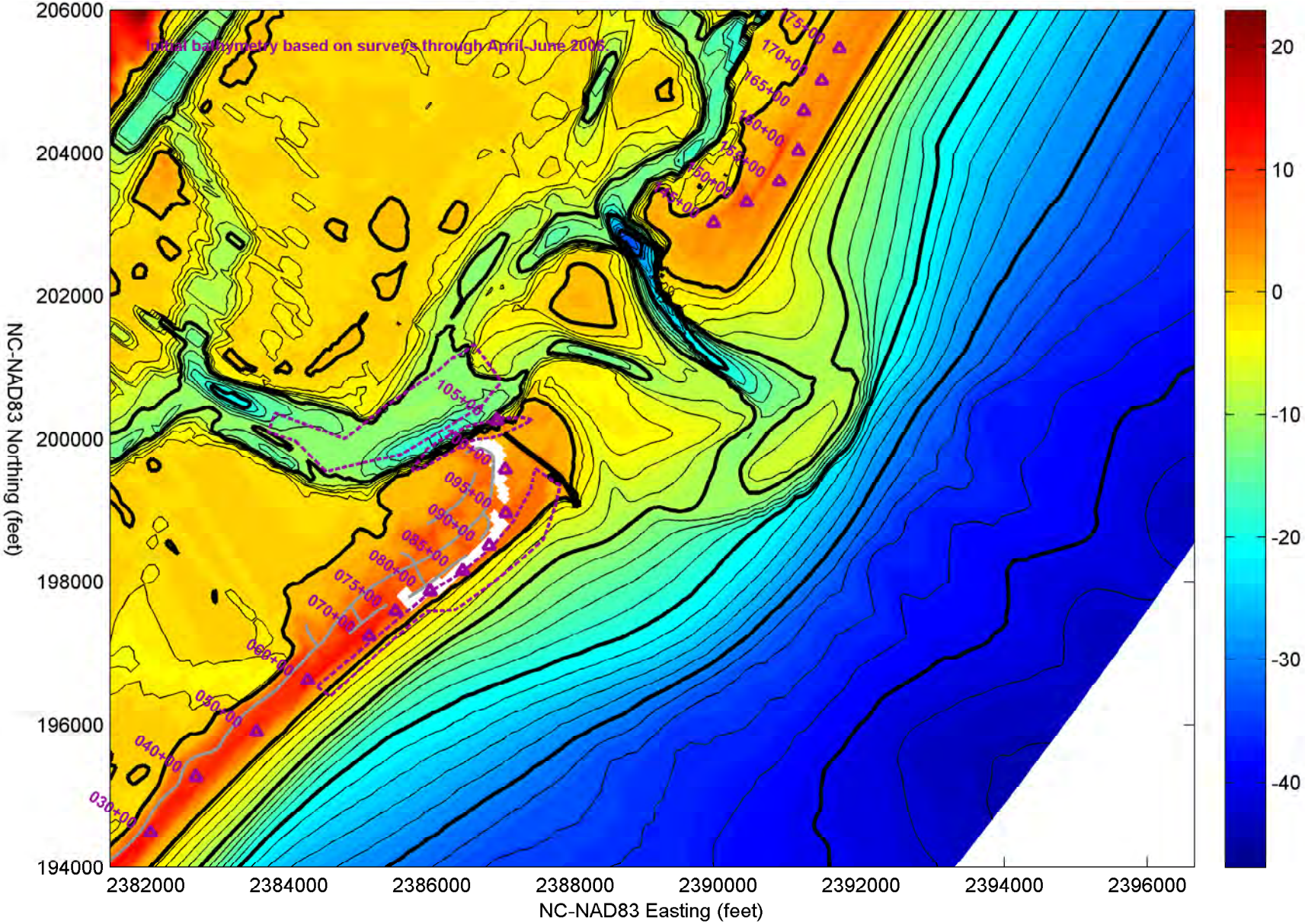
Bathymetry (feet NAVD), Year 7, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)

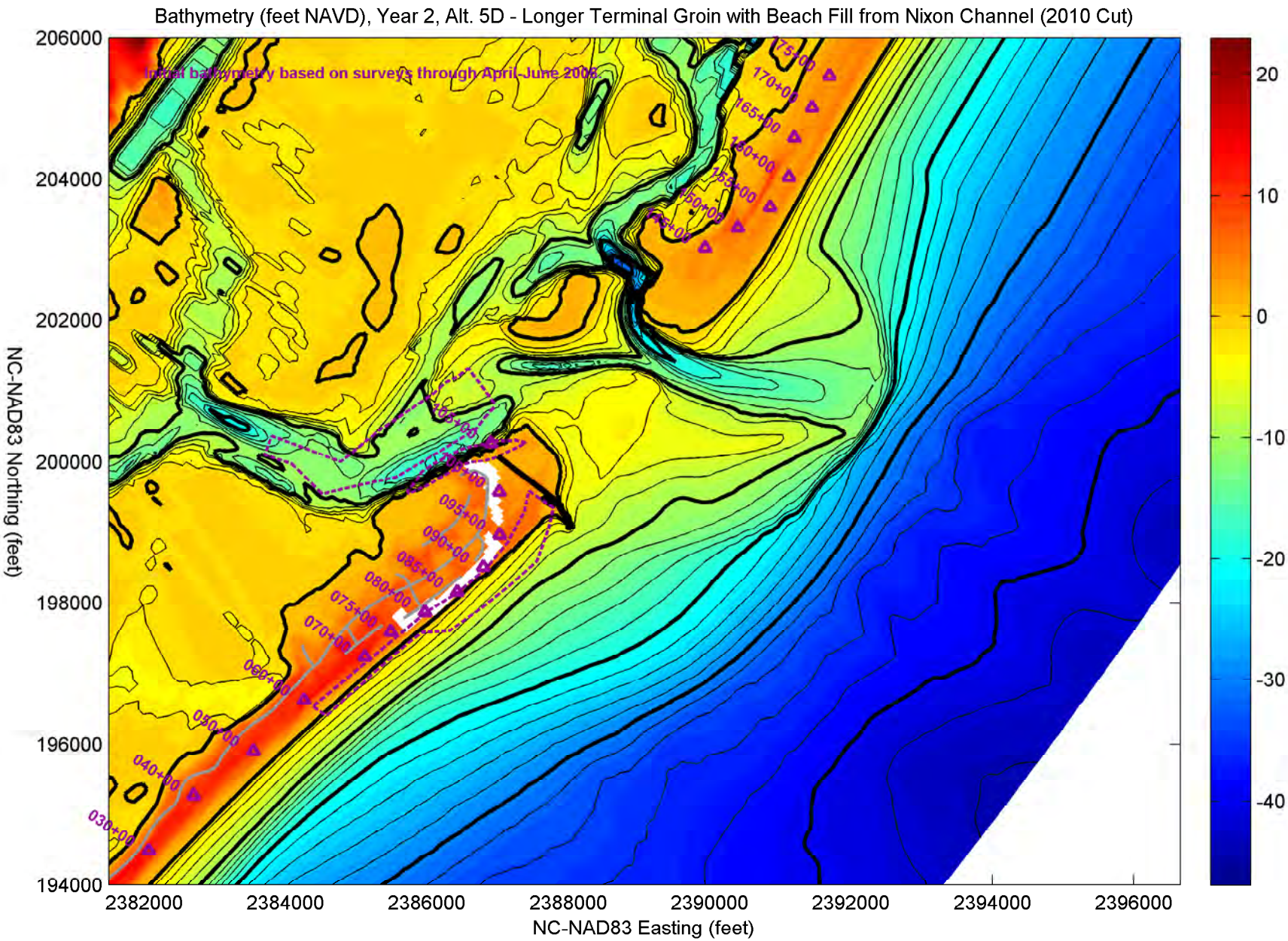


Bathymetry (feet NAVD), Year 0, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)

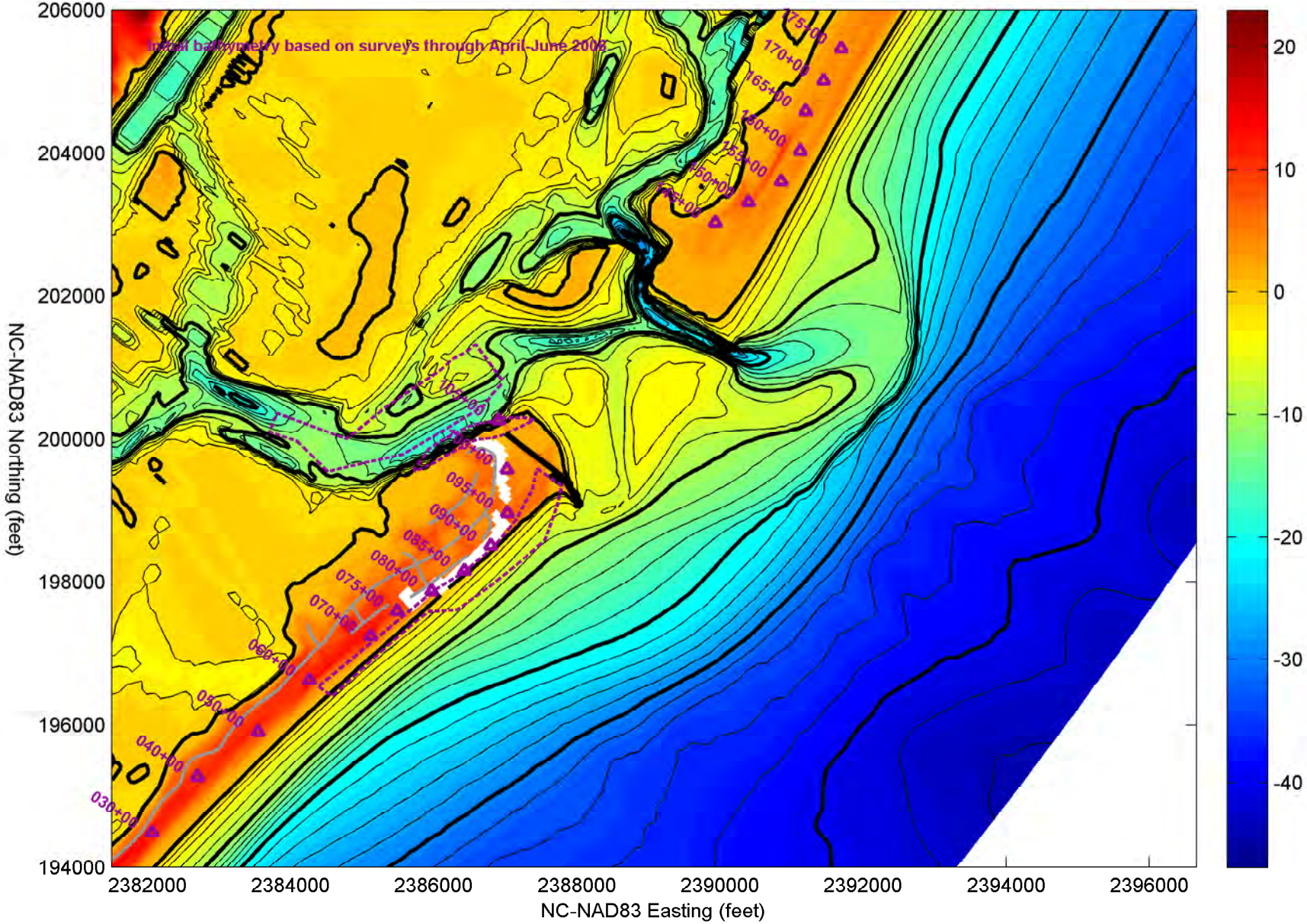


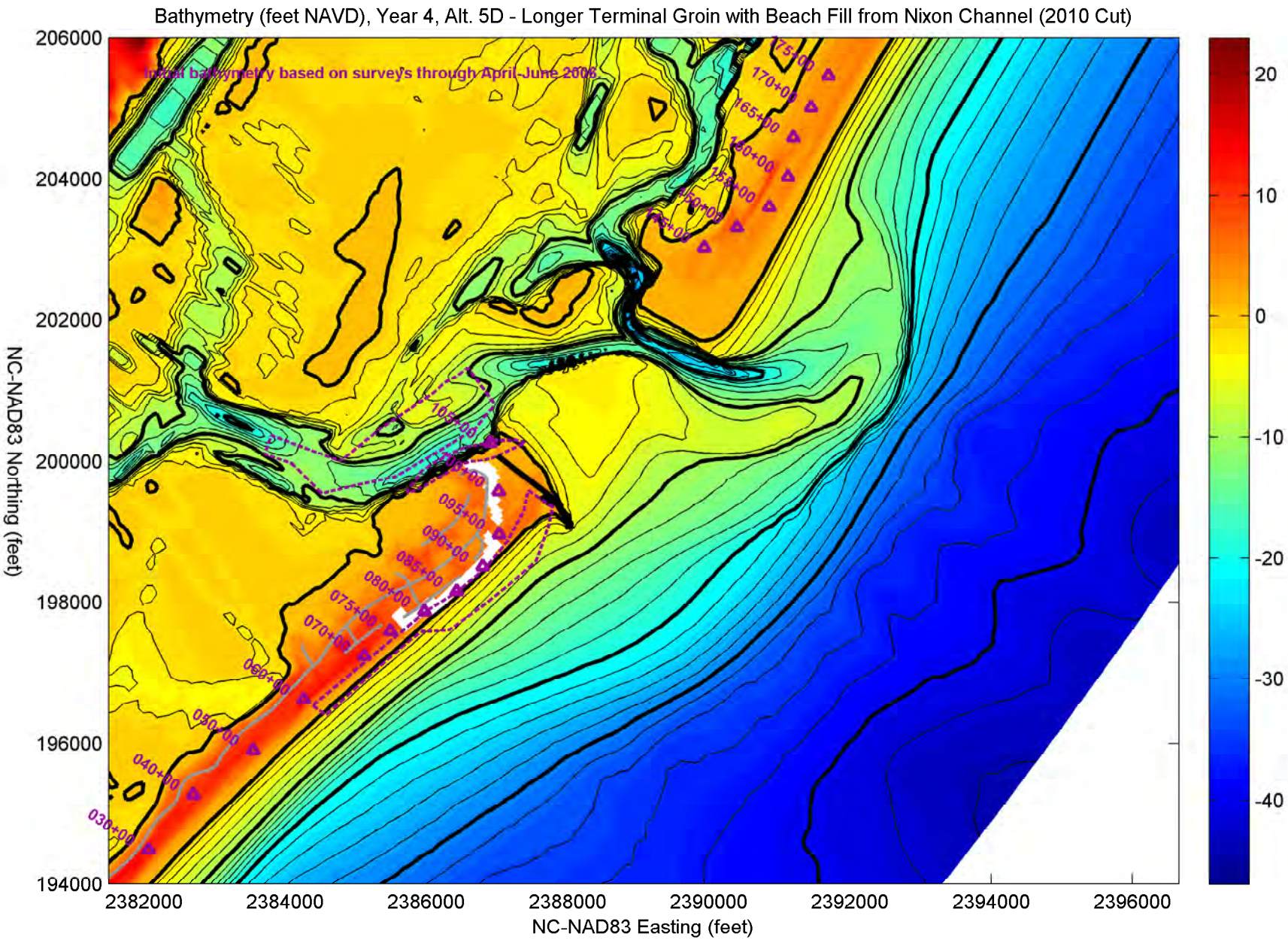
Bathymetry (feet NAVD), Year 1, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



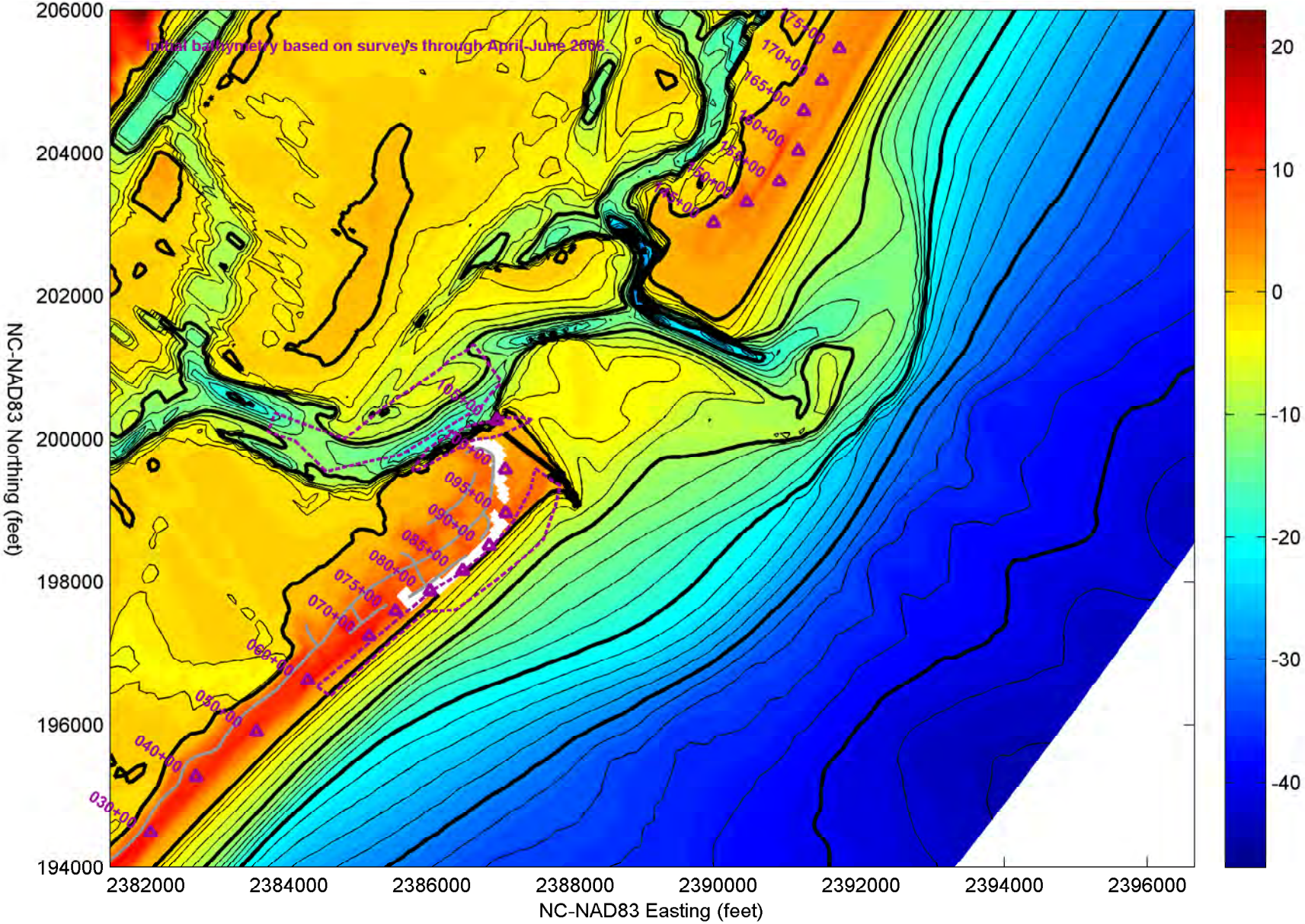

Bathymetry (feet NAVD), Year 2, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)
Initial bathymetry based on surveys through April-June 2006
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
20
10
0
-10
-20
-30
-40
175+00
170+00
165+00
160+00
155+00
150+00
145+00
105+00
100+00
095+00
090+00
085+00
080+00
075+00
070+00
060+00
050+00
040+00
030+00

Bathymetry (feet NAVD), Year 3, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)

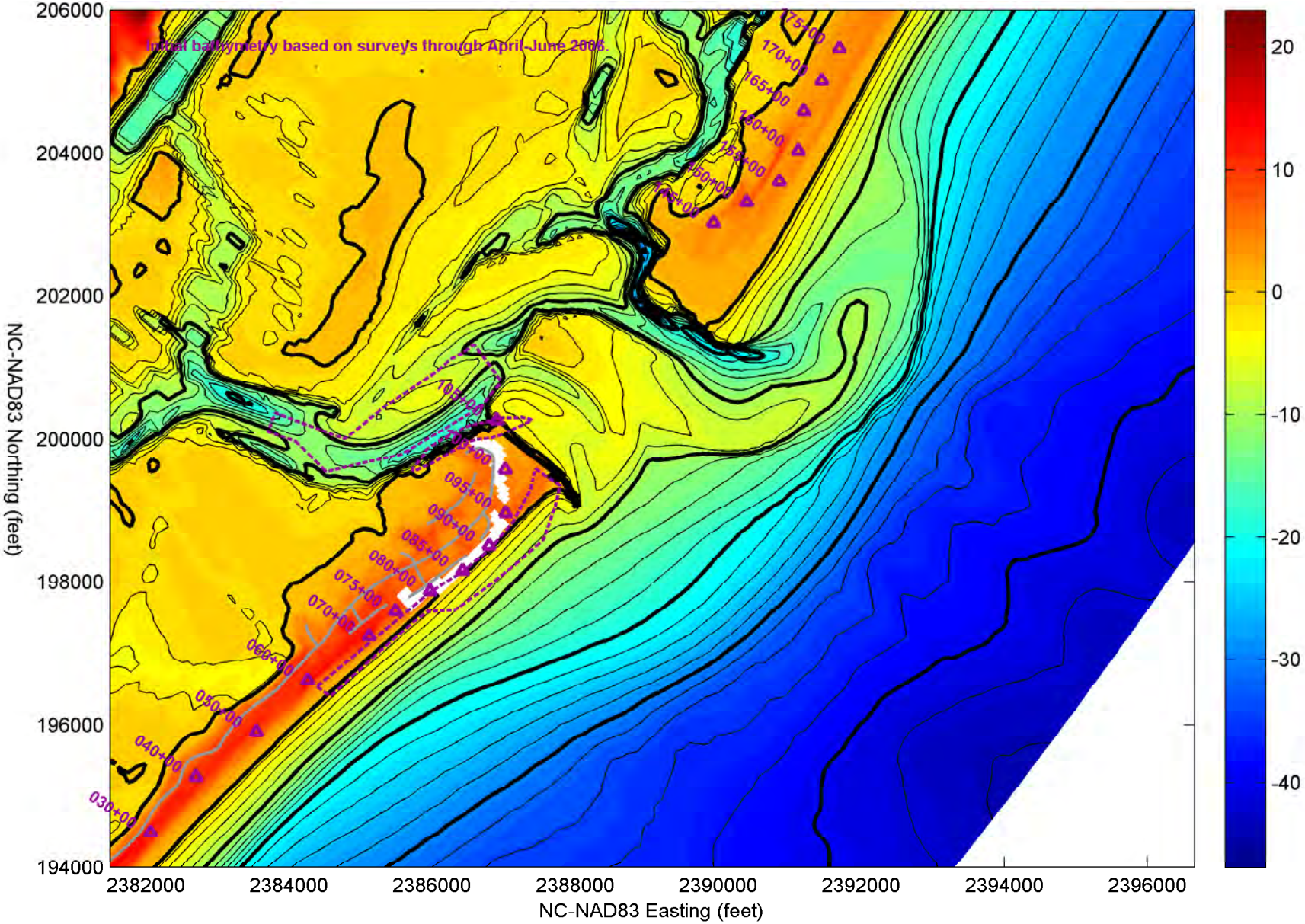



Bathymetry (feet NAVD), Year 4, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)
Initial bathymetry based on surveys through April-June 2006
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
20
10
0
-10
-20
-30
-40
030+00
040+00
050+00
060+00
070+00
075+00
080+00
085+00
090+00
095+00
100+00
105+00
150+00
155+00
160+00
165+00
170+00
175+00

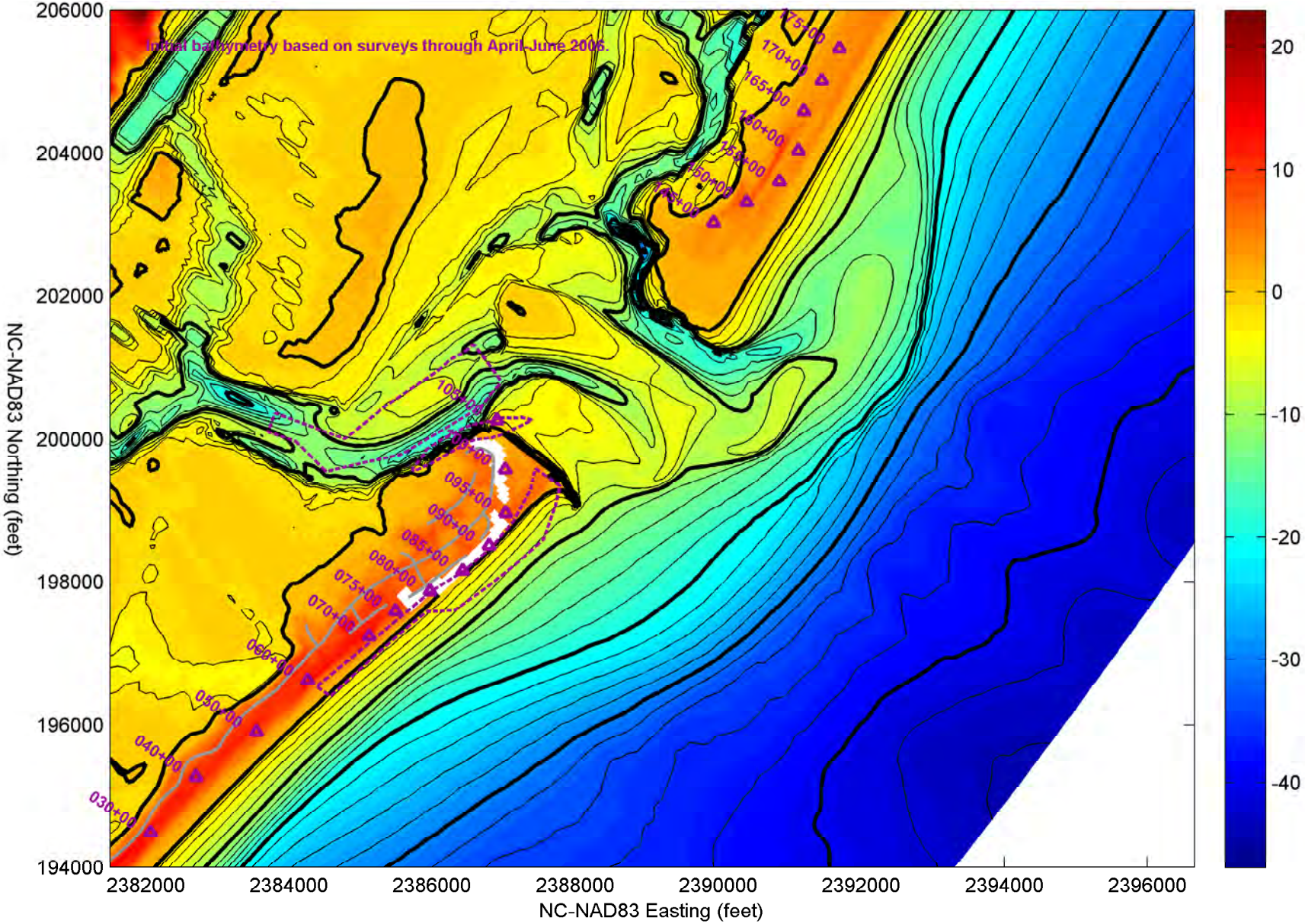
Bathymetry (feet NAVD), Year 5, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)

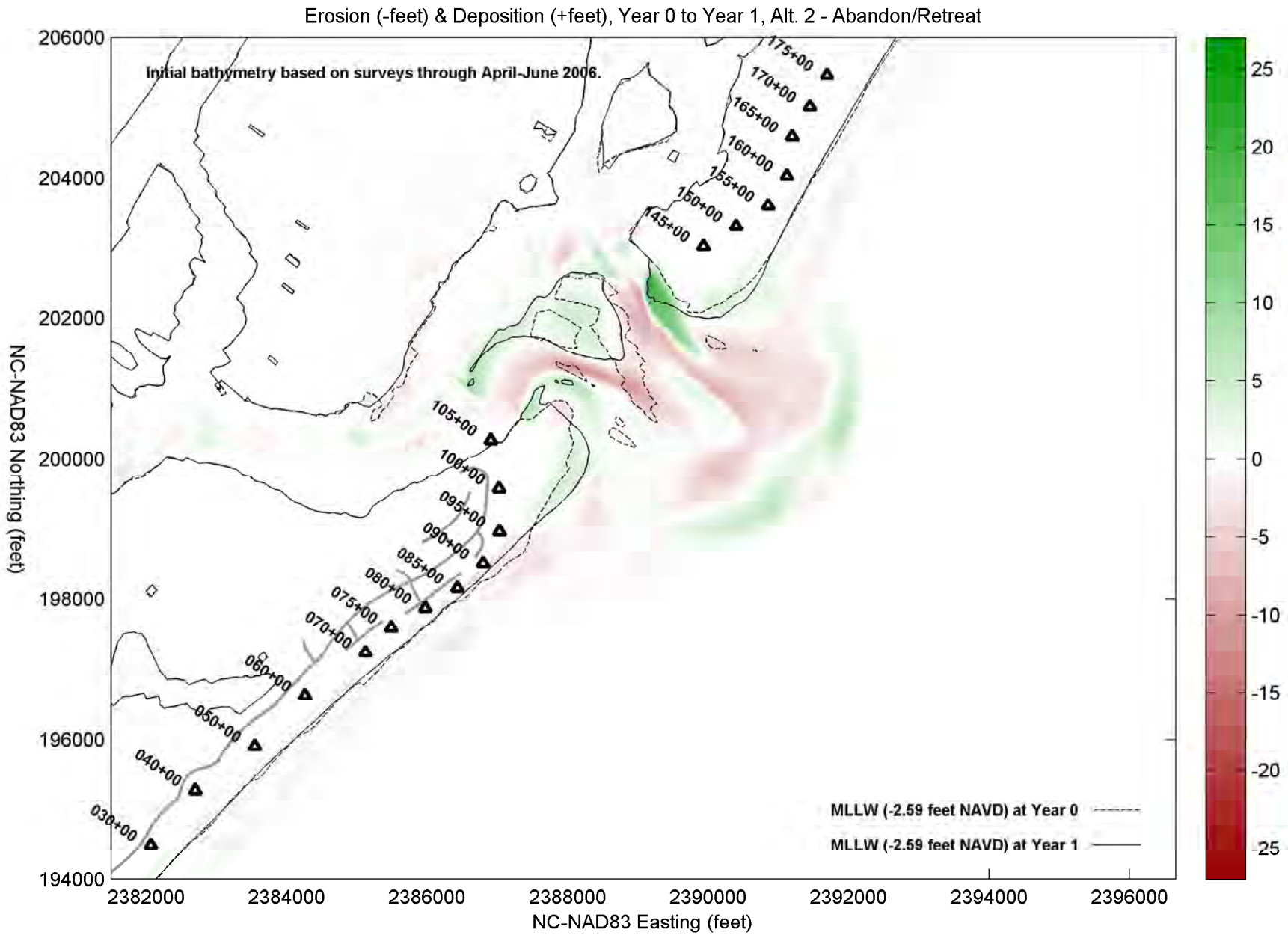


Bathymetry (feet NAVD), Year 6, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)

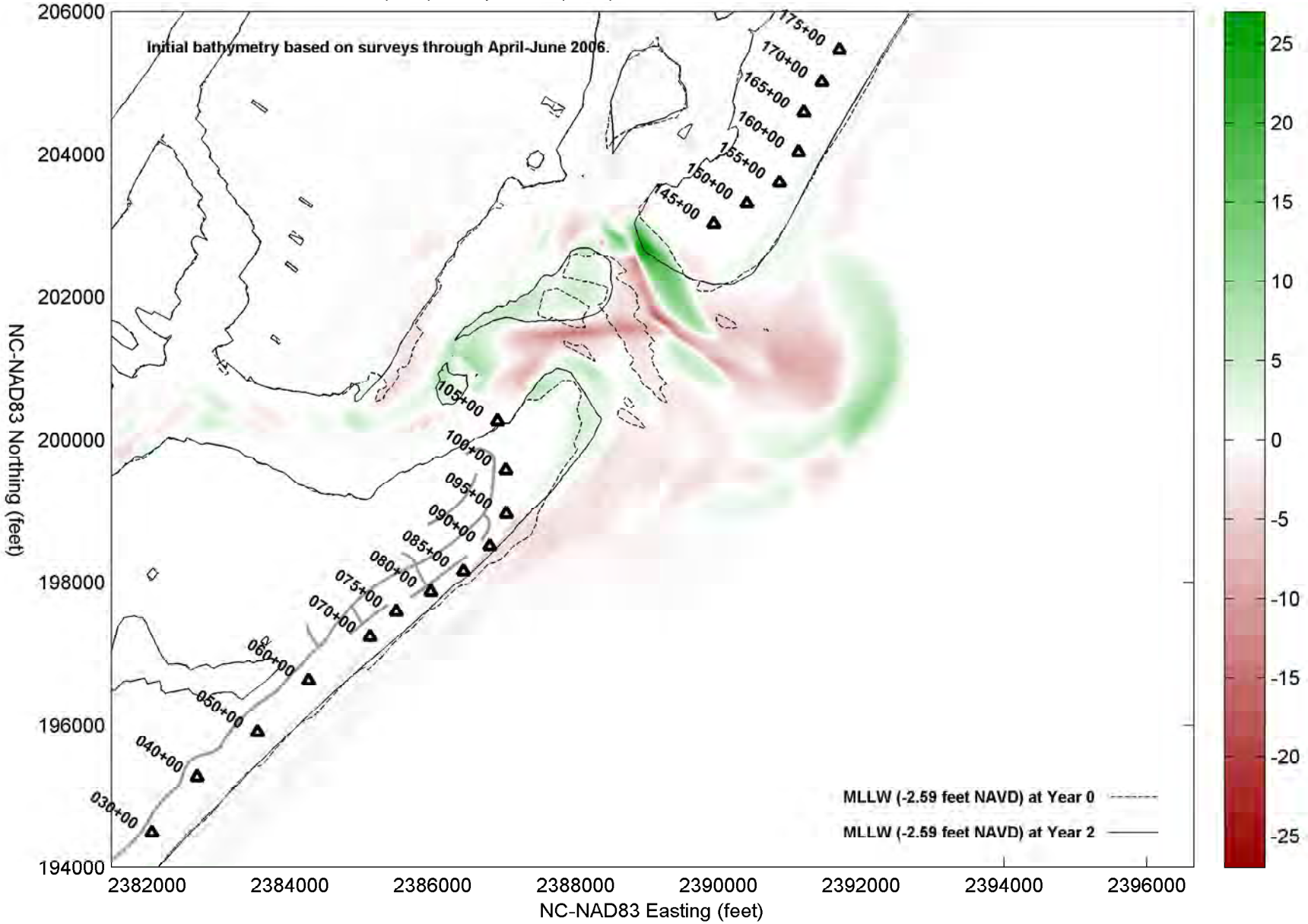


Bathymetry (feet NAVD), Year 7, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)

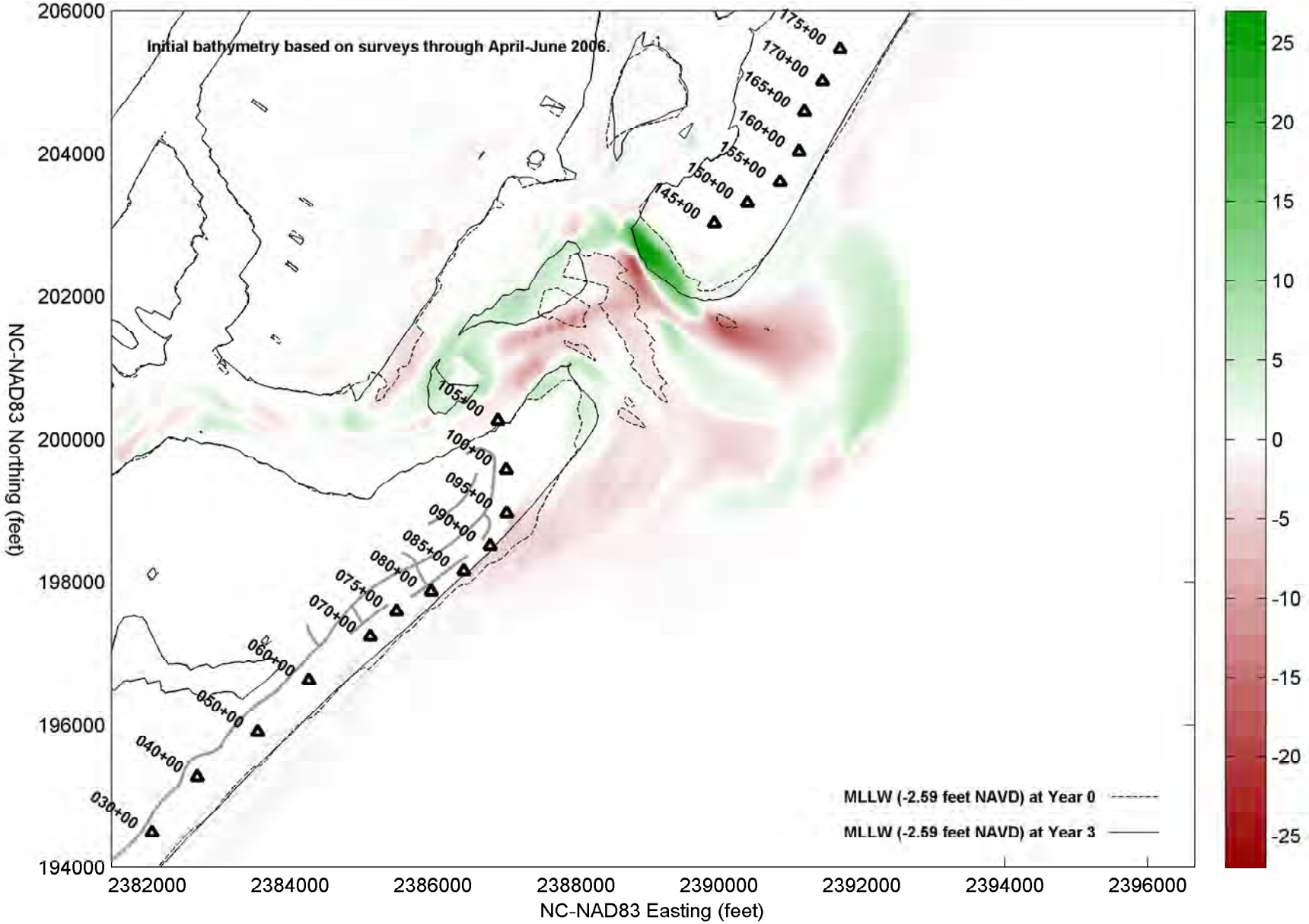



Erosion (-feet) & Deposition (+feet), Year 0 to Year 1, Alt. 2 - Abandon/Retreat
Initial bathymetry based on surveys through April-June 2006.
175+00
170+00
165+00
160+00
155+00
150+00
145+00
105+00
100+00
095+00
090+00
085+00
080+00
075+00
070+00
060+00
050+00
040+00
030+00
MLLW (-2.59 feet NAVD) at Year 0
MLLW (-2.59 feet NAVD) at Year 1
206000
204000
202000
200000
198000
196000
194000
NC-NAD83 Northing (feet)
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
NC-NAD83 Easting (feet)
25
20
15
10
5
0
-5
-10
-15
-20
-25

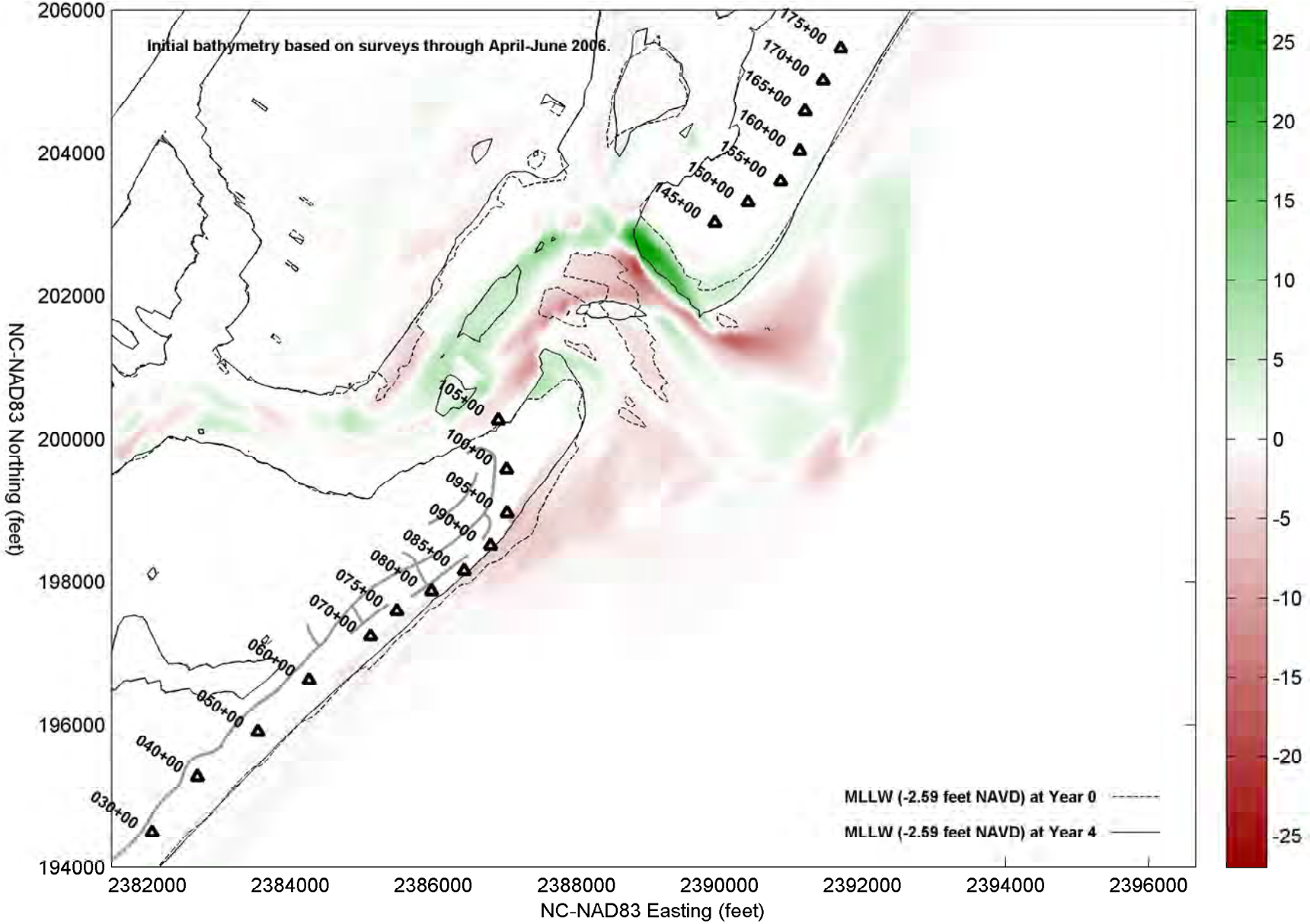
Erosion (-feet) & Deposition (+feet), Year 0 to Year 2, Alt. 2 - Abandon/Retreat



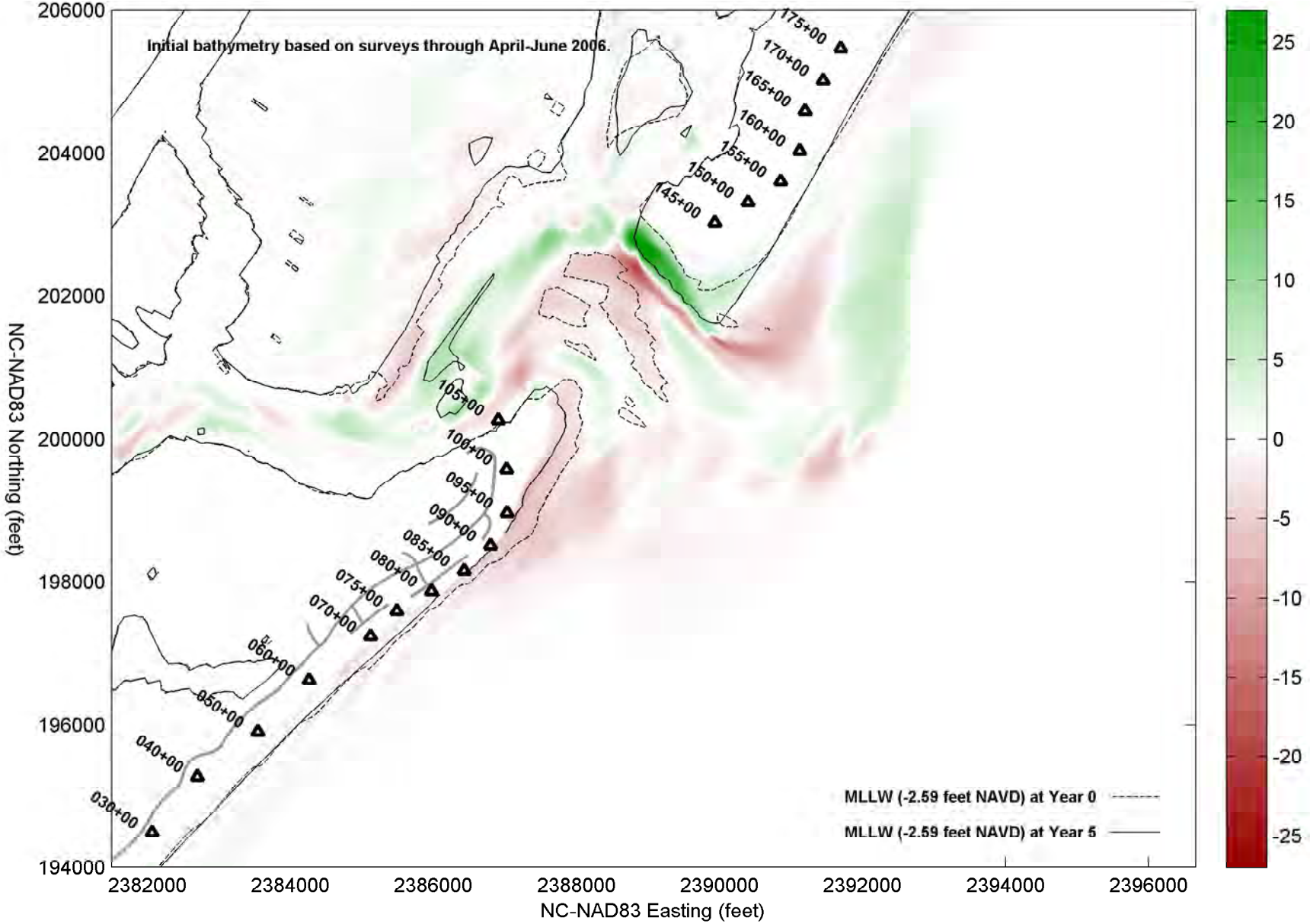
Erosion (-feet) & Deposition (+feet), Year 0 to Year 3, Alt. 2 - Abandon/Retreat



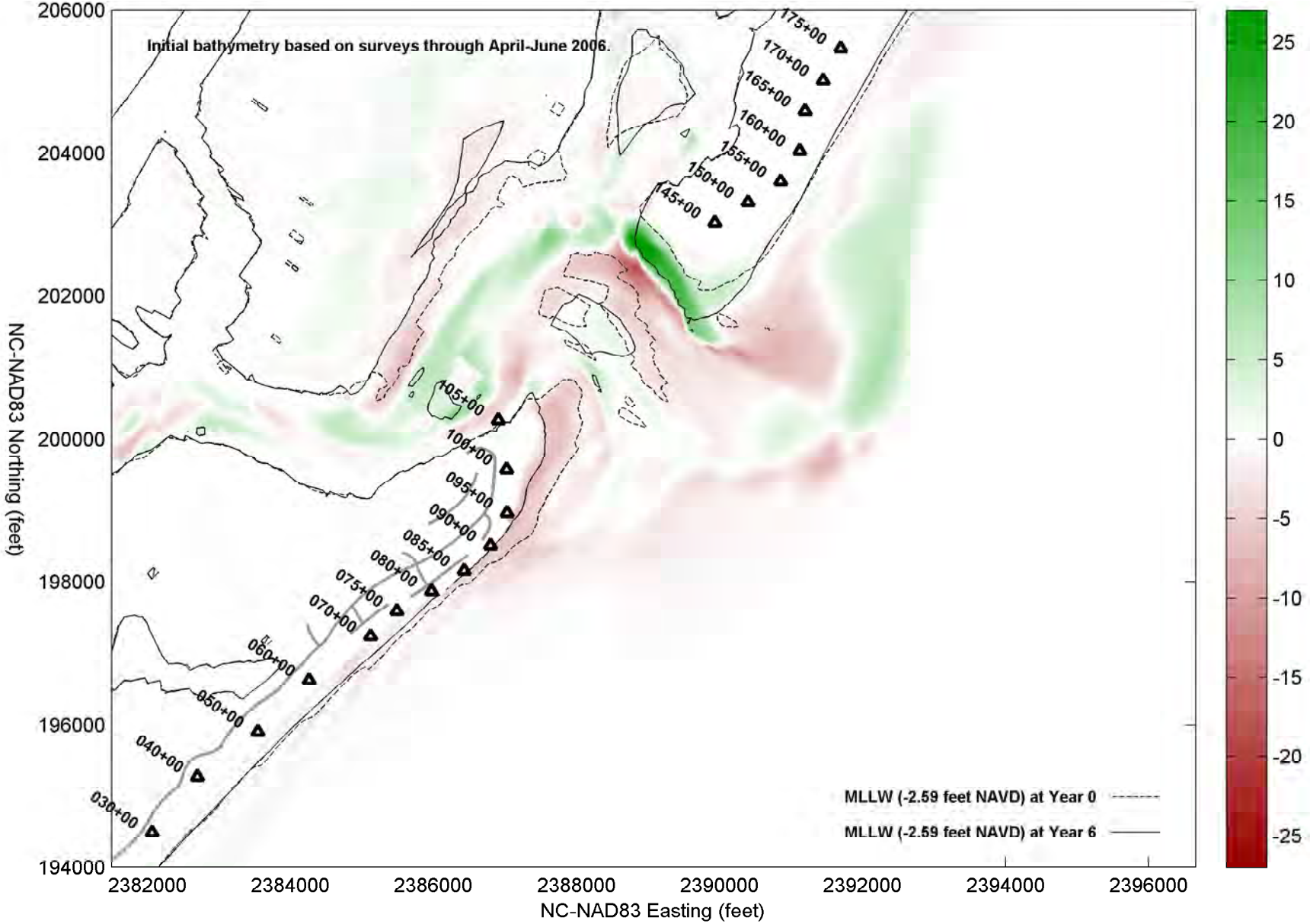
Erosion (-feet) & Deposition (+feet), Year 0 to Year 4, Alt. 2 - Abandon/Retreat



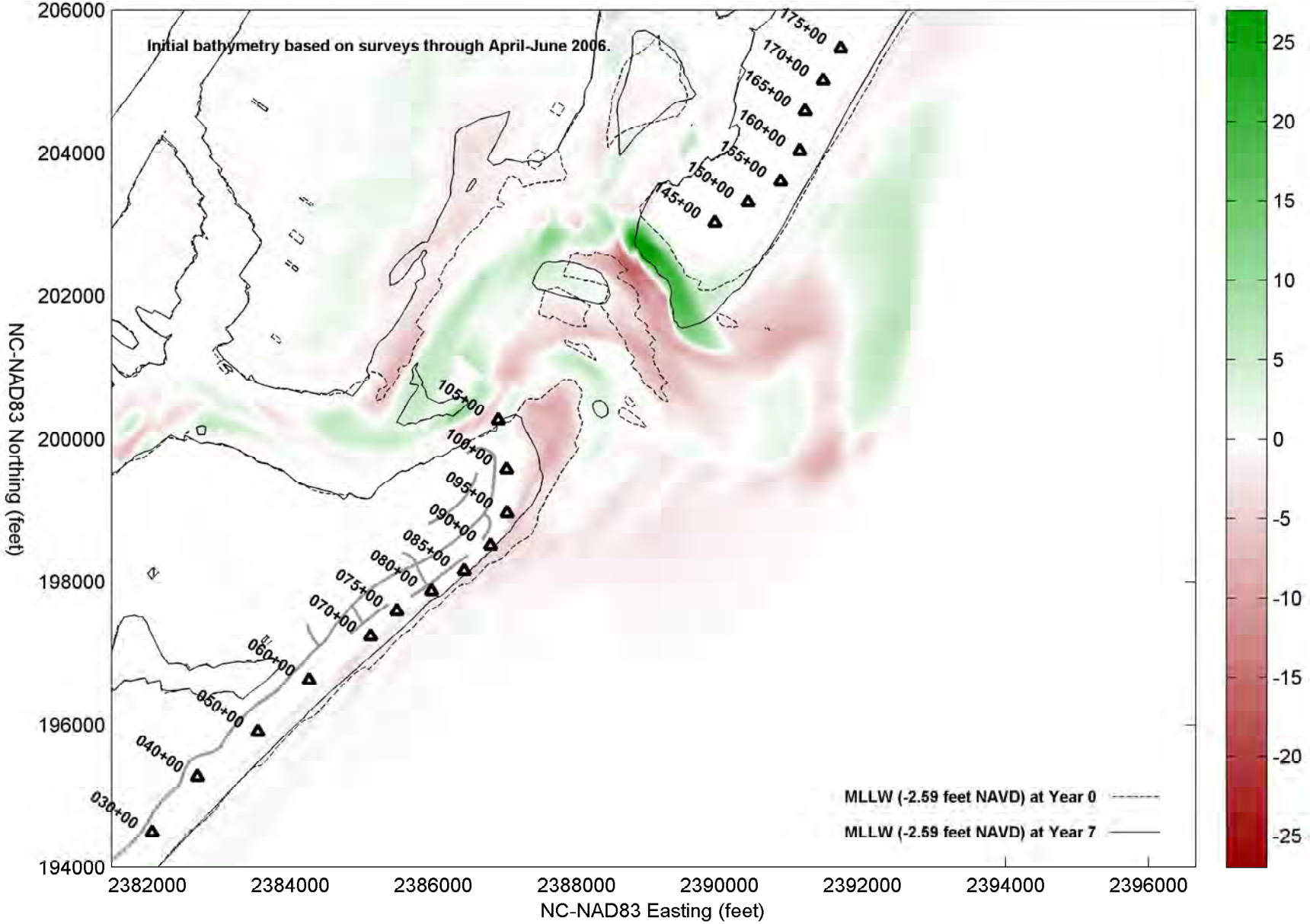
Erosion (-feet) & Deposition (+feet), Year 0 to Year 5, Alt. 2 - Abandon/Retreat

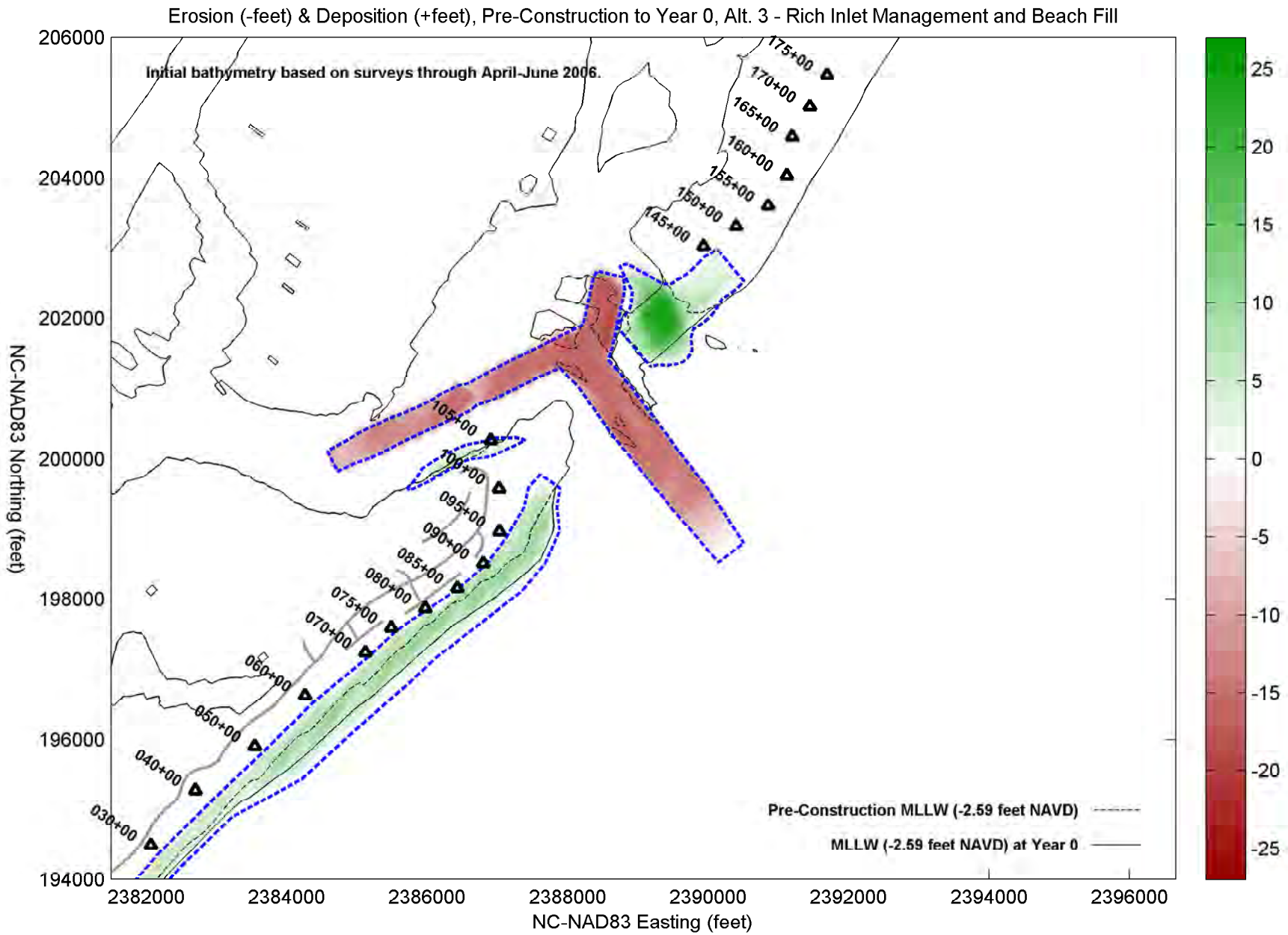


Erosion (-feet) & Deposition (+feet), Year 0 to Year 6, Alt. 2 - Abandon/Retreat

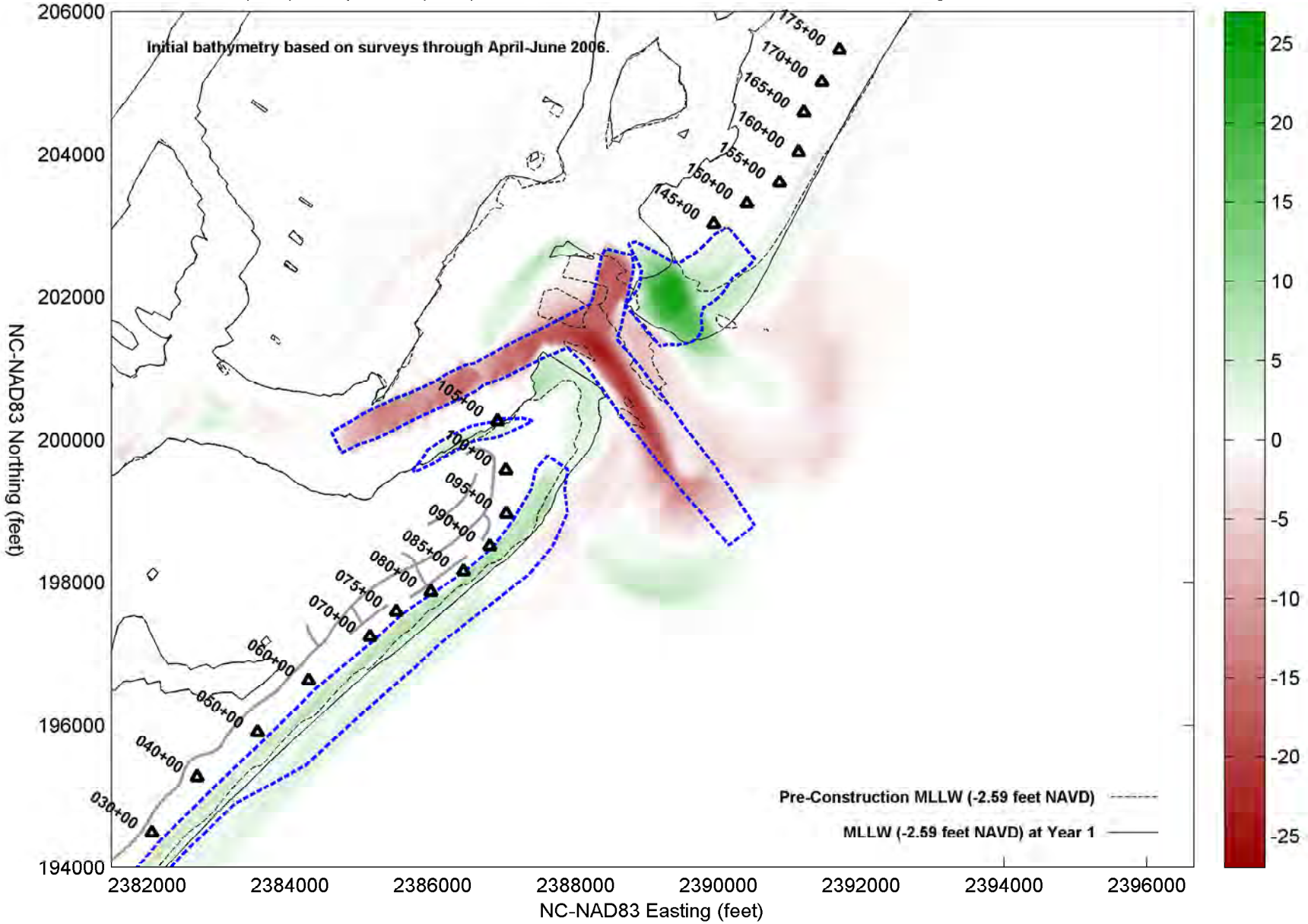


Erosion (-feet) & Deposition (+feet), Year 0 to Year 7, Alt. 2 - Abandon/Retreat

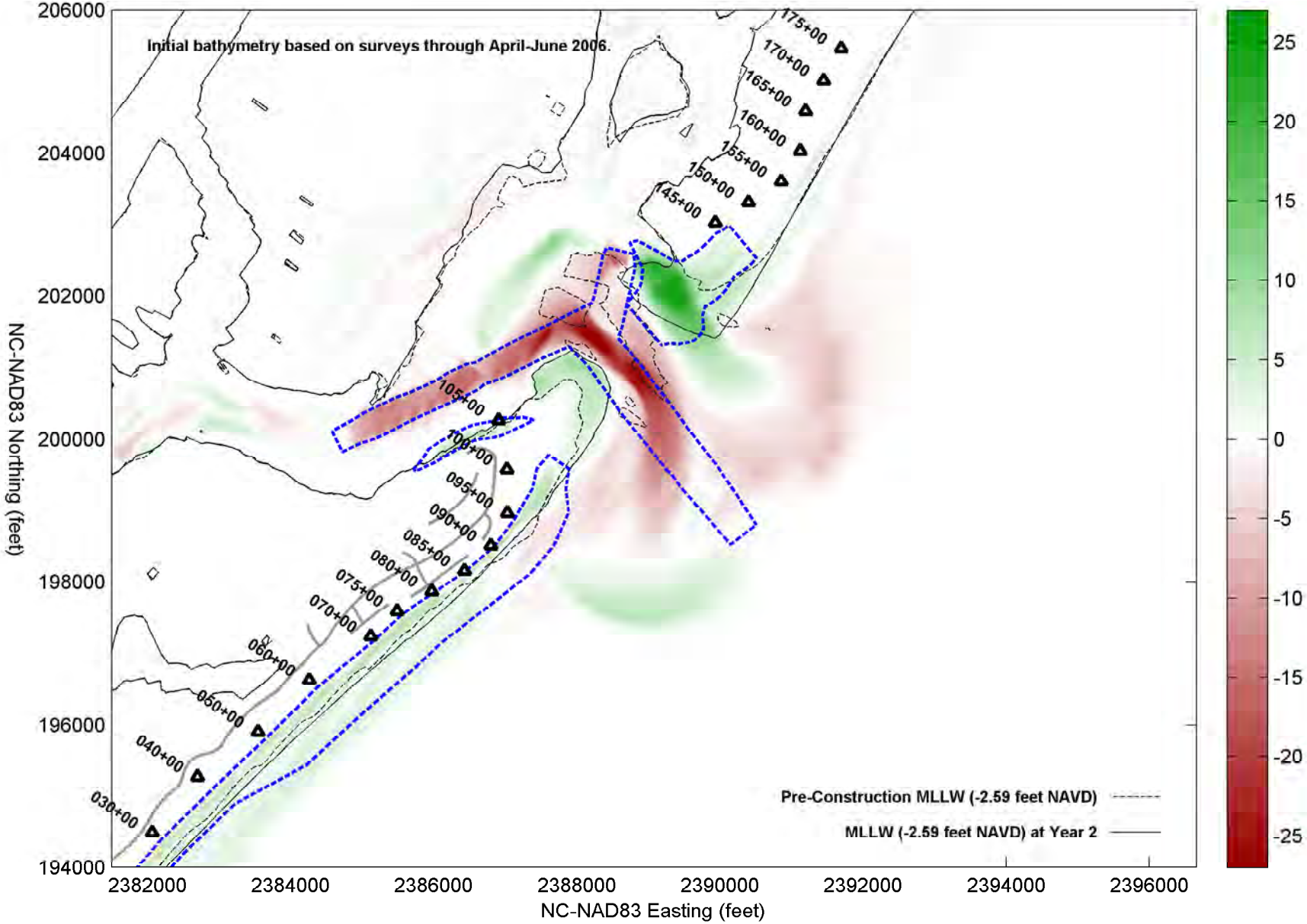



Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 0, Alt. 3 - Rich Inlet Management and Beach Fill
Initial bathymetry based on surveys through April-June 2006.
Pre-Construction MLLW (-2.59 feet NAVD)
MLLW (-2.59 feet NAVD) at Year 0
NC-NAD83 Northing (feet)
NC-NAD83 Easting (feet)
206000
204000
202000
200000
198000
196000
194000
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
175+00
170+00
165+00
160+00
155+00
150+00
145+00
105+00
100+00
095+00
090+00
085+00
080+00
075+00
070+00
060+00
050+00
040+00
030+00
25
20
15
10
5
0
-5
-10
-15
-20
-25

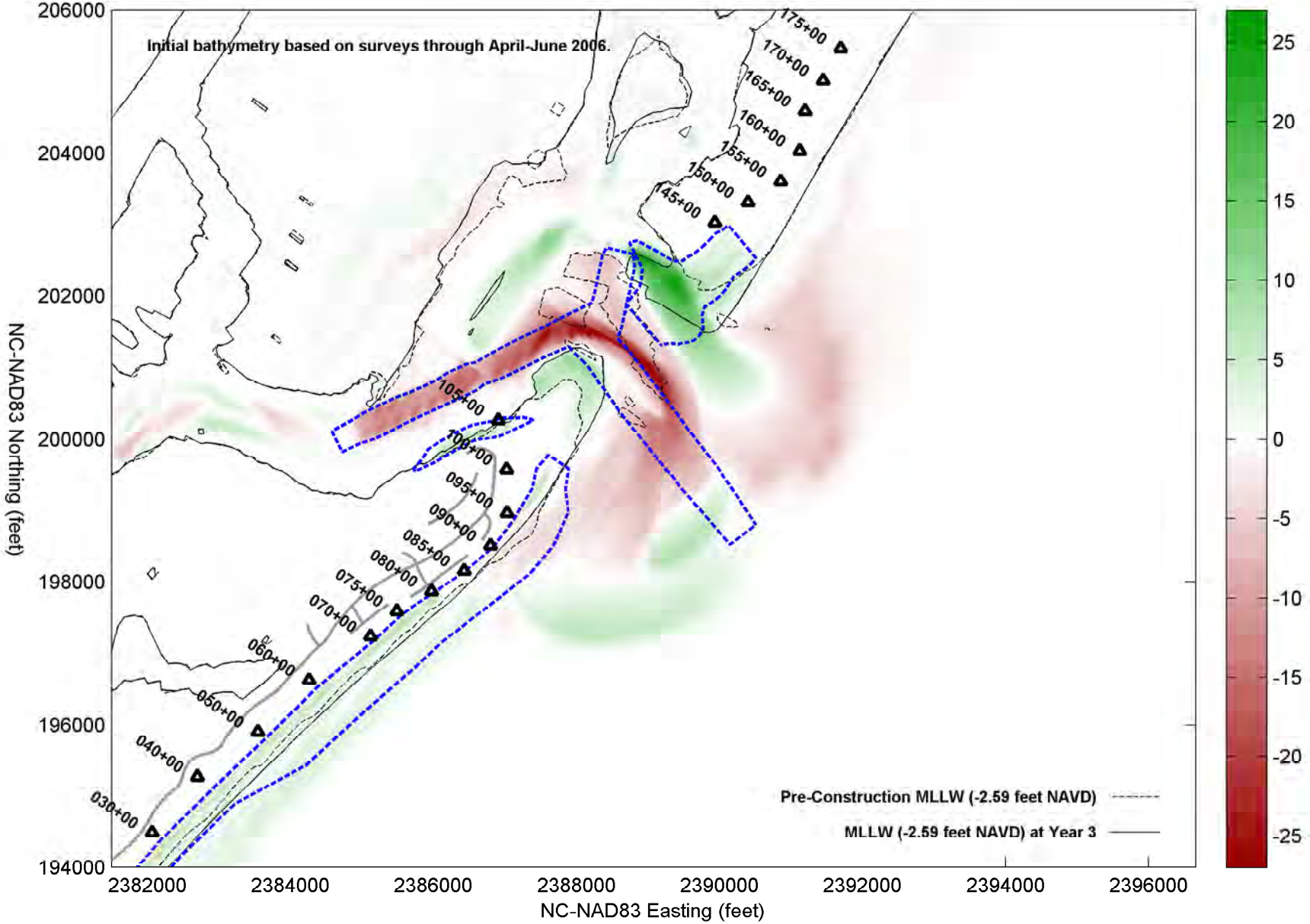
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 1, Alt. 3 - Rich Inlet Management and Beach Fill



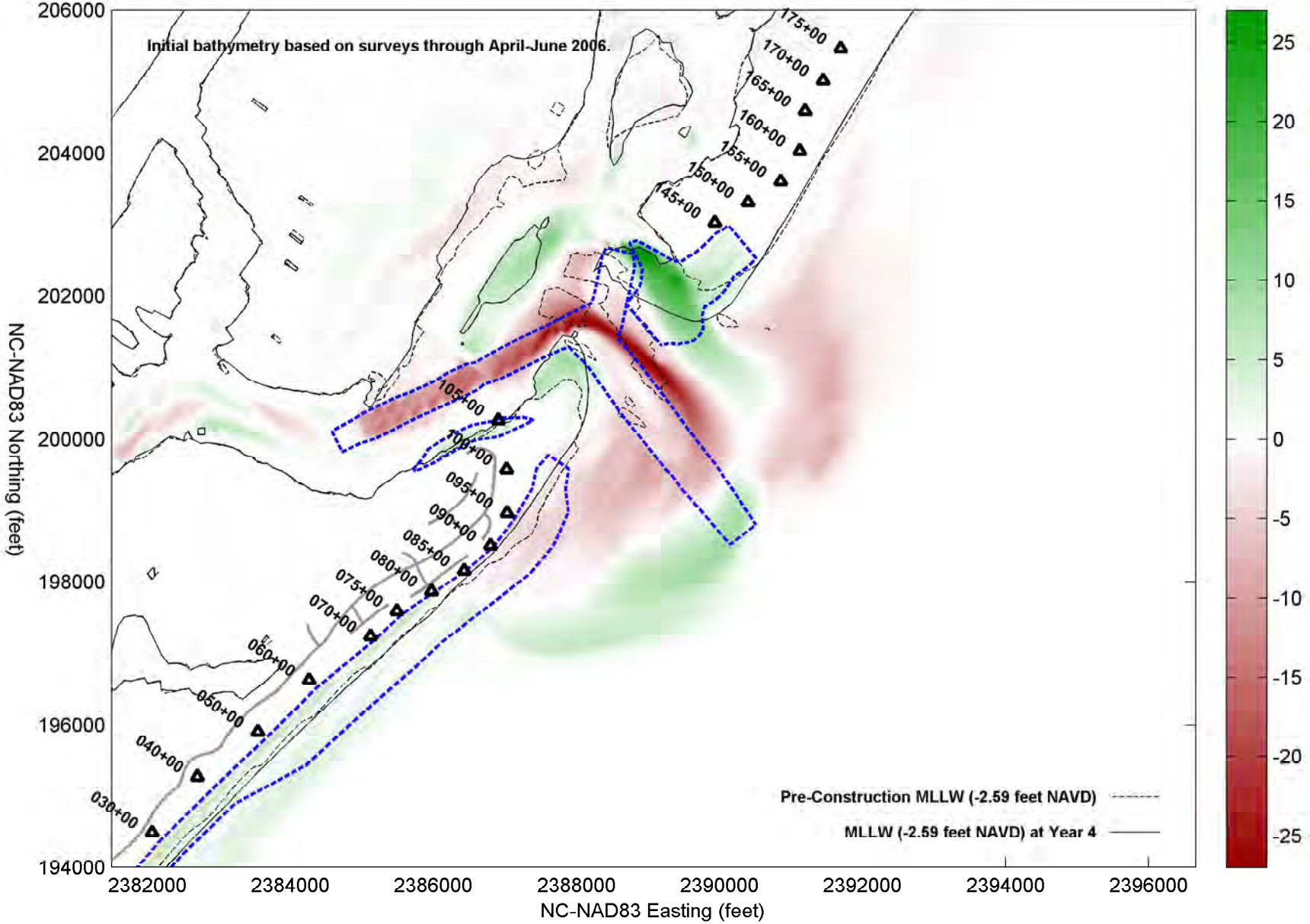
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 2, Alt. 3 - Rich Inlet Management and Beach Fill



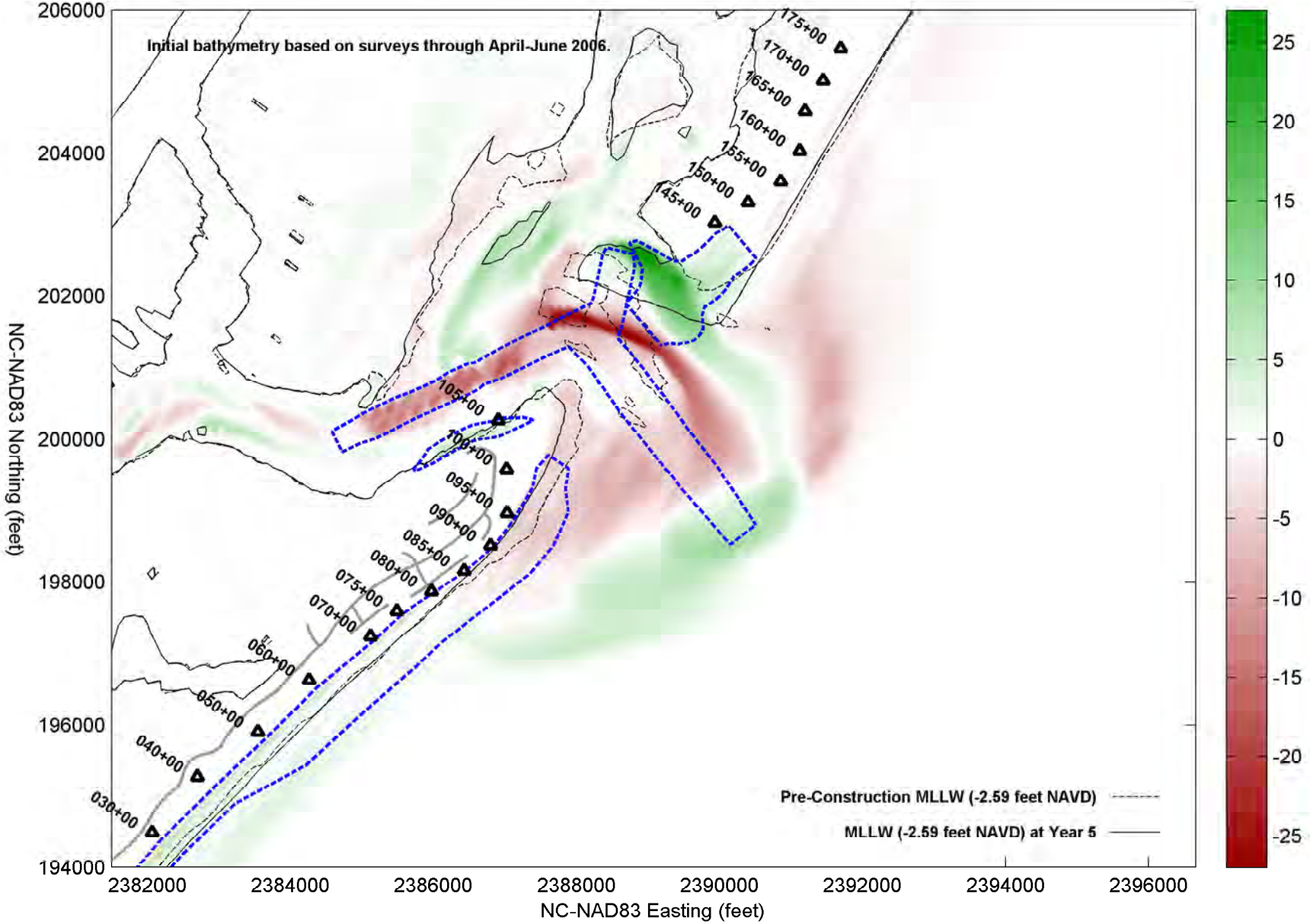
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 3, Alt. 3 - Rich Inlet Management and Beach Fill



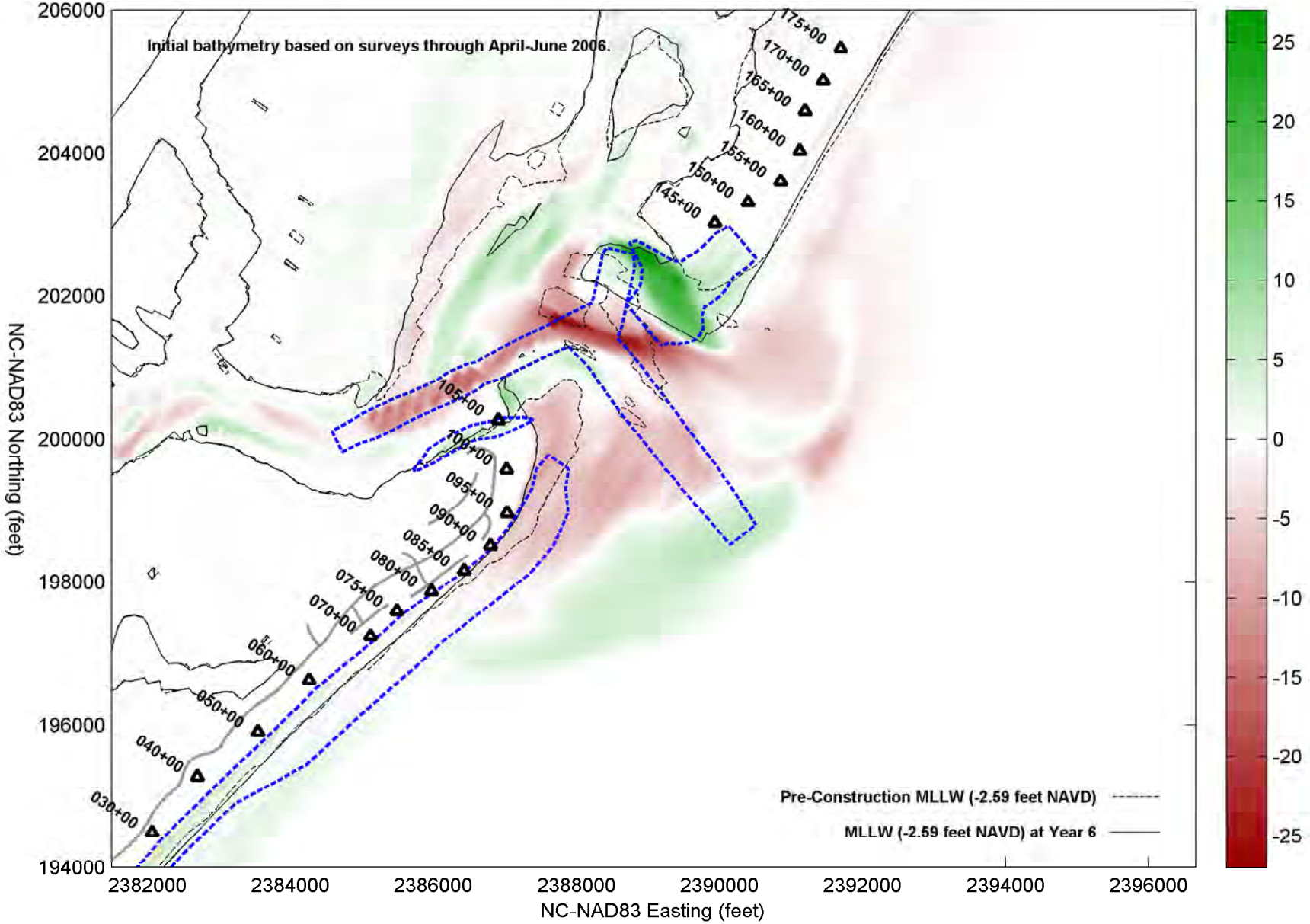
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 4, Alt. 3 - Rich Inlet Management and Beach Fill



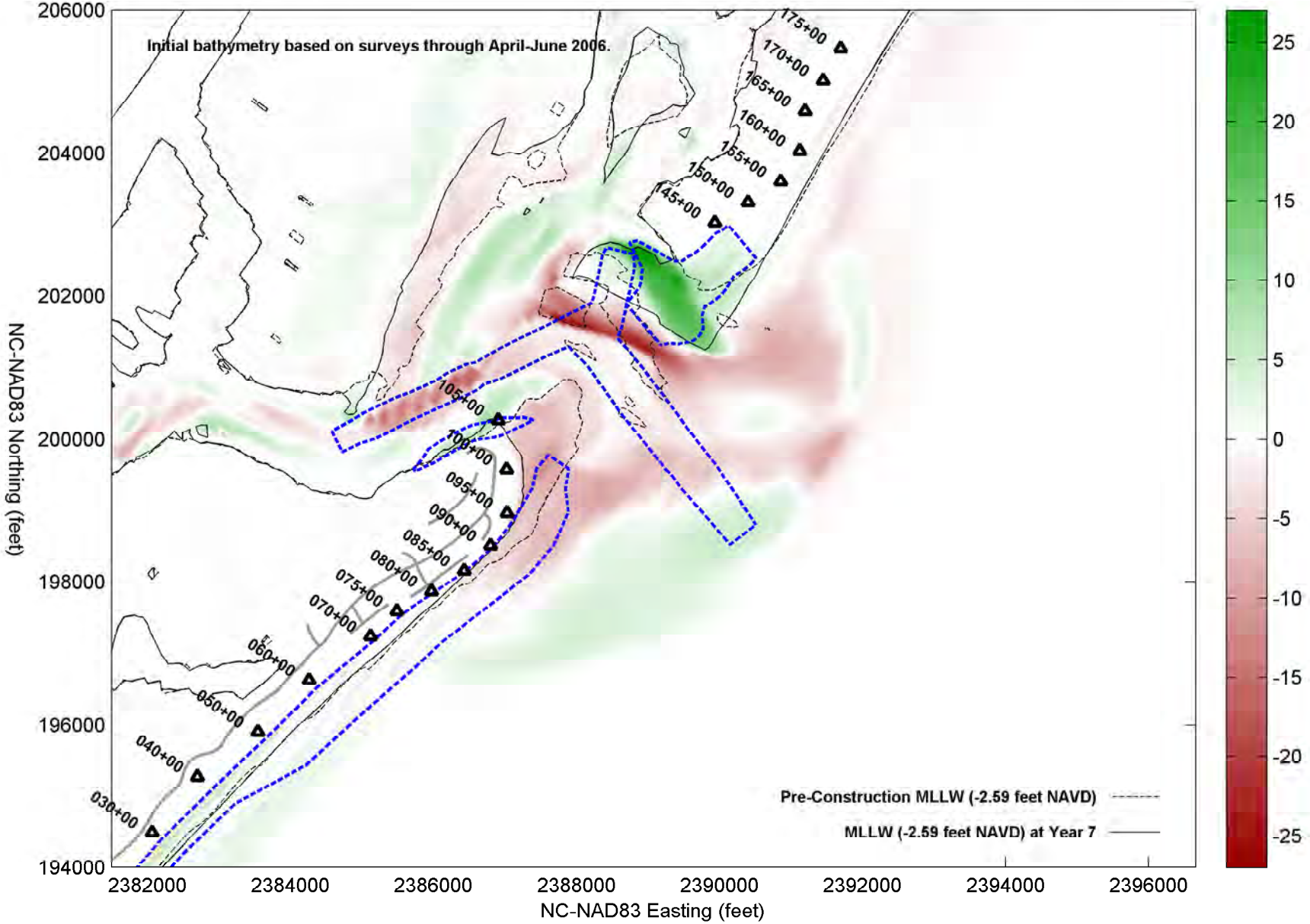
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 5, Alt. 3 - Rich Inlet Management and Beach Fill

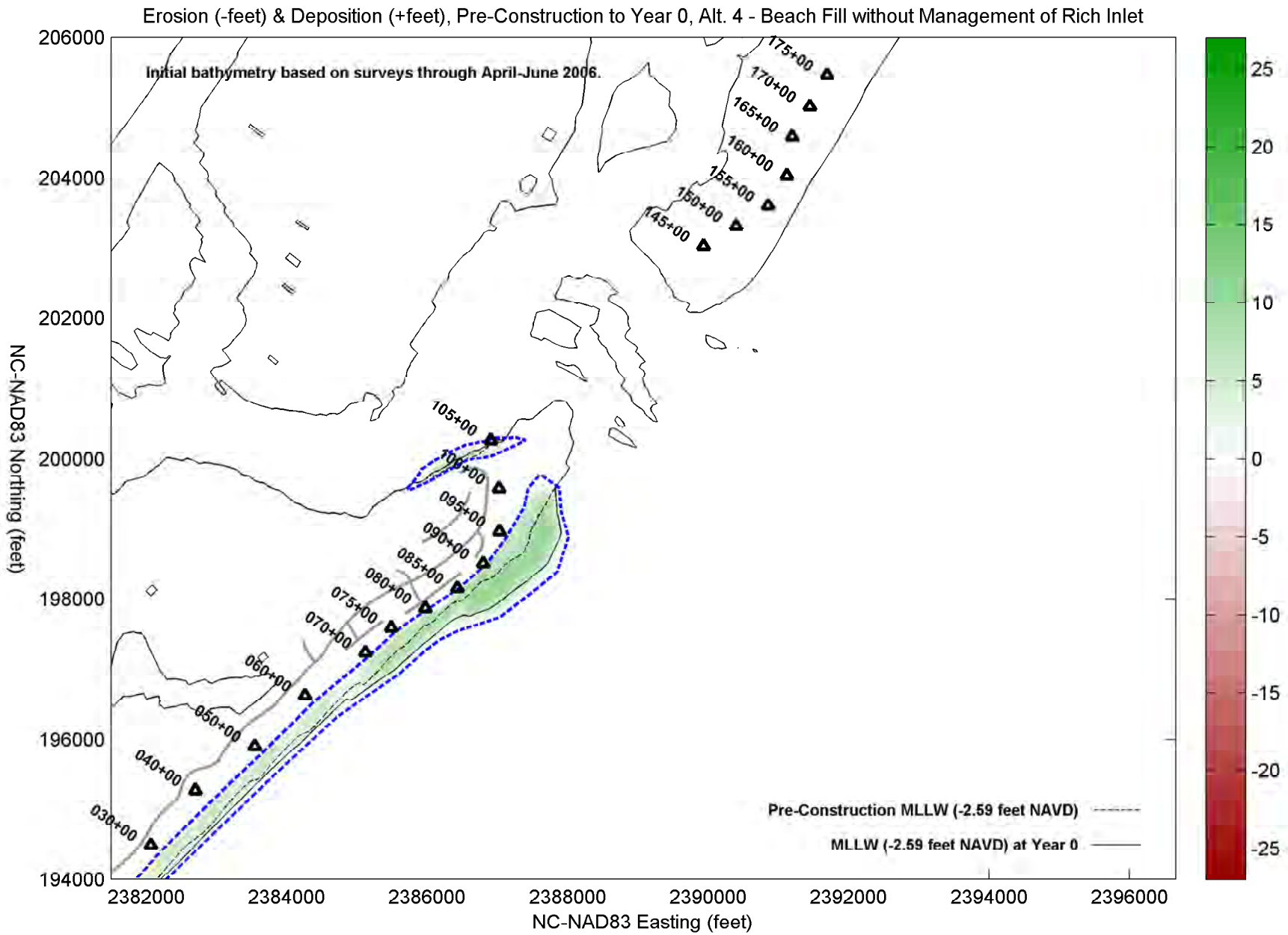


Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 6, Alt. 3 - Rich Inlet Management and Beach Fill

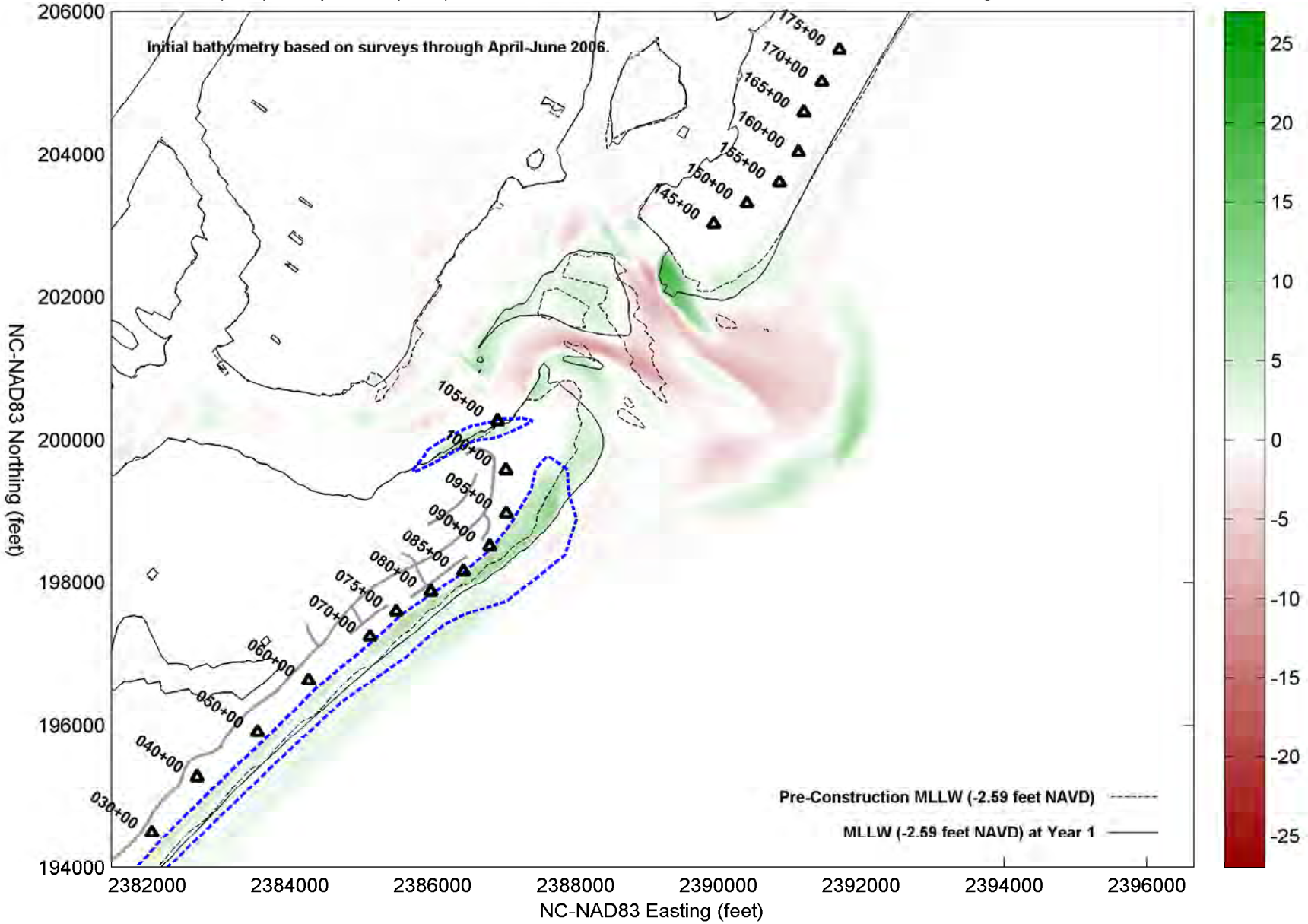


Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 7, Alt. 3 - Rich Inlet Management and Beach Fill

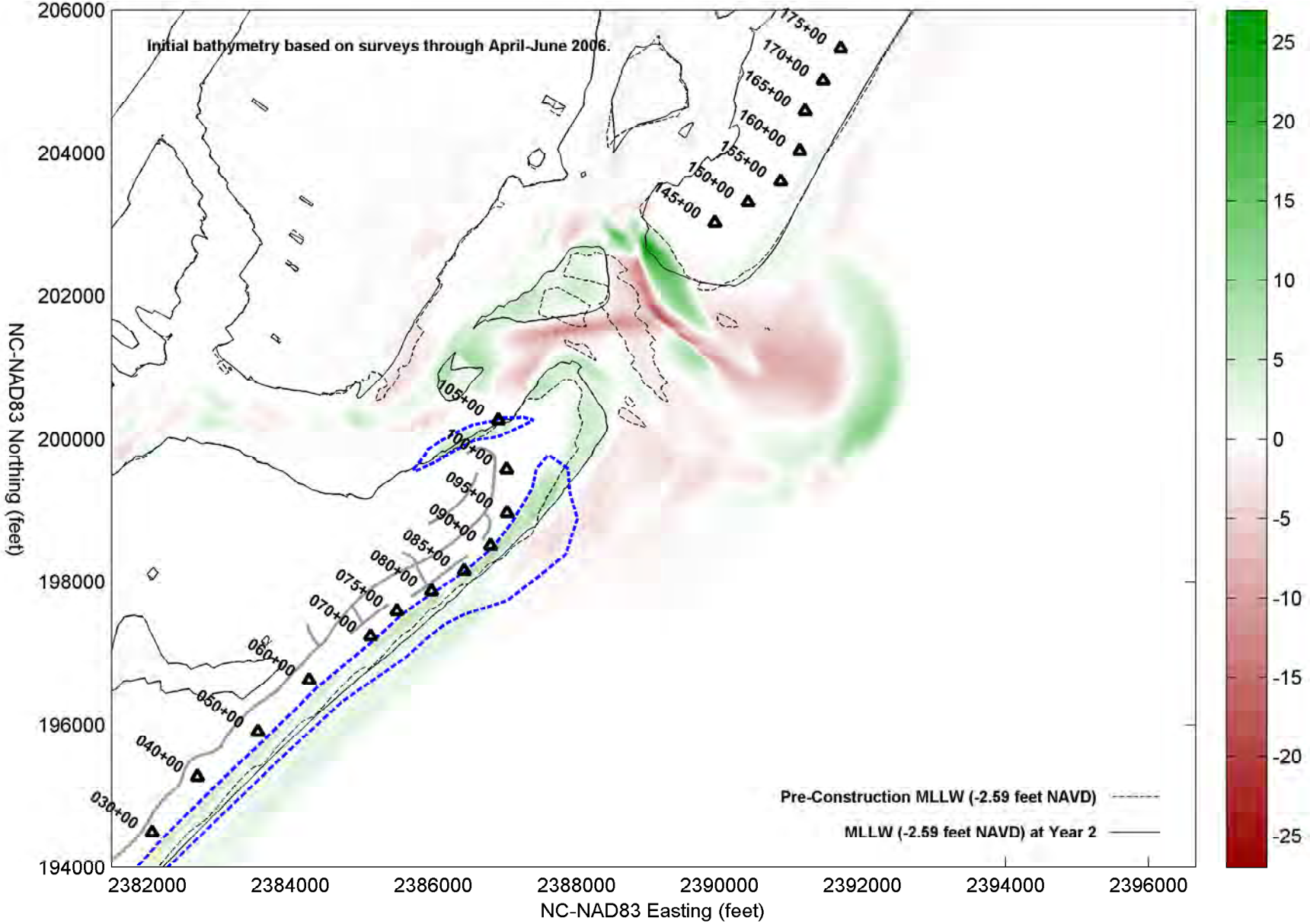



Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 0, Alt. 4 - Beach Fill without Management of Rich Inlet
Initial bathymetry based on surveys through April-June 2006.
175+00
170+00
165+00
160+00
155+00
150+00
145+00
105+00
100+00
095+00
090+00
085+00
080+00
075+00
070+00
060+00
050+00
040+00
030+00
Pre-Construction MLLW (-2.59 feet NAVD)
MLLW (-2.59 feet NAVD) at Year 0
206000
204000
202000
200000
198000
196000
194000
NC-NAD83 Northing (feet)
2382000
2384000
2386000
2388000
2390000
2392000
2394000
2396000
NC-NAD83 Easting (feet)
25
20
15
10
5
0
-5
-10
-15
-20
-25

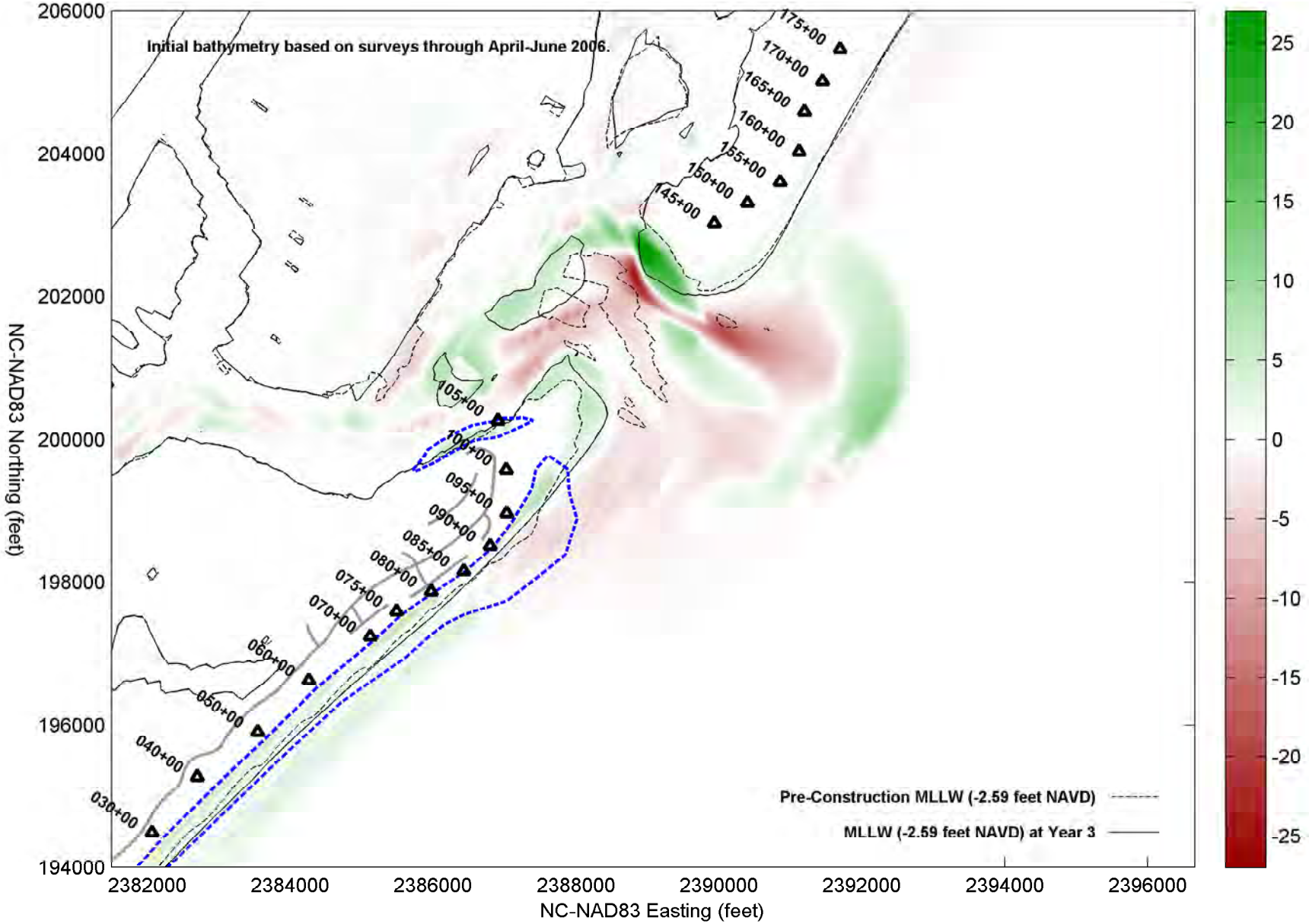
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 1, Alt. 4 - Beach Fill without Management of Rich Inlet



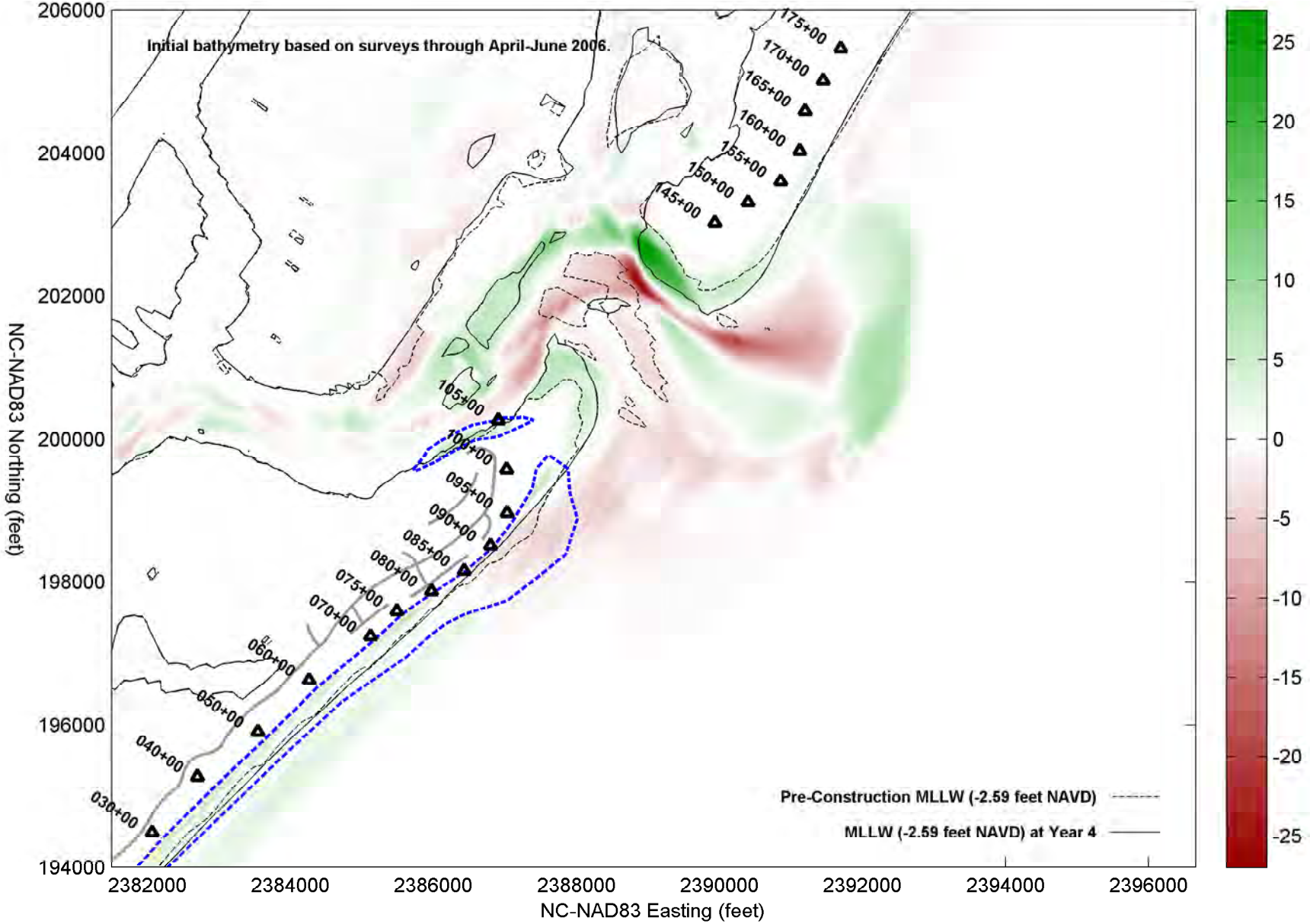
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 2, Alt. 4 - Beach Fill without Management of Rich Inlet



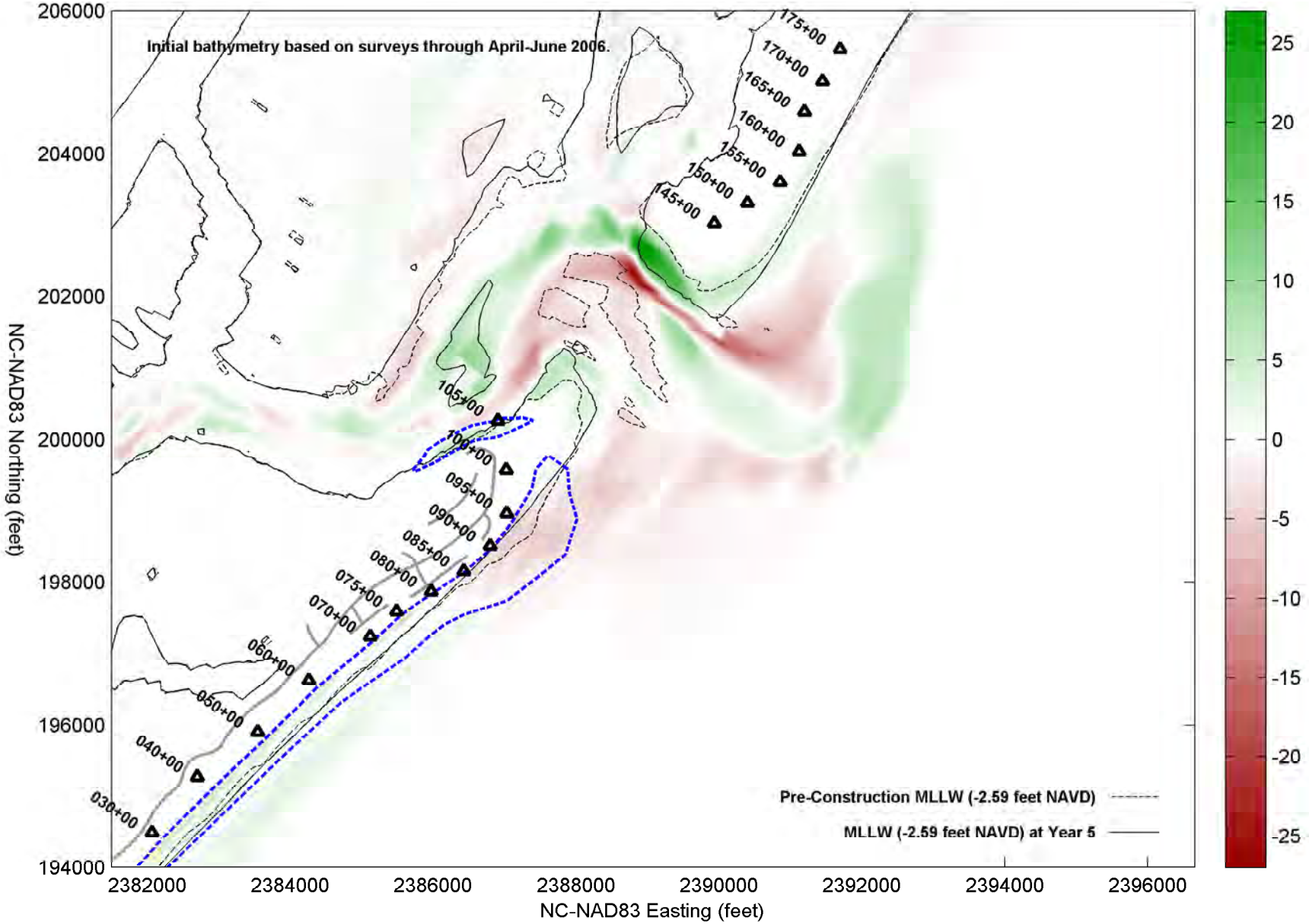
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 3, Alt. 4 - Beach Fill without Management of Rich Inlet



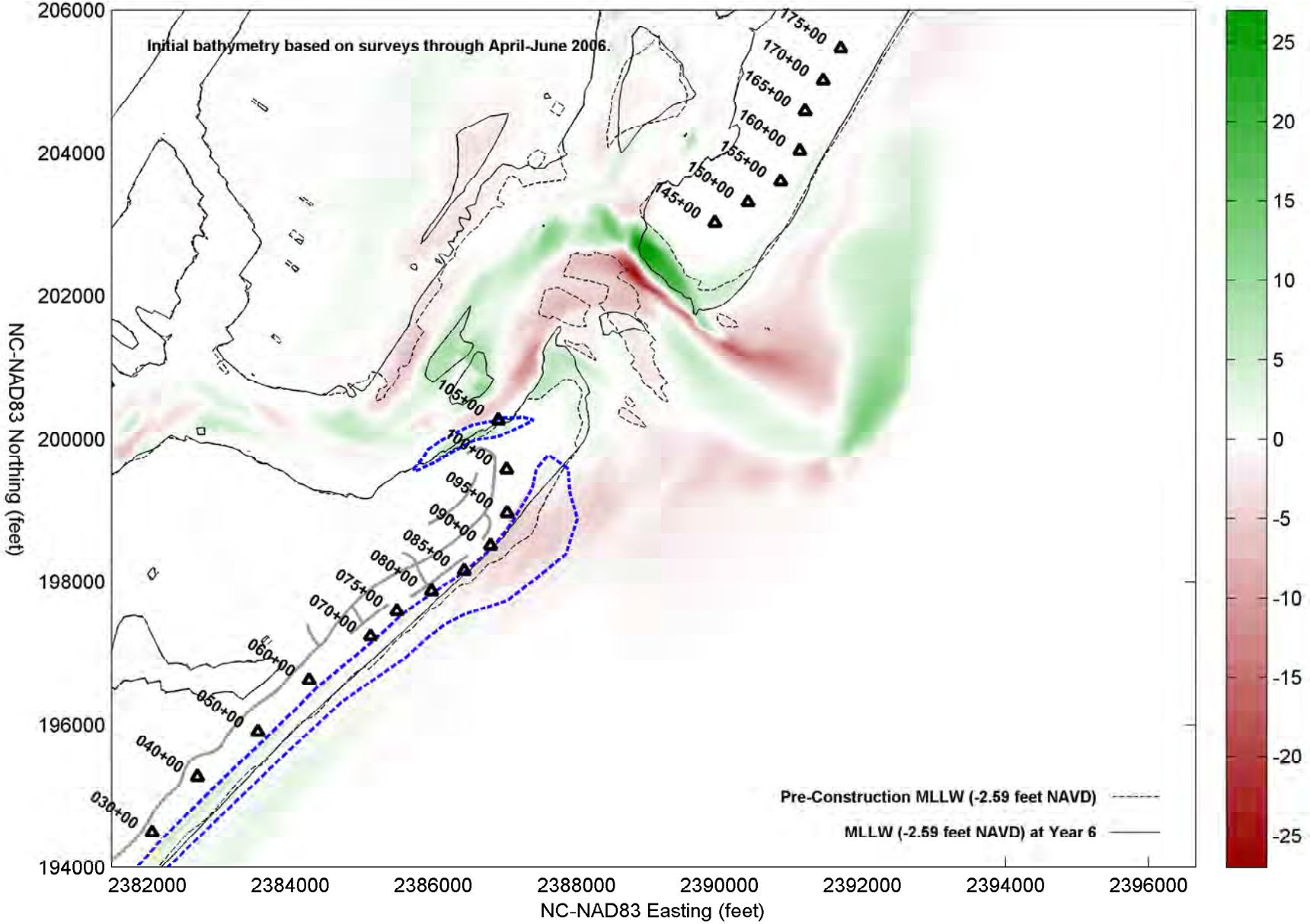
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 4, Alt. 4 - Beach Fill without Management of Rich Inlet



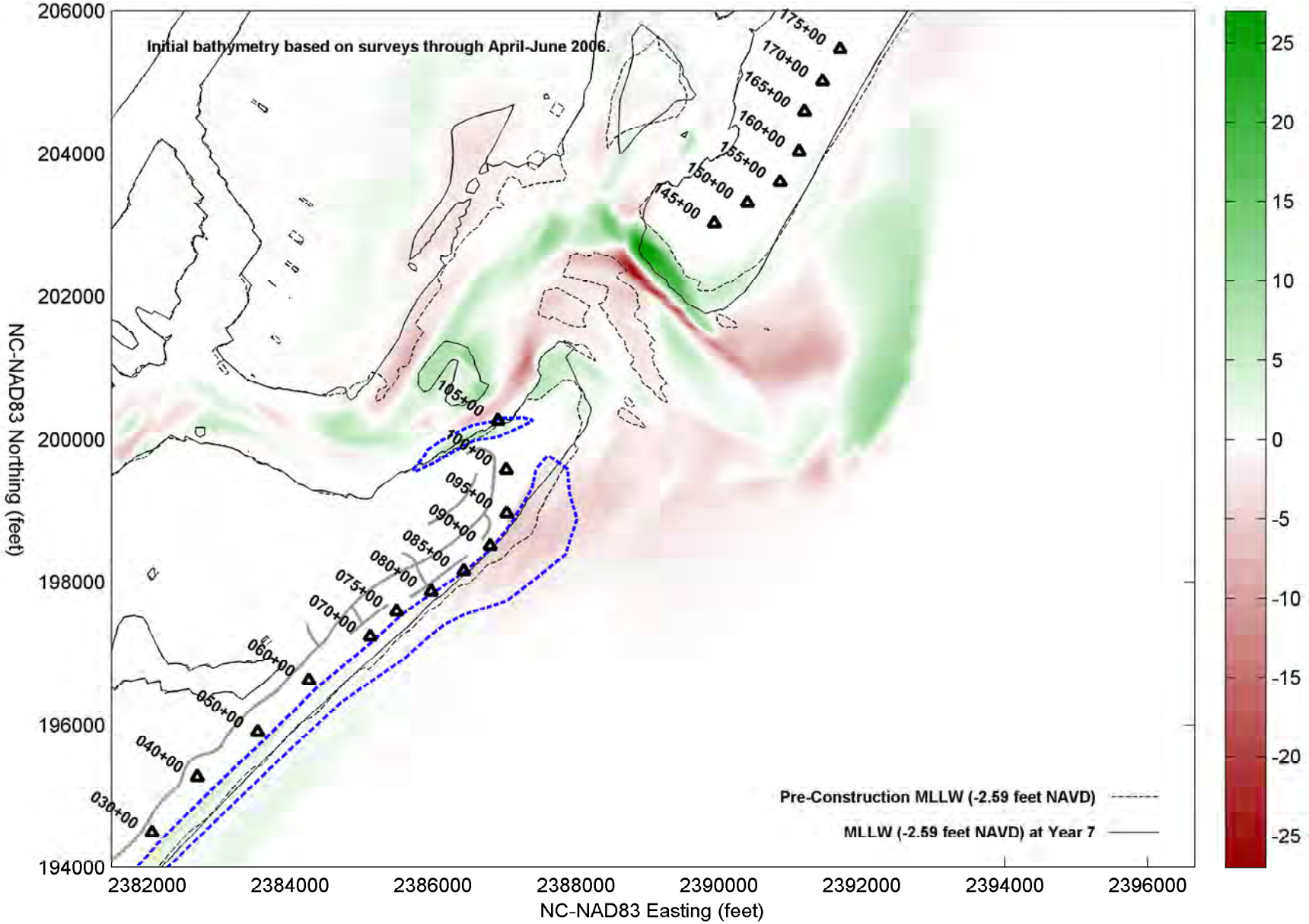
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 5, Alt. 4 - Beach Fill without Management of Rich Inlet



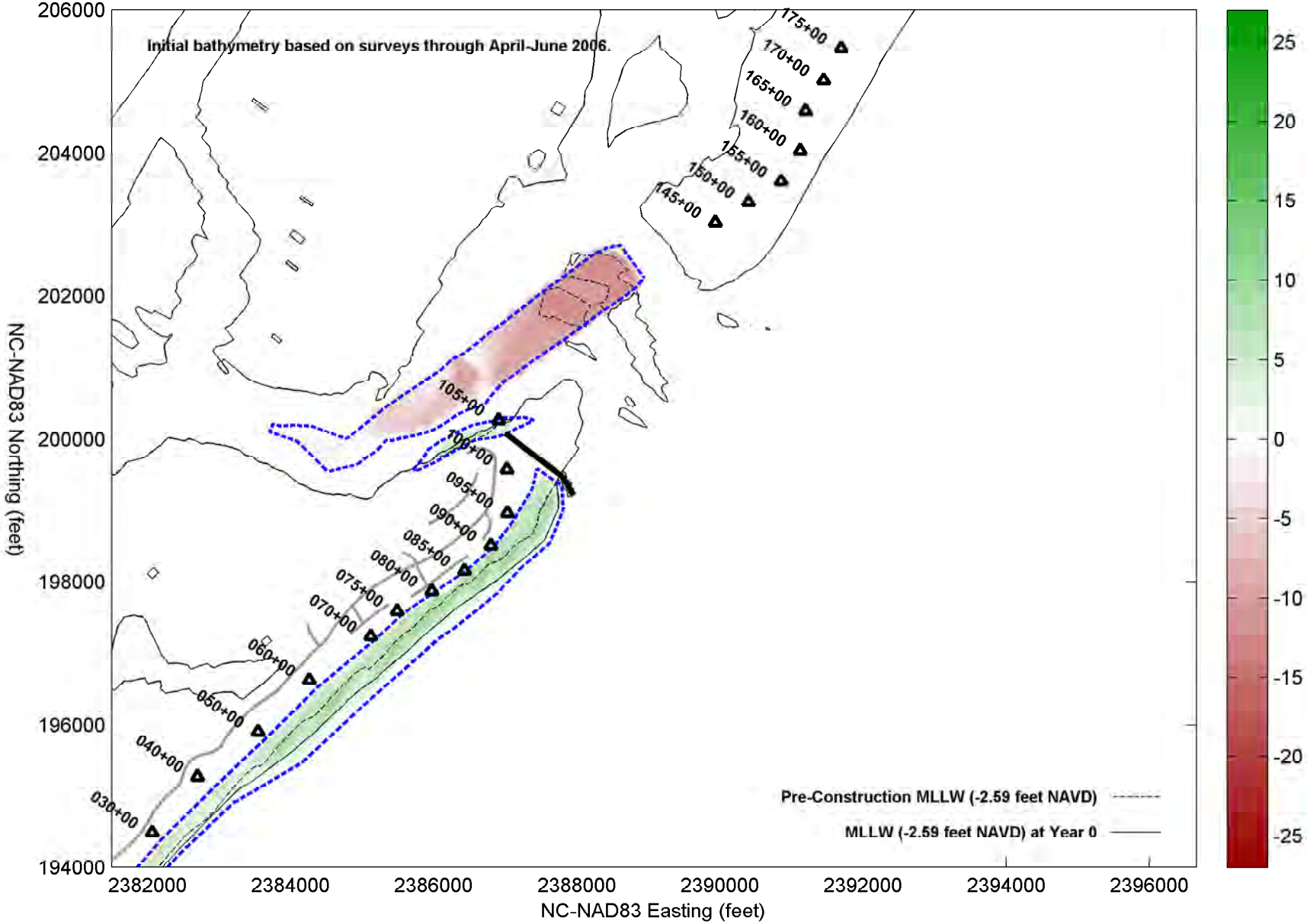
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 6, Alt. 4 - Beach Fill without Management of Rich Inlet



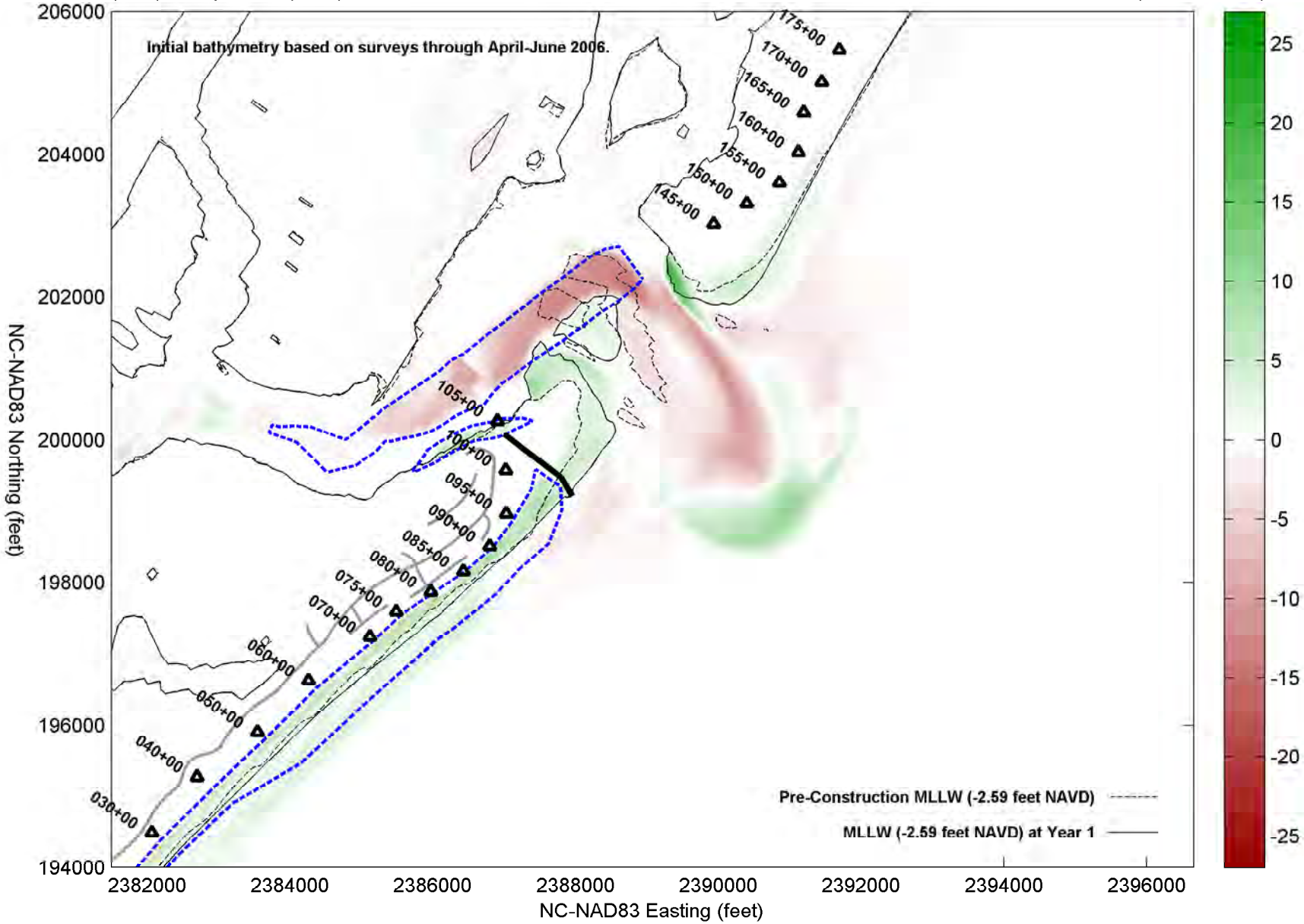
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 7, Alt. 4 - Beach Fill without Management of Rich Inlet



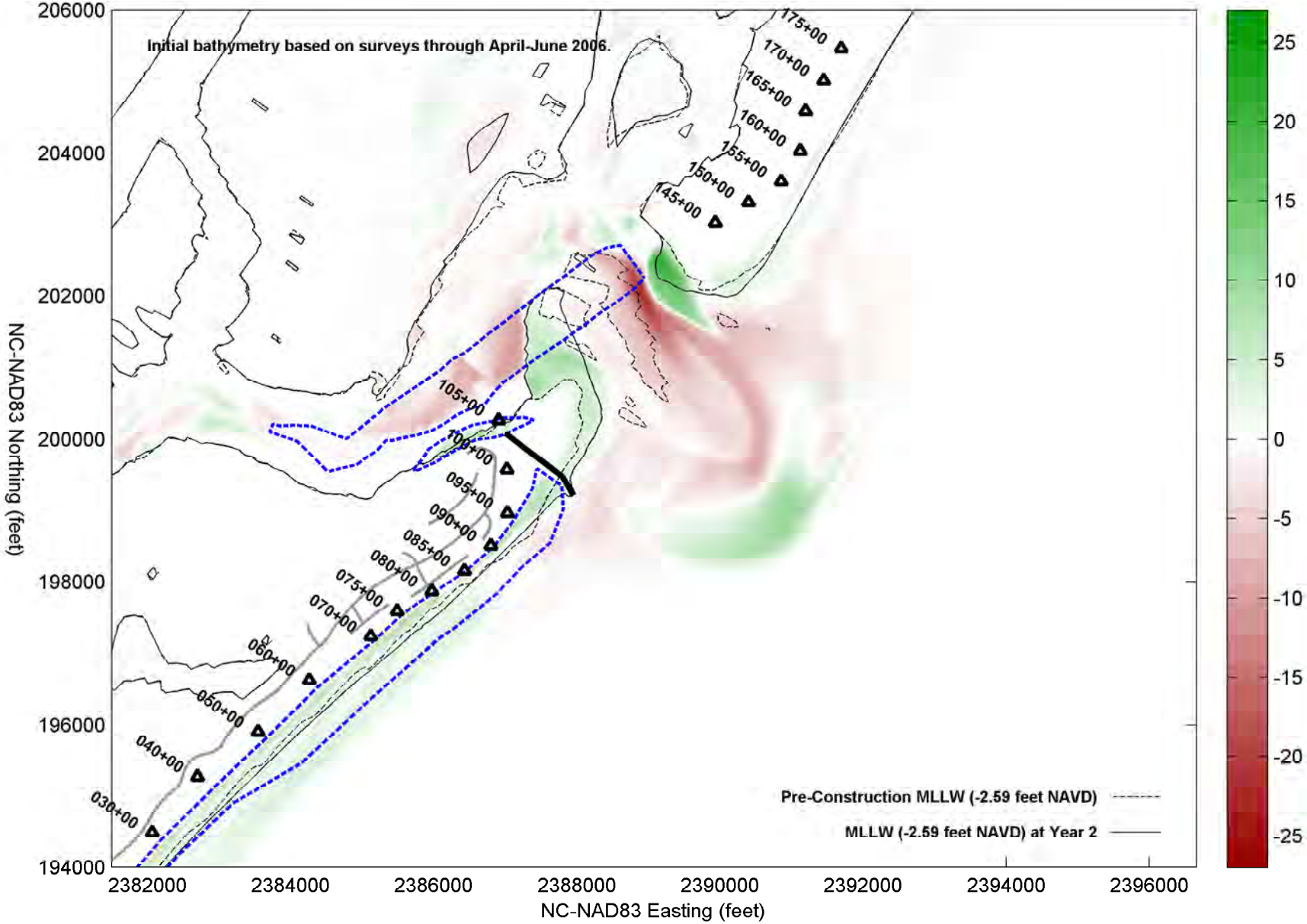
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 0, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



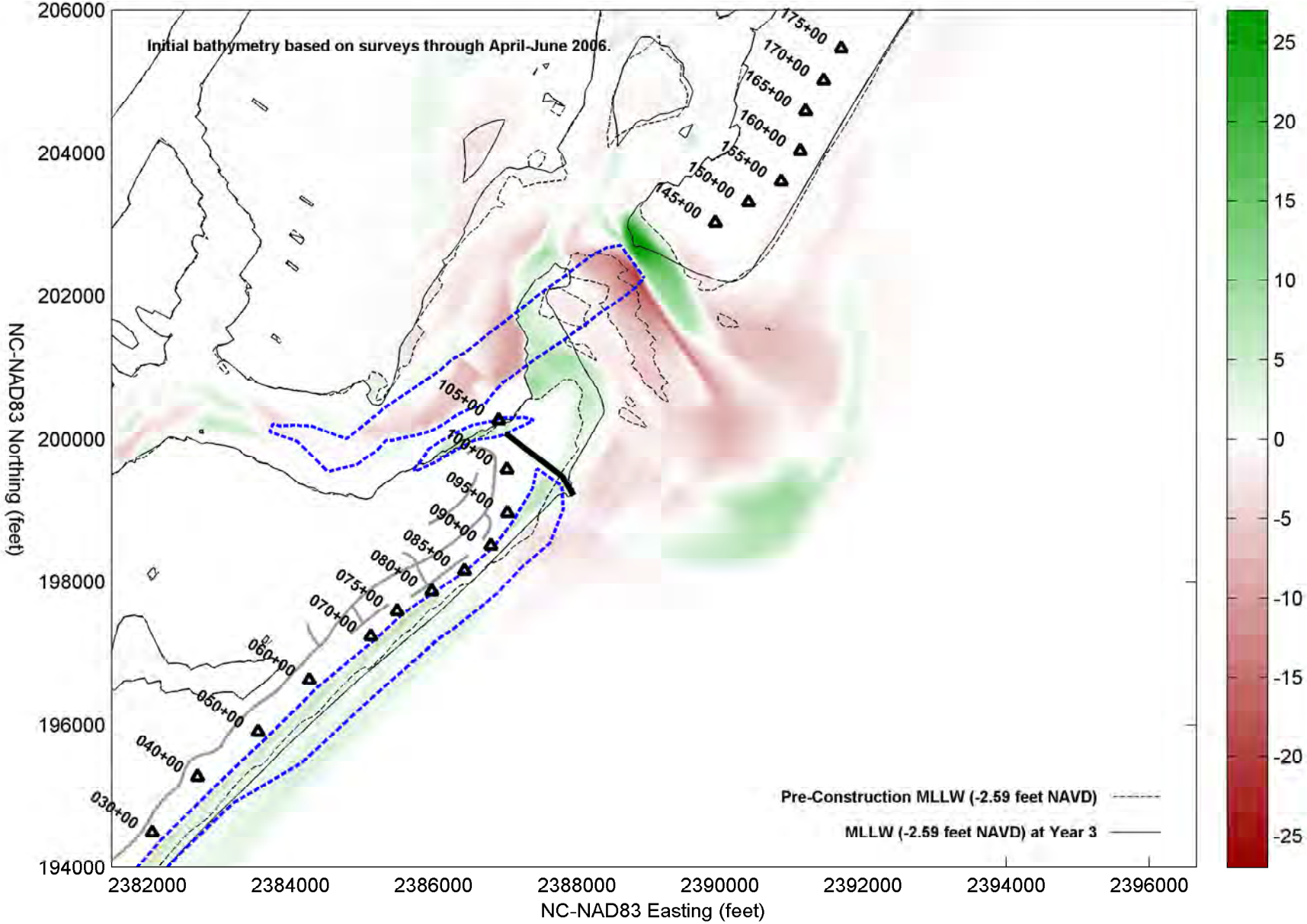
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 1, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



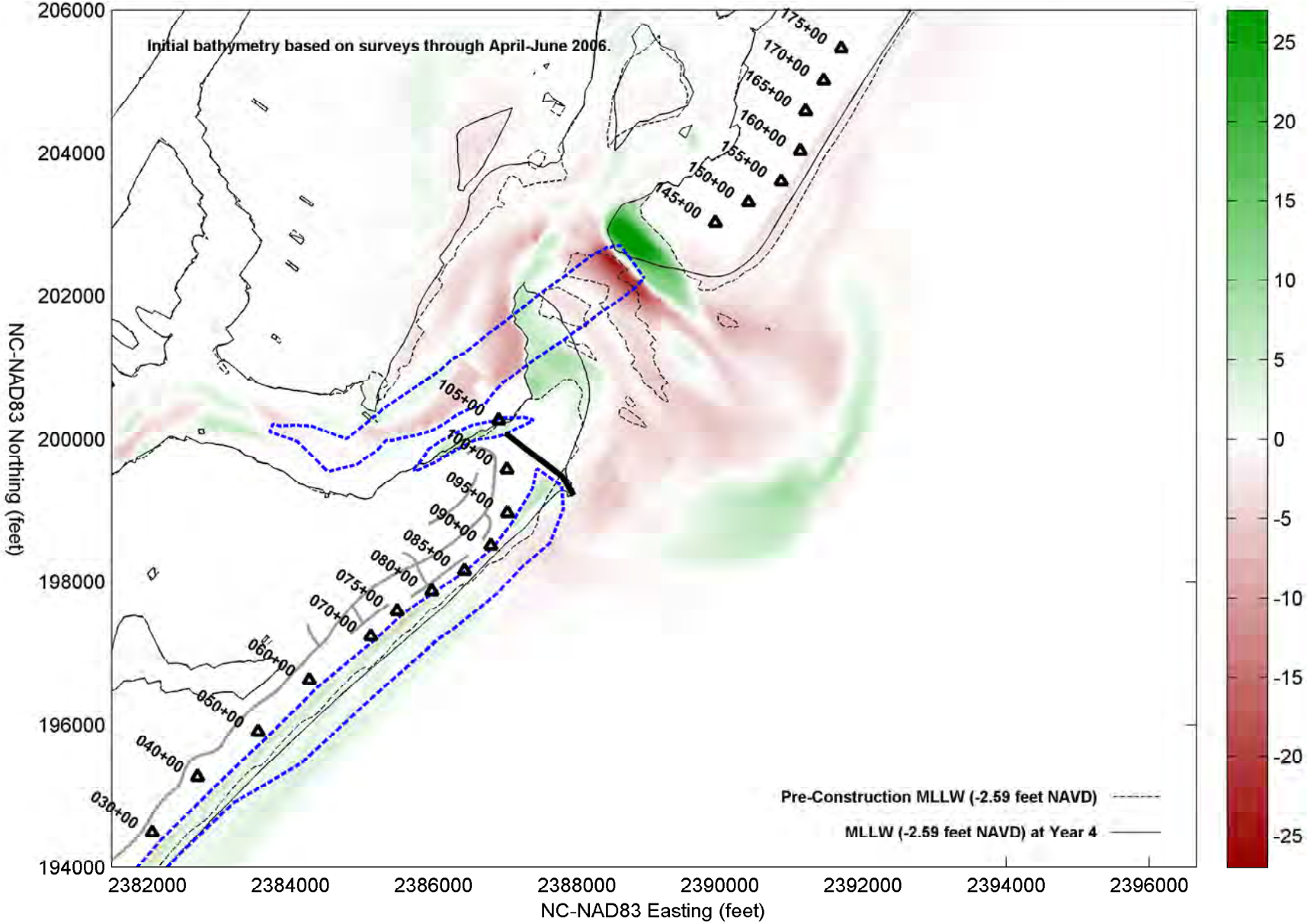
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 2, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



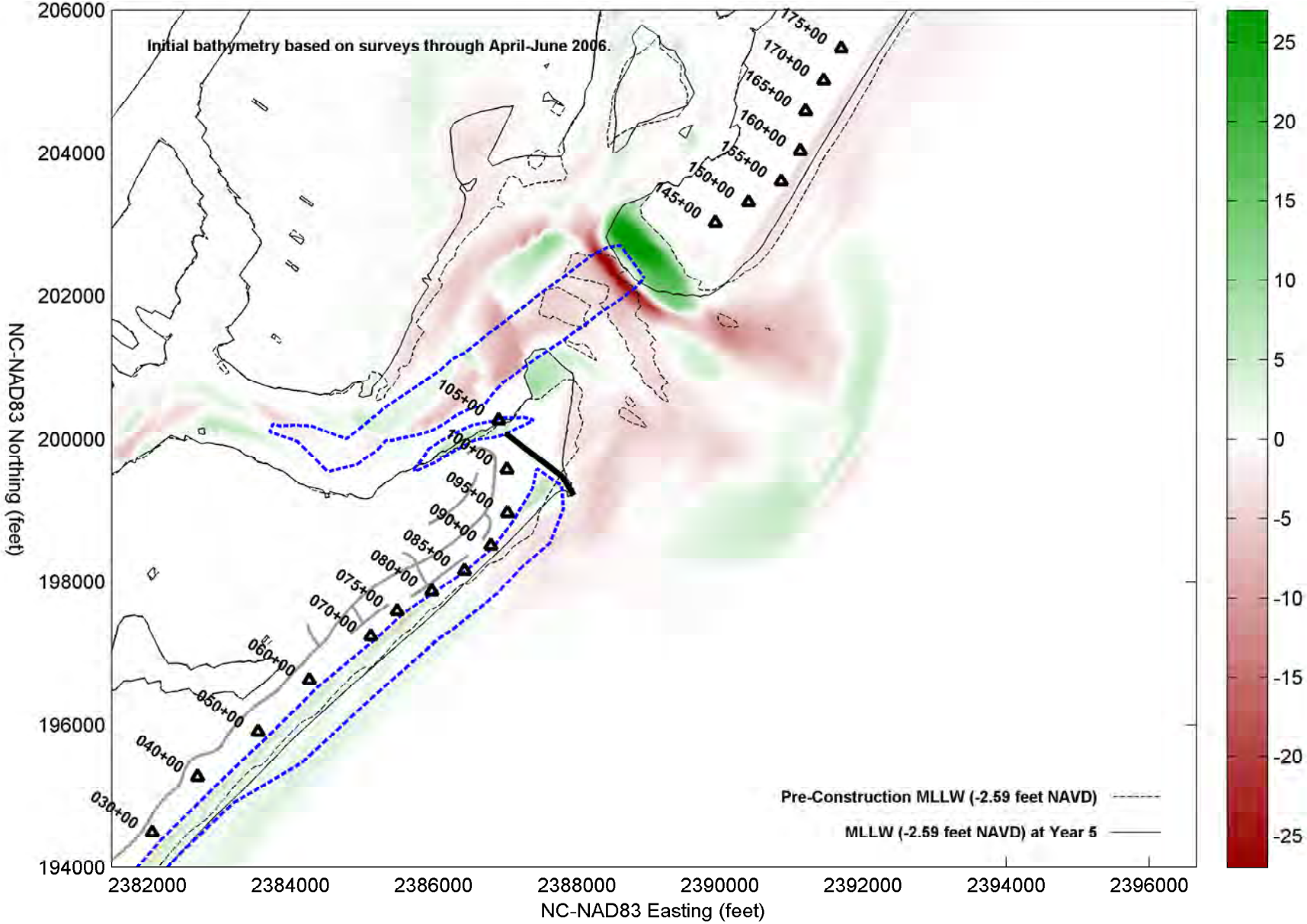
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 3, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



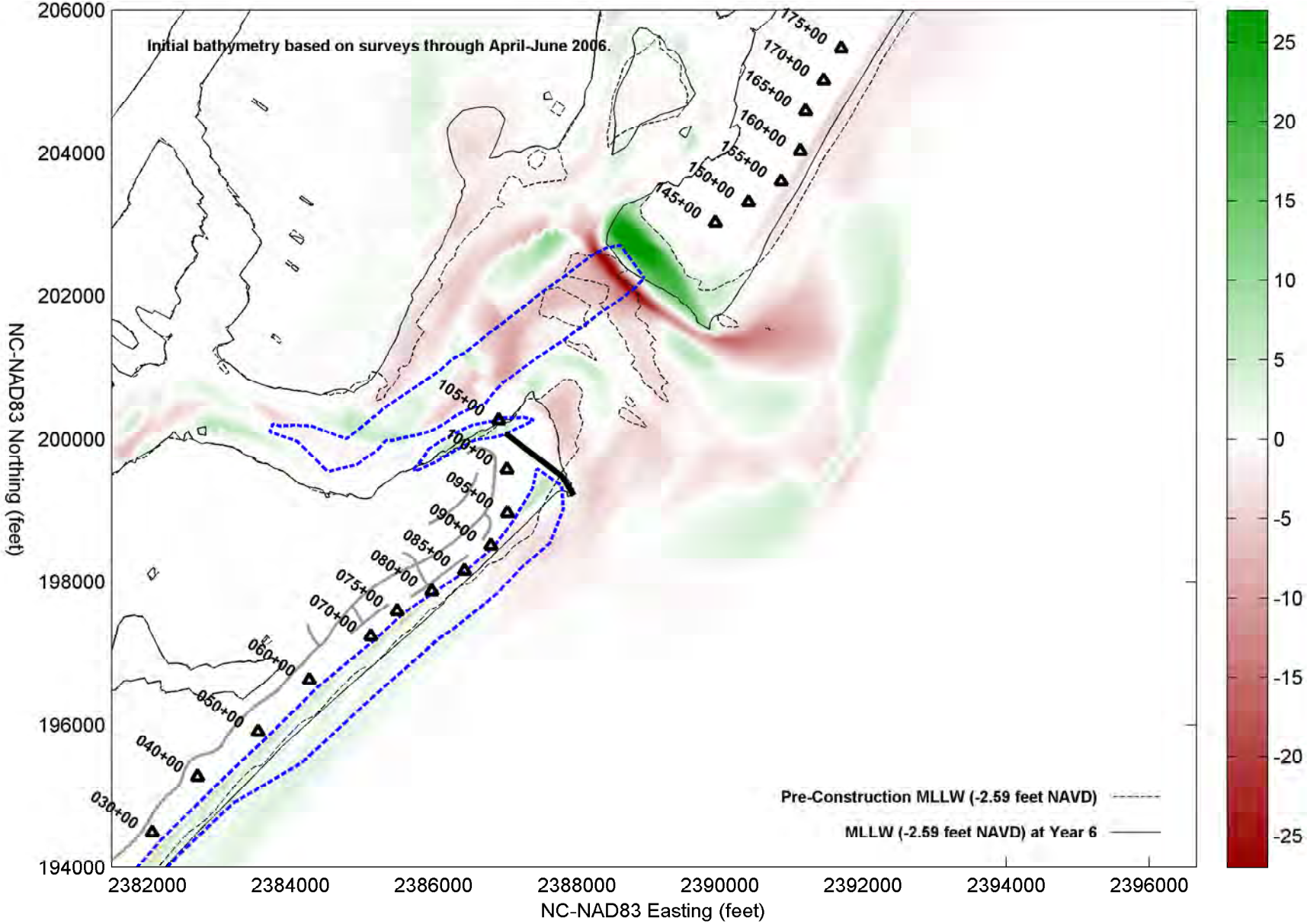
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 4, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



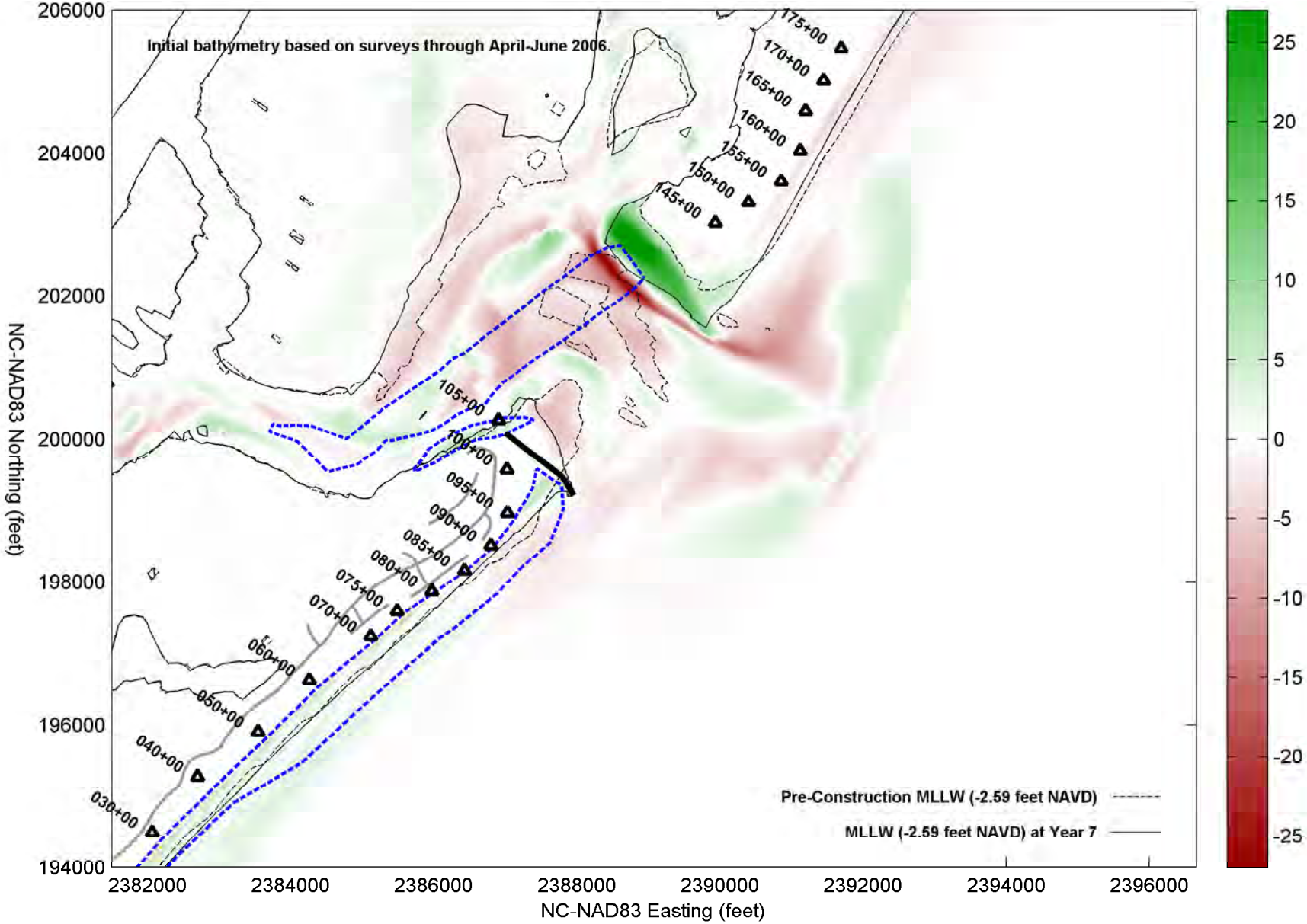
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 5, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



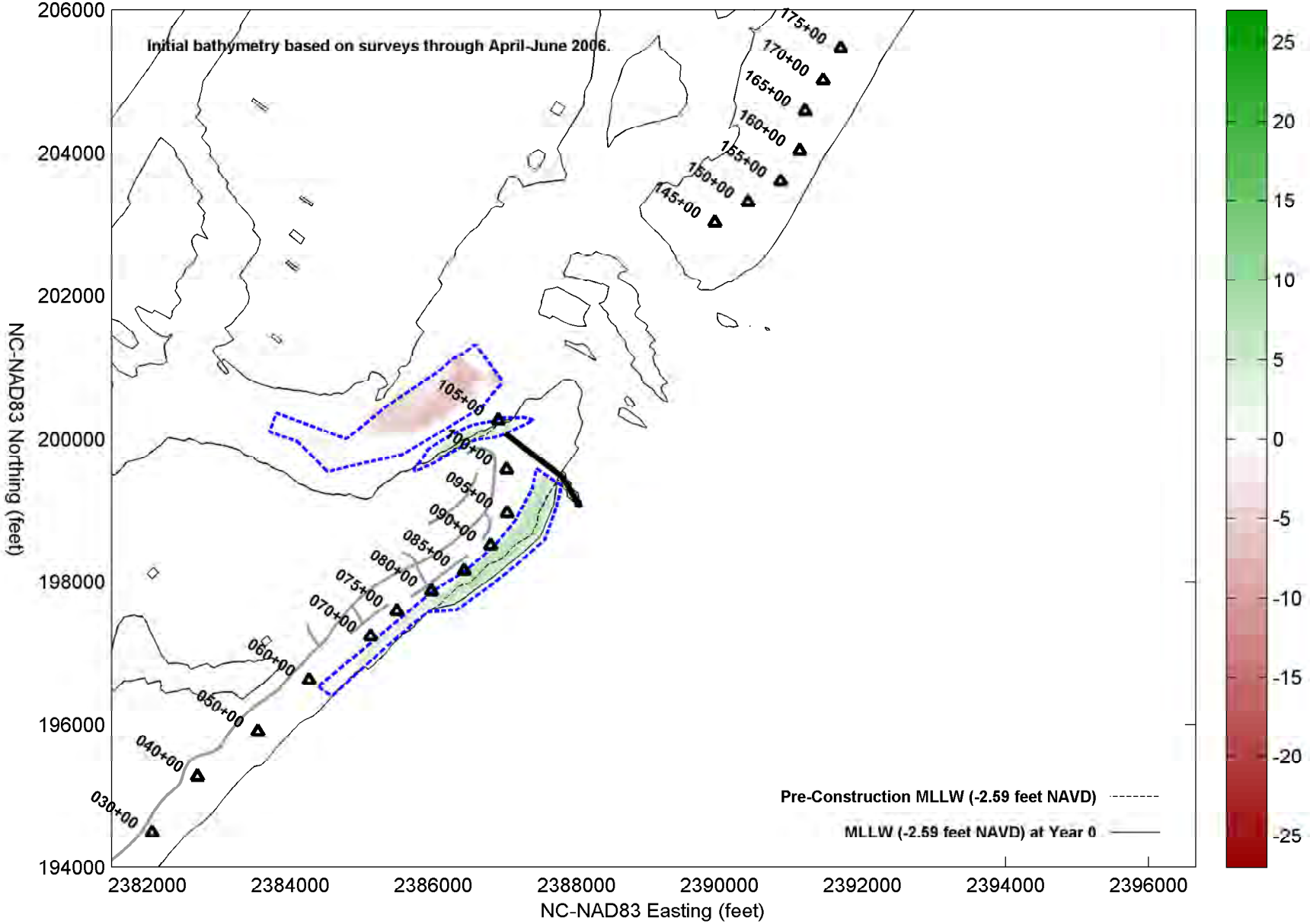
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 6, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



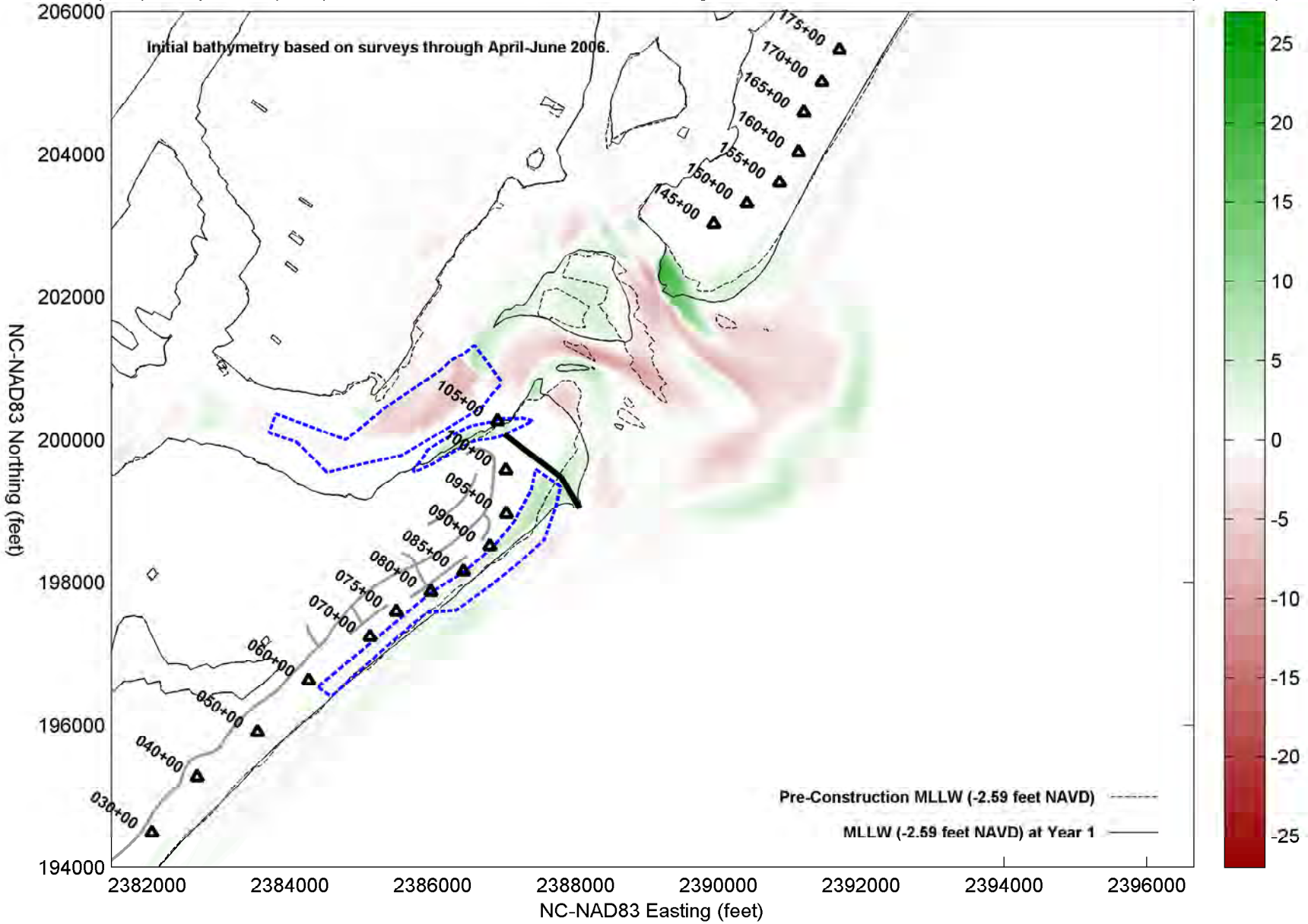
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 7, Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut)



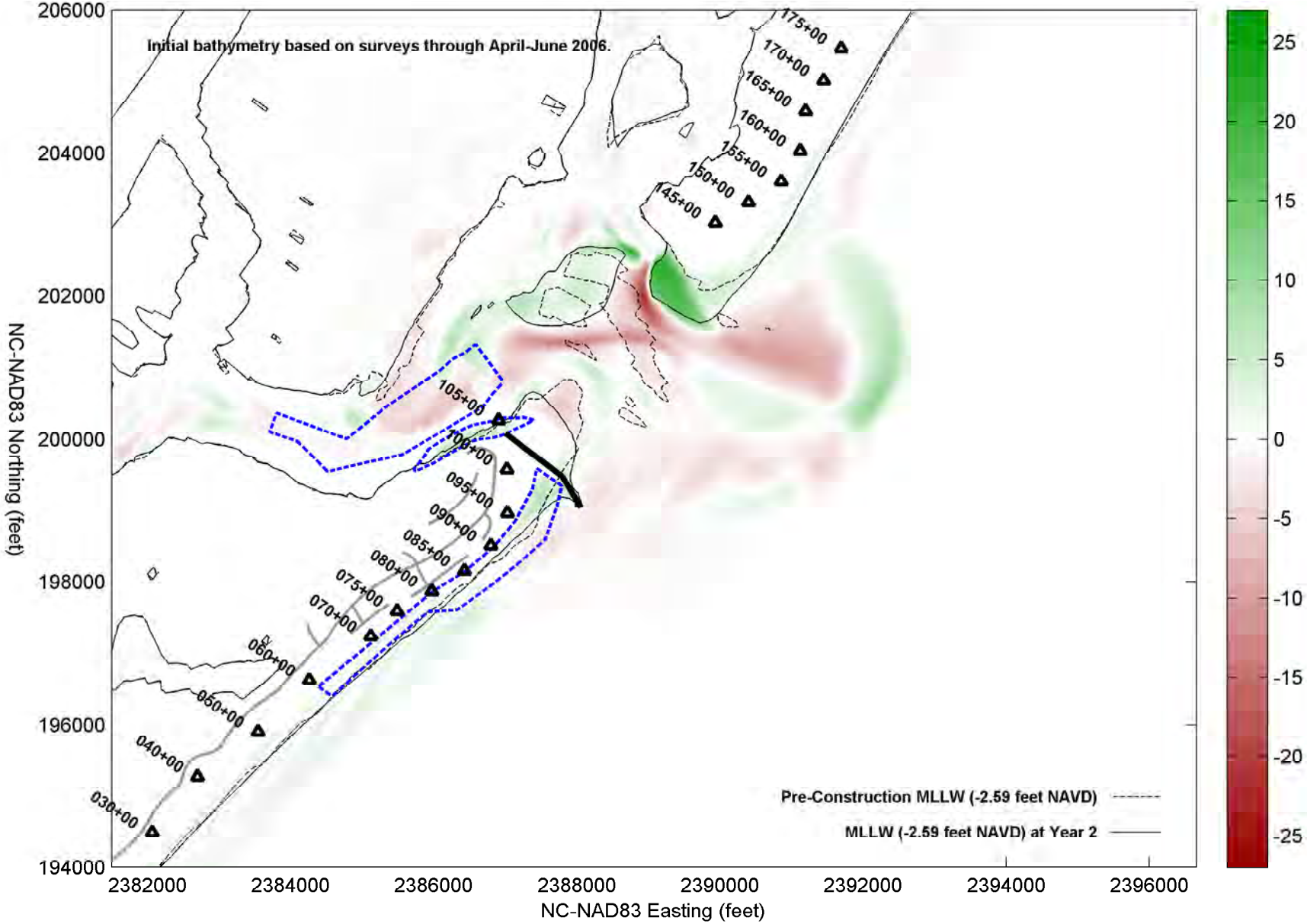
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 0, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



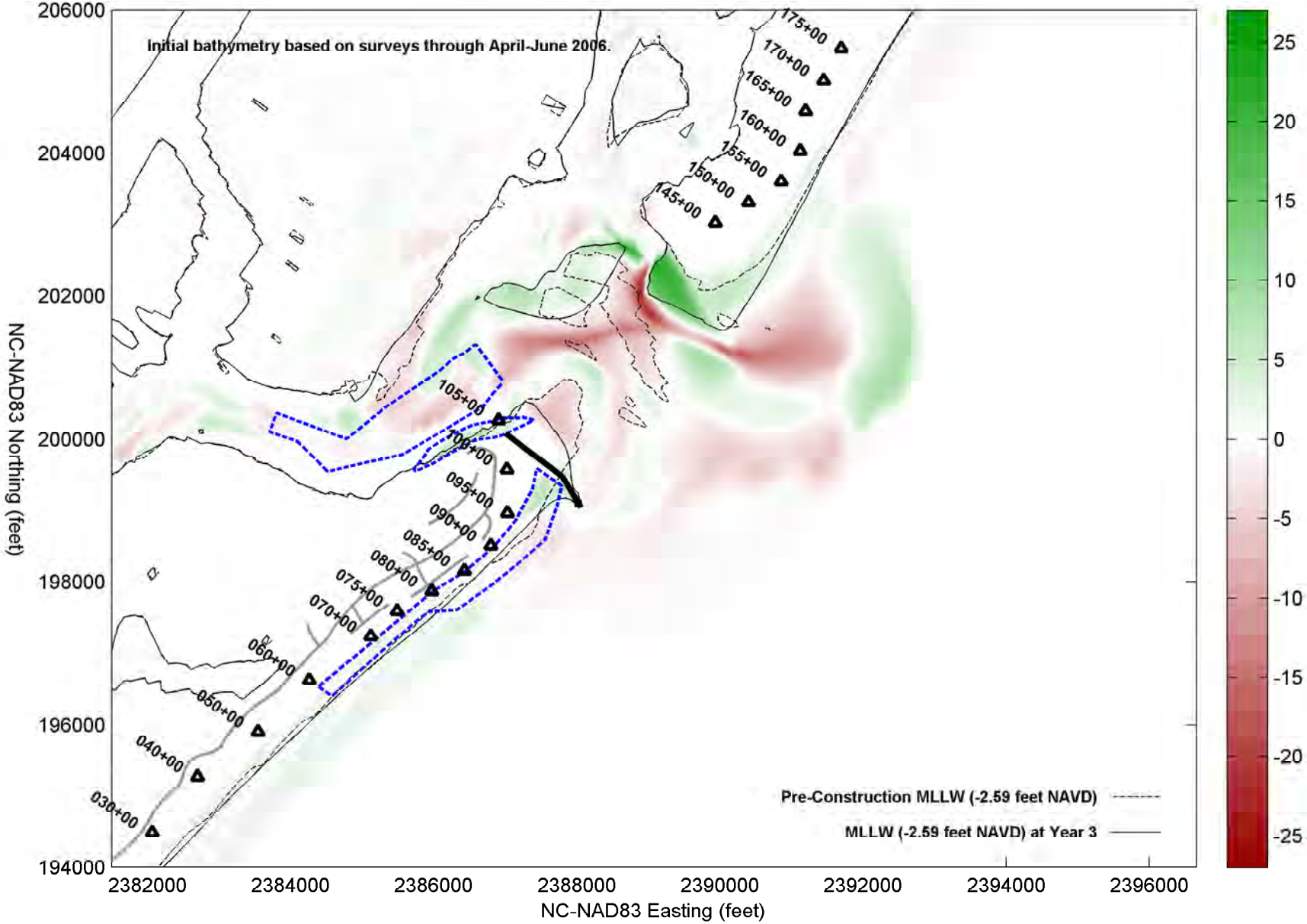
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 1, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



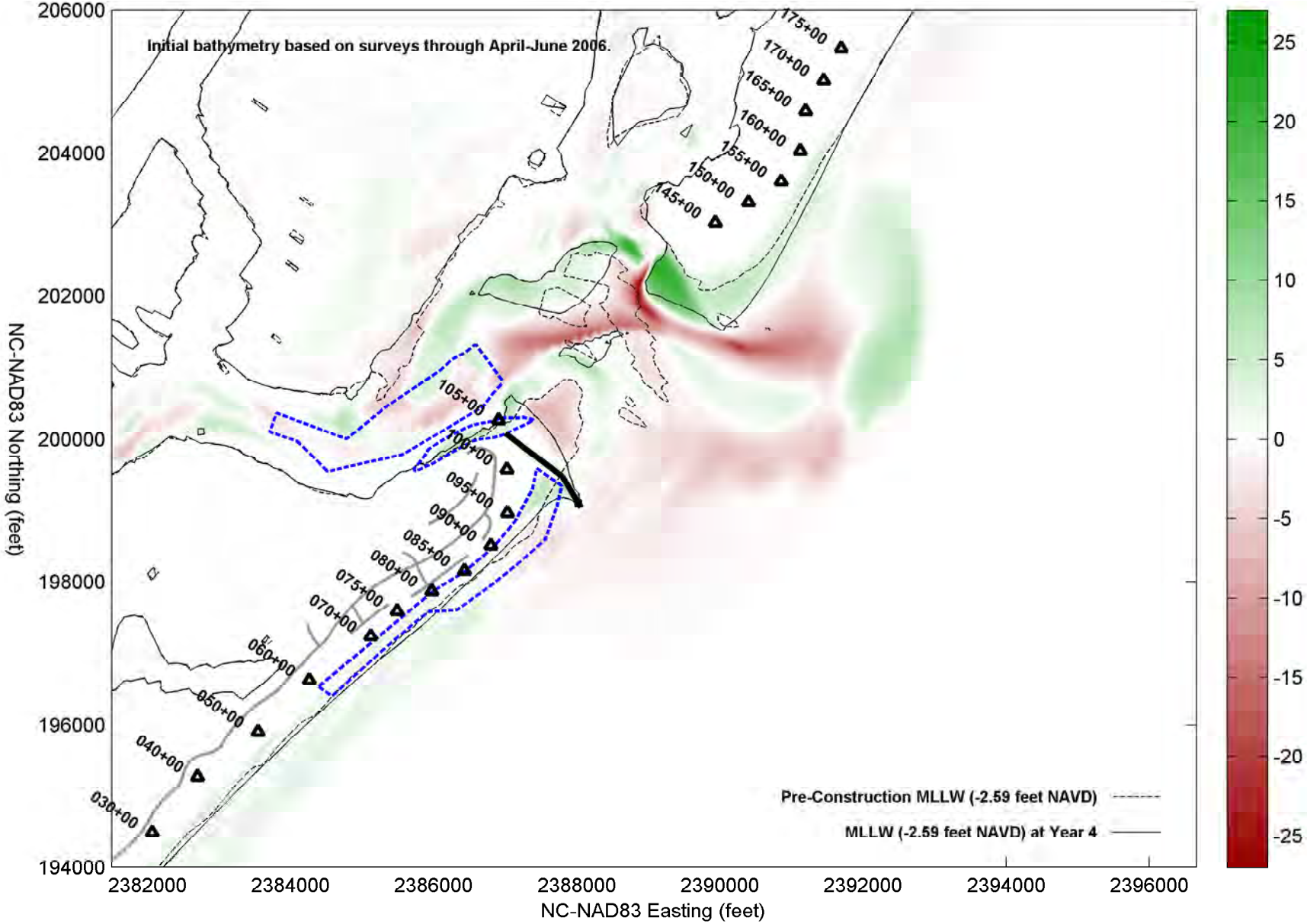
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 2, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



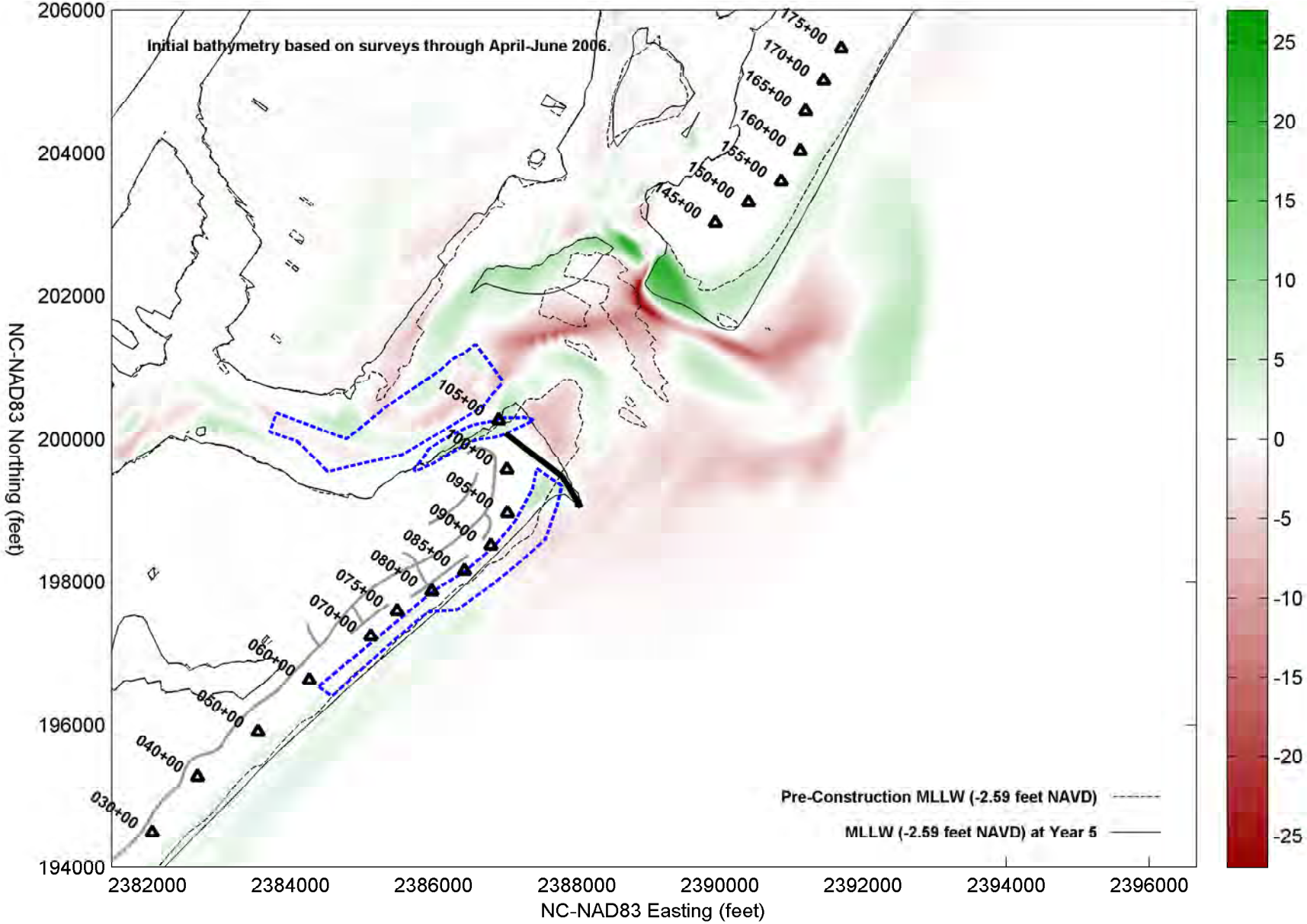
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 3, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



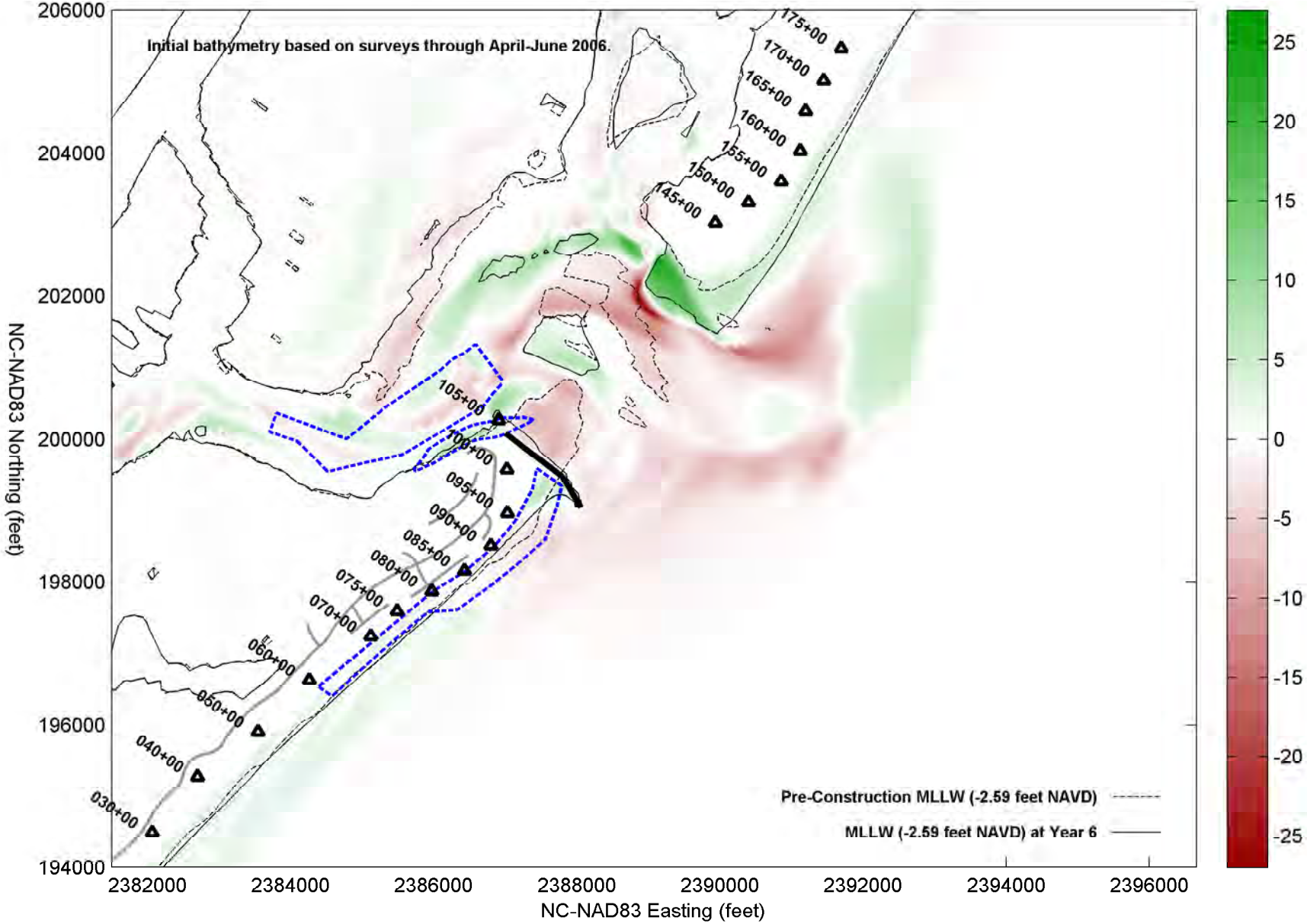
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 4, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



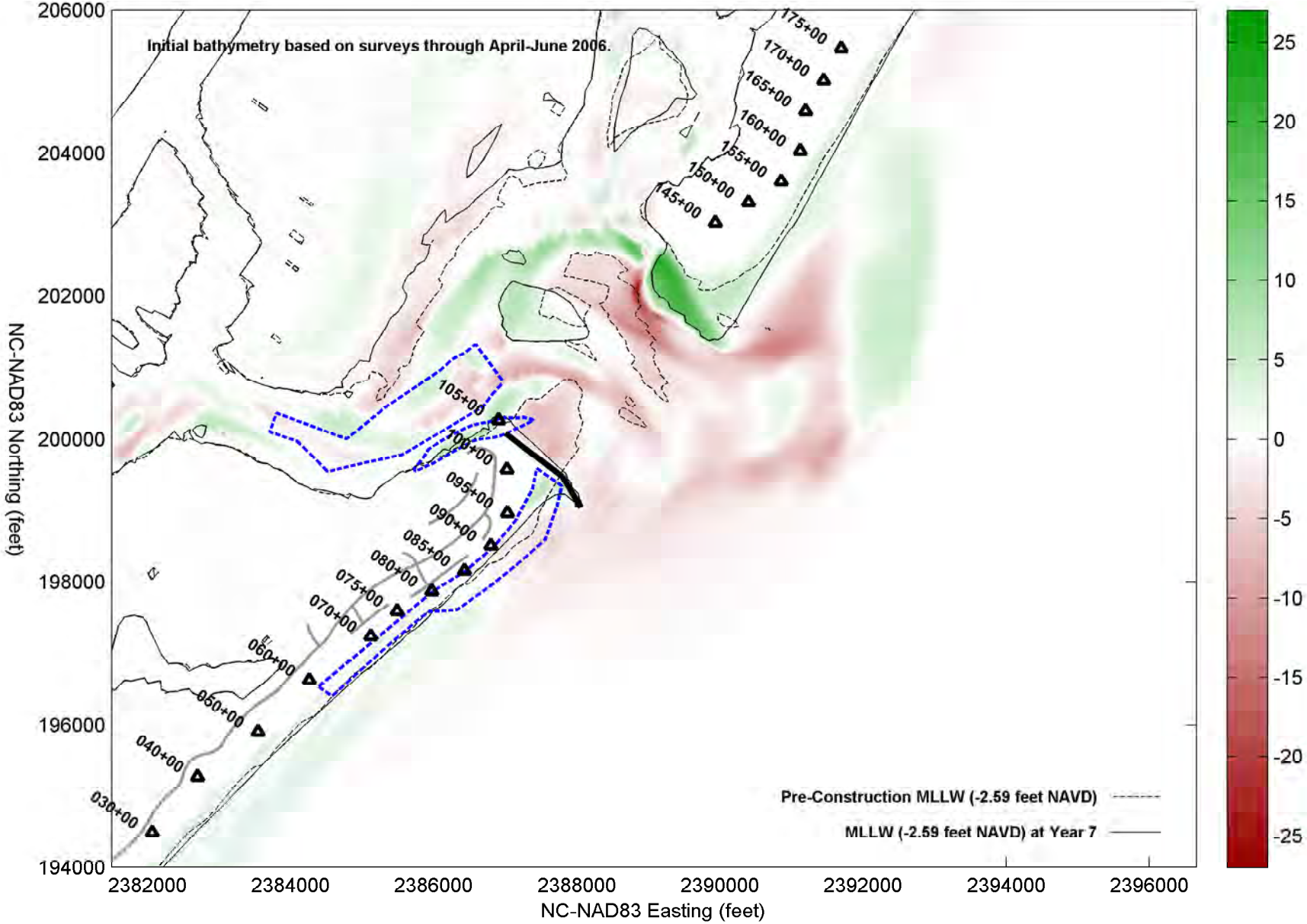
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 5, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



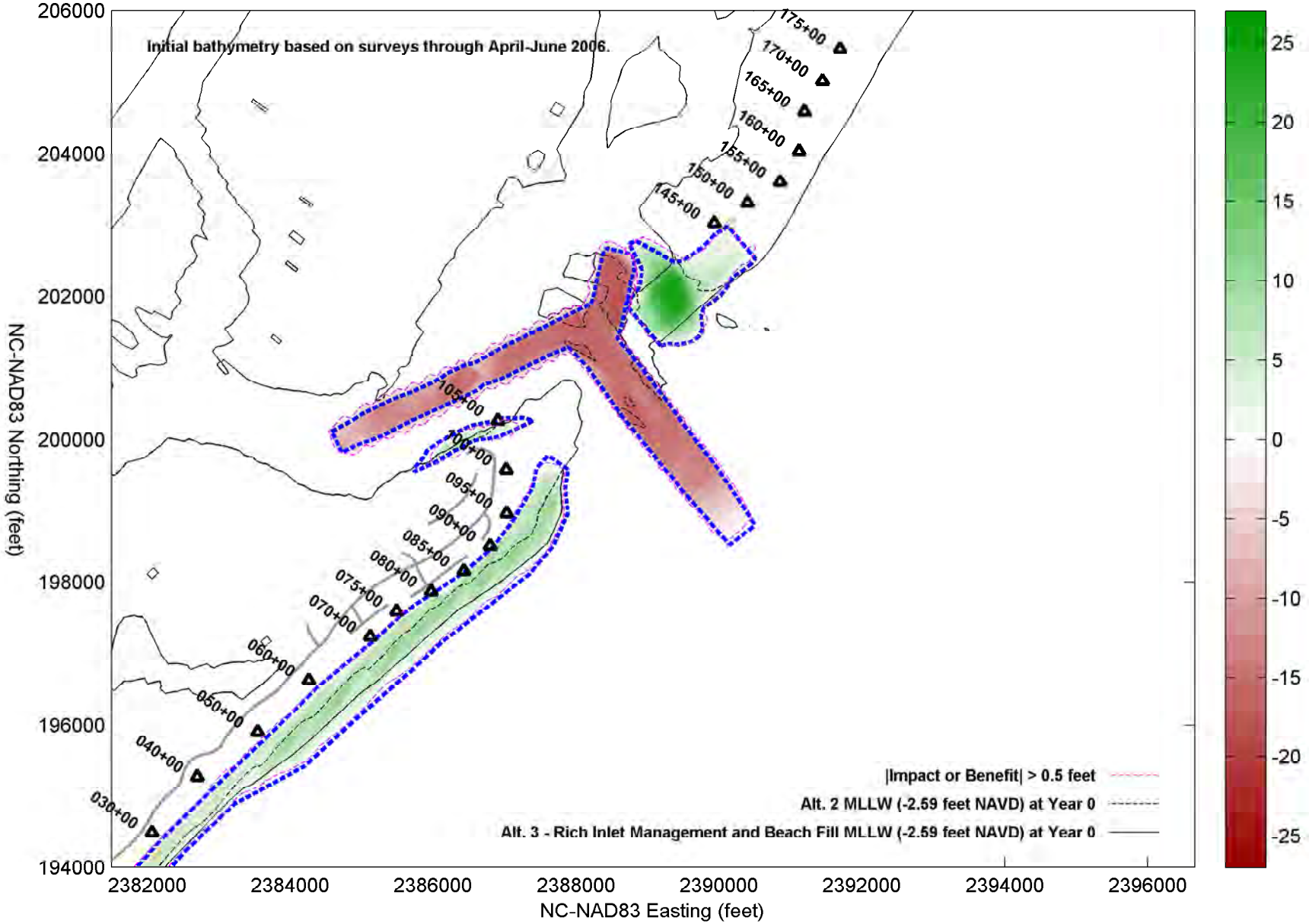
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 6, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



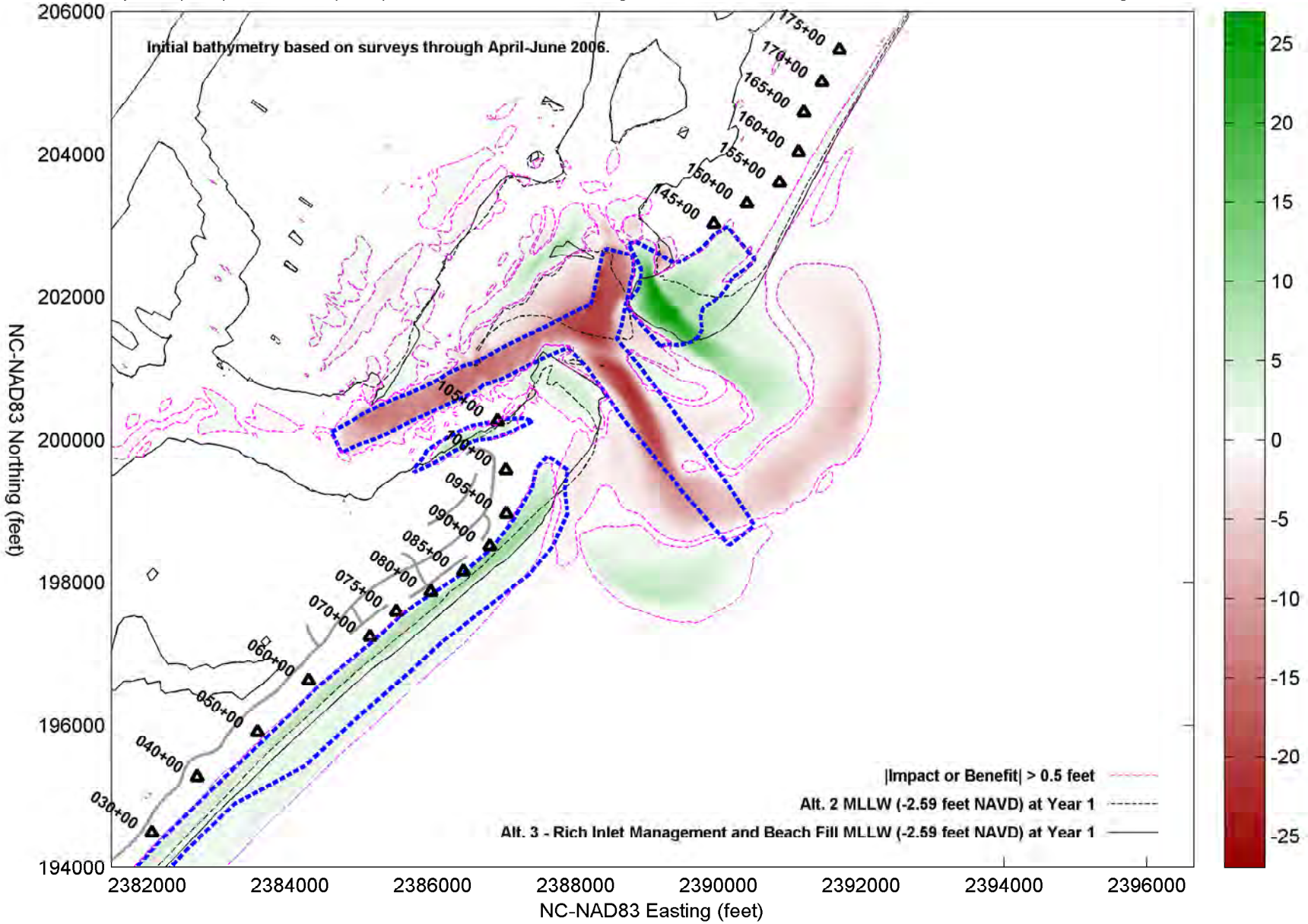
Erosion (-feet) & Deposition (+feet), Pre-Construction to Year 7, Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut)



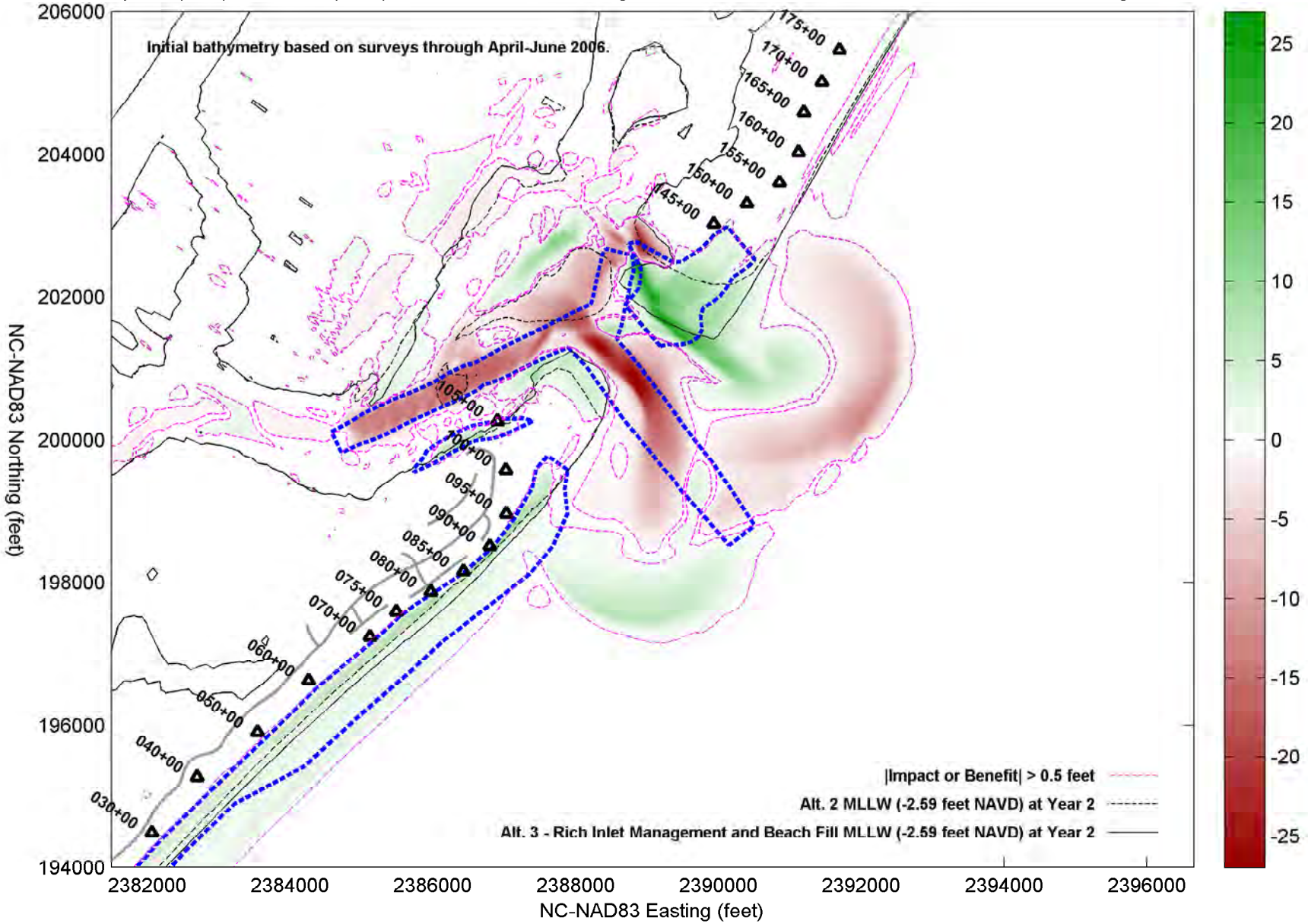
Impacts (-feet) & Benefits (+feet) of Alt. 3 - Rich Inlet Management and Beach Fill vs. Alt. 2 - Abandon/Retreat through Year 0



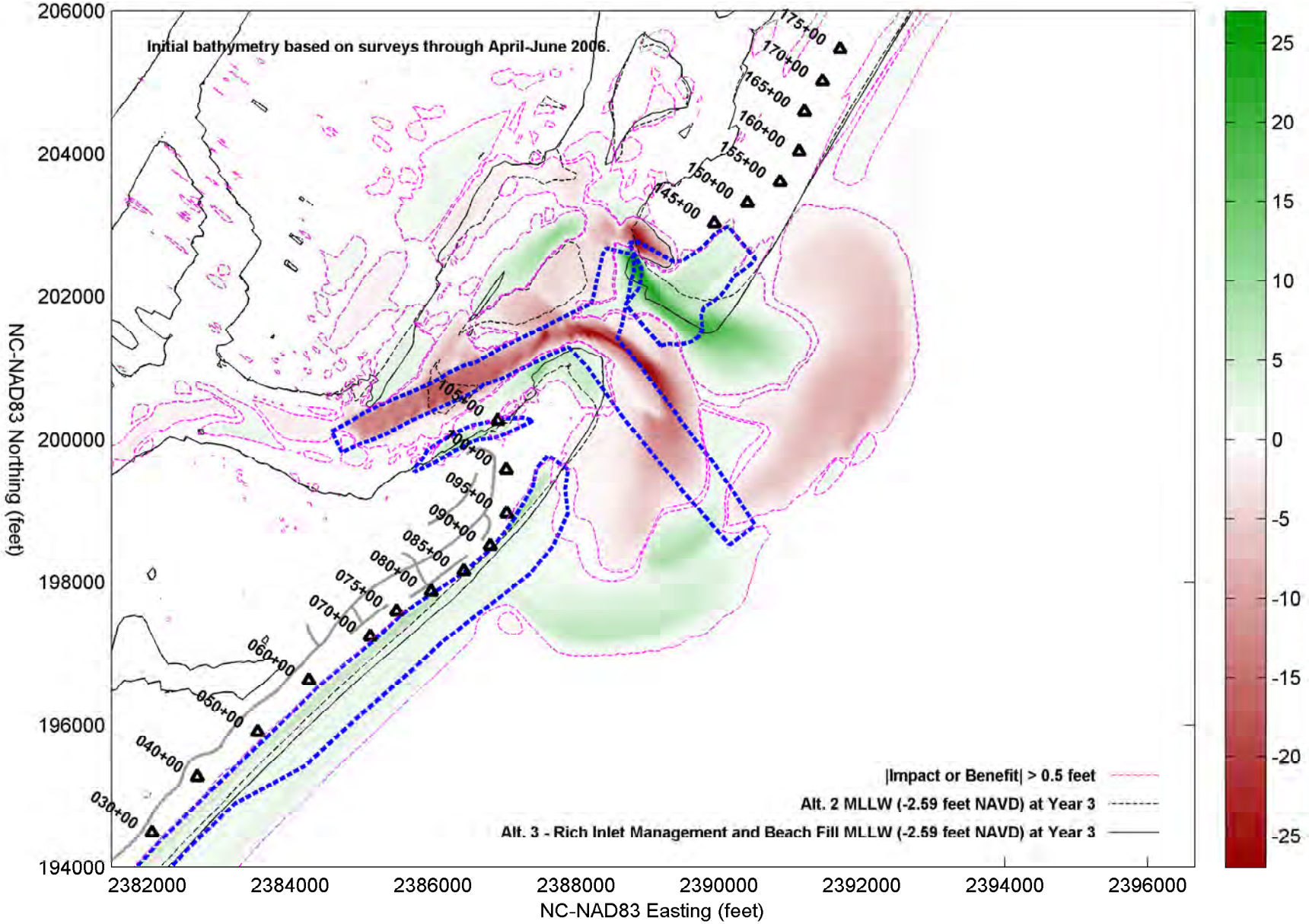
Impacts (-feet) & Benefits (+feet) of Alt. 3 - Rich Inlet Management and Beach Fill vs. Alt. 2 - Abandon/Retreat through Year 1



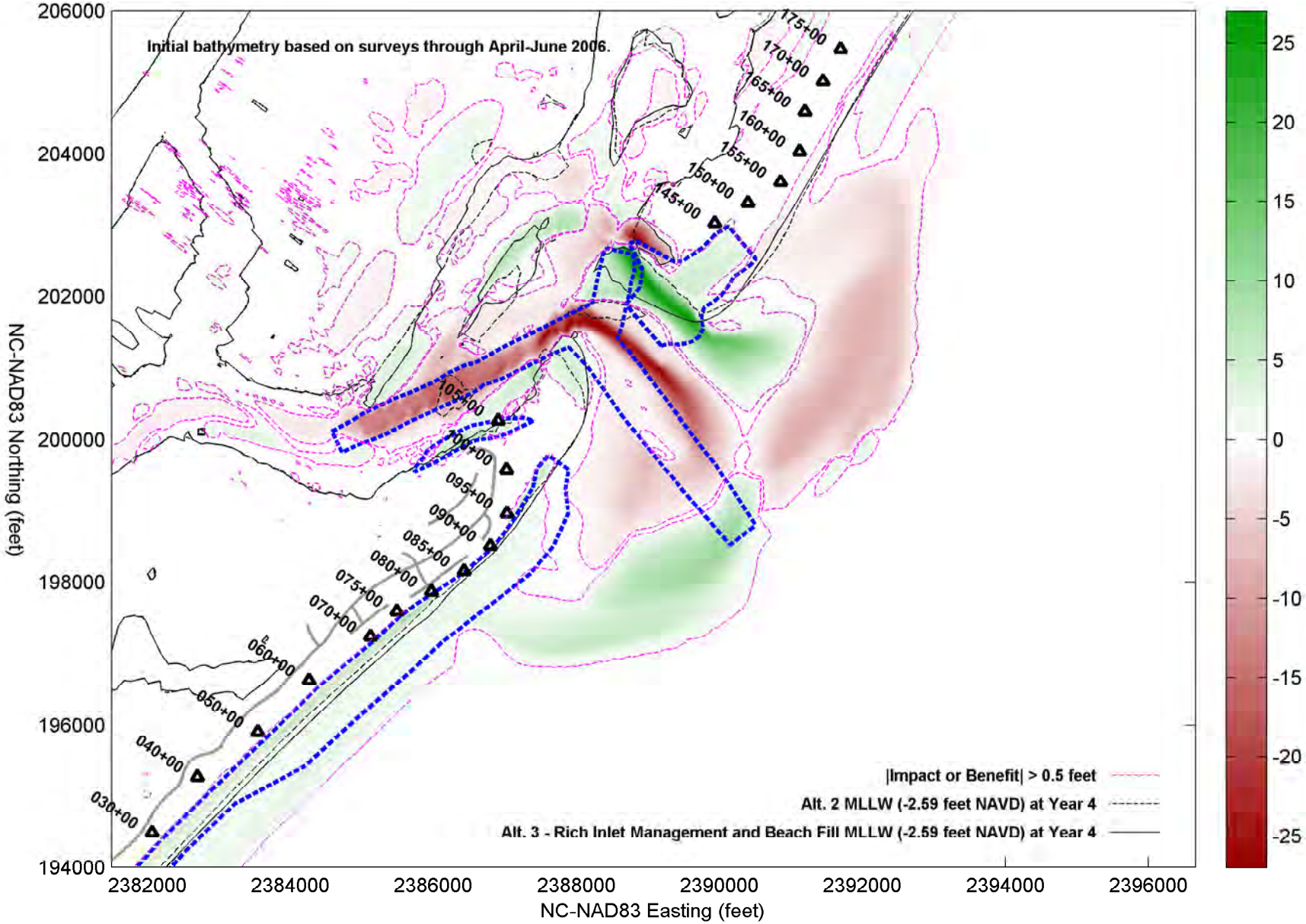
Impacts (-feet) & Benefits (+feet) of Alt. 3 - Rich Inlet Management and Beach Fill vs. Alt. 2 - Abandon/Retreat through Year 2



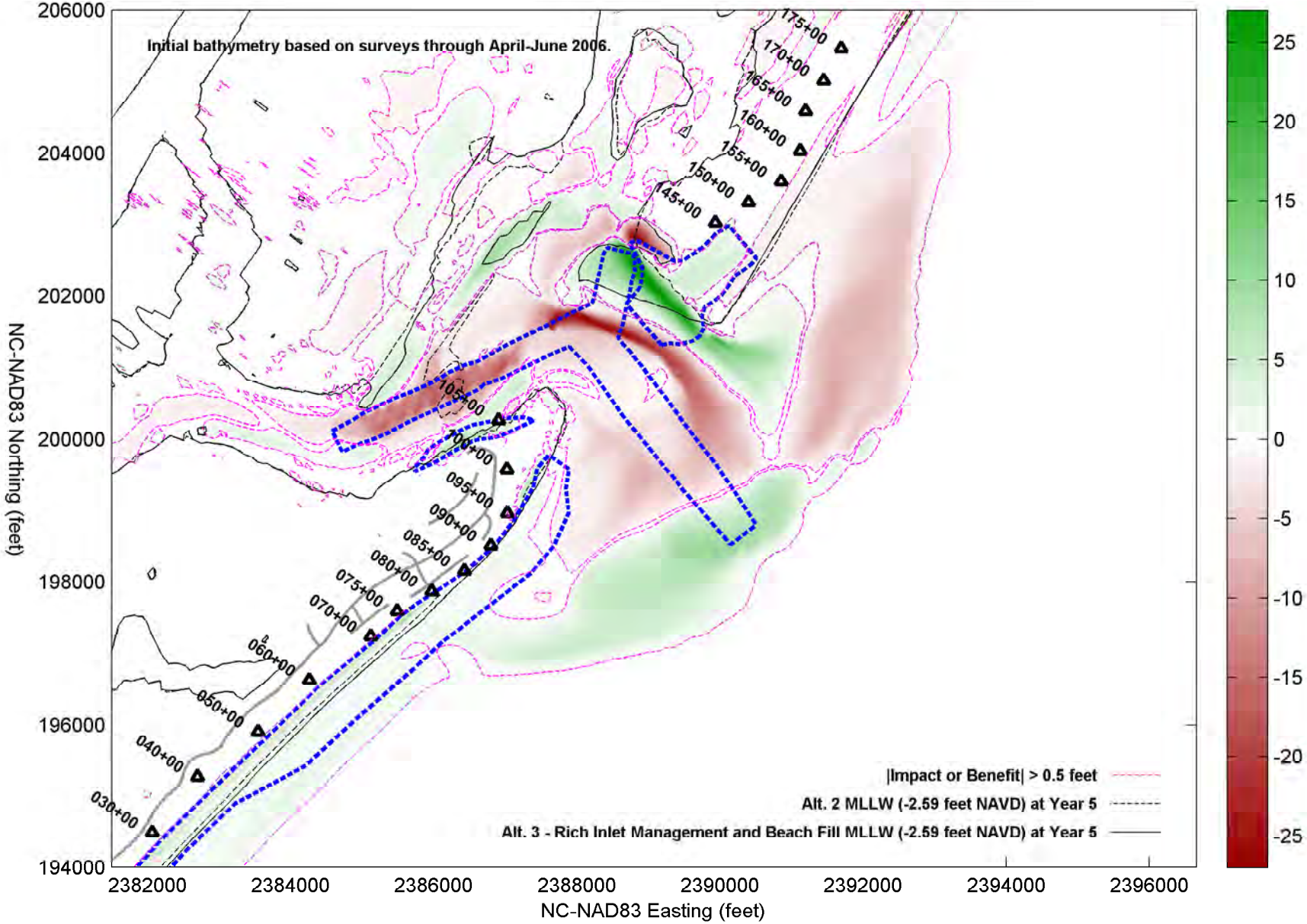
Impacts (-feet) & Benefits (+feet) of Alt. 3 - Rich Inlet Management and Beach Fill vs. Alt. 2 - Abandon/Retreat through Year 3



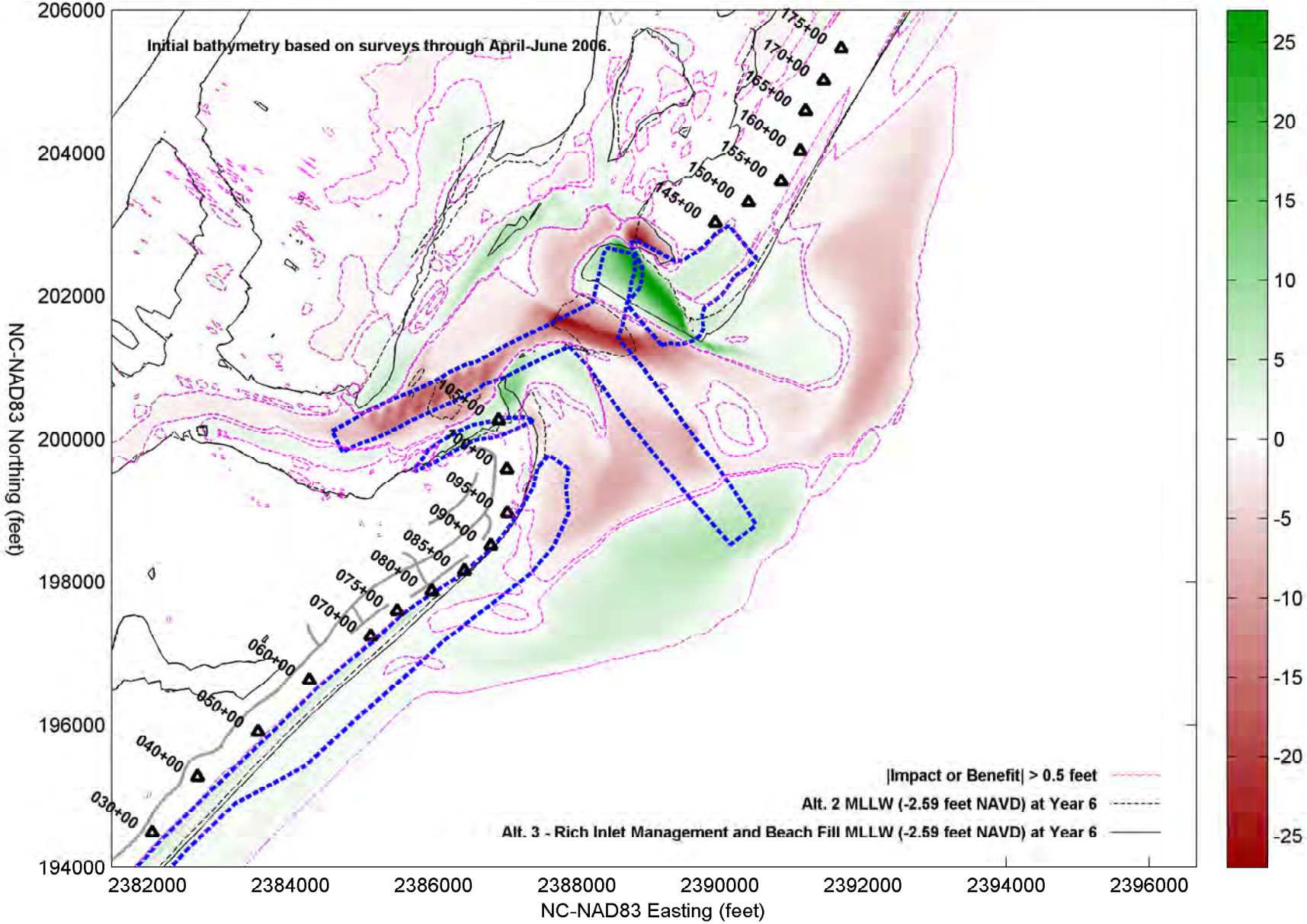
Impacts (-feet) & Benefits (+feet) of Alt. 3 - Rich Inlet Management and Beach Fill vs. Alt. 2 - Abandon/Retreat through Year 4



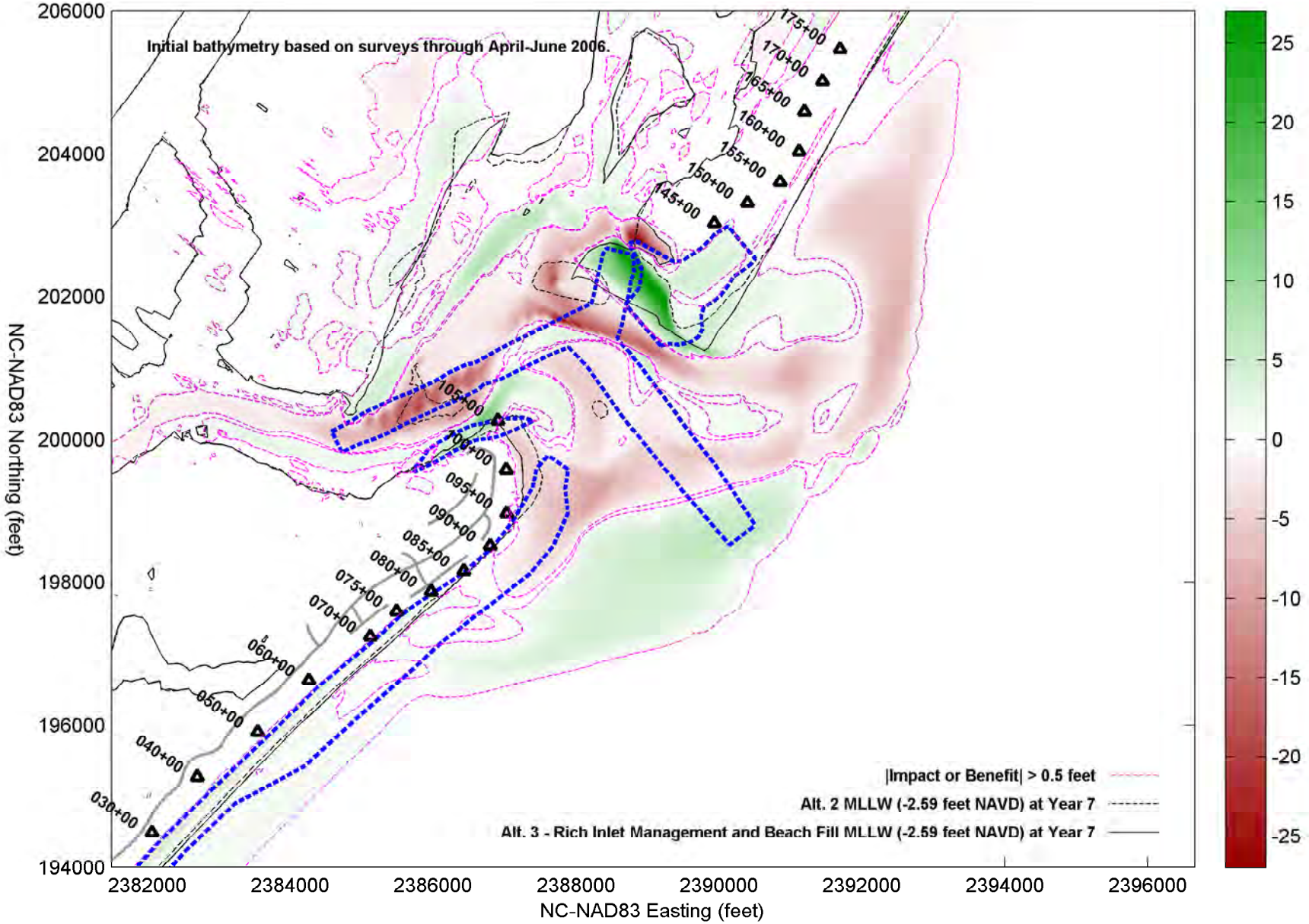
Impacts (-feet) & Benefits (+feet) of Alt. 3 - Rich Inlet Management and Beach Fill vs. Alt. 2 - Abandon/Retreat through Year 5



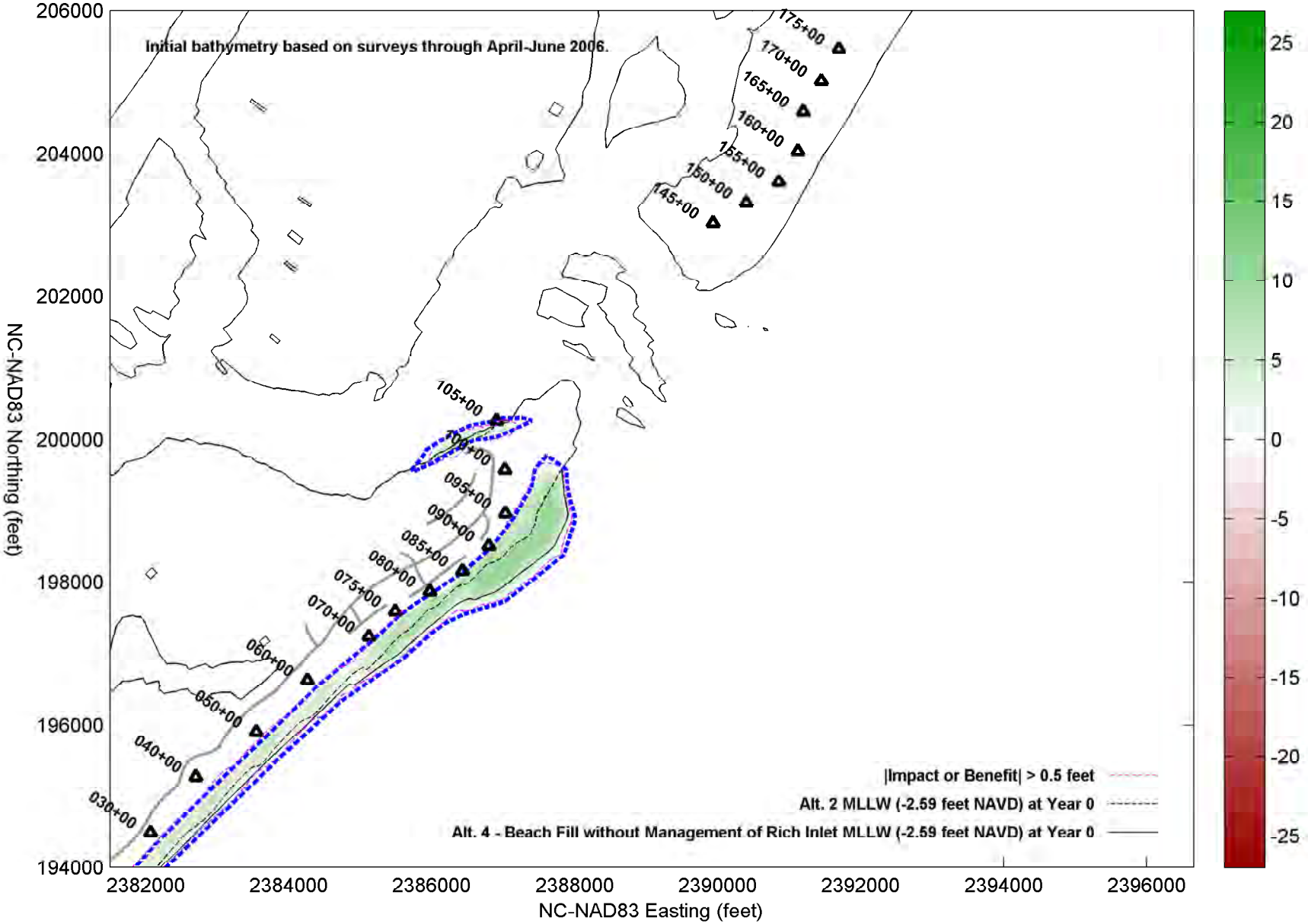
Impacts (-feet) & Benefits (+feet) of Alt. 3 - Rich Inlet Management and Beach Fill vs. Alt. 2 - Abandon/Retreat through Year 6



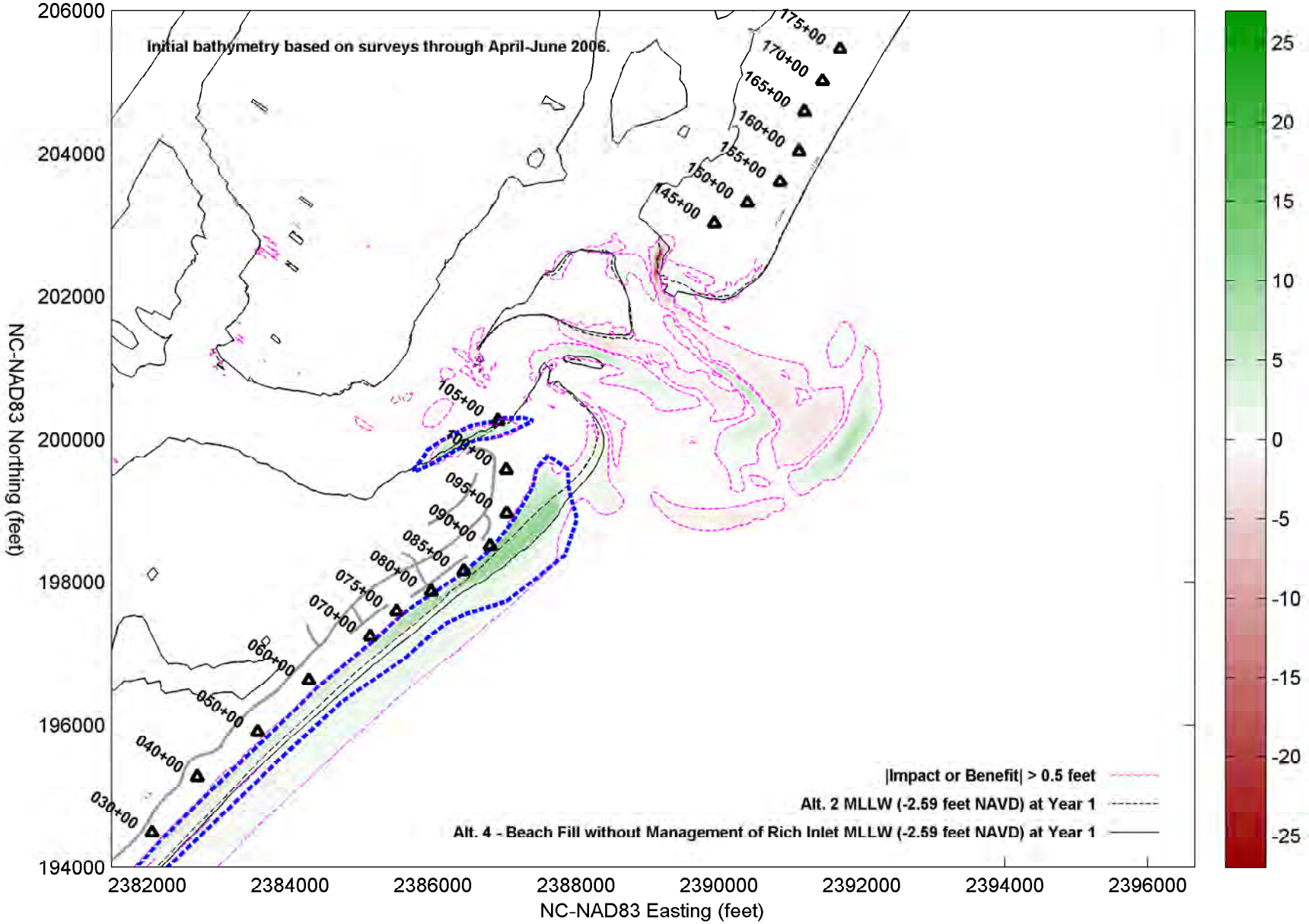
Impacts (-feet) & Benefits (+feet) of Alt. 3 - Rich Inlet Management and Beach Fill vs. Alt. 2 - Abandon/Retreat through Year 7



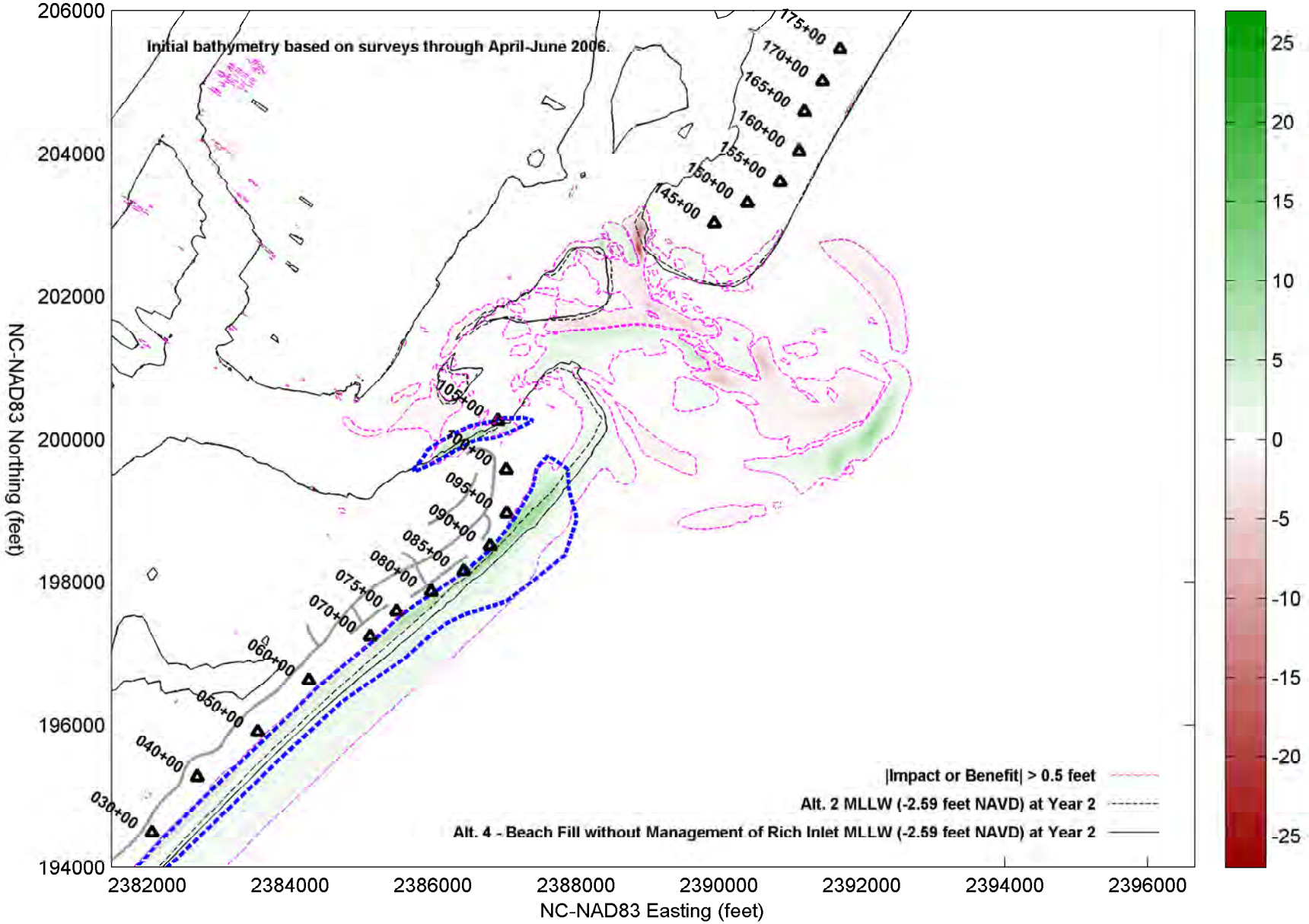
Impacts (-feet) & Benefits (+feet) of Alt. 4 - Beach Fill without Management of Rich Inlet vs. Alt. 2 - Abandon/Retreat through Year 0



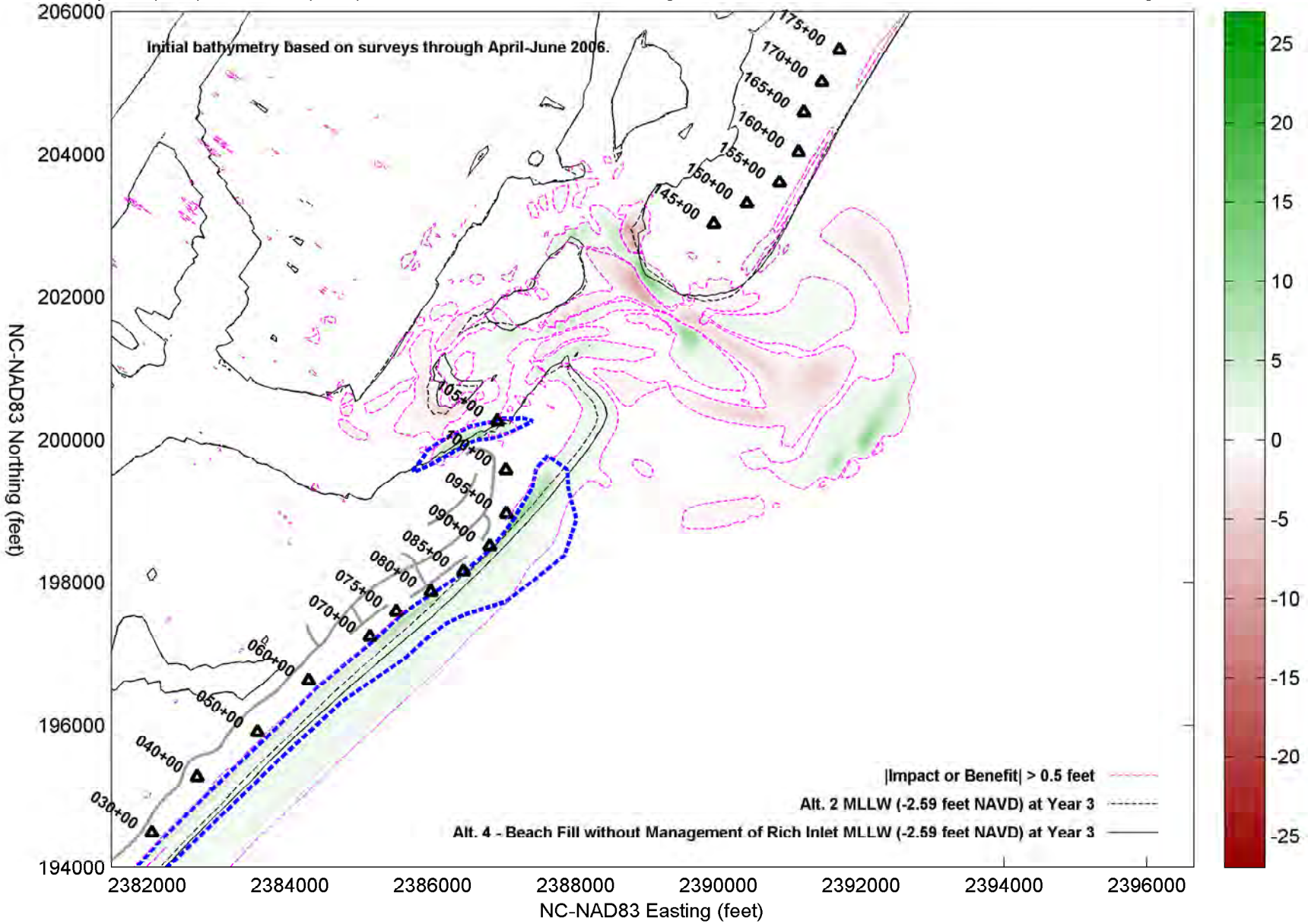
Impacts (-feet) & Benefits (+feet) of Alt. 4 - Beach Fill without Management of Rich Inlet vs. Alt. 2 - Abandon/Retreat through Year 1



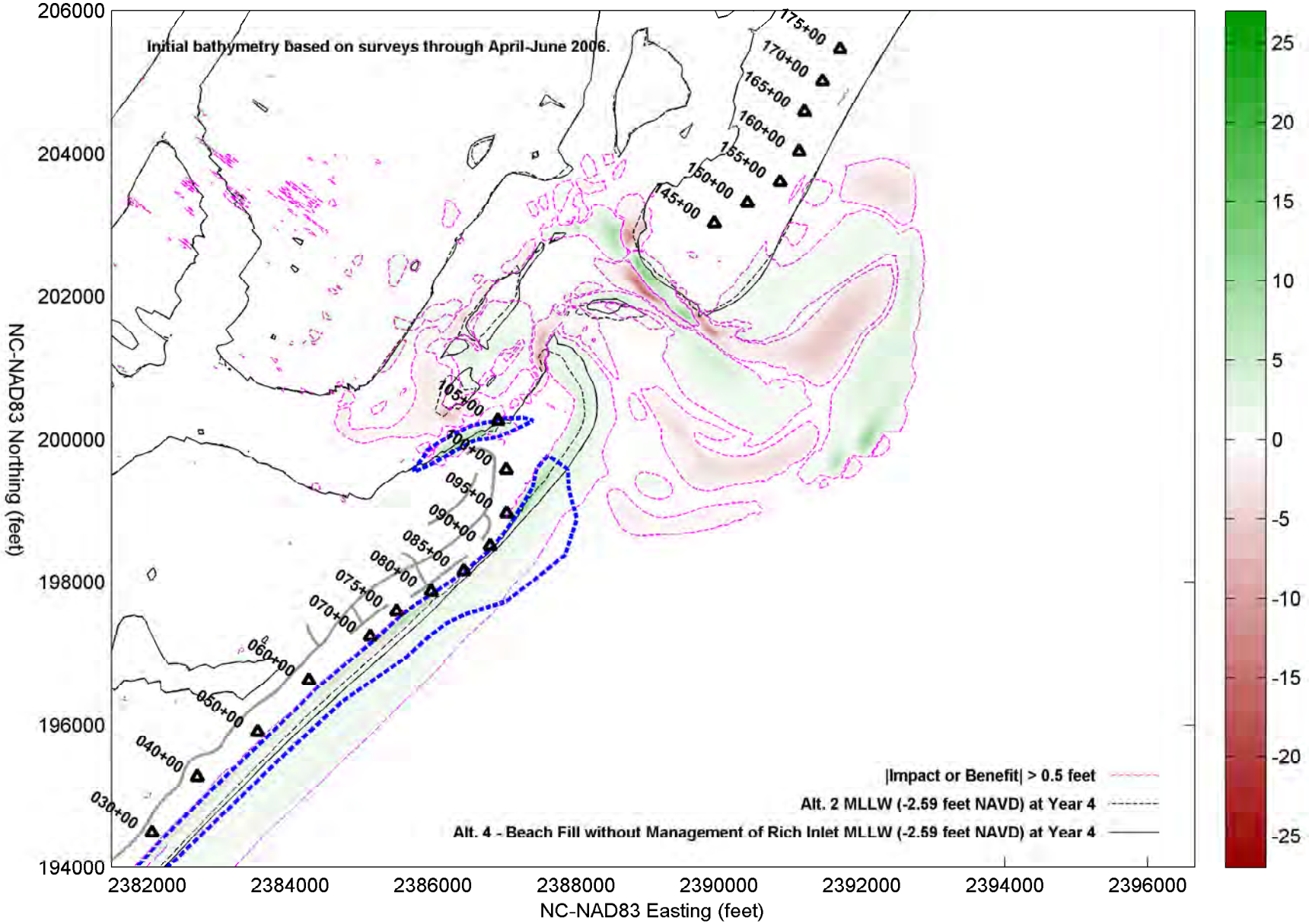
Impacts (-feet) & Benefits (+feet) of Alt. 4 - Beach Fill without Management of Rich Inlet vs. Alt. 2 - Abandon/Retreat through Year 2



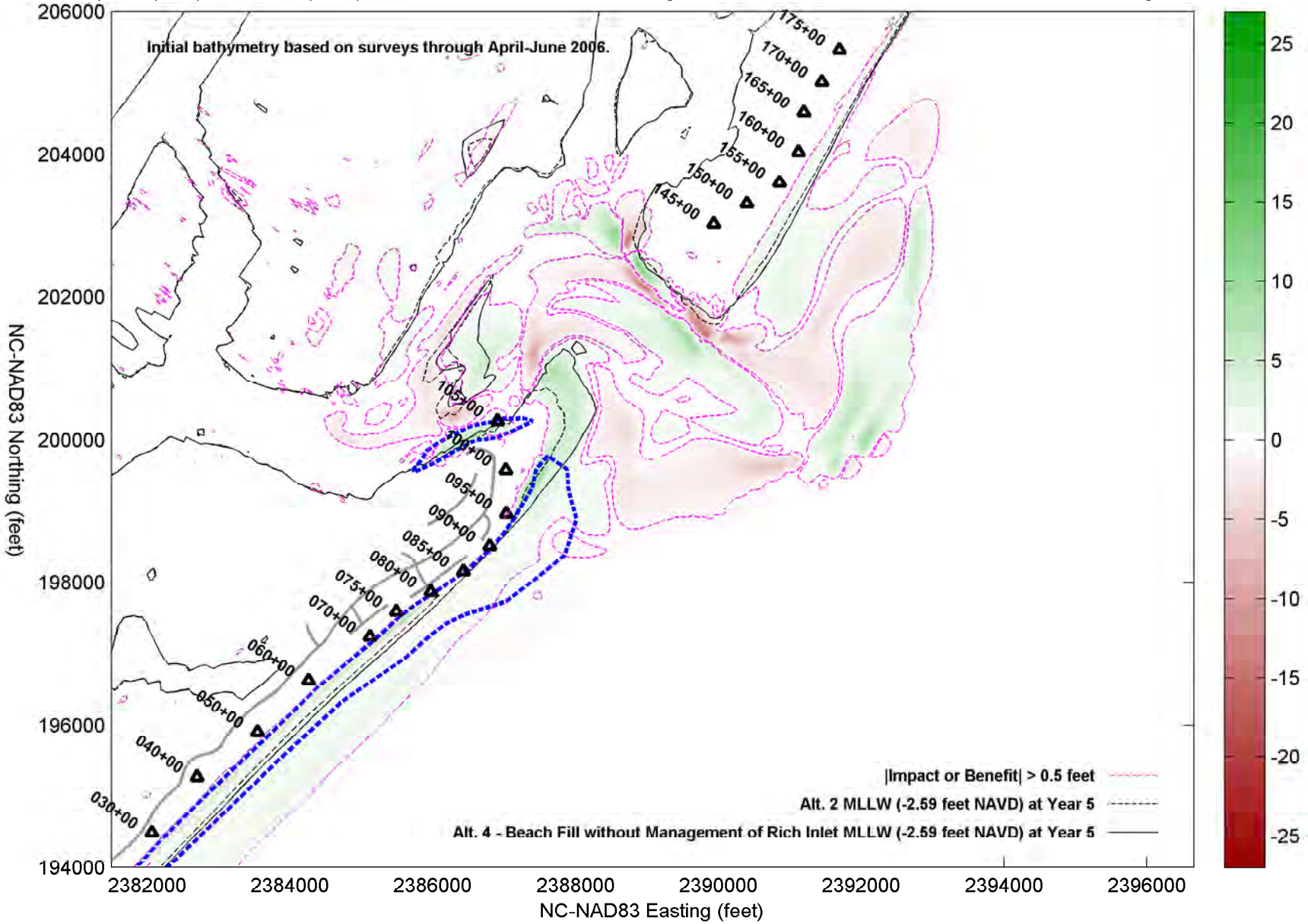
Impacts (-feet) & Benefits (+feet) of Alt. 4 - Beach Fill without Management of Rich Inlet vs. Alt. 2 - Abandon/Retreat through Year 3



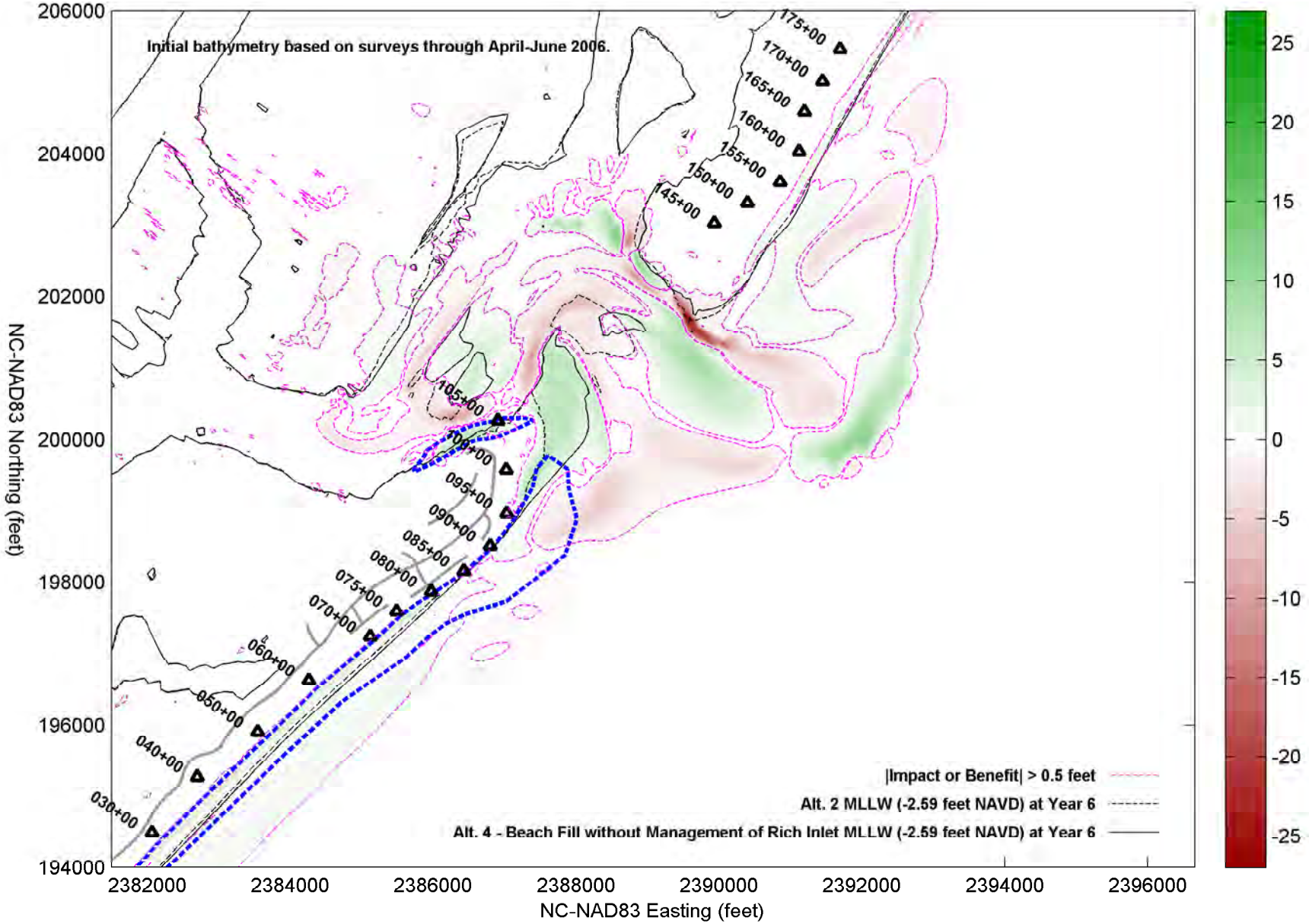
Impacts (-feet) & Benefits (+feet) of Alt. 4 - Beach Fill without Management of Rich Inlet vs. Alt. 2 - Abandon/Retreat through Year 4



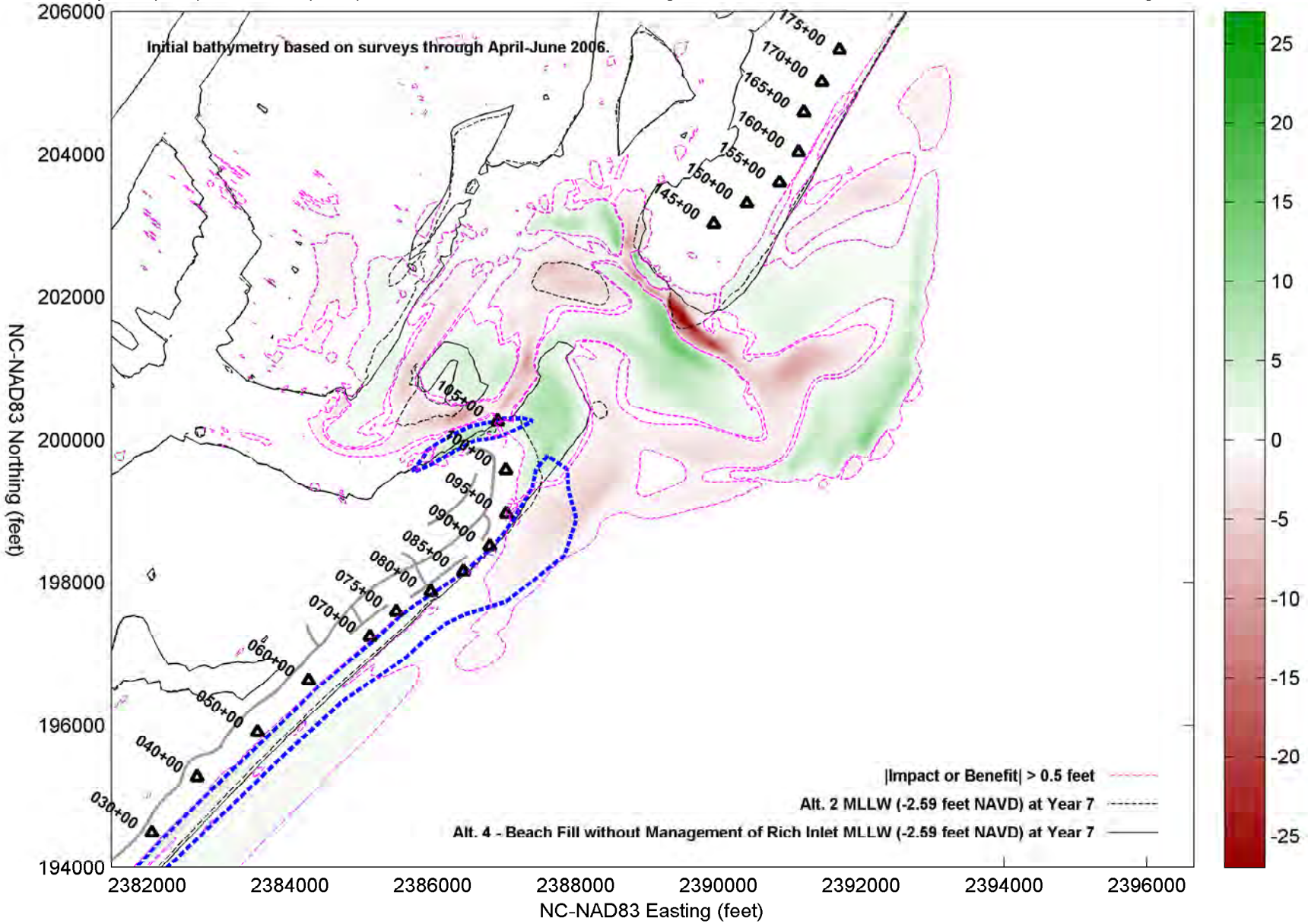
Impacts (-feet) & Benefits (+feet) of Alt. 4 - Beach Fill without Management of Rich Inlet vs. Alt. 2 - Abandon/Retreat through Year 5



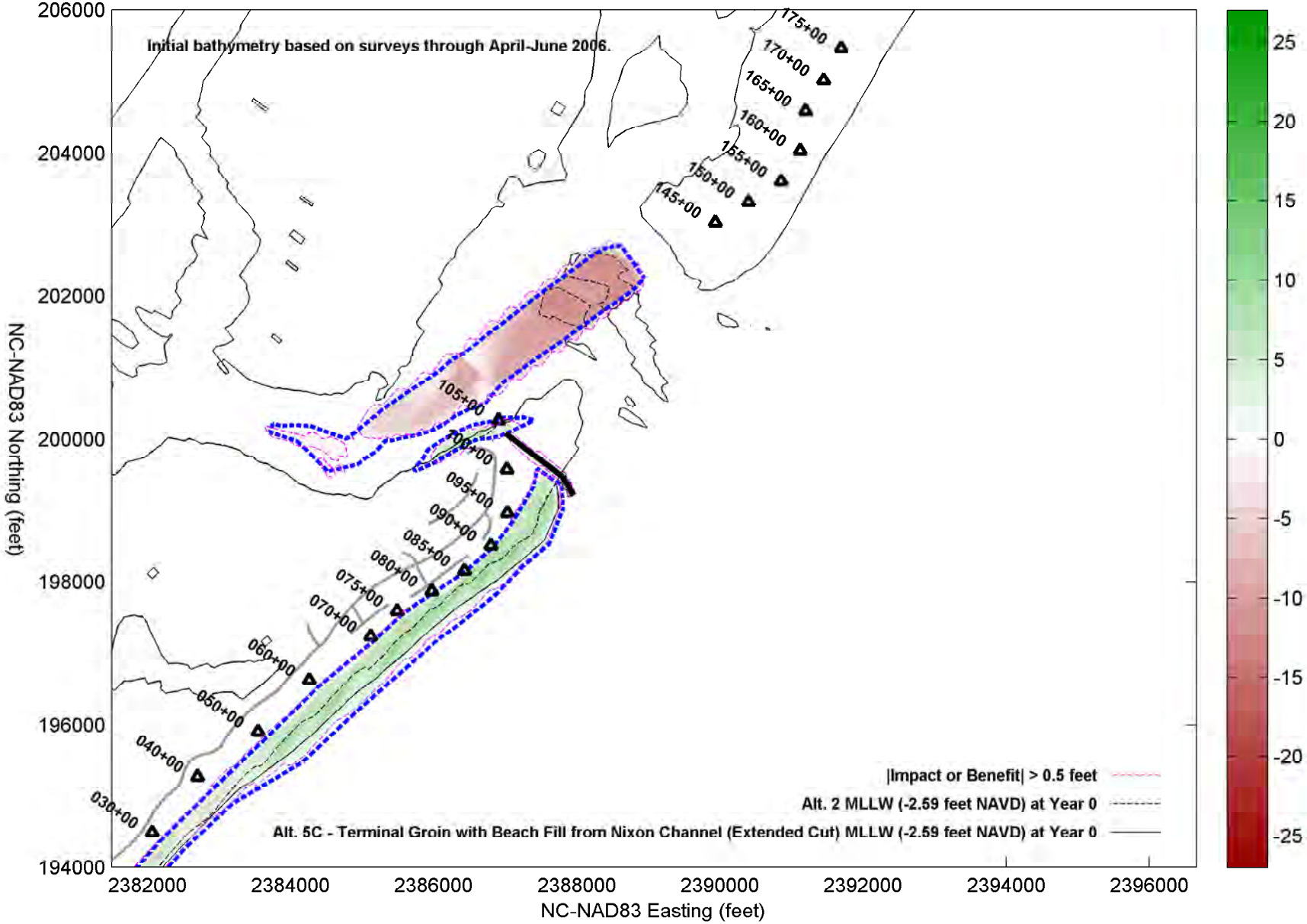
Impacts (-feet) & Benefits (+feet) of Alt. 4 - Beach Fill without Management of Rich Inlet vs. Alt. 2 - Abandon/Retreat through Year 6



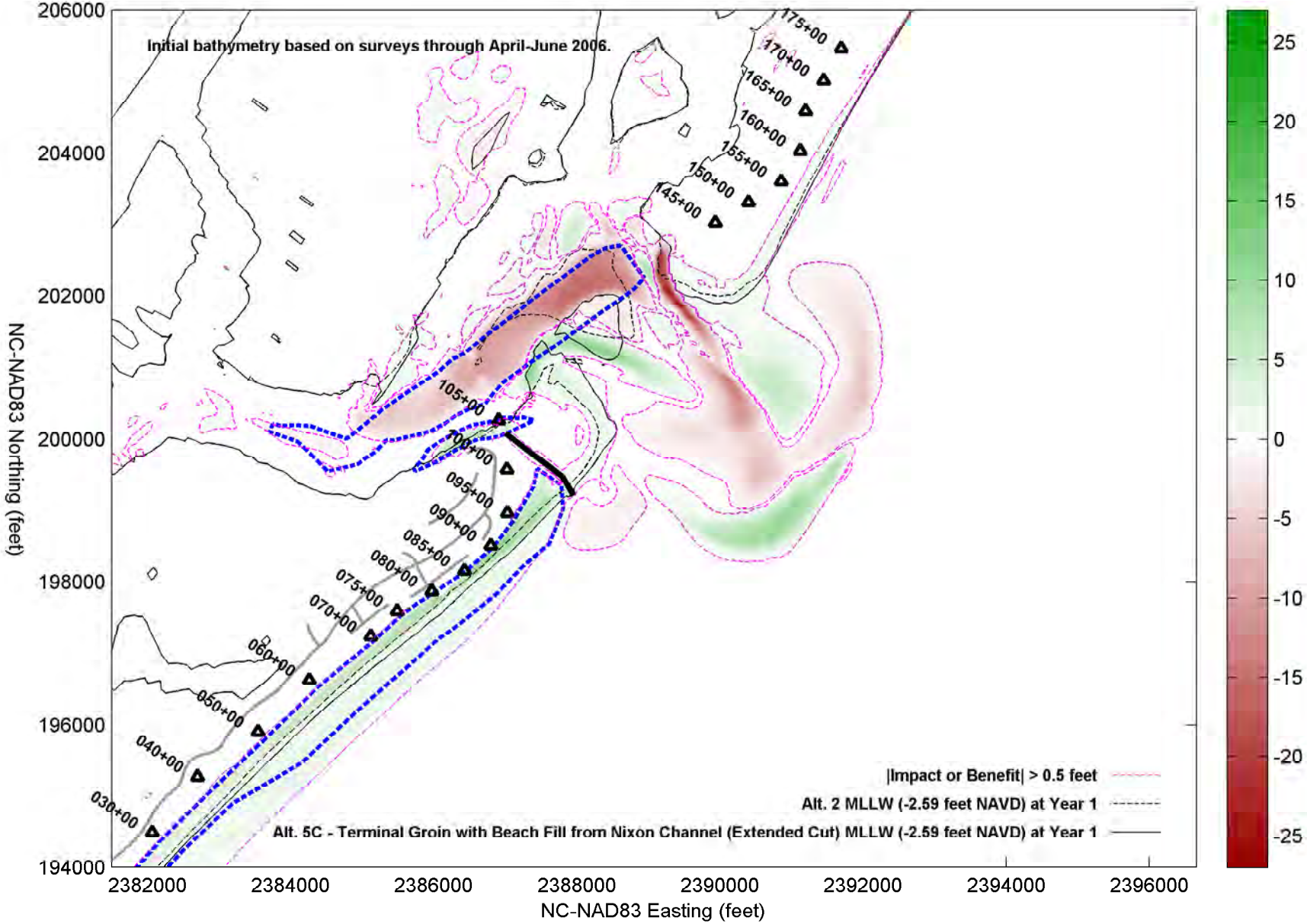
Impacts (-feet) & Benefits (+feet) of Alt. 4 - Beach Fill without Management of Rich Inlet vs. Alt. 2 - Abandon/Retreat through Year 7



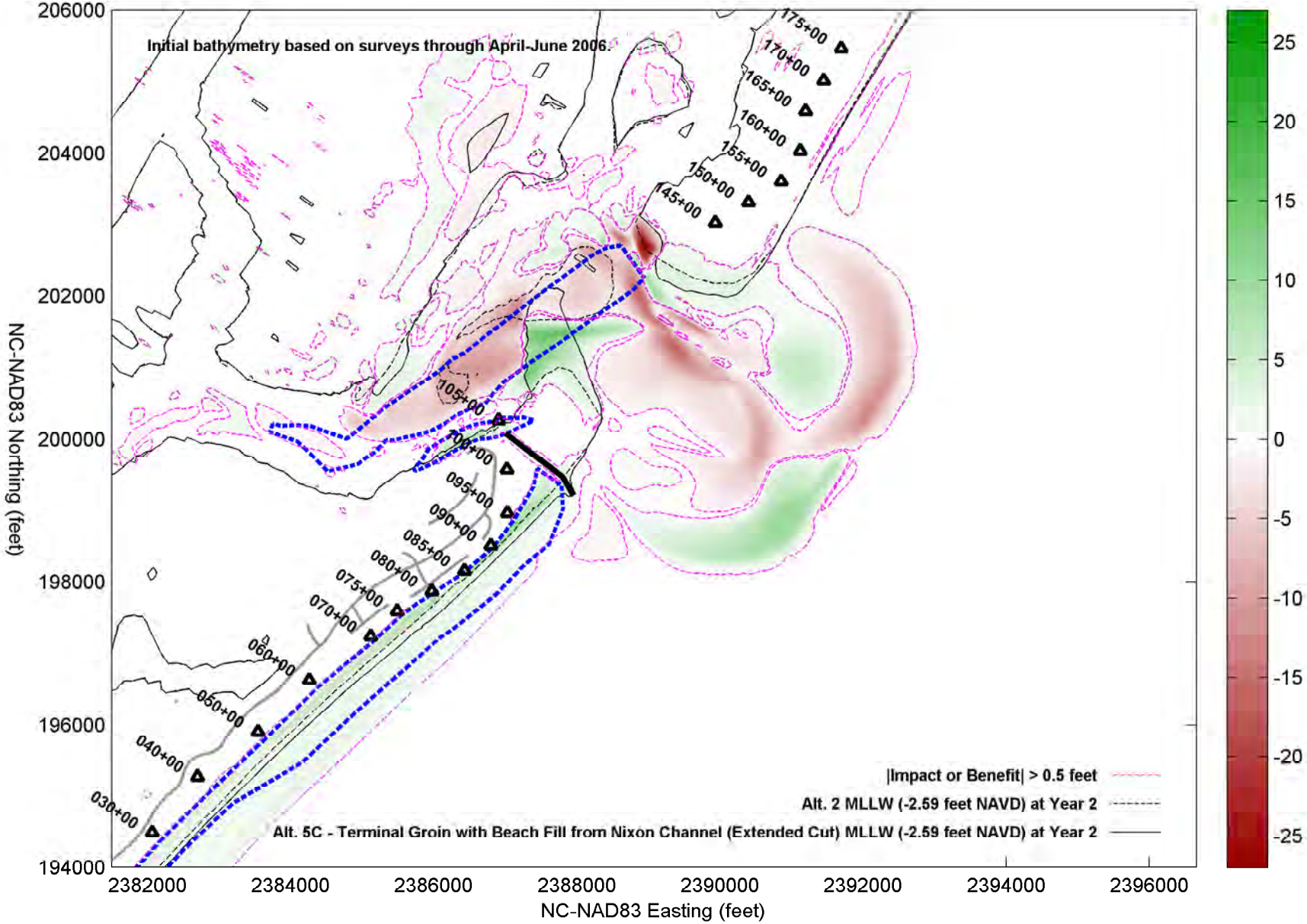
Impacts (-feet) & Benefits (+feet) of Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 - Abandon/Retreat through Year 0



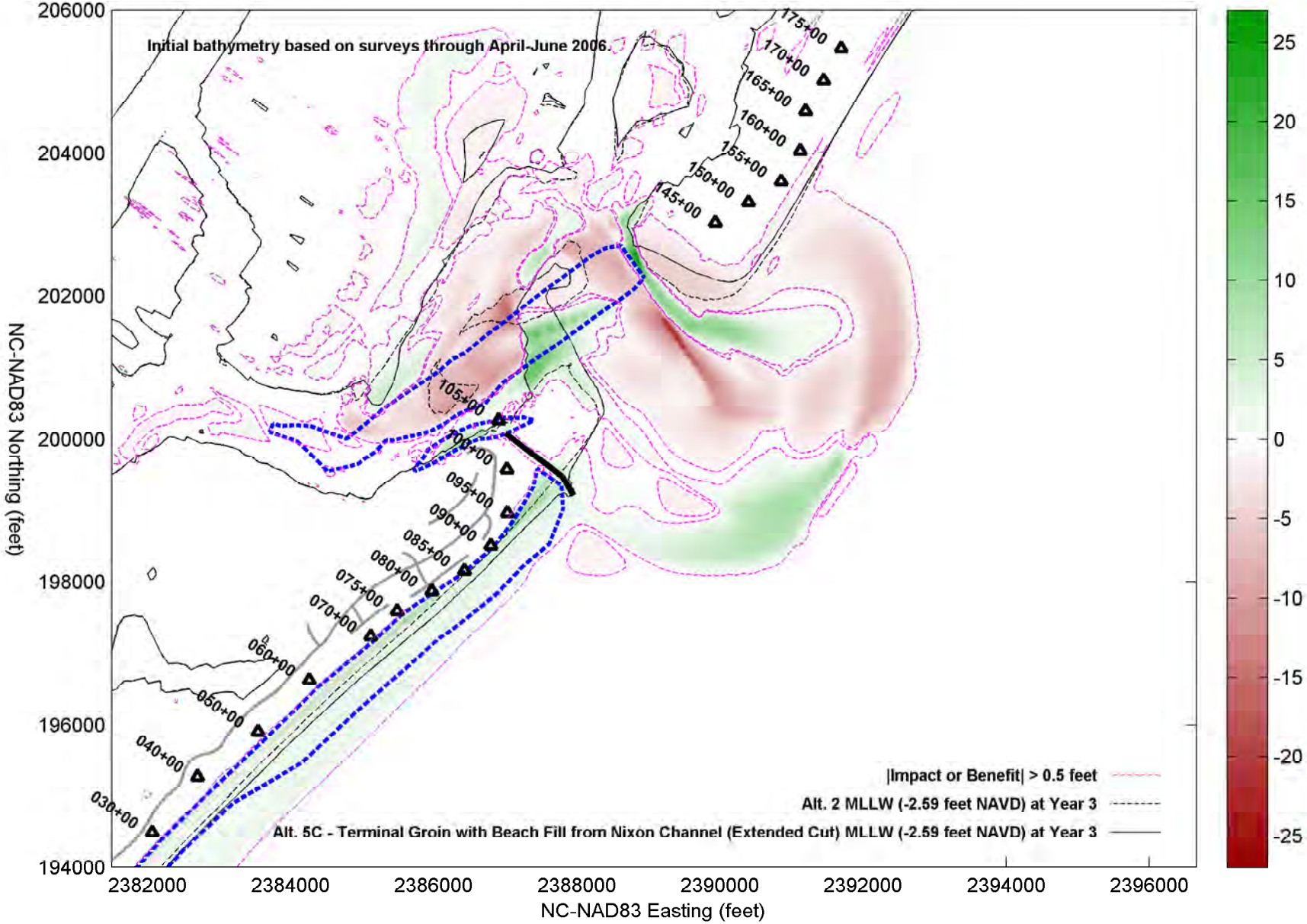
Impacts (-feet) & Benefits (+feet) of Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 - Abandon/Retreat through Year 1



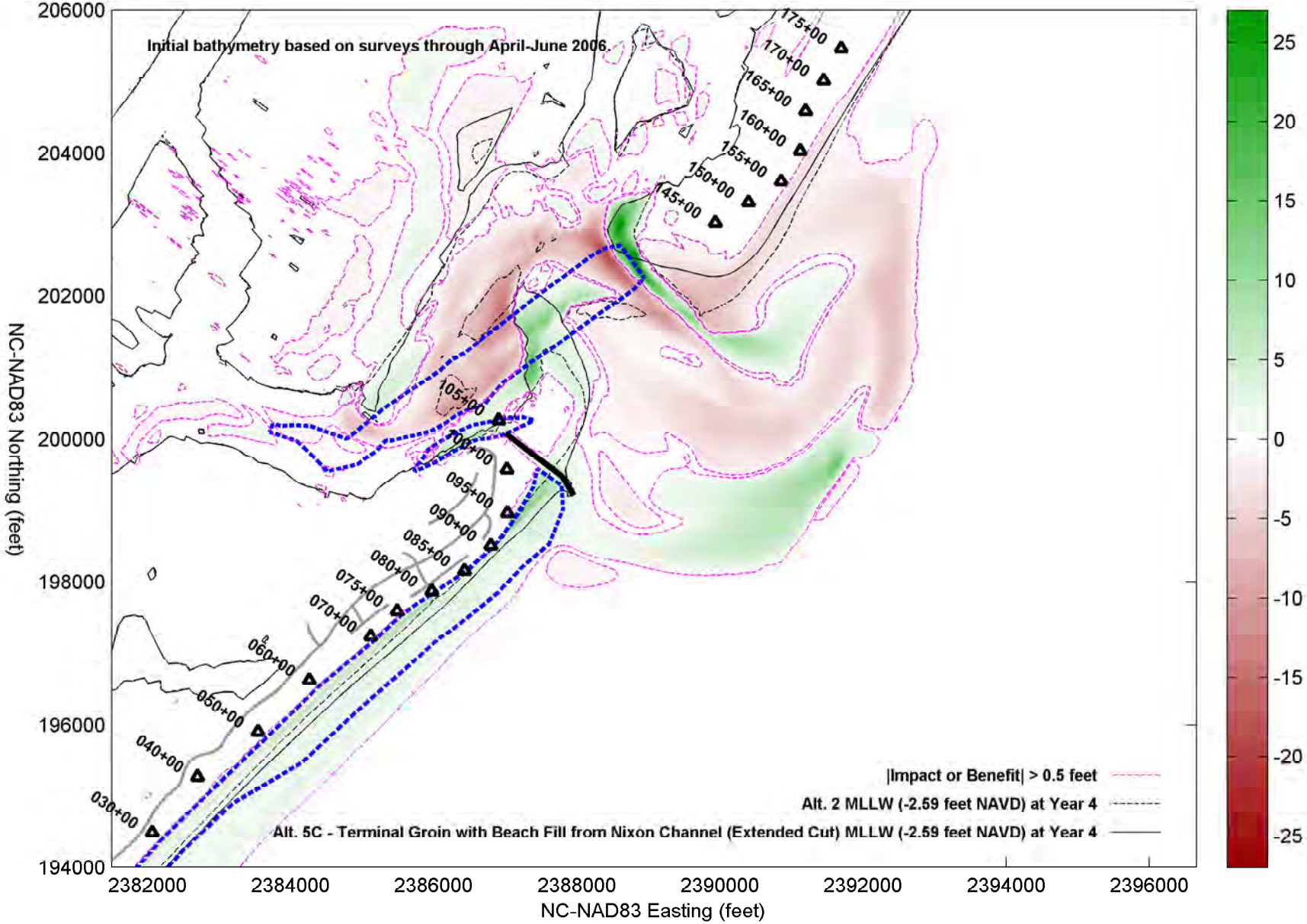
Impacts (-feet) & Benefits (+feet) of Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 - Abandon/Retreat through Year 2



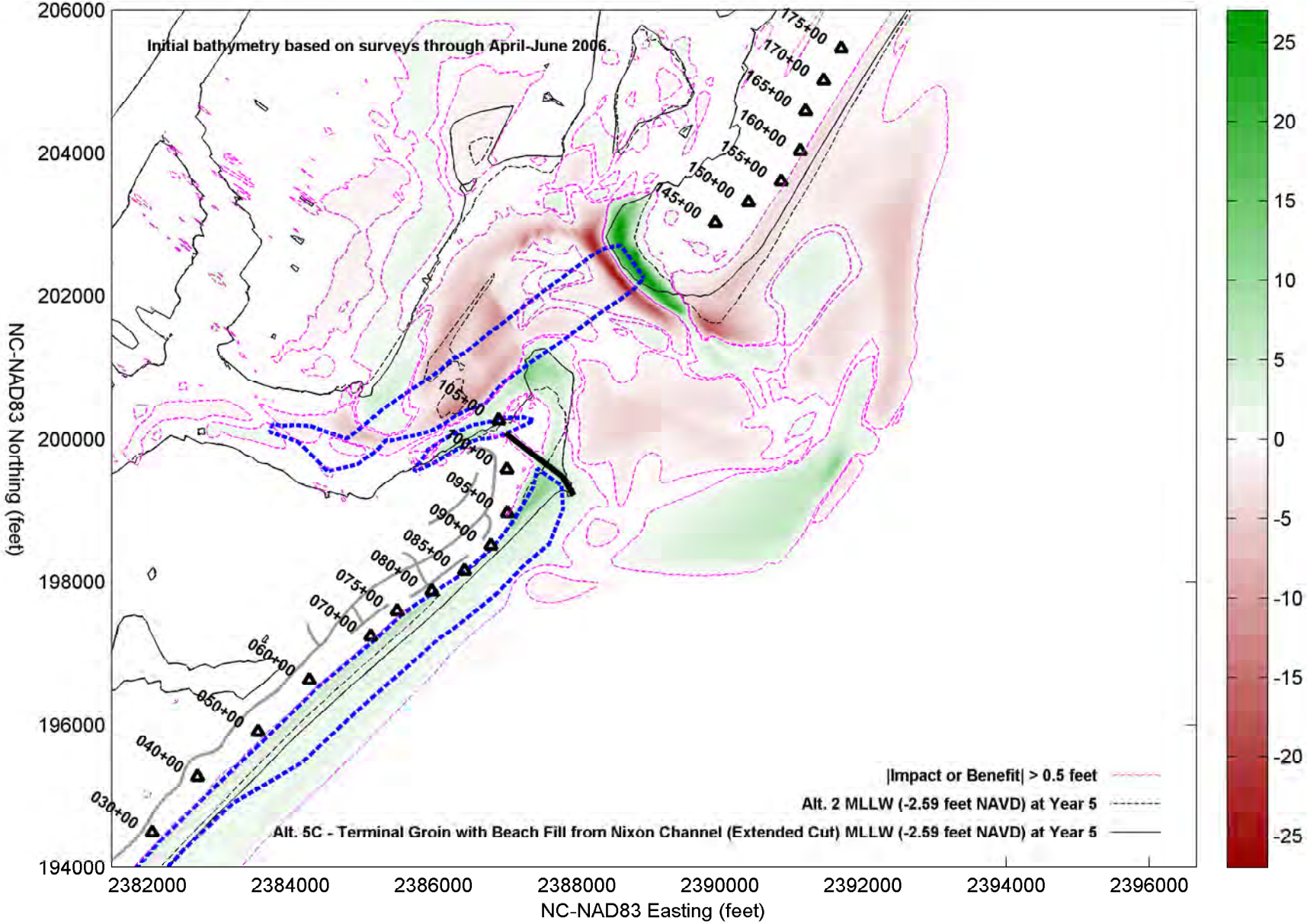
Impacts (-feet) & Benefits (+feet) of Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 - Abandon/Retreat through Year 3



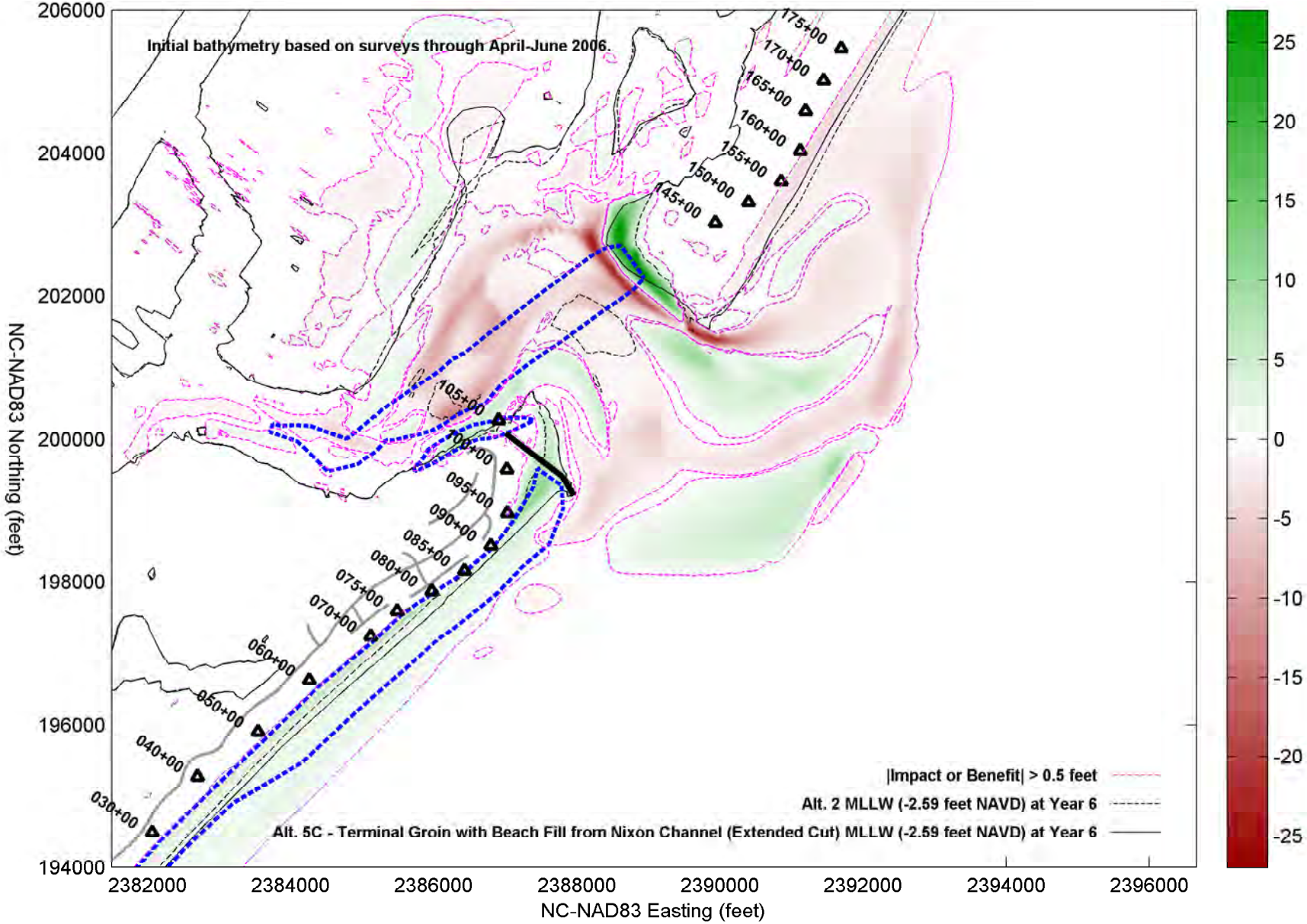
Impacts (-feet) & Benefits (+feet) of Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 - Abandon/Retreat through Year 4



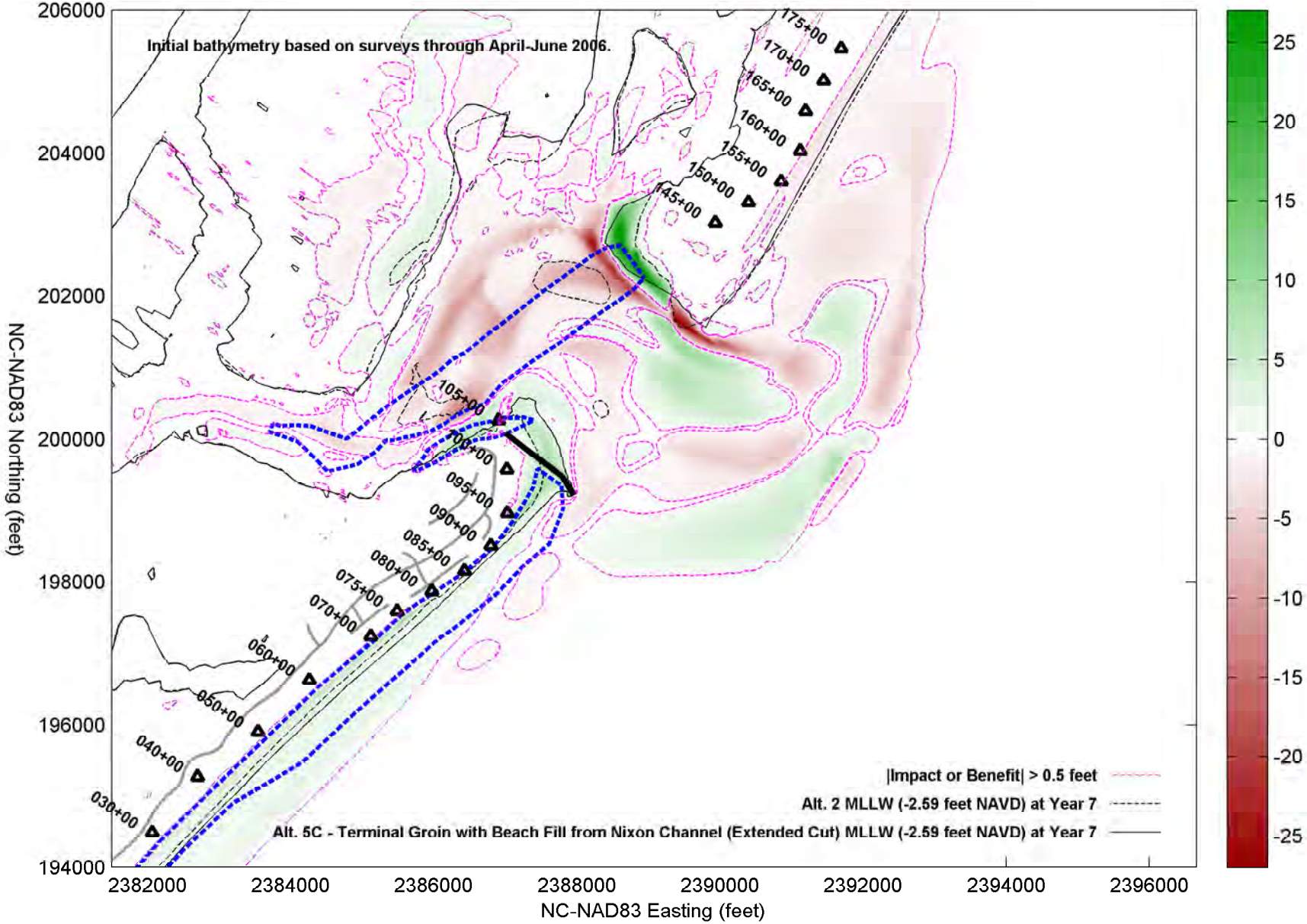
Impacts (-feet) & Benefits (+feet) of Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 - Abandon/Retreat through Year 5



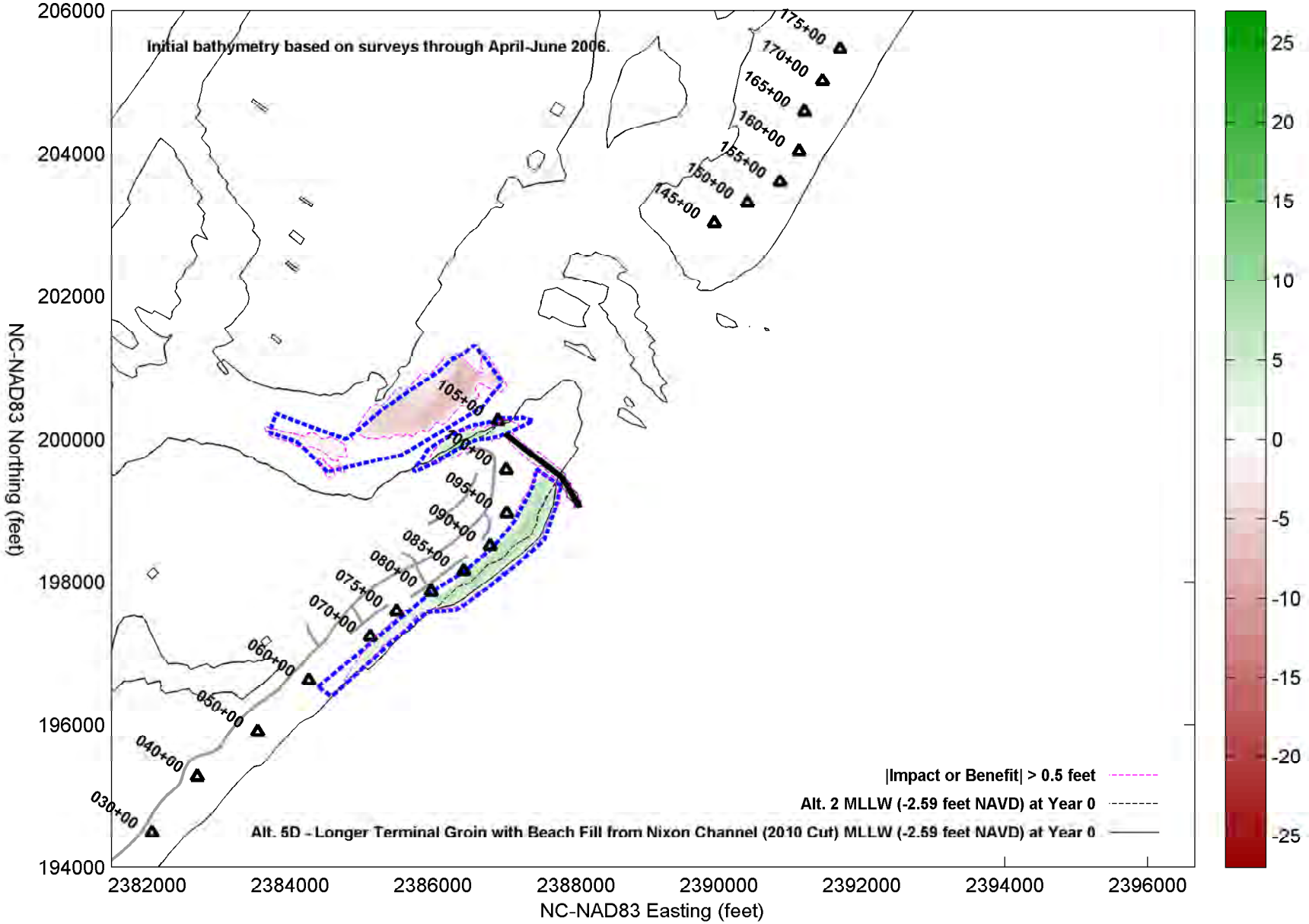
Impacts (-feet) & Benefits (+feet) of Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 - Abandon/Retreat through Year 6



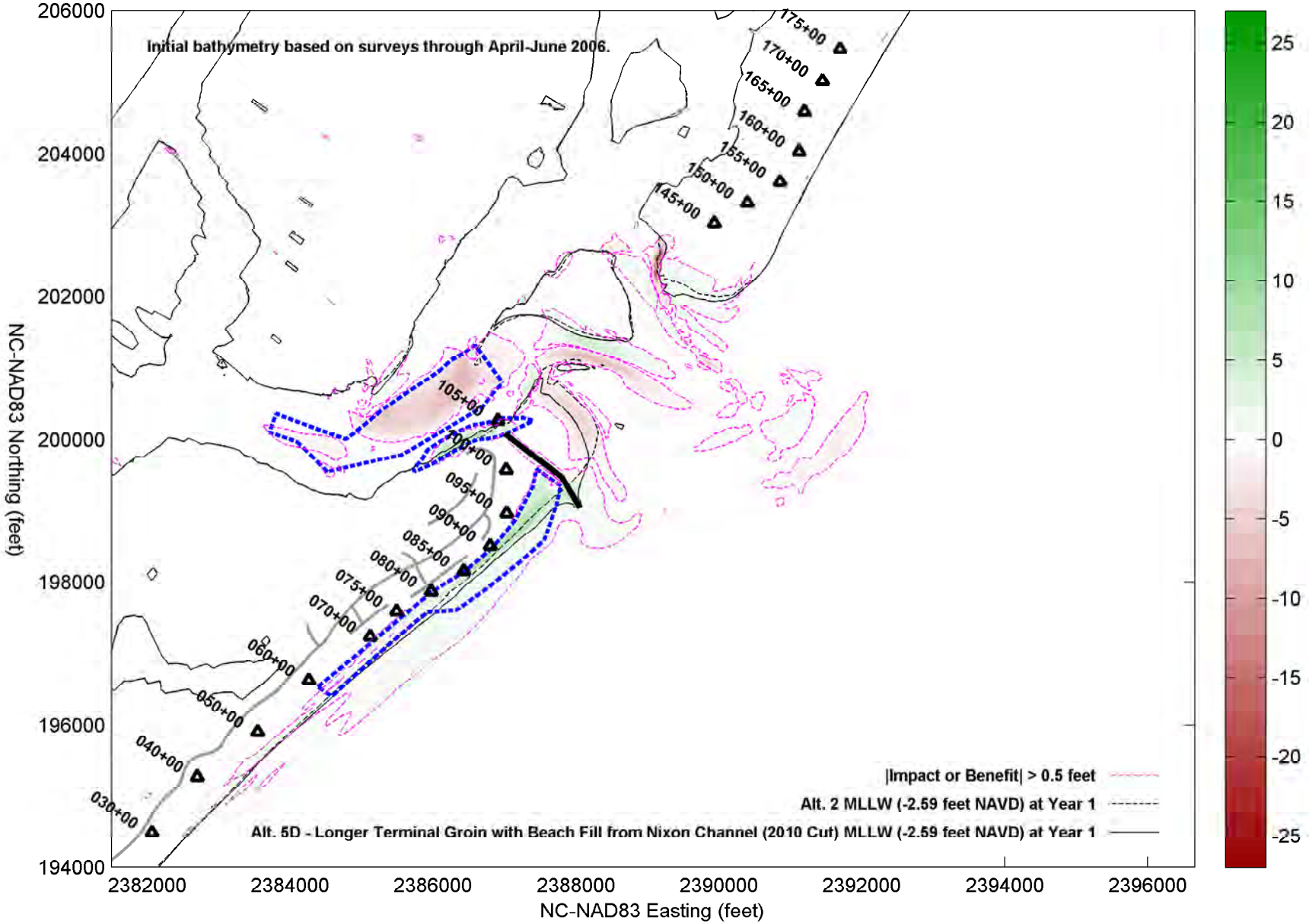
Impacts (-feet) & Benefits (+feet) of Alt. 5C - Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 - Abandon/Retreat through Year 7



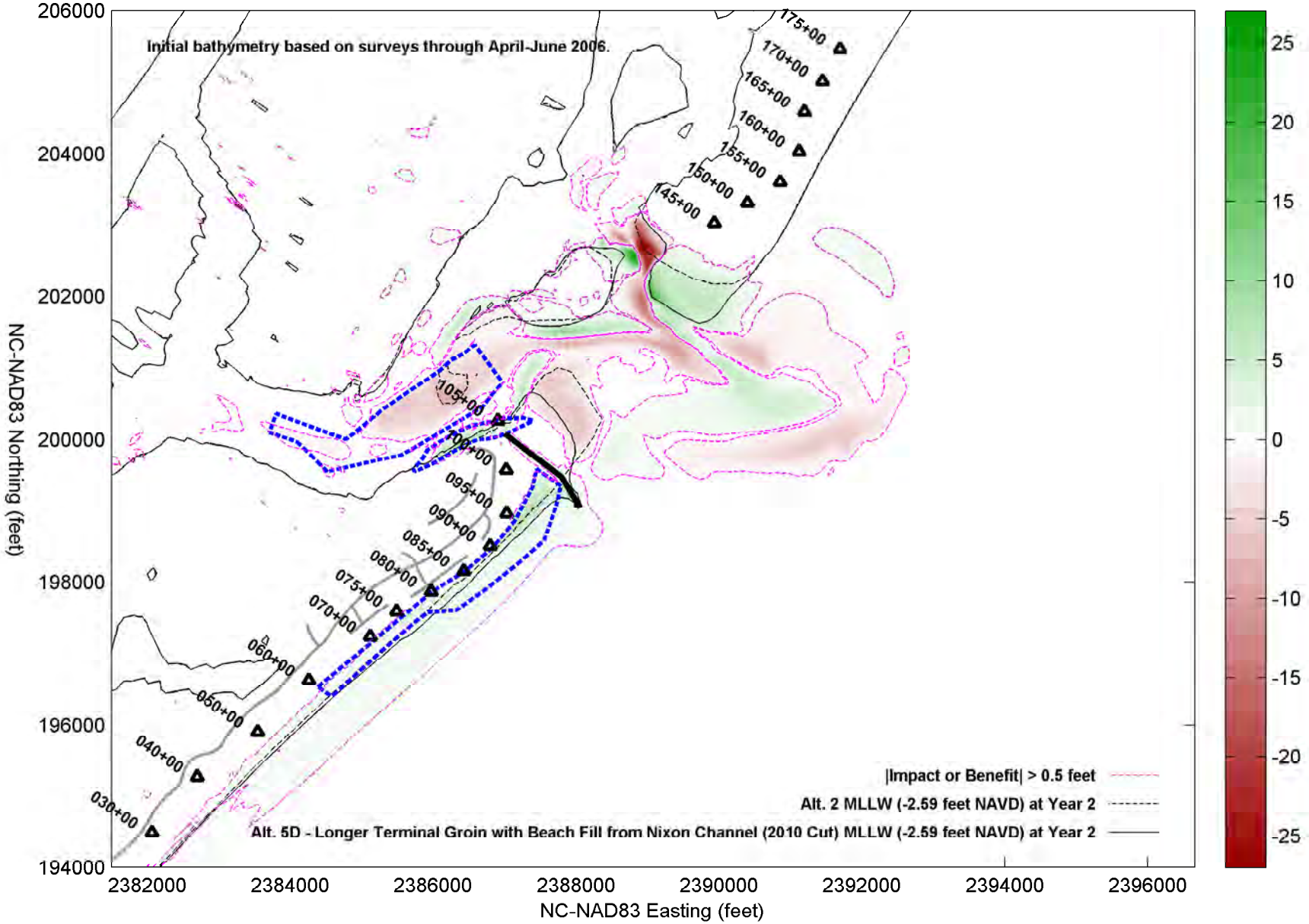
Impacts (-feet) & Benefits (+feet) of Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 - Abandon/Retreat through Year 0



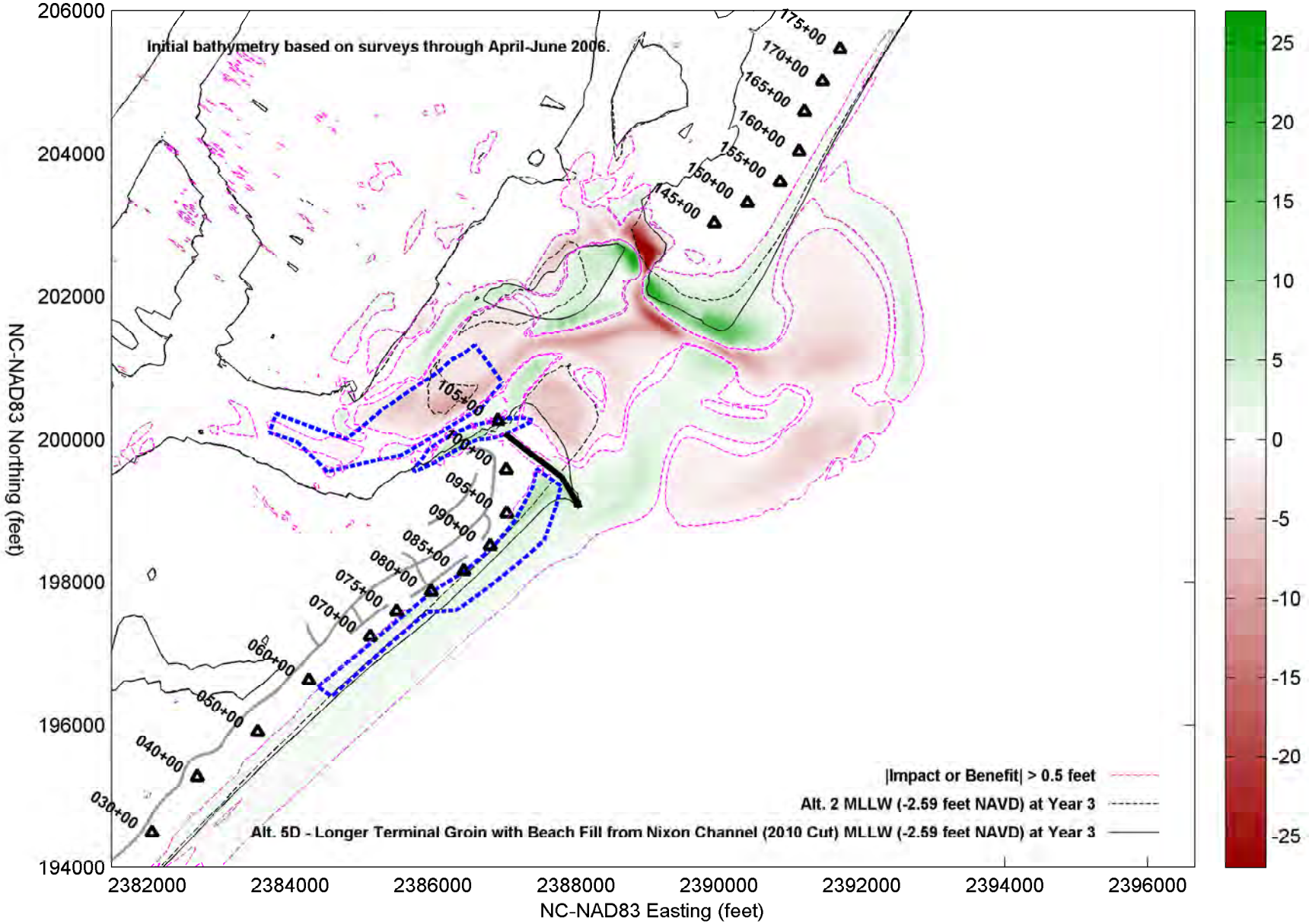
Impacts (-feet) & Benefits (+feet) of Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 - Abandon/Retreat through Year 1



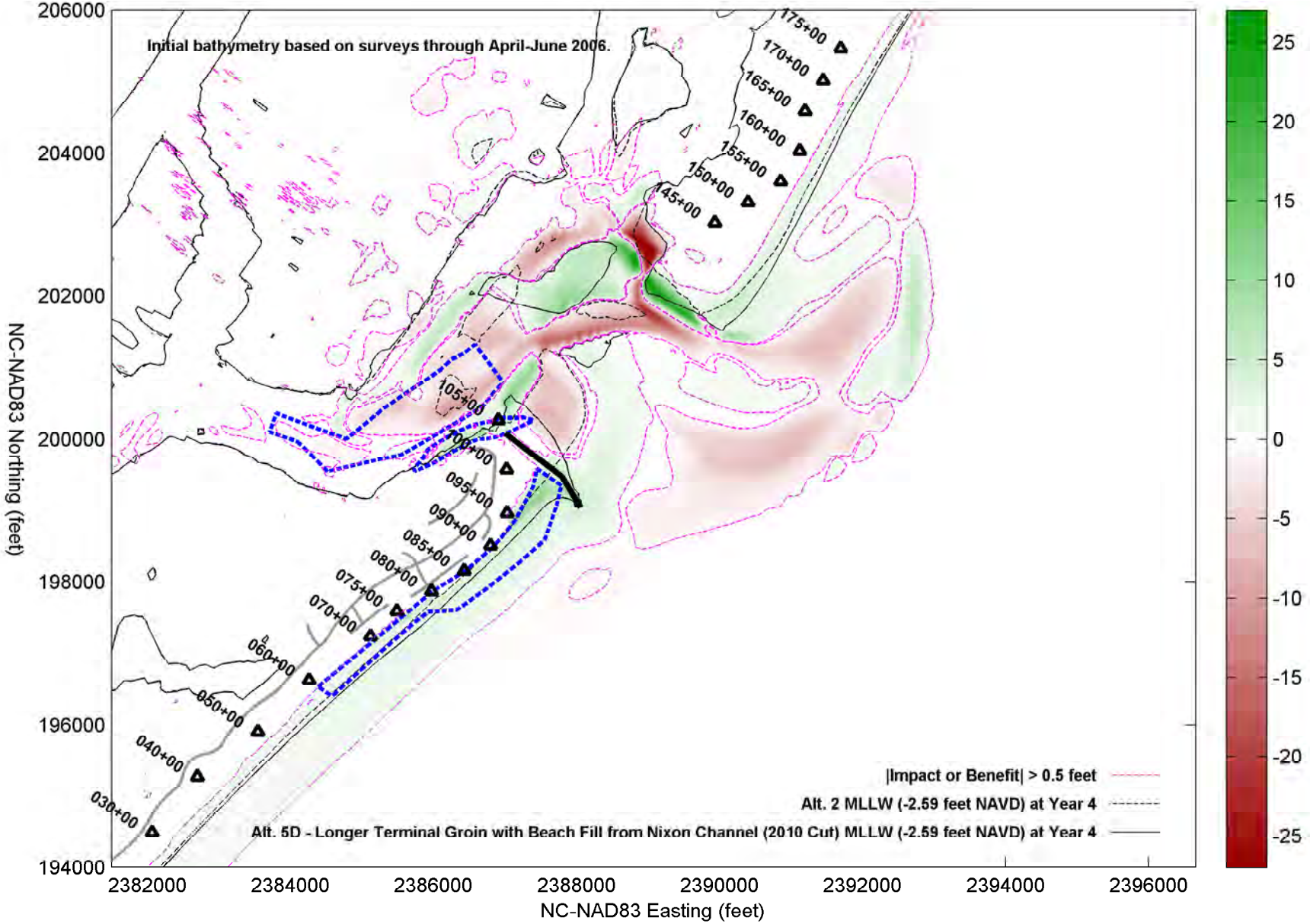
Impacts (-feet) & Benefits (+feet) of Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 - Abandon/Retreat through Year 2



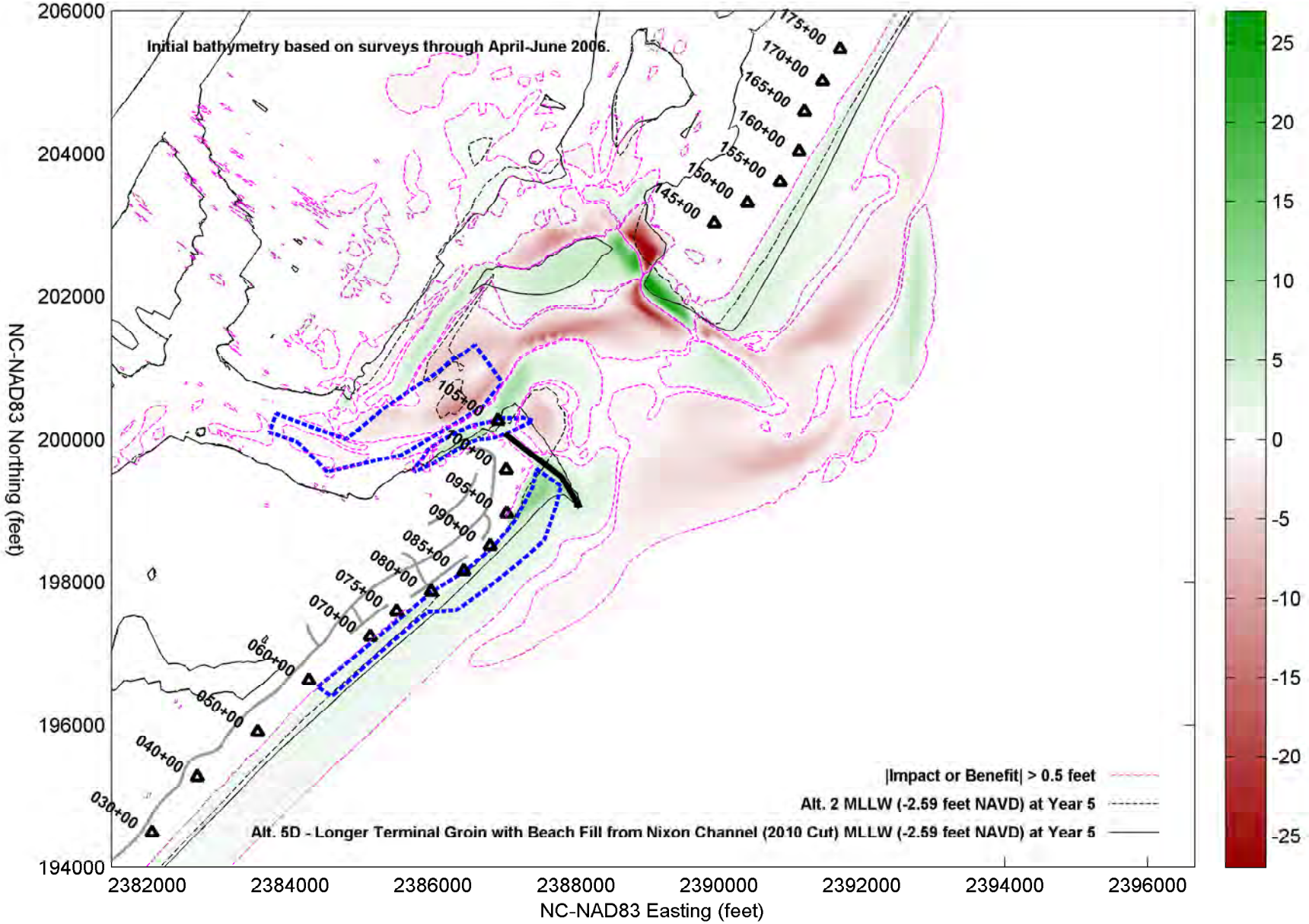
Impacts (-feet) & Benefits (+feet) of Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 - Abandon/Retreat through Year 3



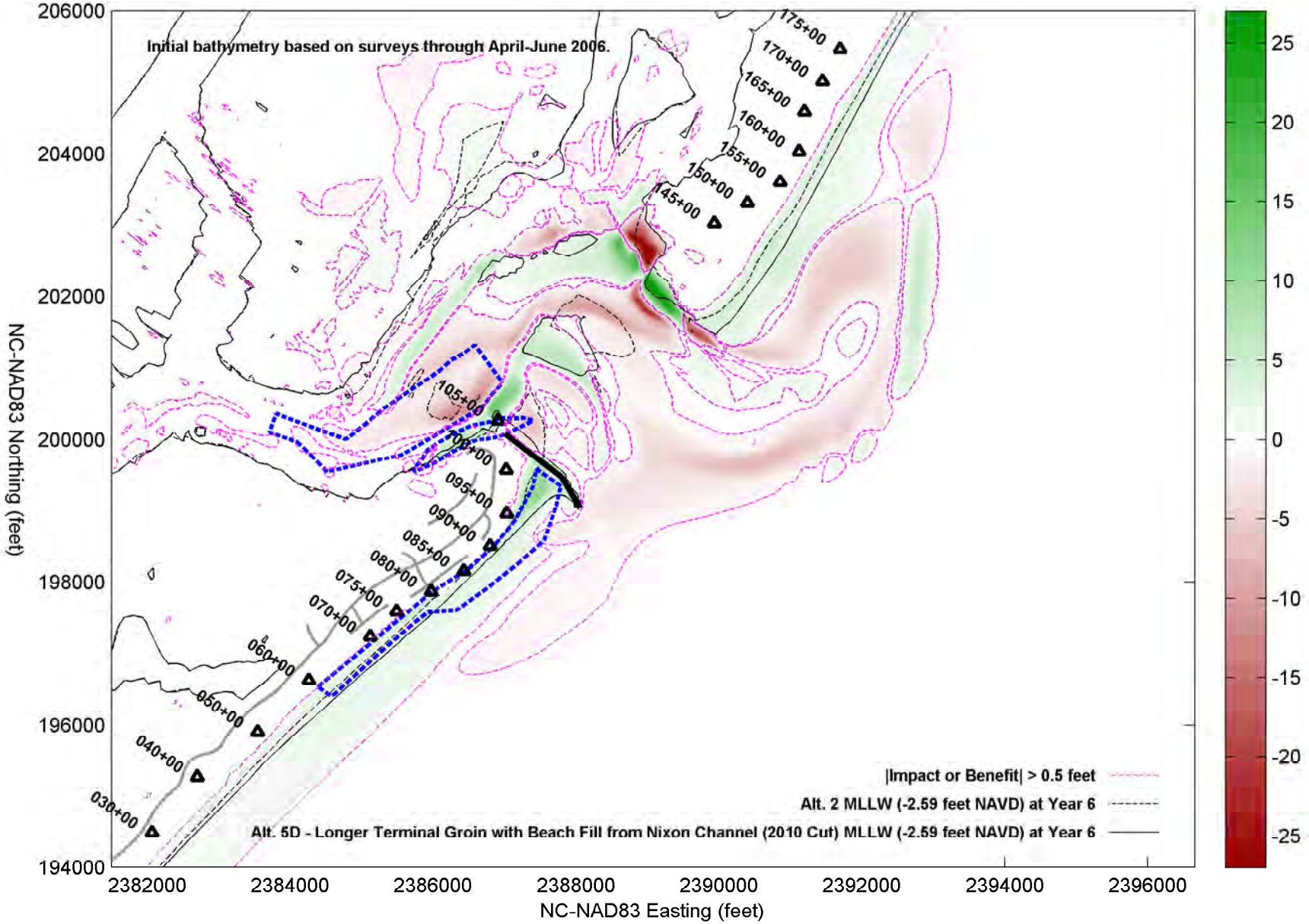
Impacts (-feet) & Benefits (+feet) of Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 - Abandon/Retreat through Year 4



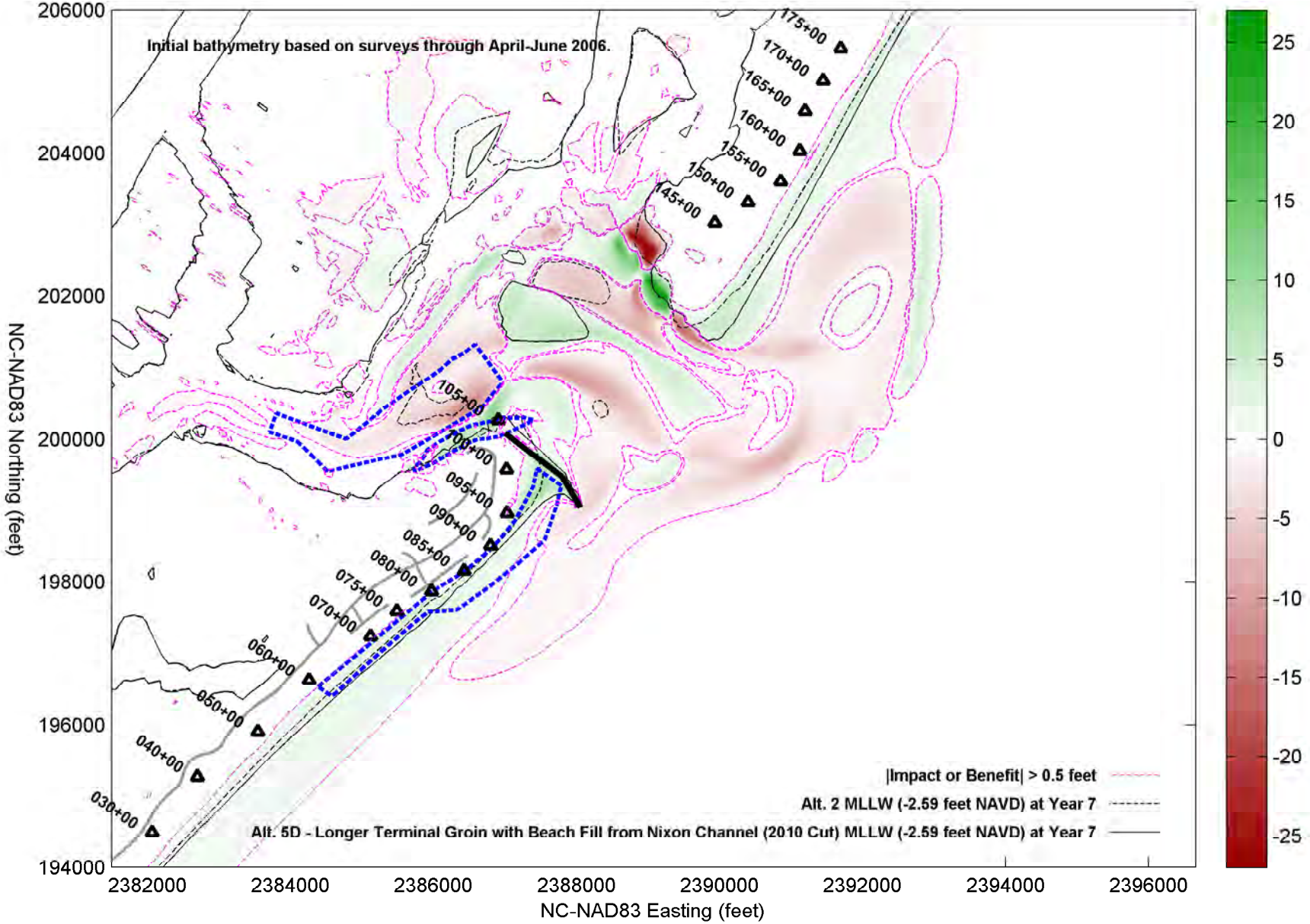
Impacts (-feet) & Benefits (+feet) of Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 - Abandon/Retreat through Year 5



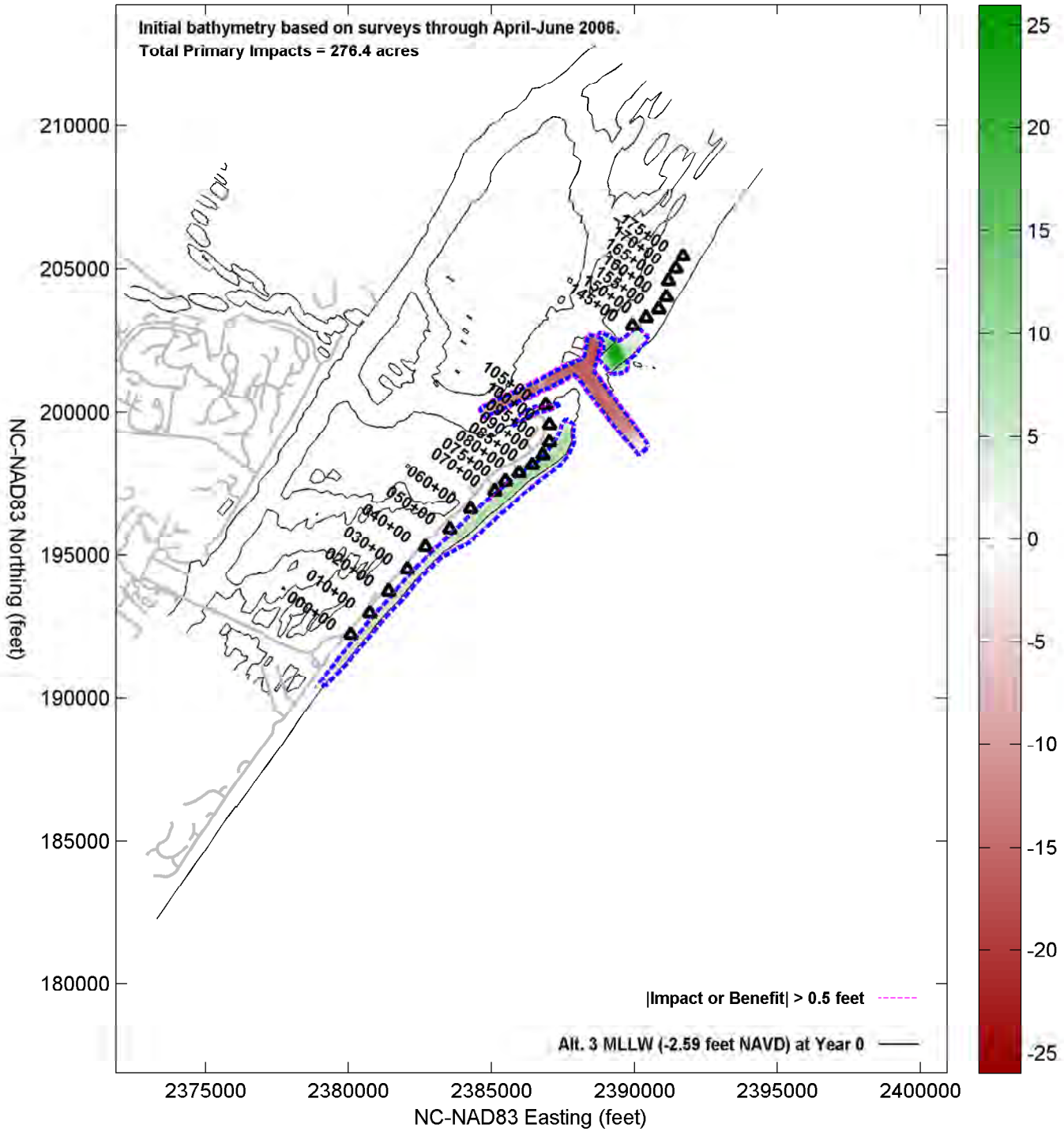
Impacts (-feet) & Benefits (+feet) of Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 - Abandon/Retreat through Year 6



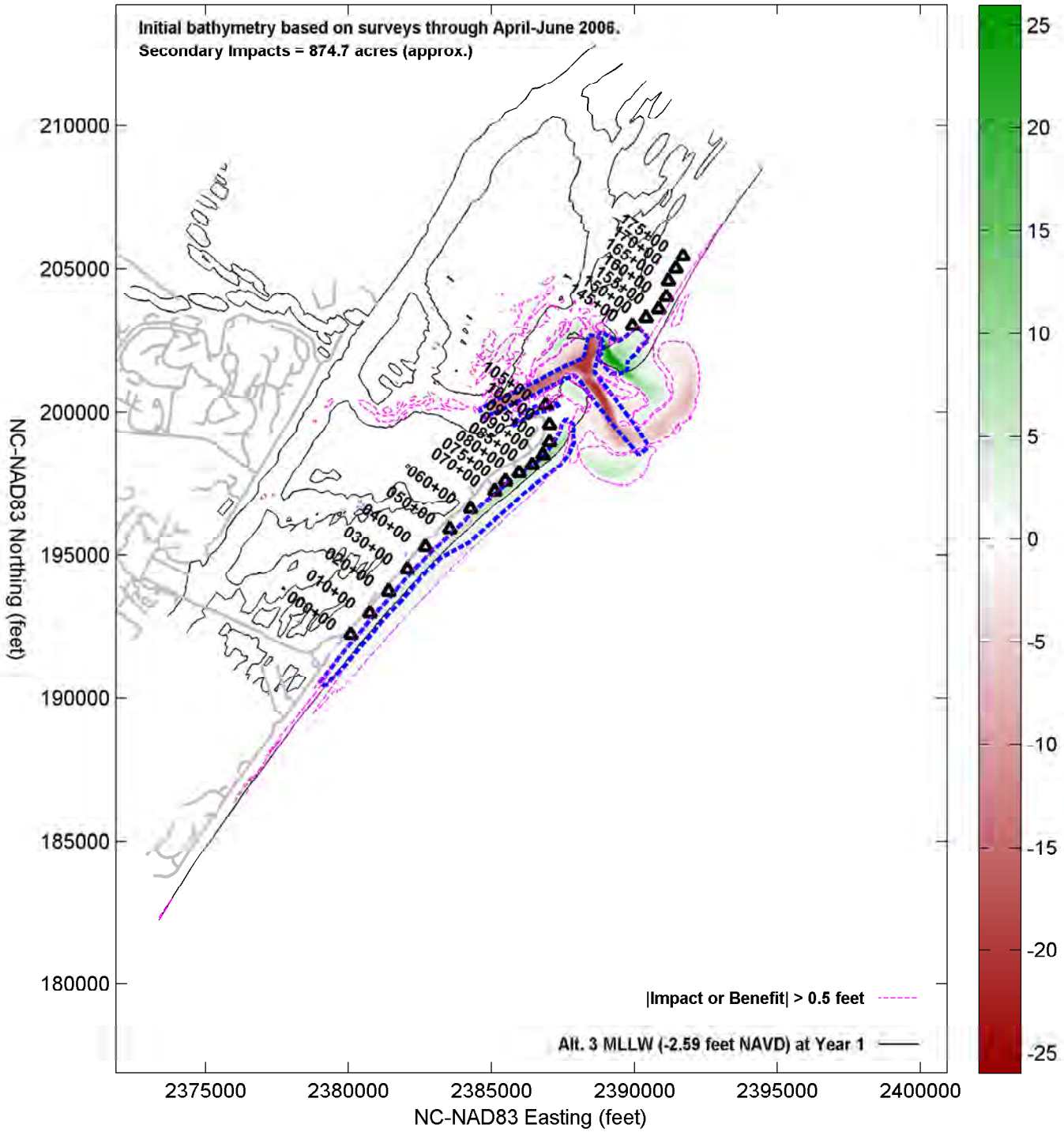
Impacts (-feet) & Benefits (+feet) of Alt. 5D - Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 - Abandon/Retreat through Year 7



Impacts (-) & Benefits (+feet) of Alt. 3: Rich Inlet Management and Beach Fill vs. Alt. 2 through Year 0



Impacts (-) & Benefits (+feet) of Alt. 3: Rich Inlet Management and Beach Fill vs. Alt. 2 through Year 1



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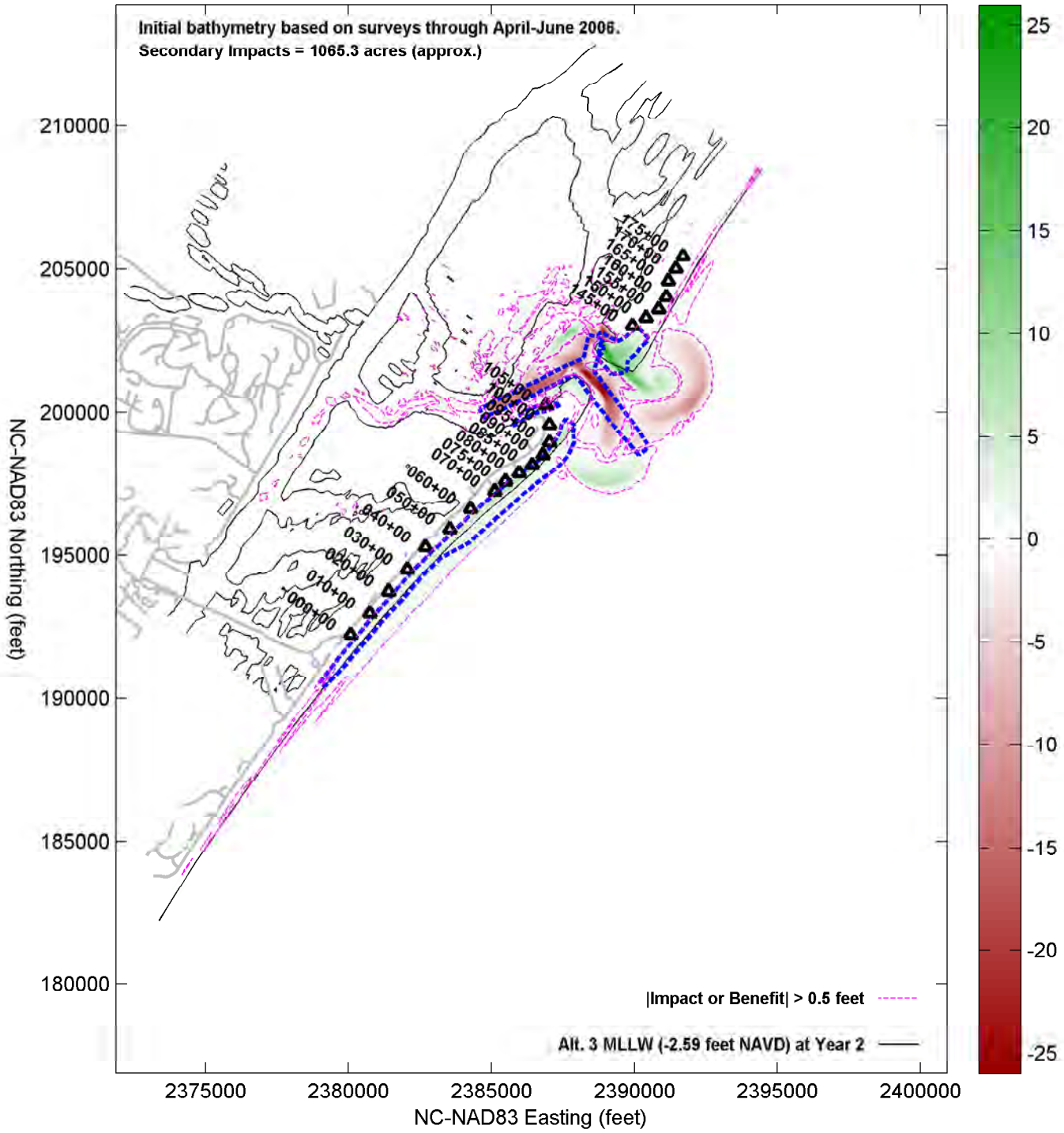
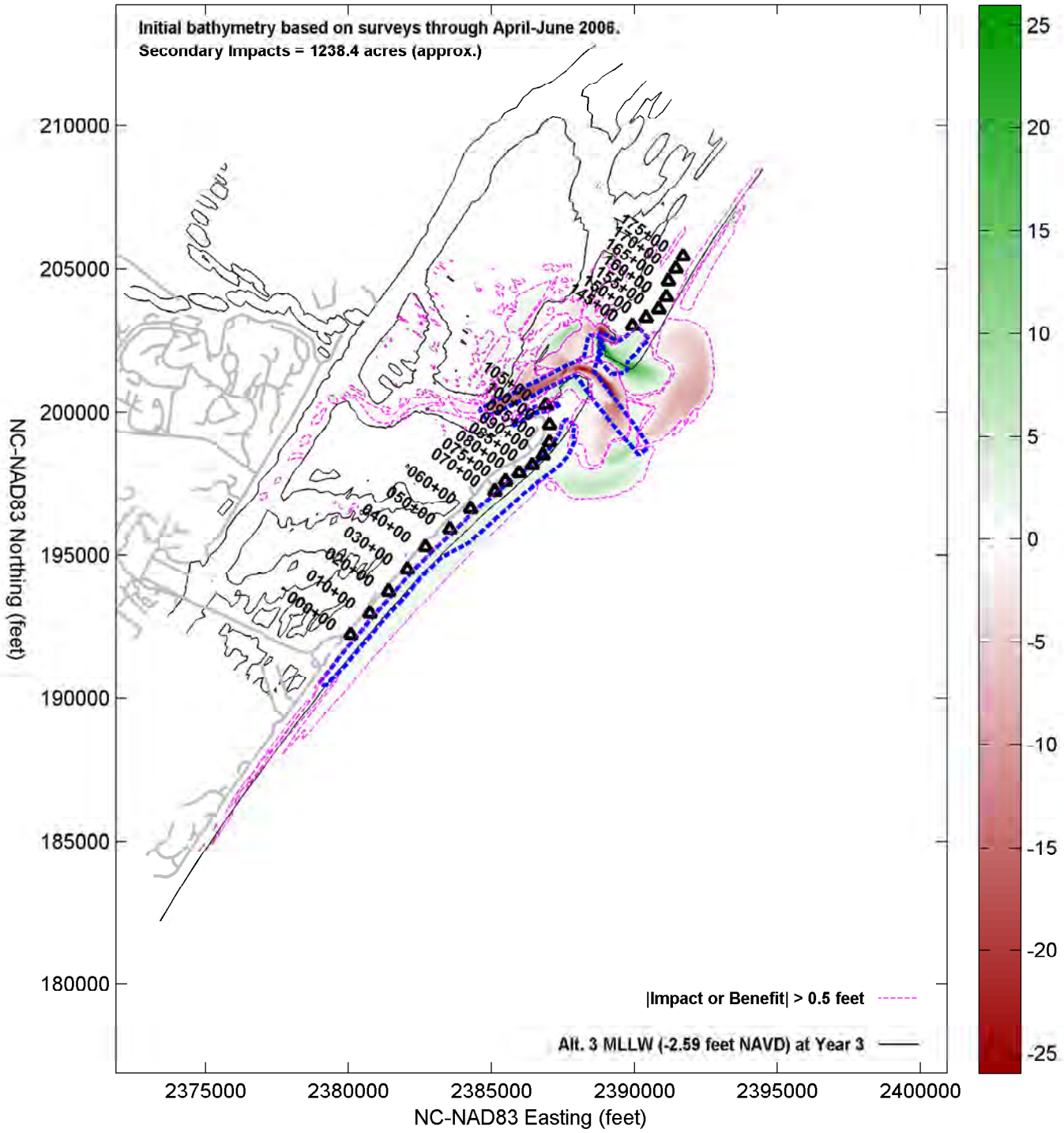
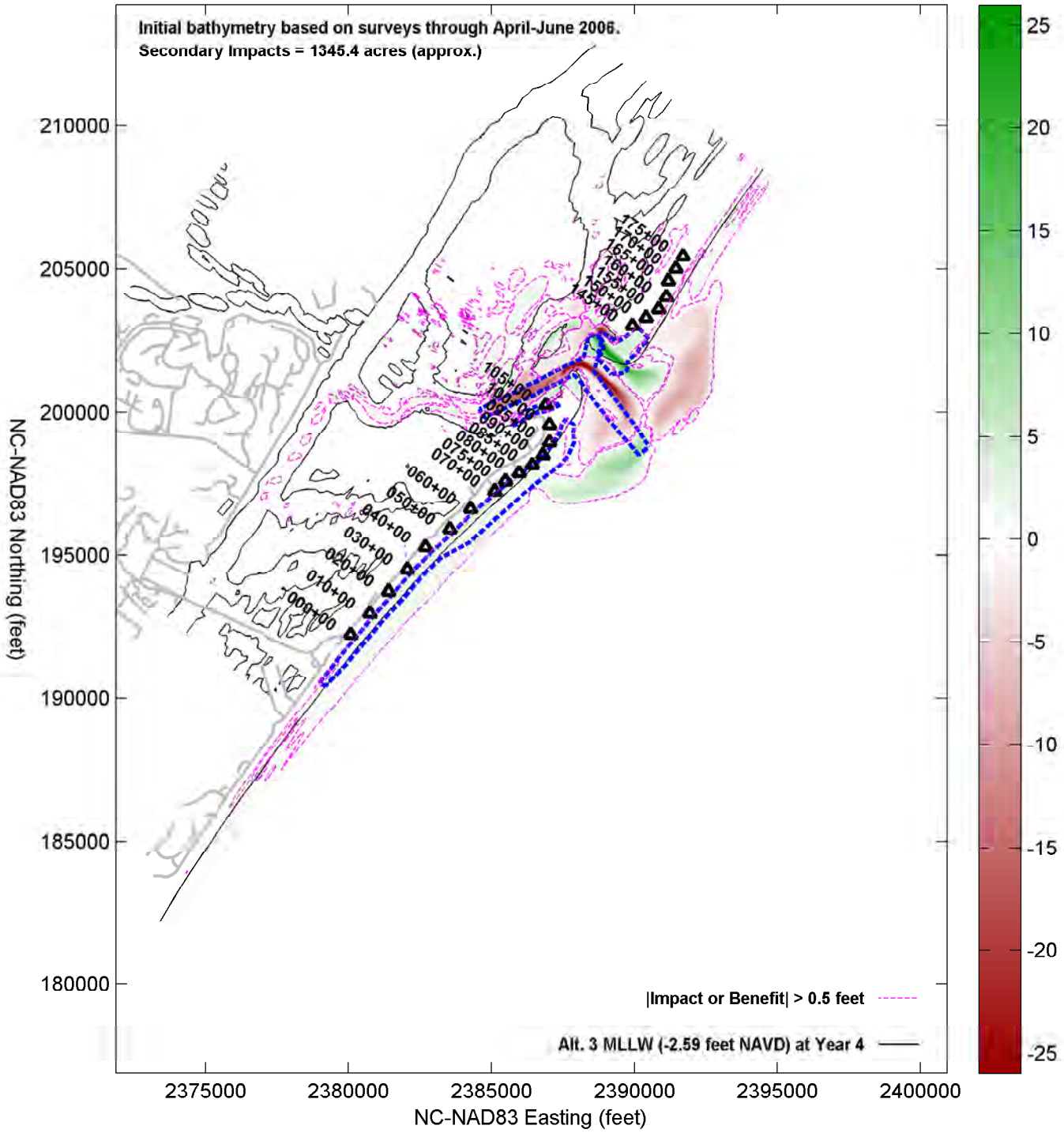


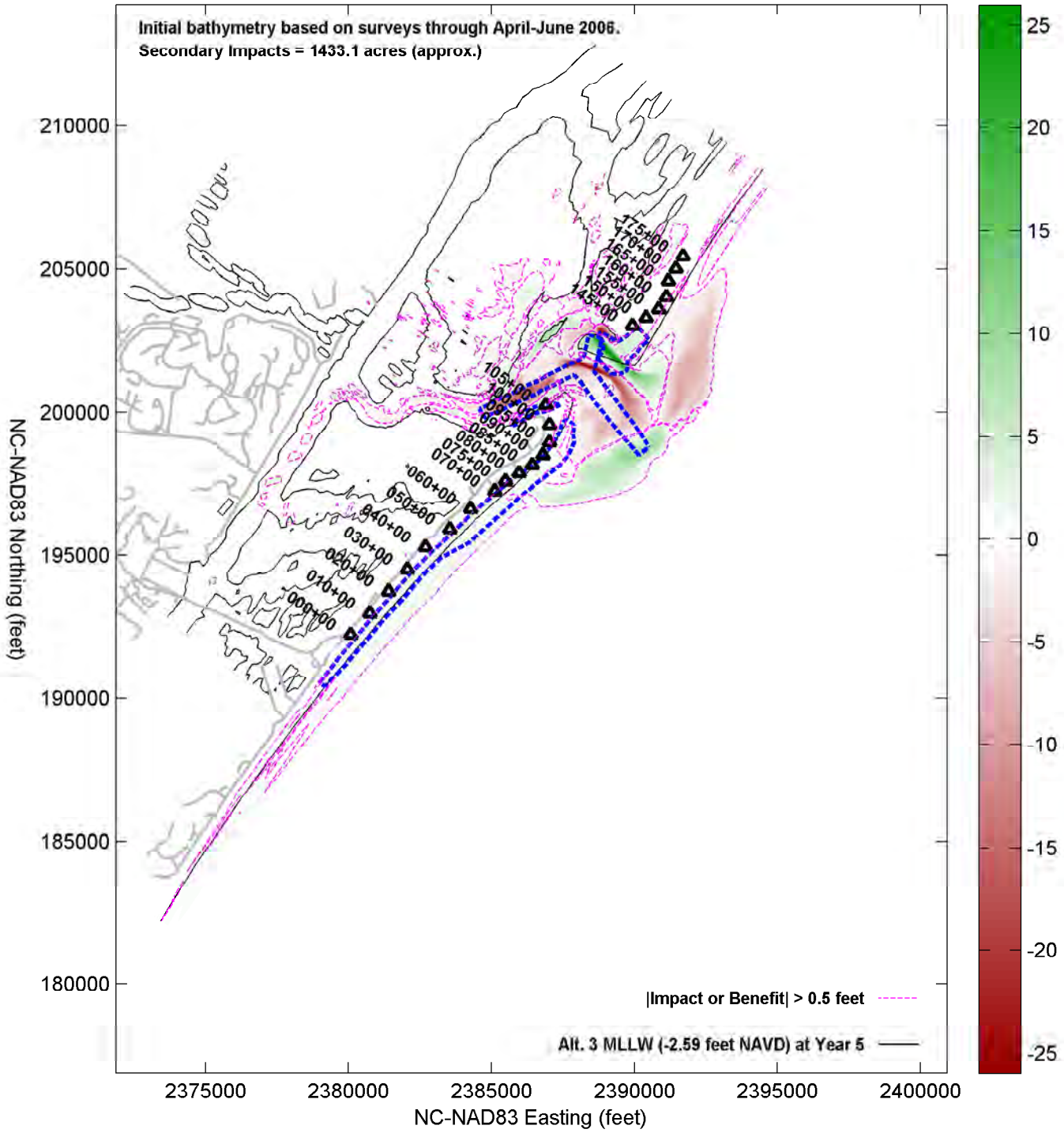
Impacts (-) & Benefits (+feet) of Alt. 3: Rich Inlet Management and Beach Fill vs. Alt. 2 through Year 3



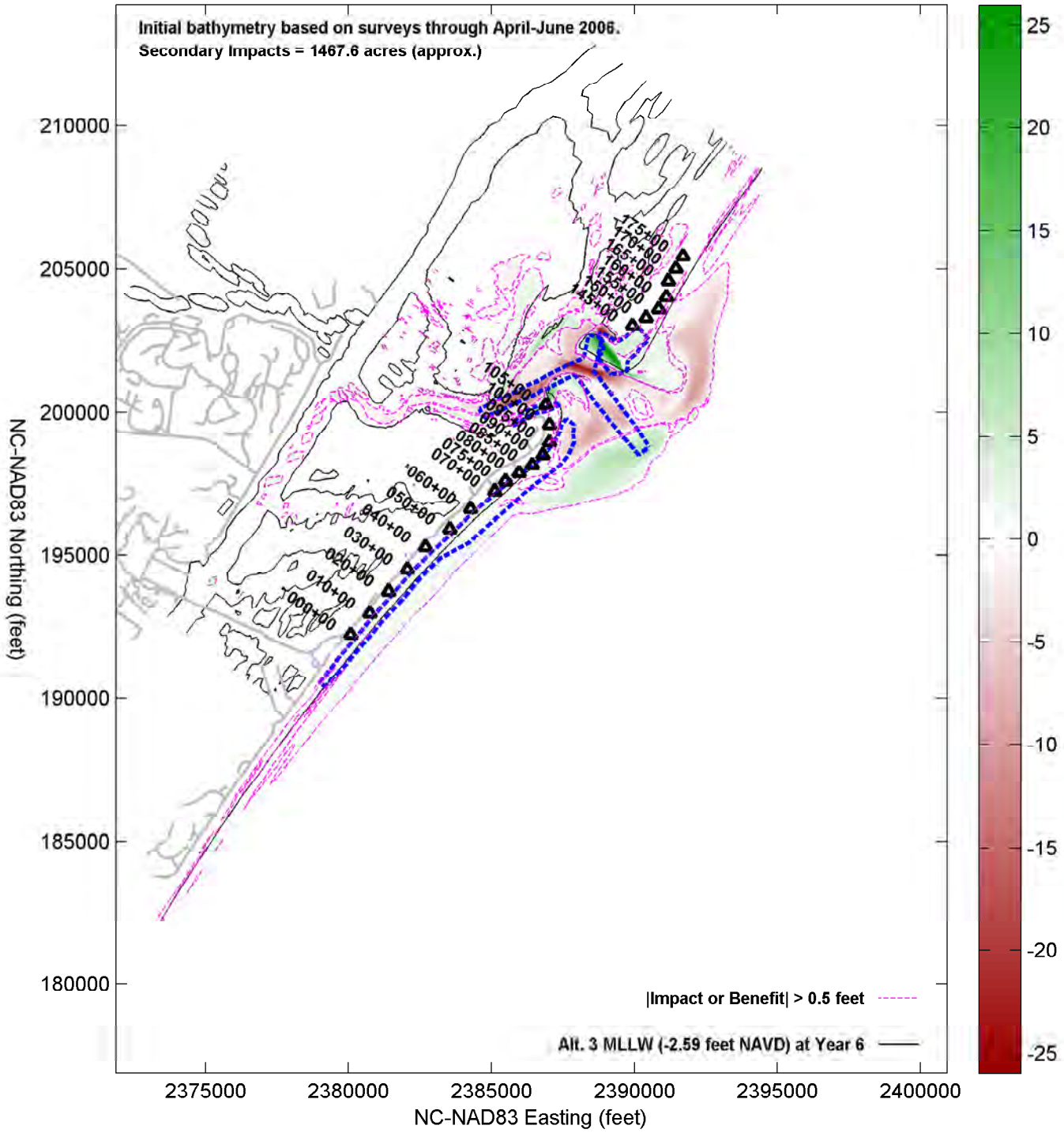
Impacts (-) & Benefits (+feet) of Alt. 3: Rich Inlet Management and Beach Fill vs. Alt. 2 through Year 4



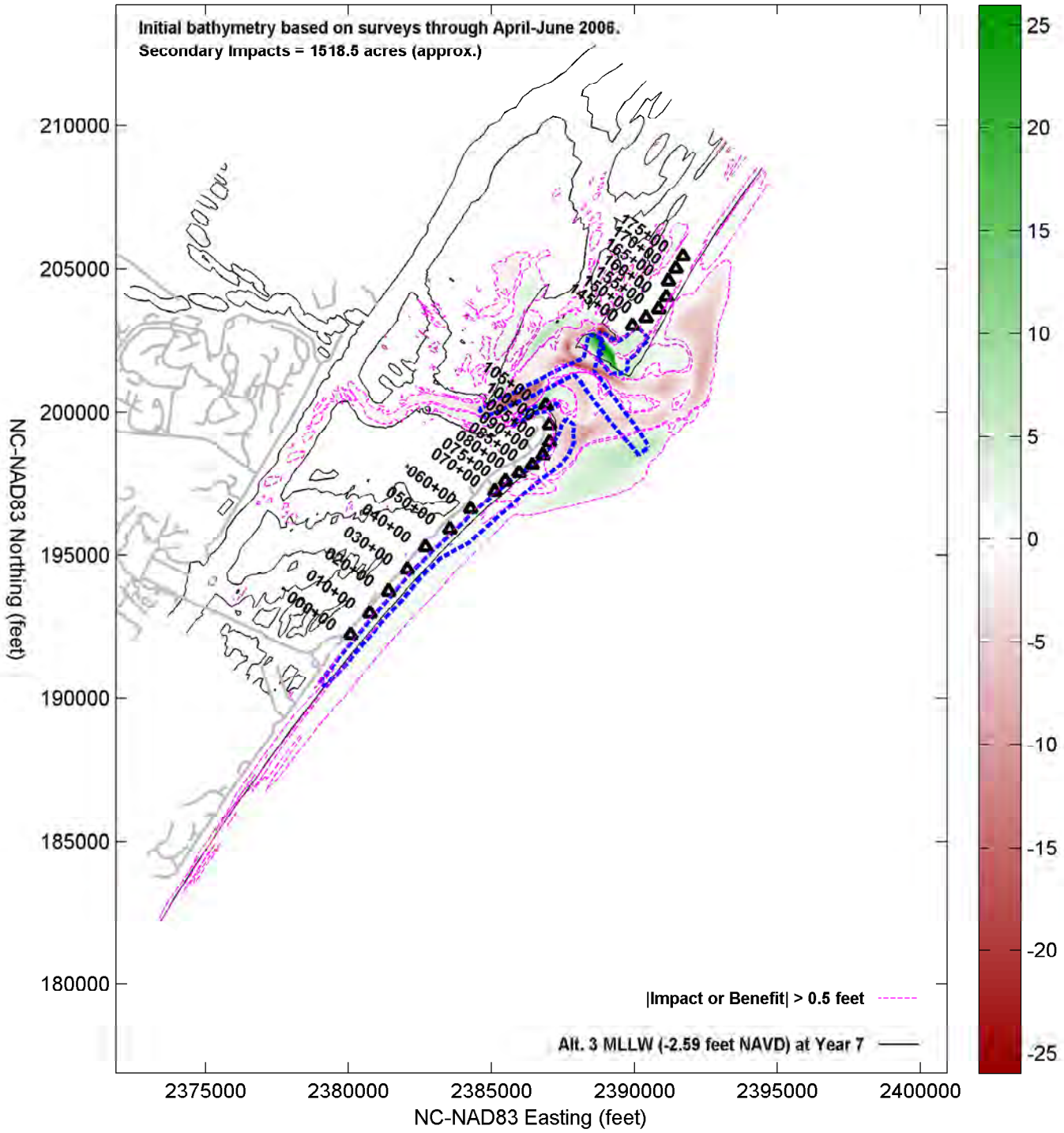
Impacts (-) & Benefits (+feet) of Alt. 3: Rich Inlet Management and Beach Fill vs. Alt. 2 through Year 5



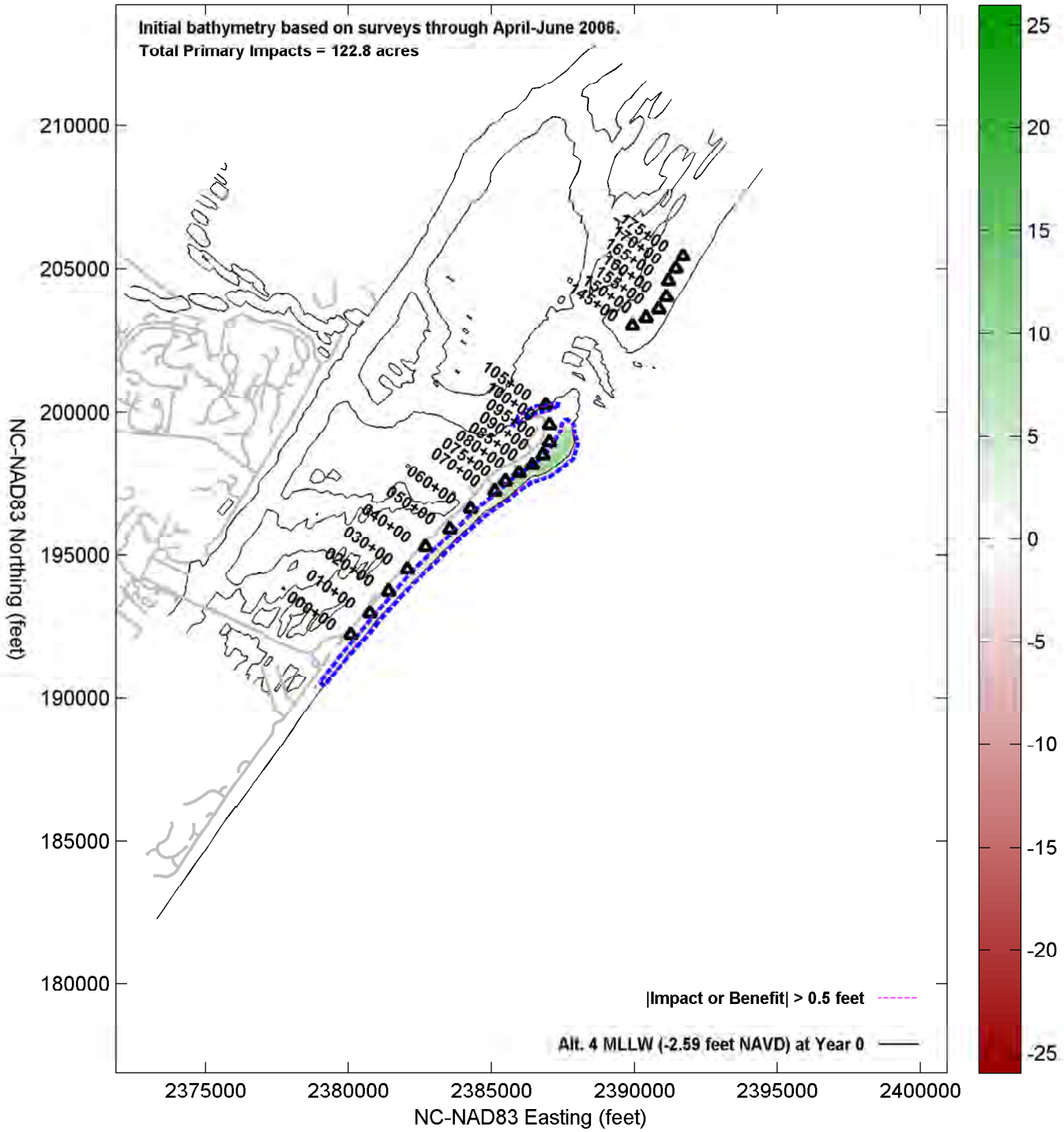
Impacts (-) & Benefits (+feet) of Alt. 3: Rich Inlet Management and Beach Fill vs. Alt. 2 through Year 6



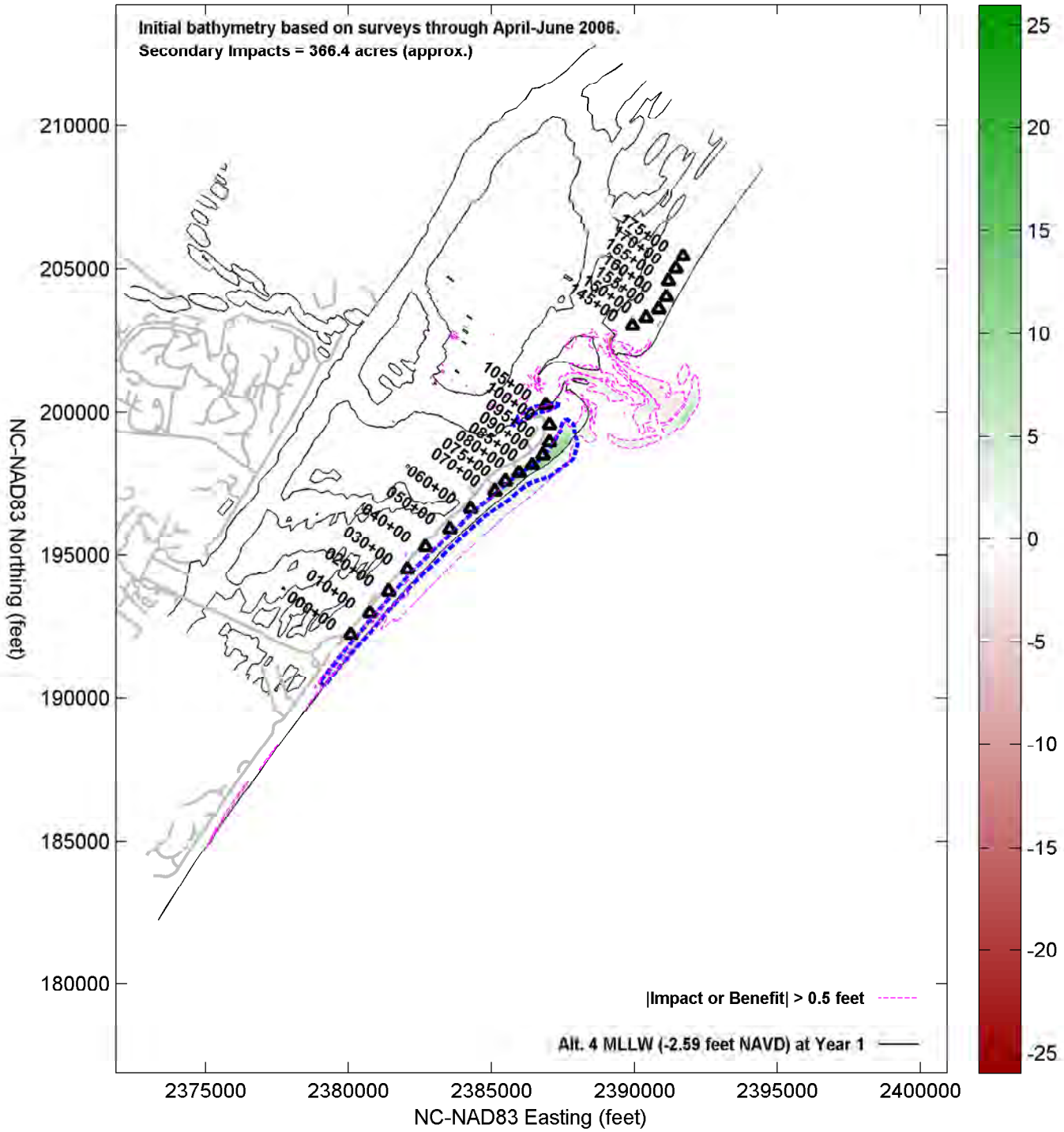
Impacts (-) & Benefits (+feet) of Alt. 3: Rich Inlet Management and Beach Fill vs. Alt. 2 through Year 7



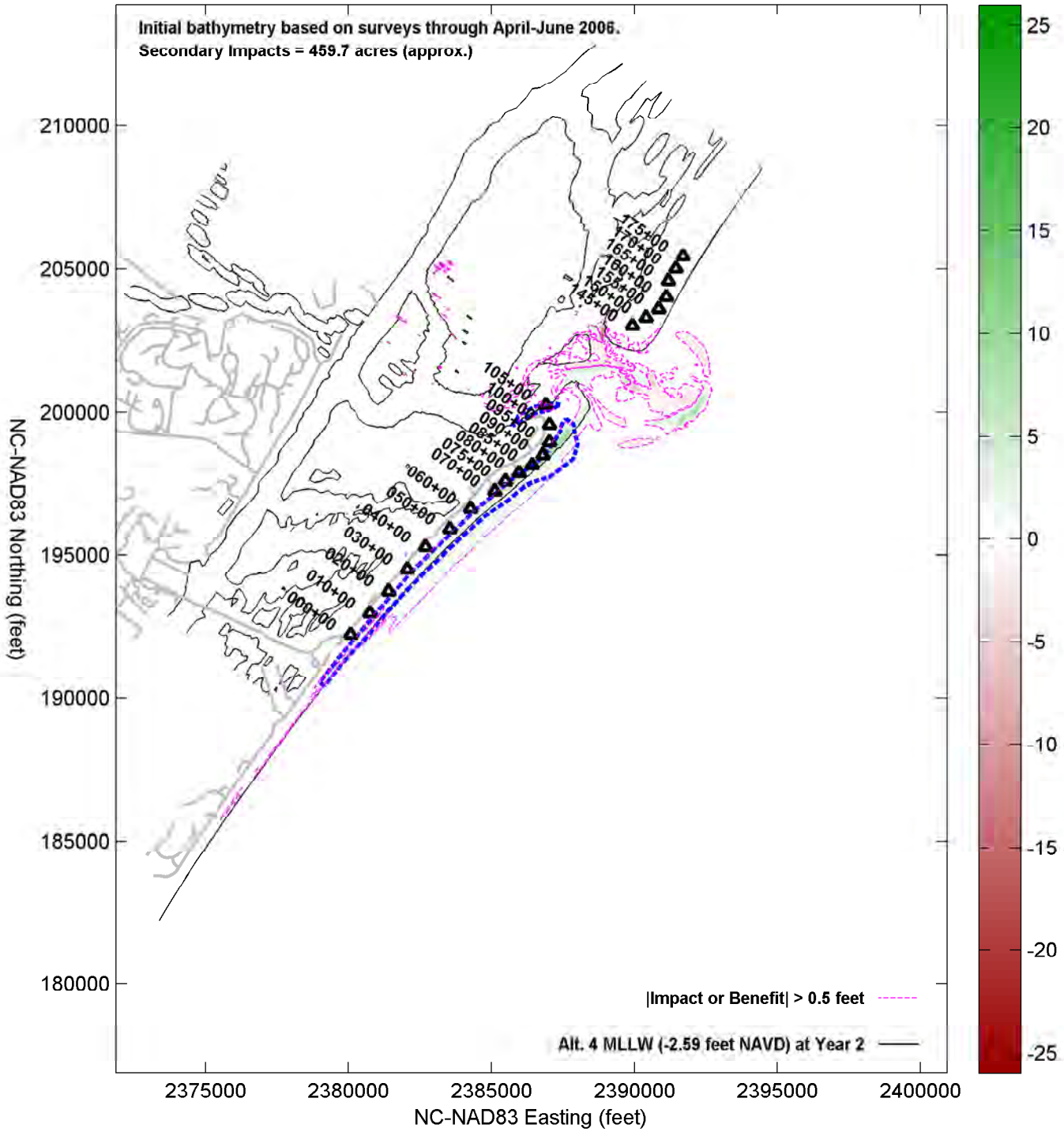
Impacts (-) & Benefits (+feet) of Alt. 4: Beach Fill without Management of Rich Inlet vs. Alt. 2 through Year 0



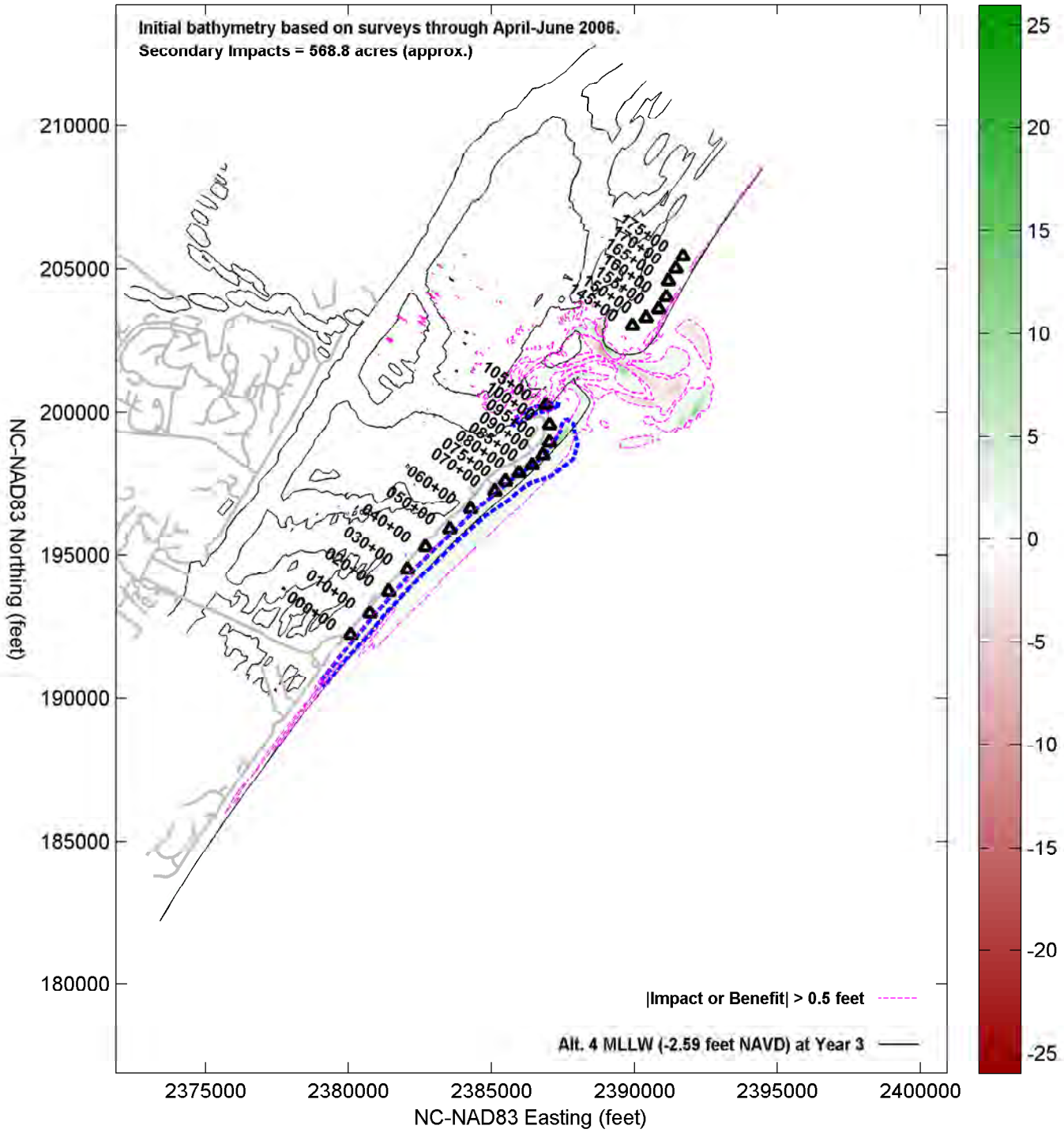
Impacts (-) & Benefits (+feet) of Alt. 4: Beach Fill without Management of Rich Inlet vs. Alt. 2 through Year 1



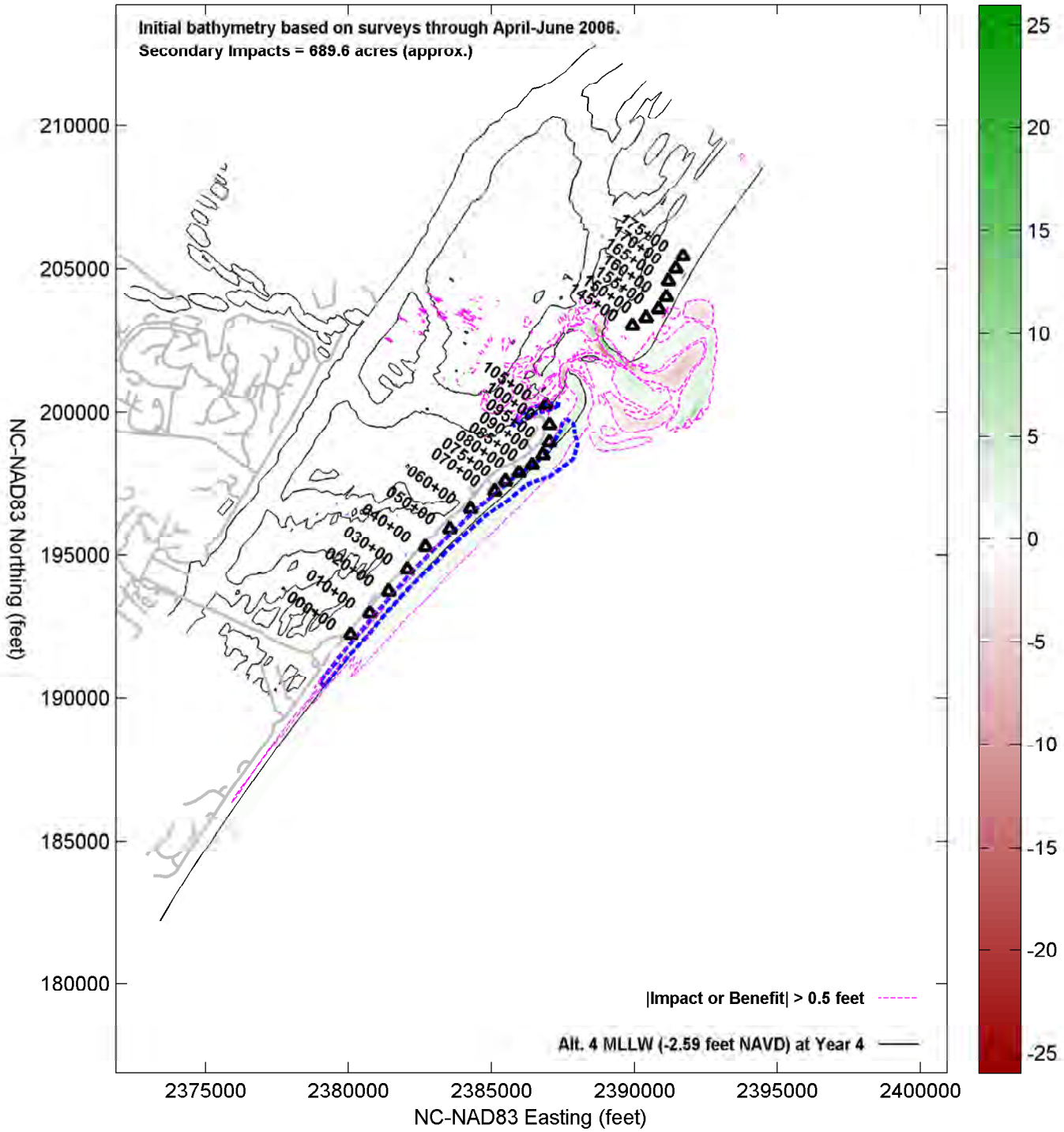
Impacts (-) & Benefits (+feet) of Alt. 4: Beach Fill without Management of Rich Inlet vs. Alt. 2 through Year 2



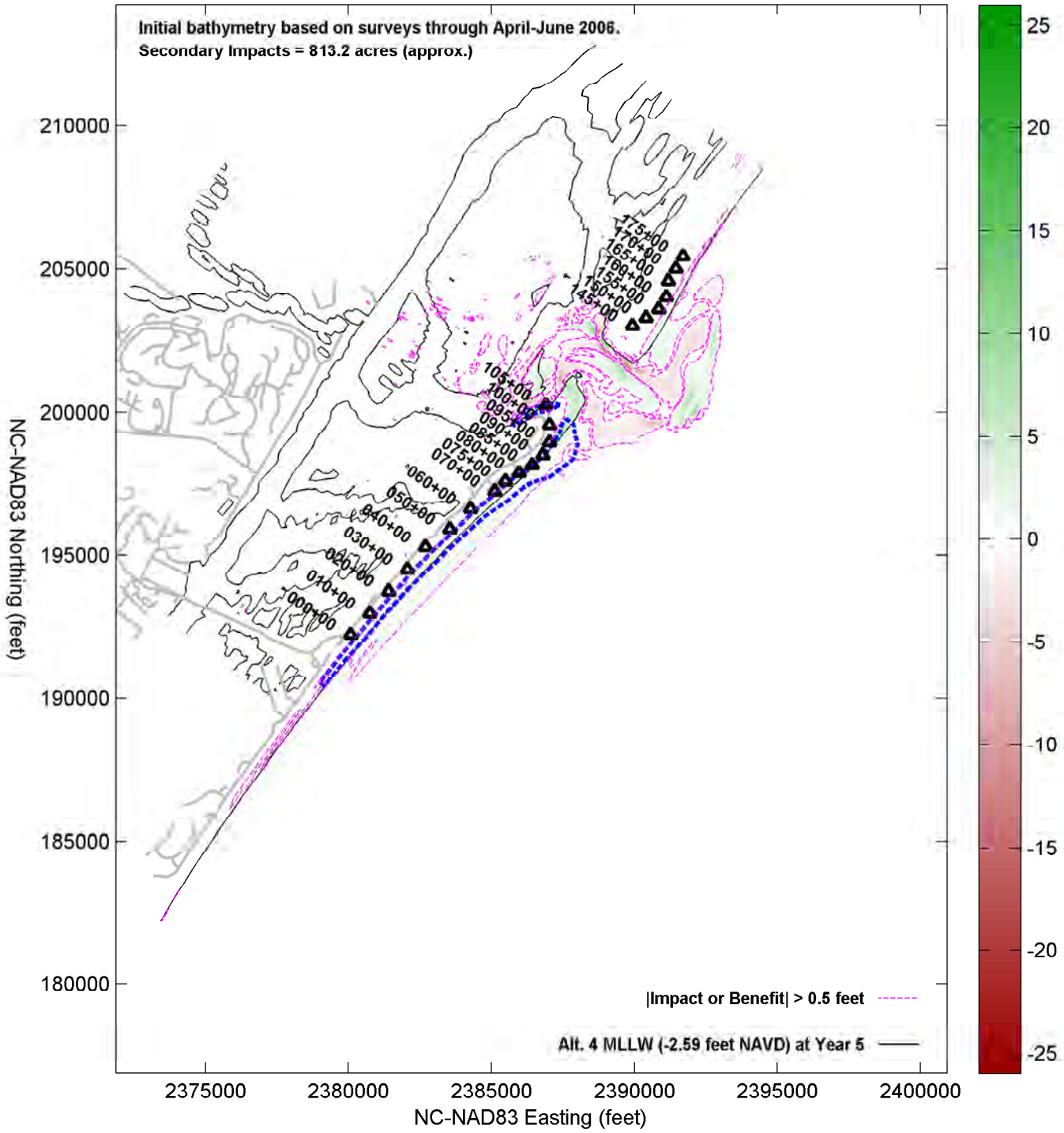
Impacts (-) & Benefits (+feet) of Alt. 4: Beach Fill without Management of Rich Inlet vs. Alt. 2 through Year 3



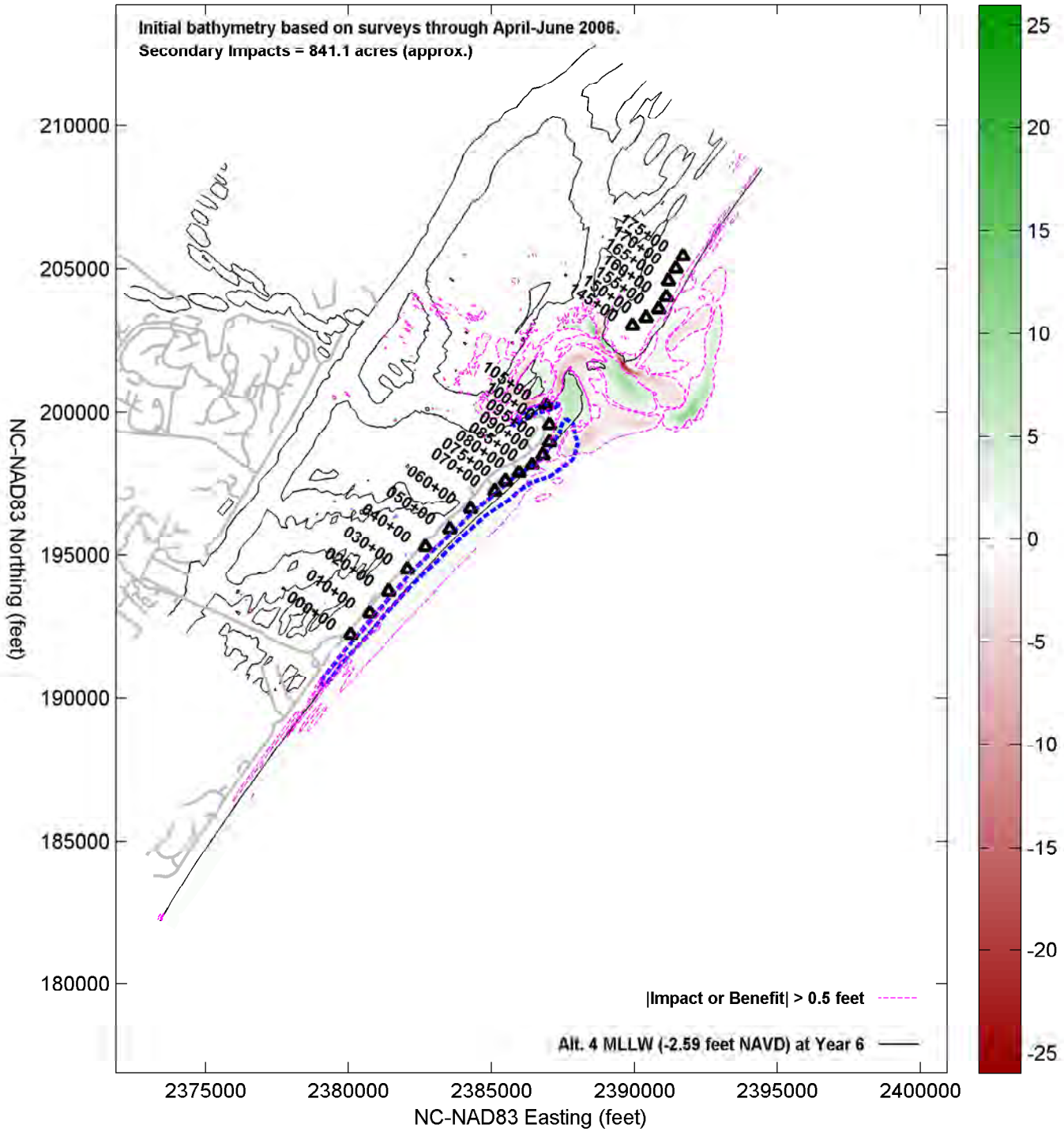
Impacts (-) & Benefits (+feet) of Alt. 4: Beach Fill without Management of Rich Inlet vs. Alt. 2 through Year 4



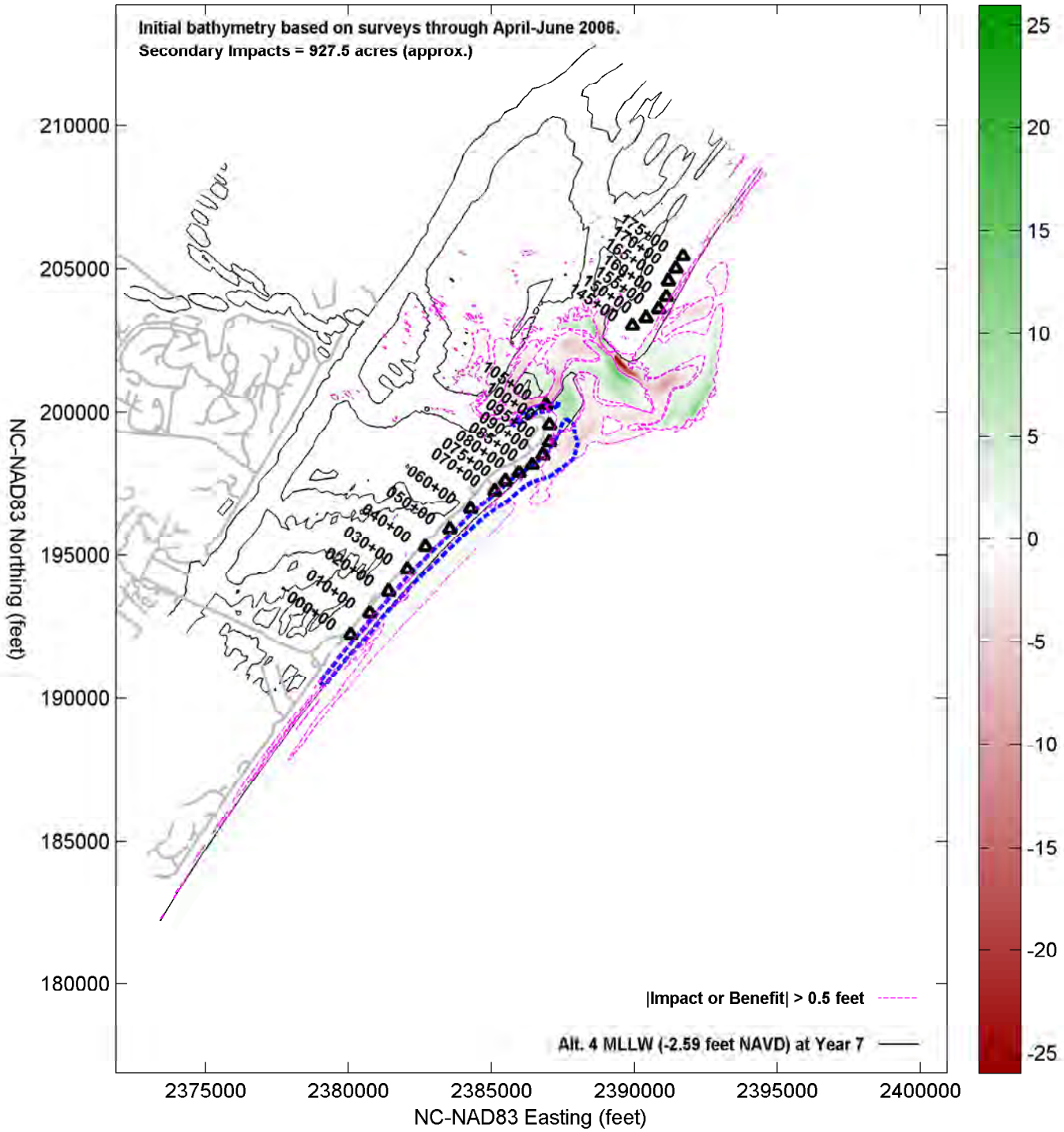
Impacts (-) & Benefits (+feet) of Alt. 4: Beach Fill without Management of Rich Inlet vs. Alt. 2 through Year 5



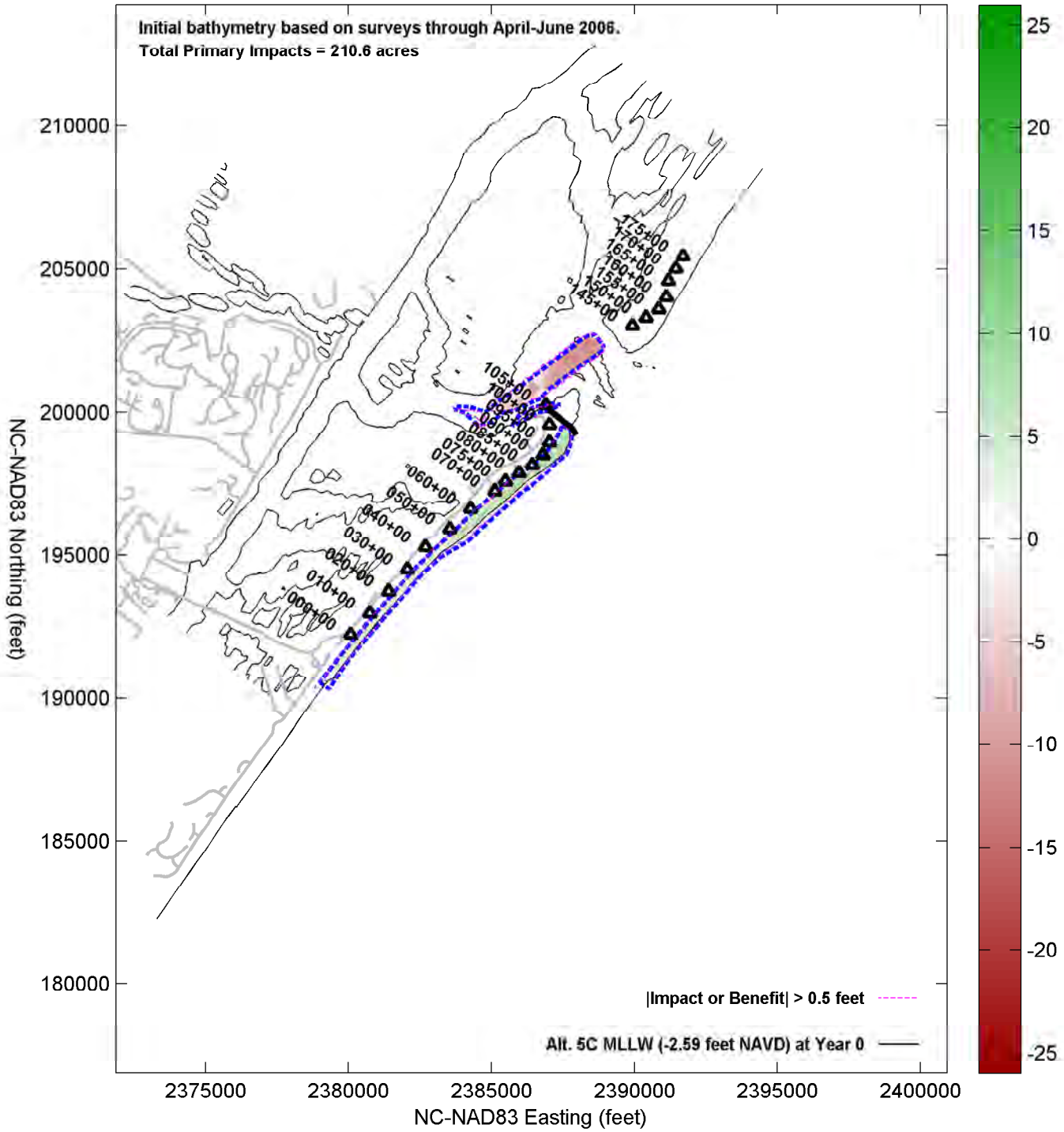
Impacts (-) & Benefits (+feet) of Alt. 4: Beach Fill without Management of Rich Inlet vs. Alt. 2 through Year 6



Impacts (-) & Benefits (+feet) of Alt. 4: Beach Fill without Management of Rich Inlet vs. Alt. 2 through Year 7



npacts (-) & Benefits (+feet) of Alt. 5C: Term. Groin with Beach Fill from Nixon Channel (Extended Cut) vs. Alt. 2 through Year 0



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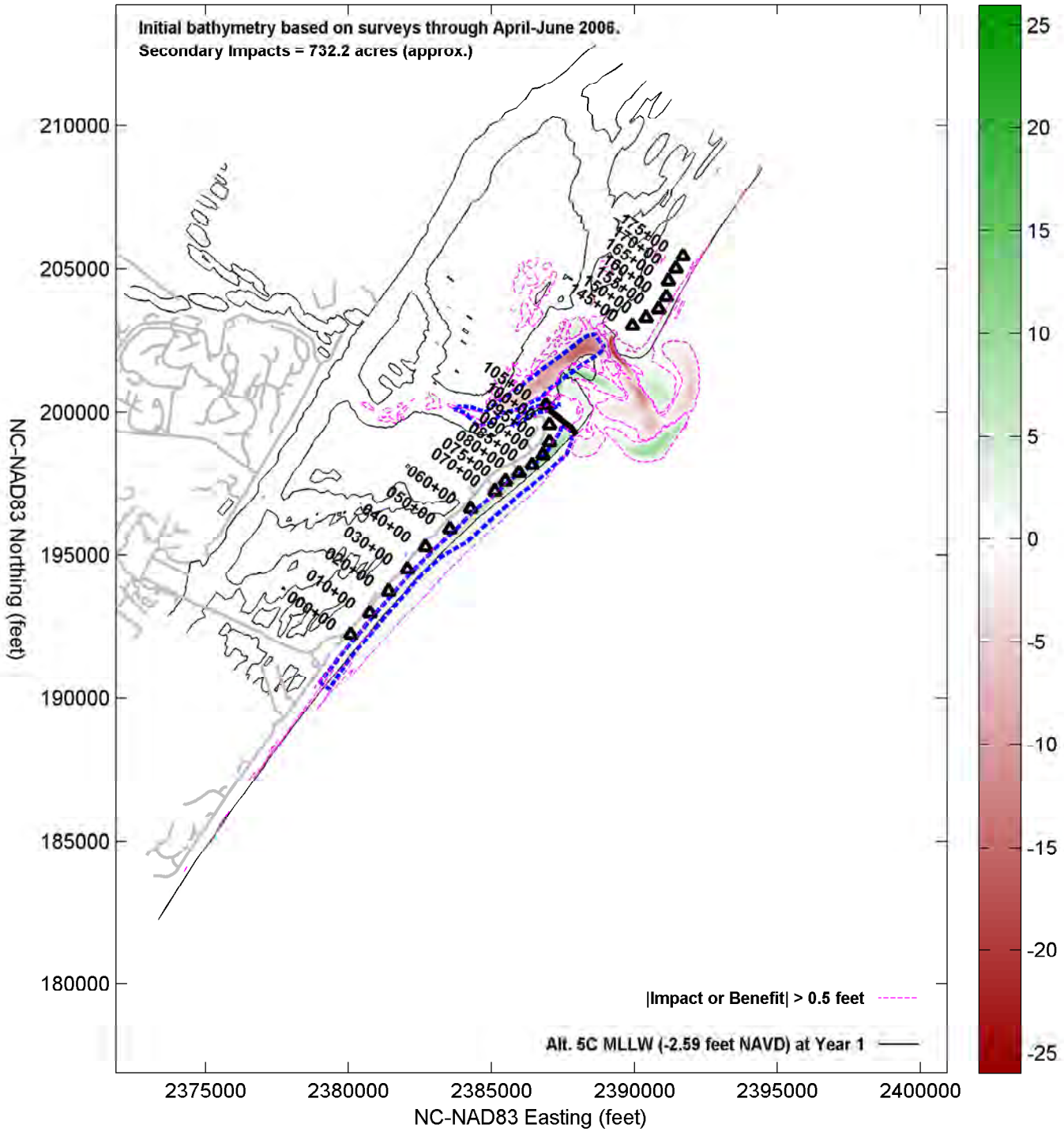

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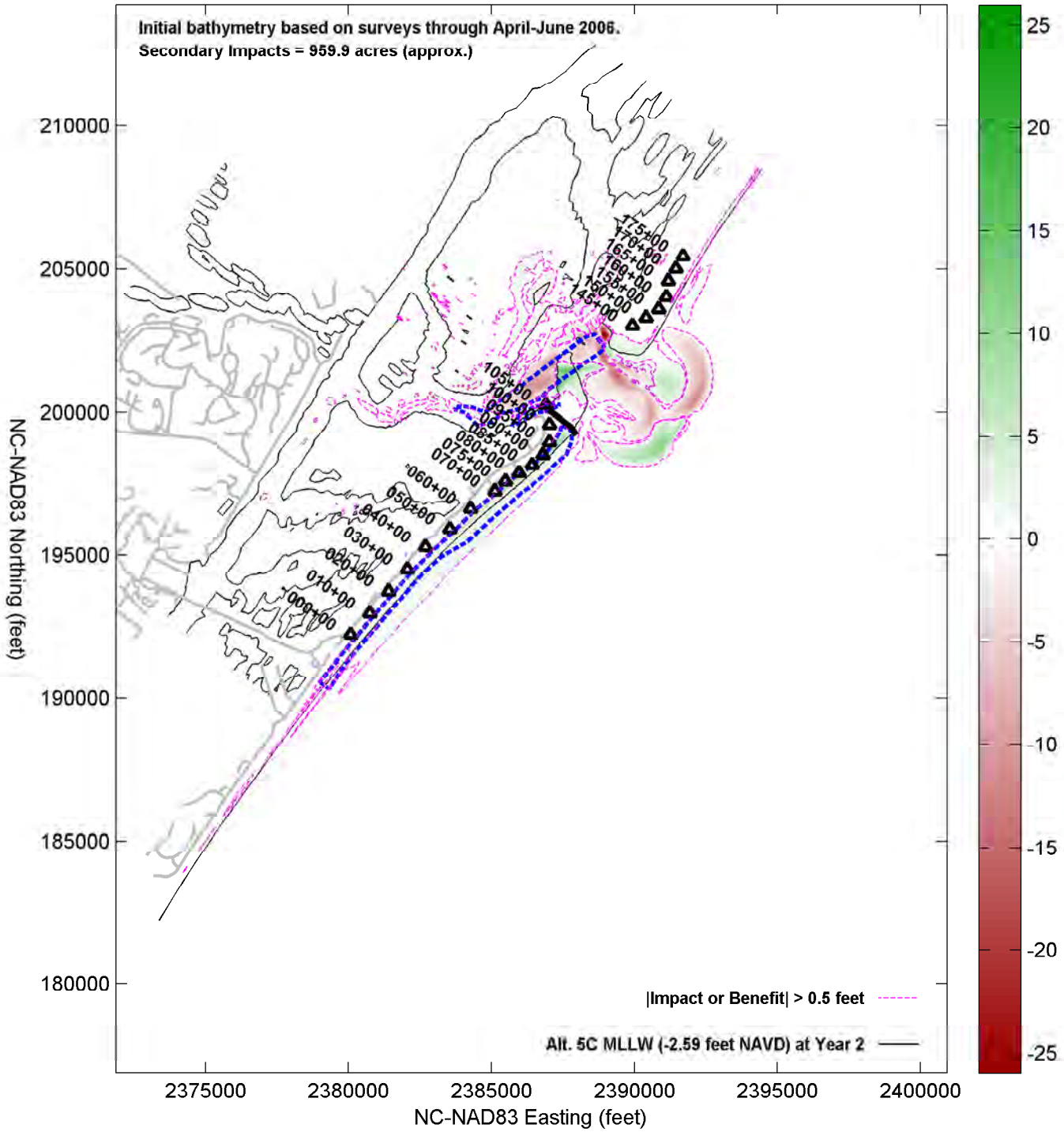

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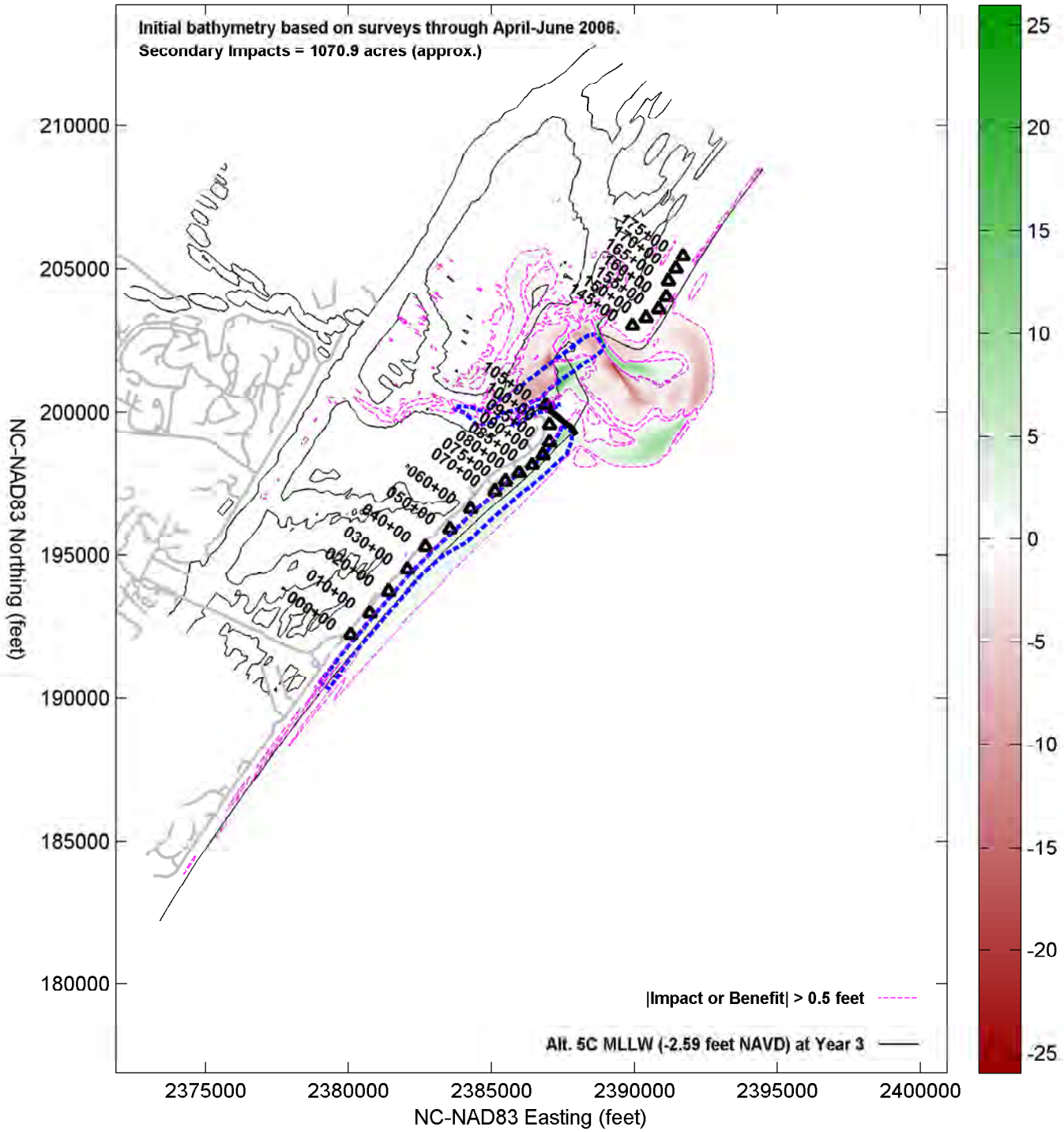

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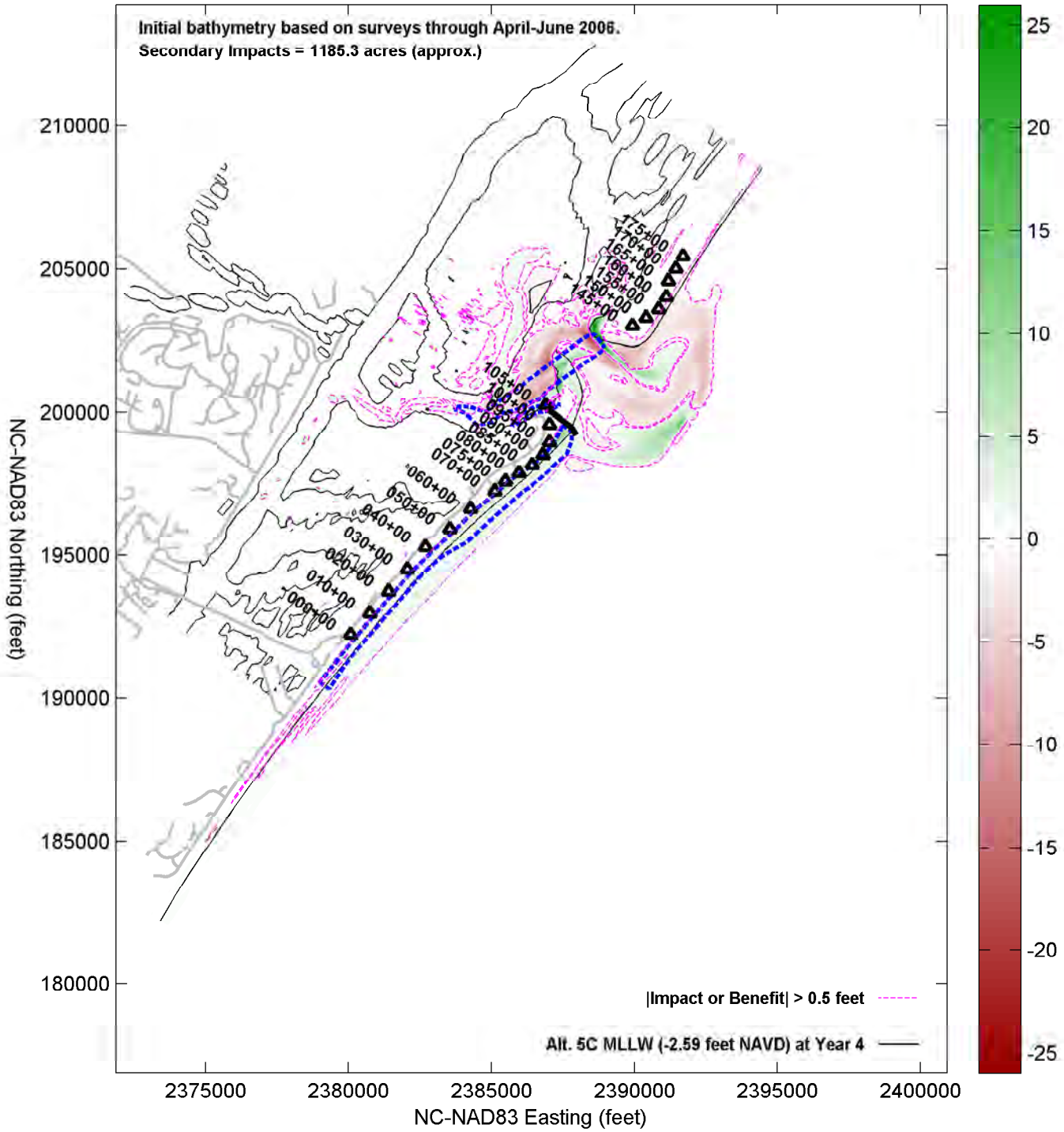

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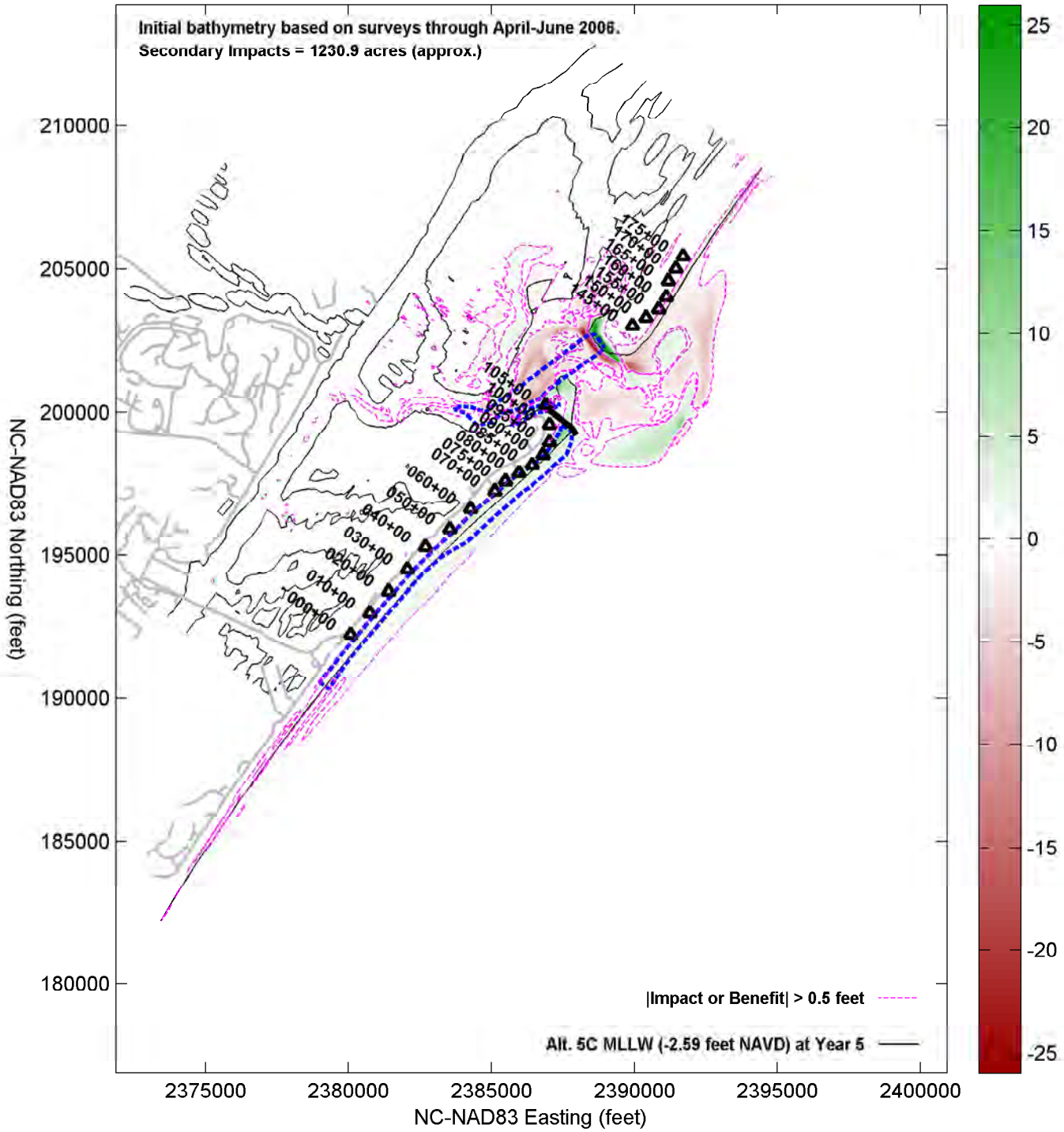

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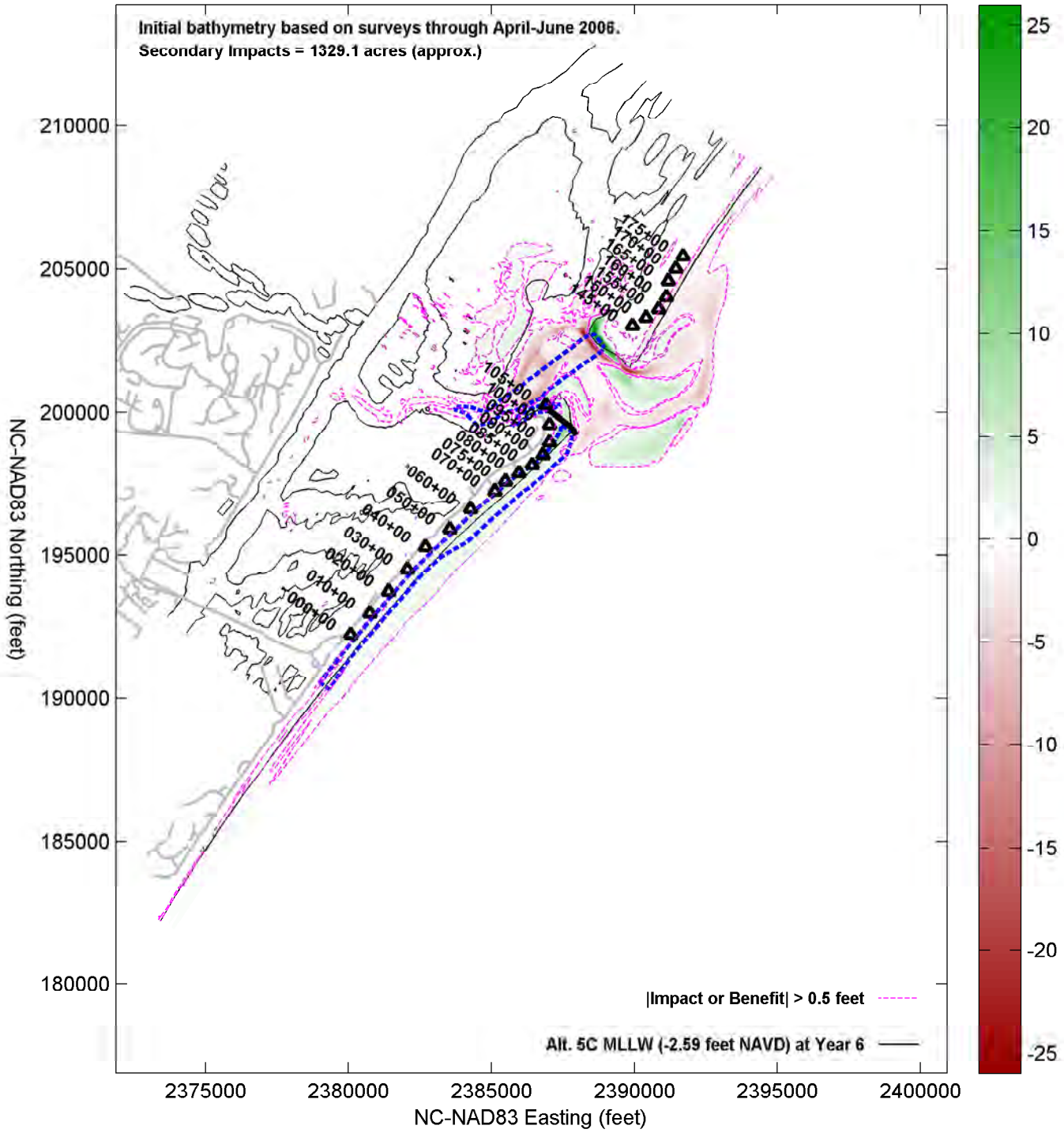

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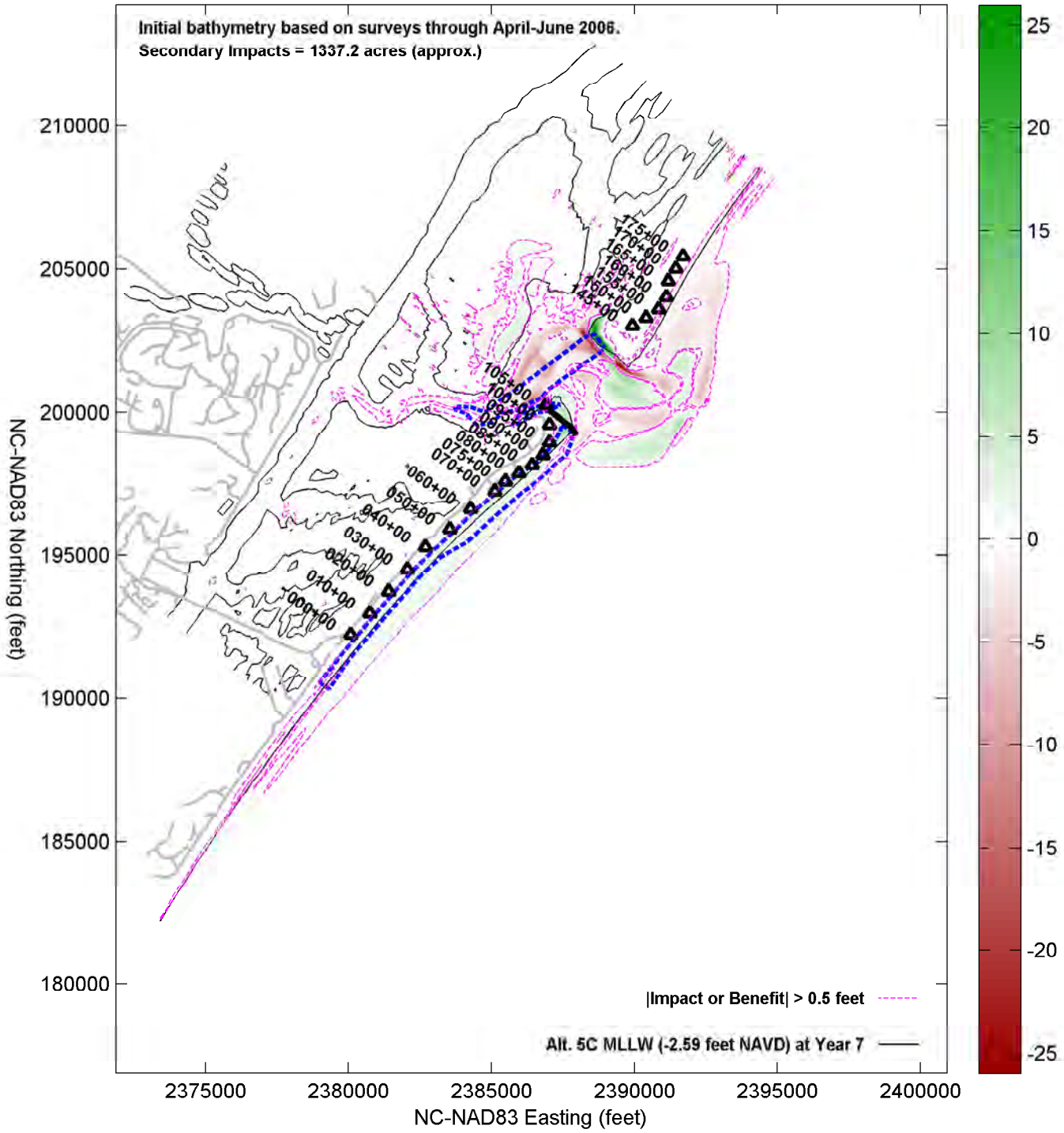
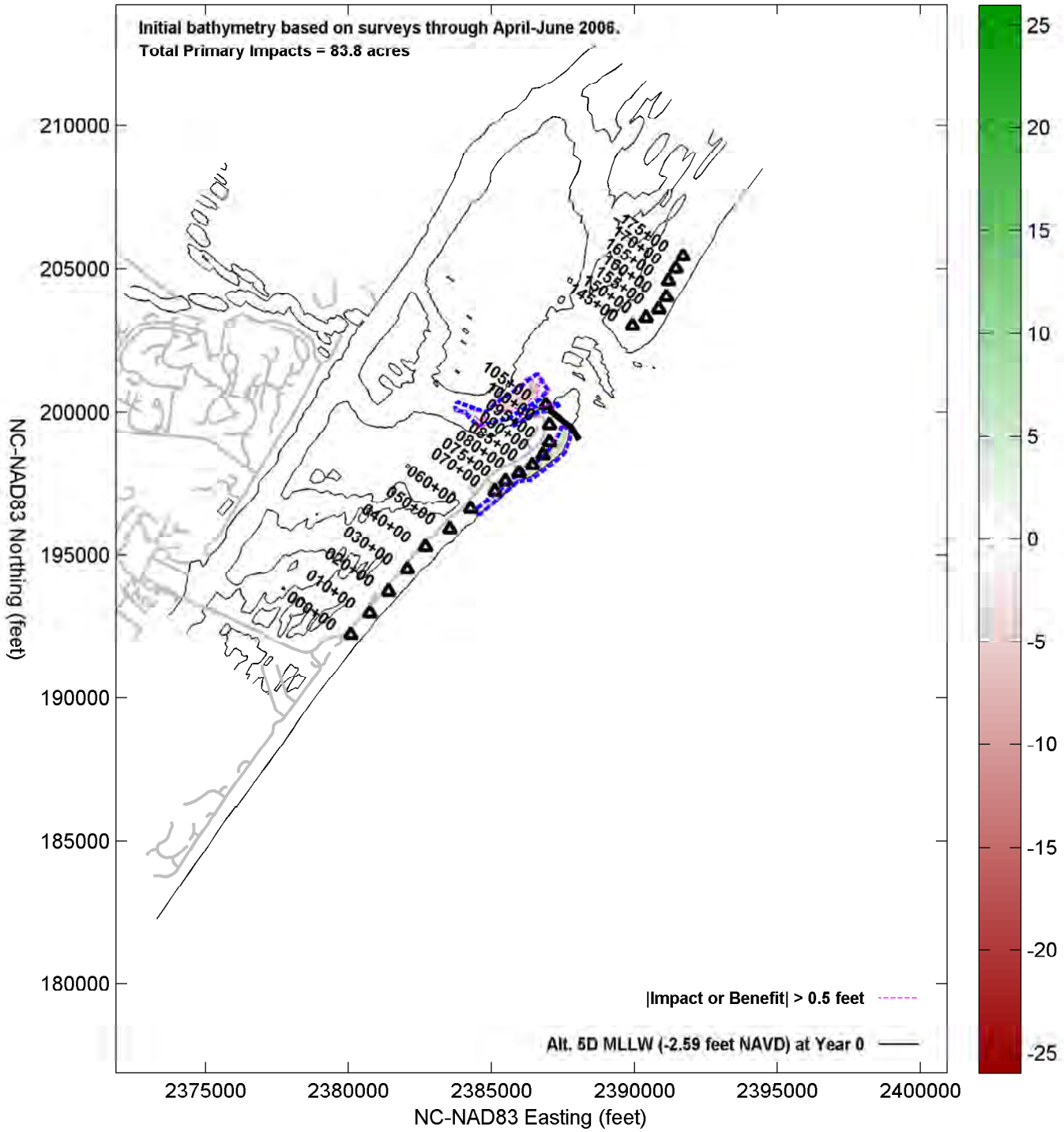


›acts (-) & Benefits (+feet) of Alt. 5D: Longer Term. Groin with Beach Fill from Nixon Channel (2010 Cut) vs. Alt. 2 through Year 0



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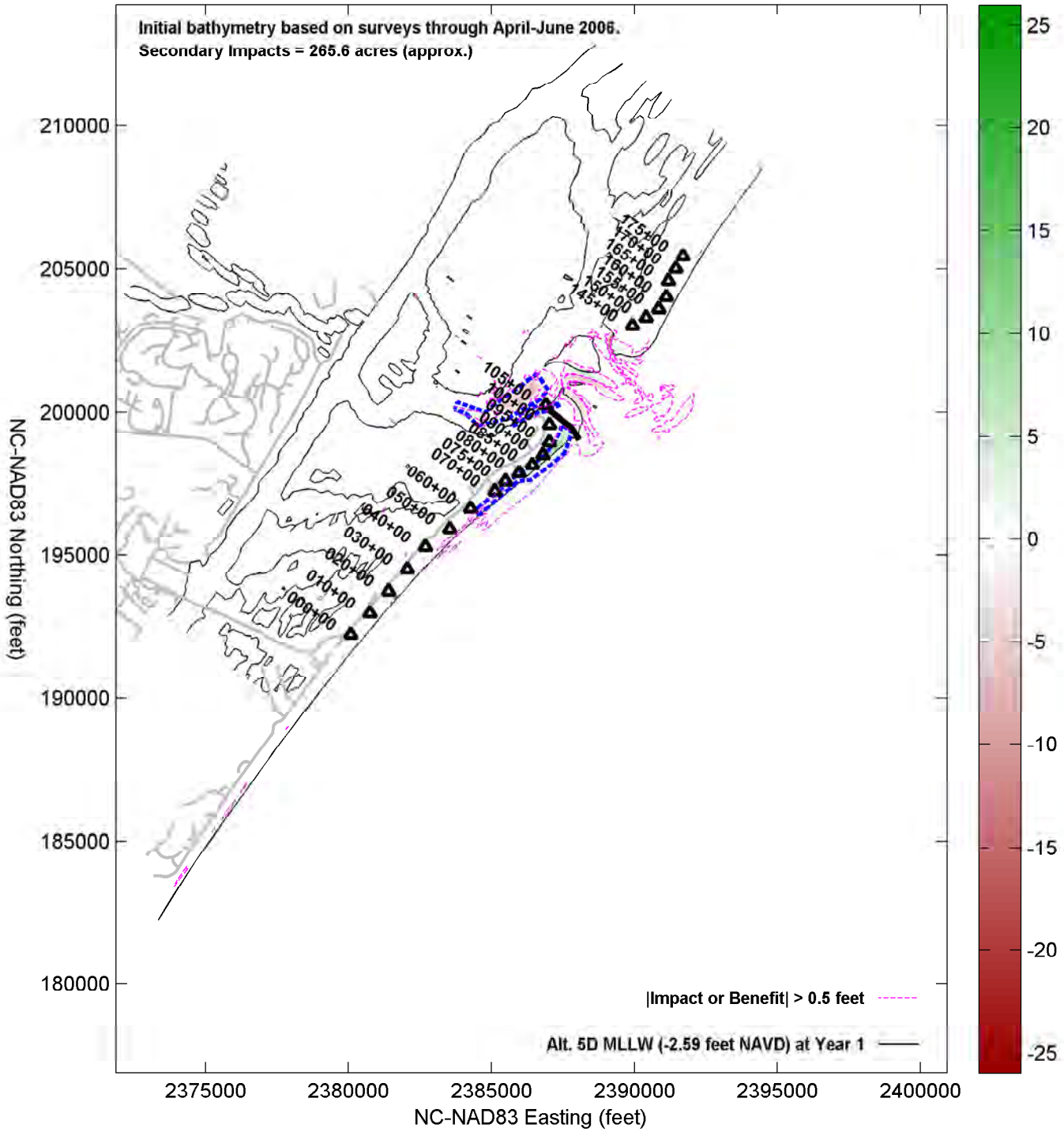

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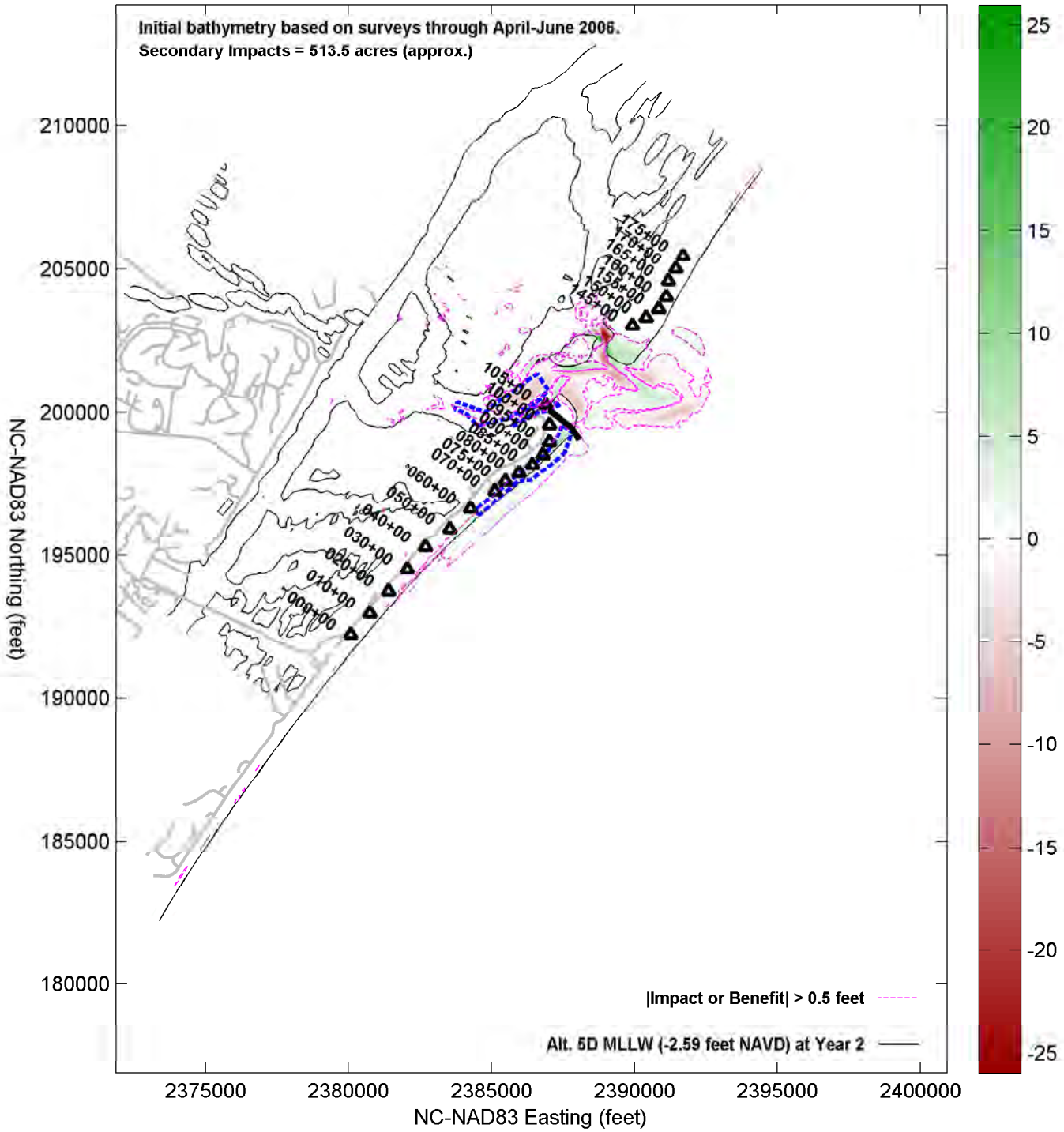

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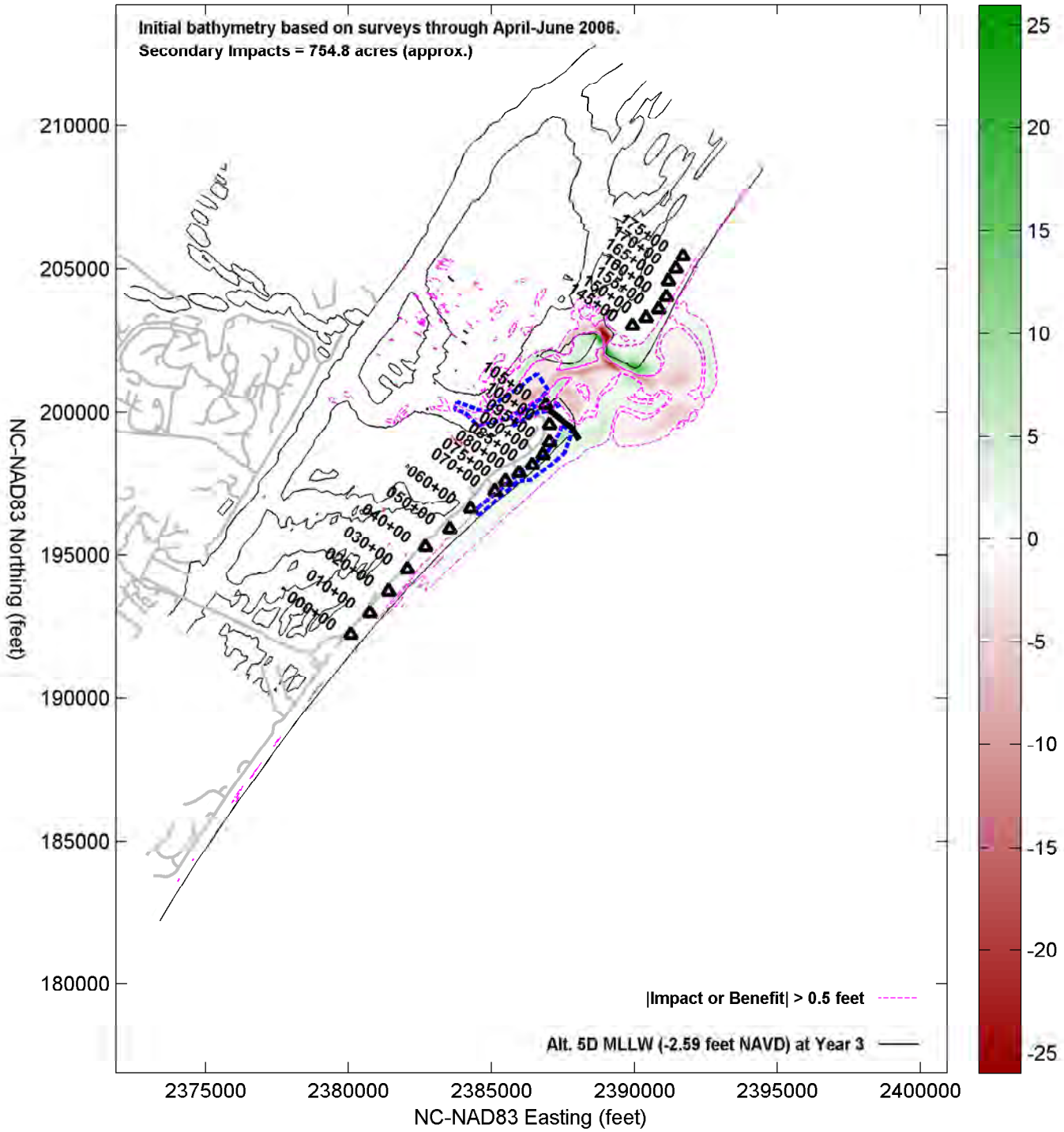

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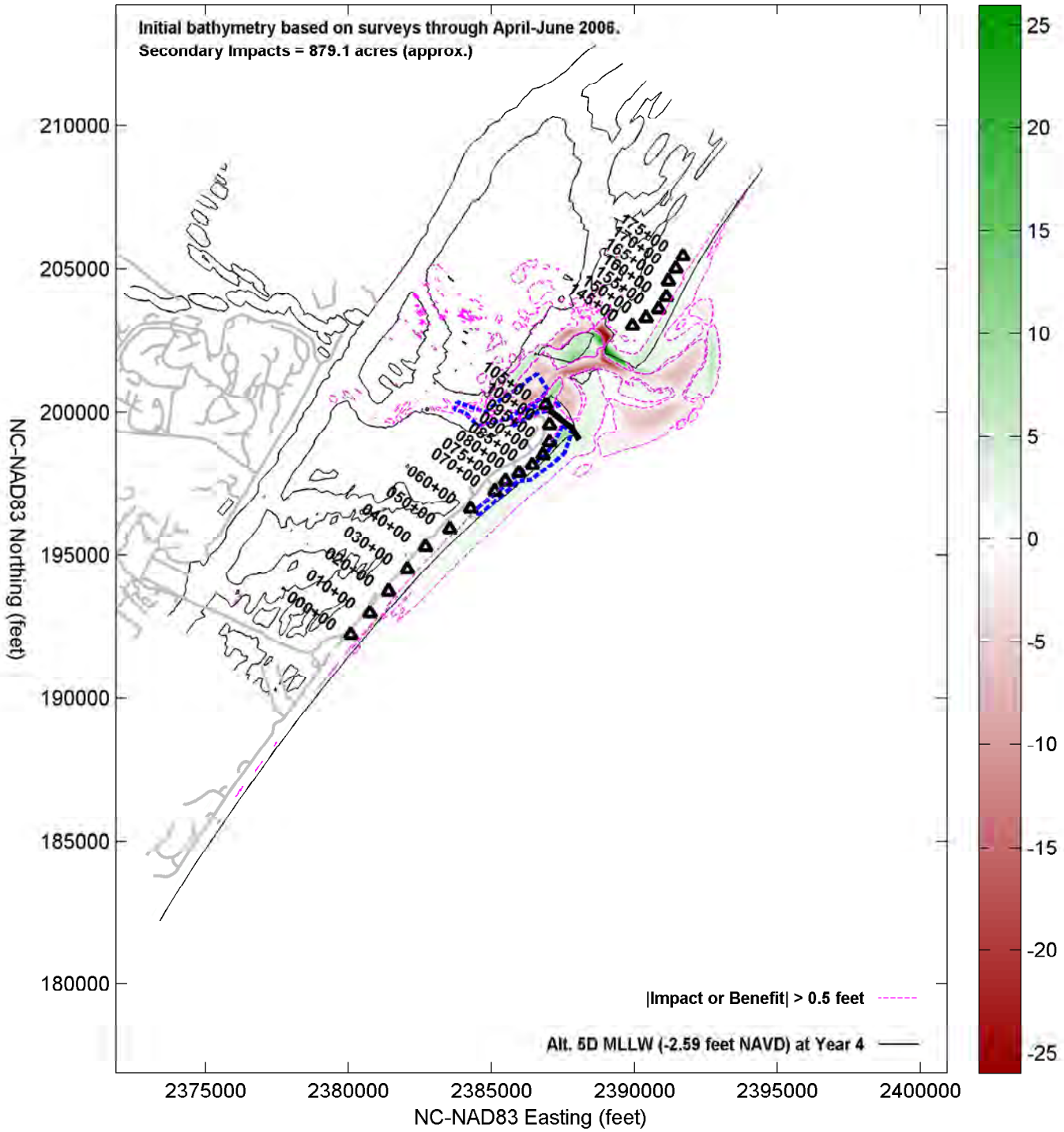

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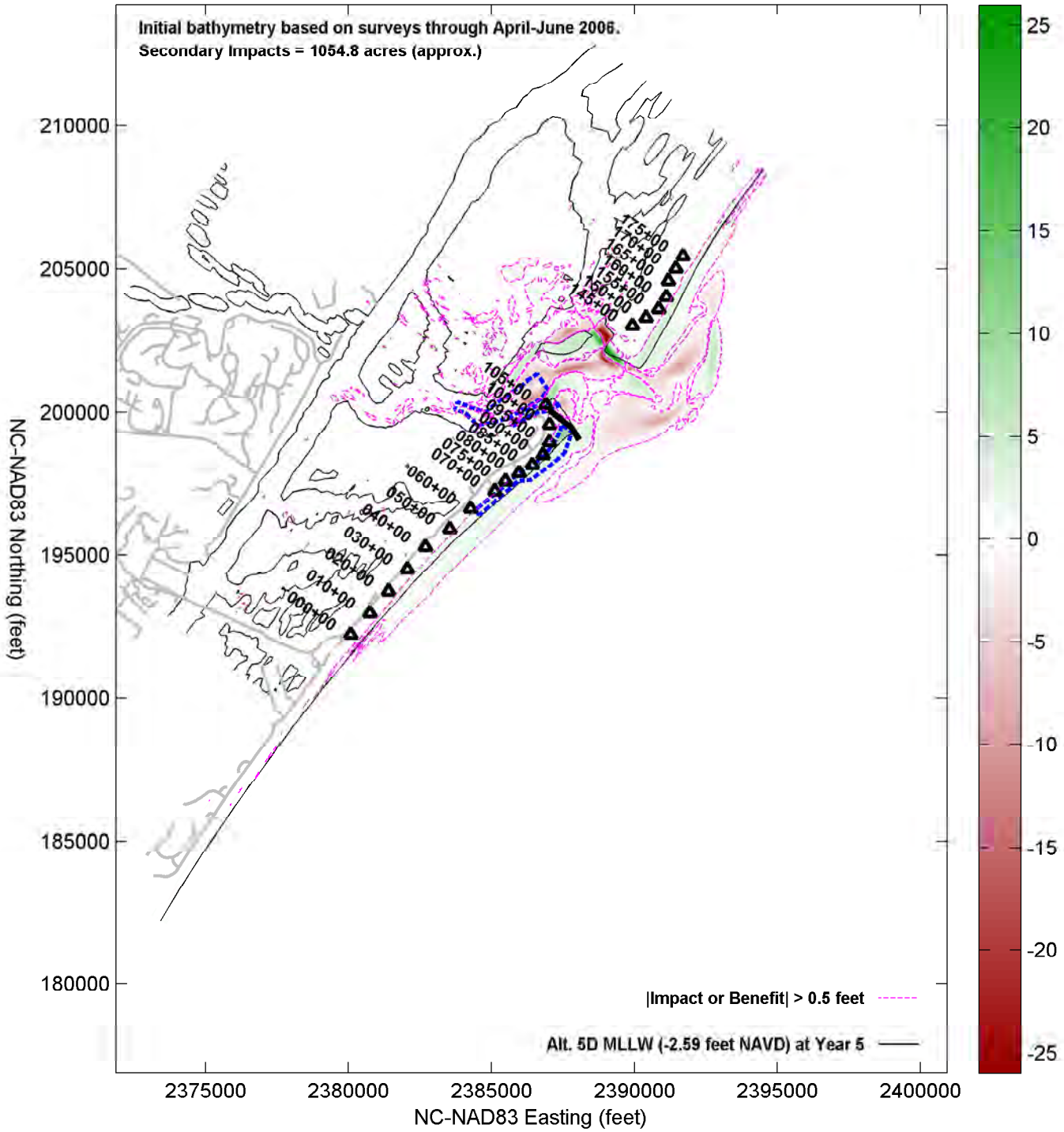

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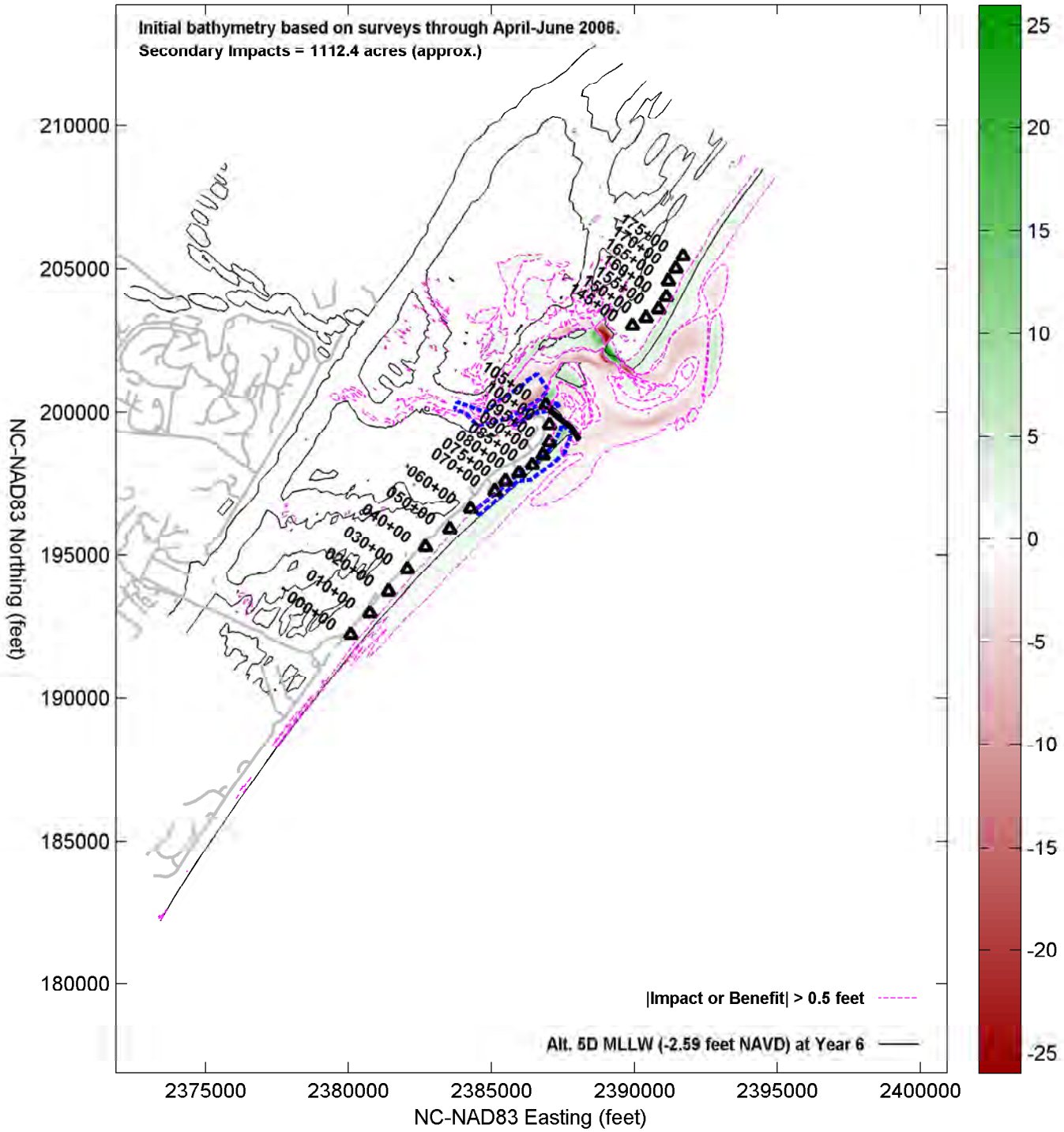

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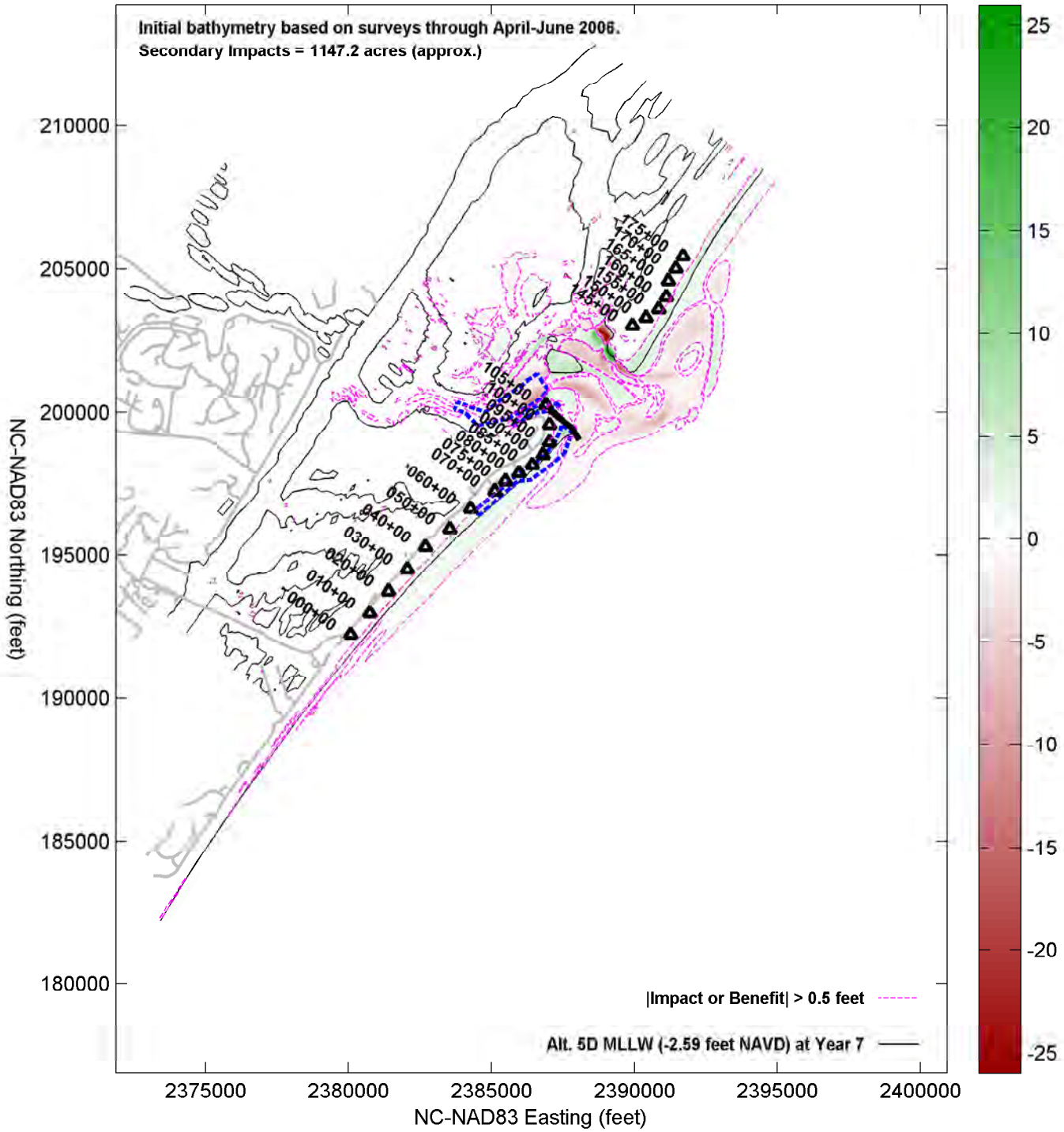
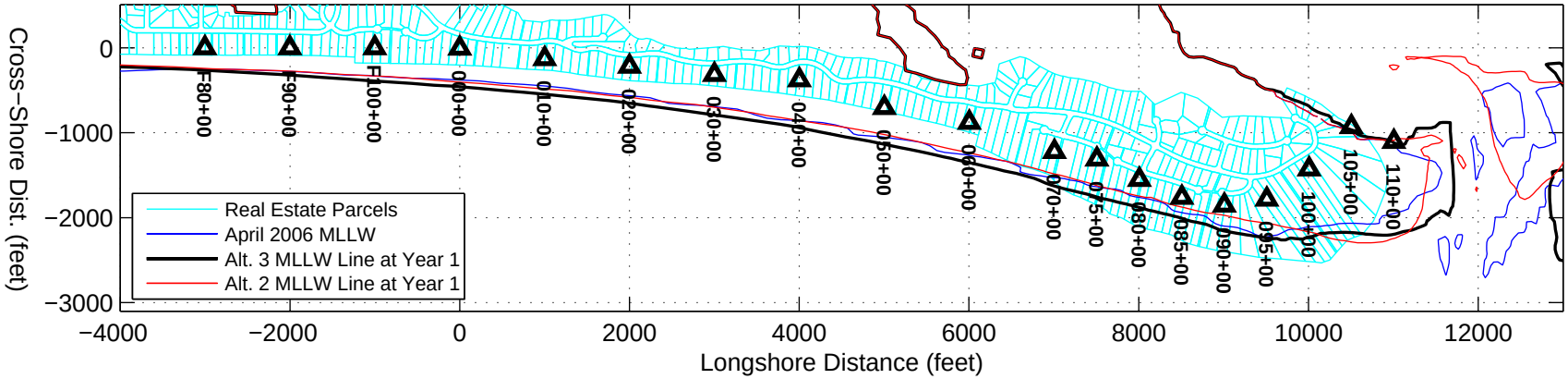


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 3: Rich Inlet Management and Beach Fill Based on April−June 2006 Cond.

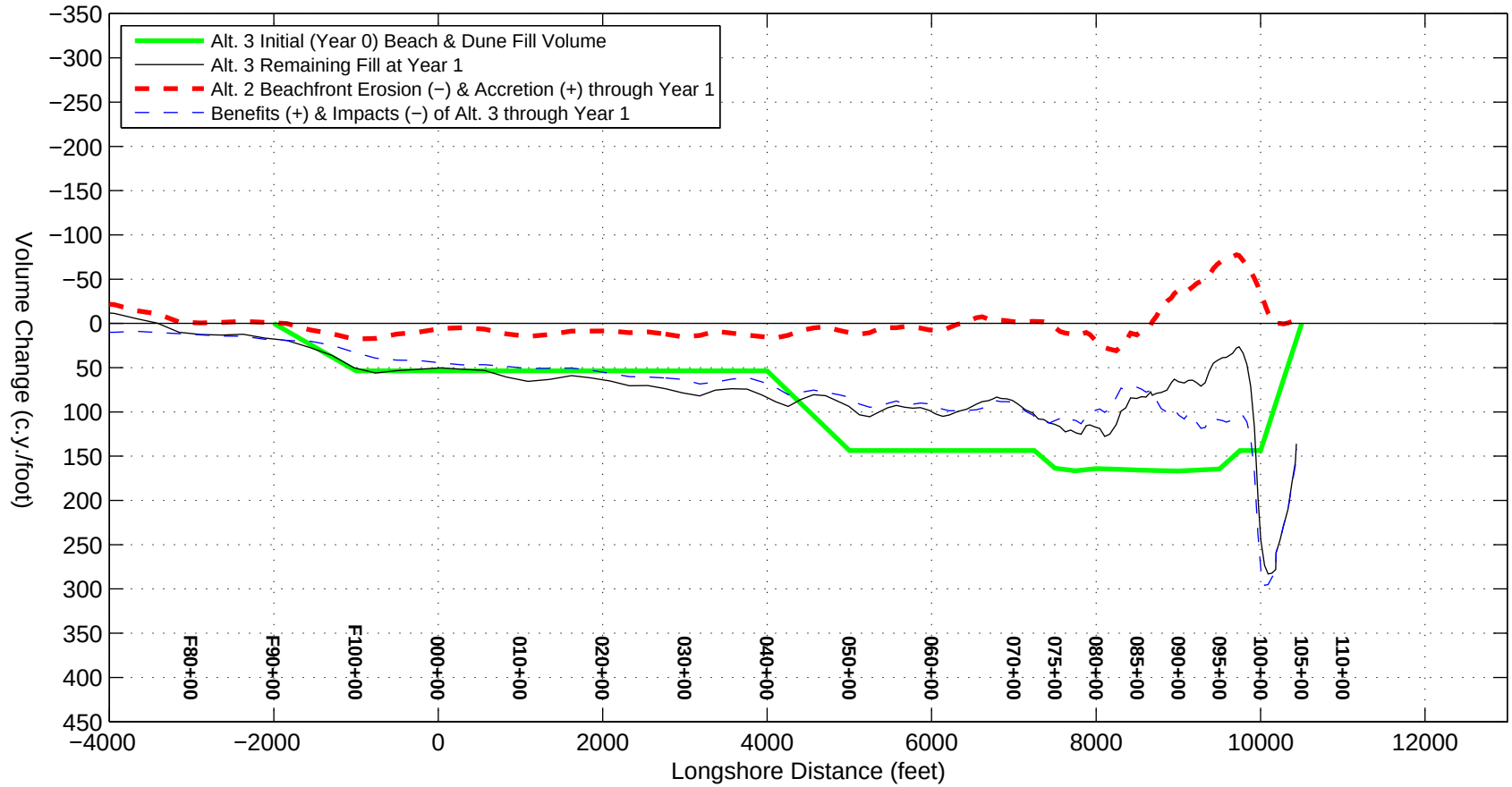
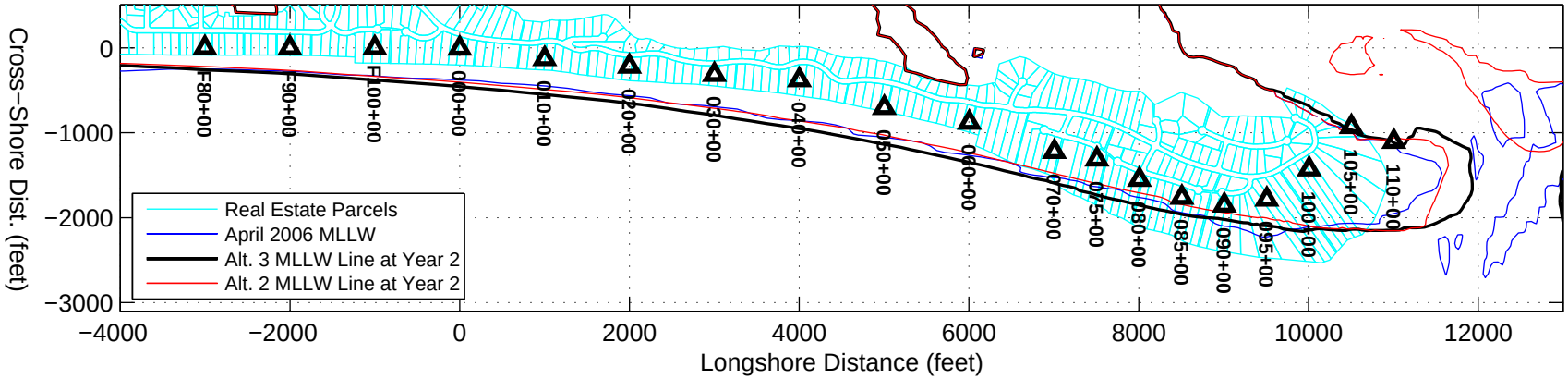


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 3: Rich Inlet Management and Beach Fill Based on April−June 2006 Cond.

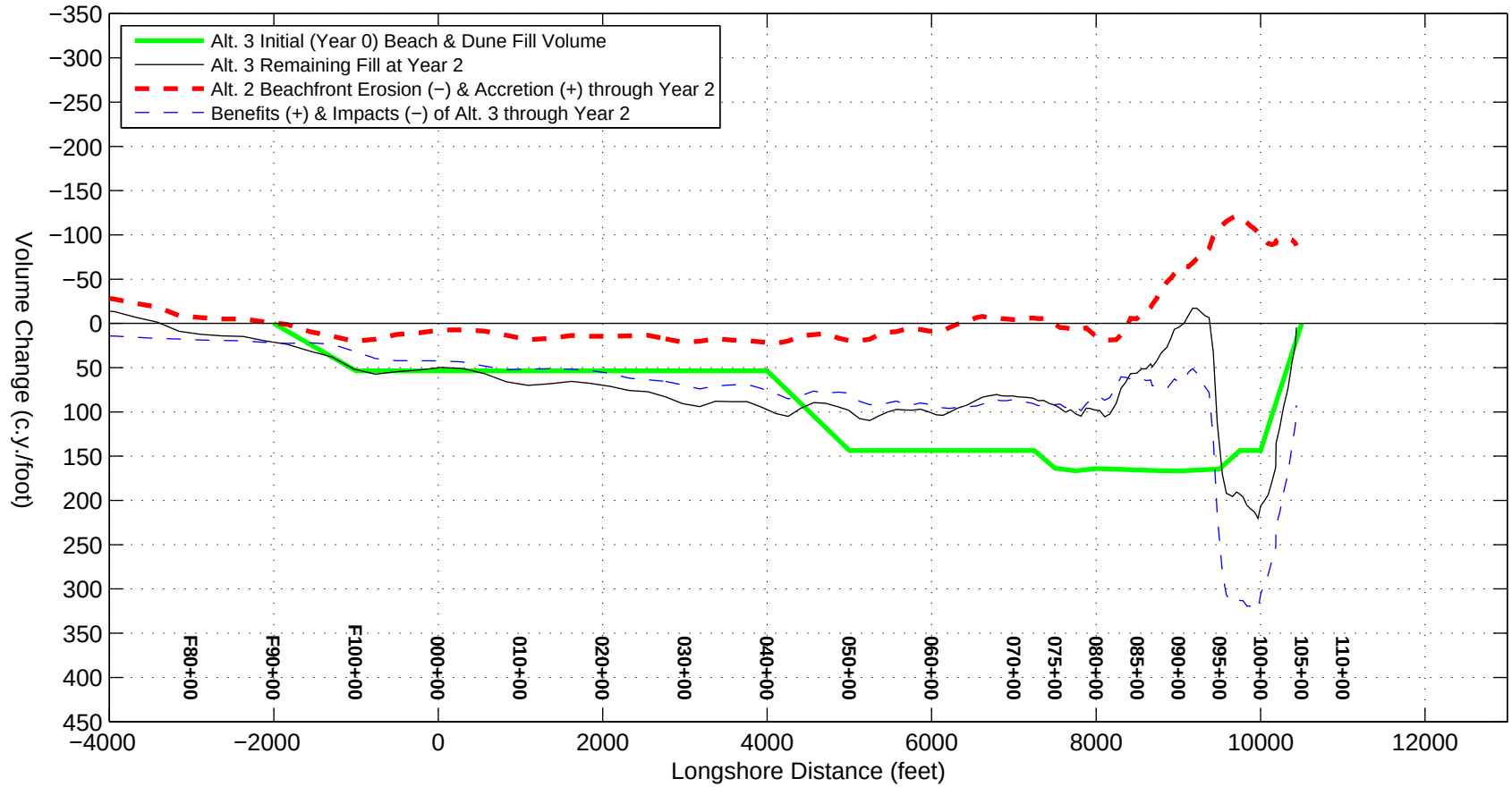
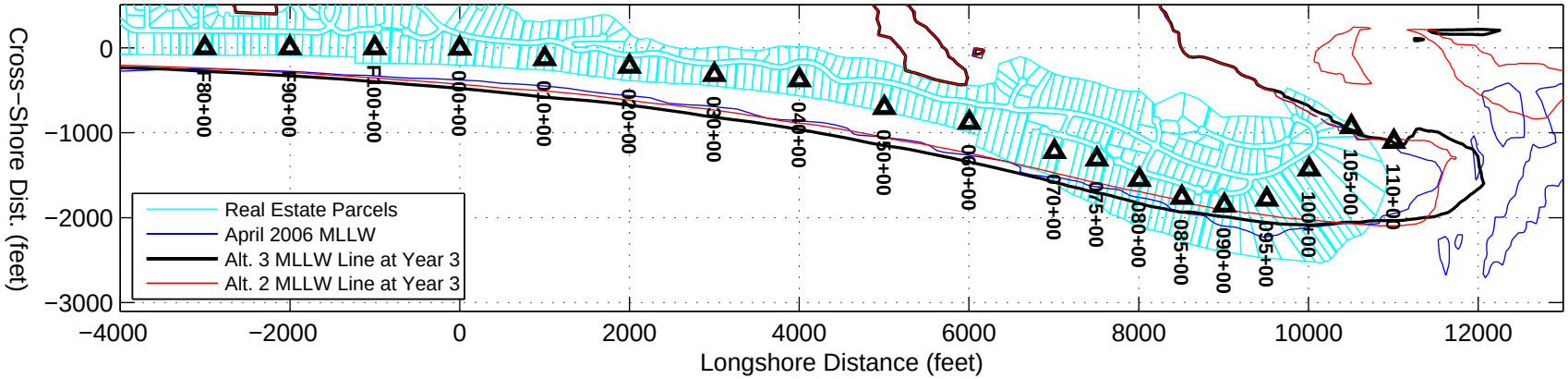


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 3: Rich Inlet Management and Beach Fill Based on April−June 2006 Cond.

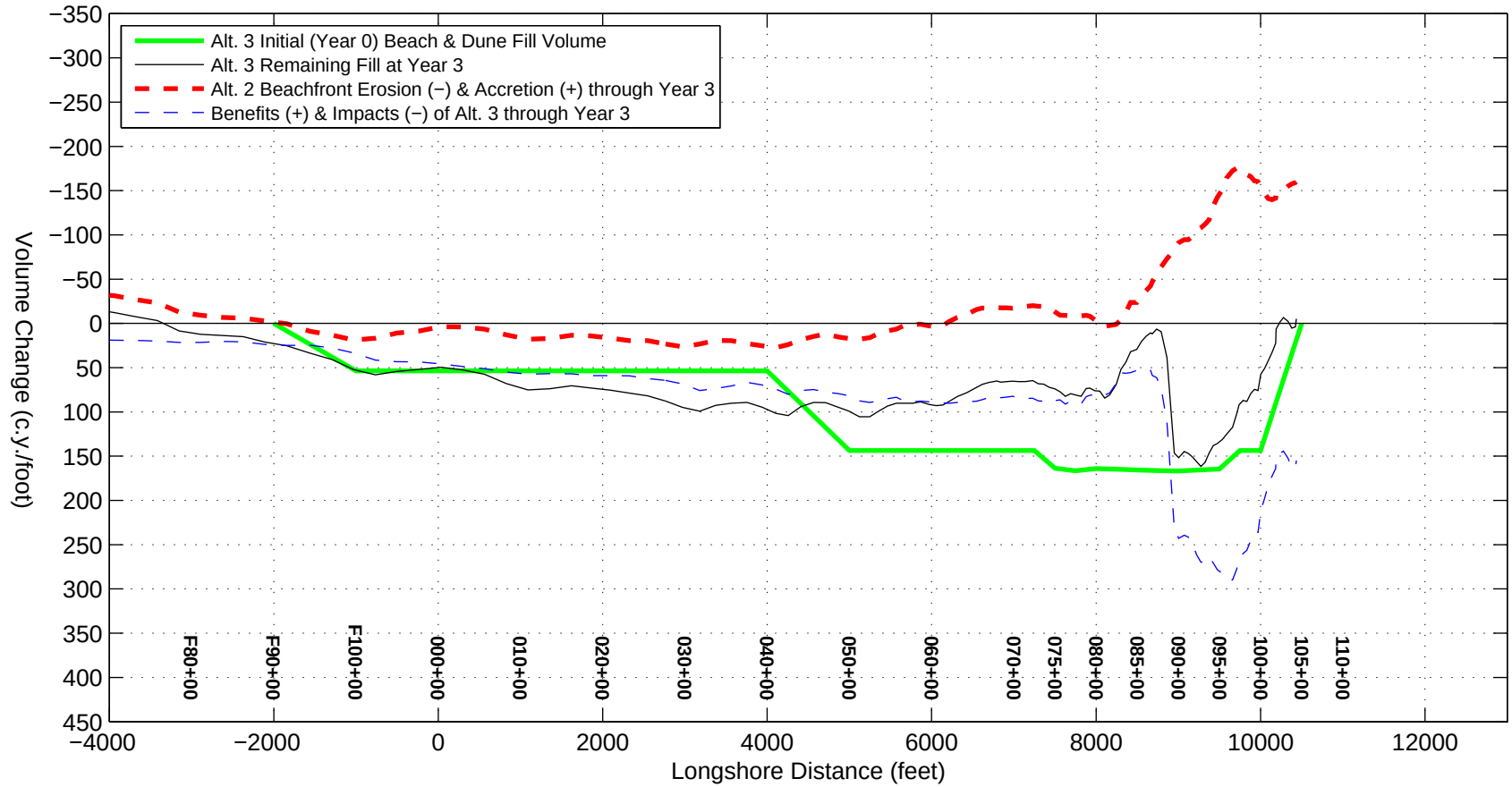
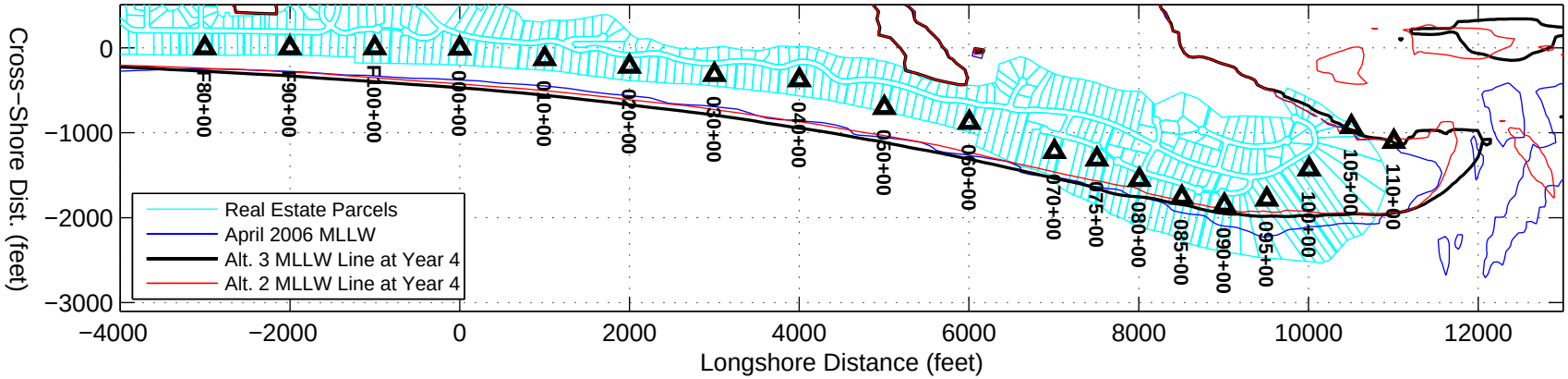


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 3: Rich Inlet Management and Beach Fill Based on April−June 2006 Cond.

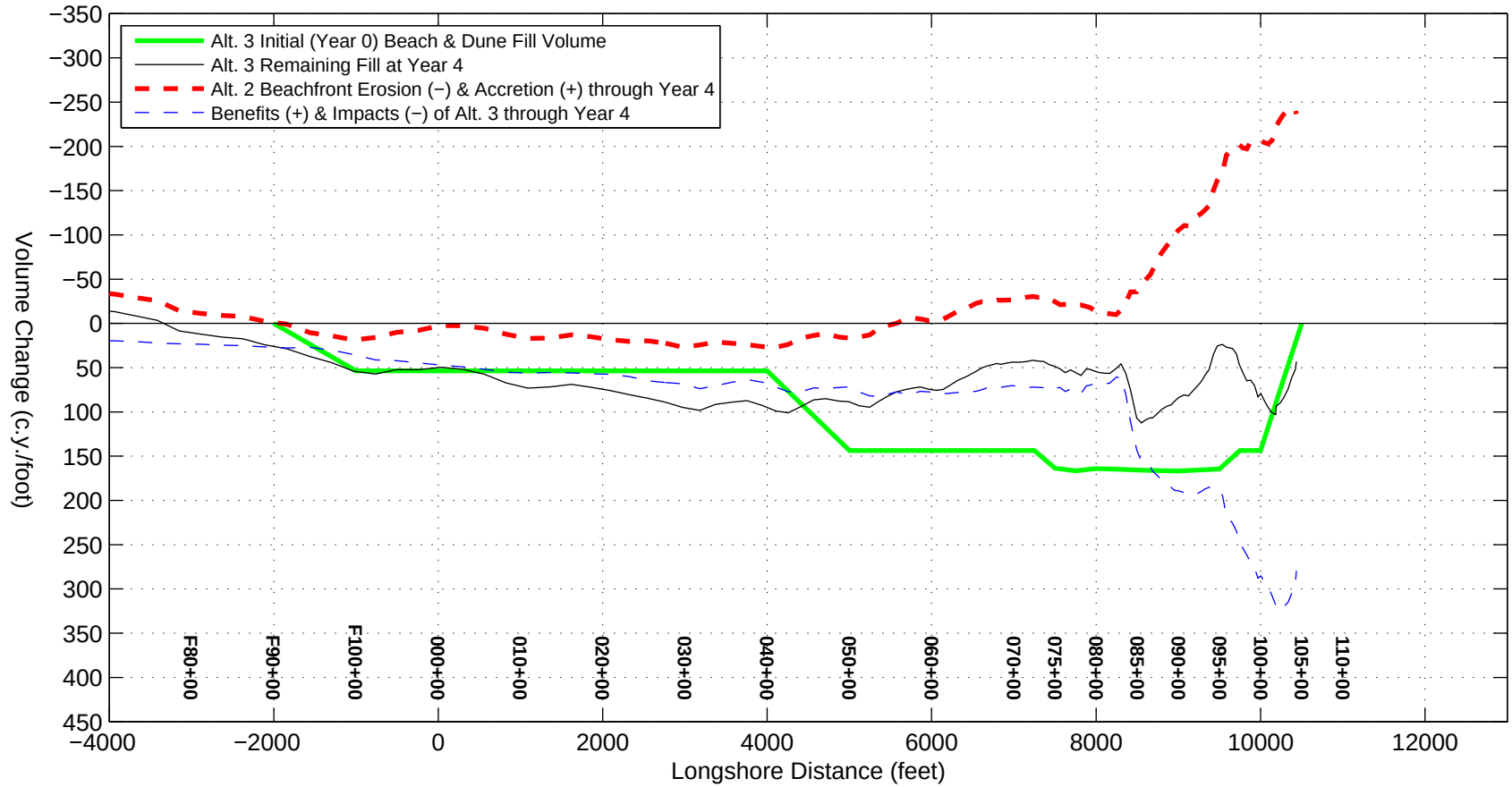
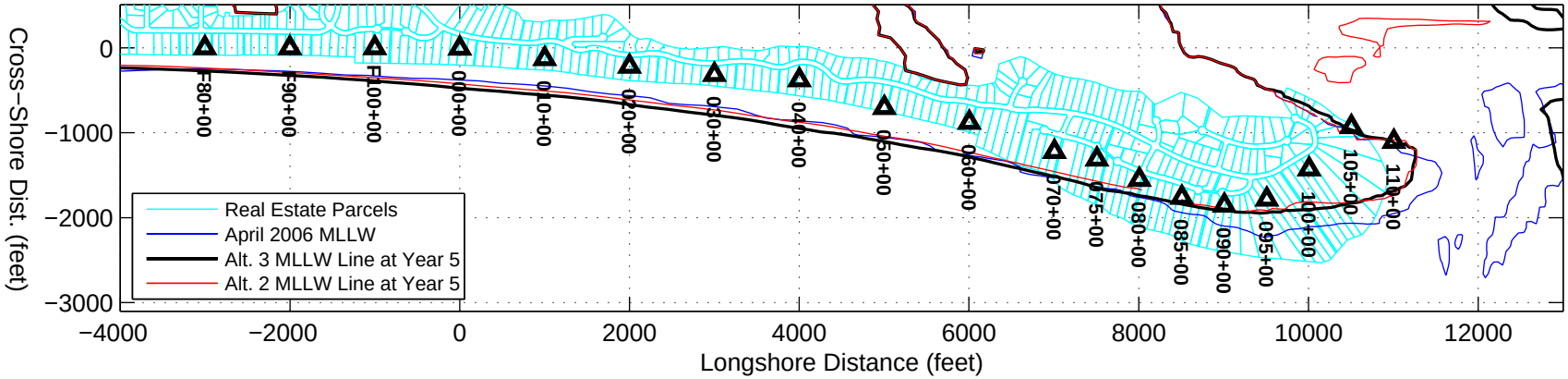


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 3: Rich Inlet Management and Beach Fill Based on April−June 2006 Cond.

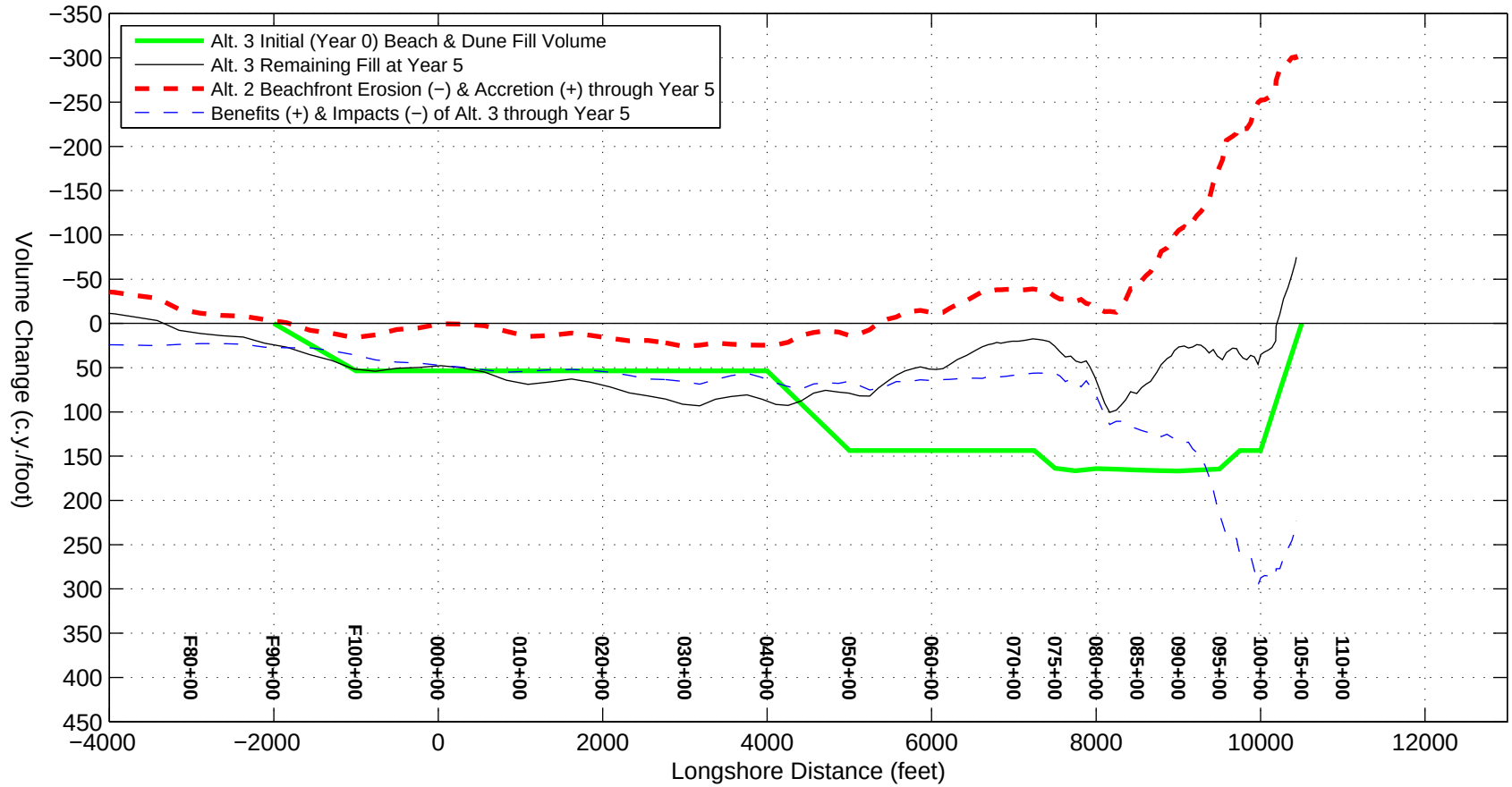
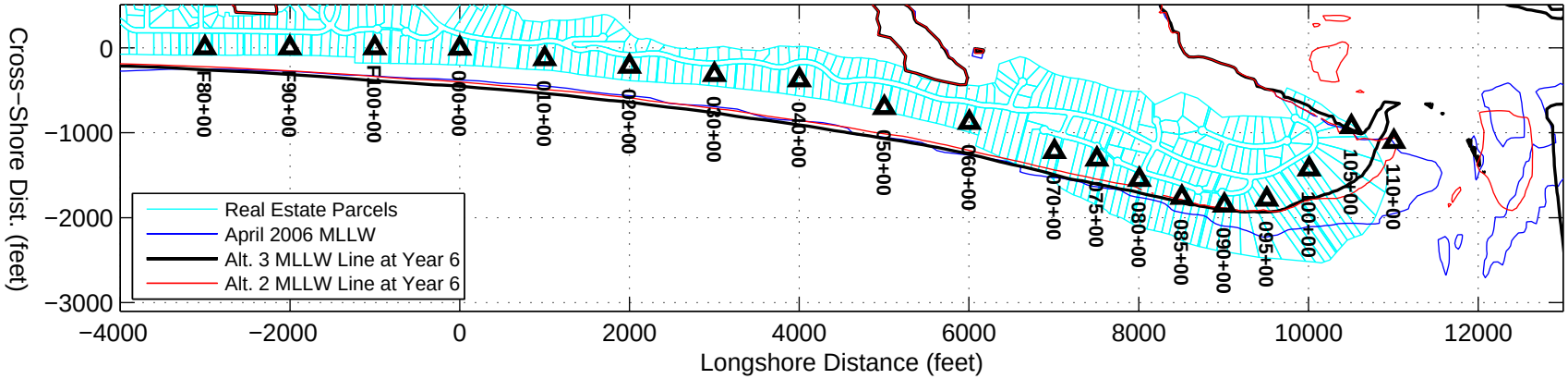


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 3: Rich Inlet Management and Beach Fill Based on April−June 2006 Cond.

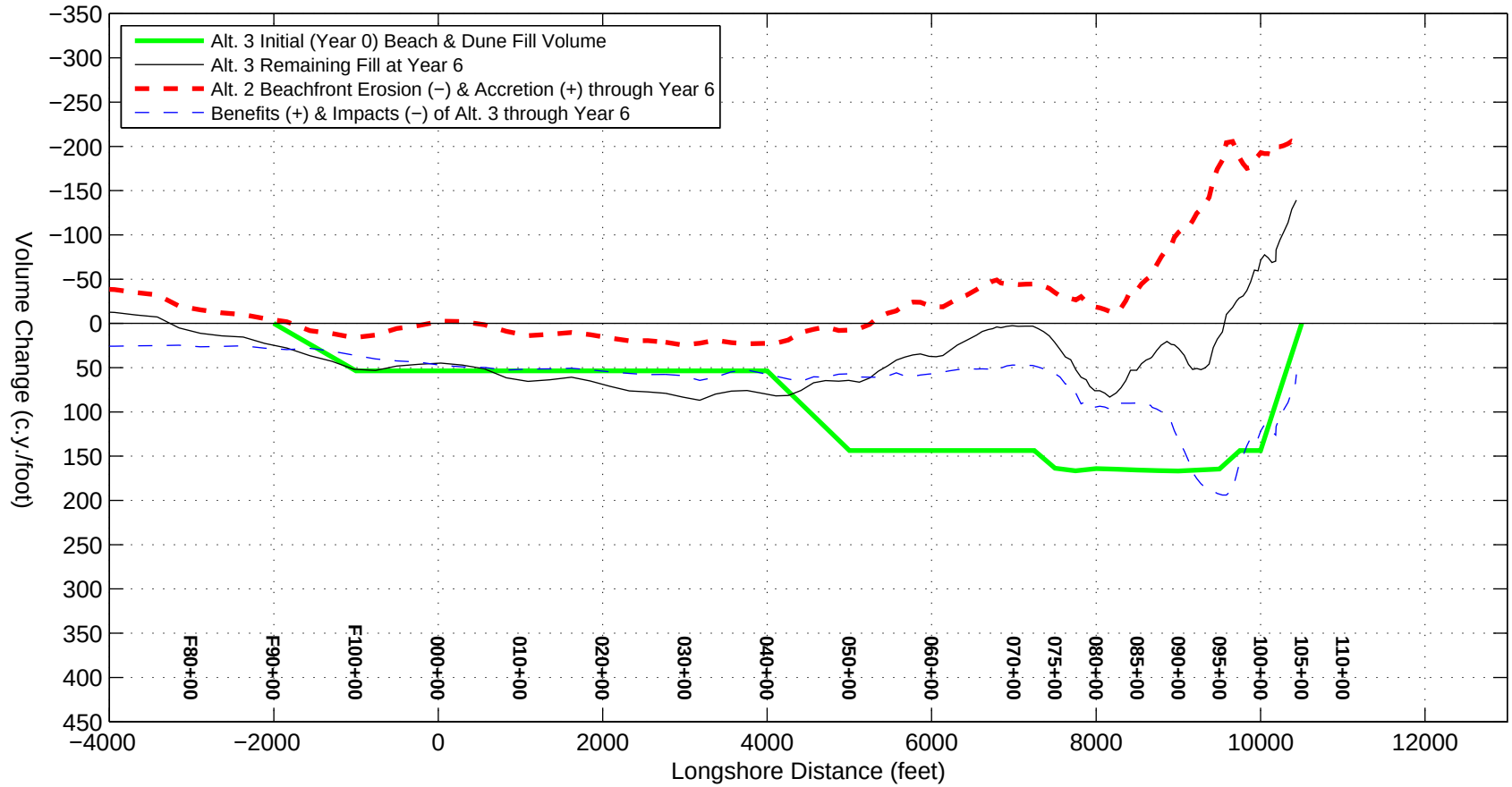
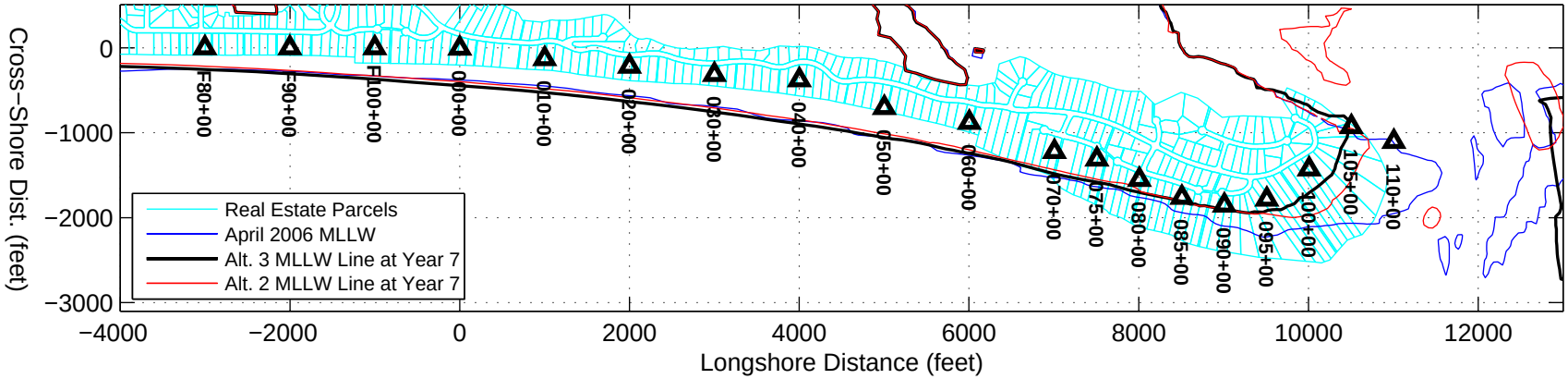


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 3: Rich Inlet Management and Beach Fill Based on April−June 2006 Cond.

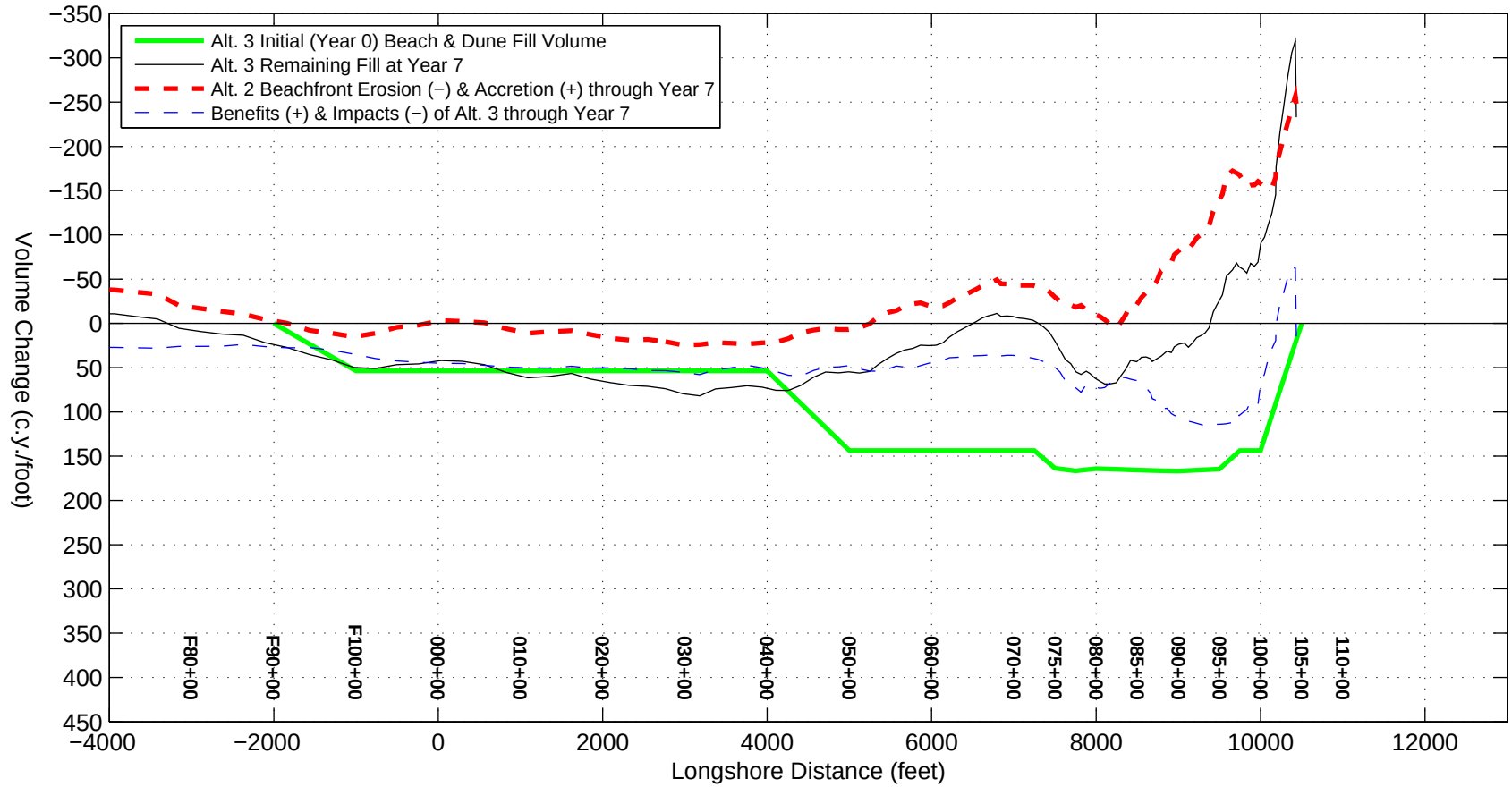
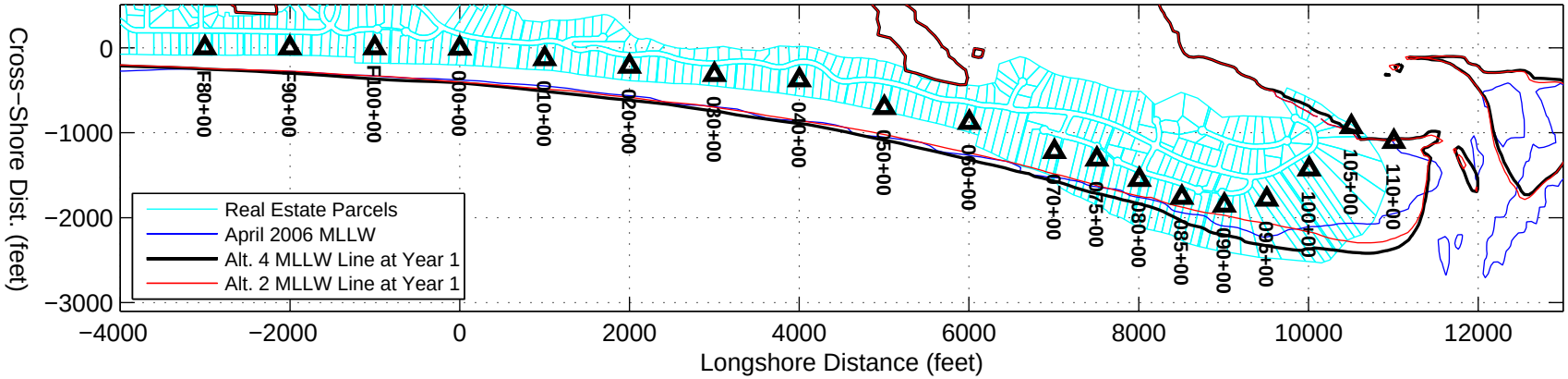
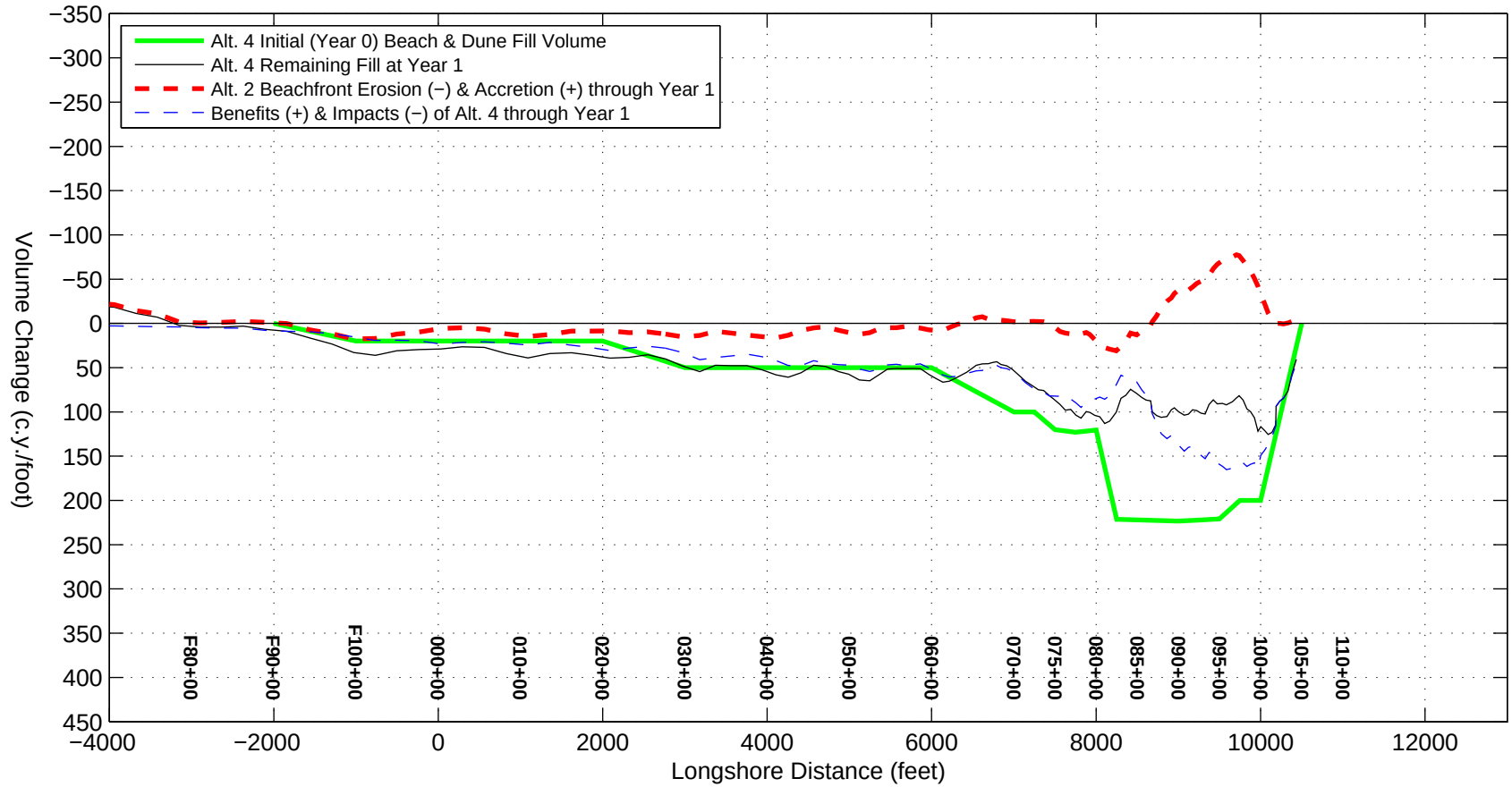


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 4: Beach Fill without Management of Rich Inlet Based on April−June 2006 Cond.



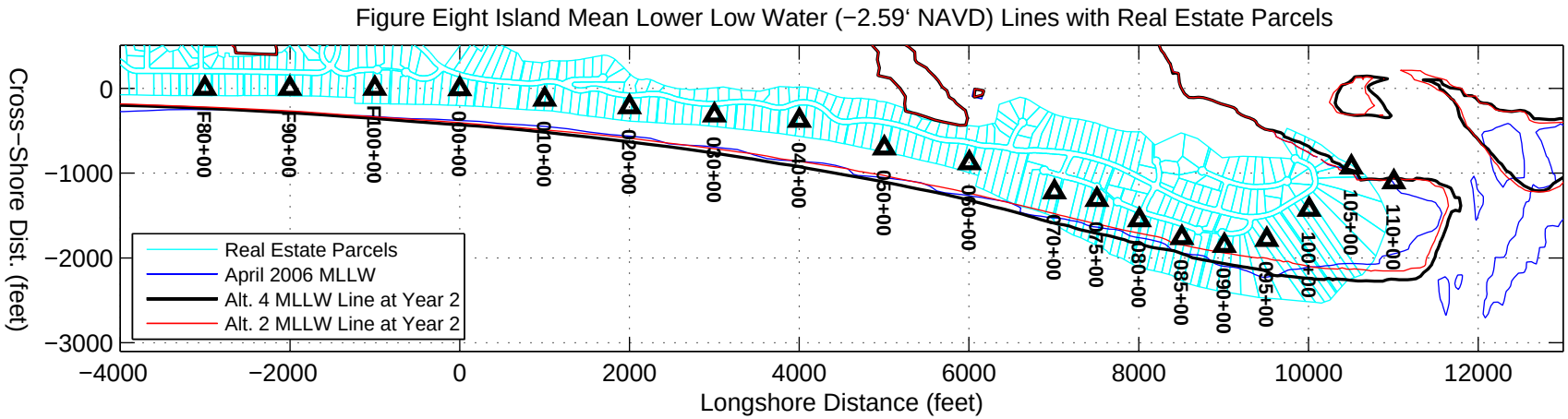


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels
Cross−Shore Dist. (feet)
Longshore Distance (feet)
Real Estate Parcels
April 2006 MLLW
Alt. 4 MLLW Line at Year 2
Alt. 2 MLLW Line at Year 2
F80+00
F90+00
F100+00
000+00
010+00
020+00
030+00
040+00
050+00
060+00
070+00
075+00
080+00
085+00
090+00
095+00
100+00
105+00
110+00

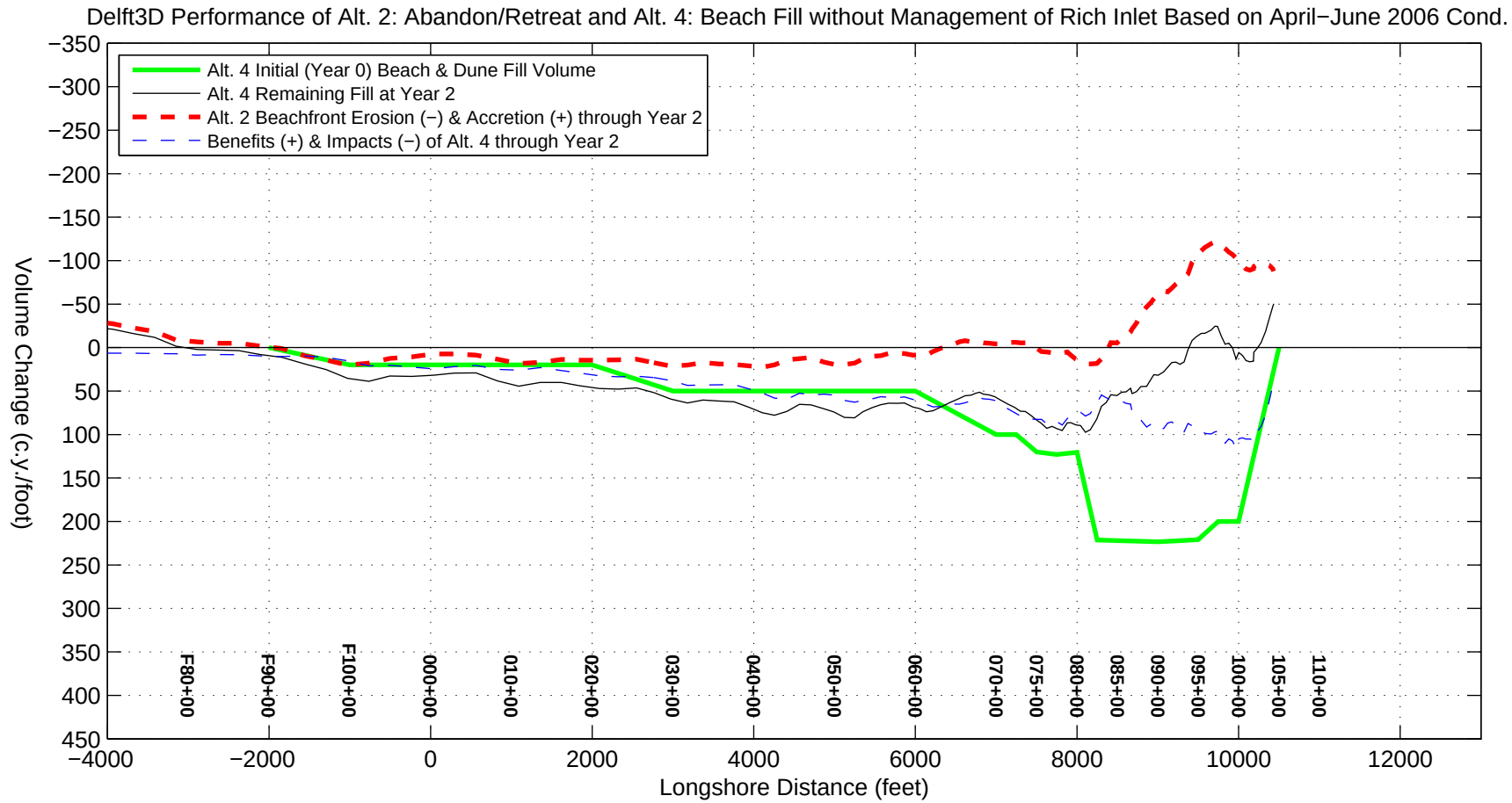
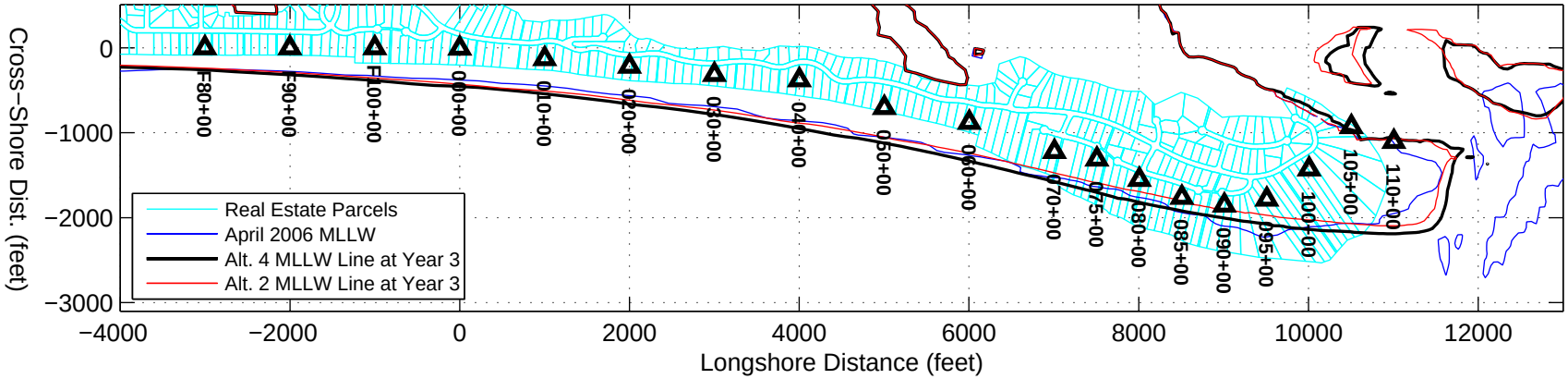

Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 4: Beach Fill without Management of Rich Inlet Based on April−June 2006 Cond.
Alt. 4 Initial (Year 0) Beach & Dune Fill Volume
Alt. 4 Remaining Fill at Year 2
Alt. 2 Beachfront Erosion (−) & Accretion (+) through Year 2
Benefits (+) & Impacts (−) of Alt. 4 through Year 2
Volume Change (c.y./foot)
Longshore Distance (feet)
F80+00
F90+00
F100+00
000+00
010+00
020+00
030+00
040+00
050+00
060+00
070+00
075+00
080+00
085+00
090+00
095+00
100+00
105+00
110+00

Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 4: Beach Fill without Management of Rich Inlet Based on April−June 2006 Cond.

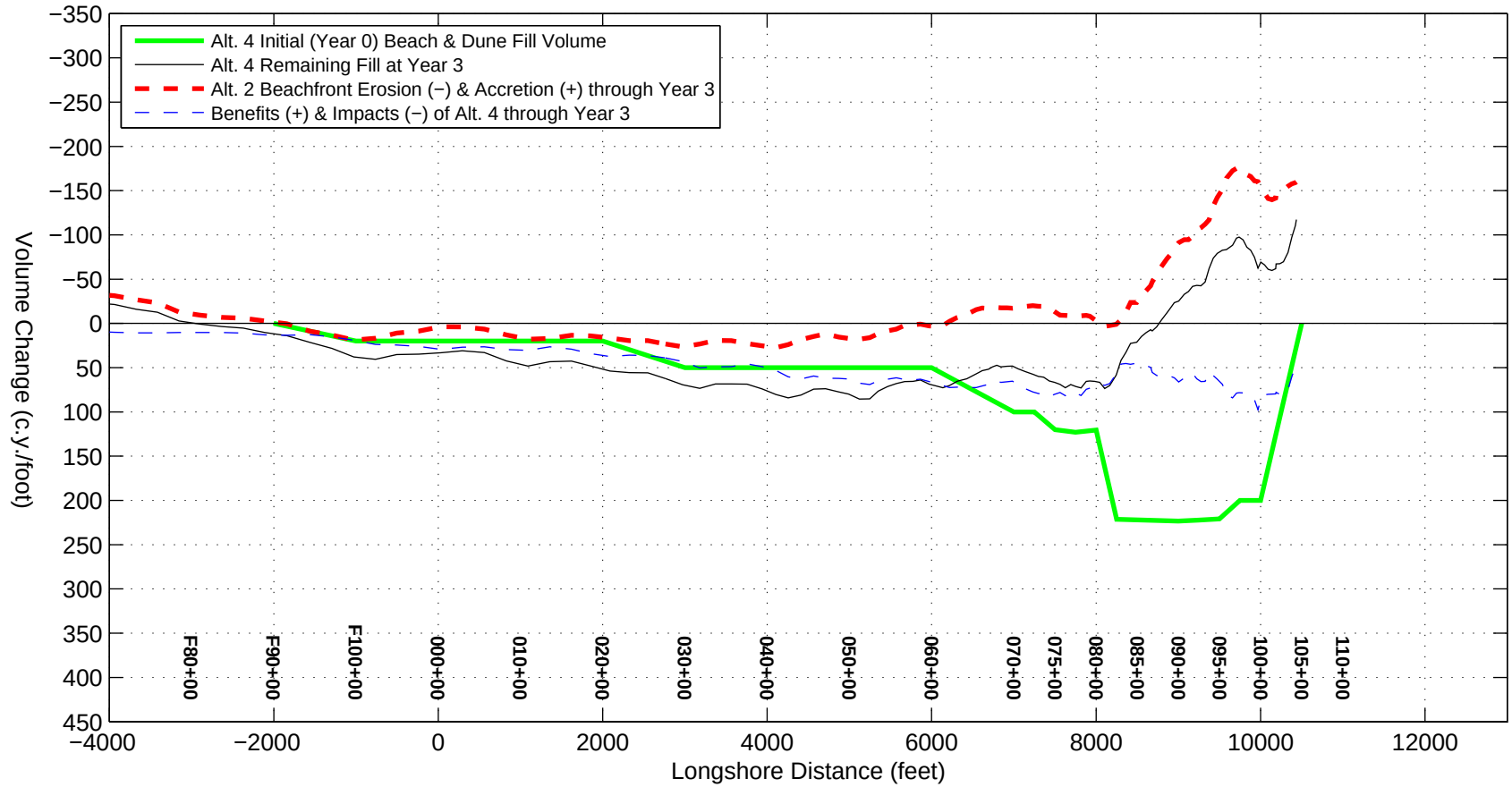
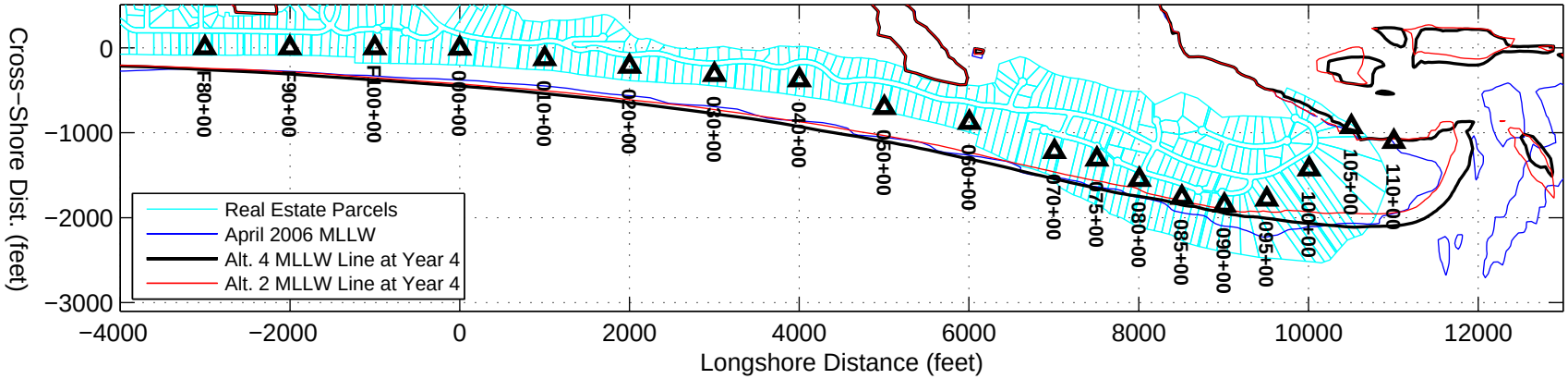
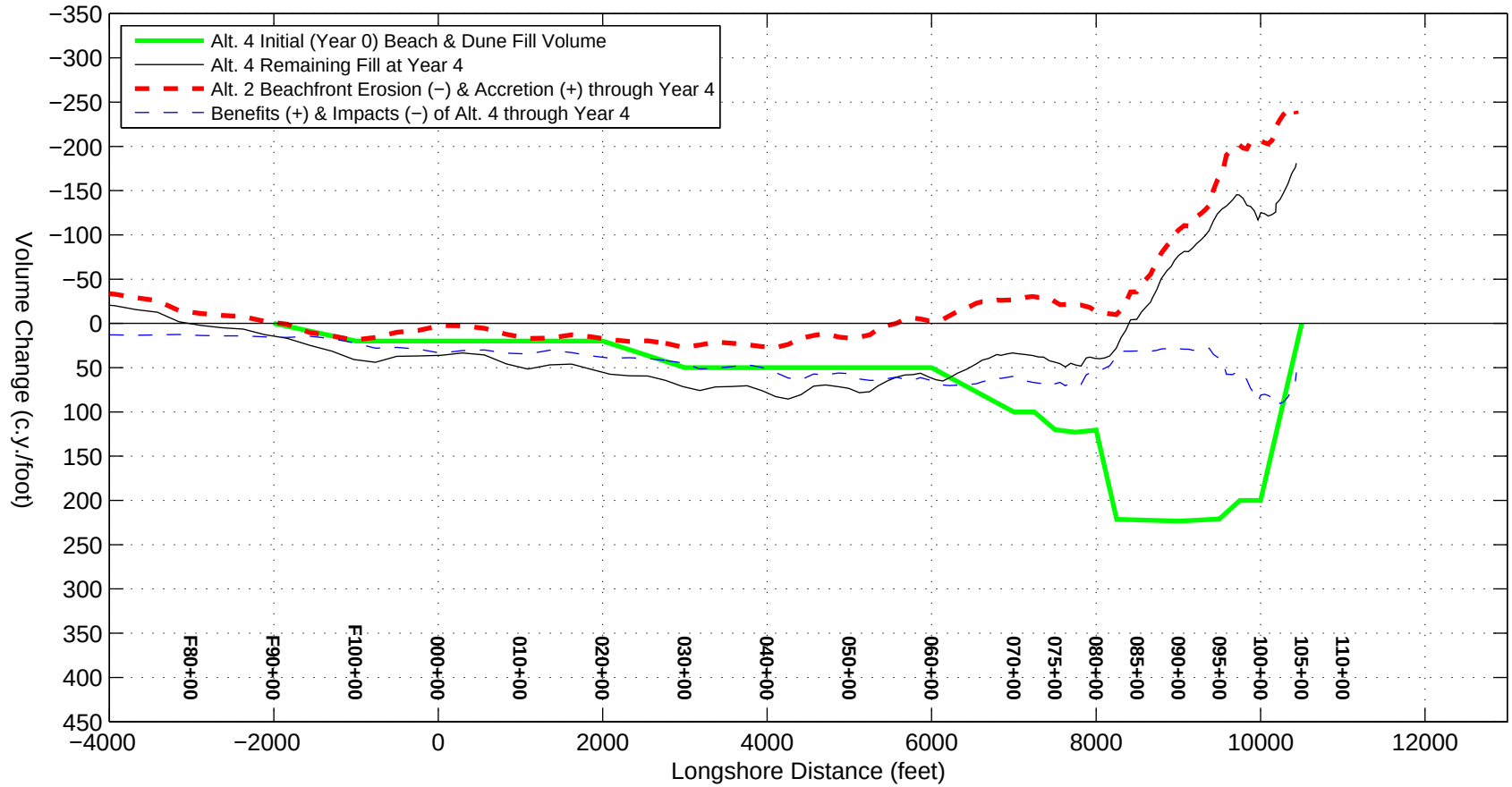


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 4: Beach Fill without Management of Rich Inlet Based on April−June 2006 Cond.



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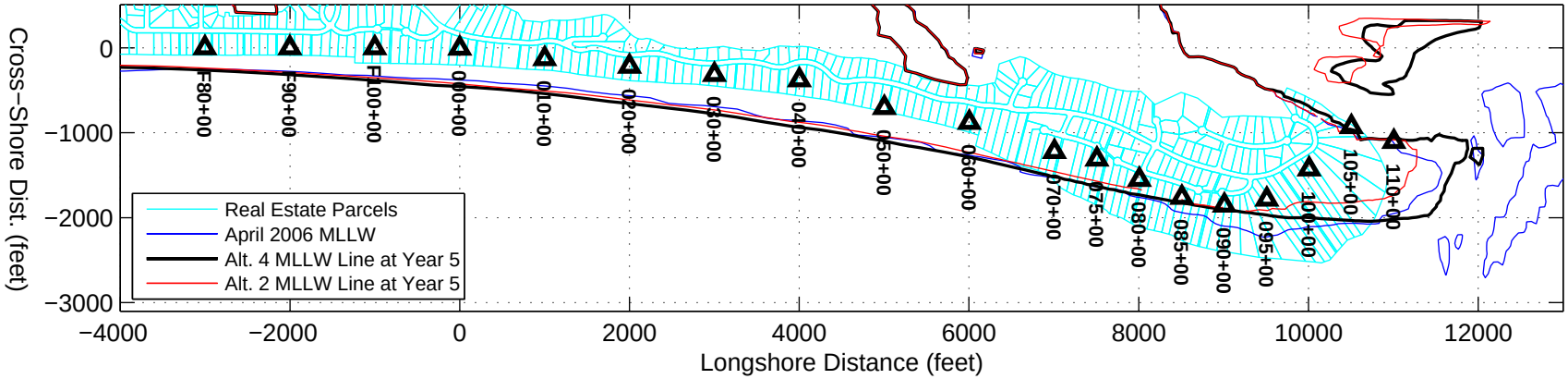


Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 4: Beach Fill without Management of Rich Inlet Based on April−June 2006 Cond.

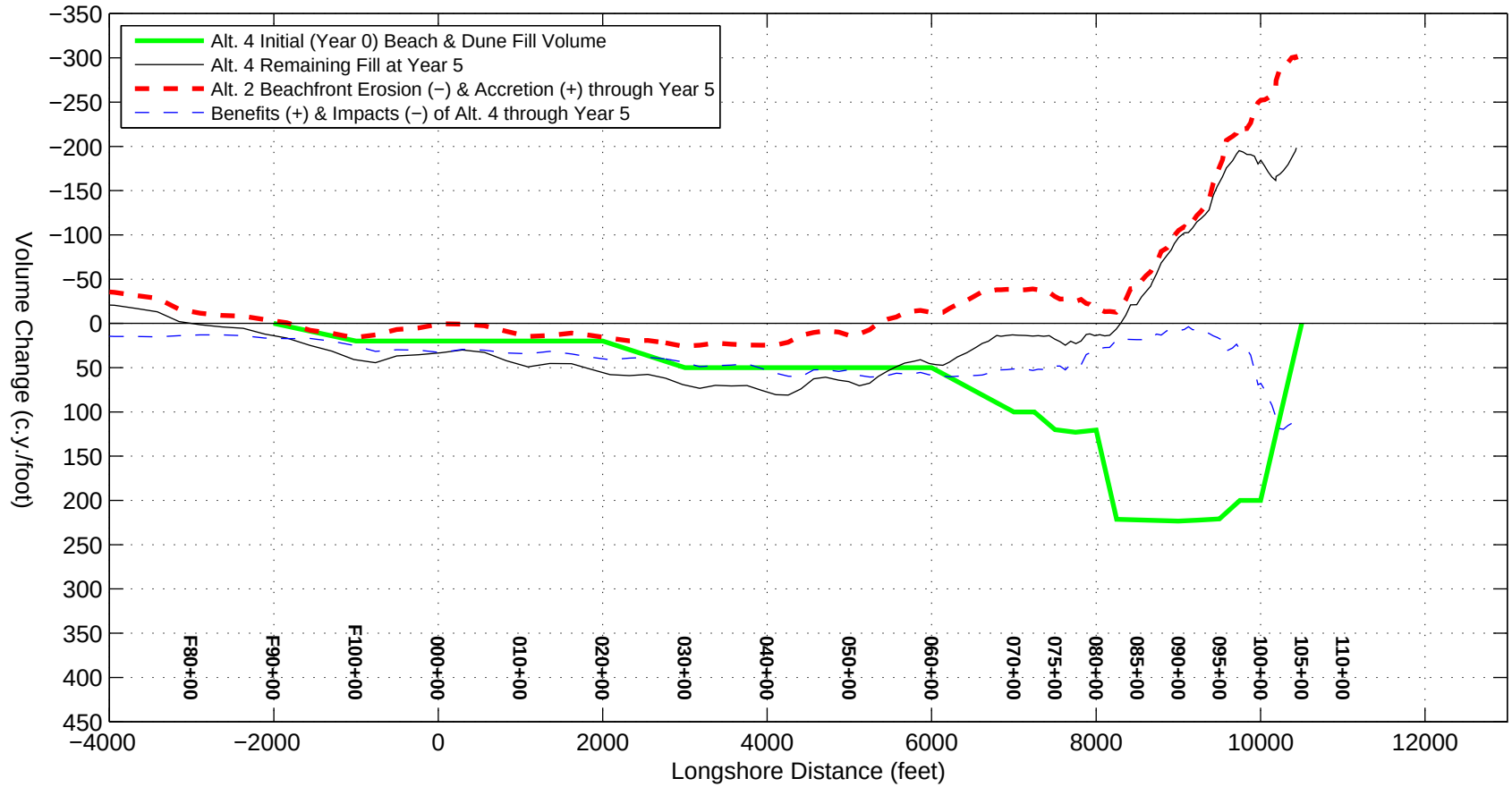
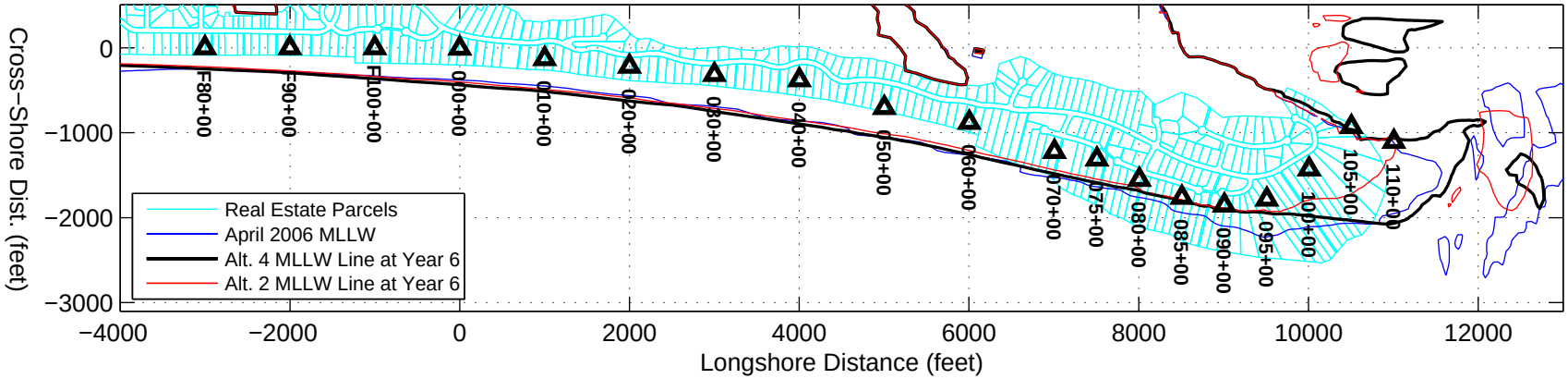


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 4: Beach Fill without Management of Rich Inlet Based on April−June 2006 Cond.

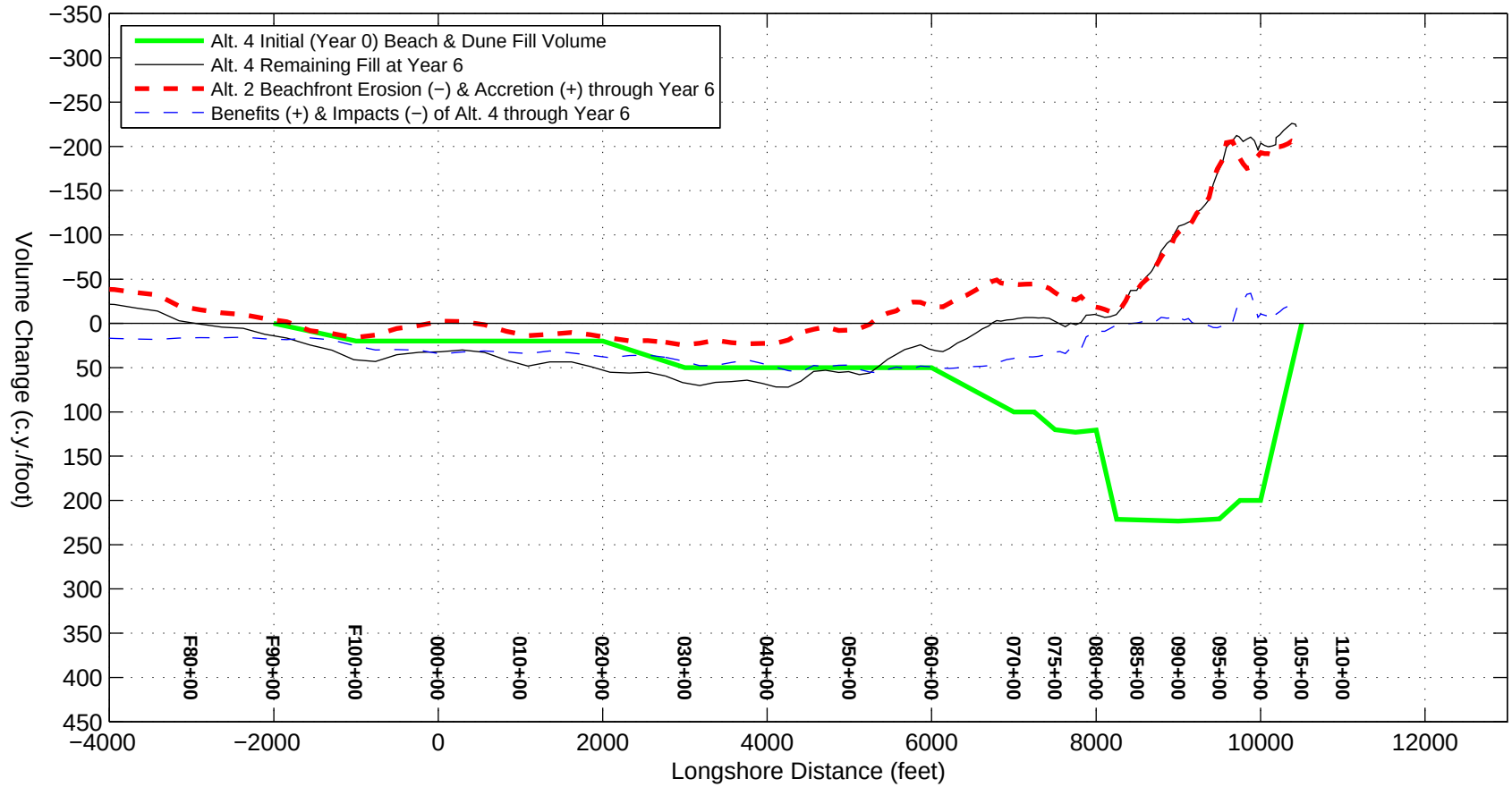
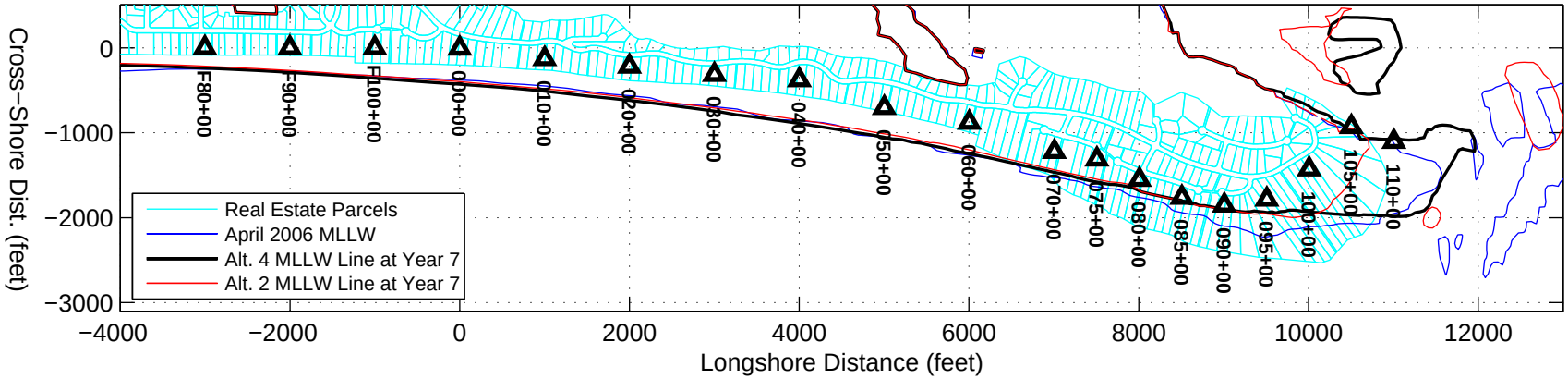


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 4: Beach Fill without Management of Rich Inlet Based on April−June 2006 Cond.

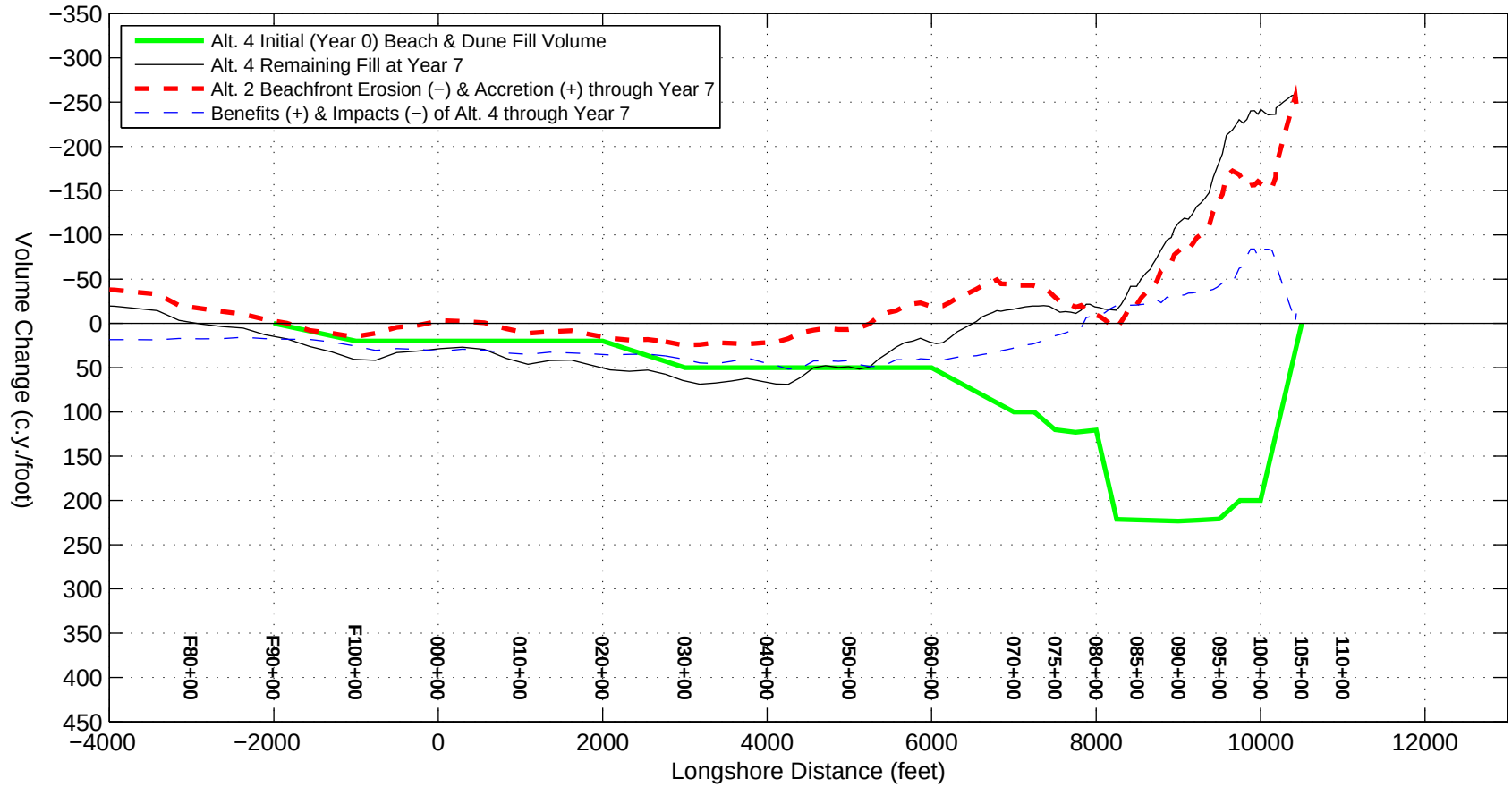
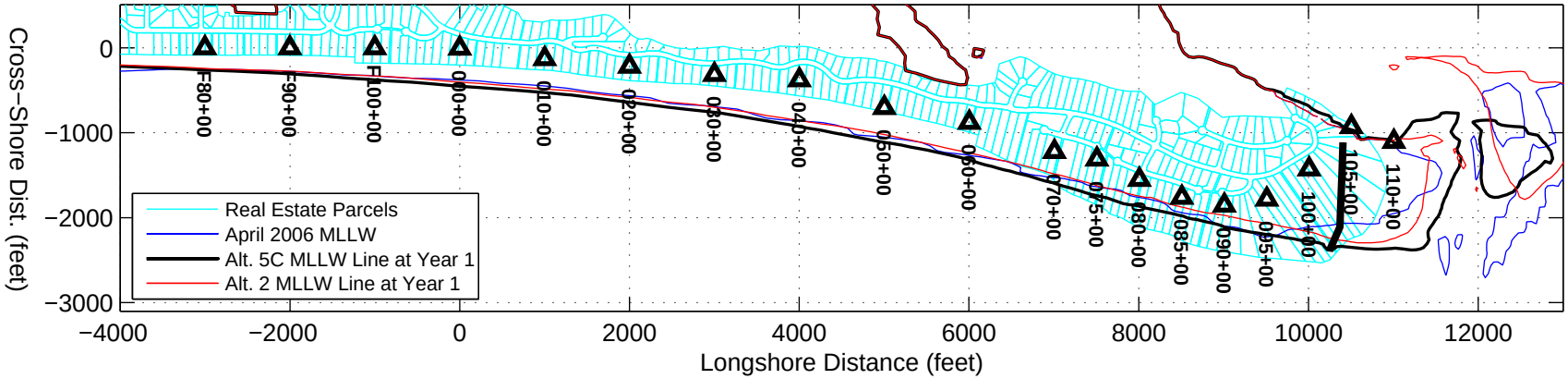


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 5C: Terminal Groin with Beach Fill from Nixon Channel (Extended Cut) Based on April−June 2006 Cond.

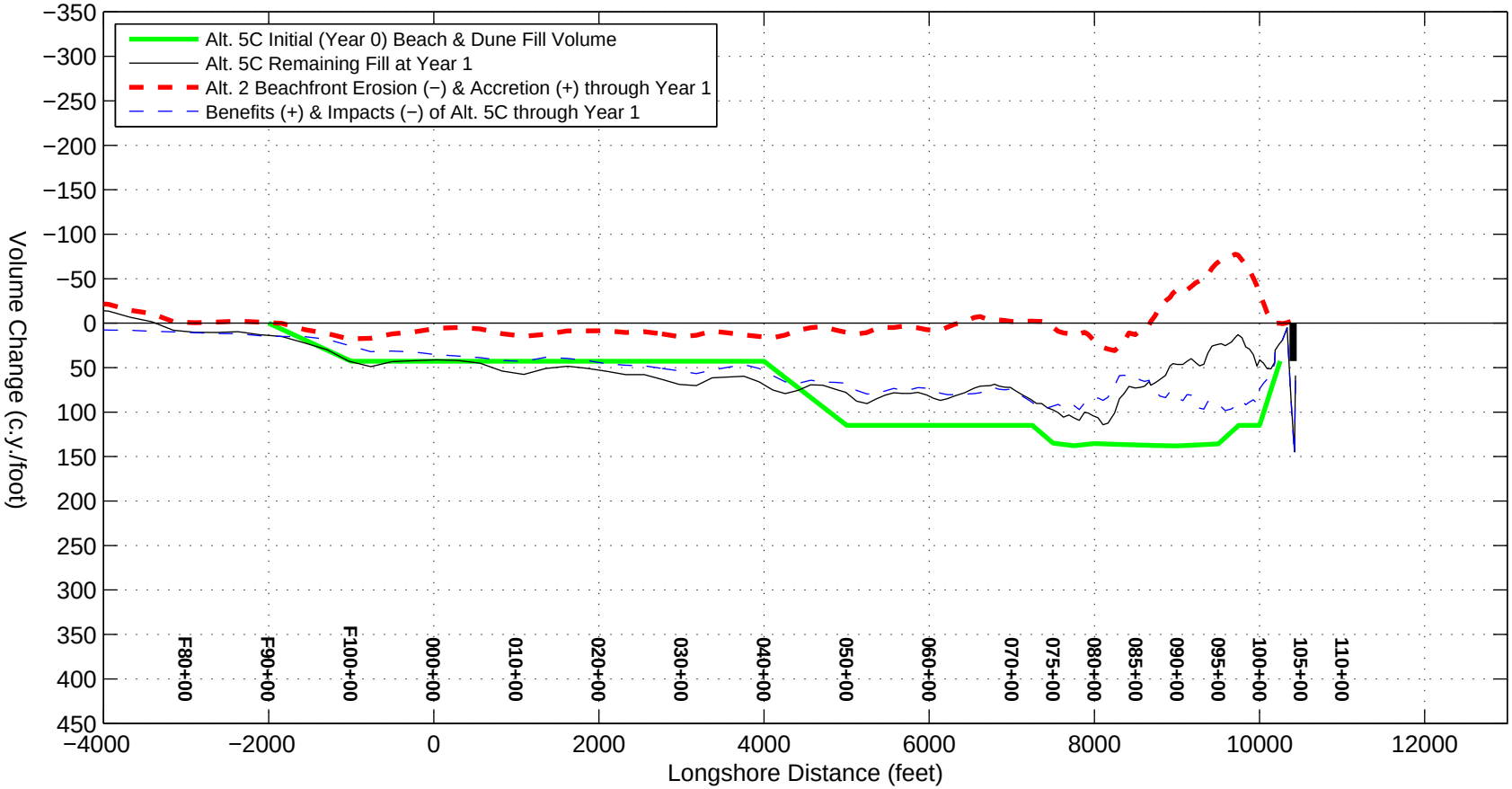
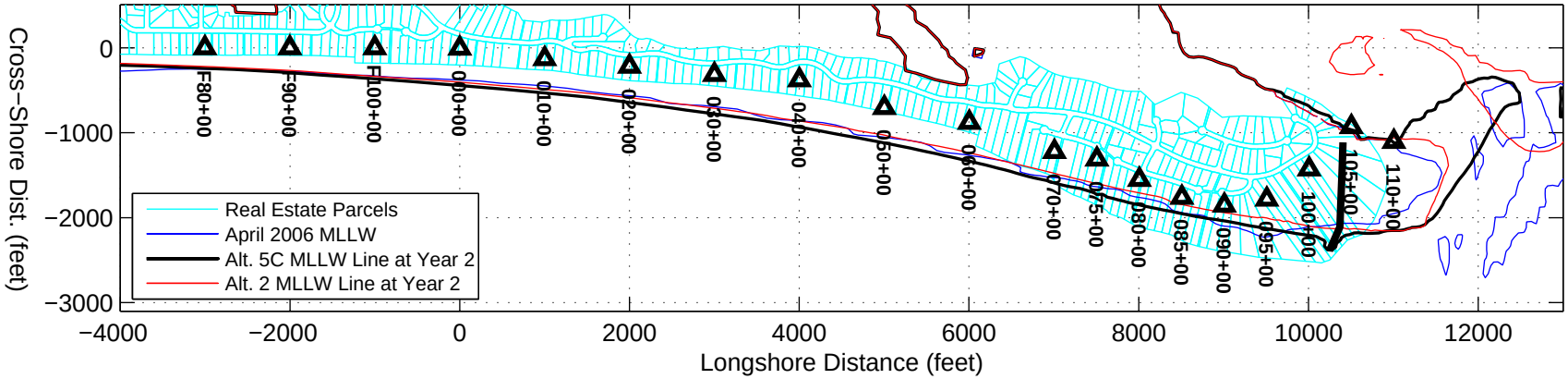


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



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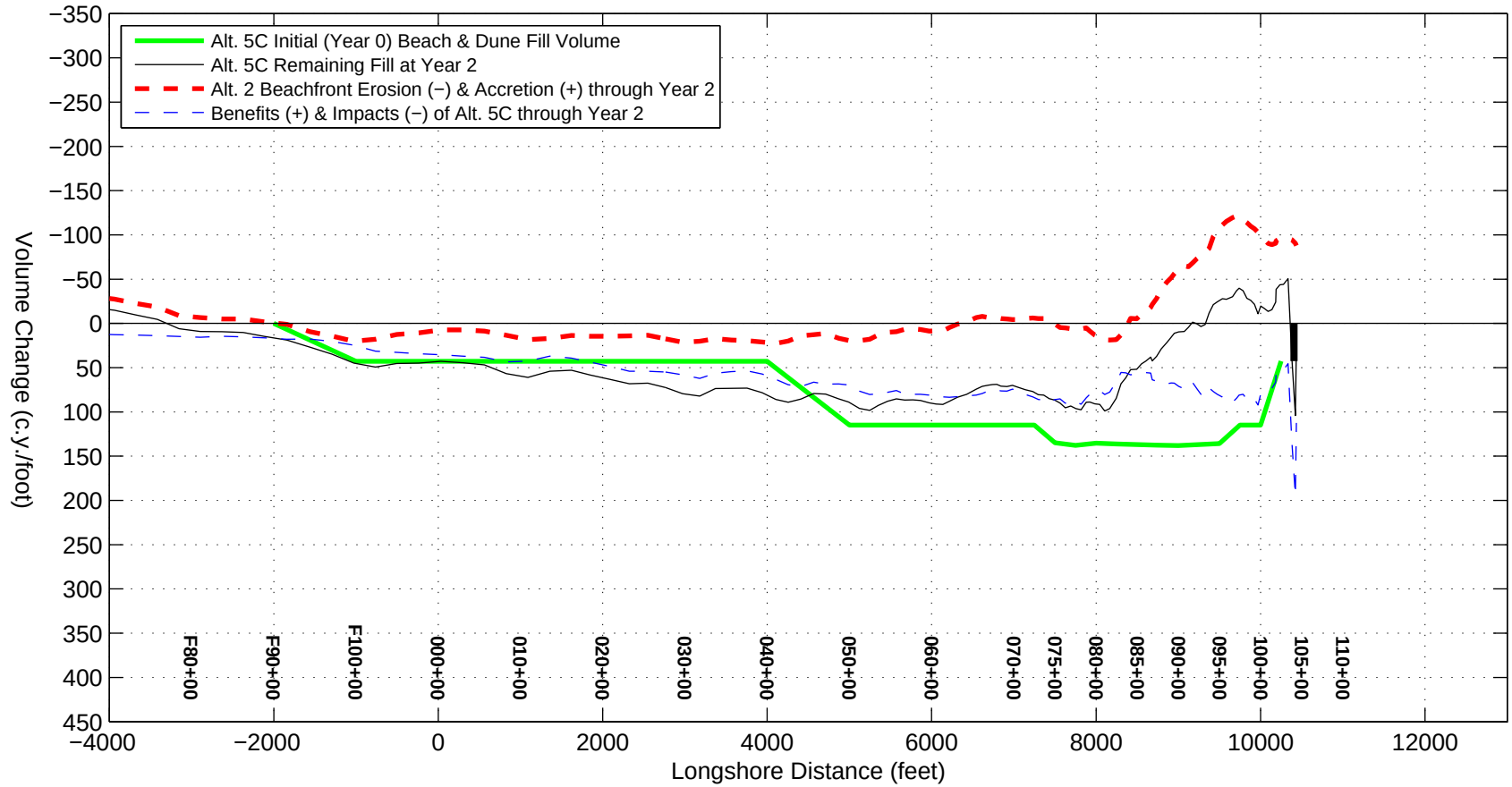

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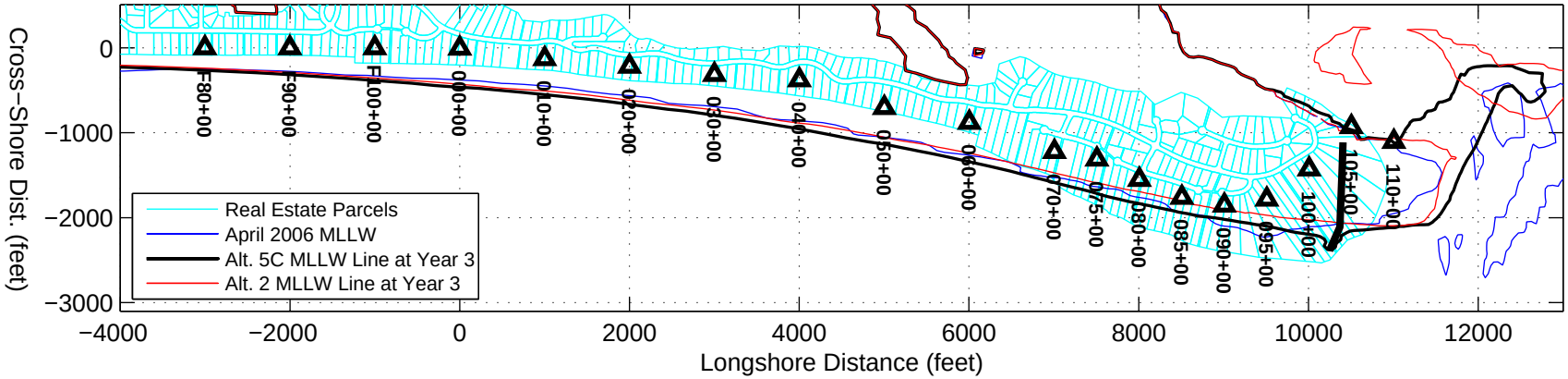

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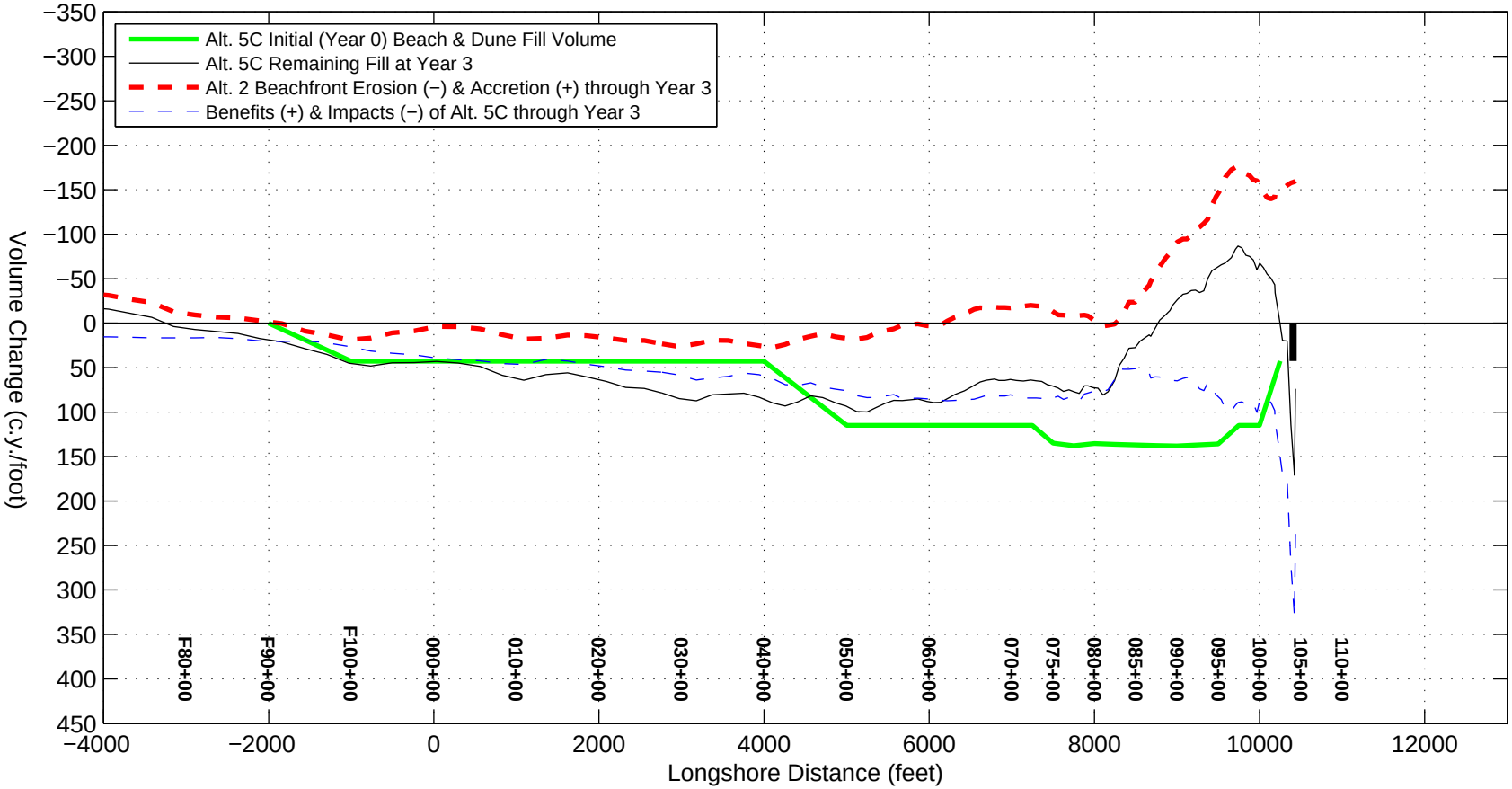

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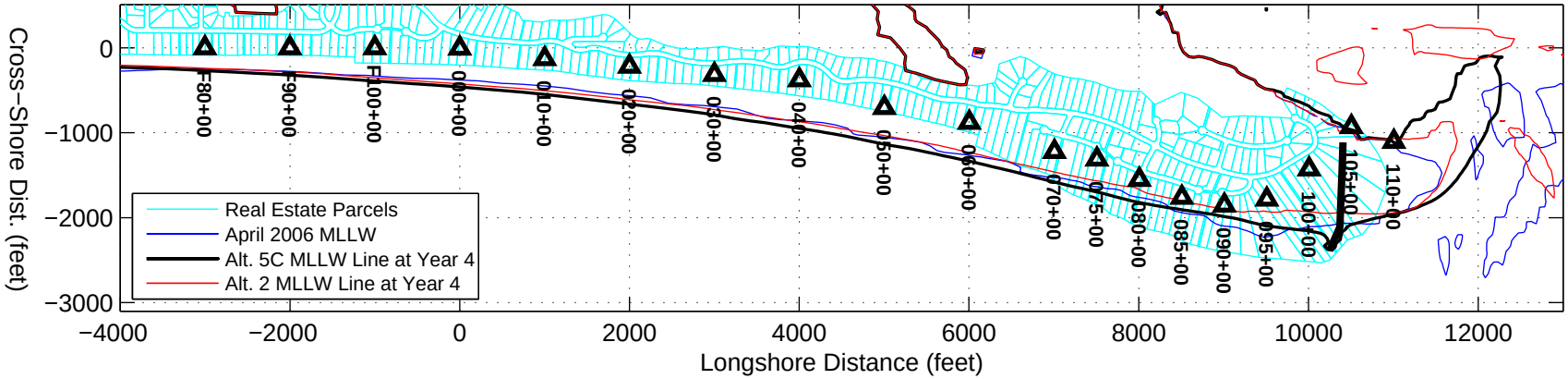

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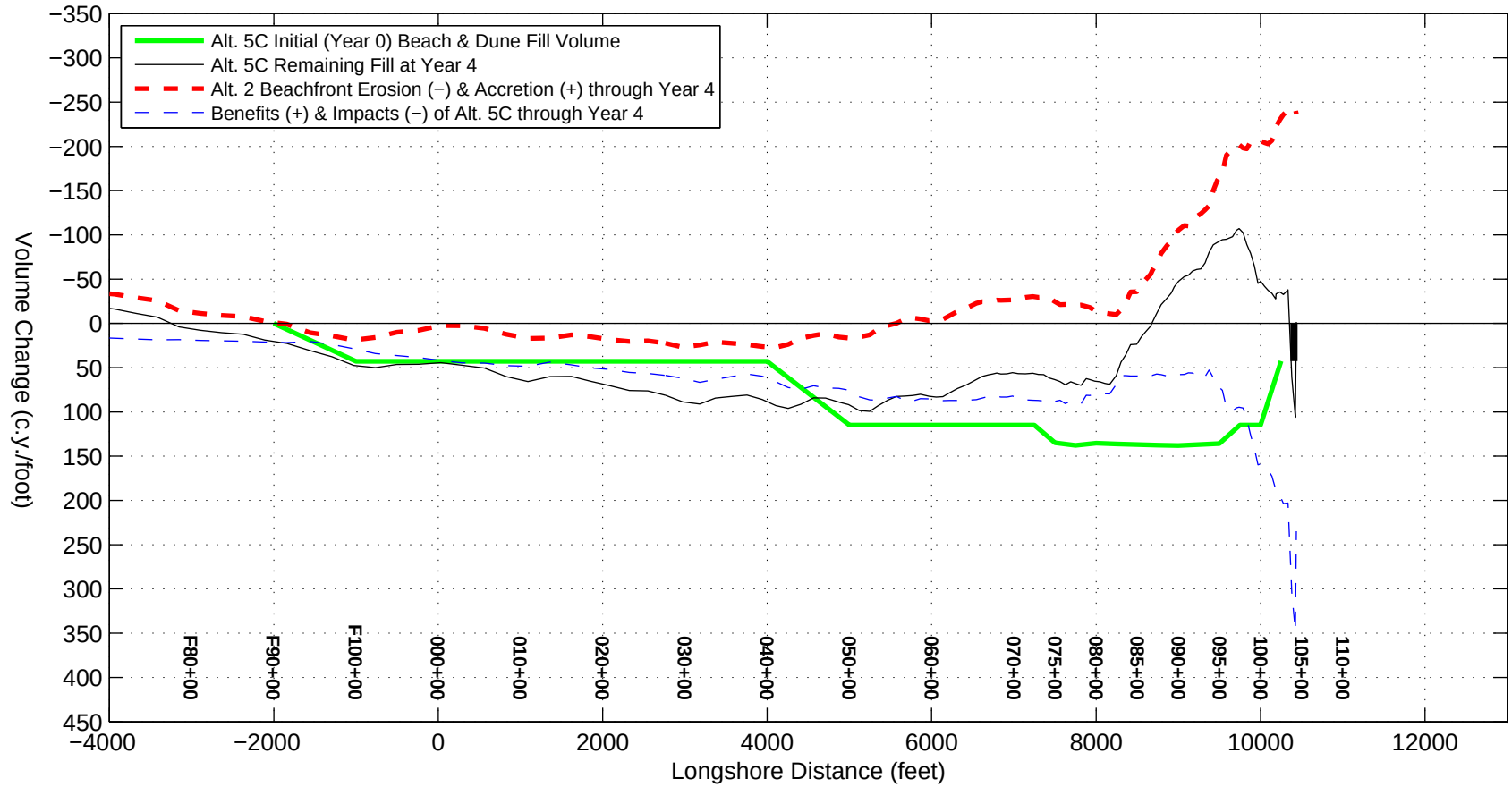

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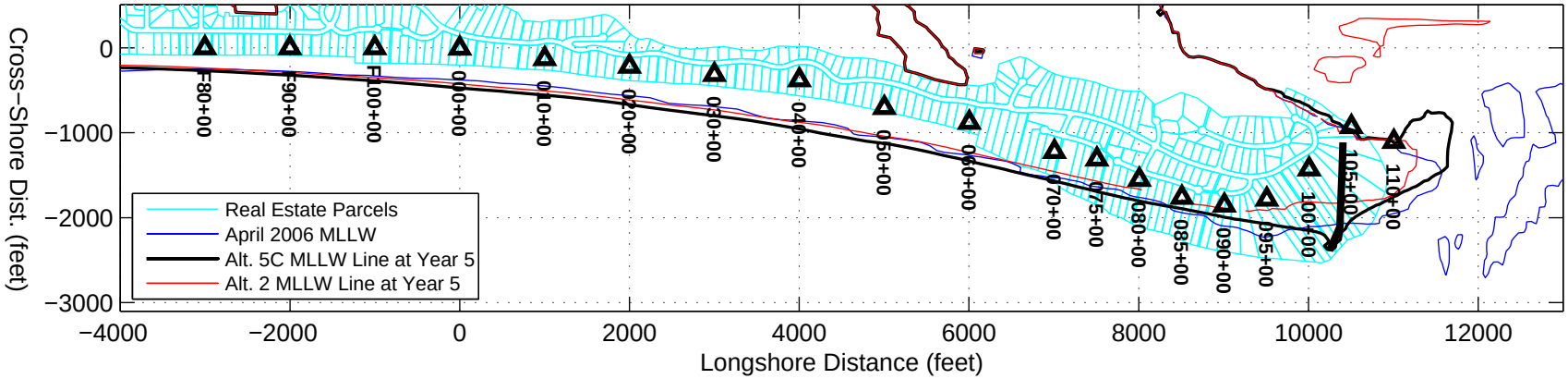

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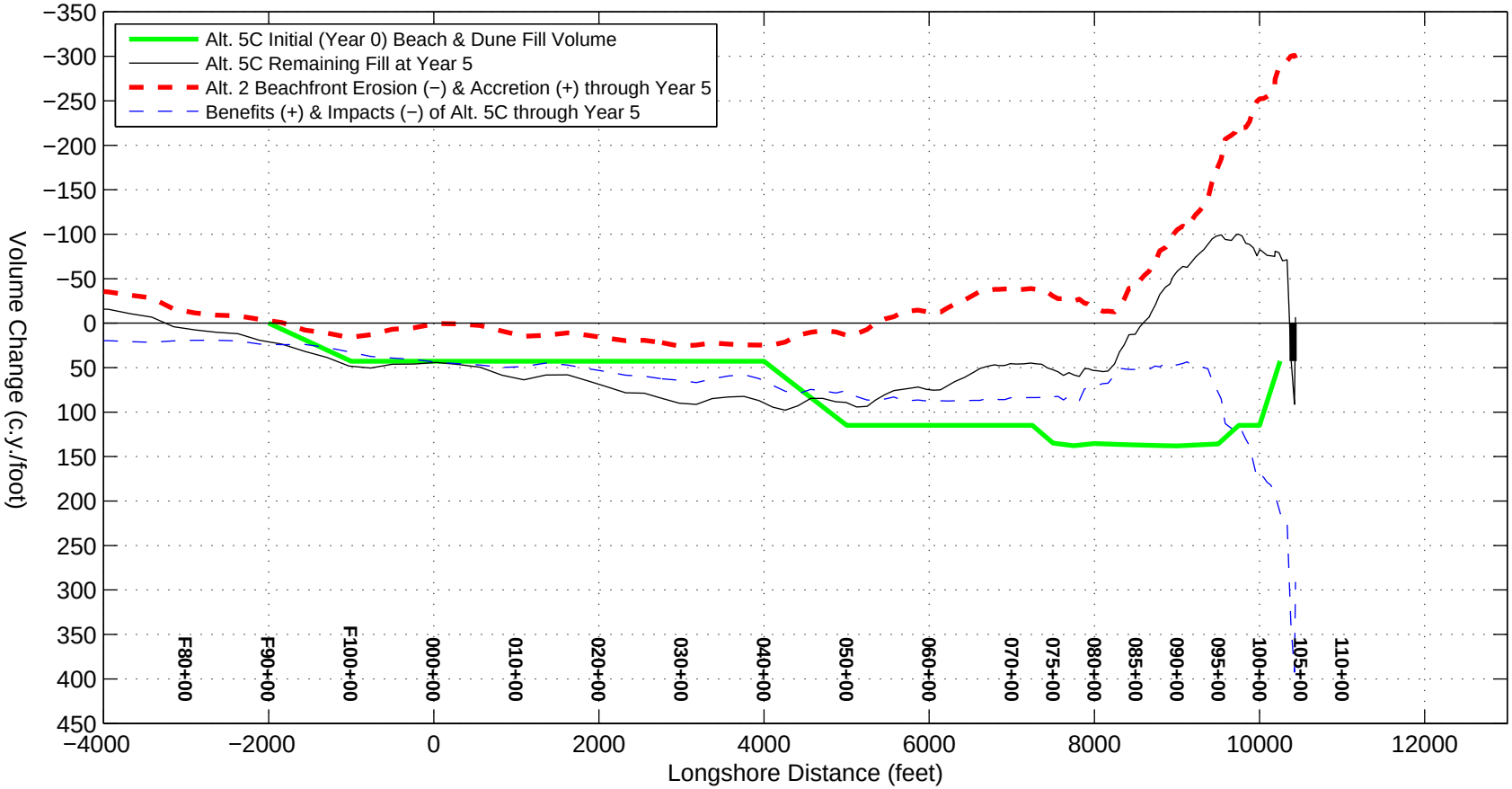
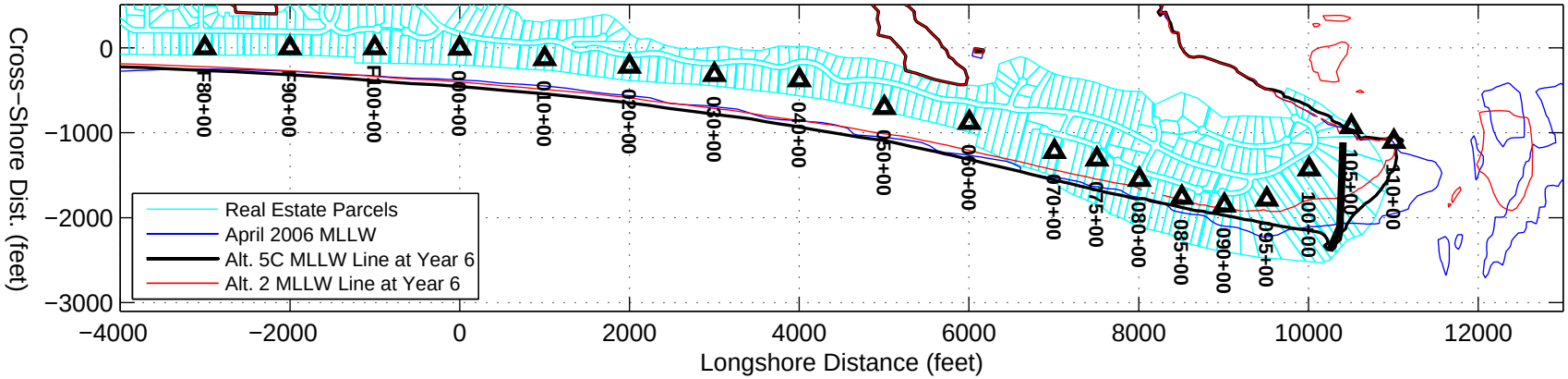


Figure Eight Island Mean Lower Low Water (−2.59‘ NAVD) Lines with Real Estate Parcels



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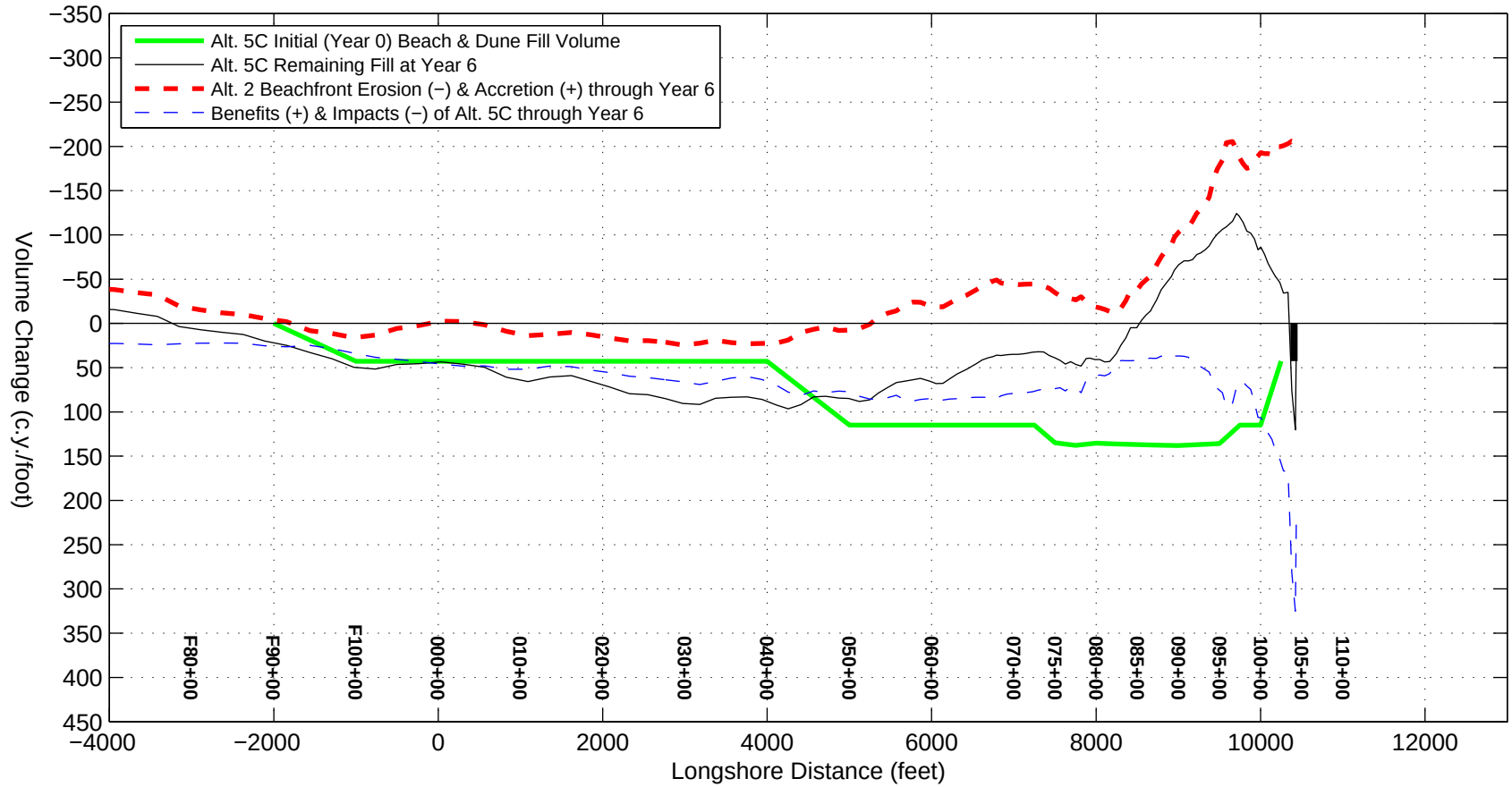

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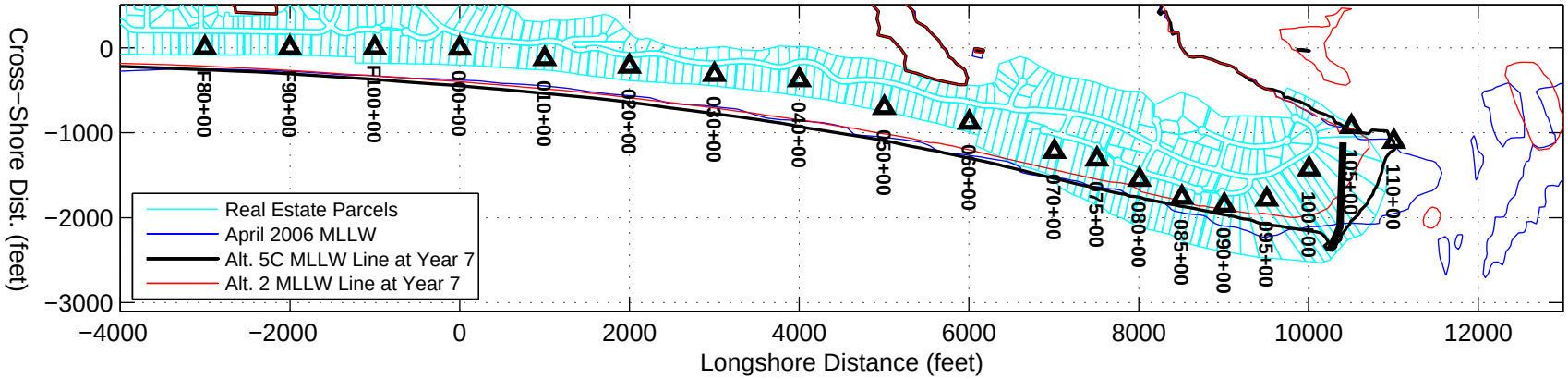

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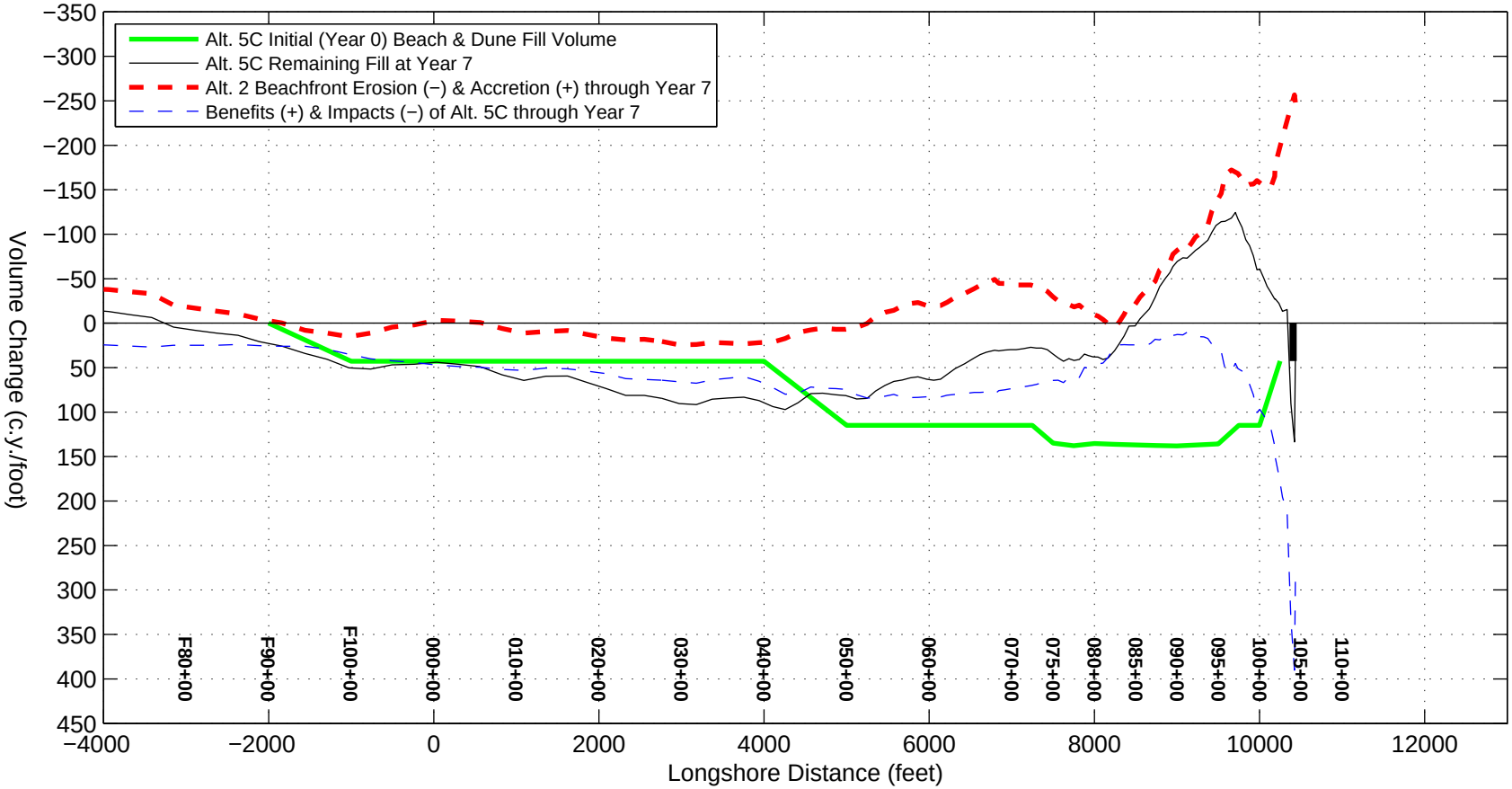

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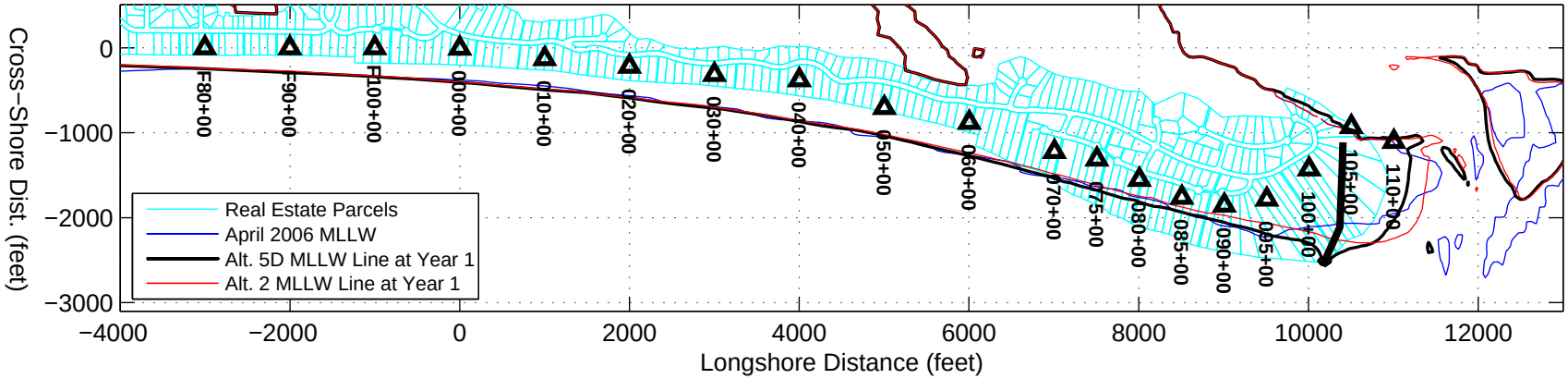
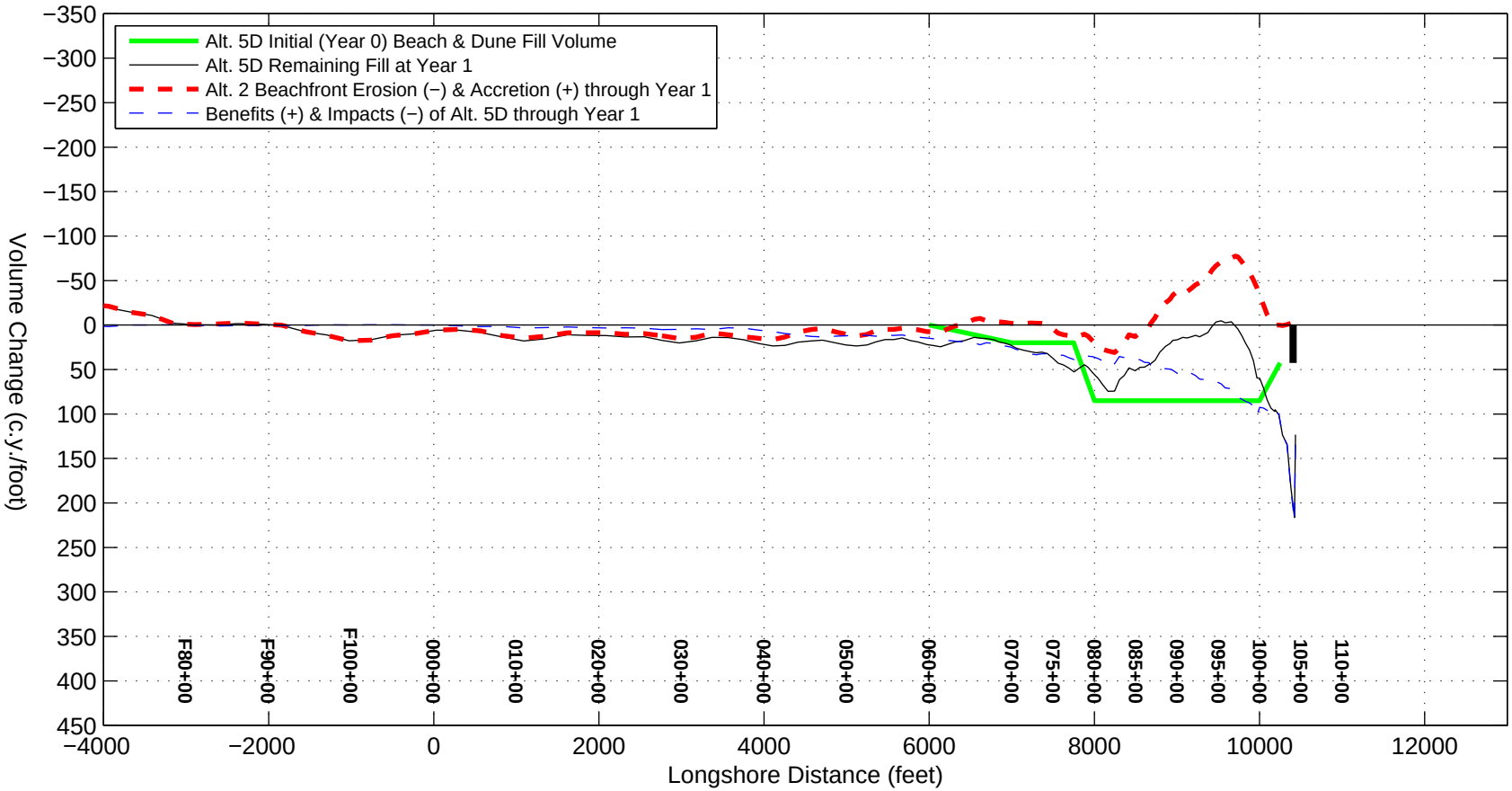


Delft3D Performance of Alt. 2: Abandon/Retreat and Alt. 5D: Longer Terminal Groin with Beach Fill from Nixon Channel (2010 Cut) Based on April−June 2006 Cond.



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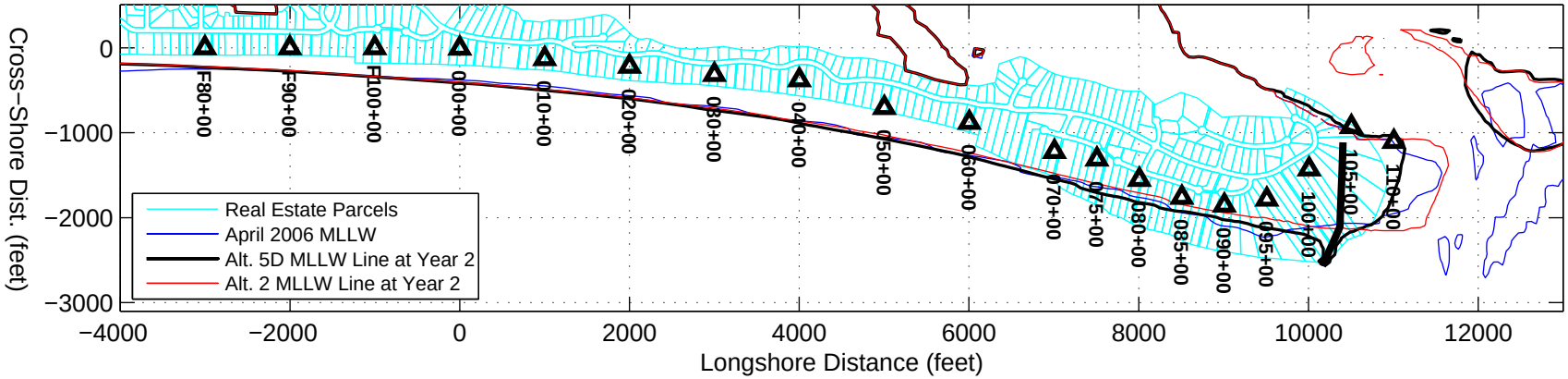

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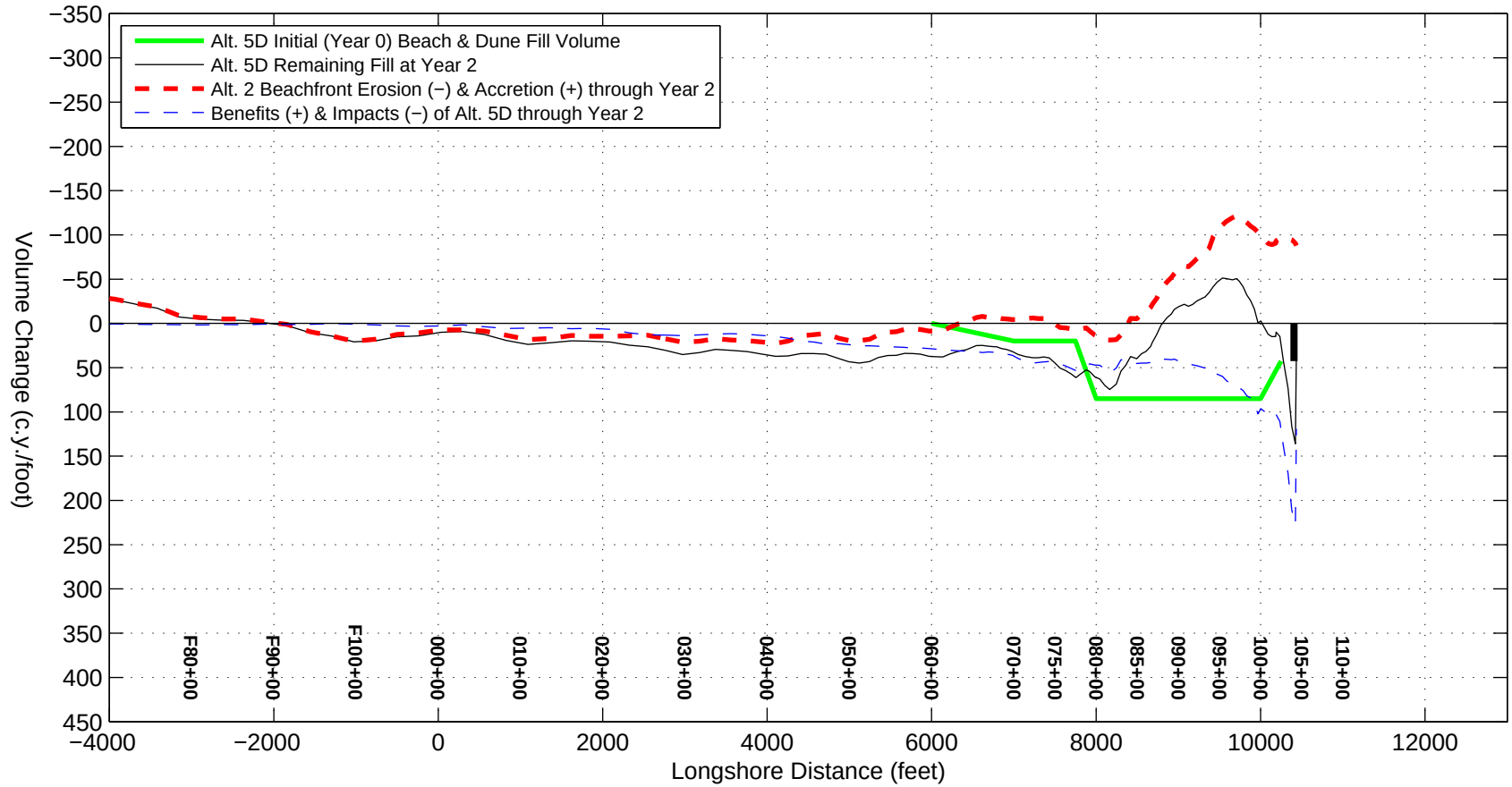

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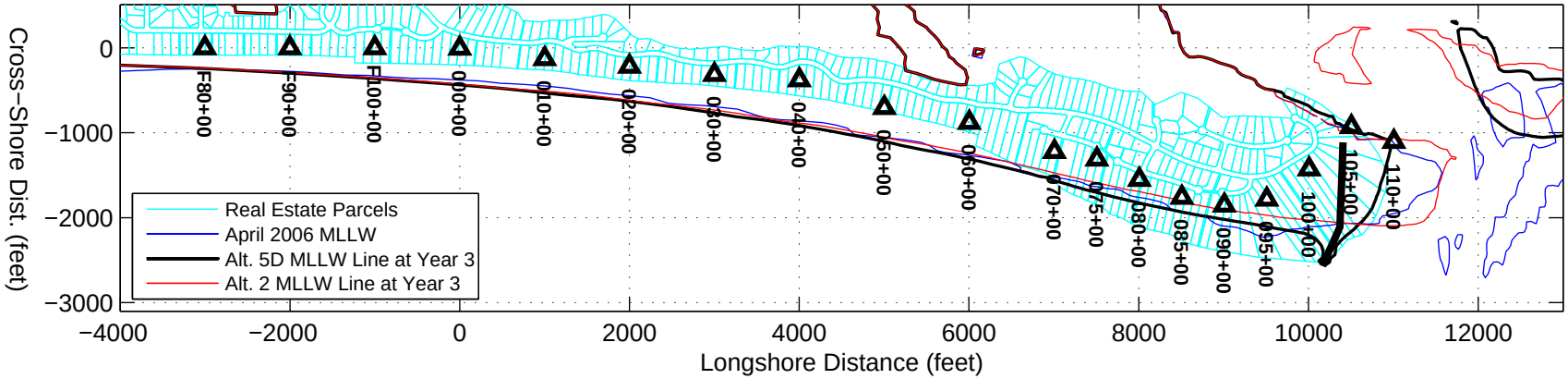

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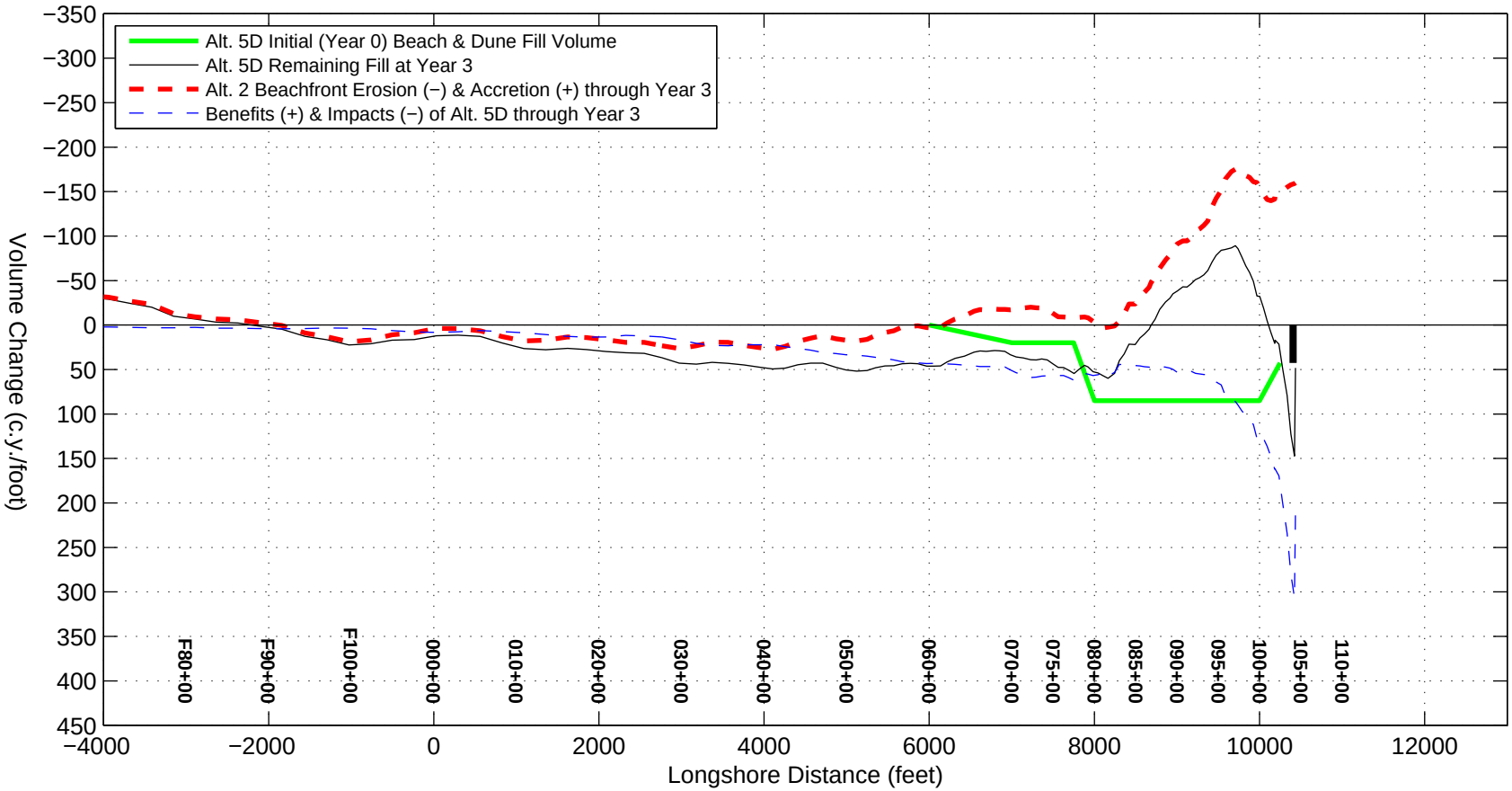

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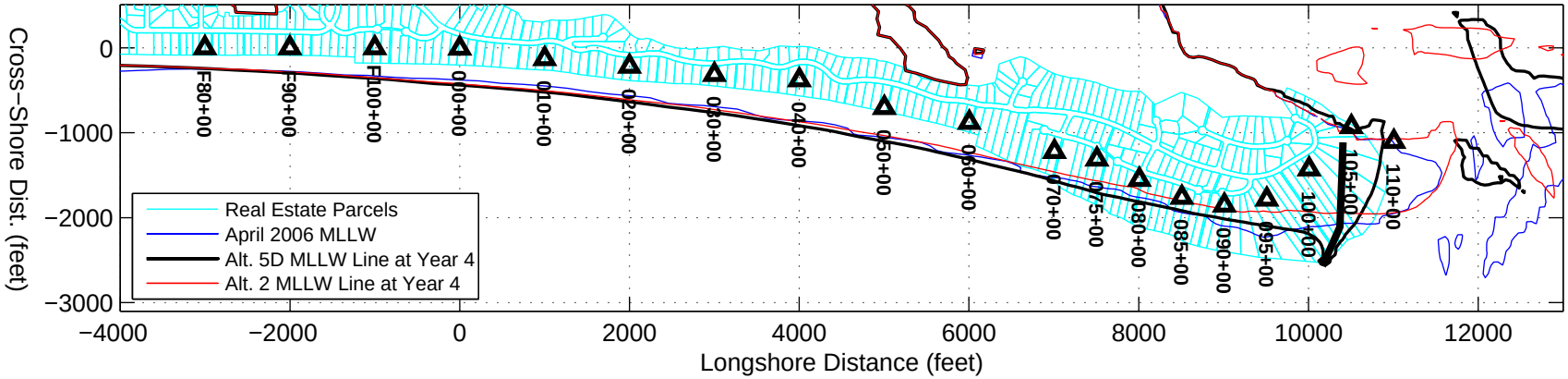

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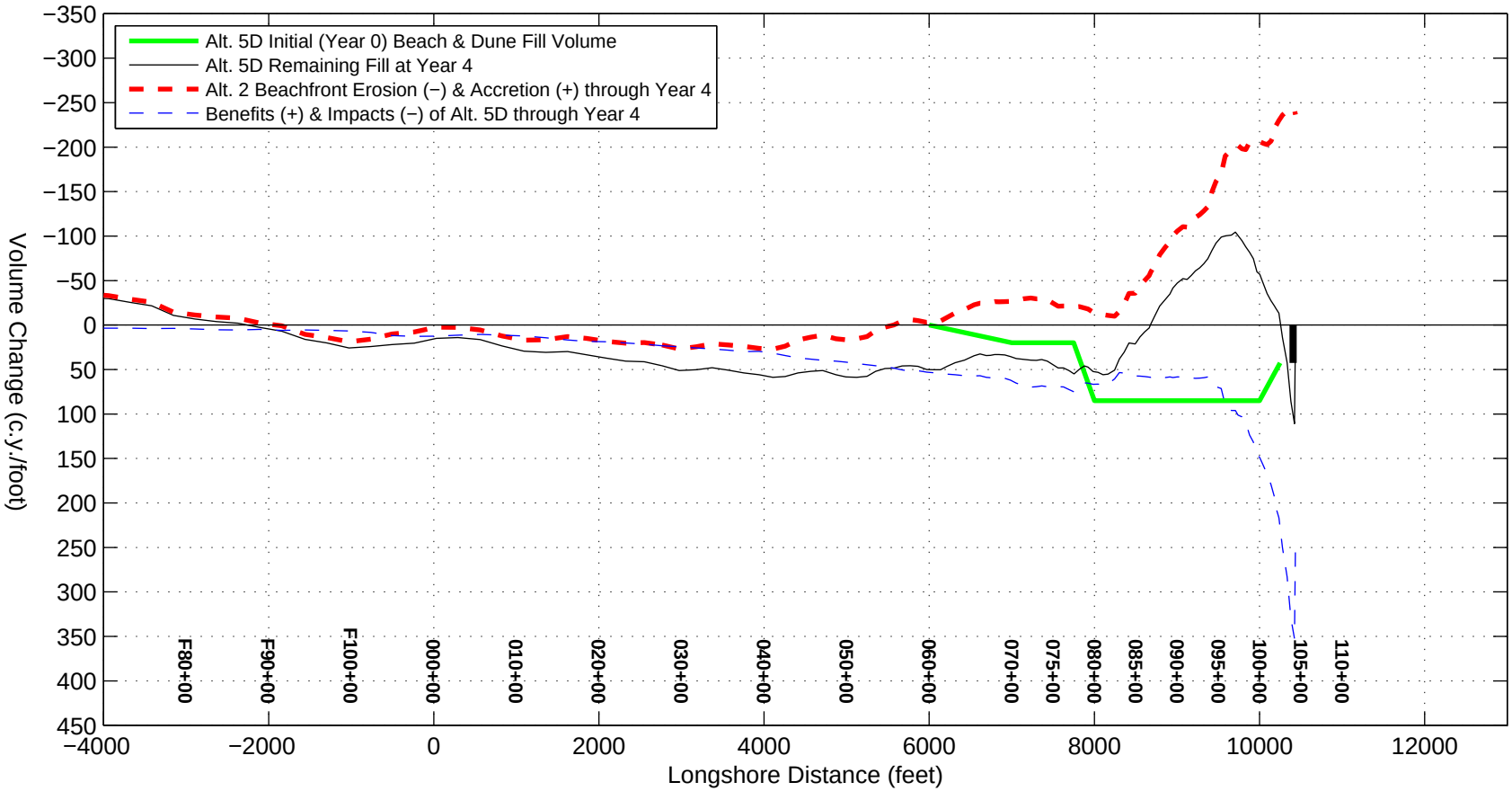

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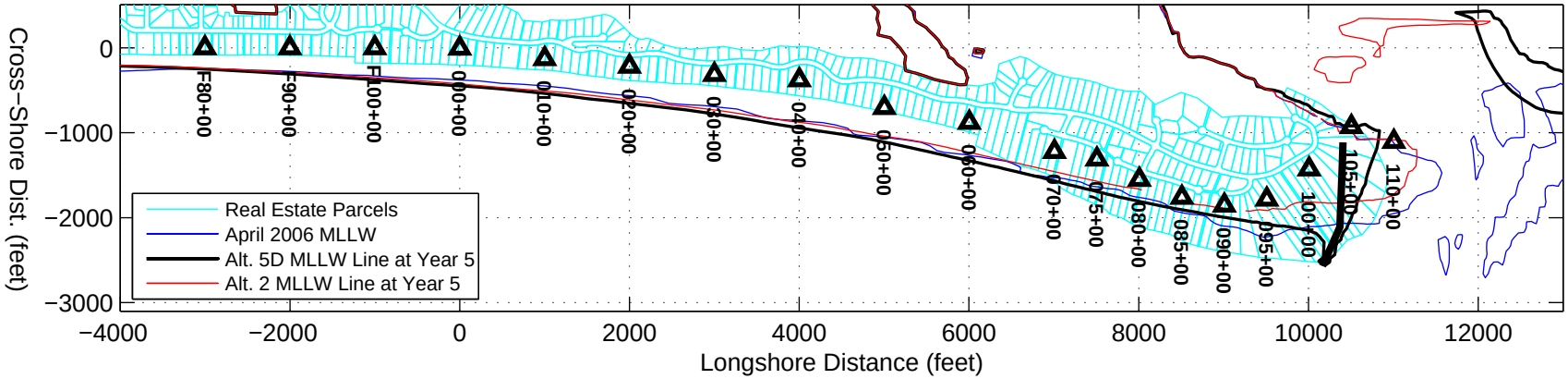

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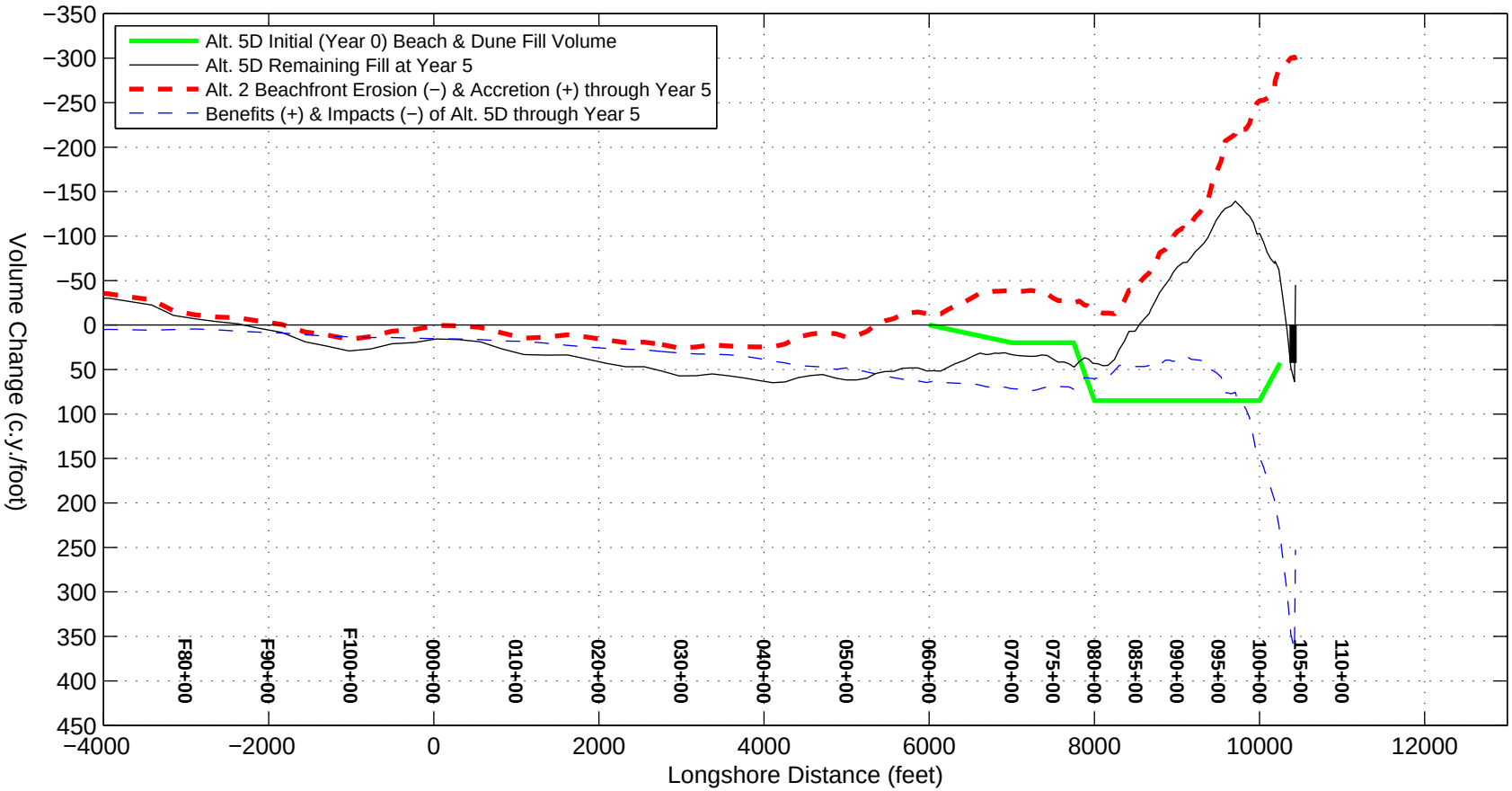

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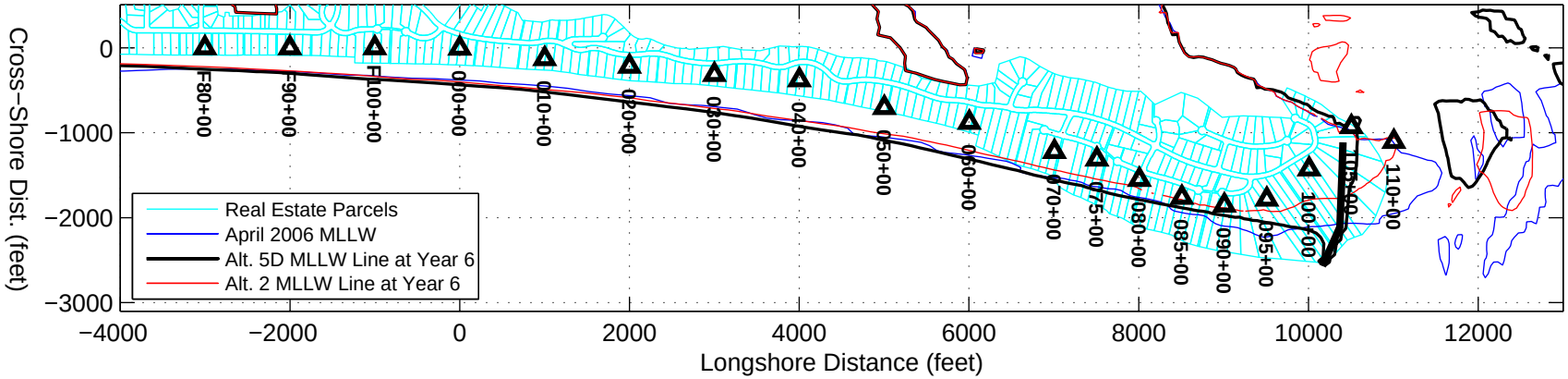

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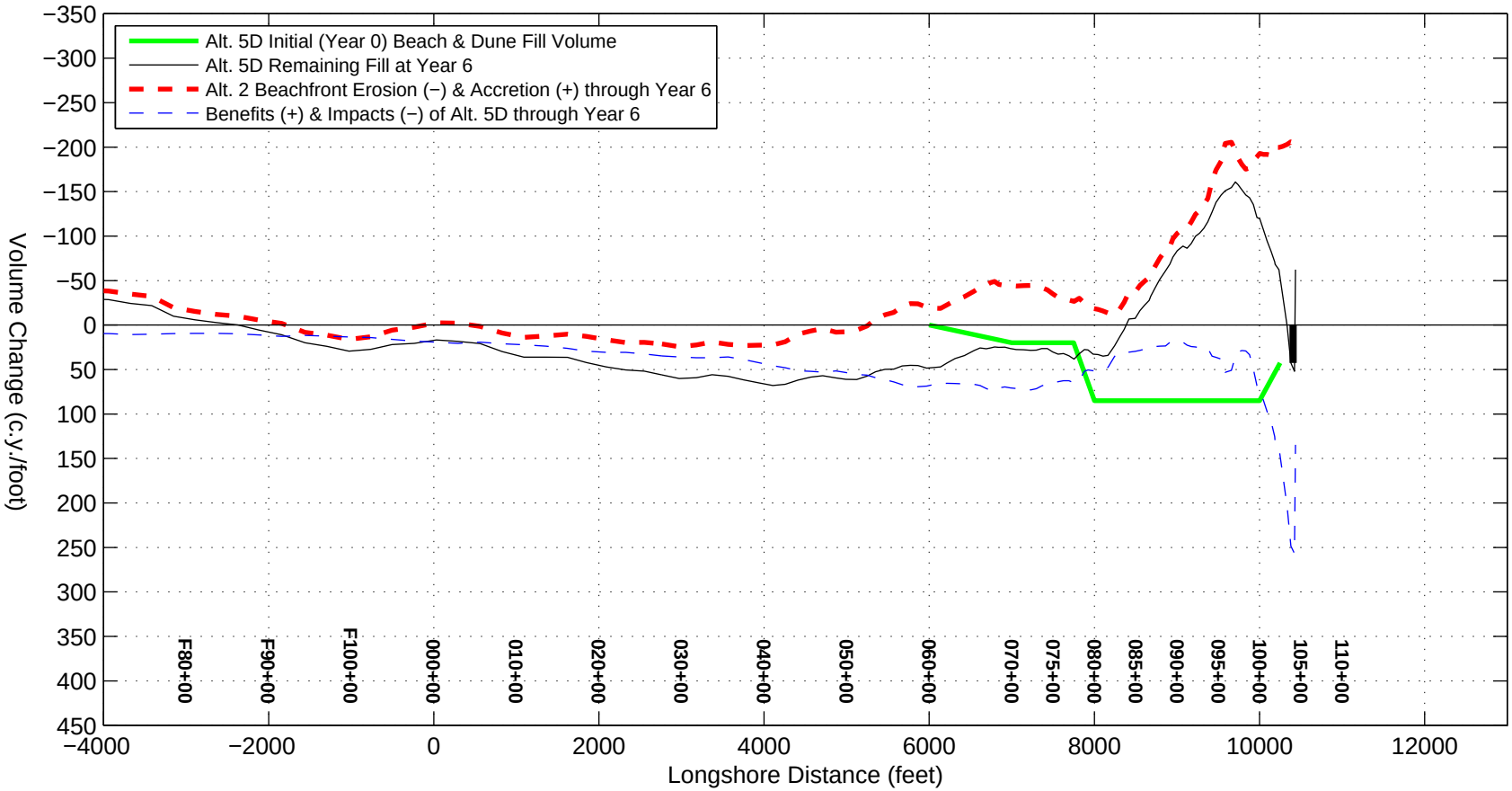

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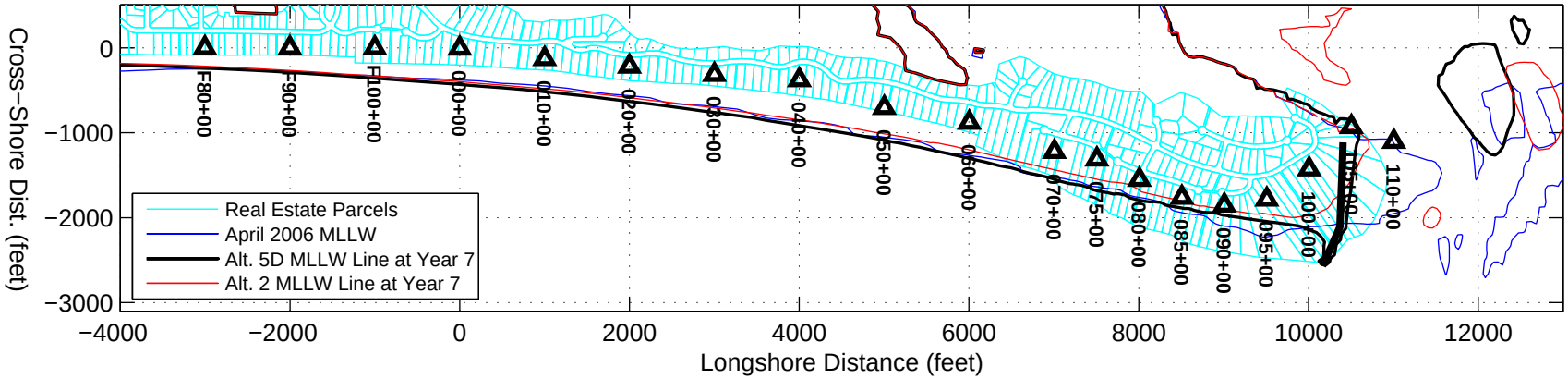

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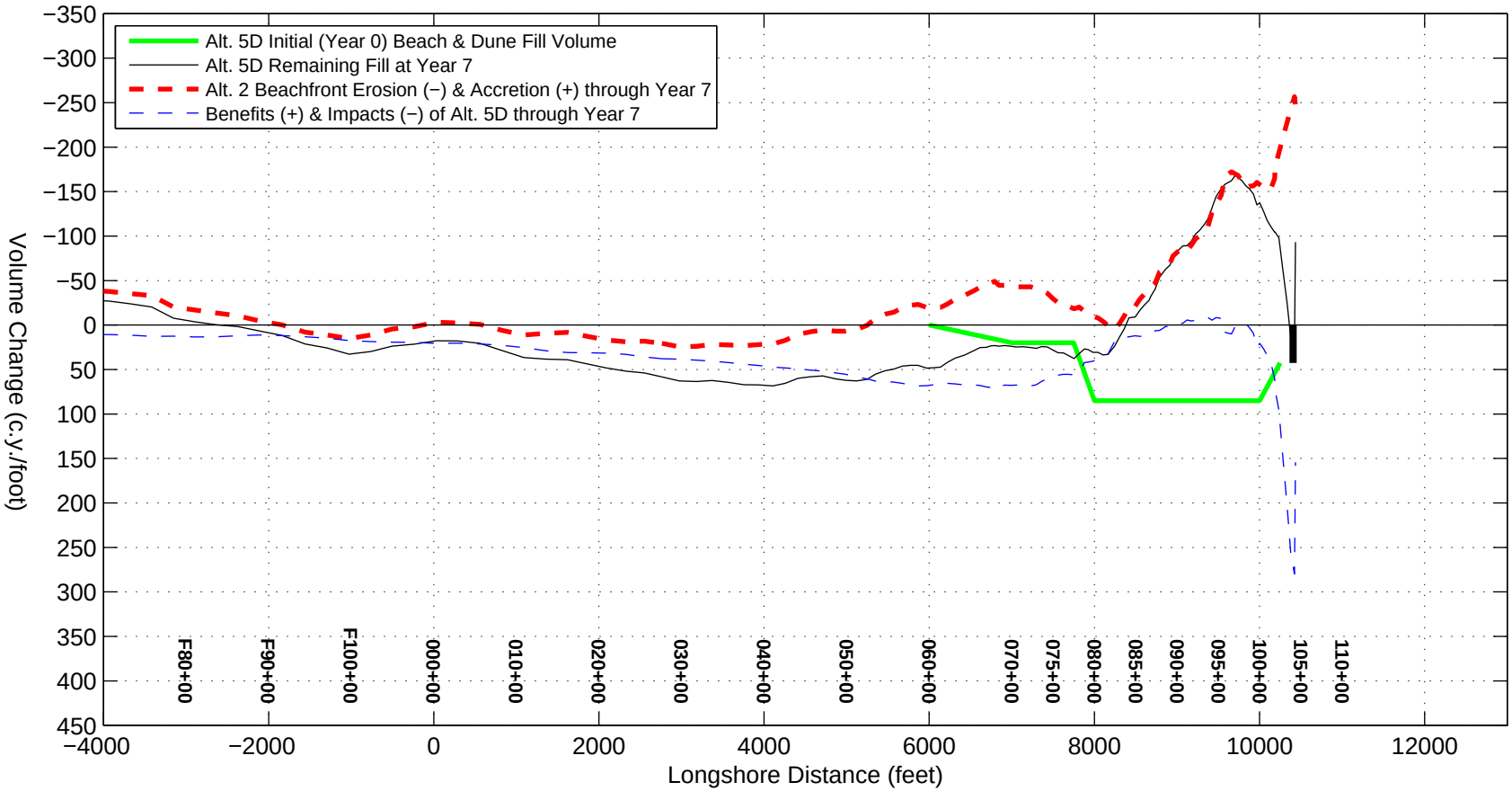

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alternative 2 Beach Erosion (-) & Accretion (+) in cubic yards Year 0 through Year ….							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	0	8,000	10,000	9,000	10,000	7,000	7,000	7,000
F100+00 to 00+00	1,001	0	13,000	14,000	12,000	11,000	8,000	7,000	6,000
00+00 to 10+00	1,000	0	8,000	10,000	8,000	7,000	4,000	2,000	1,000
10+00 to 20+00	1,000	0	11,000	16,000	16,000	15,000	13,000	12,000	10,000
20+00 to 30+00	1,000	0	11,000	16,000	21,000	21,000	20,000	20,000	19,000
30+00 to 40+00	1,000	0	12,000	19,000	22,000	24,000	24,000	22,000	23,000
40+00 to 50+00	1,000	0	9,000	17,000	19,000	18,000	15,000	12,000	12,000
50+00 to 60+00	1,000	0	7,000	12,000	9,000	4,000	-3,000	-11,000	-11,000
60+00 to 70+00	1,000	0	-1,000	-1,000	-10,000	-18,000	-28,000	-35,000	-35,000
70+00 to 72+50	250	0	0	-1,000	-5,000	-7,000	-10,000	-11,000	-11,000
72+50 to 75+00	250	0	0	-1,000	-5,000	-7,000	-9,000	-10,000	-9,000
75+00 to 77+50	250	0	3,000	1,000	-2,000	-5,000	-7,000	-8,000	-6,000
77+50 to 80+00	250	0	3,000	2,000	-2,000	-5,000	-6,000	-6,000	-4,000
80+00 to 82+50	250	0	7,000	4,000	0	-3,000	-4,000	-4,000	-1,000
82+50 to 85+00	250	0	5,000	1,000	-4,000	-6,000	-7,000	-7,000	-3,000
85+00 to 87+50	250	0	1,000	-4,000	-10,000	-13,000	-14,000	-13,000	-9,000
87+50 to 90+00	250	0	-6,000	-12,000	-19,000	-22,000	-22,000	-21,000	-17,000
90+00 to 92+50	250	0	-10,000	-17,000	-24,000	-28,000	-28,000	-28,000	-22,000
92+50 to 95+00	250	0	-14,000	-22,000	-31,000	-35,000	-36,000	-37,000	-29,000
95+00 to 97+50	250	0	-18,000	-29,000	-41,000	-47,000	-51,000	-49,000	-41,000
97+50 to 100+00	250	0	-14,000	-28,000	-41,000	-51,000	-58,000	-46,000	-40,000
100+00 to 102+50	250	0	-3,000	-23,000	-36,000	-53,000	-66,000	-49,000	-41,000
102+50 to 105+00	250	0	-1,000	-23,000	-39,000	-60,000	-74,000	-50,000	-59,000
F90+00 to 30+00	5,001	0	51,000	66,000	66,000	64,000	52,000	48,000	43,000
30+00 to 60+00	3,000	0	28,000	48,000	50,000	46,000	36,000	23,000	24,000
60+00 to 77+50	1,750	0	2,000	-2,000	-22,000	-37,000	-54,000	-64,000	-61,000
77+50 to 95+00	1,750	0	-14,000	-48,000	-90,000	-112,000	-117,000	-116,000	-85,000
95+00 to 100+00	500	0	-32,000	-57,000	-82,000	-98,000	-109,000	-95,000	-81,000
100+00 to 105+00	500	0	-4,000	-46,000	-75,000	-113,000	-140,000	-99,000	-100,000
TOTAL	12,501	0	31,000	-39,000	-153,000	-250,000	-332,000	-303,000	-260,000

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alternative 3 Remaining Beach Fill* in cubic yards Year 0 through Year ….							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	26,800	31,000	34,000	36,000	39,000	37,000	38,000	37,000
F100+00 to 00+00	1,001	53,600	53,000	54,000	54,000	54,000	51,000	49,000	47,000
00+00 to 10+00	1,000	53,500	55,000	57,000	59,000	58,000	56,000	52,000	48,000
10+00 to 20+00	1,000	53,500	62,000	68,000	73,000	72,000	66,000	64,000	60,000
20+00 to 30+00	1,000	53,500	71,000	79,000	83,000	84,000	81,000	77,000	72,000
30+00 to 40+00	1,000	53,500	77,000	91,000	93,000	92,000	86,000	80,000	75,000
40+00 to 50+00	1,000	98,600	87,000	96,000	96,000	92,000	84,000	72,000	65,000
50+00 to 60+00	1,000	143,600	98,000	102,000	96,000	82,000	65,000	48,000	40,000
60+00 to 70+00	1,000	143,600	94,000	90,000	77,000	58,000	34,000	18,000	3,000
70+00 to 72+50	250	35,900	24,000	21,000	16,000	11,000	5,000	1,000	**-1,000**
72+50 to 75+00	250	35,900	27,000	22,000	18,000	11,000	5,000	3,000	2,000
75+00 to 77+50	250	41,300	30,000	24,000	20,000	13,000	9,000	9,000	10,000
77+50 to 80+00	250	41,300	30,000	25,000	19,000	14,000	12,000	16,000	14,000
80+00 to 82+50	250	41,100	30,000	25,000	20,000	14,000	22,000	20,000	17,000
82+50 to 85+00	250	41,300	23,000	16,000	11,000	17,000	21,000	16,000	13,000
85+00 to 87+50	250	41,500	20,000	12,000	4,000	27,000	17,000	10,000	10,000
87+50 to 90+00	250	41,600	18,000	5,000	18,000	23,000	10,000	6,000	8,000
90+00 to 92+50	250	41,600	16,000	**-2,000**	37,000	20,000	7,000	11,000	6,000
92+50 to 95+00	250	41,300	14,000	6,000	37,000	12,000	8,000	10,000	0
95+00 to 97+50	250	35,900	9,000	46,000	29,000	7,000	8,000	**-3,000**	**-13,000**
97+50 to 100+00	250	35,900	24,000	52,000	20,000	17,000	10,000	**-12,000**	**-16,000**
100+00 to 102+50	250	26,900	67,000	43,000	8,000	23,000	5,000	**-19,000**	**-34,000**
102+50 to 105+00	250	9,000	46,000	13,000	0	16,000	**-13,000**	**-31,000**	**-68,000**
F90+00 to 30+00	5,001	240,900	272,000	292,000	305,000	307,000	291,000	280,000	264,000
30+00 to 60+00	3,000	295,700	262,000	289,000	285,000	266,000	235,000	200,000	180,000
60+00 to 77+50	1,750	256,700	175,000	157,000	131,000	93,000	53,000	31,000	14,000
77+50 to 95+00	1,750	289,700	151,000	87,000	146,000	127,000	97,000	89,000	68,000
95+00 to 100+00	500	71,800	33,000	98,000	49,000	24,000	18,000	**-15,000**	**-29,000**
100+00 to 105+00	500	35,900	113,000	56,000	8,000	39,000	**-8,000**	**-50,000**	**-102,000**
TOTAL	12,501	1,190,700	1,006,000	979,000	924,000	856,000	686,000	535,000	395,000

*NOTE: **Red**, negative values indicate erosion into the pre-construction beach profile.

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alternative 4 Remaining Beach Fill* in cubic yards Year 0 through Year ….							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	10,000	19,000	21,000	23,000	26,000	26,000	26,000	27,000
F100+00 to 00+00	1,001	20,000	32,000	35,000	37,000	39,000	38,000	37,000	35,000
00+00 to 10+00	1,000	20,000	30,000	33,000	36,000	39,000	35,000	35,000	32,000
10+00 to 20+00	1,000	20,000	36,000	42,000	46,000	49,000	48,000	46,000	44,000
20+00 to 30+00	1,000	35,000	40,000	50,000	58,000	61,000	60,000	58,000	55,000
30+00 to 40+00	1,000	50,000	50,000	63,000	70,000	73,000	72,000	67,000	66,000
40+00 to 50+00	1,000	50,000	54,000	71,000	78,000	77,000	70,000	62,000	57,000
50+00 to 60+00	1,000	50,000	56,000	71,000	73,000	66,000	54,000	41,000	33,000
60+00 to 70+00	1,000	75,000	54,000	62,000	59,000	48,000	29,000	13,000	1,000
70+00 to 72+50	250	25,000	16,000	16,000	13,000	9,000	3,000	**-2,000**	**-5,000**
72+50 to 75+00	250	25,000	20,000	19,000	16,000	10,000	4,000	**-1,000**	**-5,000**
75+00 to 77+50	250	30,400	24,000	22,000	17,000	12,000	5,000	0	**-3,000**
77+50 to 80+00	250	30,400	26,000	23,000	17,000	11,000	4,000	**-1,000**	**-4,000**
80+00 to 82+50	250	42,700	27,000	23,000	17,000	9,000	3,000	**-2,000**	**-4,000**
82+50 to 85+00	250	55,400	20,000	16,000	8,000	2,000	**-3,000**	**-7,000**	**-8,000**
85+00 to 87+50	250	55,600	23,000	13,000	3,000	**-5,000**	**-10,000**	**-14,000**	**-15,000**
87+50 to 90+00	250	55,700	25,000	10,000	**-3,000**	**-15,000**	**-20,000**	**-23,000**	**-24,000**
90+00 to 92+50	250	55,700	25,000	6,000	**-9,000**	**-21,000**	**-26,000**	**-29,000**	**-30,000**
92+50 to 95+00	250	55,400	24,000	1,000	**-15,000**	**-27,000**	**-33,000**	**-37,000**	**-38,000**
95+00 to 97+50	250	50,000	22,000	**-5,000**	**-22,000**	**-34,000**	**-45,000**	**-50,000**	**-53,000**
97+50 to 100+00	250	50,000	25,000	**-1,000**	**-20,000**	**-33,000**	**-47,000**	**-51,000**	**-59,000**
100+00 to 102+50	250	37,500	28,000	2,000	**-16,000**	**-32,000**	**-43,000**	**-51,000**	**-60,000**
102+50 to 105+00	250	12,500	15,000	**-7,000**	**-23,000**	**-41,000**	**-46,000**	**-55,000**	**-64,000**
F90+00 to 30+00	5,001	105,000	157,000	181,000	200,000	214,000	207,000	202,000	193,000
30+00 to 60+00	3,000	150,000	160,000	205,000	221,000	216,000	196,000	170,000	156,000
60+00 to 77+50	1,750	155,400	114,000	119,000	105,000	79,000	41,000	10,000	**-12,000**
77+50 to 95+00	1,750	350,900	170,000	92,000	18,000	**-46,000**	**-85,000**	**-113,000**	**-123,000**
95+00 to 100+00	500	100,000	47,000	**-6,000**	**-42,000**	**-67,000**	**-92,000**	**-101,000**	**-112,000**
100+00 to 105+00	500	50,000	43,000	**-5,000**	**-39,000**	**-73,000**	**-89,000**	**-106,000**	**-124,000**
TOTAL	12,501	911,300	691,000	586,000	463,000	323,000	178,000	62,000	**-22,000**

*NOTE: **Red**, negative values indicate erosion into the pre-construction beach profile.

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alternative 5C Remaining Beach Fill* in cubic yards Year 0 through Year ….							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	21,400	25,000	29,000	31,000	33,000	34,000	35,000	36,000
F100+00 to 00+00	1,001	42,900	44,000	46,000	45,000	47,000	47,000	48,000	48,000
00+00 to 10+00	1,000	42,800	47,000	49,000	50,000	52,000	51,000	51,000	51,000
10+00 to 20+00	1,000	42,800	52,000	57,000	60,000	63,000	61,000	63,000	63,000
20+00 to 30+00	1,000	42,800	60,000	69,000	74,000	78,000	80,000	81,000	81,000
30+00 to 40+00	1,000	42,800	64,000	76,000	82,000	85,000	86,000	86,000	87,000
40+00 to 50+00	1,000	78,800	74,000	84,000	88,000	90,000	90,000	88,000	86,000
50+00 to 60+00	1,000	114,800	82,000	90,000	91,000	88,000	82,000	74,000	72,000
60+00 to 70+00	1,000	114,800	77,000	78,000	74,000	67,000	59,000	49,000	44,000
70+00 to 72+50	250	28,700	20,000	19,000	16,000	14,000	11,000	9,000	7,000
72+50 to 75+00	250	28,700	23,000	21,000	17,000	15,000	12,000	9,000	7,000
75+00 to 77+50	250	28,700	26,000	23,000	19,000	17,000	14,000	11,000	10,000
77+50 to 80+00	250	28,700	26,000	23,000	18,000	16,000	14,000	11,000	10,000
80+00 to 82+50	250	28,700	27,000	23,000	19,000	16,000	13,000	10,000	9,000
82+50 to 85+00	250	28,700	20,000	15,000	10,000	9,000	6,000	4,000	3,000
85+00 to 87+50	250	28,700	17,000	11,000	4,000	2,000	**-1,000**	**-3,000**	**-3,000**
87+50 to 90+00	250	28,700	14,000	5,000	**-3,000**	**-8,000**	**-10,000**	**-12,000**	**-13,000**
90+00 to 92+50	250	28,700	11,000	1,000	**-8,000**	**-14,000**	**-16,000**	**-18,000**	**-19,000**
92+50 to 95+00	250	28,700	9,000	**-3,000**	**-12,000**	**-20,000**	**-22,000**	**-22,000**	**-24,000**
95+00 to 97+50	250	28,700	5,000	**-8,000**	**-18,000**	**-25,000**	**-24,000**	**-28,000**	**-29,000**
97+50 to 100+00	250	28,700	8,000	**-6,000**	**-19,000**	**-19,000**	**-22,000**	**-25,000**	**-22,000**
100+00 to 102+50	250	19,700	10,000	**-6,000**	**-11,000**	**-9,000**	**-20,000**	**-16,000**	**-10,000**
102+50 to 105+00	250	0	15,000	3,000	18,000	3,000	**-2,000**	6,000	10,000
F90+00 to 30+00	5,001	192,700	228,000	250,000	260,000	273,000	273,000	278,000	279,000
30+00 to 60+00	3,000	236,400	220,000	250,000	261,000	263,000	258,000	248,000	245,000
60+00 to 77+50	1,750	200,900	146,000	141,000	126,000	113,000	96,000	78,000	68,000
77+50 to 95+00	1,750	200,900	124,000	75,000	28,000	1,000	**-16,000**	**-30,000**	**-37,000**
95+00 to 100+00	500	57,400	13,000	**-14,000**	**-37,000**	**-44,000**	**-46,000**	**-53,000**	**-51,000**
100+00 to 105+00	500	19,700	25,000	**-3,000**	7,000	**-6,000**	**-22,000**	**-10,000**	0
TOTAL	12,501	908,000	756,000	699,000	645,000	600,000	543,000	511,000	504,000

*NOTE: **Red**, negative values indicate erosion into the pre-construction beach profile.

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alt. 5D (1500-ft groin) Remaining Beach Fill* in cubic yards Year 0 through Year ….							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	0	8,000	11,000	13,000	16,000	18,000	20,000	21,000
F100+00 to 00+00	1,001	0	12,000	16,000	18,000	22,000	23,000	23,000	25,000
00+00 to 10+00	1,000	0	9,000	14,000	15,000	18,000	20,000	23,000	22,000
10+00 to 20+00	1,000	0	14,000	21,000	27,000	31,000	35,000	38,000	40,000
20+00 to 30+00	1,000	0	15,000	27,000	34,000	42,000	48,000	52,000	54,000
30+00 to 40+00	1,000	0	17,000	32,000	44,000	52,000	58,000	60,000	65,000
40+00 to 50+00	1,000	0	20,000	36,000	46,000	55,000	60,000	62,000	62,000
50+00 to 60+00	1,000	0	19,000	38,000	47,000	51,000	54,000	52,000	53,000
60+00 to 70+00	1,000	10,000	19,000	30,000	35,000	39,000	39,000	34,000	33,000
70+00 to 72+50	250	5,000	7,000	9,000	9,000	10,000	9,000	7,000	6,000
72+50 to 75+00	250	5,000	8,000	10,000	10,000	10,000	9,000	7,000	6,000
75+00 to 77+50	250	5,000	11,000	13,000	12,000	12,000	11,000	8,000	8,000
77+50 to 80+00	250	13,100	12,000	14,000	12,000	12,000	10,000	8,000	8,000
80+00 to 82+50	250	21,300	17,000	17,000	14,000	13,000	11,000	8,000	8,000
82+50 to 85+00	250	21,300	14,000	12,000	8,000	7,000	4,000	1,000	1,000
85+00 to 87+50	250	21,300	11,000	7,000	2,000	1,000	**-3,000**	**-6,000**	**-6,000**
87+50 to 90+00	250	21,300	6,000	**-2,000**	**-7,000**	**-8,000**	**-12,000**	**-16,000**	**-16,000**
90+00 to 92+50	250	21,300	3,000	**-5,000**	**-11,000**	**-13,000**	**-18,000**	**-23,000**	**-23,000**
92+50 to 95+00	250	21,300	2,000	**-9,000**	**-16,000**	**-19,000**	**-25,000**	**-30,000**	**-31,000**
95+00 to 97+50	250	21,300	0	**-12,000**	**-21,000**	**-25,000**	**-33,000**	**-38,000**	**-40,000**
97+50 to 100+00	250	21,300	8,000	**-6,000**	**-14,000**	**-20,000**	**-30,000**	**-35,000**	**-38,000**
100+00 to 102+50	250	16,000	22,000	3,000	0	**-8,000**	**-20,000**	**-22,000**	**-29,000**
102+50 to 105+00	250	0	38,000	19,000	21,000	12,000	1,000	**-1,000**	**-8,000**
F90+00 to 30+00	5,001	0	58,000	89,000	107,000	129,000	144,000	156,000	162,000
30+00 to 60+00	3,000	0	56,000	106,000	137,000	158,000	172,000	174,000	180,000
60+00 to 77+50	1,750	25,000	45,000	62,000	66,000	71,000	68,000	56,000	53,000
77+50 to 95+00	1,750	140,900	65,000	34,000	2,000	**-7,000**	**-33,000**	**-58,000**	**-59,000**
95+00 to 100+00	500	42,600	8,000	**-18,000**	**-35,000**	**-45,000**	**-63,000**	**-73,000**	**-78,000**
100+00 to 105+00	500	16,000	60,000	22,000	21,000	4,000	**-19,000**	**-23,000**	**-37,000**
60+00 to 102+50	4,250	224,500	140,000	81,000	33,000	11,000	**-48,000**	**-97,000**	**-113,000**
TOTAL	12,501	224,500	292,000	295,000	298,000	310,000	269,000	232,000	221,000

*NOTE: **Red**, negative values indicate erosion into the pre-construction beach profile.

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alternative 2 Beach Erosion (-) & Accretion (+) in cubic yards Year 0 through Year							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	0	8,000	10,000	9,000	10,000	7,000	7,000	7,000
F100+00 to 00+00	1,001	0	13,000	14,000	12,000	11,000	8,000	7,000	6,000
00+00 to 10+00	1,000	0	8,000	10,000	8,000	7,000	4,000	2,000	1,000
10+00 to 20+00	1,000	0	11,000	16,000	16,000	15,000	13,000	12,000	10,000
20+00 to 30+00	1,000	0	11,000	16,000	21,000	21,000	20,000	20,000	19,000
30+00 to 40+00	1,000	0	12,000	19,000	22,000	24,000	24,000	22,000	23,000
40+00 to 50+00	1,000	0	9,000	17,000	19,000	18,000	15,000	12,000	12,000
50+00 to 60+00	1,000	0	7,000	12,000	9,000	4,000	-3,000	-11,000	-11,000
60+00 to 70+00	1,000	0	-1,000	-1,000	-10,000	-18,000	-28,000	-35,000	-35,000
70+00 to 72+50	250	0	0	-1,000	-5,000	-7,000	-10,000	-11,000	-11,000
72+50 to 75+00	250	0	0	-1,000	-5,000	-7,000	-9,000	-10,000	-9,000
75+00 to 77+50	250	0	3,000	1,000	-2,000	-5,000	-7,000	-8,000	-6,000
77+50 to 80+00	250	0	3,000	2,000	-2,000	-5,000	-6,000	-6,000	-4,000
80+00 to 82+50	250	0	7,000	4,000	0	-3,000	-4,000	-4,000	-1,000
82+50 to 85+00	250	0	5,000	1,000	-4,000	-6,000	-7,000	-7,000	-3,000
85+00 to 87+50	250	0	1,000	-4,000	-10,000	-13,000	-14,000	-13,000	-9,000
87+50 to 90+00	250	0	-6,000	-12,000	-19,000	-22,000	-22,000	-21,000	-17,000
90+00 to 92+50	250	0	-10,000	-17,000	-24,000	-28,000	-28,000	-28,000	-22,000
92+50 to 95+00	250	0	-14,000	-22,000	-31,000	-35,000	-36,000	-37,000	-29,000
95+00 to 97+50	250	0	-18,000	-29,000	-41,000	-47,000	-51,000	-49,000	-41,000
97+50 to 100+00	250	0	-14,000	-28,000	-41,000	-51,000	-58,000	-46,000	-40,000
100+00 to 102+50	250	0	-3,000	-23,000	-36,000	-53,000	-66,000	-49,000	-41,000
102+50 to 105+00	250	0	-1,000	-23,000	-39,000	-60,000	-74,000	-50,000	-59,000
F90+00 to 30+00	5,001	0	51,000	66,000	66,000	64,000	52,000	48,000	43,000
30+00 to 60+00	3,000	0	28,000	48,000	50,000	46,000	36,000	23,000	24,000
60+00 to 77+50	1,750	0	2,000	-2,000	-22,000	-37,000	-54,000	-64,000	-61,000
77+50 to 95+00	1,750	0	-14,000	-48,000	-90,000	-112,000	-117,000	-116,000	-85,000
95+00 to 100+00	500	0	-32,000	-57,000	-82,000	-98,000	-109,000	-95,000	-81,000
100+00 to 105+00	500	0	-4,000	-46,000	-75,000	-113,000	-140,000	-99,000	-100,000
TOTAL	12,501	0	31,000	-39,000	-153,000	-250,000	-332,000	-303,000	-260,000

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alternative 3 Erosion (-) & Accretion (+) vs. Post-Construction in cubic yards Year 0 through Year							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	0	4,200	7,200	9,200	12,200	10,200	11,200	10,200
F100+00 to 00+00	1,001	0	-600	400	400	400	-2,600	-4,600	-6,600
00+00 to 10+00	1,000	0	1,500	3,500	5,500	4,500	2,500	-1,500	-5,500
10+00 to 20+00	1,000	0	8,500	14,500	19,500	18,500	12,500	10,500	6,500
20+00 to 30+00	1,000	0	17,500	25,500	29,500	30,500	27,500	23,500	18,500
30+00 to 40+00	1,000	0	23,500	37,500	39,500	38,500	32,500	26,500	21,500
40+00 to 50+00	1,000	0	-11,600	-2,600	-2,600	-6,600	-14,600	-26,600	-33,600
50+00 to 60+00	1,000	0	-45,600	-41,600	-47,600	-61,600	-78,600	-95,600	-103,600
60+00 to 70+00	1,000	0	-49,600	-53,600	-66,600	-85,600	-109,600	-125,600	-140,600
70+00 to 72+50	250	0	-11,900	-14,900	-19,900	-24,900	-30,900	-34,900	-36,900
72+50 to 75+00	250	0	-8,900	-13,900	-17,900	-24,900	-30,900	-32,900	-33,900
75+00 to 77+50	250	0	-11,300	-17,300	-21,300	-28,300	-32,300	-32,300	-31,300
77+50 to 80+00	250	0	-11,300	-16,300	-22,300	-27,300	-29,300	-25,300	-27,300
80+00 to 82+50	250	0	-11,100	-16,100	-21,100	-27,100	-19,100	-21,100	-24,100
82+50 to 85+00	250	0	-18,300	-25,300	-30,300	-24,300	-20,300	-25,300	-28,300
85+00 to 87+50	250	0	-21,500	-29,500	-37,500	-14,500	-24,500	-31,500	-31,500
87+50 to 90+00	250	0	-23,600	-36,600	-23,600	-18,600	-31,600	-35,600	-33,600
90+00 to 92+50	250	0	-25,600	-43,600	-4,600	-21,600	-34,600	-30,600	-35,600
92+50 to 95+00	250	0	-27,300	-35,300	-4,300	-29,300	-33,300	-31,300	-41,300
95+00 to 97+50	250	0	-26,900	10,100	-6,900	-28,900	-27,900	-38,900	-48,900
97+50 to 100+00	250	0	-11,900	16,100	-15,900	-18,900	-25,900	-47,900	-51,900
100+00 to 102+50	250	0	40,100	16,100	-18,900	-3,900	-21,900	-45,900	-60,900
102+50 to 105+00	250	0	37,000	4,000	-9,000	7,000	-22,000	-40,000	-77,000
F90+00 to 30+00	5,001	0	31,100	51,100	64,100	66,100	50,100	39,100	23,100
30+00 to 60+00	3,000	0	-33,700	-6,700	-10,700	-29,700	-60,700	-95,700	-115,700
60+00 to 77+50	1,750	0	-81,700	-99,700	-125,700	-163,700	-203,700	-225,700	-242,700
77+50 to 95+00	1,750	0	-138,700	-202,700	-143,700	-162,700	-192,700	-200,700	-221,700
95+00 to 100+00	500	0	-38,800	26,200	-22,800	-47,800	-53,800	-86,800	-100,800
100+00 to 105+00	500	0	77,100	20,100	-27,900	3,100	-43,900	-85,900	-137,900
TOTAL	12,501	0	-184,700	-211,700	-266,700	-334,700	-504,700	-655,700	-795,700

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alternative 4 Erosion (-) & Accretion (+) vs. Post-Construction in cubic yards Year 0 through Year							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	0	9,000	11,000	13,000	16,000	16,000	16,000	17,000
F100+00 to 00+00	1,001	0	12,000	15,000	17,000	19,000	18,000	17,000	15,000
00+00 to 10+00	1,000	0	10,000	13,000	16,000	19,000	15,000	15,000	12,000
10+00 to 20+00	1,000	0	16,000	22,000	26,000	29,000	28,000	26,000	24,000
20+00 to 30+00	1,000	0	5,000	15,000	23,000	26,000	25,000	23,000	20,000
30+00 to 40+00	1,000	0	0	13,000	20,000	23,000	22,000	17,000	16,000
40+00 to 50+00	1,000	0	4,000	21,000	28,000	27,000	20,000	12,000	7,000
50+00 to 60+00	1,000	0	6,000	21,000	23,000	16,000	4,000	-9,000	-17,000
60+00 to 70+00	1,000	0	-21,000	-13,000	-16,000	-27,000	-46,000	-62,000	-74,000
70+00 to 72+50	250	0	-9,000	-9,000	-12,000	-16,000	-22,000	-27,000	-30,000
72+50 to 75+00	250	0	-5,000	-6,000	-9,000	-15,000	-21,000	-26,000	-30,000
75+00 to 77+50	250	0	-6,400	-8,400	-13,400	-18,400	-25,400	-30,400	-33,400
77+50 to 80+00	250	0	-4,400	-7,400	-13,400	-19,400	-26,400	-31,400	-34,400
80+00 to 82+50	250	0	-15,700	-19,700	-25,700	-33,700	-39,700	-44,700	-46,700
82+50 to 85+00	250	0	-35,400	-39,400	-47,400	-53,400	-58,400	-62,400	-63,400
85+00 to 87+50	250	0	-32,600	-42,600	-52,600	-60,600	-65,600	-69,600	-70,600
87+50 to 90+00	250	0	-30,700	-45,700	-58,700	-70,700	-75,700	-78,700	-79,700
90+00 to 92+50	250	0	-30,700	-49,700	-64,700	-76,700	-81,700	-84,700	-85,700
92+50 to 95+00	250	0	-31,400	-54,400	-70,400	-82,400	-88,400	-92,400	-93,400
95+00 to 97+50	250	0	-28,000	-55,000	-72,000	-84,000	-95,000	-100,000	-103,000
97+50 to 100+00	250	0	-25,000	-51,000	-70,000	-83,000	-97,000	-101,000	-109,000
100+00 to 102+50	250	0	-9,500	-35,500	-53,500	-69,500	-80,500	-88,500	-97,500
102+50 to 105+00	250	0	2,500	-19,500	-35,500	-53,500	-58,500	-67,500	-76,500
F90+00 to 30+00	5,001	0	52,000	76,000	95,000	109,000	102,000	97,000	88,000
30+00 to 60+00	3,000	0	10,000	55,000	71,000	66,000	46,000	20,000	6,000
60+00 to 77+50	1,750	0	-41,400	-36,400	-50,400	-76,400	-114,400	-145,400	-167,400
77+50 to 95+00	1,750	0	-180,900	-258,900	-332,900	-396,900	-435,900	-463,900	-473,900
95+00 to 100+00	500	0	-53,000	-106,000	-142,000	-167,000	-192,000	-201,000	-212,000
100+00 to 105+00	500	0	-7,000	-55,000	-89,000	-123,000	-139,000	-156,000	-174,000
TOTAL	12,501	0	-220,300	-325,300	-448,300	-588,300	-733,300	-849,300	-933,300

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alternative 5C Erosion (-) & Accretion (+) vs. Post-Construction in cubic yards Year 0 through Year							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	0	3,600	7,600	9,600	11,600	12,600	13,600	14,600
F100+00 to 00+00	1,001	0	1,100	3,100	2,100	4,100	4,100	5,100	5,100
00+00 to 10+00	1,000	0	4,200	6,200	7,200	9,200	8,200	8,200	8,200
10+00 to 20+00	1,000	0	9,200	14,200	17,200	20,200	18,200	20,200	20,200
20+00 to 30+00	1,000	0	17,200	26,200	31,200	35,200	37,200	38,200	38,200
30+00 to 40+00	1,000	0	21,200	33,200	39,200	42,200	43,200	43,200	44,200
40+00 to 50+00	1,000	0	-4,800	5,200	9,200	11,200	11,200	9,200	7,200
50+00 to 60+00	1,000	0	-32,800	-24,800	-23,800	-26,800	-32,800	-40,800	-42,800
60+00 to 70+00	1,000	0	-37,800	-36,800	-40,800	-47,800	-55,800	-65,800	-70,800
70+00 to 72+50	250	0	-8,700	-9,700	-12,700	-14,700	-17,700	-19,700	-21,700
72+50 to 75+00	250	0	-5,700	-7,700	-11,700	-13,700	-16,700	-19,700	-21,700
75+00 to 77+50	250	0	-2,700	-5,700	-9,700	-11,700	-14,700	-17,700	-18,700
77+50 to 80+00	250	0	-2,700	-5,700	-10,700	-12,700	-14,700	-17,700	-18,700
80+00 to 82+50	250	0	-1,700	-5,700	-9,700	-12,700	-15,700	-18,700	-19,700
82+50 to 85+00	250	0	-8,700	-13,700	-18,700	-19,700	-22,700	-24,700	-25,700
85+00 to 87+50	250	0	-11,700	-17,700	-24,700	-26,700	-29,700	-31,700	-31,700
87+50 to 90+00	250	0	-14,700	-23,700	-31,700	-36,700	-38,700	-40,700	-41,700
90+00 to 92+50	250	0	-17,700	-27,700	-36,700	-42,700	-44,700	-46,700	-47,700
92+50 to 95+00	250	0	-19,700	-31,700	-40,700	-48,700	-50,700	-50,700	-52,700
95+00 to 97+50	250	0	-23,700	-36,700	-46,700	-53,700	-52,700	-56,700	-57,700
97+50 to 100+00	250	0	-20,700	-34,700	-47,700	-47,700	-50,700	-53,700	-50,700
100+00 to 102+50	250	0	-9,700	-25,700	-30,700	-28,700	-39,700	-35,700	-29,700
102+50 to 105+00	250	0	15,000	3,000	18,000	3,000	-2,000	6,000	10,000
F90+00 to 30+00	5,001	0	35,300	57,300	67,300	80,300	80,300	85,300	86,300
30+00 to 60+00	3,000	0	-16,400	13,600	24,600	26,600	21,600	11,600	8,600
60+00 to 77+50	1,750	0	-54,900	-59,900	-74,900	-87,900	-104,900	-122,900	-132,900
77+50 to 95+00	1,750	0	-76,900	-125,900	-172,900	-199,900	-216,900	-230,900	-237,900
95+00 to 100+00	500	0	-44,400	-71,400	-94,400	-101,400	-103,400	-110,400	-108,400
100+00 to 105+00	500	0	5,300	-22,700	-12,700	-25,700	-41,700	-29,700	-19,700
TOTAL	12,501	0	-152,000	-209,000	-263,000	-308,000	-365,000	-397,000	-404,000

Table: Delft3D Beach Erosion and Beach Fill Performance Based on April-June 2006 Conditions
Figure Eight Island, NC

Profiles	Beach Length (feet)	Alt. 5D (1500-ft groin) Erosion (-) & Accretion (+) vs. Post-Construction in cubic yards Year 0 through Year ….							
		0	1	2	3	4	5	6	7
F90+00 to F100+00	1,000	0	8,000	11,000	13,000	16,000	18,000	20,000	21,000
F100+00 to 00+00	1,001	0	12,000	16,000	18,000	22,000	23,000	23,000	25,000
00+00 to 10+00	1,000	0	9,000	14,000	15,000	18,000	20,000	23,000	22,000
10+00 to 20+00	1,000	0	14,000	21,000	27,000	31,000	35,000	38,000	40,000
20+00 to 30+00	1,000	0	15,000	27,000	34,000	42,000	48,000	52,000	54,000
30+00 to 40+00	1,000	0	17,000	32,000	44,000	52,000	58,000	60,000	65,000
40+00 to 50+00	1,000	0	20,000	36,000	46,000	55,000	60,000	62,000	62,000
50+00 to 60+00	1,000	0	19,000	38,000	47,000	51,000	54,000	52,000	53,000
60+00 to 70+00	1,000	0	9,000	20,000	25,000	29,000	29,000	24,000	23,000
70+00 to 72+50	250	0	2,000	4,000	4,000	5,000	4,000	2,000	1,000
72+50 to 75+00	250	0	3,000	5,000	5,000	5,000	4,000	2,000	1,000
75+00 to 77+50	250	0	6,000	8,000	7,000	7,000	6,000	3,000	3,000
77+50 to 80+00	250	0	**-1,100**	900	**-1,100**	**-1,100**	**-3,100**	**-5,100**	**-5,100**
80+00 to 82+50	250	0	**-4,300**	**-4,300**	**-7,300**	**-8,300**	**-10,300**	**-13,300**	**-13,300**
82+50 to 85+00	250	0	**-7,300**	**-9,300**	**-13,300**	**-14,300**	**-17,300**	**-20,300**	**-20,300**
85+00 to 87+50	250	0	**-10,300**	**-14,300**	**-19,300**	**-20,300**	**-24,300**	**-27,300**	**-27,300**
87+50 to 90+00	250	0	**-15,300**	**-23,300**	**-28,300**	**-29,300**	**-33,300**	**-37,300**	**-37,300**
90+00 to 92+50	250	0	**-18,300**	**-26,300**	**-32,300**	**-34,300**	**-39,300**	**-44,300**	**-44,300**
92+50 to 95+00	250	0	**-19,300**	**-30,300**	**-37,300**	**-40,300**	**-46,300**	**-51,300**	**-52,300**
95+00 to 97+50	250	0	**-21,300**	**-33,300**	**-42,300**	**-46,300**	**-54,300**	**-59,300**	**-61,300**
97+50 to 100+00	250	0	**-13,300**	**-27,300**	**-35,300**	**-41,300**	**-51,300**	**-56,300**	**-59,300**
100+00 to 102+50	250	0	6,000	**-13,000**	**-16,000**	**-24,000**	**-36,000**	**-38,000**	**-45,000**
102+50 to 105+00	250	0	38,000	19,000	21,000	12,000	1,000	**-1,000**	**-8,000**
F90+00 to 30+00	5,001	0	58,000	89,000	107,000	129,000	144,000	156,000	162,000
30+00 to 60+00	3,000	0	56,000	106,000	137,000	158,000	172,000	174,000	180,000
60+00 to 77+50	1,750	0	20,000	37,000	41,000	46,000	43,000	31,000	28,000
77+50 to 95+00	1,750	0	**-75,900**	**-106,900**	**-138,900**	**-147,900**	**-173,900**	**-198,900**	**-199,900**
95+00 to 100+00	500	0	**-34,600**	**-60,600**	**-77,600**	**-87,600**	**-105,600**	**-115,600**	**-120,600**
100+00 to 105+00	500	0	44,000	6,000	5,000	**-12,000**	**-35,000**	**-39,000**	**-53,000**
60+00 to 102+50	4,250	0	**-84,500**	**-143,500**	**-191,500**	**-213,500**	**-272,500**	**-321,500**	**-337,500**
TOTAL	12,501	0	67,500	70,500	73,500	85,500	44,500	7,500	**-3,500**