Savannah Harbor Expansion Project

Mitigation Evaluation for Marsh/Wetland Impacts

November 2007

Introduction

This report combines the voluminous output generated for evaluation of 12 Mitigation Plans for the Savannah Harbor Deepening Project. The proposed Harbor Deepening Project is expected to have environmental impacts throughout the Savannah River estuary. The environmental impacts to wetlands and marshes adjacent to the estuary, particularly freshwater tidal wetlands, are the focus for this evaluation and the results of the study are summarized in this report.

Background

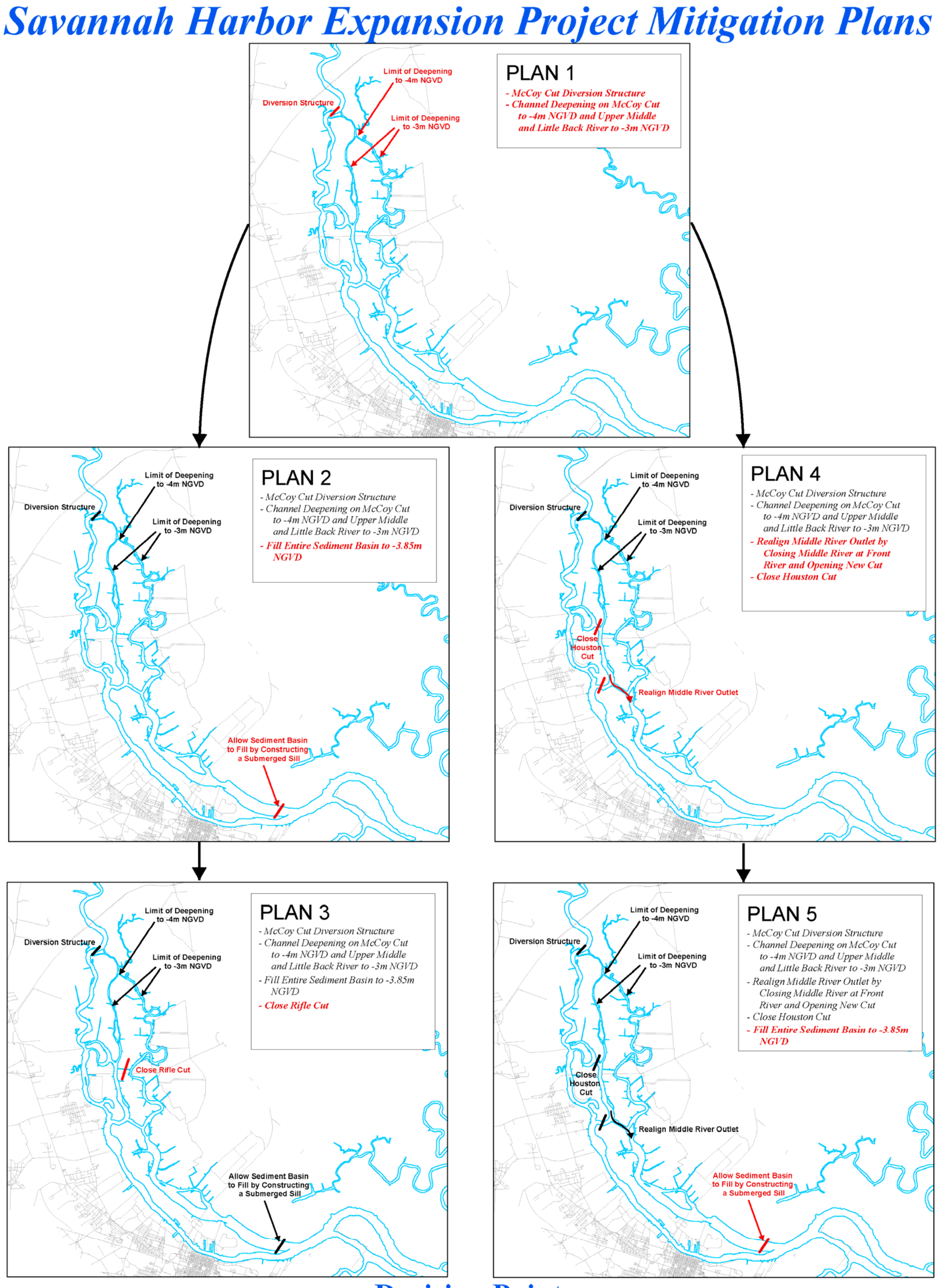
The Savannah River estuary is comprised not only of the Savannah River which houses the port facilities, but also of a several smaller rivers that wind their way through marshland and have various man-made and natural connections to the main river itself. The various connections and the extremes of the tidal prism combine to form a complex system that moves massive volumes of water during each tidal cycle. Due to the complexity of the system, a hydrodynamic model (EFDC) was used to quantify the amount of water moving throughout the estuary and evaluate the salinity content at various points over a wide range of tidal and flow conditions. The model enables a more subjective evaluation of each of the mitigation features. Details of the model development and calibration for use in the Savannah Harbor Expansion Project can be found in *Development of the Hydrodynamic and Water Quality Models for the Savannah Harbor Expansion Project* prepared by Tetra Tech, Inc., dated January 30, 2006.

Mitigation Plans

There are 12 Mitigation Plans evaluated in this report which were developed over the course of many months. The development of the Mitigation Plans began by evaluating single adjustments or features made to the estuary and the impact on salinity movement. The purpose of each mitigation feature is to limit the amount of salinity intrusion into the estuary that would inevitability increase due to deepening the harbor. As mitigation features were evaluated and deemed helpful in salinity reduction they were combined to evaluate their effectiveness as a whole. Due to the complexities of the river system combined features could behave differently than they had as single features. All features were initially evaluated under a 48 ft deepened condition and the results were compared to the salinity regime expected under the existing conditions. The goal is to develop a feature or combination of features that reduce the intrusive salinity impacts due to deepening the harbor to zero.

The first 5 Mitigation Plans have several features combined in an additive manner to determine their effectiveness. See Figure 1 for graphical representation. There are two additive feature paths out of the five plans. Plan 3 builds on Plans 2 and 1 and Plan 5 is built from Plans 4 and 1. A detailed description of each of the plans is on the following pages:

Figure 1. *Mitigation Plans 1 – 5*



Plan 1: The main mitigation feature of Plan 1 is a diversion structure on Front River to route a portion of the freshwater coming down Front River to Little Back and Middle River through McCoy's Cut. To better facilitate the movement of freshwater through the cut to Little Back and Middle River, channel deepening is proposed from an average elevation of -3.1m NGVD to -4.0m NGVD from the Front River/McCoy Cut connection to the Middle/Little Back River junction and from an average elevation of -2.1m NGVD to -3.0m NGVD on both Little Back River and Middle River for a distance of approximately 1600m from the junction. The diversion structure combined with the channel deepening on McCoy Cut, Middle River and Little Back River allow for a portion of the freshwater flowing down the Savannah River to flow through the Back River system and combat salinity intrusion into these largely freshwater areas.

Plan 2: Mitigation Plan 2 builds on Plan 1. It contains all the features of Plan 1 plus filling in the sediment basin. The sediment basin is situated at the confluence of Back River and Front River near Old Fort Jackson. The modeled existing conditions bottom elevation of the sediment basin averages -12.8 m NGVD. Dredging records show that the sediment basin fills quickly and the depth at any given time varies greatly depending on the amount of dredging it receives. The proposed bottom elevation for the sediment basin under Plan 2 is -3.85m NGVD, which corresponds to the sill elevation at the tidegate structure bordering the upstream side of the sediment basin. Much of the Back River bottom elevation above the tidegate is also at or above -3.85m NGVD. Filling in the sediment basin would allow an extension of the more shallow depths in the Back River and would impede salinity movement upstream.

Plan 3: Mitigation Plan 3 builds further on Plan 2 by adding the feature to close Rifle Cut. The modeling showed that there is quite a bit of lateral movement with the tides across Front, Middle, and Back River through Steamboat River, Houston Cut and Rifle Cut. Depending on the freshwater flows coming downstream and the variations in the tidal cycle (neap or spring) the lateral flows across the system can provide large amounts of freshwater or large amounts of saline water. Closing Rifle Cut eliminates the lateral saltwater flowpath from Middle to Back River on the incoming tide. Its closure also eliminates a flowpath for freshwater flow coming down Back River to leave on the outgoing tide. This creates more freshwater availability for the areas downstream of Rifle Cut, especially during critical flow conditions.

Plan 4: Plan 4 begins the second additive feature path option and builds on Plan 1. It includes the diversion structure, deepening on McCoy, Middle and Little Back River and realigning the Middle River outlet through New Cut and Back River. The plan also includes closing Houston Cut. Realigning Middle River and closing Houston Cut removes the two lower connections between Middle and Front River and isolates the Middle and Back River from lateral salinity movement. It also eliminates the loss of freshwater flows coming downstream through McCoy Cut through the outlets to Front River and makes more freshwater available for the lower portions of Middle and Back River. The closure of Houston Cut is key in the effectiveness of realigning Middle River. In trial runs where Houston Cut was not closed under these same conditions we found much higher salinity concentrations in Middle River due to the lateral movement allowed across the cut.

Plan 5: Building on Plan 4, Plan 5 also has the additional feature of filling in the sediment basin. The sediment basin was modeled as described above in Plan 2 under the same logic that it

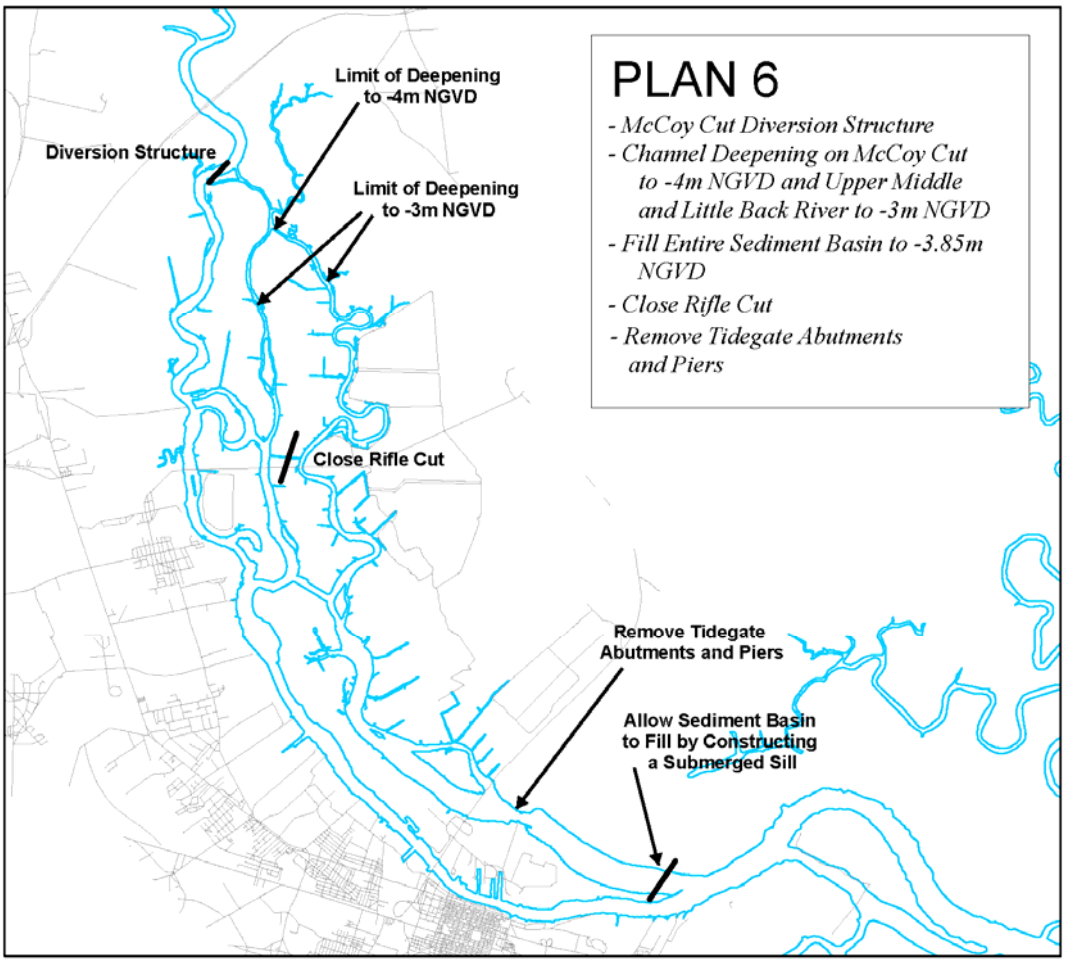
would limit salinity intrusion coming up Back River through the deep basin. However, it was necessary to evaluate this feature with the additional features that were added in Plan 4 to determine there combined effectiveness.

Extensive modeling was done on these 5 plans described above and the results were provided to the team to decided to continue forward with additional additive mitigation features to Plan 3 or Plan 5. The two plans are very different yet, they strive to reach the same goals of reducing the impacts due to deepening to zero. After extensive discussion and review, not only of impacts to wetlands but also impacts to fish habitat and water quality, it was decided to move forward with Plan 3. One of the major factors in choosing Plan 3 over Plan 5 was found by evaluating the tidal amplitude and how that changed with the different mitigation features. Plans 4 and 5 do a very good job at eliminating salinity intrusion into Middle, Back, and Little Back River. However, in the effort to remove salinity the volumes of water coming in on each tidal cycle were lowered from what they are currently to a point that was considered unacceptable. The lowered tidal peaks could pose a hazard to upland tidal wetlands that are wetted only during the high peaks of the incoming tide.

The following mitigation plans described all build on the foundation laid out in Mitigation Plan 3. The additional plans were developed in search of the most effective mitigation plan to protect the estuary from the negative environmental impacts associated with deepening the harbor.

Plan 6: Mitigation Plan 6 has the same features of Plan 3 with the diversion structure, channel deepening on McCoy Cut, and upper Middle and Little Back River, Rifle Cut closed and the sediment basin filled. In addition to the features in Plan 3, Plan 6 also has the tidegate abutments and piers removed. See Figure 2. The removal of the tidegate abutments and piers helps to provide more tidal movement through the lower portion of Back River and increases its flushing capacity. Salt water that has entered on the incoming tide will be able to flush with less restriction on the outgoing tide.

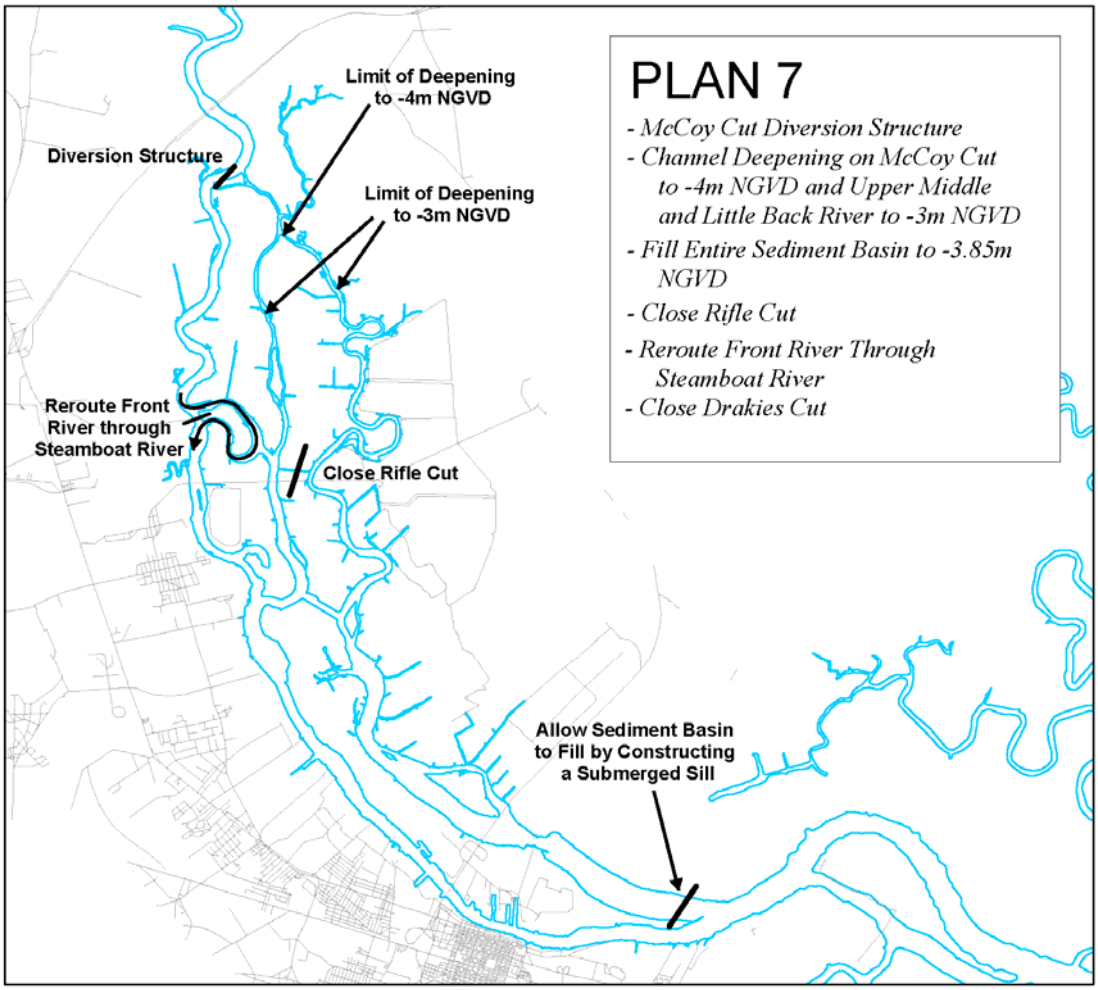
Figure 2. *Mitigation Plan 6*



Plan 7: Mitigation Plan 7 has the features described in Plan 3 and an additional feature that basically lengthens the Front River by approximately 2 miles. The additional feature reroutes Front River though Steamboat River by closing Drakies Cut. Historically, the Front River channel flowed through Steamboat River and Drakies Cut was a man made feature that aided in navigation. The proposed feature in Plan 7 would restore the natural bend in the river but it

would be deepened and widened to maintain the channel geometry that currently exists in that area of Front River. Currently Steamboat River has an average bottom elevation of -1.85m NGVD and a top width that varies throughout the reach from less than 60m to over 100m. In the vicinity of Drakies Cut, Front River has an approximate bottom elevation of -10.4m NGVD and top width of 190m. By rerouting Front River through the 2 mile bend, the channel is essentially lengthened and salinity has a longer path to travel before reaching areas upstream of Steamboat than it currently has under the existing condition. Also, rerouting the freshwater flow through Steamboat coming downstream on Front River will allow it to have access to Middle River through Houston Cut. However, the same access routes to Middle River would be available for saline water coming upstream on the incoming tide.

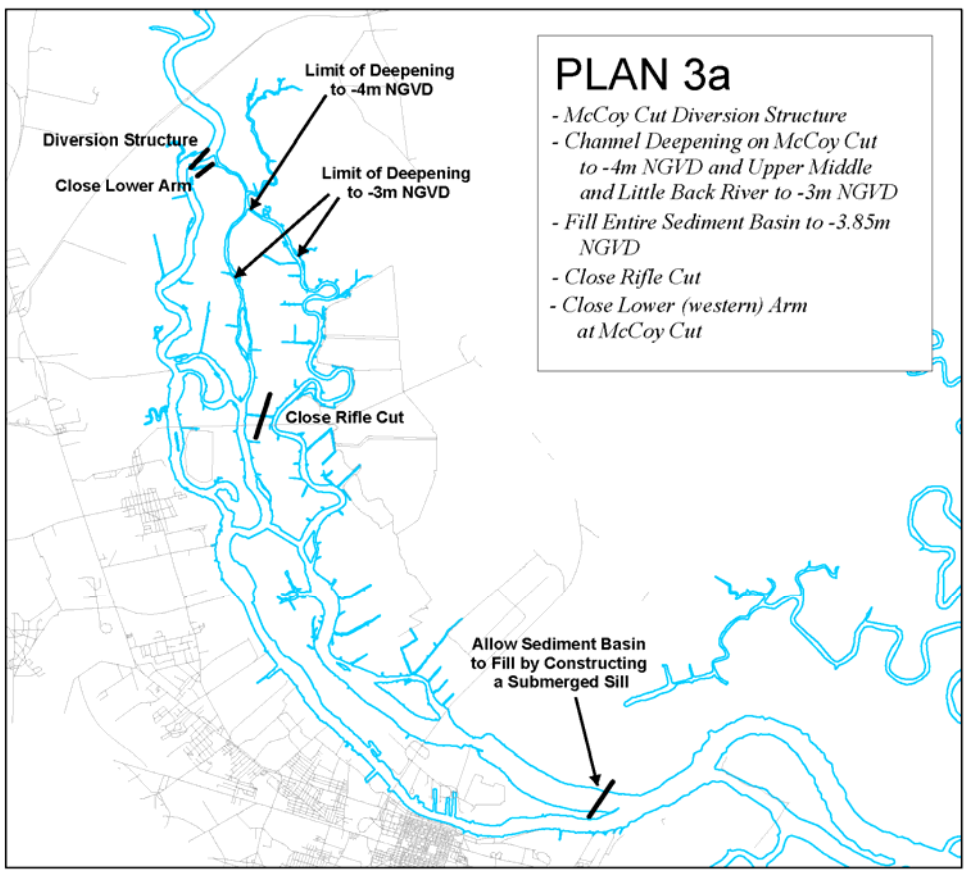
Figure 3. *Mitigation Plan 7*



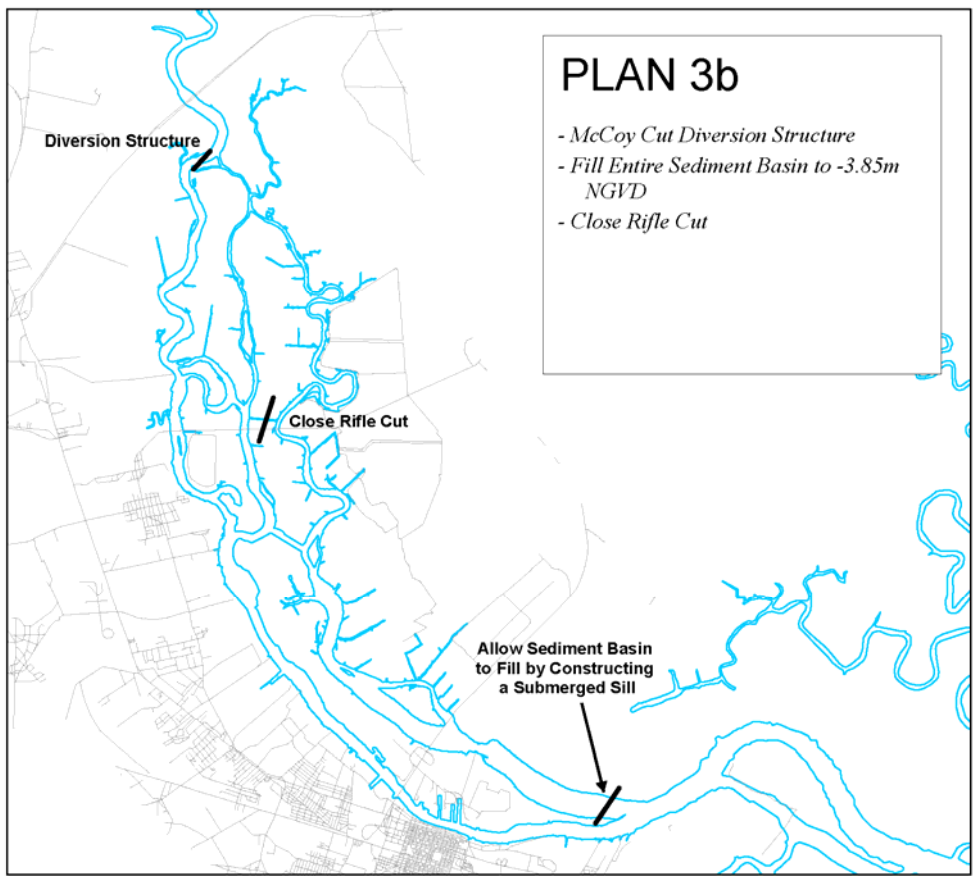
When it was realized that Plan 6 and 7 again did not provide complete mitigation for the deepening impacts, in particular for the tidal freshwater marshes, additional measures were evaluated. Again, building on the features laid out in the most promising plan evaluated to this point, Mitigation Plan 3. Plans 3a, 3b and 3c are described in Figure 4.

Figure 4. *Mitigation Plan 3a, 3b and 3c*

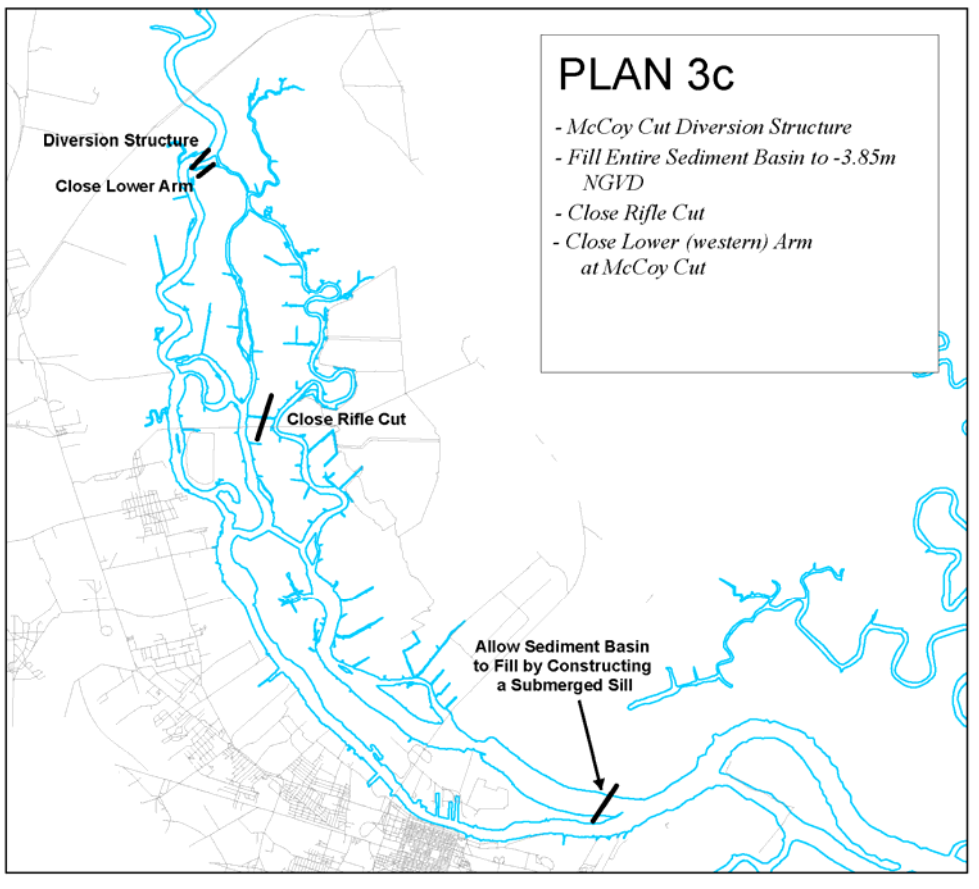
Plan 3a: Plan 3a includes the mitigation feature of closing the lower (western) arm at McCoys Cut. This cut is approximately 750m long where McCoy Cut is only 250m long. The preferential tidal flowpath from Front River to access the junction of McCoy Cut and the lower arm would be through McCoy Cut, because of the shorter distance for the water to have to travel. By closing this lower arm, the flow coming in McCoy Cut from Front River will not have the opportunity to exit the Back River System until points further downstream. The changes made to the cut will most likely have a more localized effect in the vicinity of McCoy Cut. Because the arm is shallow, narrow and long, the benefits from its closure will not likely translate great distances downstream on Little Back River and Middle River.



Plan 3b: Plan 3b has the same features of Plan 3, but excluding the deepening on McCoy Cut, Little Back and Middle River. During the planning process many different diversion structure sizes and channel lengths and depths on the upper reaches of Middle and Little Back Rivers were evaluated. The channel deepening described first in Plan 1 had the greatest potential to provide benefits. However, excluding the channel deepening in this area in combination with the other features described in Plan 3 was a combination that could still have great benefit without the added cost.



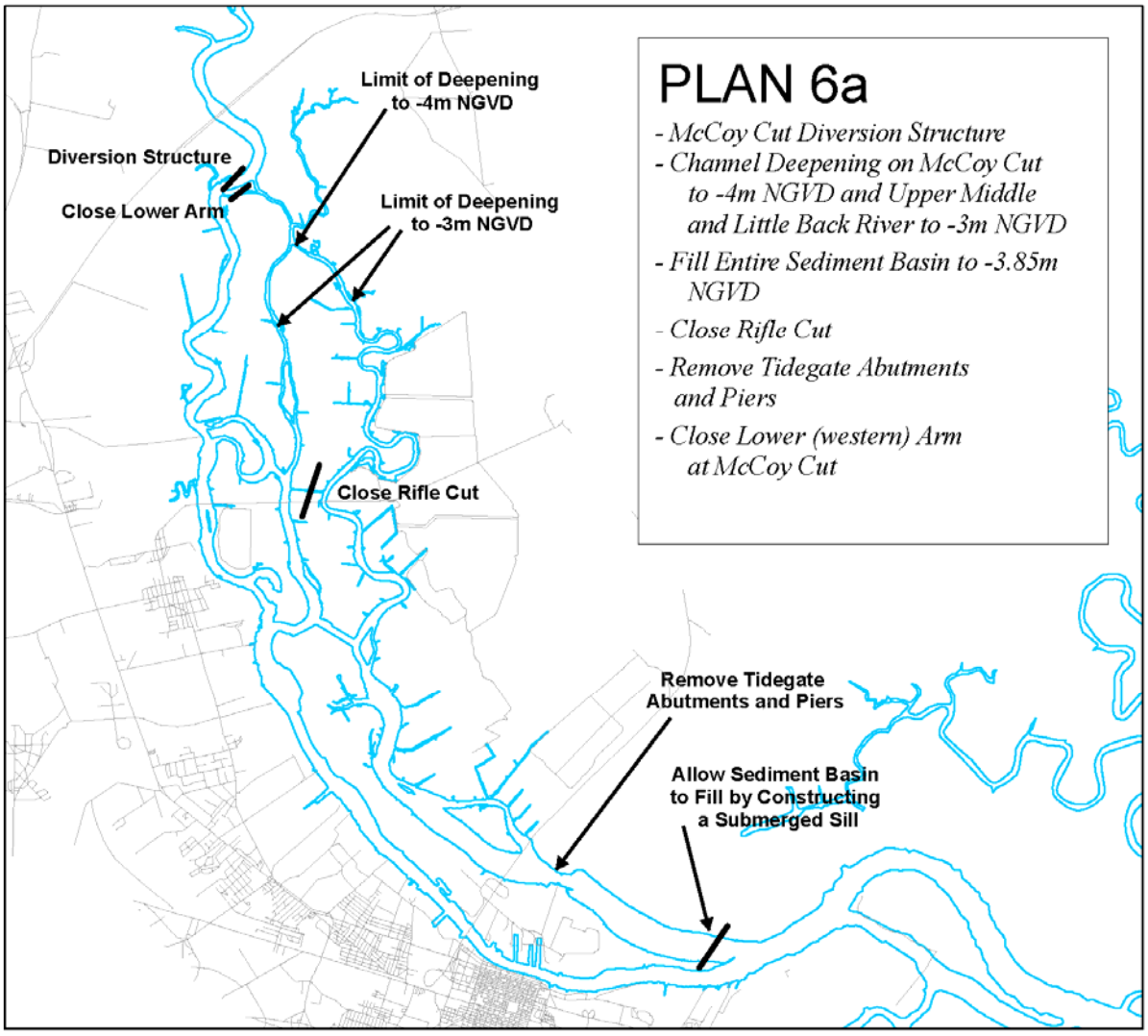
Plan 3c: Plan 3c is a combination of the two features modified in Plans 3a and 3b. Plan 3c has the diversion structure on Front River, the lower (western) arm at McCoy Cut closed, Rifle Cut closed and the Sediment Basin filled. This plan evaluates the necessity of deepening McCoy Cut and the upper reaches of Middle and Little Back with the implementation of the lower arm closed.



In addition to the benefits gained in impact reduction through implementation of Plan 3, Plan 6 also shows a great deal of potential. However, Plan 6 does not provide full mitigation for the impacts from harbor deepening. In an effort to reduce the impacts to zero, additional features were evaluated building on Mitigation Plan 6. The two additional Plans 6a and 6b are presented below.

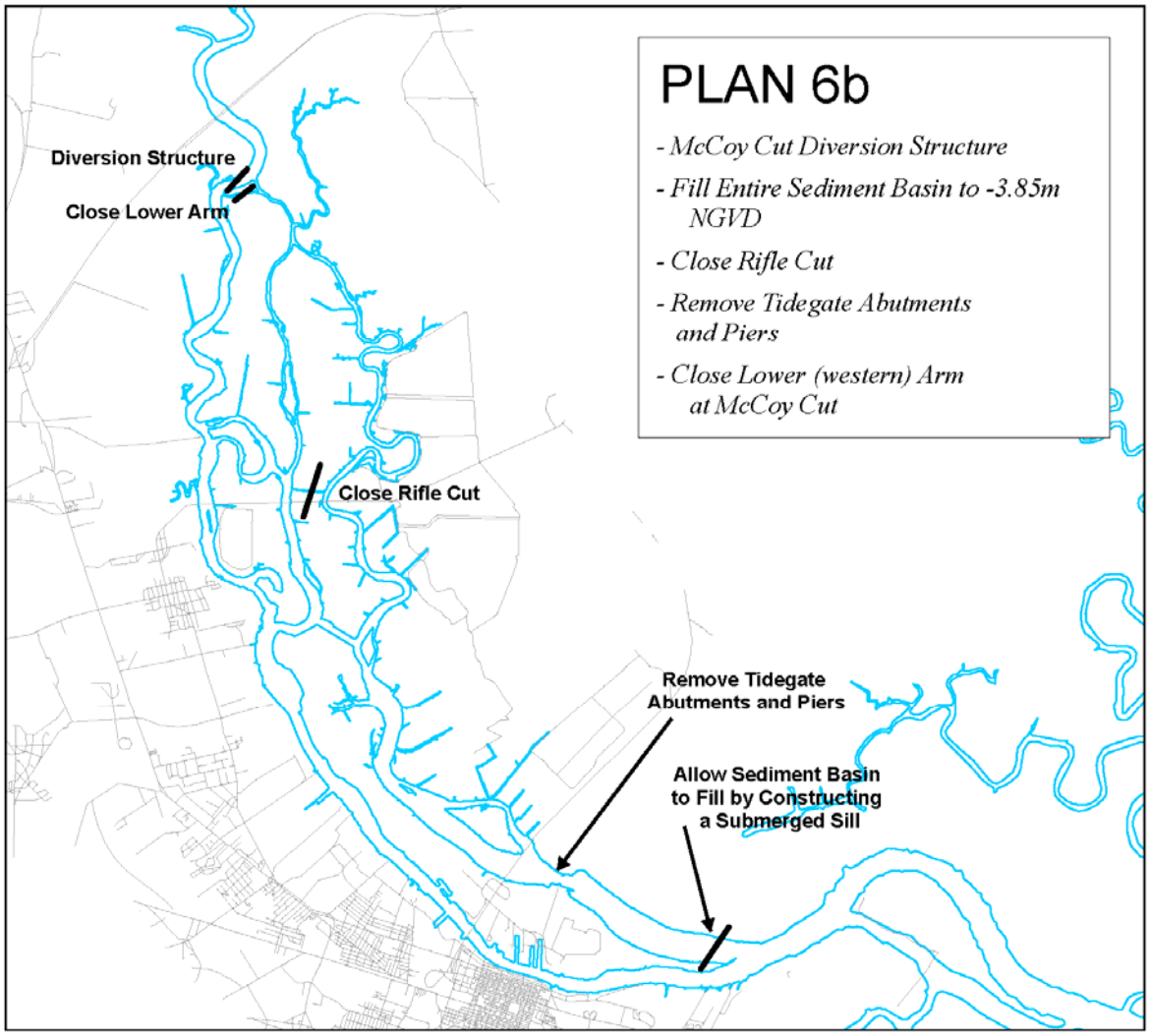
Plan 6a: Mitigation Plan 6a has the same features as Plan 6, diversion structure on Front River, channel deepening on McCoy Cut, upper Middle and Little Back Rivers, Rifle Cut closed, the Sediment Basin filled, the tidegate abutments and piers removed, plus one additional feature closing the lower (western) arm at McCoy Cut. This plan maximizes the potential for additional freshwater flows to enter the Back River System at McCoy Cut and flow downstream through Middle, Back and Little Back Rivers. It also has features that will limit salt water intrusion through the sediment basin into Back River.

Figure 6. *Mitigation Plan 6a*



Plan 6b: Mitigation Plan 6b has the same features as Plan 6, except for channel deepening on McCoy Cut, upper Middle and Little Back Rivers. Also, one feature is added, closing the lower (western) arm at McCoy Cut. This plan is very similar to Plan 6a and allows for isolation of one of the mitigation features to determine its effectiveness. The feature that 6a includes and 6b excludes is channel deepening on McCoy Cut, upper Middle and Little Back Rivers

Figure 7. *Mitigation Plan 6b*

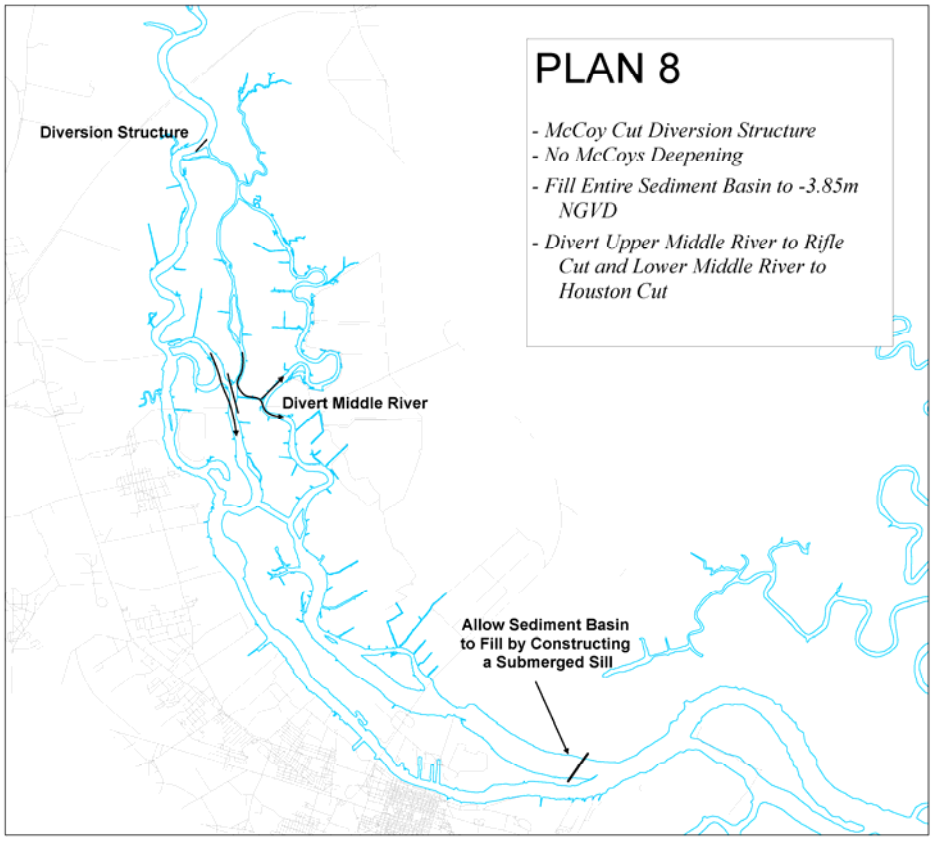


Ineffective Plans/Features

During the screening process several mitigation features were proposed and then tested with the model. The screening process allowed for features to be evaluated subjectively with quantitative output to determine their effectiveness. Many features and combinations of features were examined before the final mitigation plans were formed. The screening process also allowed time to determine the most effective channel geometry for deepening, widening, and filling associated with many of the features. Greater detail about the selection process for the mitigation plans can be found in the main report document for this project.

One additional plan that was evaluated but largely excluded from the reporting process is Plan 8. See Figure 8. Plan 8 includes a diversion structure on Front River, filling the sediment basin, and diverting Middle River. Diverting of Middle River in this plan differs greatly from that described in Plans 4 and 5. In Plan 8 the lower portion of Middle River would be routed through Houston Cut and the upper portion of Steamboat River and the upper portion of Middle River would be routed through Rifle Cut. After an initial evaluation, Plan 8 was found to cause too great an impact on the tidal prism especially within the Back River System. For the same reasons mentioned above in discussion of the decision between Plan 3 and 5, Plan 8 was excluded from further analysis. It is included here to document that it was evaluated and considered as plan to mitigate the impacts due to deepening the navigation channel, but along with many of the other mitigation features and combinations screened, it was found to be ineffective.

Figure 8. *Mitigation Plan 8*



Output

Due to the fact that the decision making process required large volumes of information disseminated during the mitigation planning, the output was reported to the team as it was developed. As a result, the output was issued in seemingly unorganized bits and pieces. Fortunately, we have catalogued and complied all of the different pieces here in this report. See Table 1.

Table 1. *Mitigation Plan Evaluation Reports*

Title	Contents	Date
Wetland/Marsh Mitigation Plan Evaluation	Evaluation of Mitigation **Plans 1 – 5** for salinity impacts under 4 different flow scenarios and 4 different navigation channel depths.	*April 2007*
Savannah Harbor Expansion Project Evaluation of Marsh/Wetland Impacts with Additional Mitigation Plans	Evaluation of Mitigation **Plans 3a, 3b, 3c, 6 and 6b** under one flow scenario and three different navigation channel depths.	*August 2007*
Savannah Harbor Expansion Project Evaluation of Marsh/Wetland Impacts Plan 6a ONLY	Evaluation of Mitigation **Plan 6a** under one flow scenario and three different navigation channel depths.	*August 2007*
Savannah Harbor Expansion Project Evaluation of Marsh/Wetland Impacts Plan 7 ONLY	Evaluation of Mitigation **Plan 7** under one flow scenario and two different navigation channel depths.	*October 2007*

Results

The results for each Mitigation Plans outlined above can be found in the reports listed in the Table 1. Please see each individual report for details on each plans effectiveness. For details on the plan formulation process and reasons for choosing the selected mitigation plan please see the main report document for this project.

Wetland/Marsh Mitigation Plan Evaluation

April 2007

Savannah Harbor Expansion Project
Wetland/Marsh Mitigation Plan Evaluation

MARSH Acreages Impacted ONLY

Deepening Only
No Mitigation Options

		Acreages Negatively Impacted (fresh to salt)		Acreages Postively Impacted (salt to fresh)		Net Impact (net negative), net postive	
		50% Exceedance	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*
Basic Evaluation 1997- Existing Sea Level	*44-ft*	1633.2	0	0	0	(1633.2)	0.0
	45-ft	1633.2	0	0	0	(1633.2)	0.0
	46-ft	1633.2	0	0	0	(1633.2)	0.0
	48-ft	1932.2	299	0	0	(1932.2)	(299.0)
Sensitivity Analysis #1 2001- Existing Sea Level	*44-ft*	469.2	494.2	0	0	(469.2)	(494.2)
	45-ft	768.2	494.2	0	0	(768.2)	(494.2)
	46-ft	768.2	494.2	0	0	(768.2)	(494.2)
	48-ft	768.2	494.2	0	0	(768.2)	(494.2)
Sensitivity Analysis #2A 1997- 25cm Sea Level Rise	*Existing*	1287.4	299	0	0	(1287.4)	(299.0)
	44-ft	1932.2	299	0	0	(1932.2)	(299.0)
	45-ft	1932.2	299	0	0	(1932.2)	(299.0)
	46-ft	1932.2	299	0	0	(1932.2)	(299.0)
	48-ft	1932.2	299	0	0	(1932.2)	(299.0)
Sensitivity Analysis #2B 1997- 50cm Sea Level Rise	*Existing*	1932.2	299	0	0	(1932.2)	(299.0)
	44-ft	1932.2	1210.8	0	0	(1932.2)	(1210.8)
	45-ft	1932.2	1457.9	0	0	(1932.2)	(1457.9)
	46-ft	1932.2	1457.9	0	0	(1932.2)	(1457.9)
	48-ft	1932.2	1457.9	0	0	(1932.2)	(1457.9)

1997 Conditions- Average Historic Flow, Temperature, and Tidal Conditons- March through October 1997
2001 Conditions- Historic Low Flow, Average Temperature and Tidal Conditons- March through October 1997

Savannah Harbor Expansion Project
Wetland/Marsh Mitigation Plan Evaluation

MARSH Acreages Impacted ONLY

Plan 1

-McCoy Cut Diversion Structure;

-Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD

		Acreages Negatively Impacted (fresh to salt)		Acreages Postively Impacted (salt to fresh)		Net Impact (net negative), net postive	
		50% Exceedance	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*
Basic Evaluation 1997- Existing Sea Level	*44-ft*	988.4	0	0	0	(988.4)	0.0
	45-ft	988.4	0	0	0	(988.4)	0.0
	46-ft	988.4	0	0	0	(988.4)	0.0
	48-ft	988.4	0	0	0	(988.4)	0.0
Sensitivity Analysis #1 2001- Existing Sea Level	*44-ft*	469.2	0	0	664.7	(469.2)	664.7
	45-ft	469.2	0	0	664.7	(469.2)	664.7
	46-ft	469.2	0	0	664.7	(469.2)	664.7
	48-ft	469.2	0	0	417.6	(469.2)	417.6
Sensitivity Analysis #2A 1997- 25cm Sea Level Rise	*44-ft*	988.4	0	0	0	(988.4)	0.0
	45-ft	1287.4	0	0	0	(1287.4)	0.0
	46-ft	1287.4	0	0	0	(1287.4)	0.0
	48-ft	1633.2	299	0	0	(1633.2)	(299.0)
Sensitivity Analysis #2B 1997- 50cm Sea Level Rise	*44-ft*	1287.4	299	0	0	(1287.4)	(299.0)
	45-ft	1633.2	299	0	0	(1633.2)	(299.0)
	46-ft	1633.2	299	0	0	(1633.2)	(299.0)
	48-ft	1932.2	299	0	0	(1932.2)	(299.0)

1997 Conditions- Average Historic Flow, Temperature, and Tidal Conditons- March through October 1997

2001 Conditions- Historic Low Flow, Average Temperature and Tidal Conditons- March through October 1997

Savannah Harbor Expansion Project
Wetland/Marsh Mitigation Plan Evaluation

MARSH Acreages Impacted ONLY

Plan 2

-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD

		Acreages Negatively Impacted (fresh to salt)		Acreages Postively Impacted (salt to fresh)		Net Impact (net negative), net postive	
		50% Exceedance	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*
Basic Evaluation 1997- Existing Sea Level	*44-ft*	988.4	0	0	0	(988.4)	0.0
	45-ft	988.4	0	0	0	(988.4)	0.0
	46-ft	988.4	0	0	0	(988.4)	0.0
	48-ft	988.4	0	0	0	(988.4)	0.0
Sensitivity Analysis #1 2001- Existing Sea Level	*44-ft*	469.2	0	0	664.7	(469.2)	664.7
	45-ft	469.2	0	0	664.7	(469.2)	664.7
	46-ft	469.2	0	0	417.6	(469.2)	417.6
	48-ft	469.2	0	0	0	(469.2)	0.0
Sensitivity Analysis #2A 1997- 25cm Sea Level Rise	*44-ft*	988.4	0	0	0	(988.4)	0.0
	45-ft	988.4	0	0	0	(988.4)	0.0
	46-ft	1287.4	0	0	0	(1287.4)	0.0
	48-ft	1633.2	299	0	0	(1633.2)	(299.0)
Sensitivity Analysis #2B 1997- 50cm Sea Level Rise	*44-ft*	1287.4	299	0	0	(1287.4)	(299.0)
	45-ft	1633.2	299	0	0	(1633.2)	(299.0)
	46-ft	1633.2	299	0	0	(1633.2)	(299.0)
	48-ft	1932.2	299	0	0	(1932.2)	(299.0)

1997 Conditions- Average Historic Flow, Temperature, and Tidal Conditons- March through October 1997
2001 Conditions- Historic Low Flow, Average Temperature and Tidal Conditons- March through October 1997

Savannah Harbor Expansion Project
Wetland/Marsh Mitigation Plan Evaluation

MARSH Acreages Impacted ONLY

Plan 3

-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD;
-Rifle Cut Closed

		Acreages Negatively Impacted (fresh to salt)		Acreages Postively Impacted (salt to fresh)		Net Impact (net negative), net postive	
		50% Exceedance	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*
Basic Evaluation 1997- Existing Sea Level	*44-ft*	988.4	0	453	345.8	(535.4)	345.8
	45-ft	988.4	0	453	345.8	(535.4)	345.8
	46-ft	988.4	0	453	345.8	(535.4)	345.8
	48-ft	1287.4	0	453	345.8	(834.4)	345.8
Sensitivity Analysis #1 2001- Existing Sea Level	*44-ft*	469.2	0	345.8	417.6	(123.4)	417.6
	45-ft	469.2	0	345.8	417.6	(123.4)	417.6
	46-ft	469.2	0	345.8	417.6	(123.4)	417.6
	48-ft	768.2	494.2	345.8	0	(422.4)	(494.2)
Sensitivity Analysis #2A 1997- 25cm Sea Level Rise	*44-ft*	1287.4	299	453	345.8	(834.4)	46.8
	45-ft	1287.4	299	453	345.8	(834.4)	46.8
	46-ft	1287.4	299	453	0	(834.4)	(299.0)
	48-ft	2055.6	299	0	0	(2055.6)	(299.0)
Sensitivity Analysis #2B 1997- 50cm Sea Level Rise	*44-ft*	1586.4	299	0	0	(1586.4)	(299.0)
	45-ft	1586.4	299	0	0	(1586.4)	(299.0)
	46-ft	2055.6	299	0	0	(2055.6)	(299.0)
	48-ft	2055.6	299	0	0	(2055.6)	(299.0)

1997 Conditions- Average Historic Flow, Temperature, and Tidal Conditons- March through October 1997
2001 Conditions- Historic Low Flow, Average Temperature and Tidal Conditons- March through October 1997

Savannah Harbor Expansion Project
Wetland/Marsh Mitigation Plan Evaluation

MARSH Acreages Impacted ONLY

Plan 4

-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD;
-Realign Middle River Outlet by Closing Middle River at Front River and Opening New Cut;
-Close Houston Cut

		Acreages Negatively Impacted (fresh to salt)		Acreages Postively Impacted (salt to fresh)		Net Impact (net negative), net postive	
		50% Exceedance	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*
Basic Evaluation 1997- Existing Sea Level	*44-ft*	1334.2	0	210.1	598	(1124.1)	598.0
	45-ft	1334.2	0	0	598	(1334.2)	598.0
	46-ft	1334.2	0	0	598	(1334.2)	598.0
	48-ft	1334.2	0	0	598	(1334.2)	598.0
Sensitivity Analysis #1 2001- Existing Sea Level	*44-ft*	469.2	0	345.8	417.6	(123.4)	417.6
	45-ft	469.2	0	598	716.6	128.8	716.6
	46-ft	469.2	0	598	0	128.8	0.0
	48-ft	469.2	494.2	598	0	128.8	(494.2)
Sensitivity Analysis #2A 1997- 25cm Sea Level Rise	*44-ft*	1334.2	0	0	598	(1334.2)	598.0
	45-ft	1803.4	0	0	598	(1803.4)	598.0
	46-ft	1803.4	0	0	598	(1803.4)	598.0
	48-ft	1803.4	0	0	598	(1803.4)	598.0
Sensitivity Analysis #2B 1997- 50cm Sea Level Rise	*44-ft*	1803.4	0	0	299	(1803.4)	299.0
	45-ft	1803.4	0	0	299	(1803.4)	299.0
	46-ft	1803.4	0	0	299	(1803.4)	299.0
	48-ft	1803.4	0	0	0	(1803.4)	0.0

1997 Conditions- Average Historic Flow, Temperature, and Tidal Conditons- March through October 1997
2001 Conditions- Historic Low Flow, Average Temperature and Tidal Conditons- March through October 1997

Savannah Harbor Expansion Project
Wetland/Marsh Mitigation Plan Evaluation

MARSH Acreages Impacted ONLY

Plan 5

-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD;
-Realign Middle River Outlet by Closing Middle River at Front River and Opening New Cut;
-Close Houston Cut;

		Acreages Negatively Impacted (fresh to salt)		Acreages Postively Impacted (salt to fresh)		Net Impact (net negative), net postive	
		50% Exceedance	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*	*50% Exceedance*	*10% Exceedance*
Basic Evaluation 1997- Existing Sea Level	*44-ft*	988.4	0	663.1	1153.9	(325.3)	1153.9
	45-ft	988.4	0	663.1	1153.9	(325.3)	1153.9
	46-ft	988.4	0	663.1	1153.9	(325.3)	1153.9
	48-ft	988.4	0	663.1	1153.9	(325.3)	1153.9
Sensitivity Analysis #1 2001- Existing Sea Level	*44-ft*	469.2	0	1153.9	1015.6	684.7	1015.6
	45-ft	469.2	494.2	1153.9	598	684.7	103.8
	46-ft	469.2	494.2	1153.9	598	684.7	103.8
	48-ft	469.2	494.2	1153.9	0	684.7	(494.2)
Sensitivity Analysis #2A 1997- 25cm Sea Level Rise	*44-ft*	988.4	0	663.1	1153.9	(325.3)	1153.9
	45-ft	988.4	0	663.1	1153.9	(325.3)	1153.9
	46-ft	988.4	0	663.1	1153.9	(325.3)	1153.9
	48-ft	1457.6	0	663.1	1153.9	(794.5)	1153.9
Sensitivity Analysis #2B 1997- 50cm Sea Level Rise	*44-ft*	988.4	0	663.1	1153.9	(325.3)	1153.9
	45-ft	988.4	0	663.1	1153.9	(325.3)	1153.9
	46-ft	1457.6	0	663.1	808.1	(794.5)	808.1
	48-ft	1457.6	0	663.1	598	(794.5)	598.0

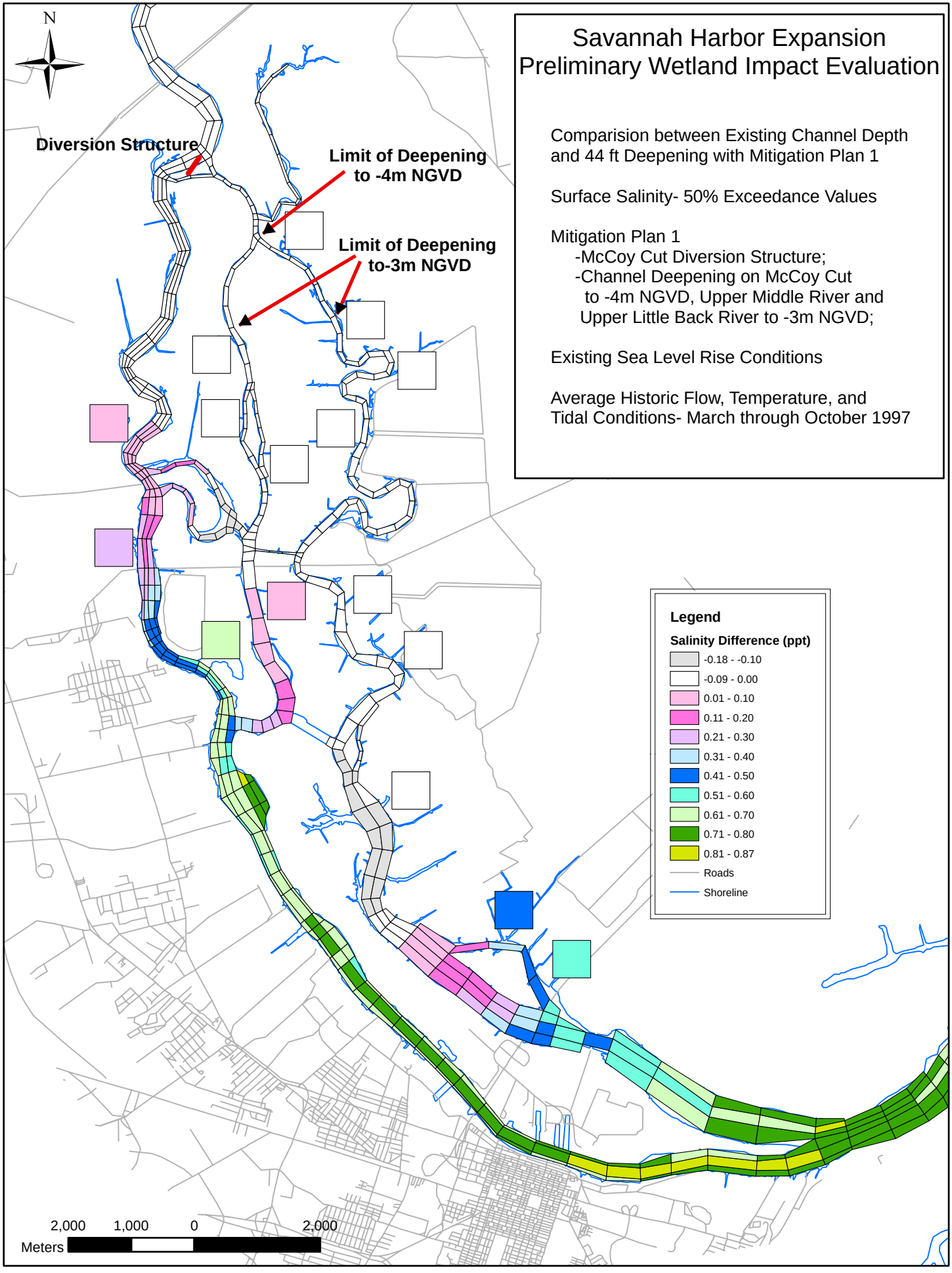
1997 Conditions- Average Historic Flow, Temperature, and Tidal Conditons- March through October 1997
2001 Conditions- Historic Low Flow, Average Temperature and Tidal Conditons- March through October 1997

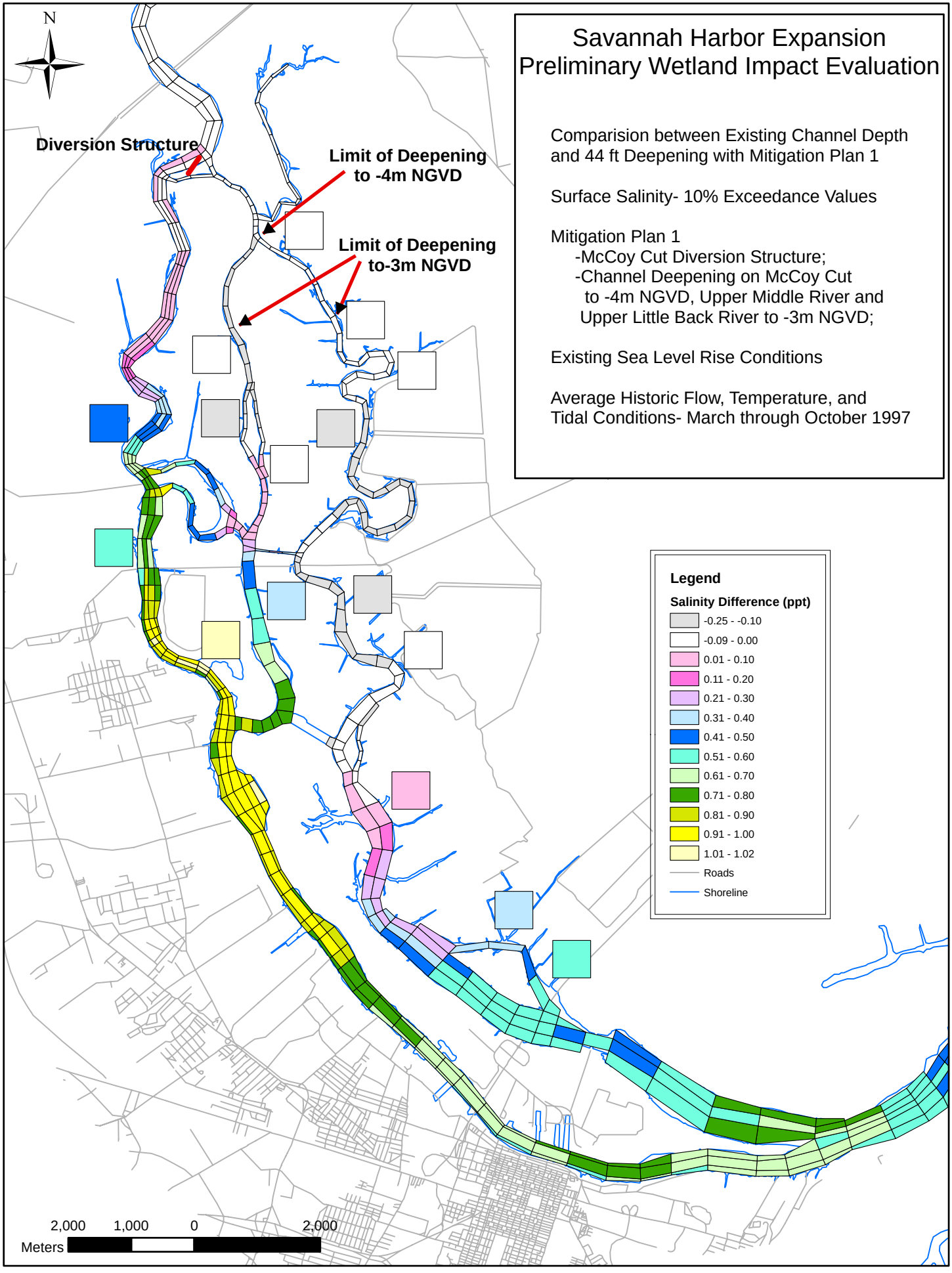
MITIGATION PLAN 1

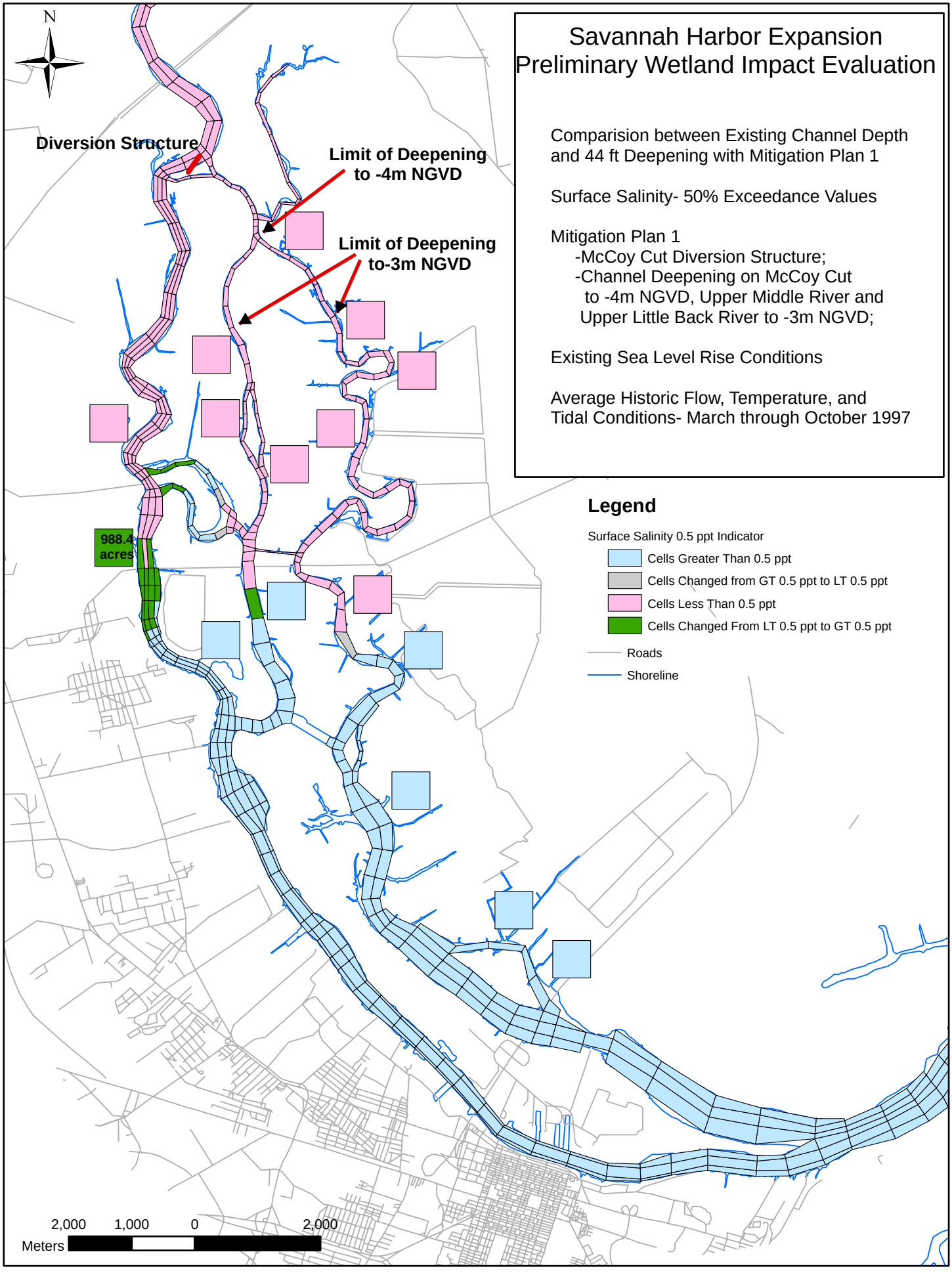
- ***McCoy Cut Diversion Structure***
- ***Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD***

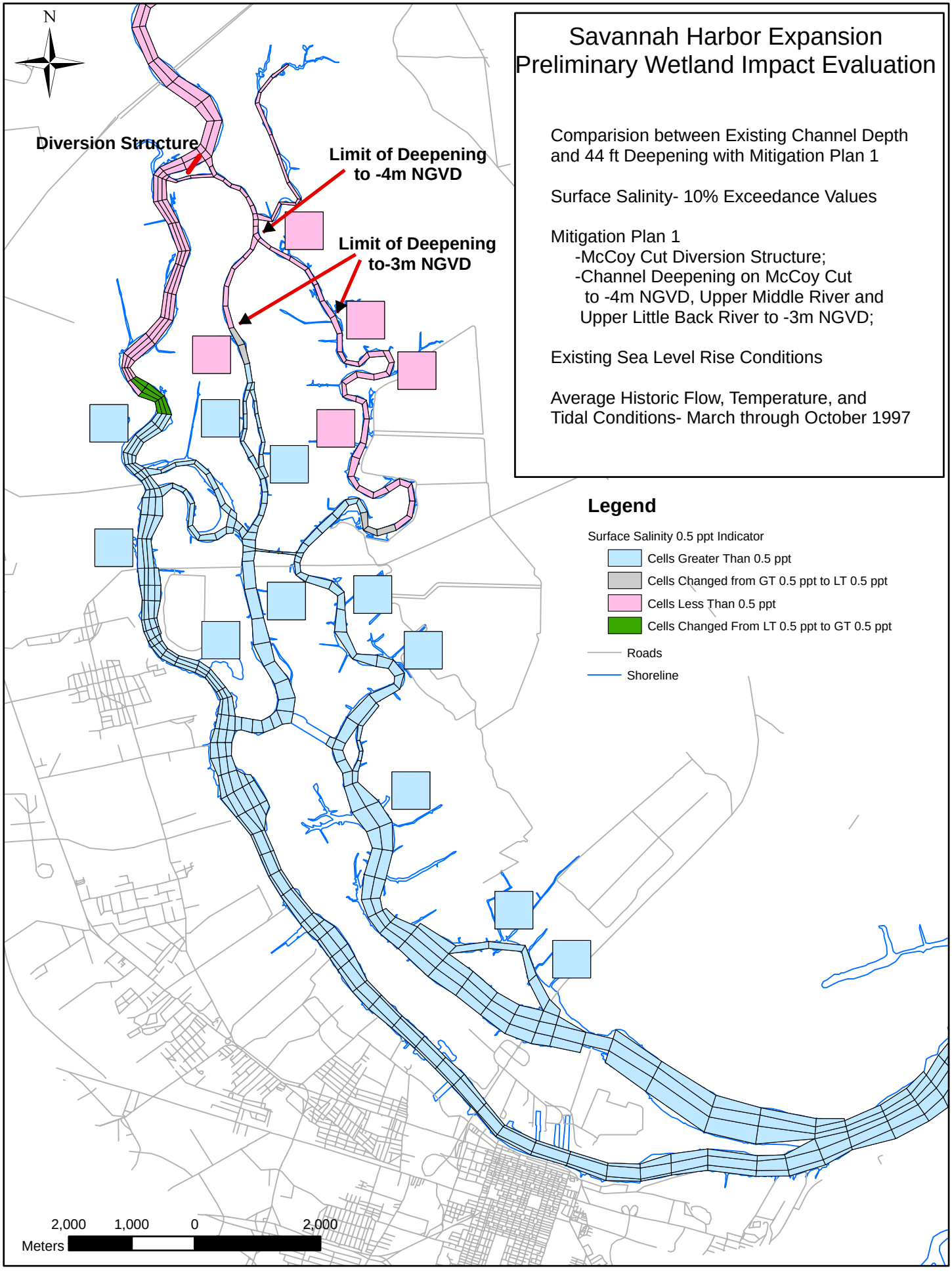
44-ft Deepening

Basic Evaluation

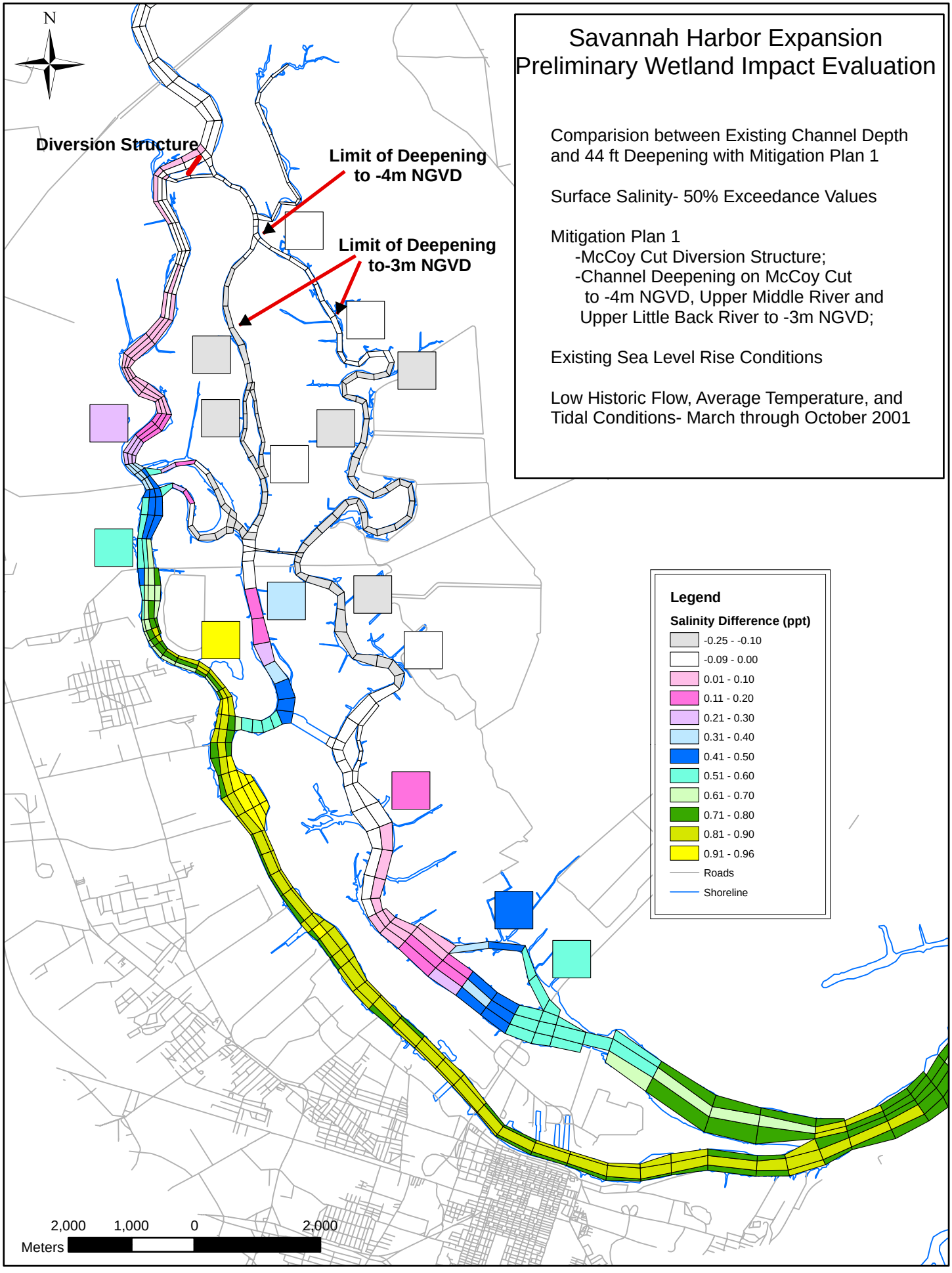

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.18 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.87
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

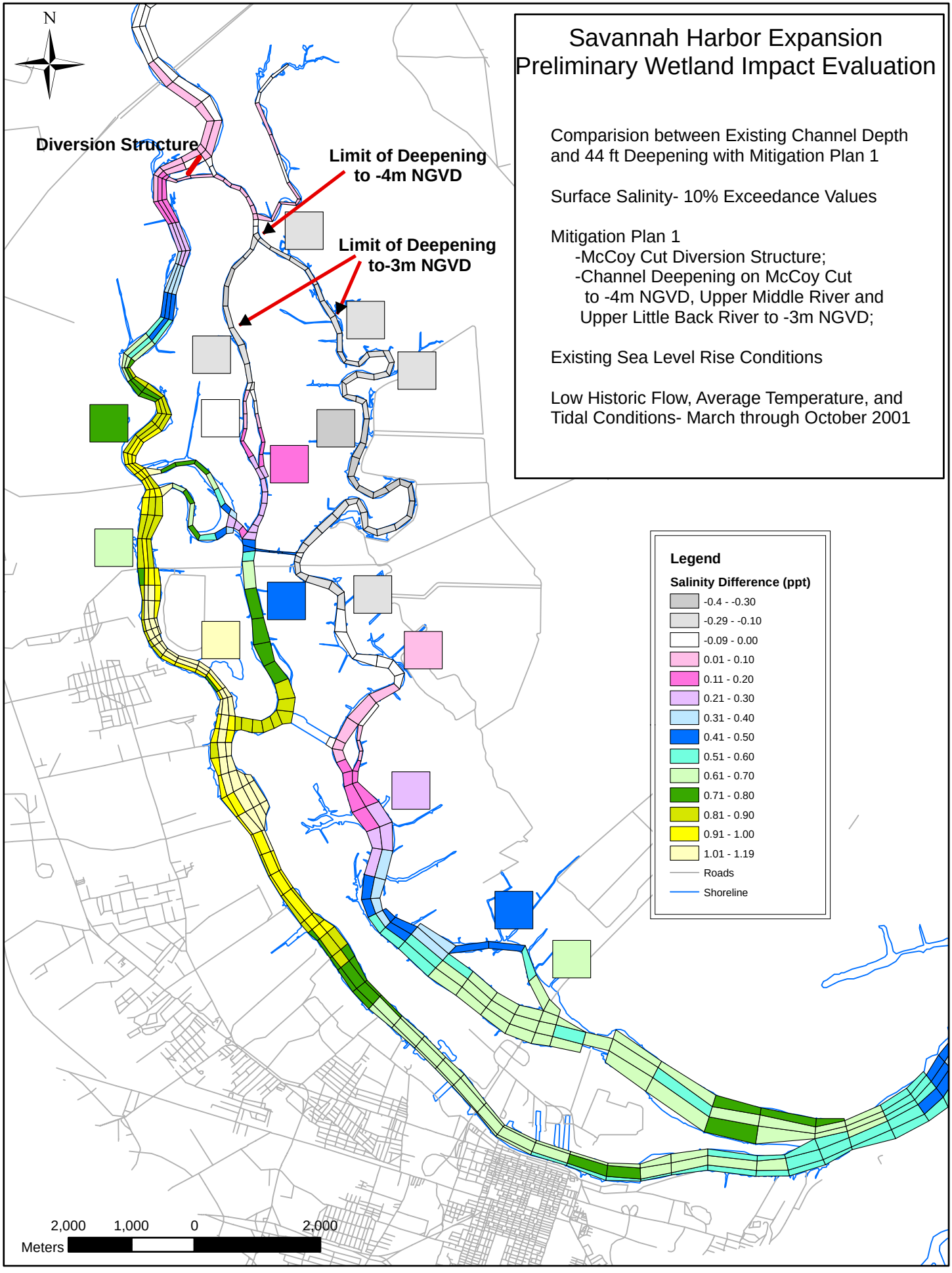

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.25 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.02
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

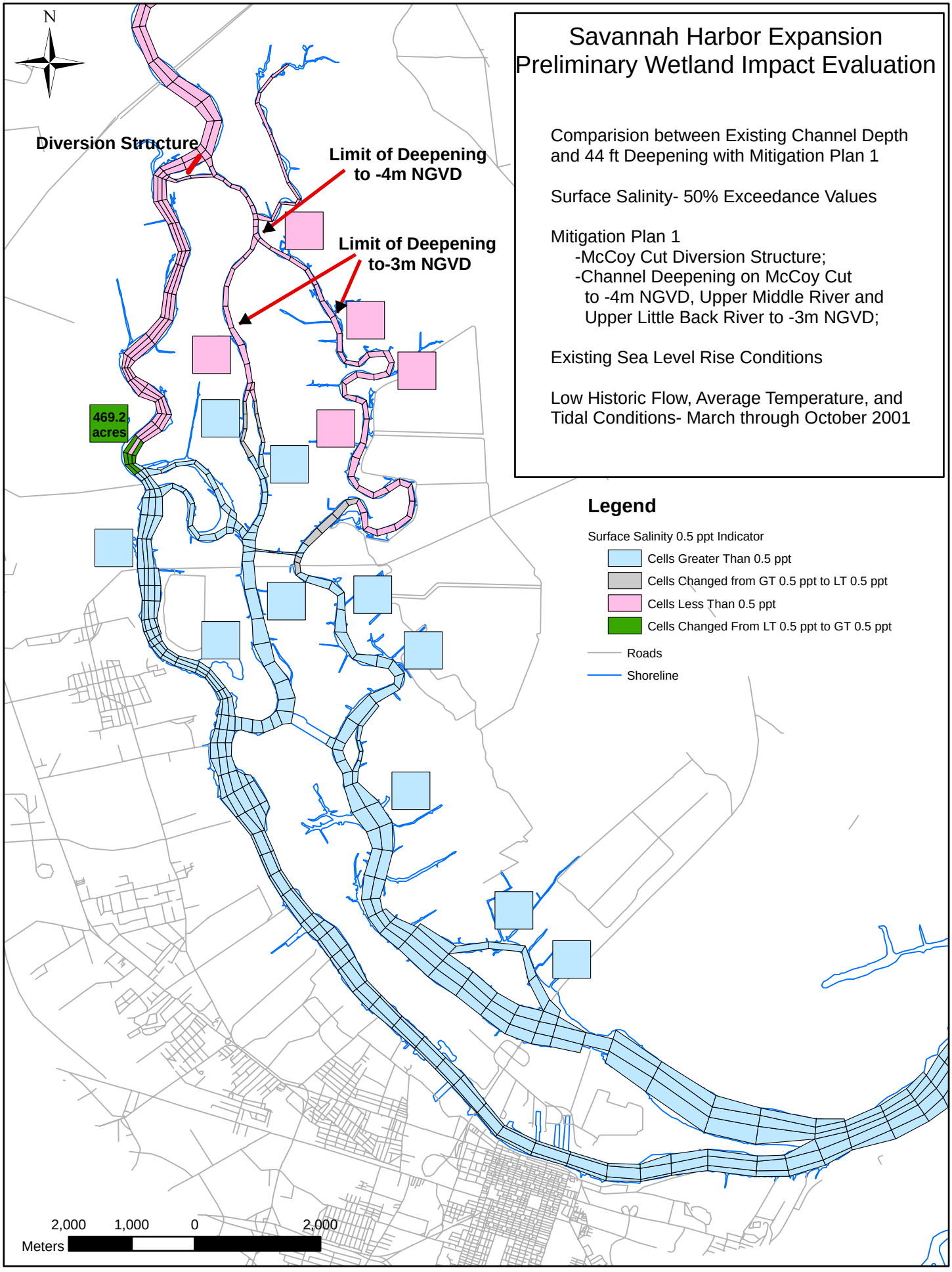

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
988.4 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

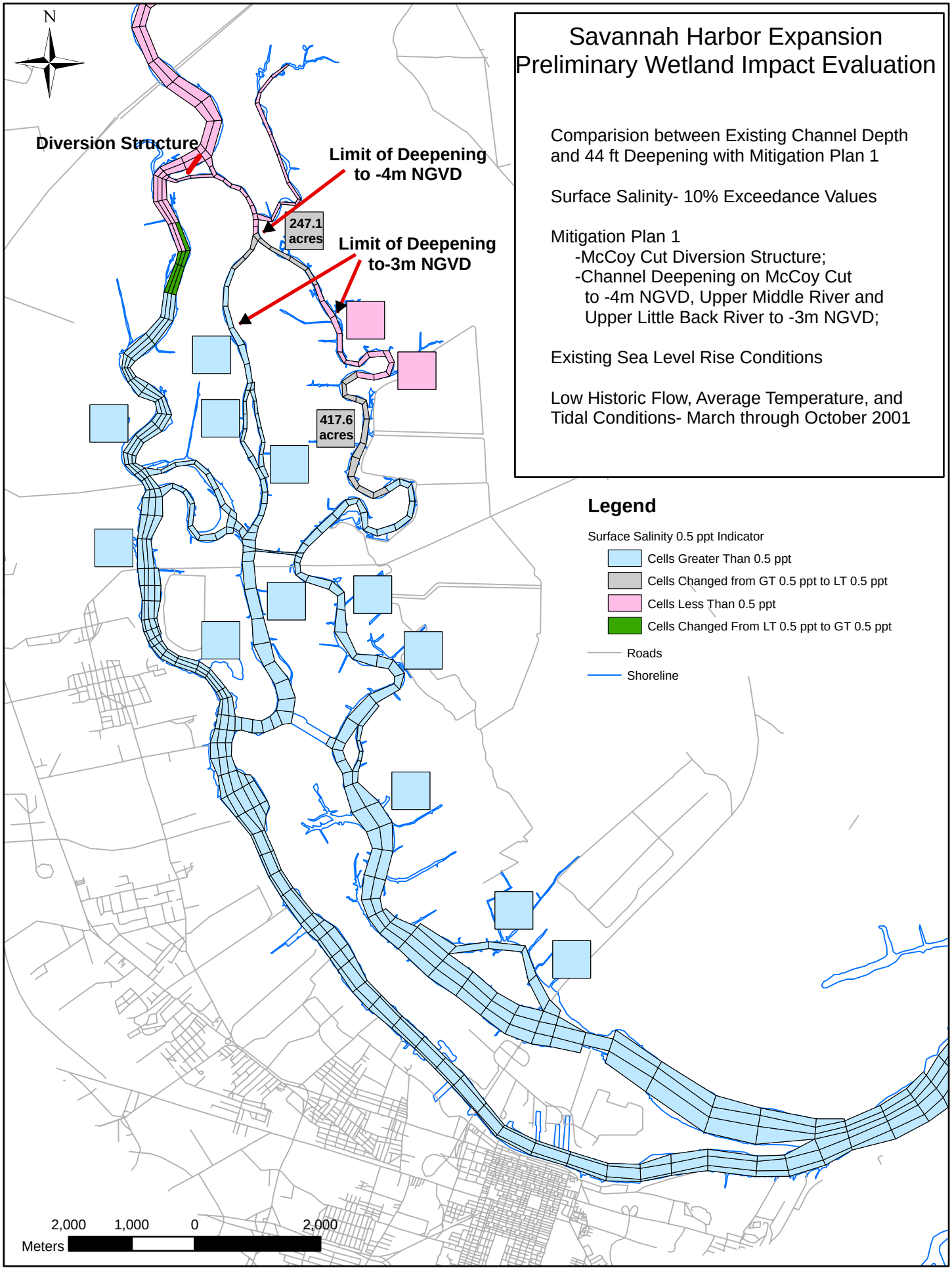

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #1

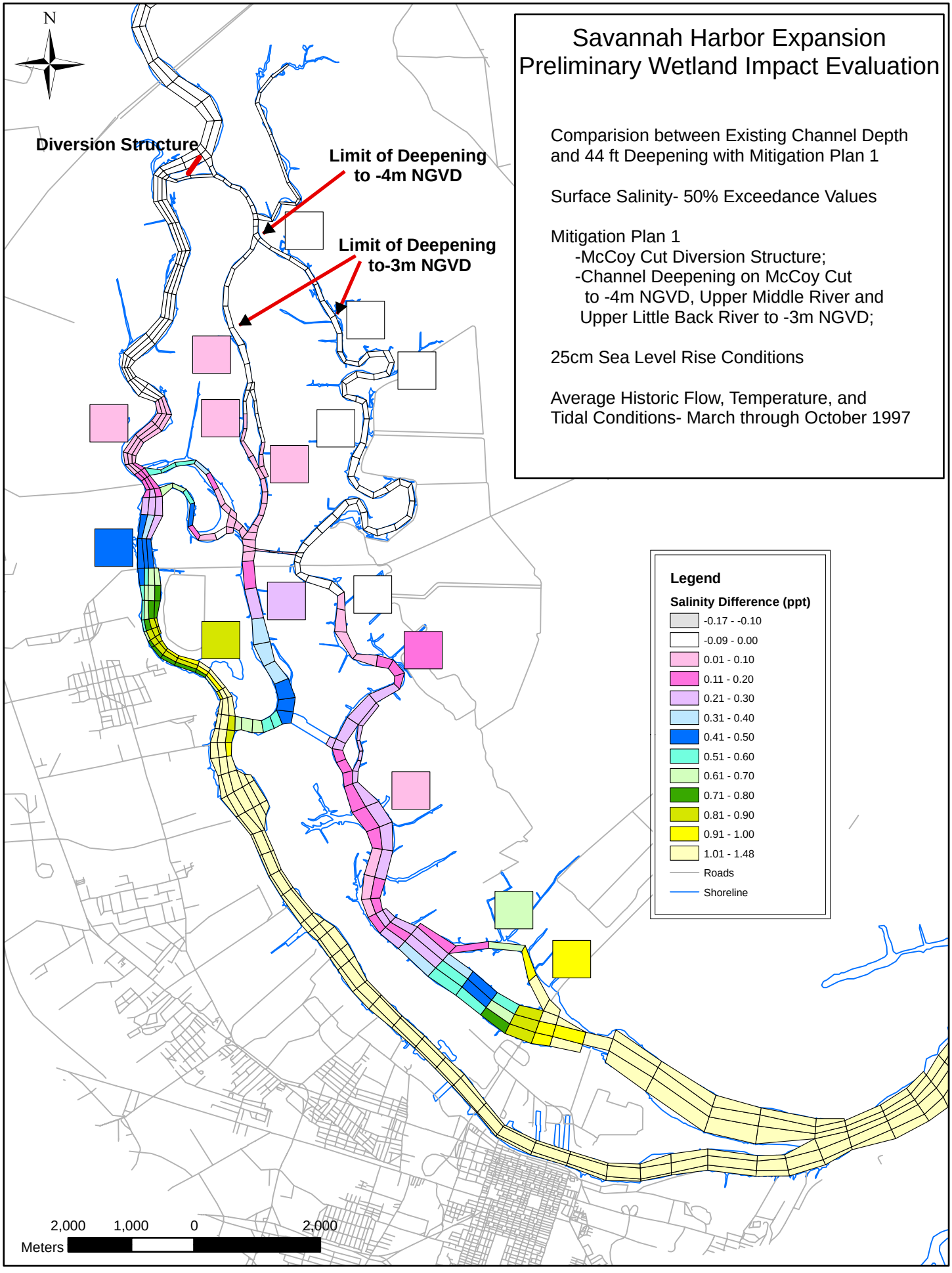

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-0.25 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 0.96
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

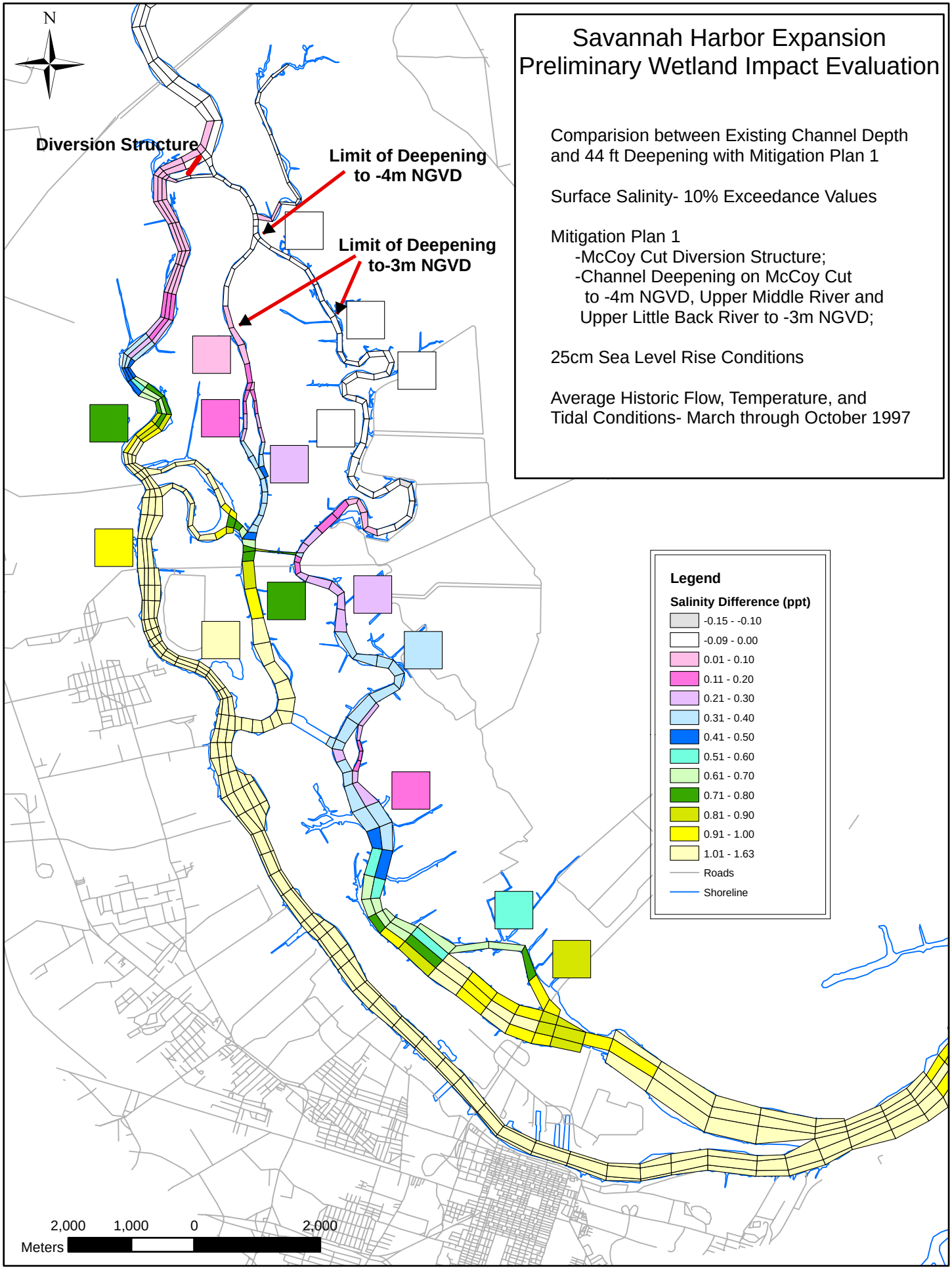

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-0.4 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.19
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

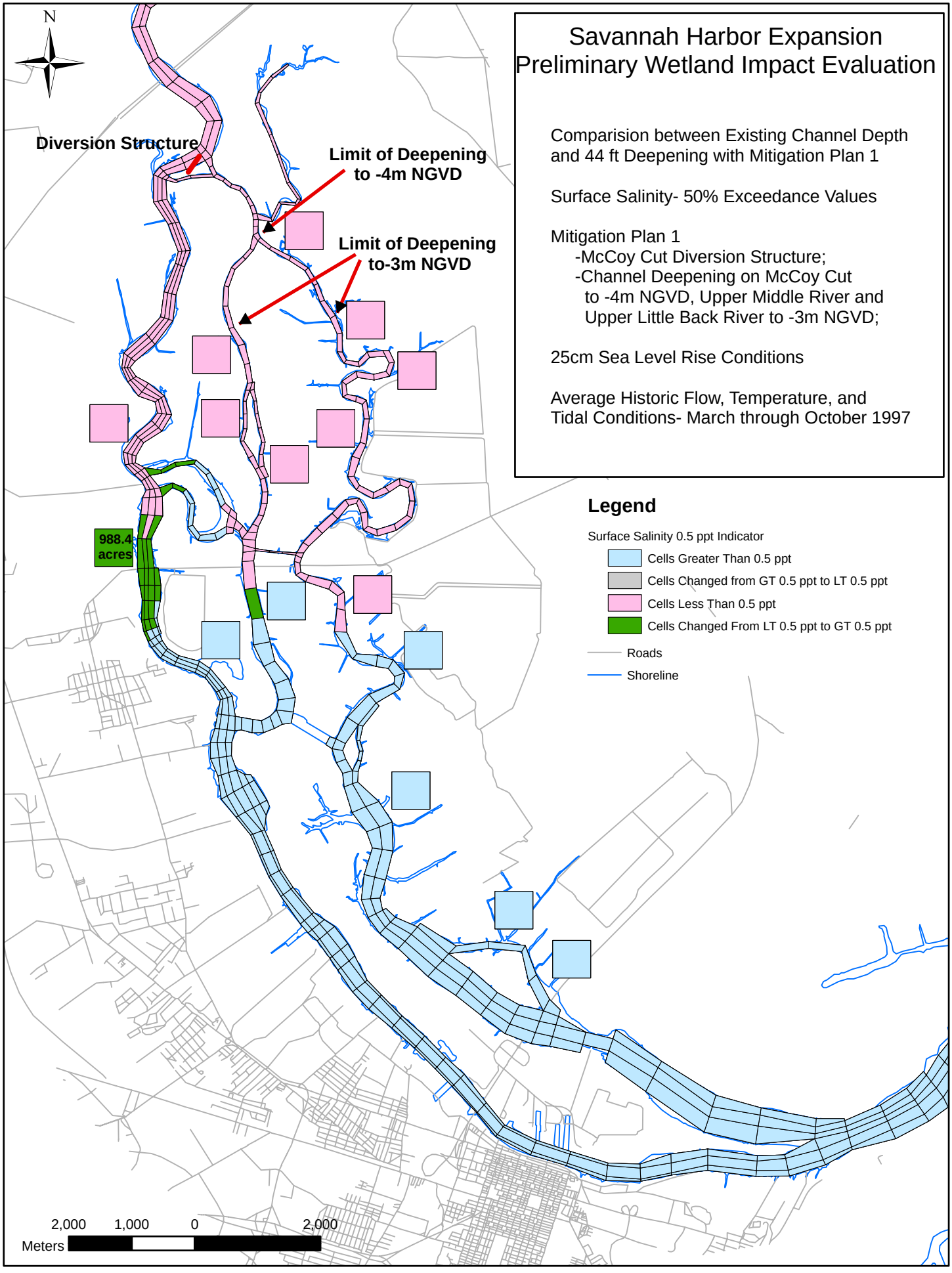

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

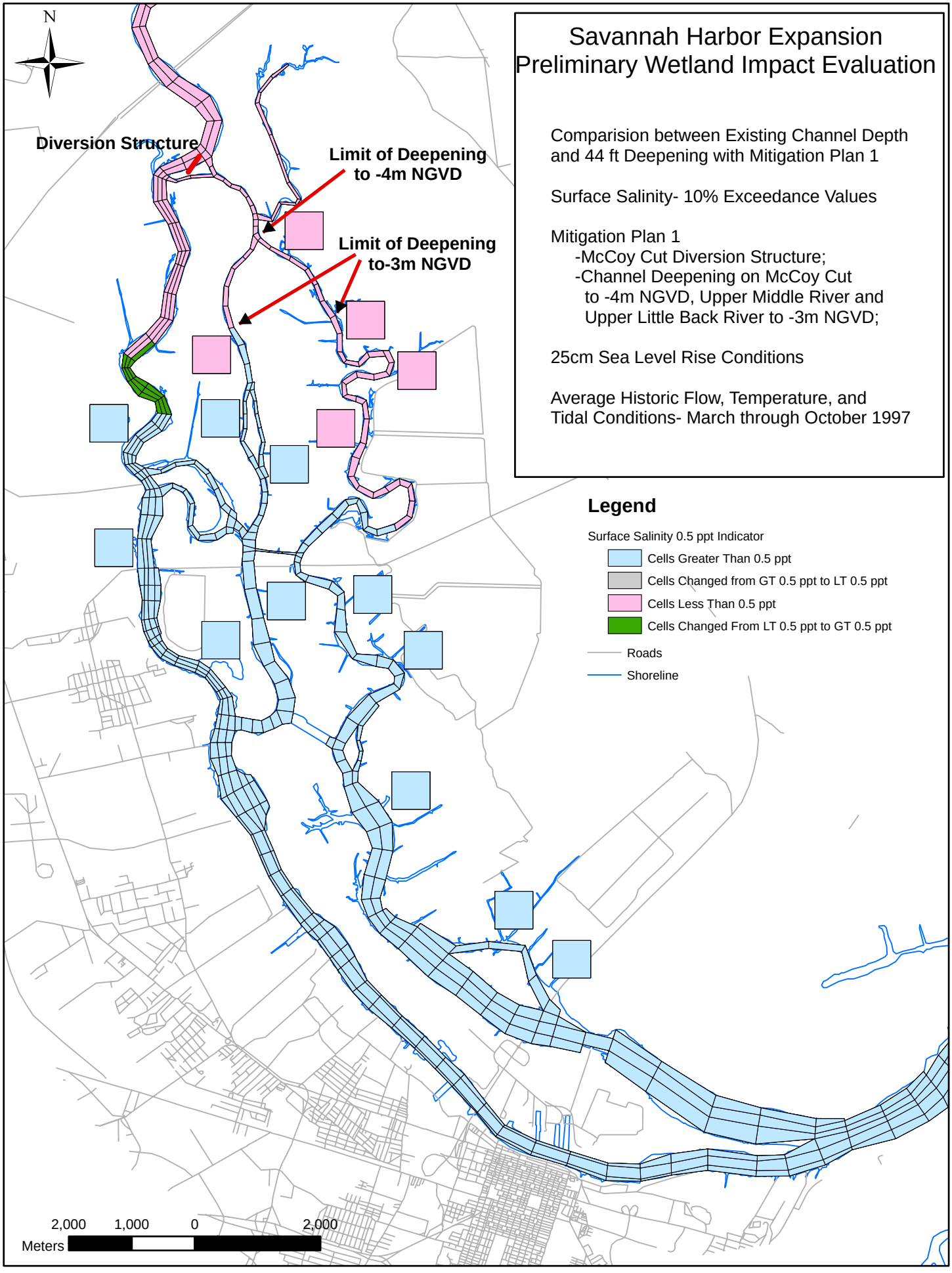

N
Diversion Structure
Limit of Deepening to -4m NGVD
247.1 acres
Limit of Deepening to-3m NGVD
417.6 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2A

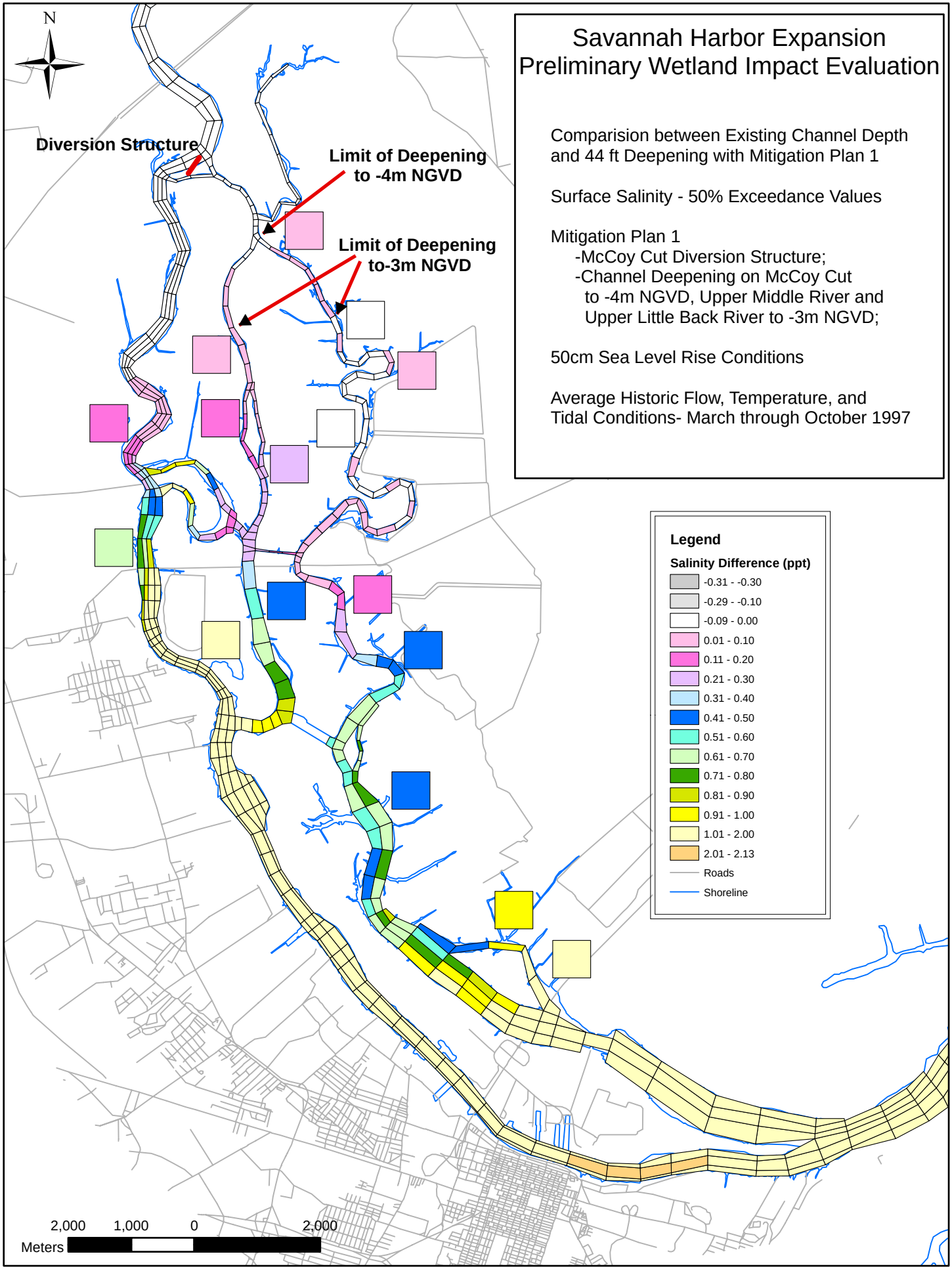

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.17 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.48
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.15 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.63
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
988.4 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2B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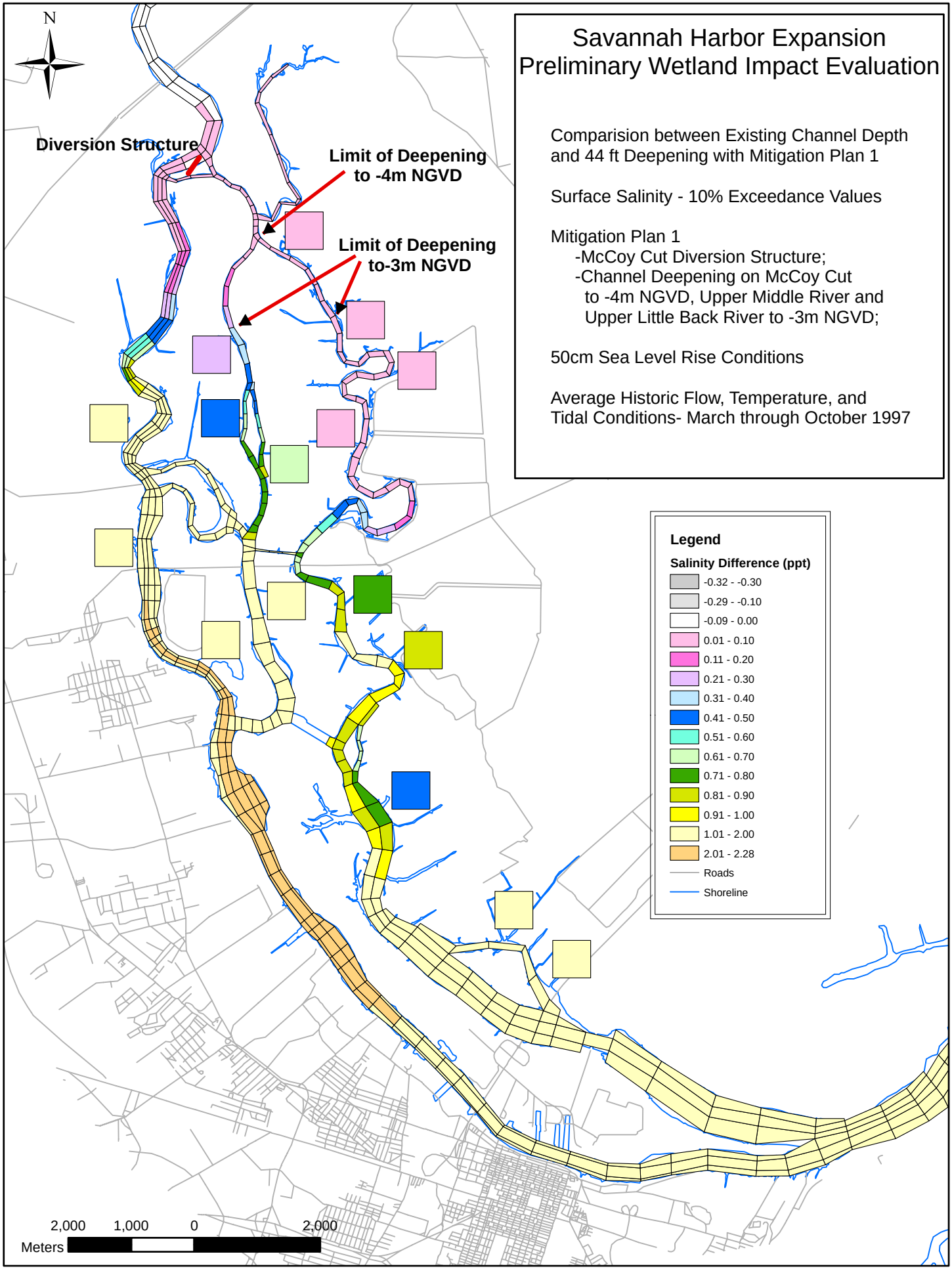
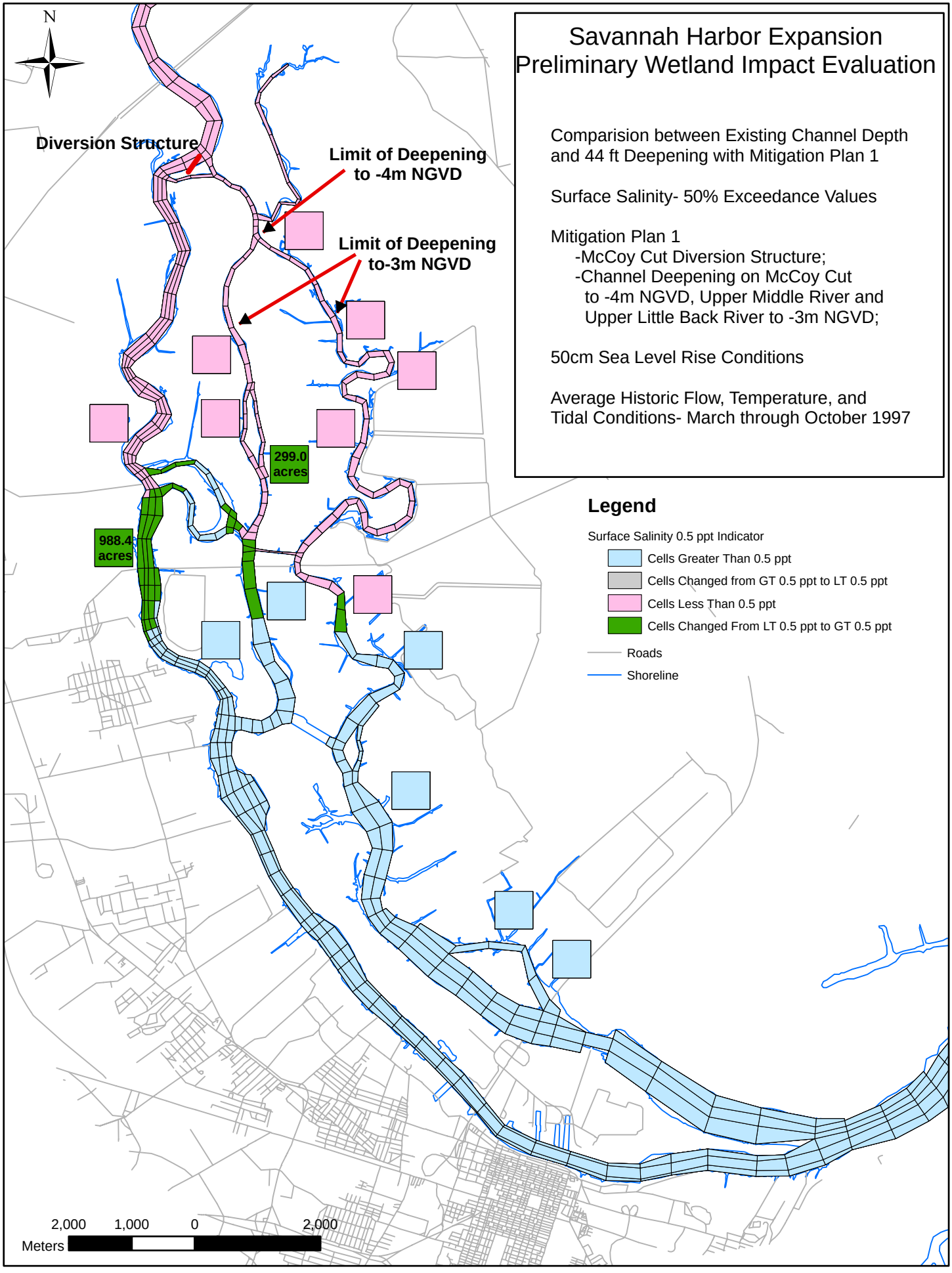
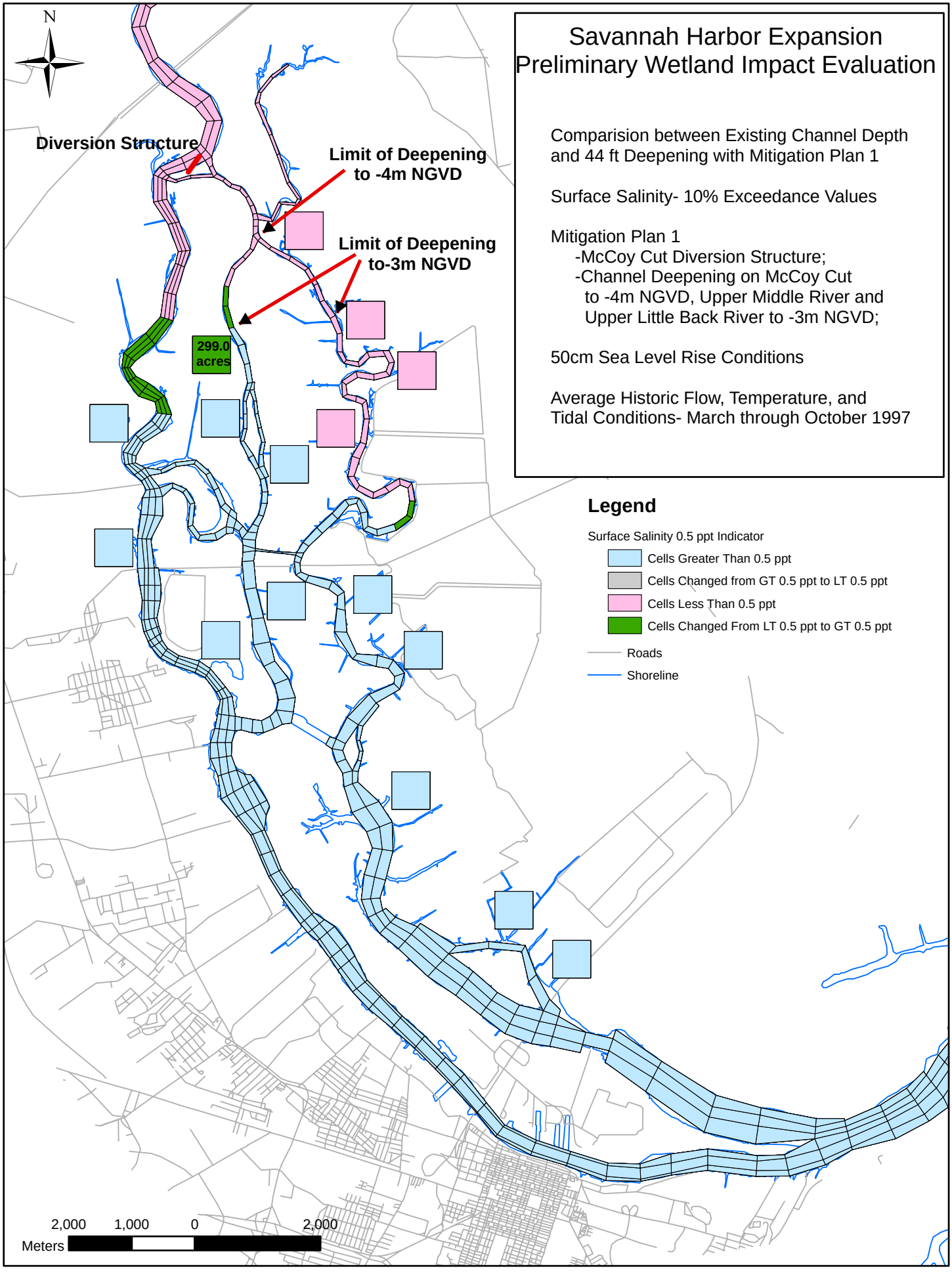
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity - 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.31 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.13
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

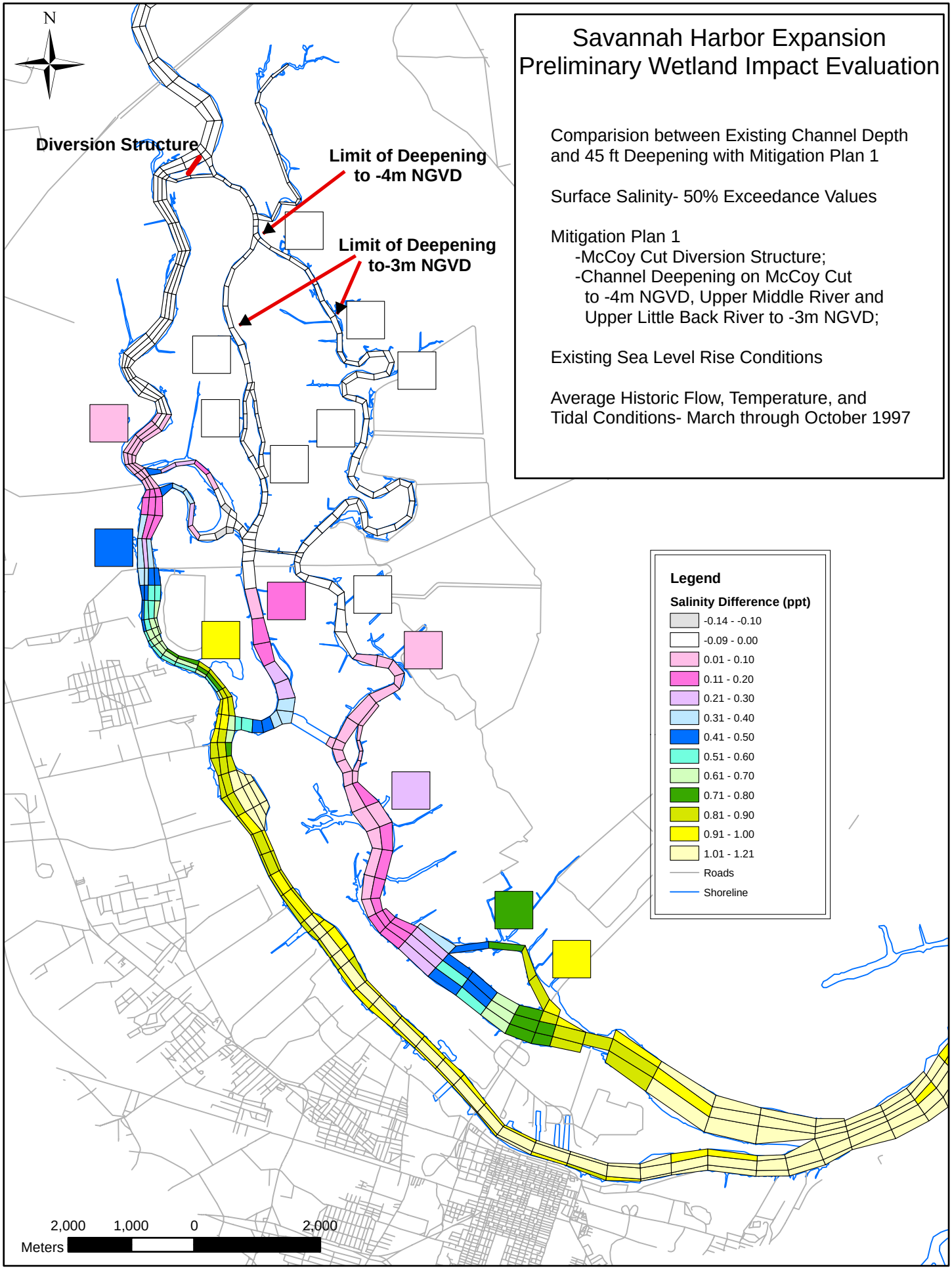

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity - 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.32 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.28
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

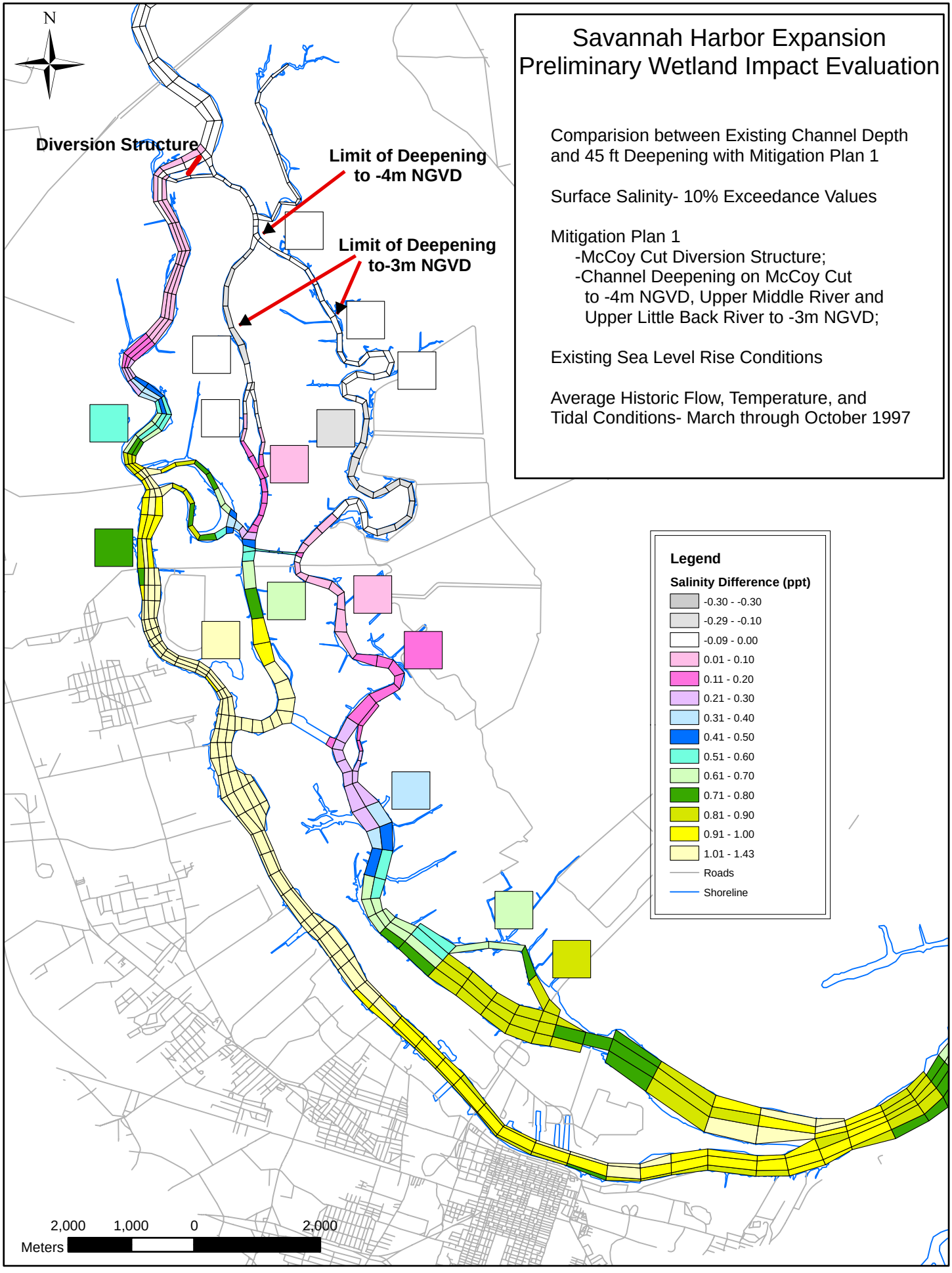

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
988.4 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

45-ft Deepening

Basic Evaluation


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.14 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.21
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.30 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.43
Roads
Shoreline
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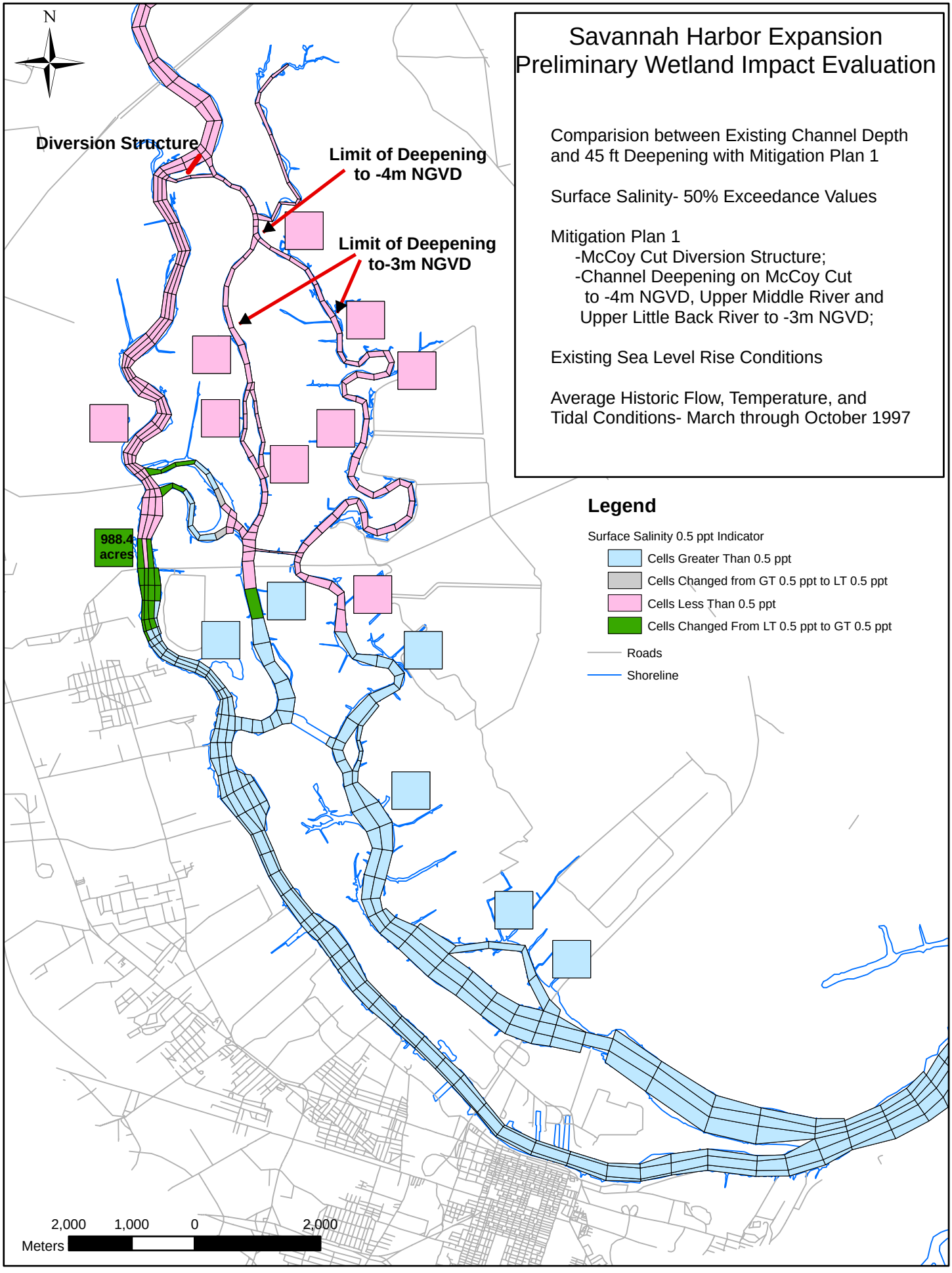
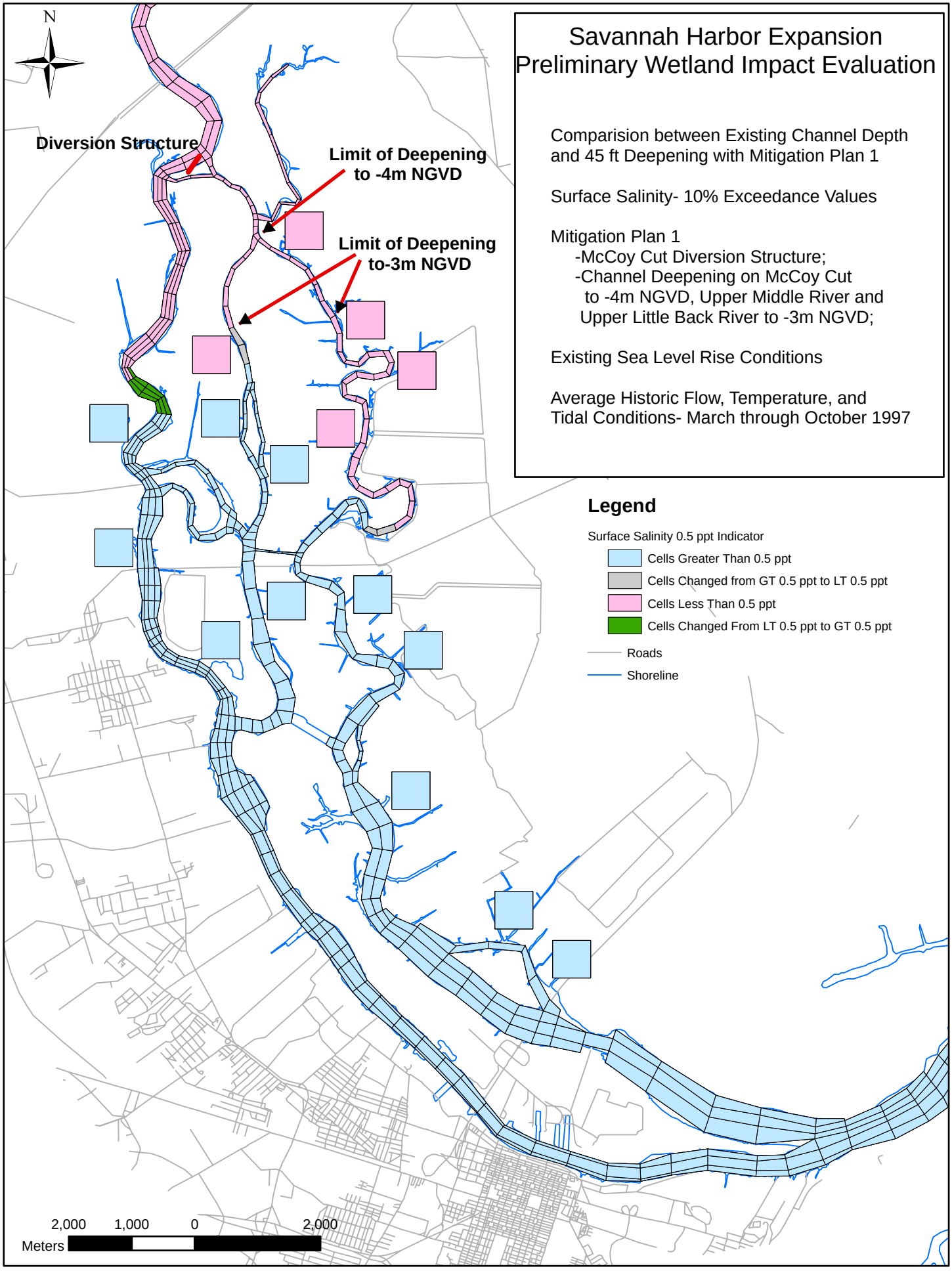
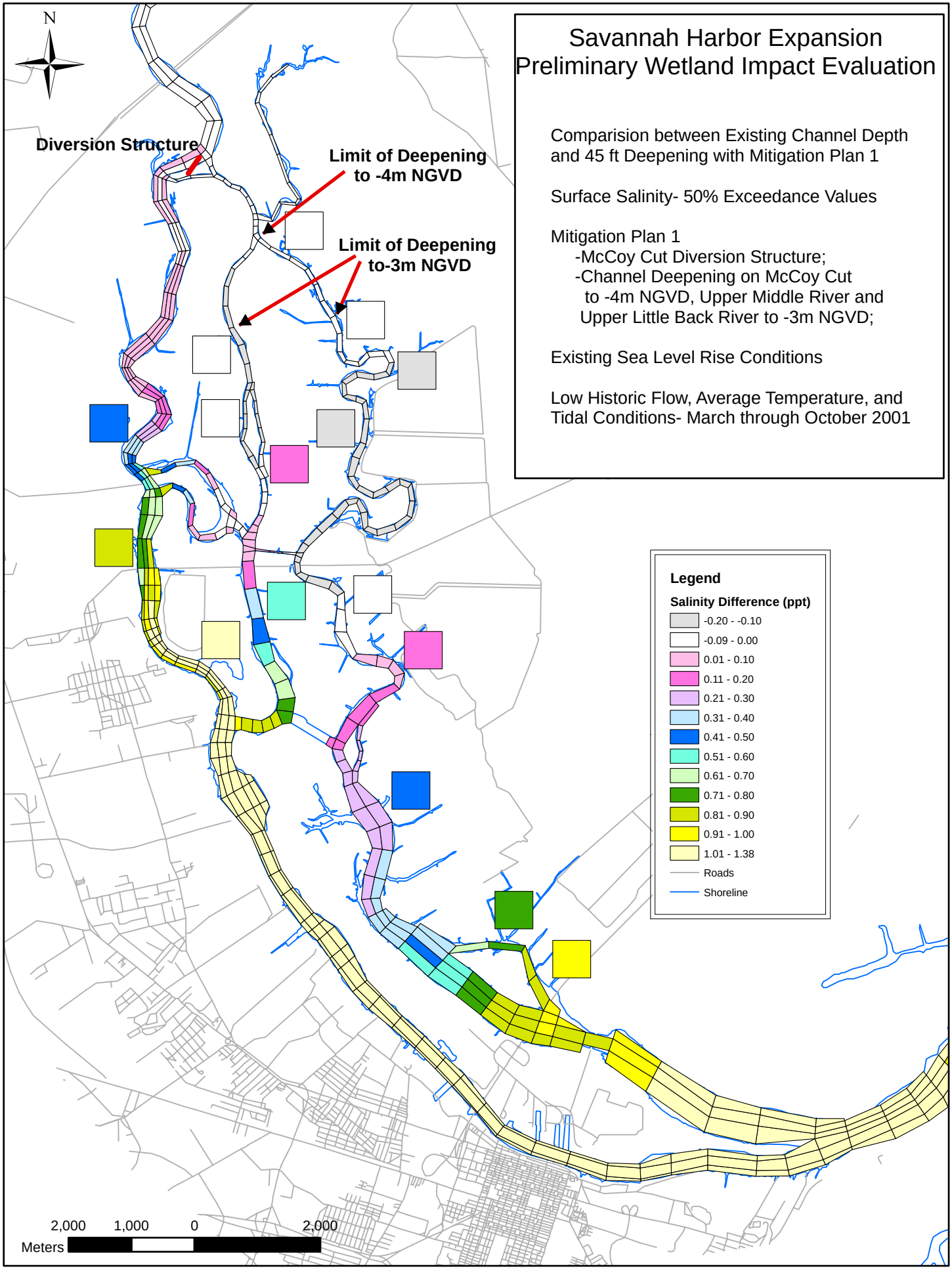
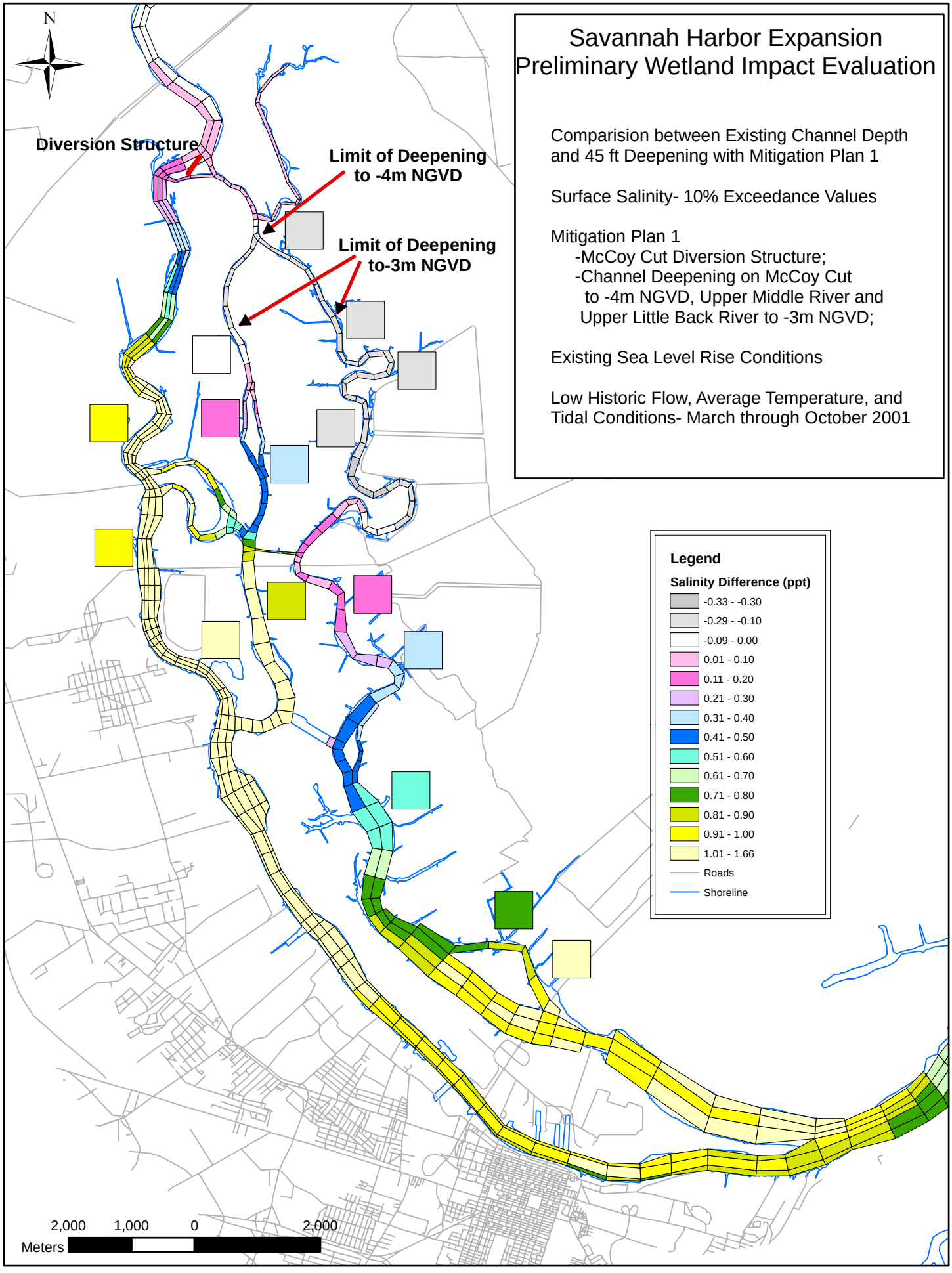
Meters
January 2007

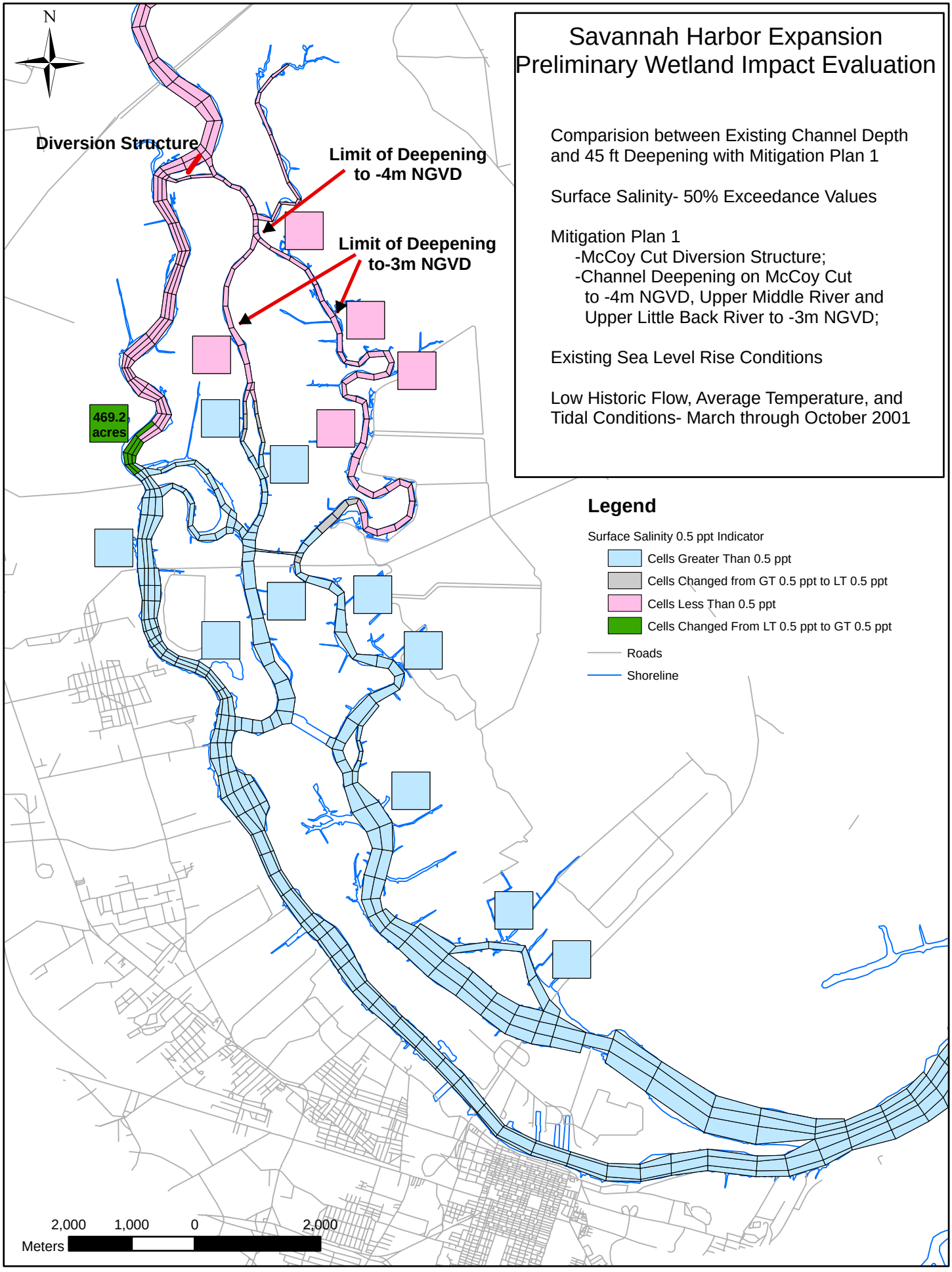

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
988.4 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

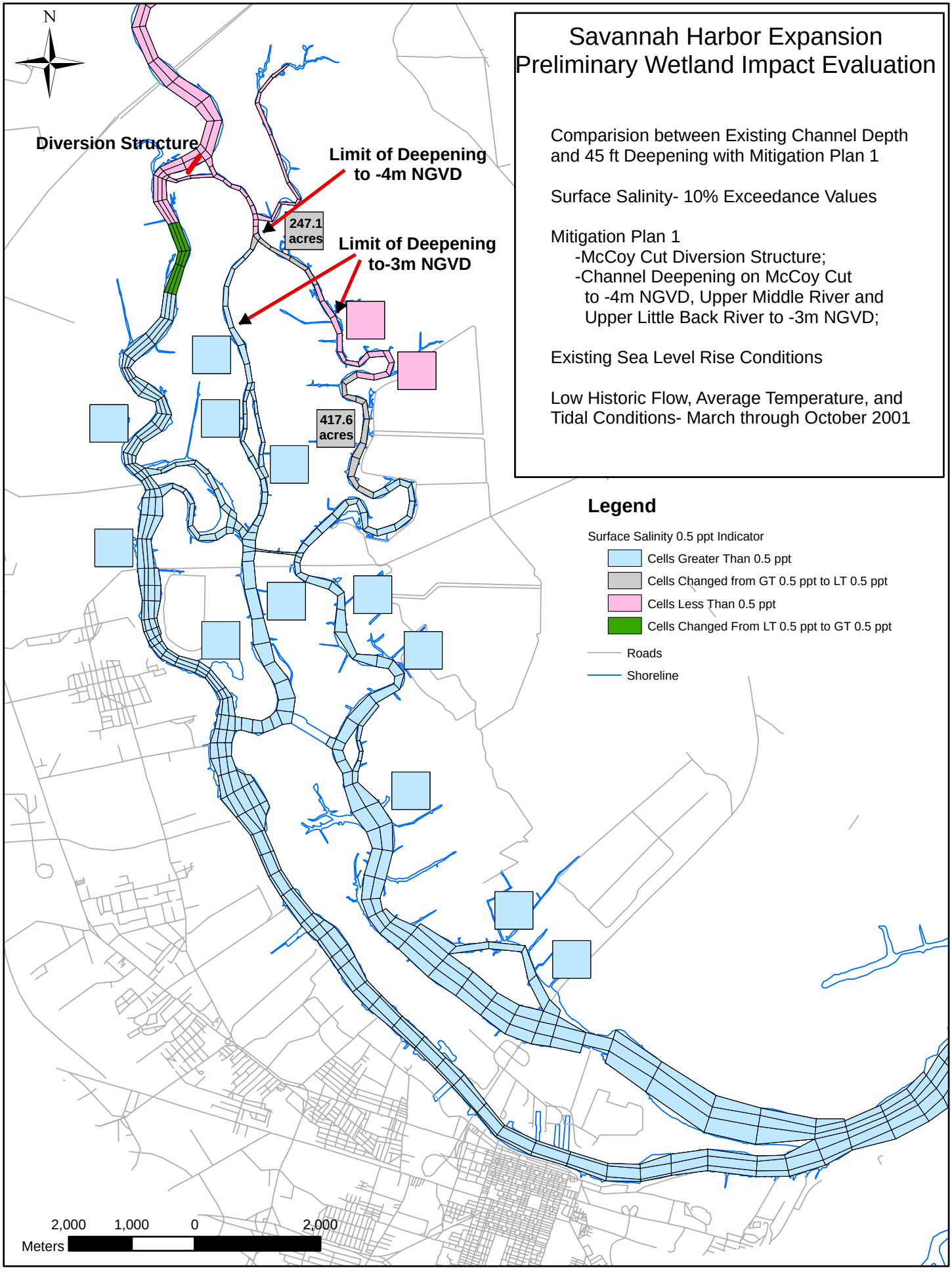

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #1

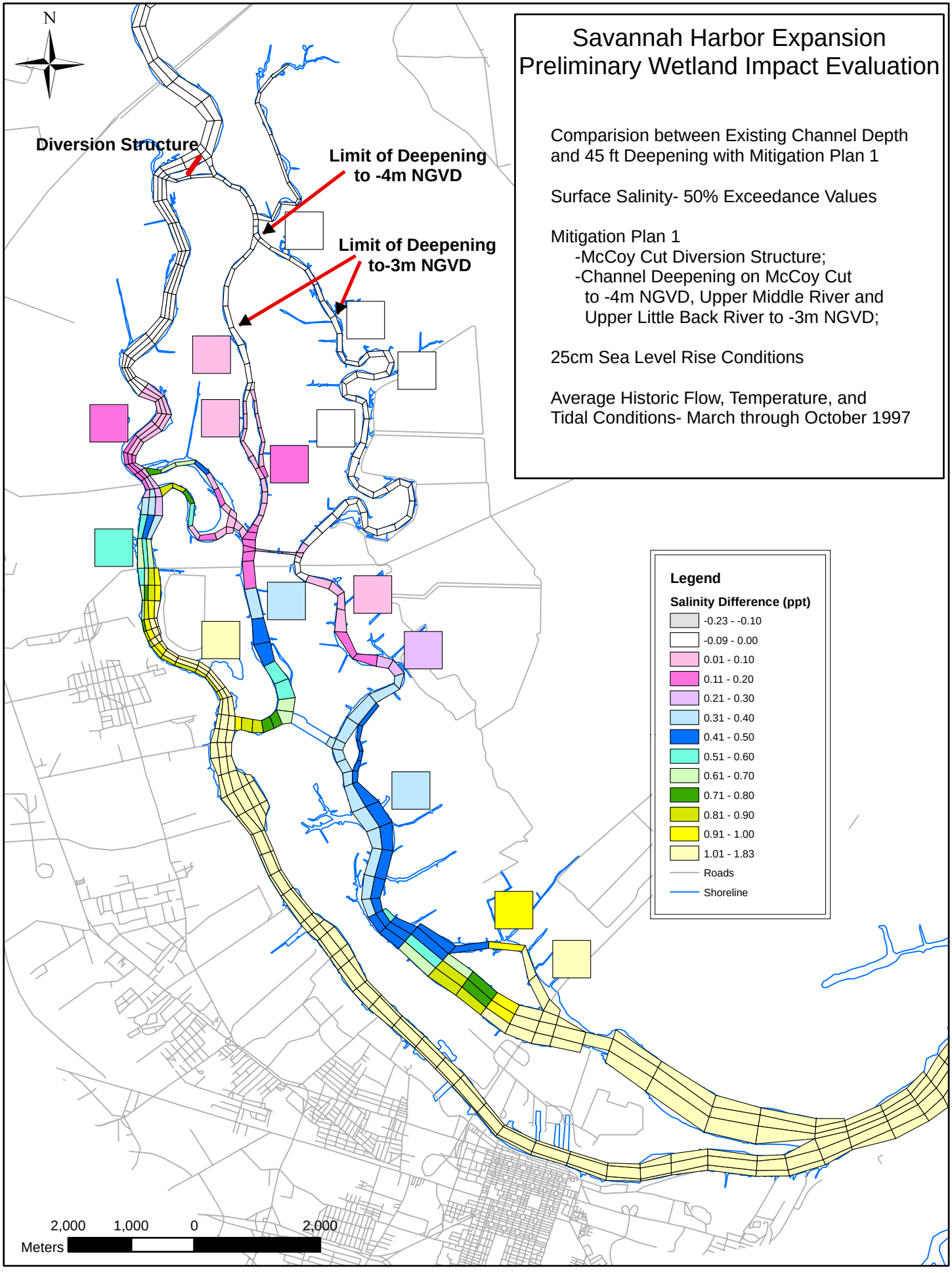

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-0.20 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.38
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

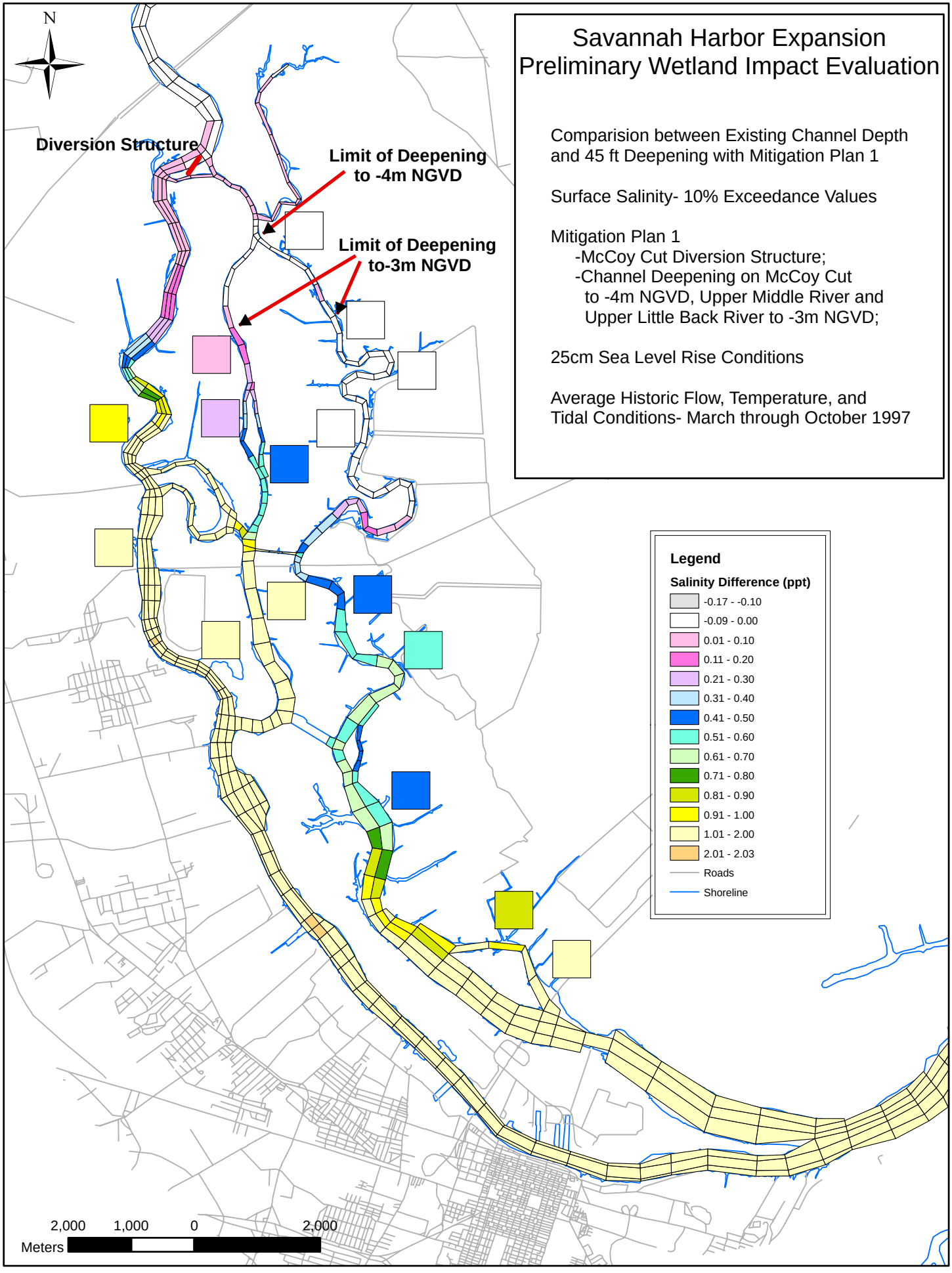

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-0.33 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.66
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

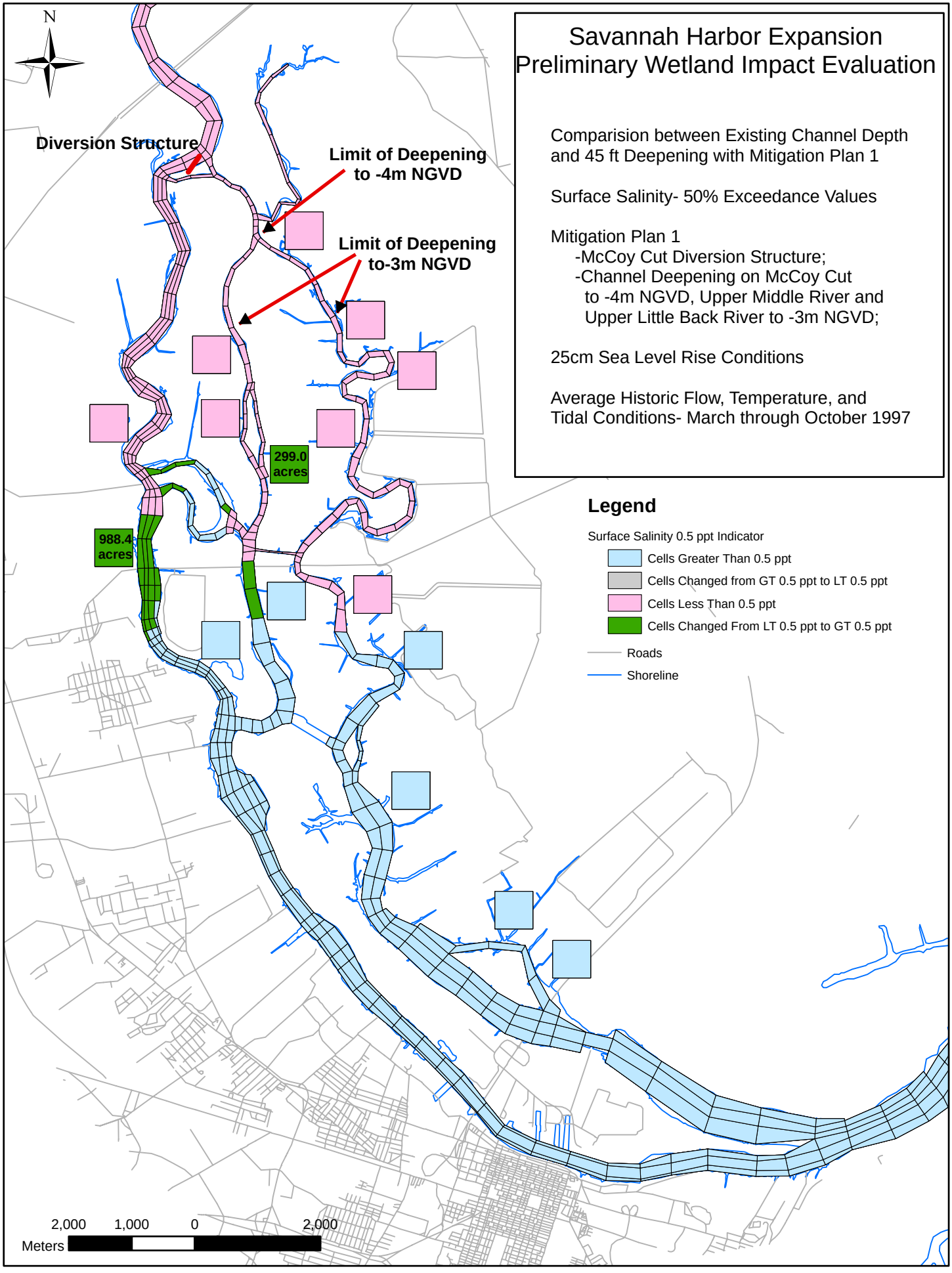

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

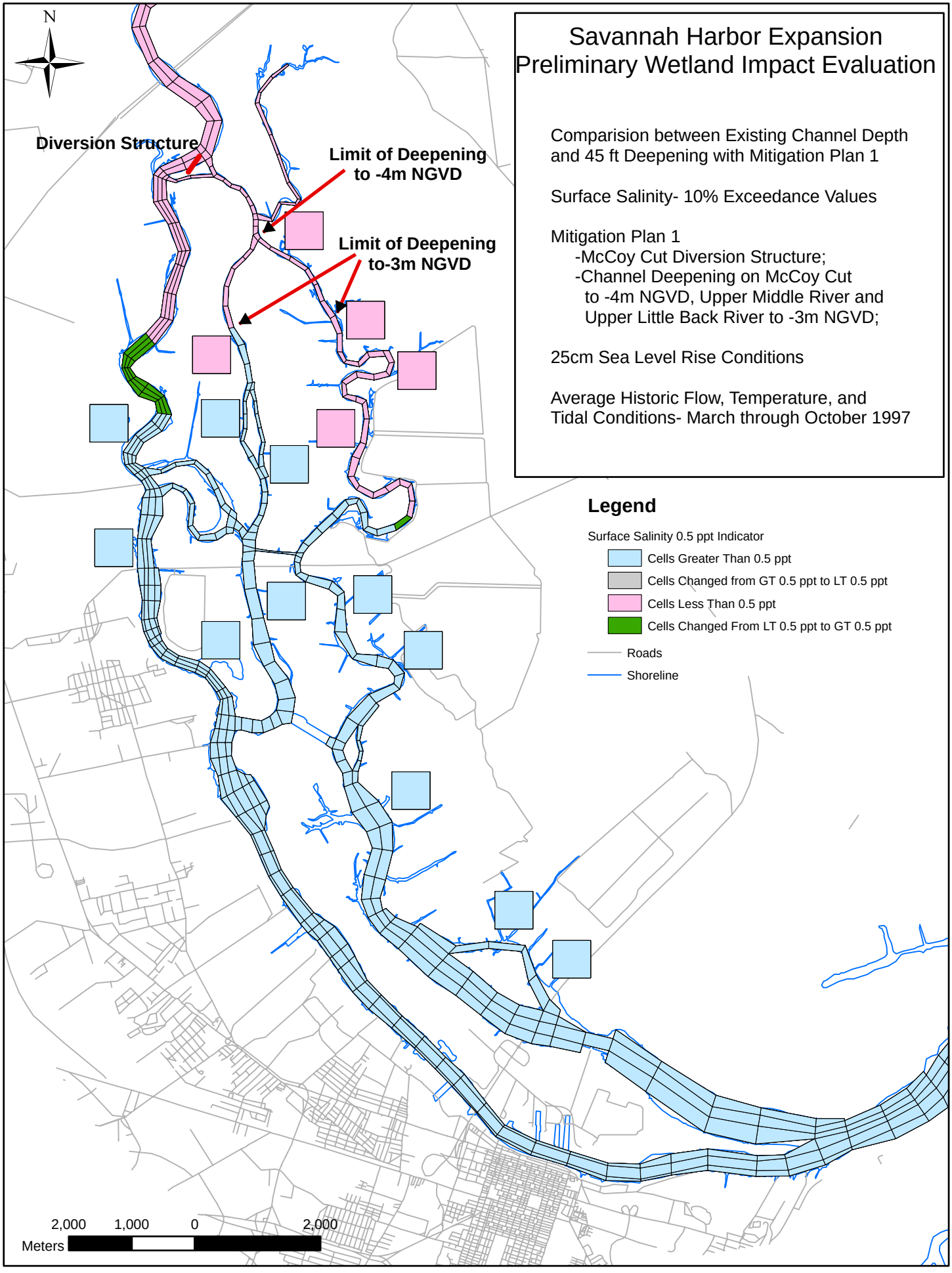

N
Diversion Structure
Limit of Deepening to -4m NGVD
247.1 acres
Limit of Deepening to-3m NGVD
417.6 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2A

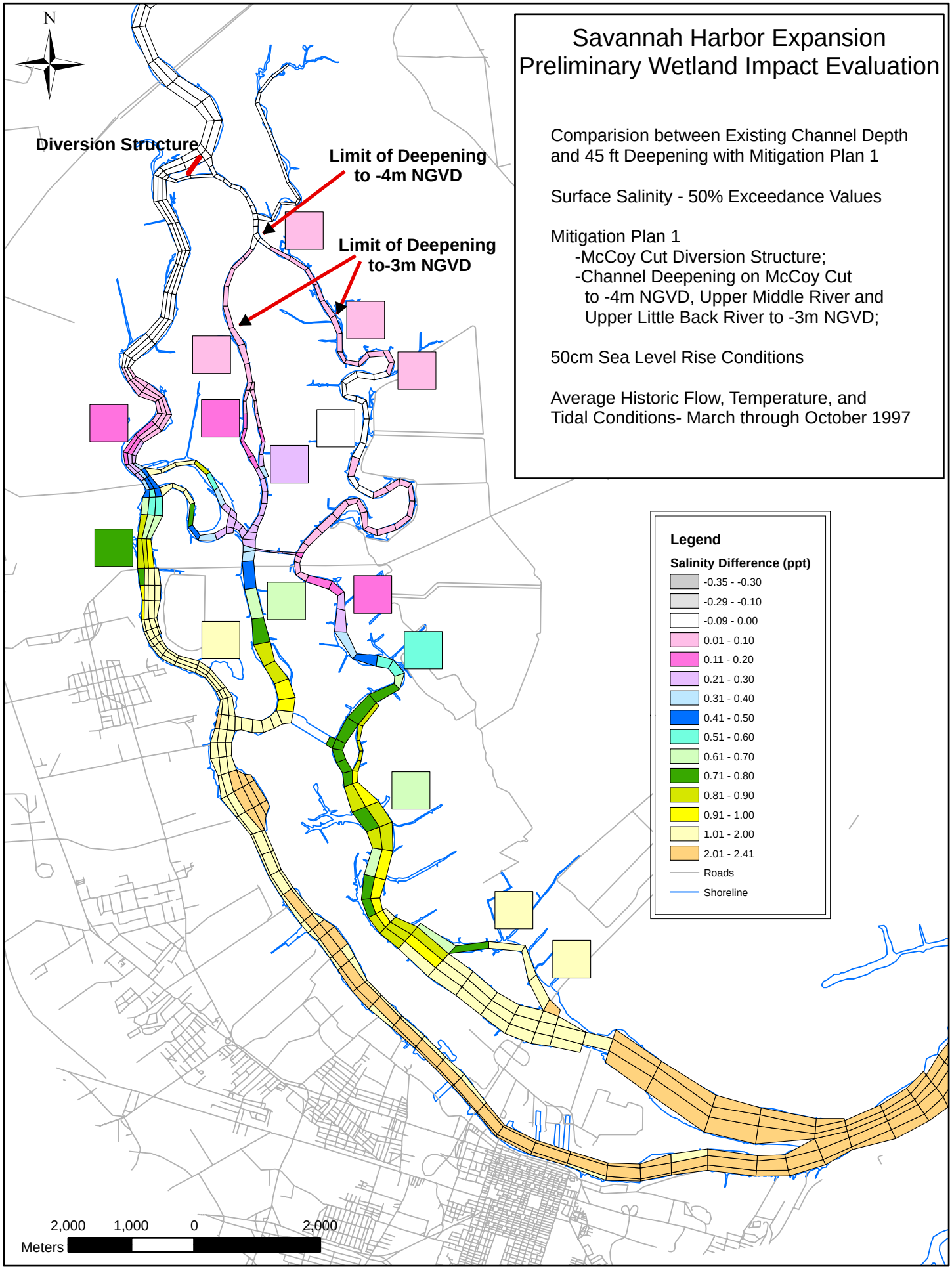

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.23 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.83
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

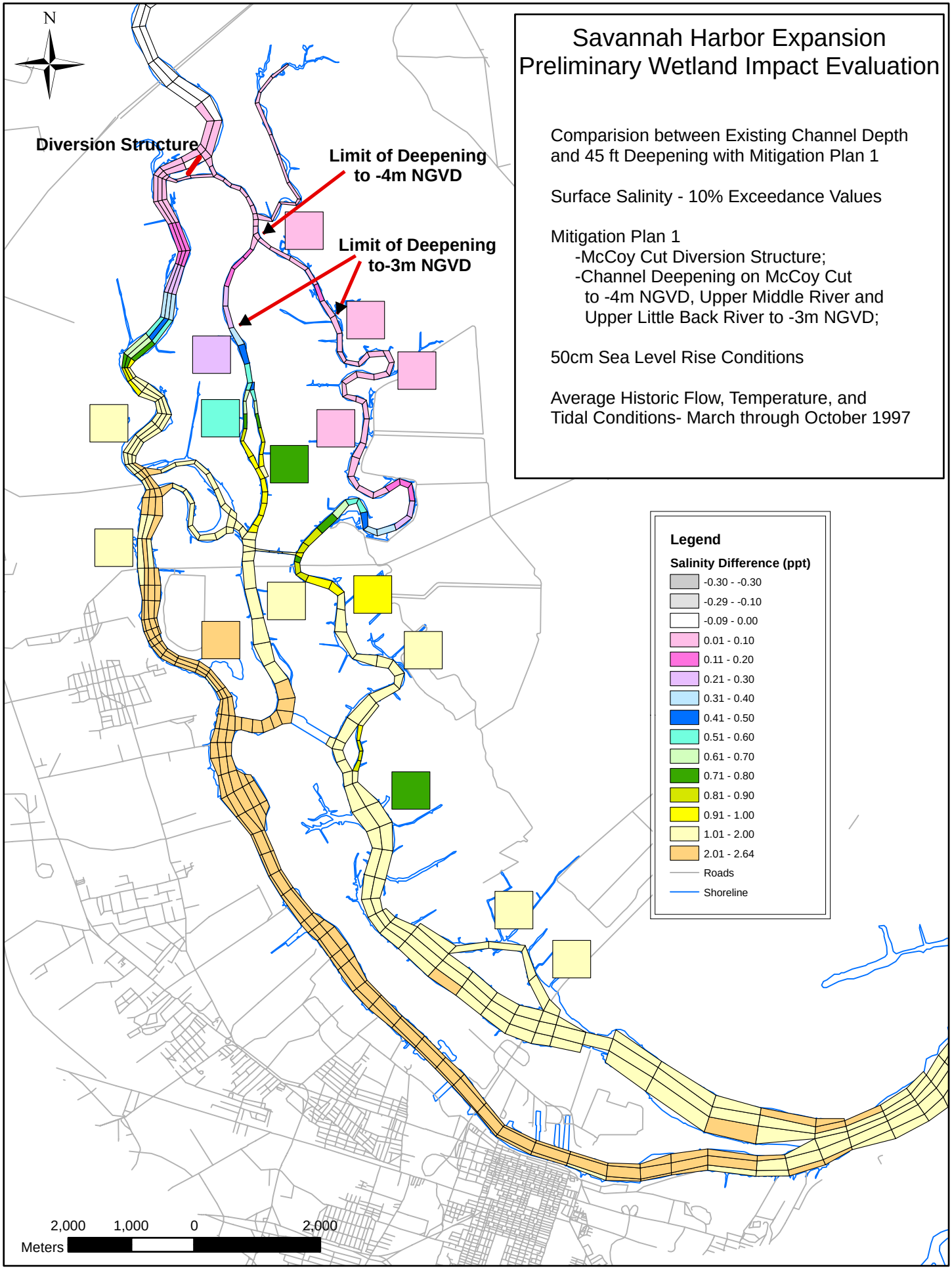

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.17 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.03
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

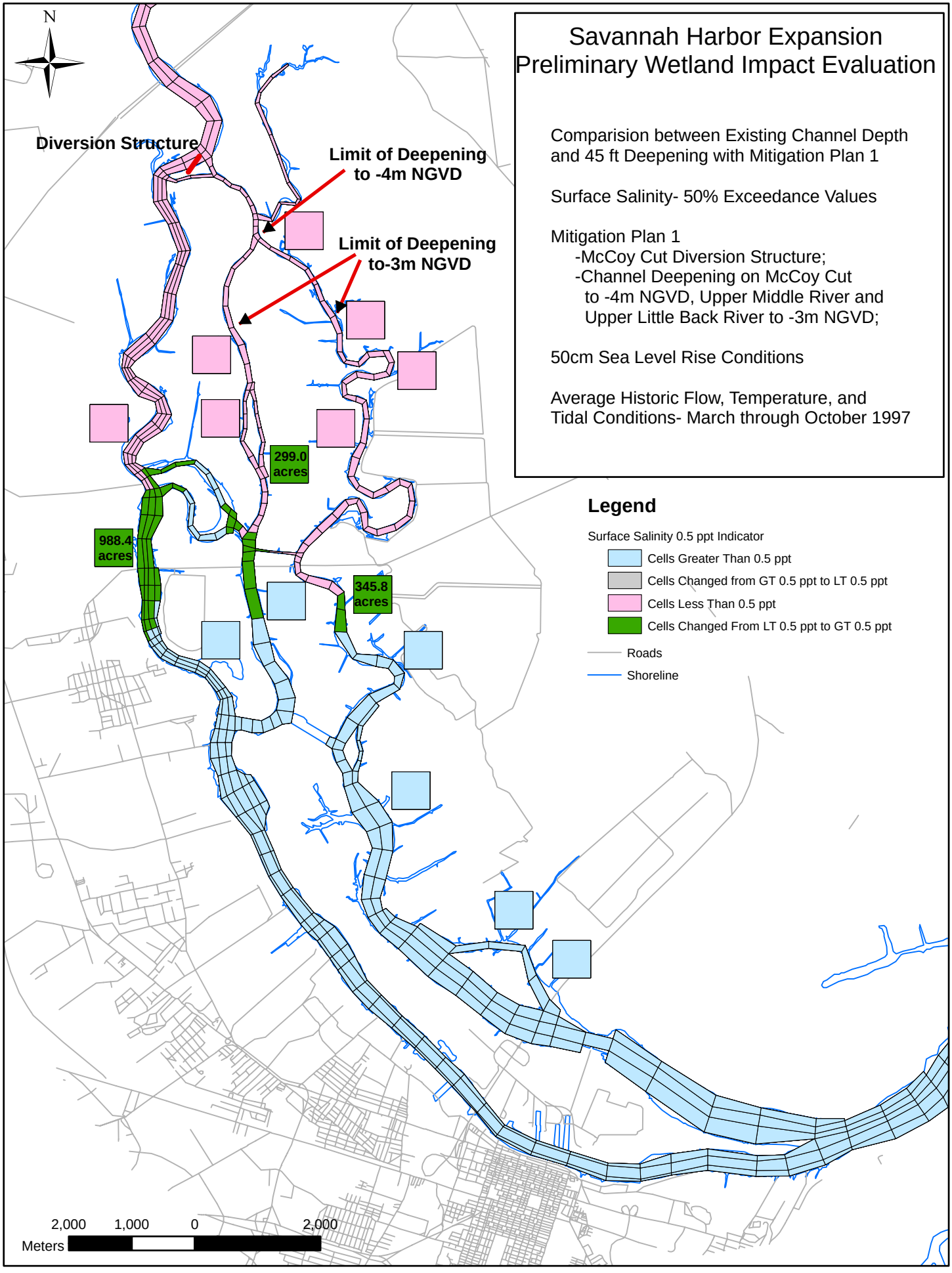

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
988.4 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

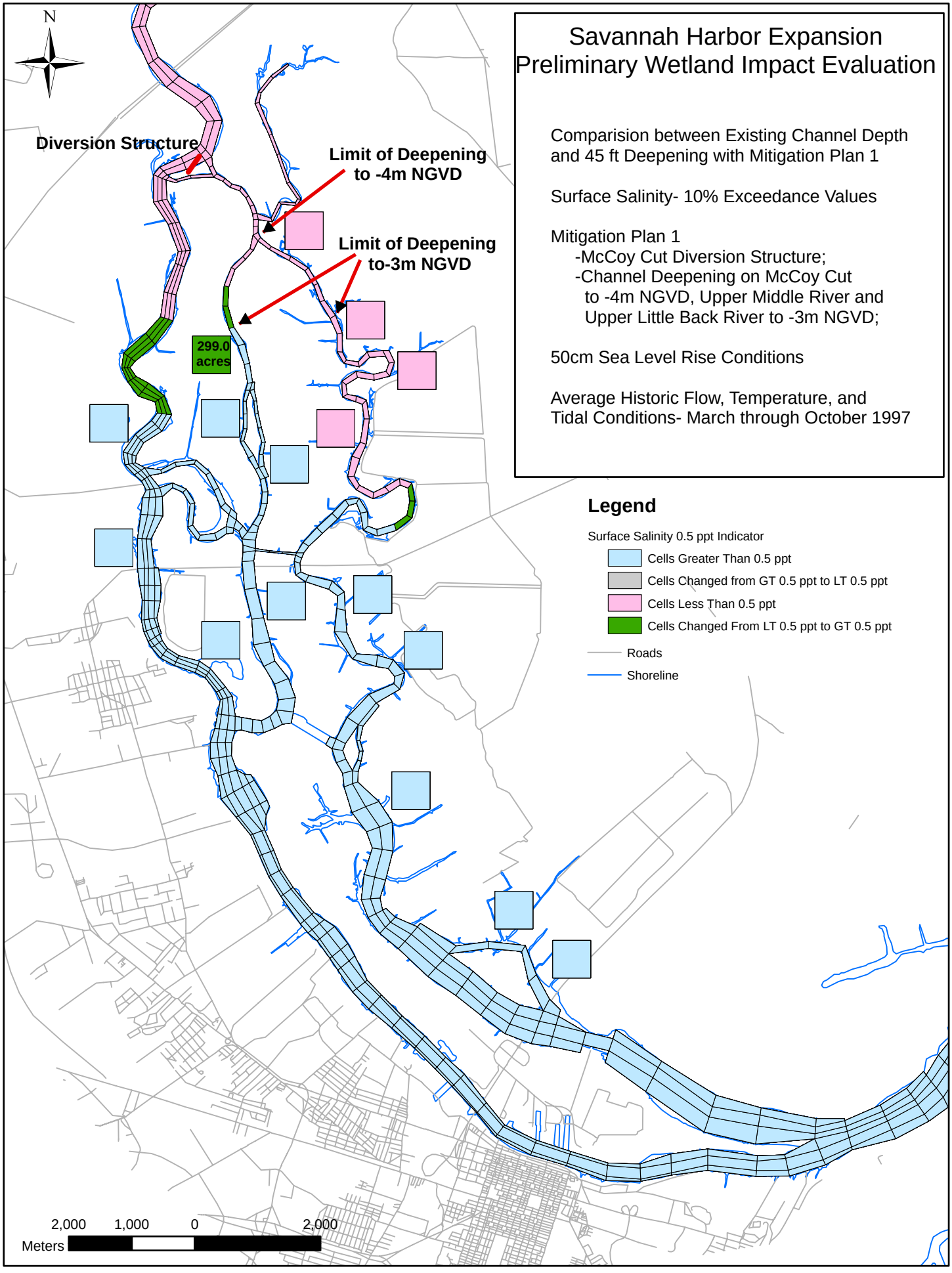

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2B


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity - 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.35 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.41
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

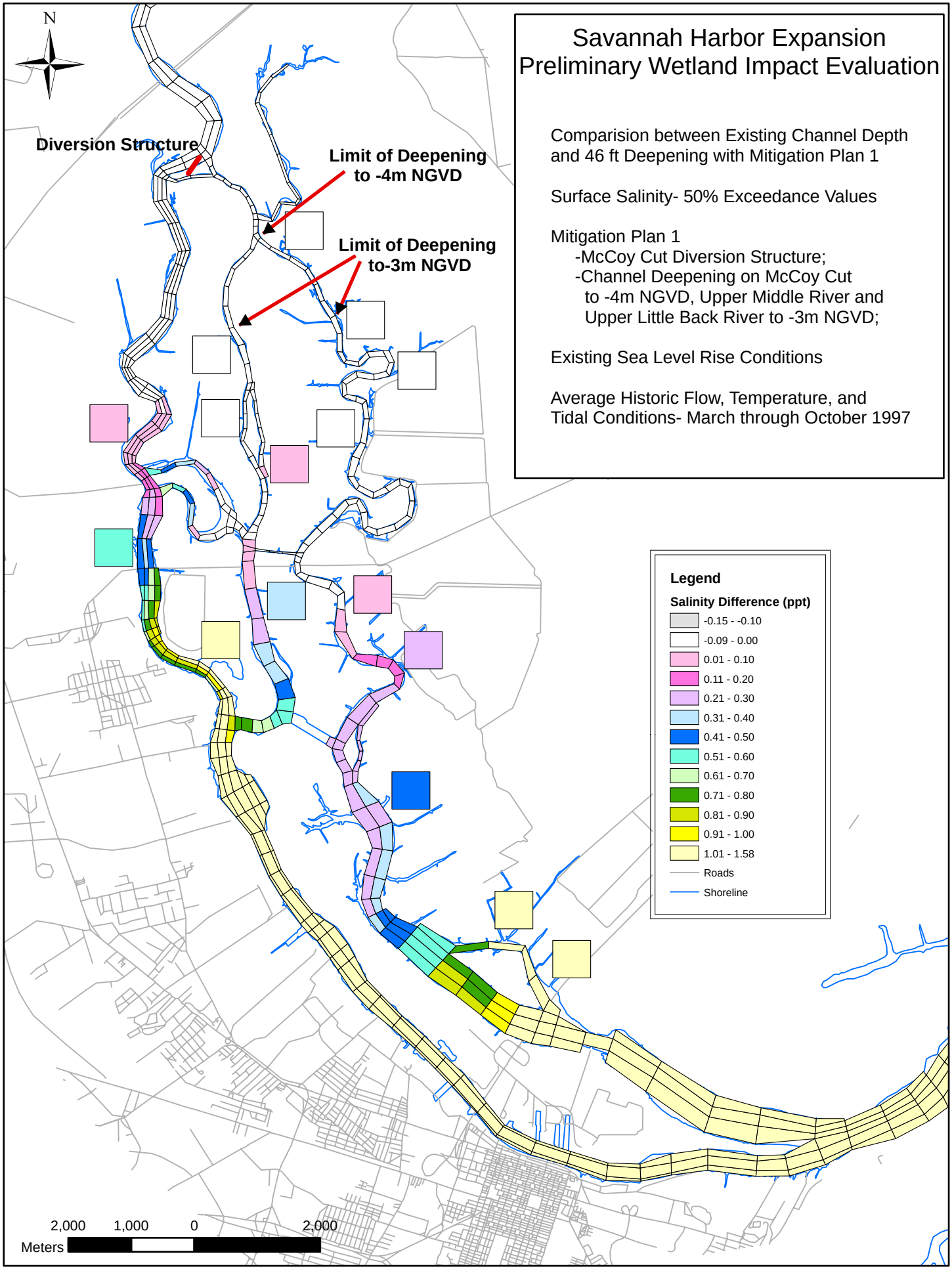

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity - 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.30 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.64
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

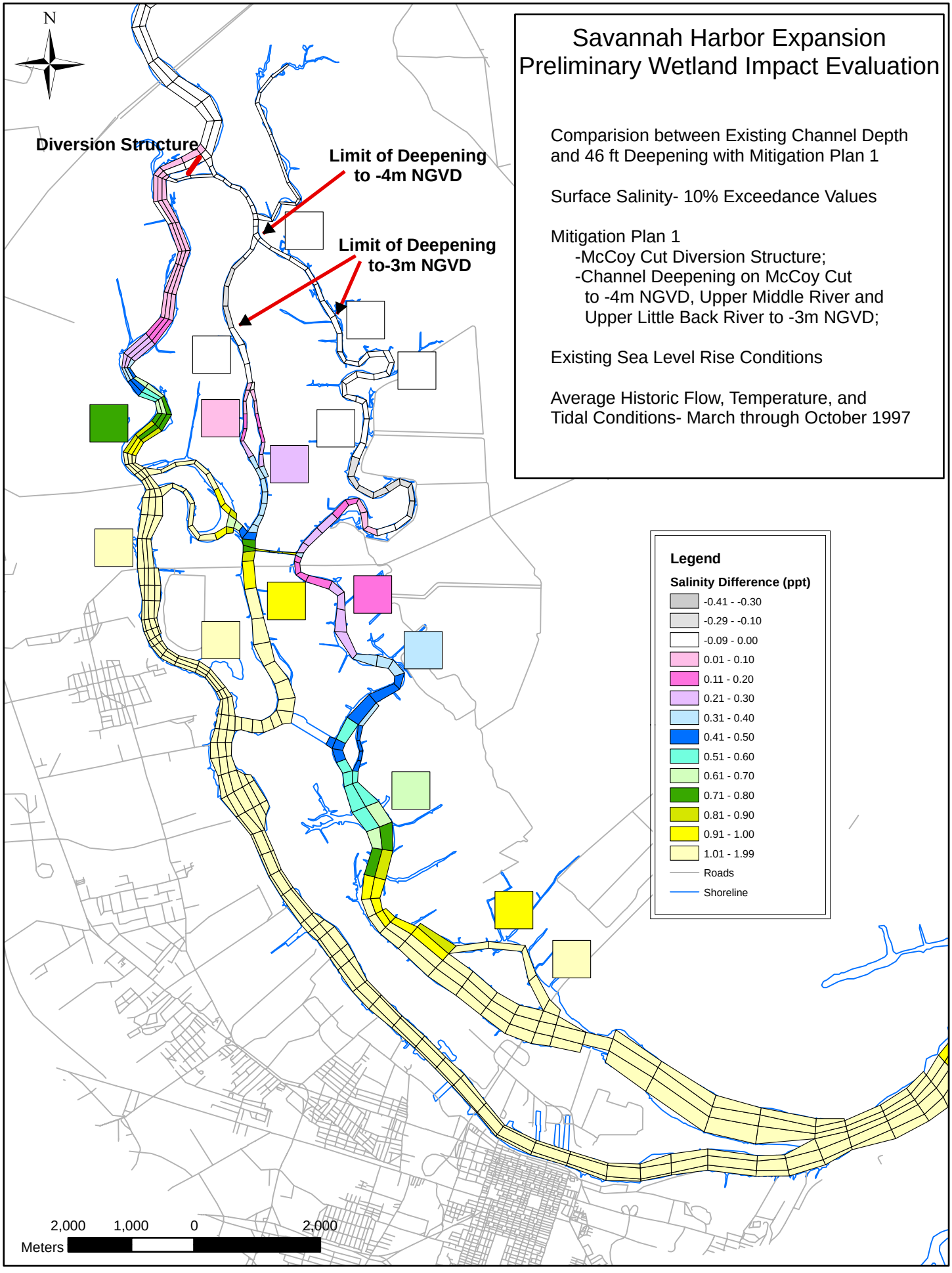

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
988.4 acres
345.8 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

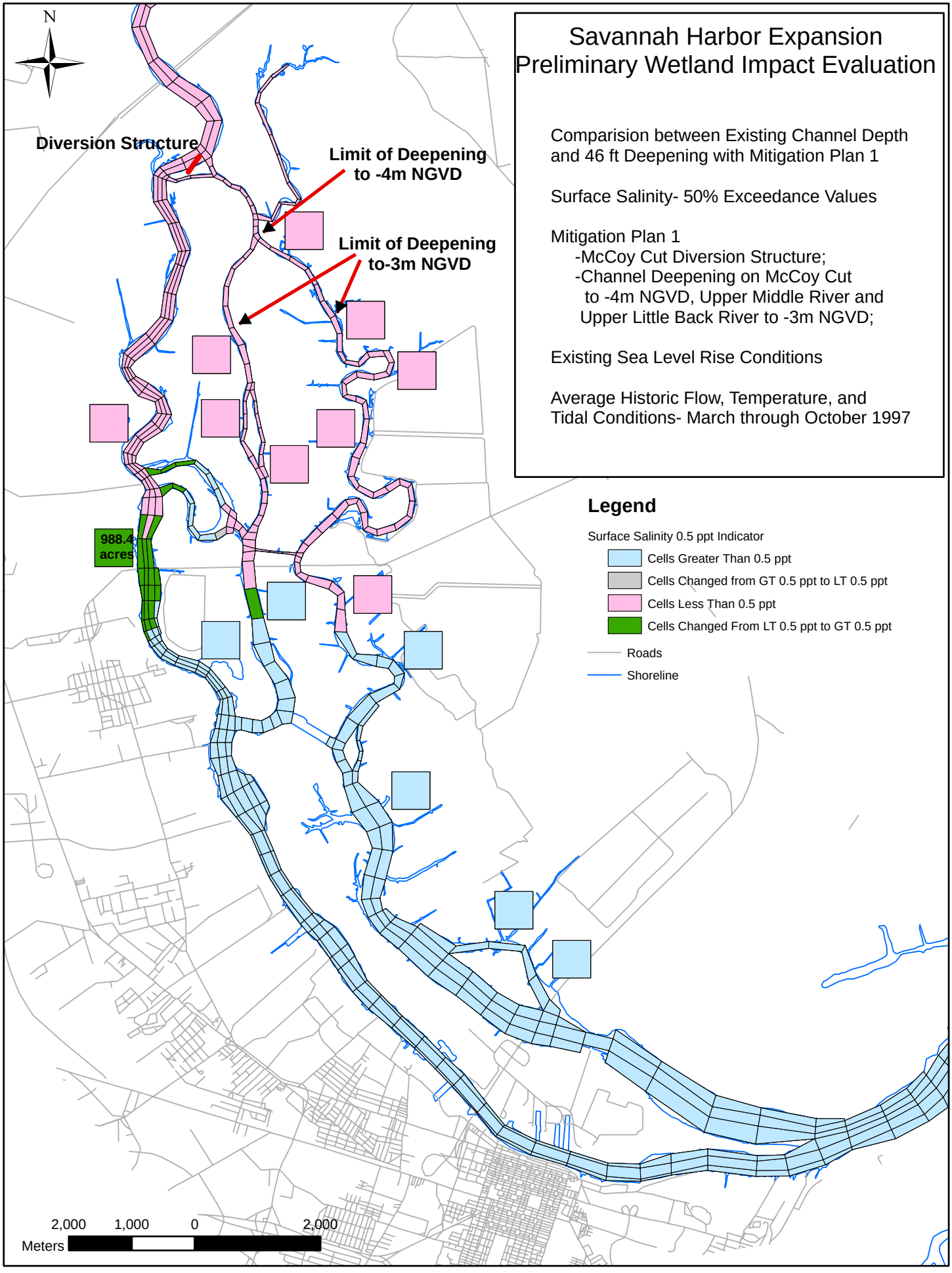

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

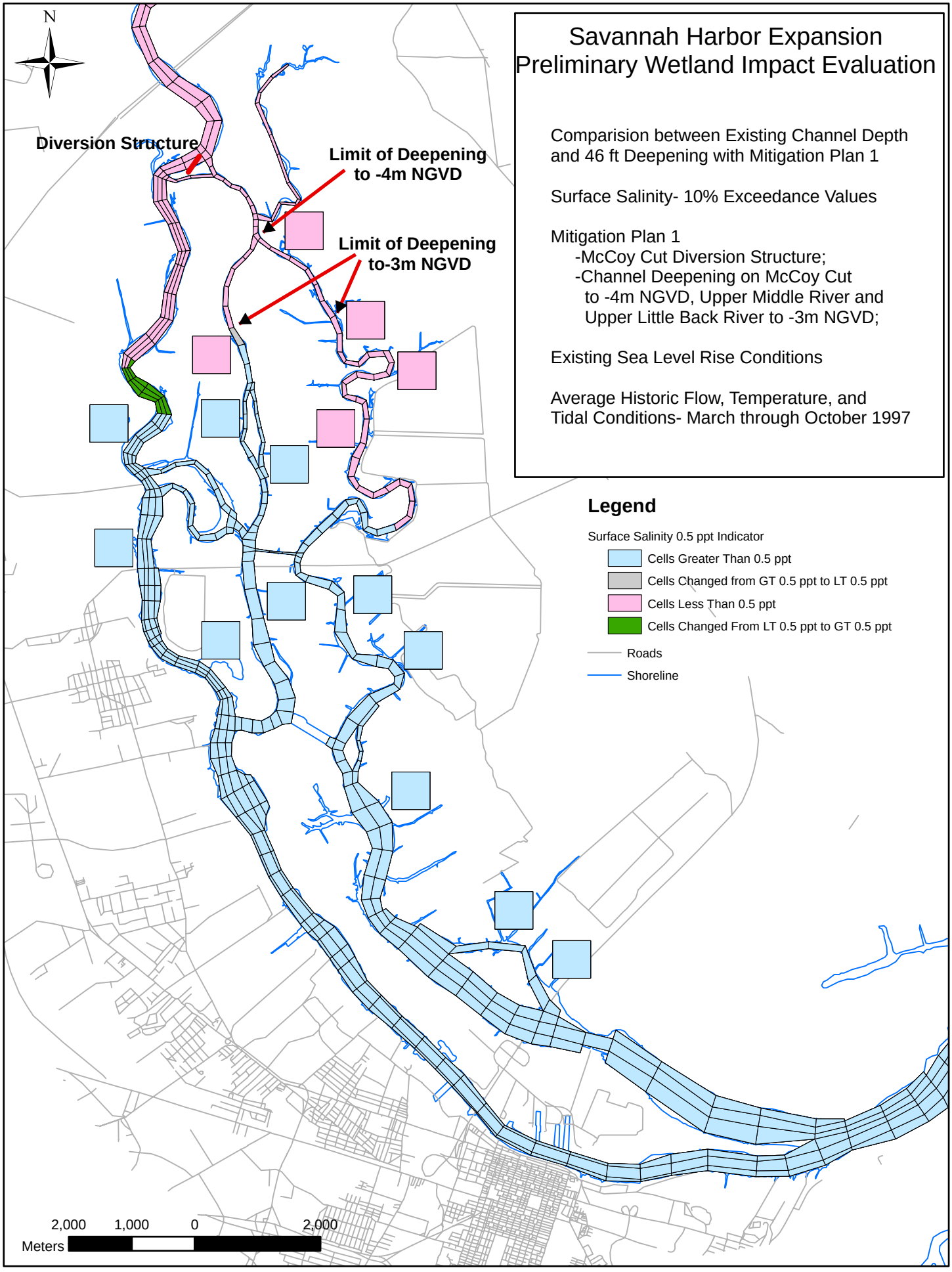
46-ft Deepening

Basic Evaluation

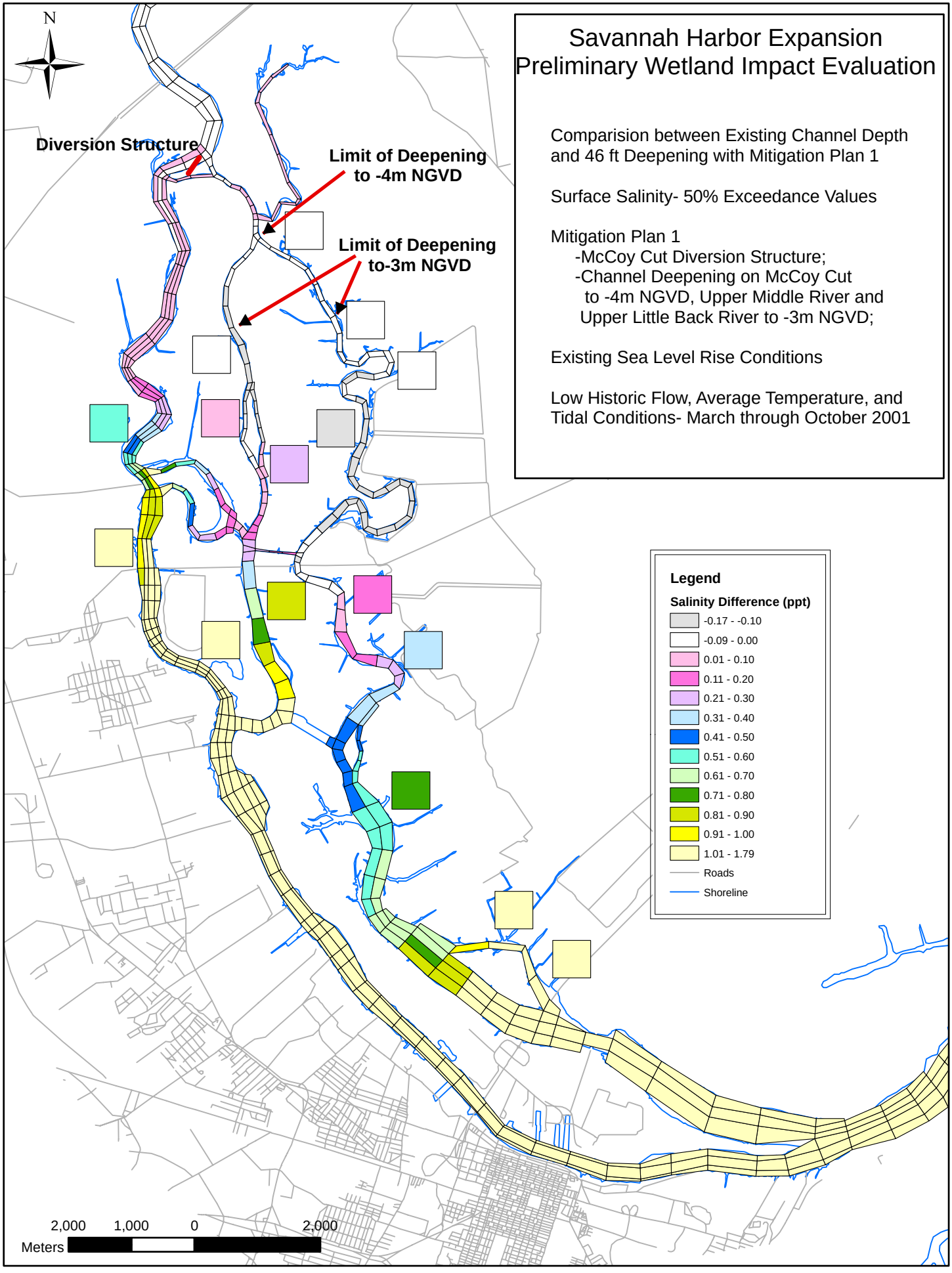

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.15 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.58
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

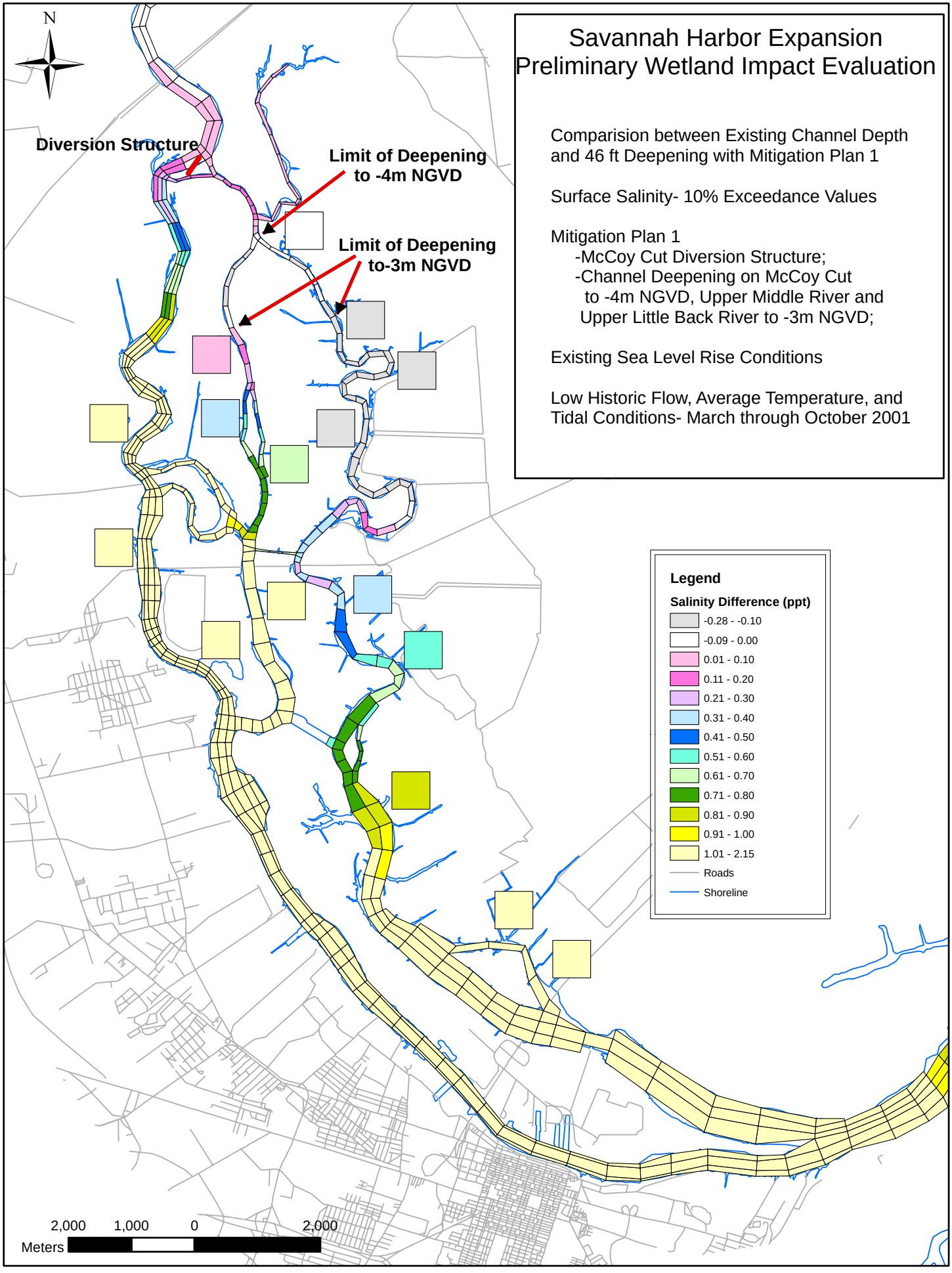

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.41 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.99
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

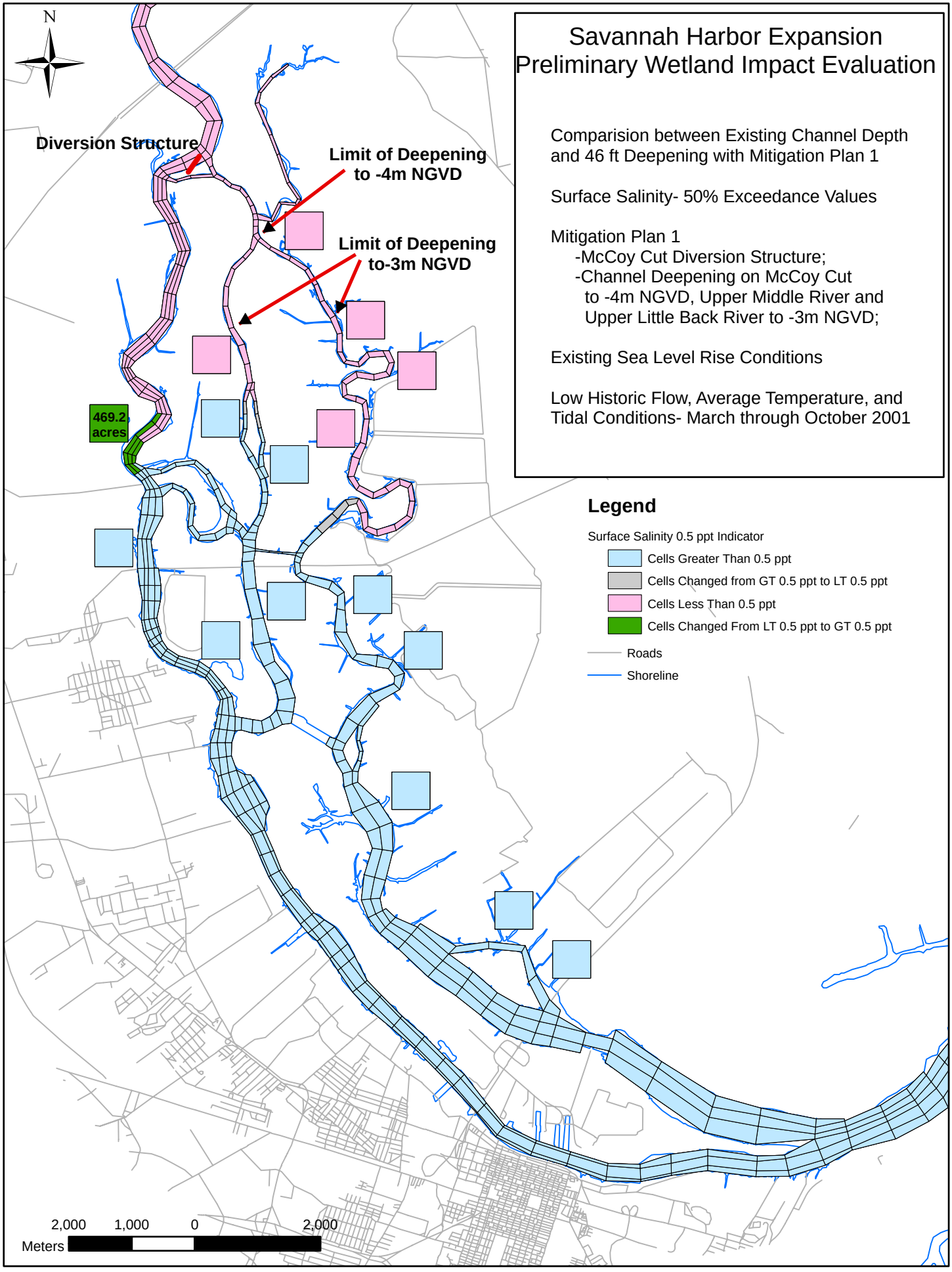

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
988.4 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

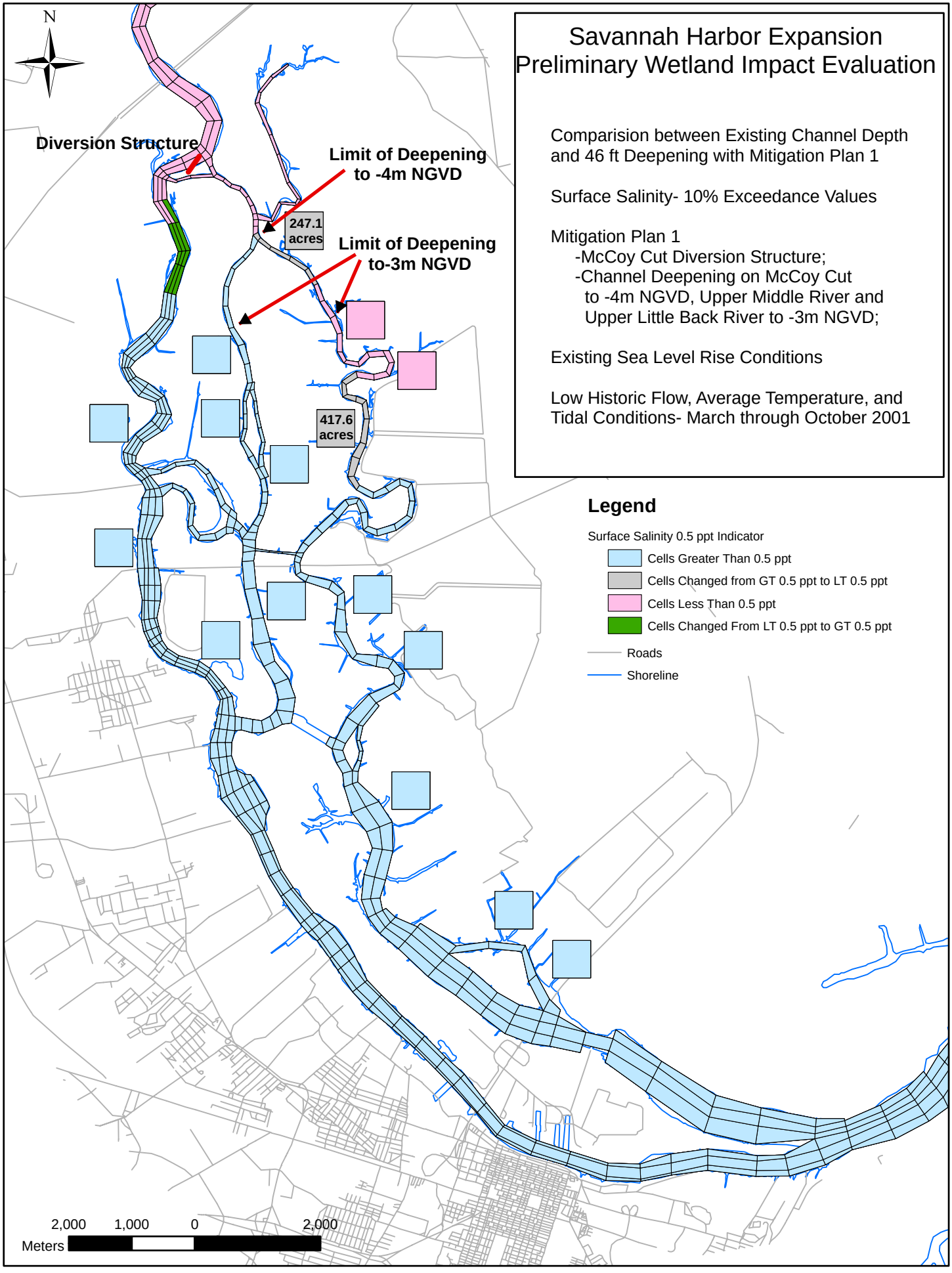

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #1

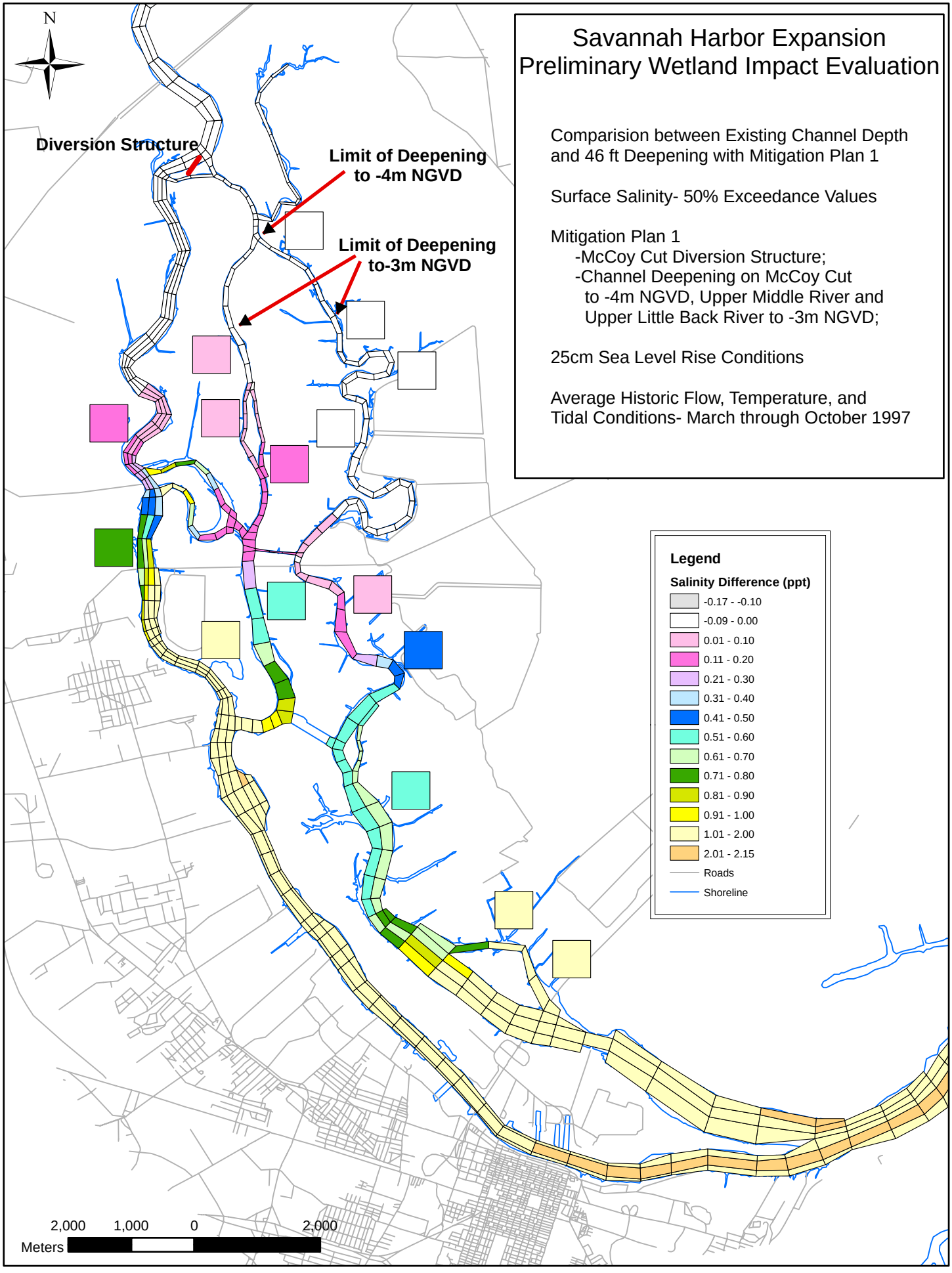

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-0.17 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.79
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

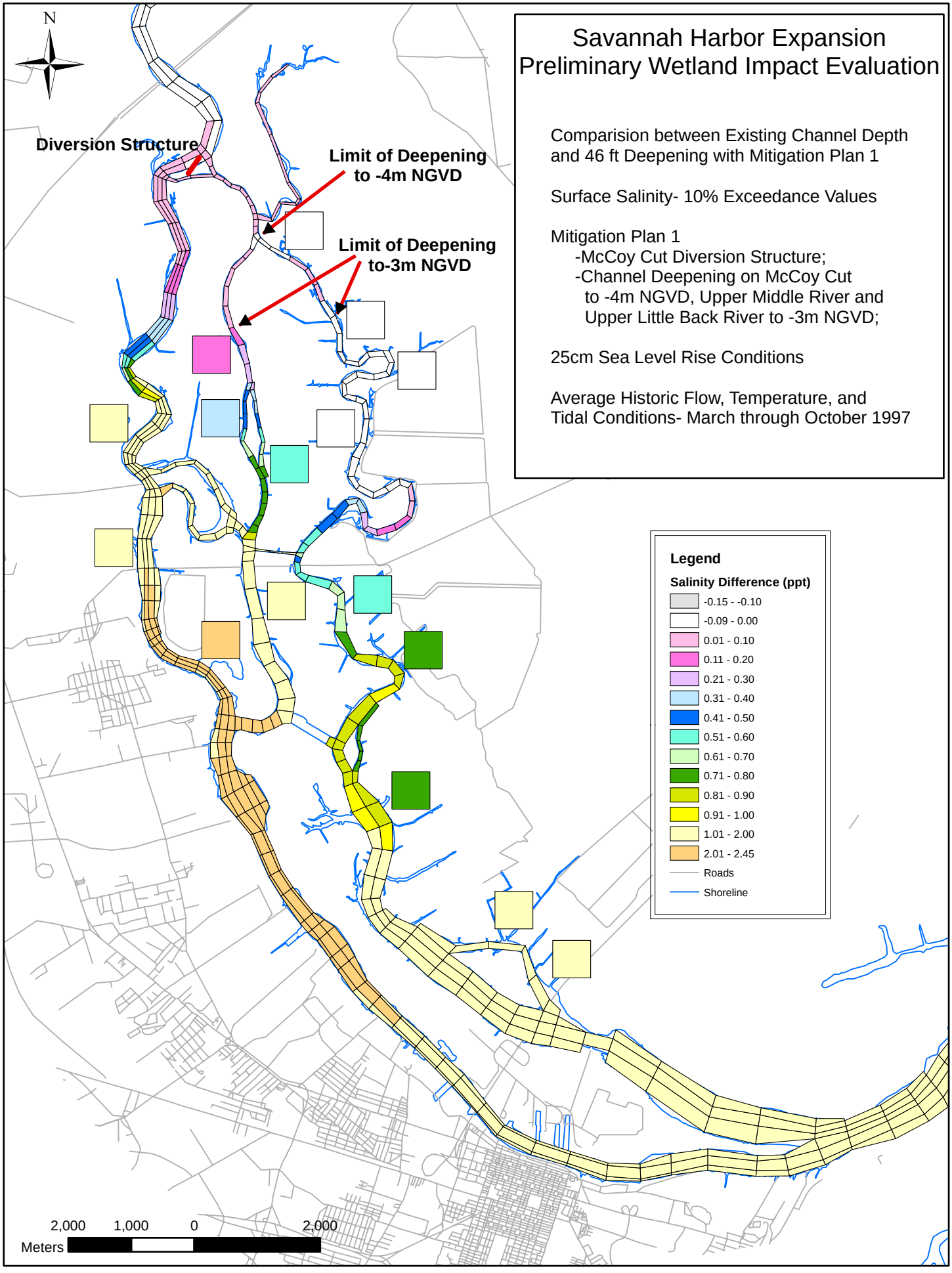

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-0.28 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.15
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

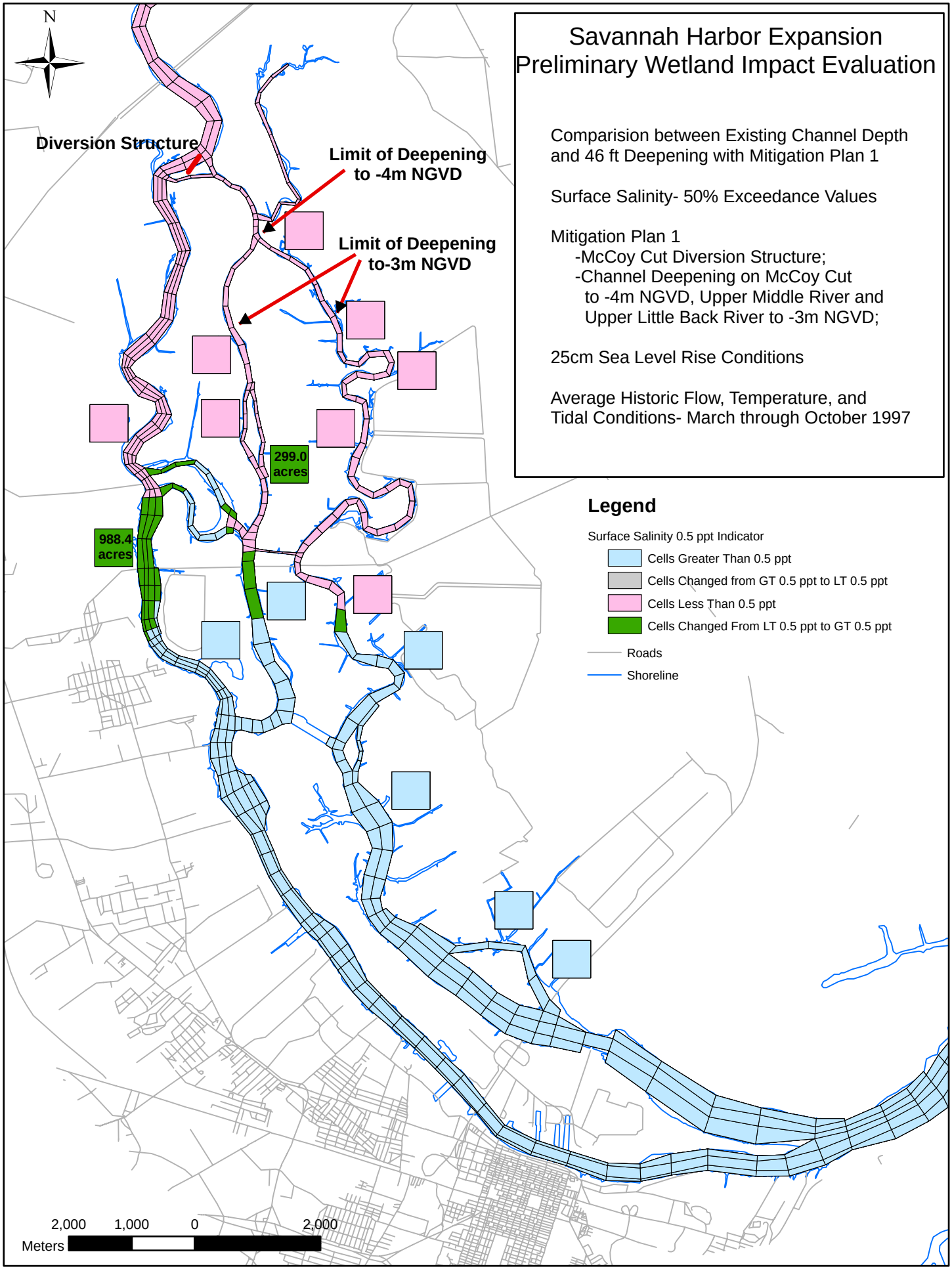

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

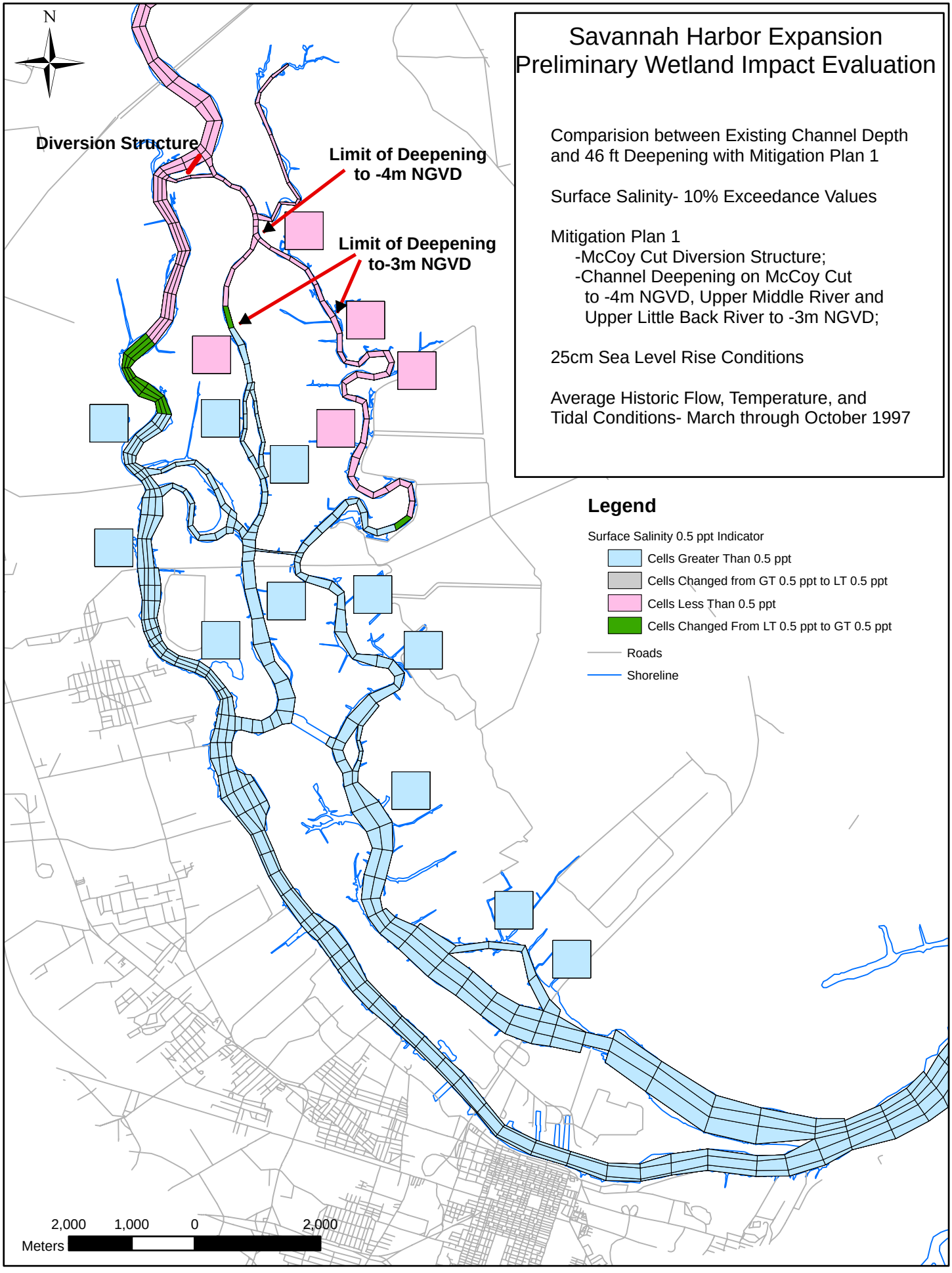

N
Diversion Structure
Limit of Deepening to -4m NGVD
247.1 acres
Limit of Deepening to-3m NGVD
417.6 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2A

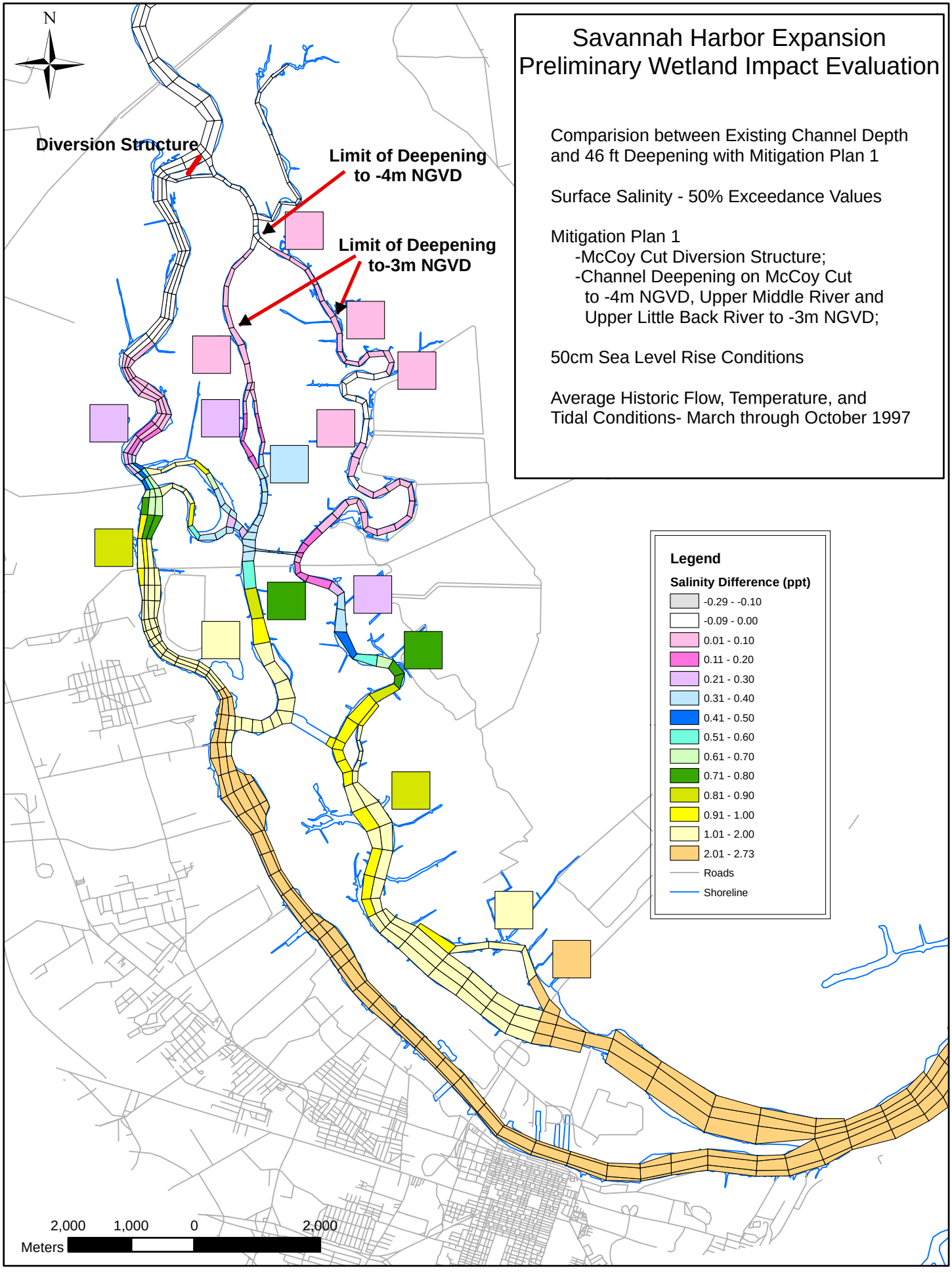

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.17 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.15
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.15 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.45
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

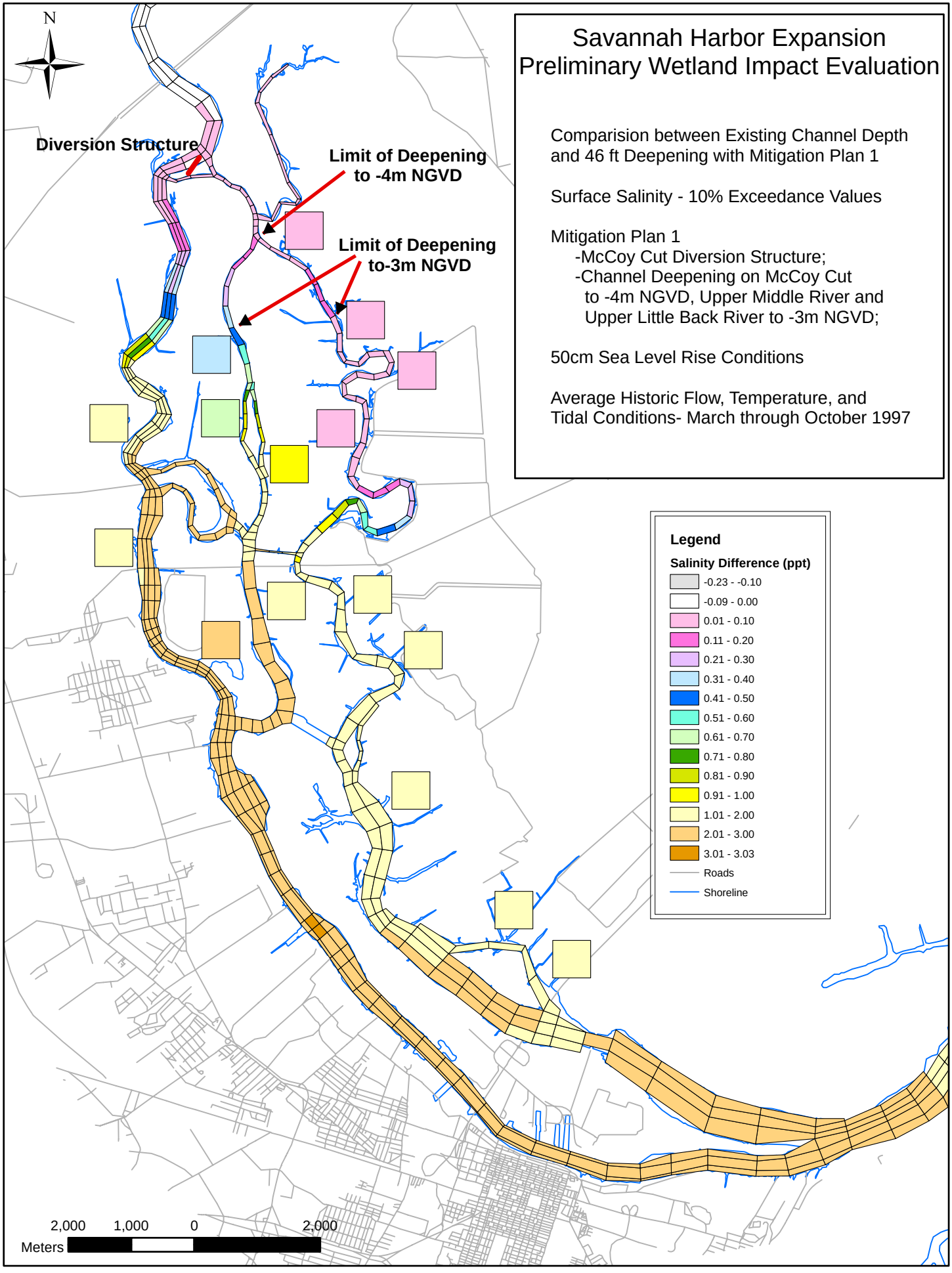

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
988.4 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

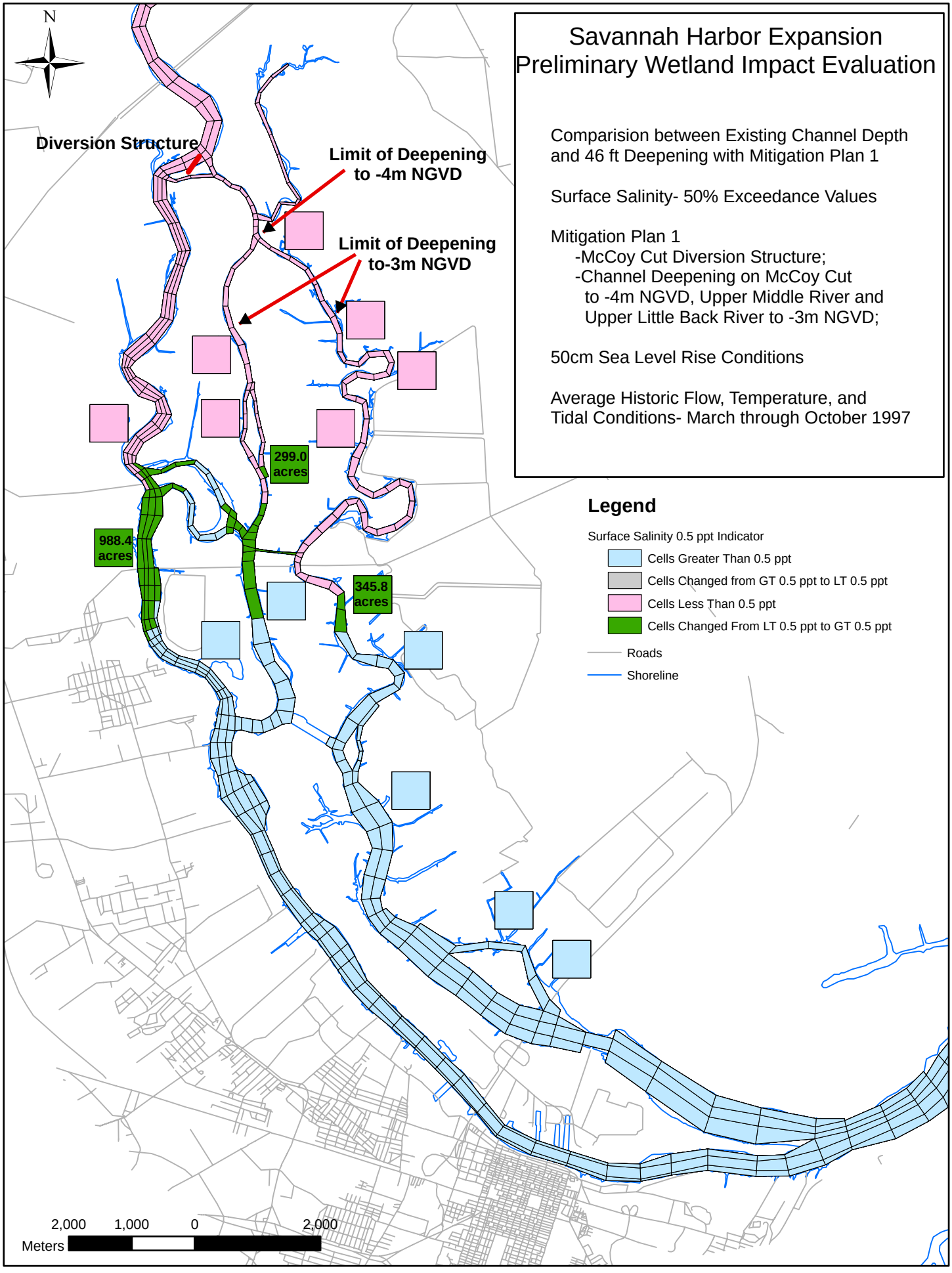

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2B



January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity - 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.23 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.00
3.01 - 3.03
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1

Surface Salinity- 50% Exceedance Values

Mitigation Plan 1
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;

50cm Sea Level Rise Conditions

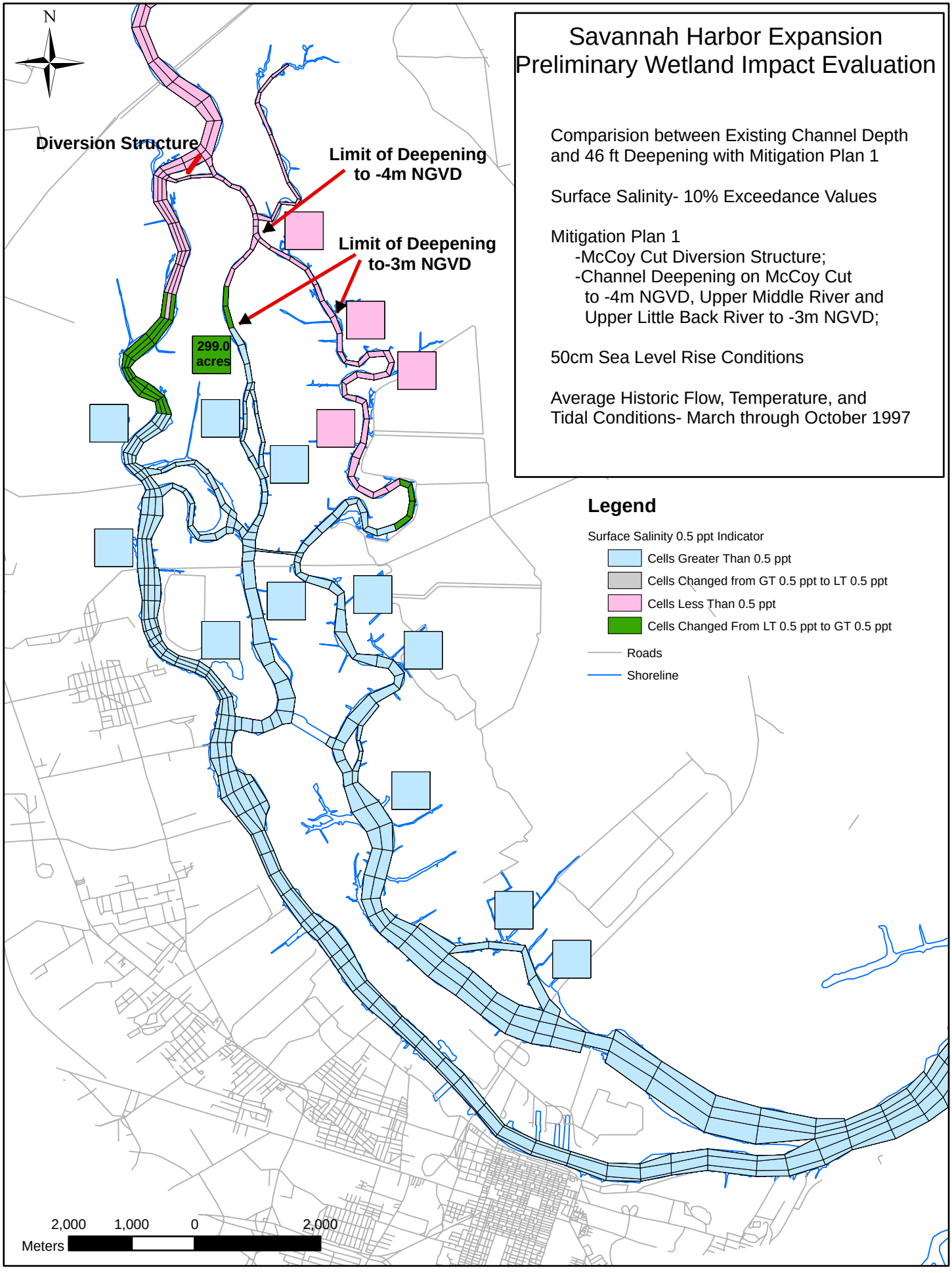
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator

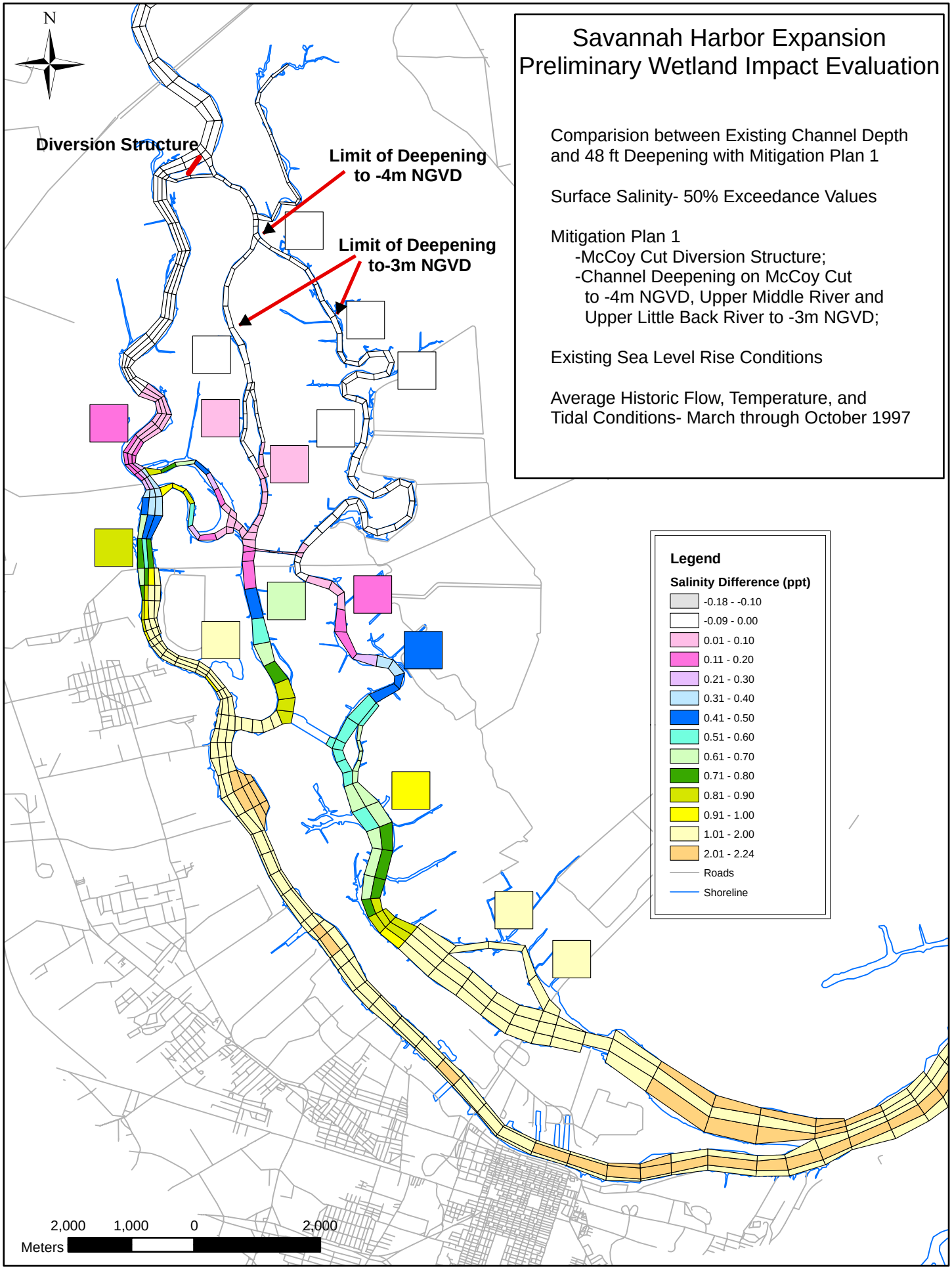
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

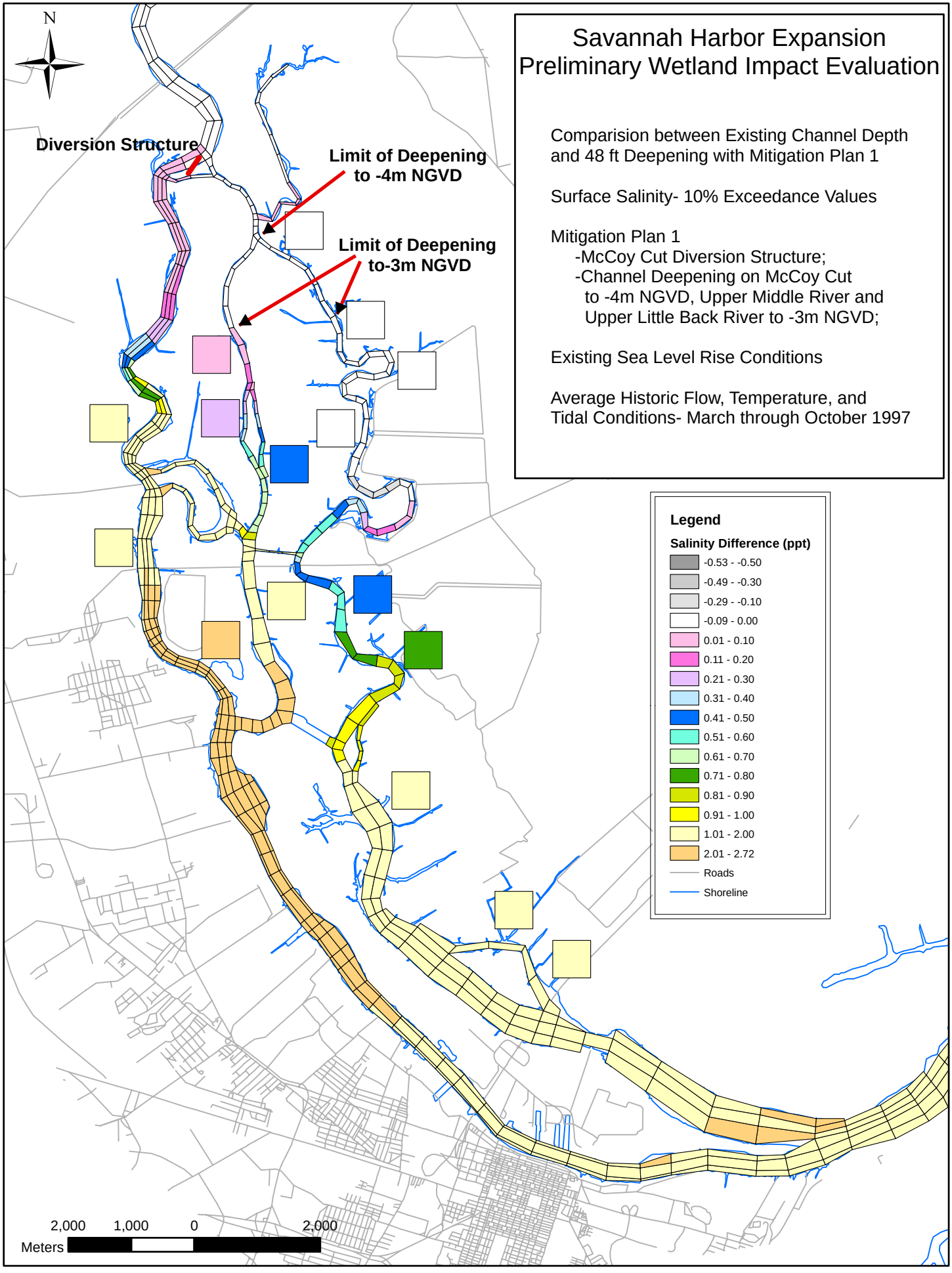
January 2007

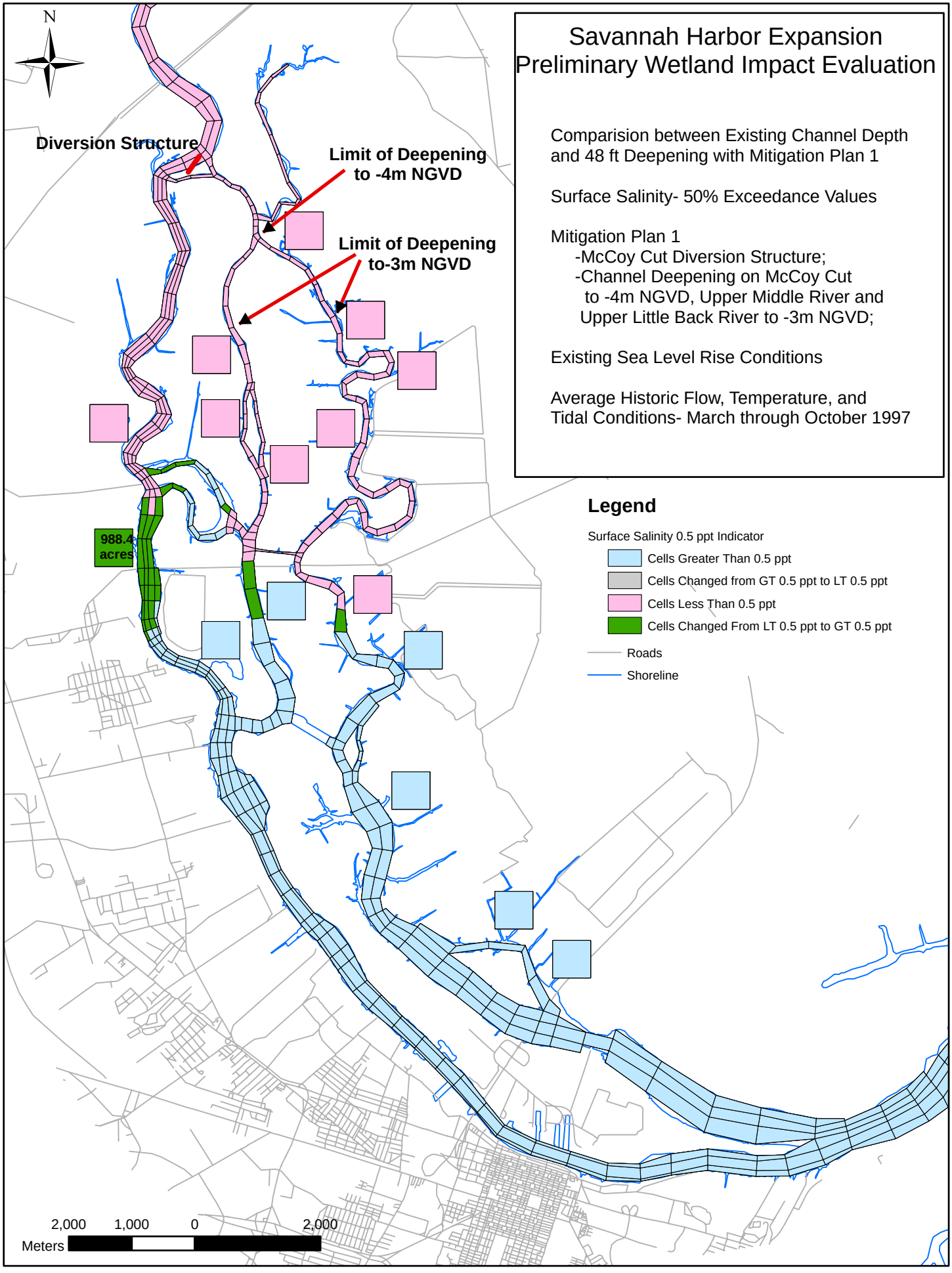

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

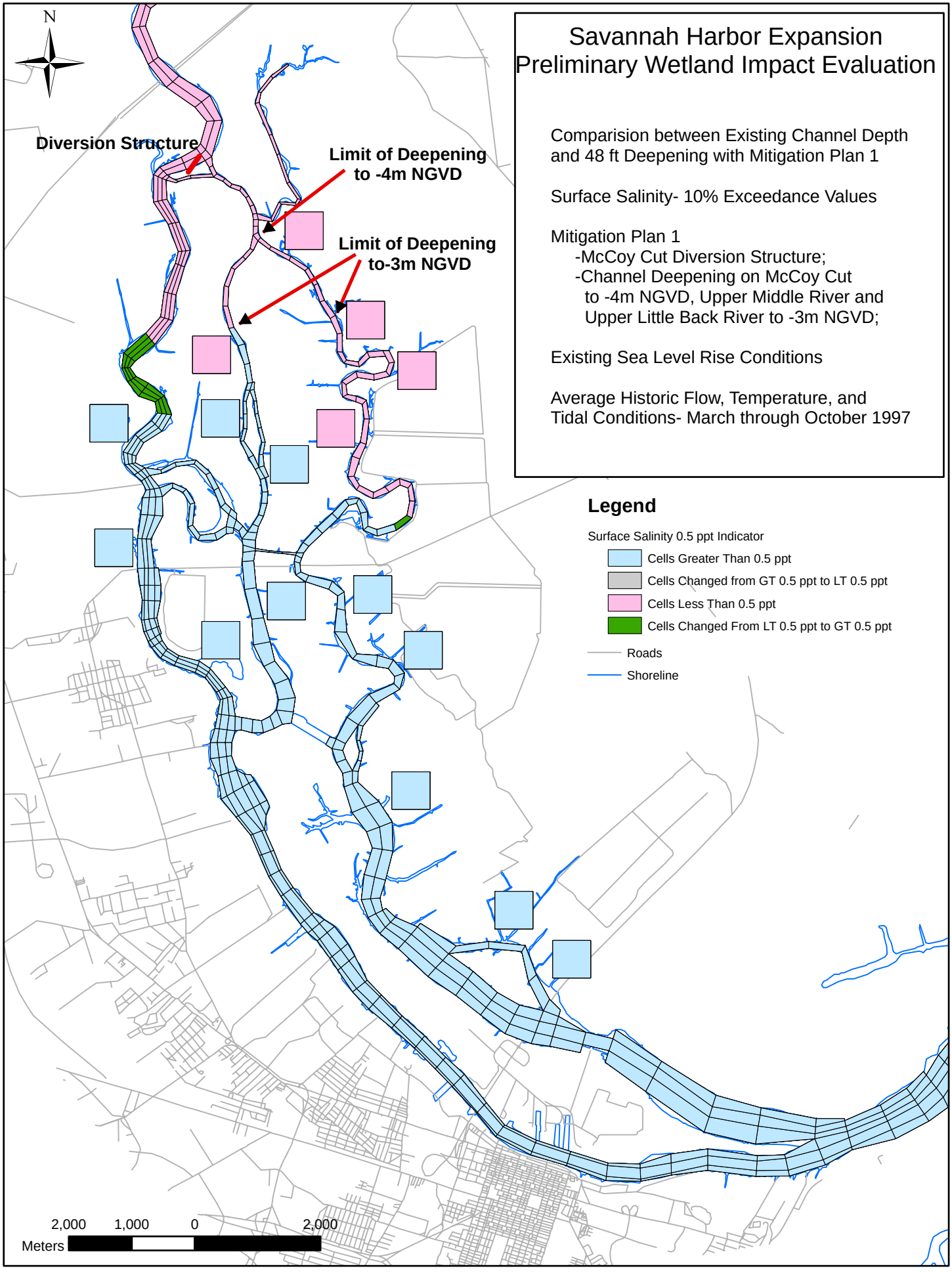
48-ft Deepening

Basic Evaluation

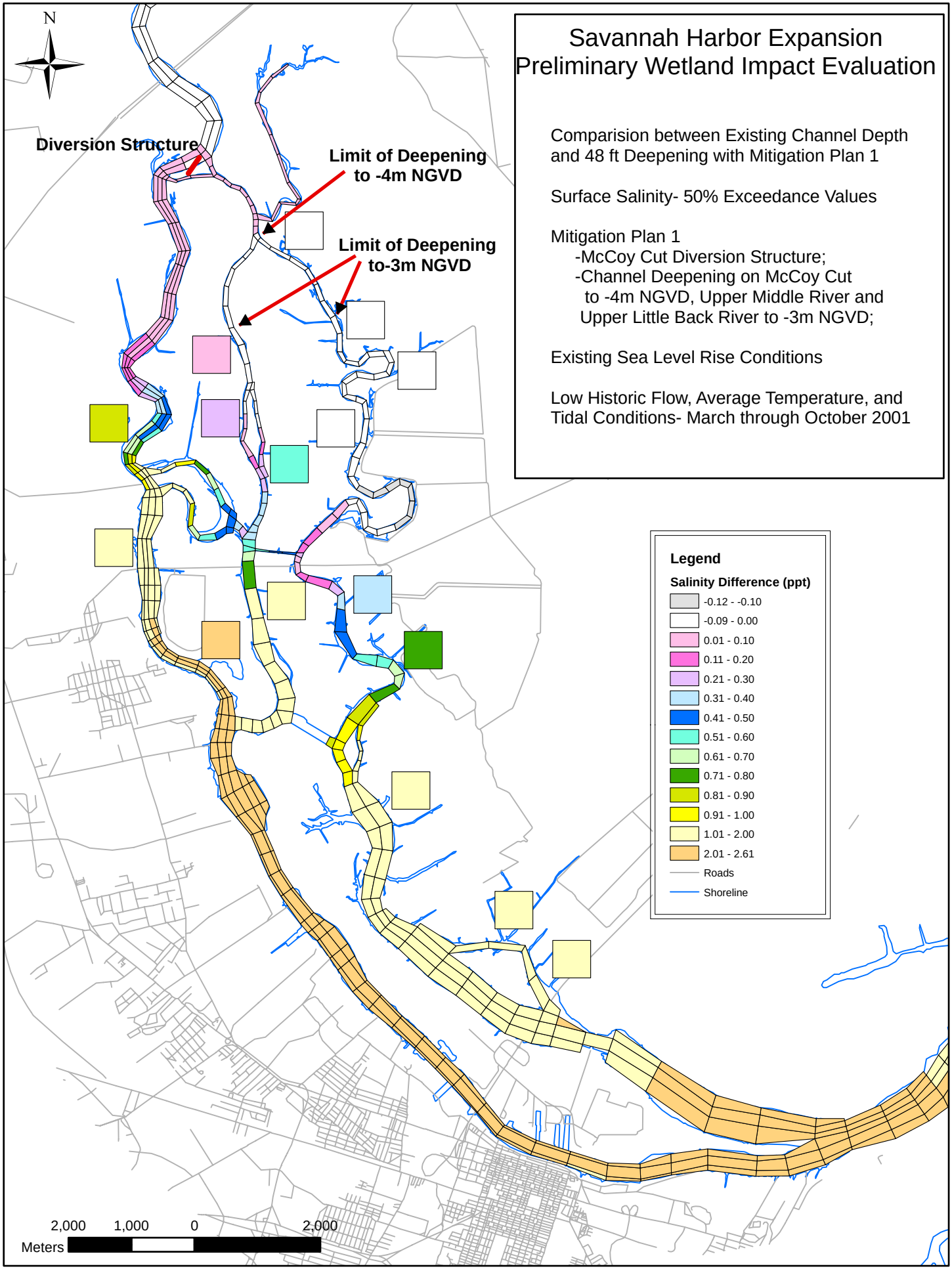

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.18 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.24
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

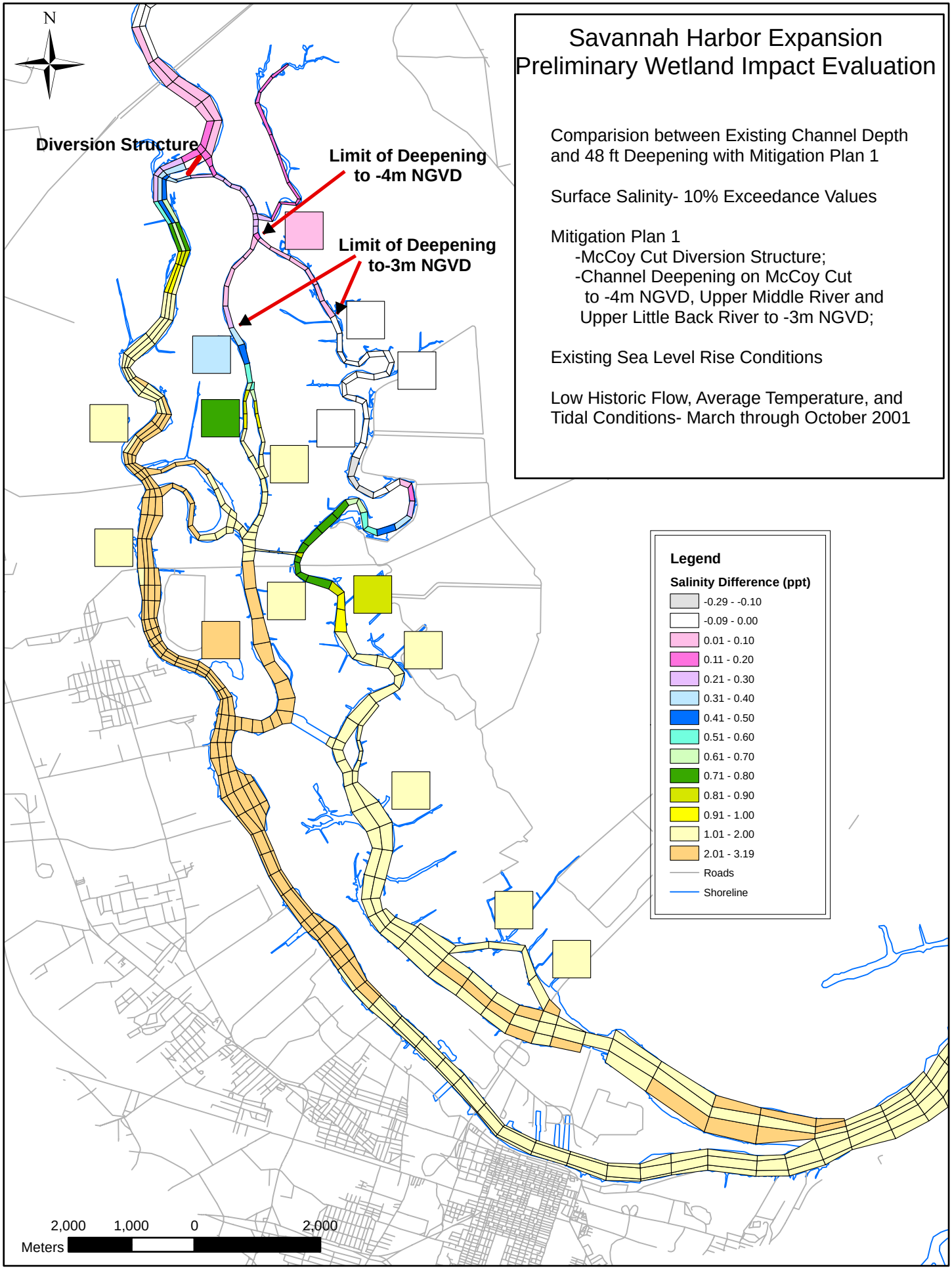

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.53 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.72
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

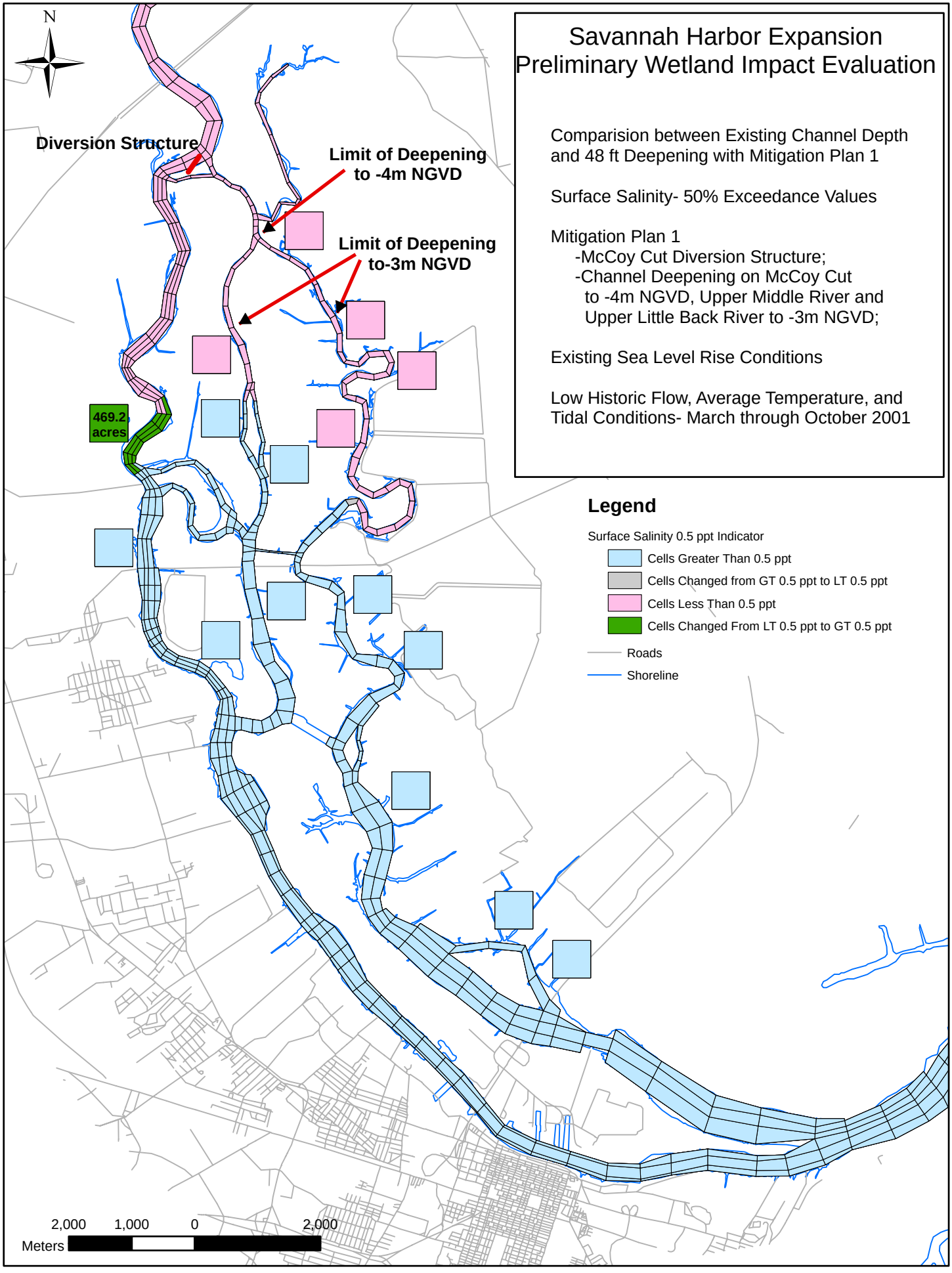

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
988.4 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

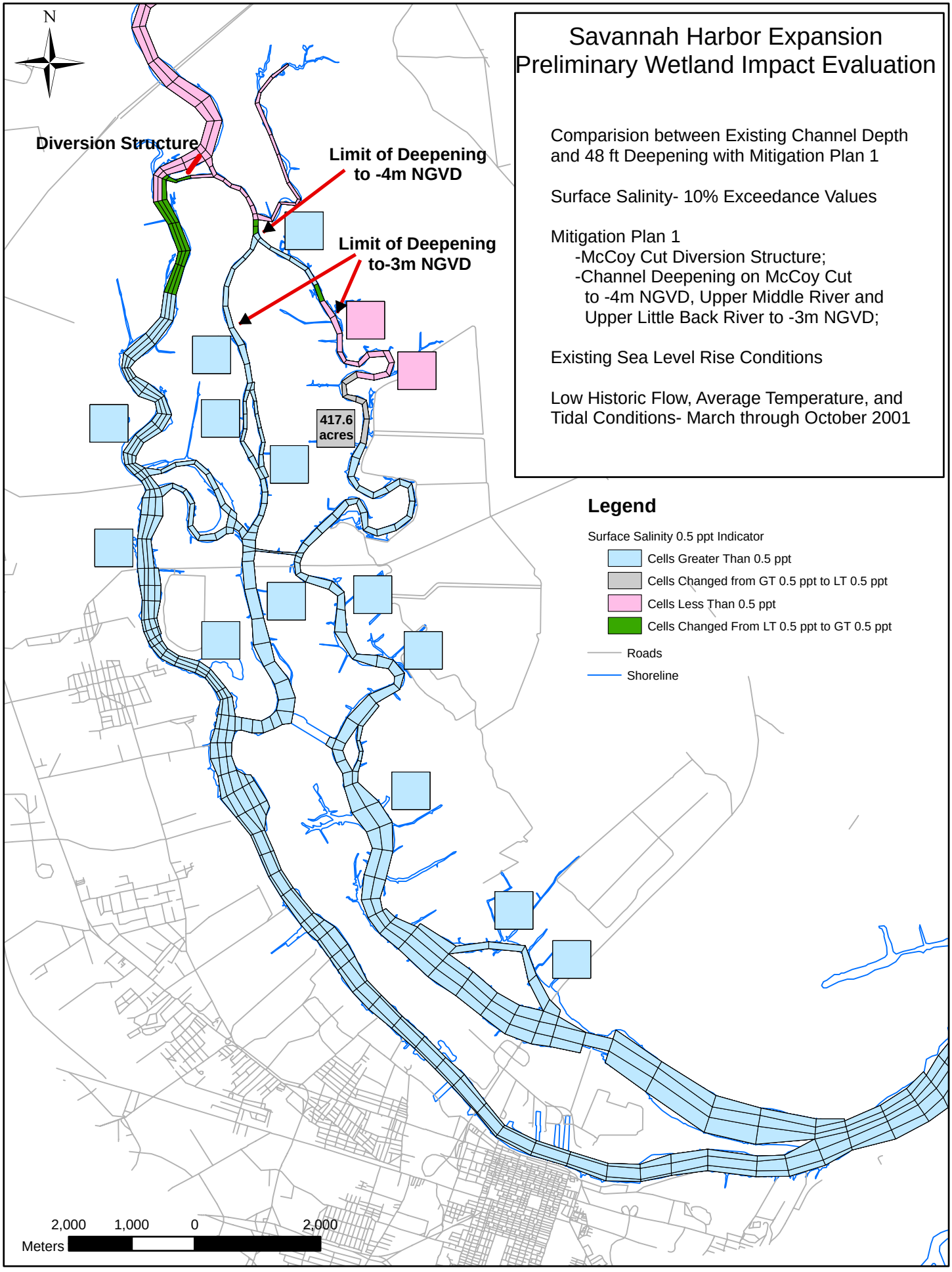

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #1

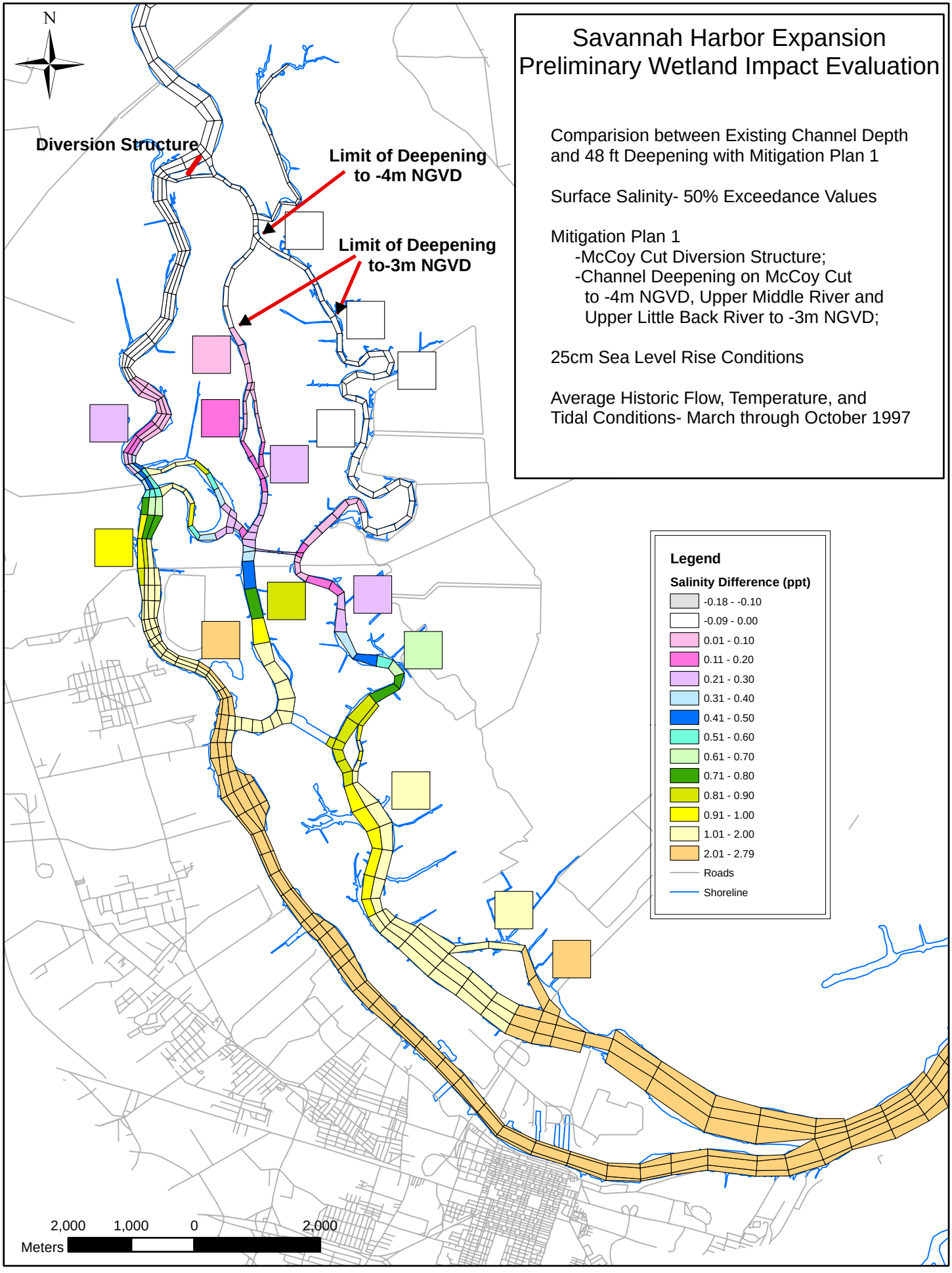

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-0.12 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.61
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

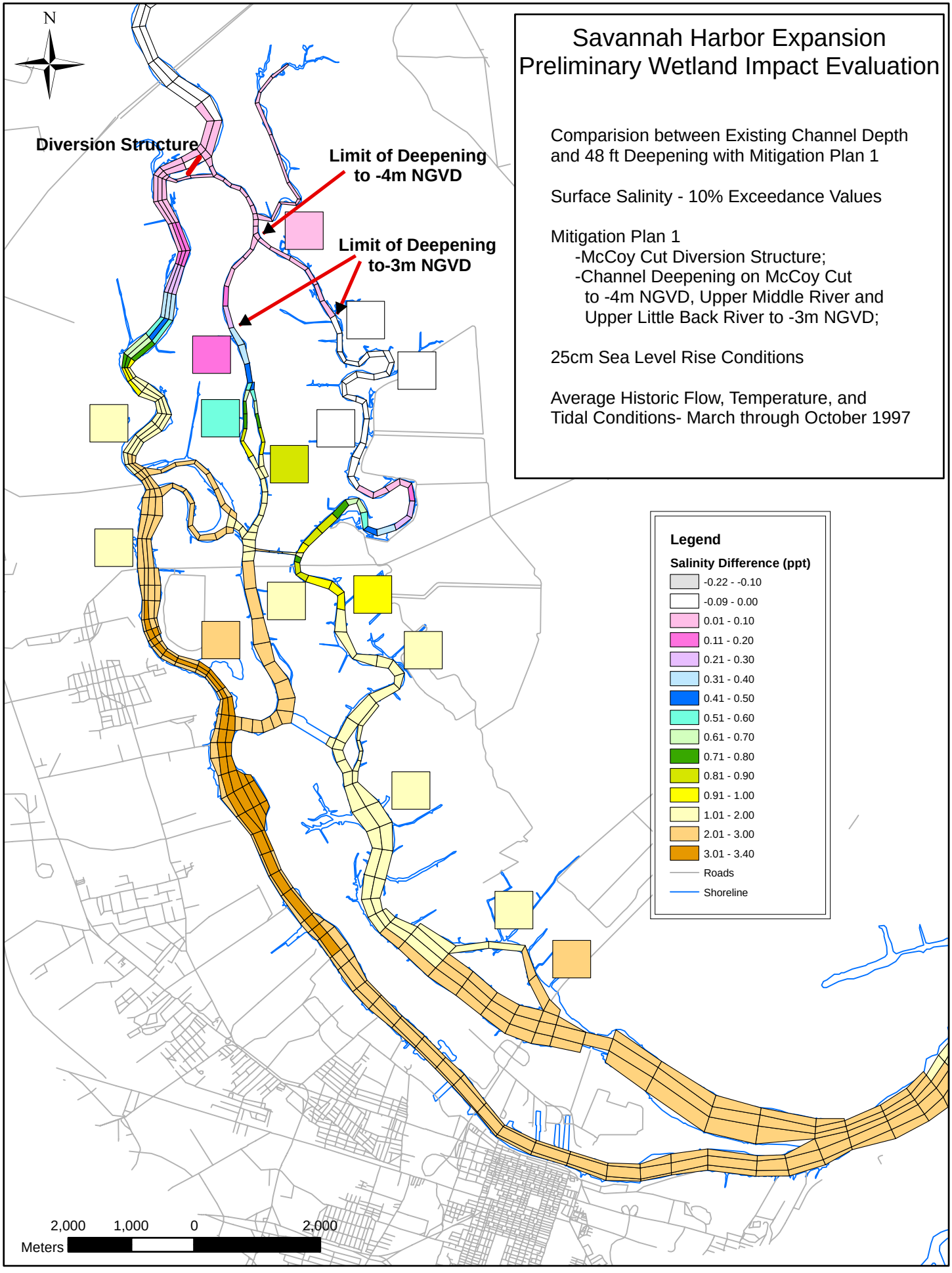

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.19
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

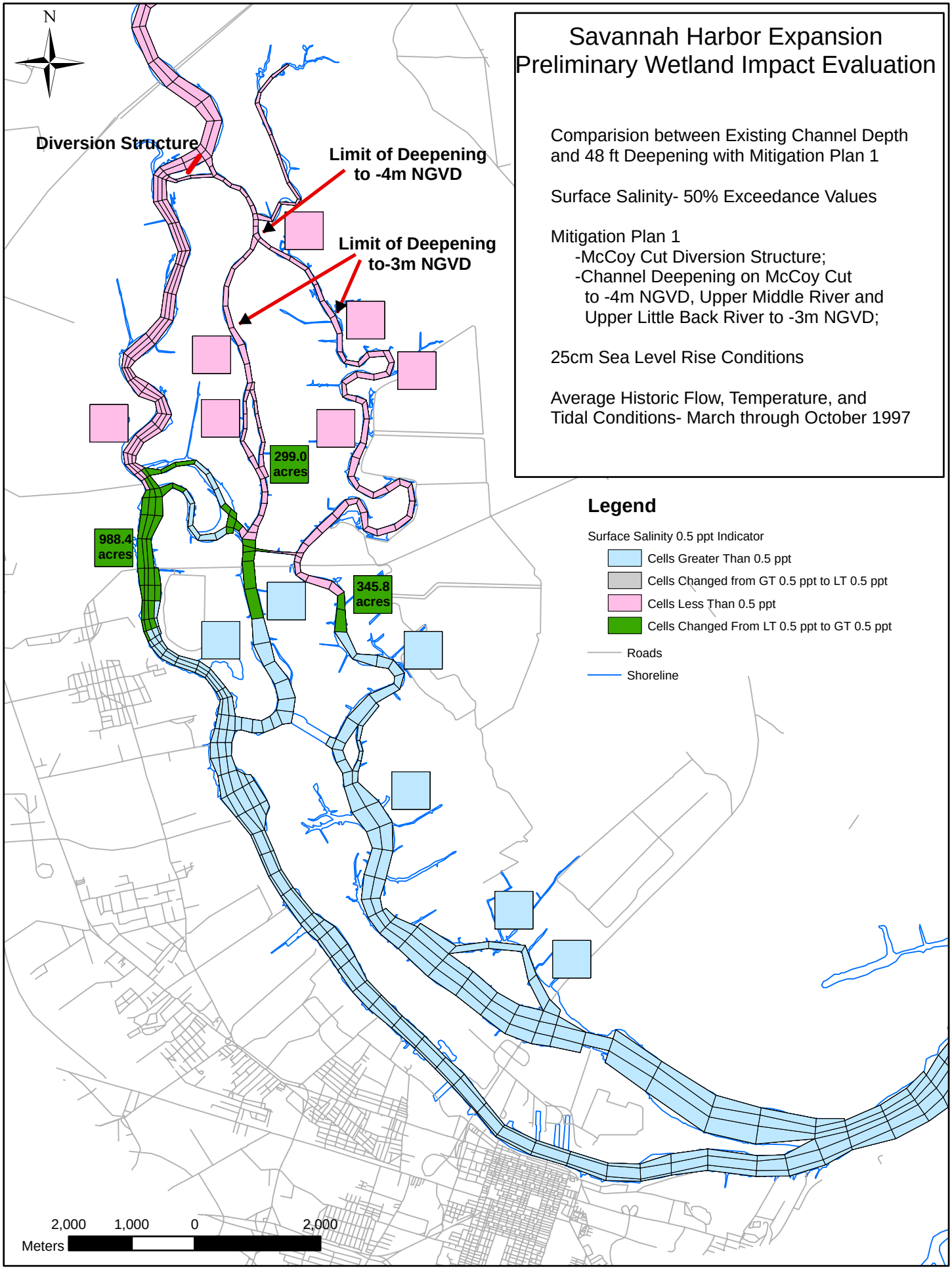

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
417.6 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

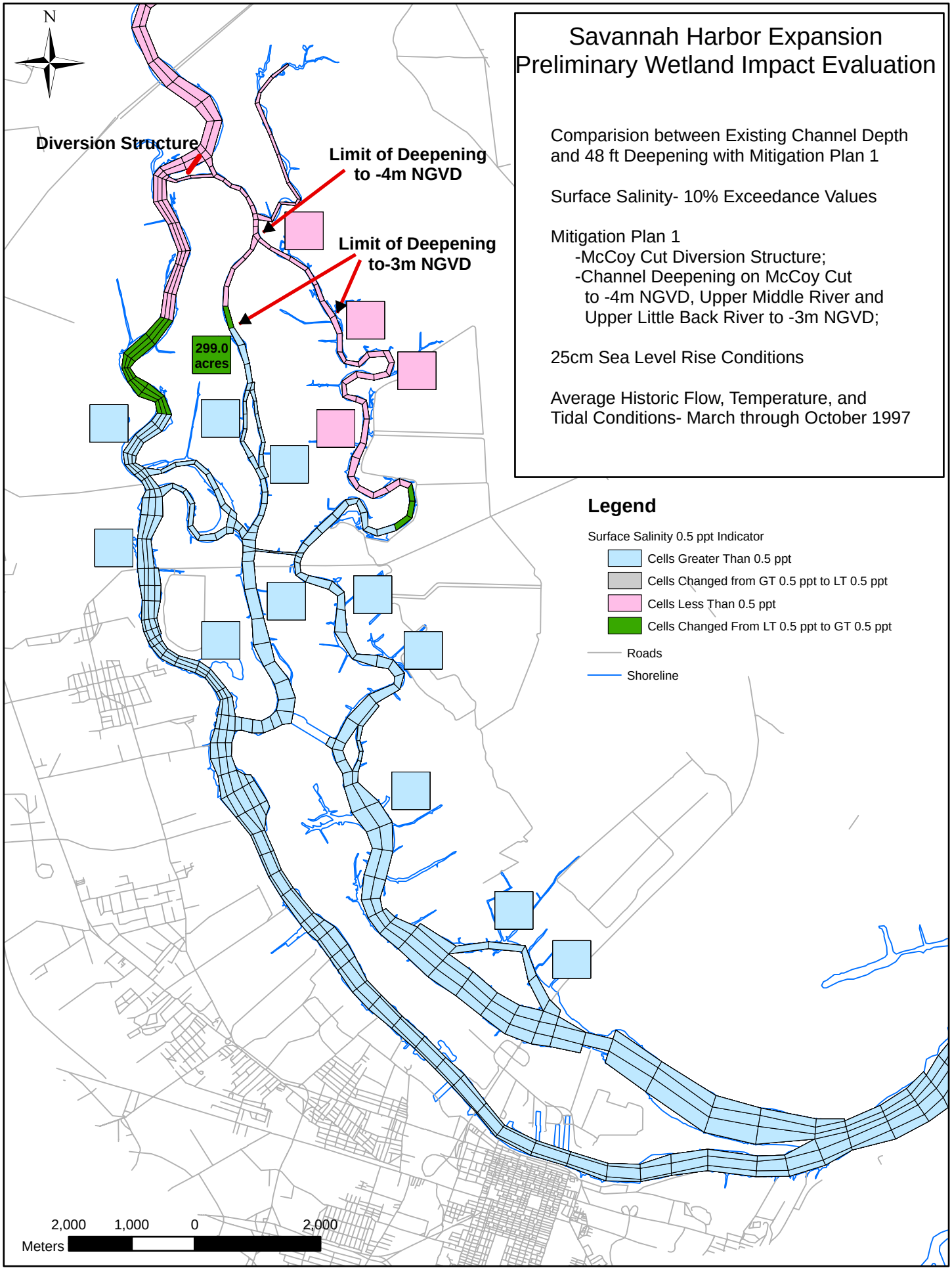
Sensitivity Analysis #2A


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.18 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.79
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

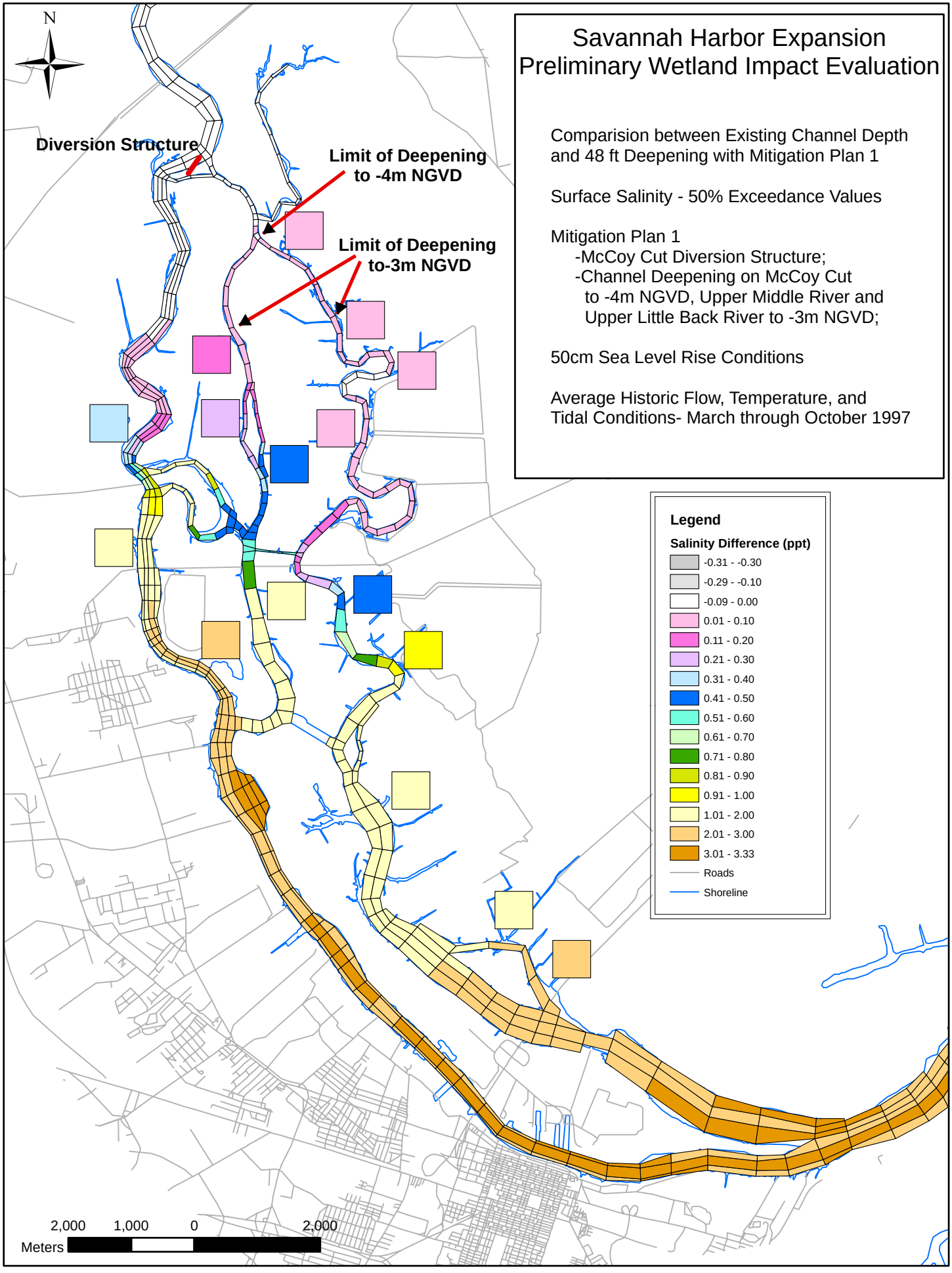


January 2007

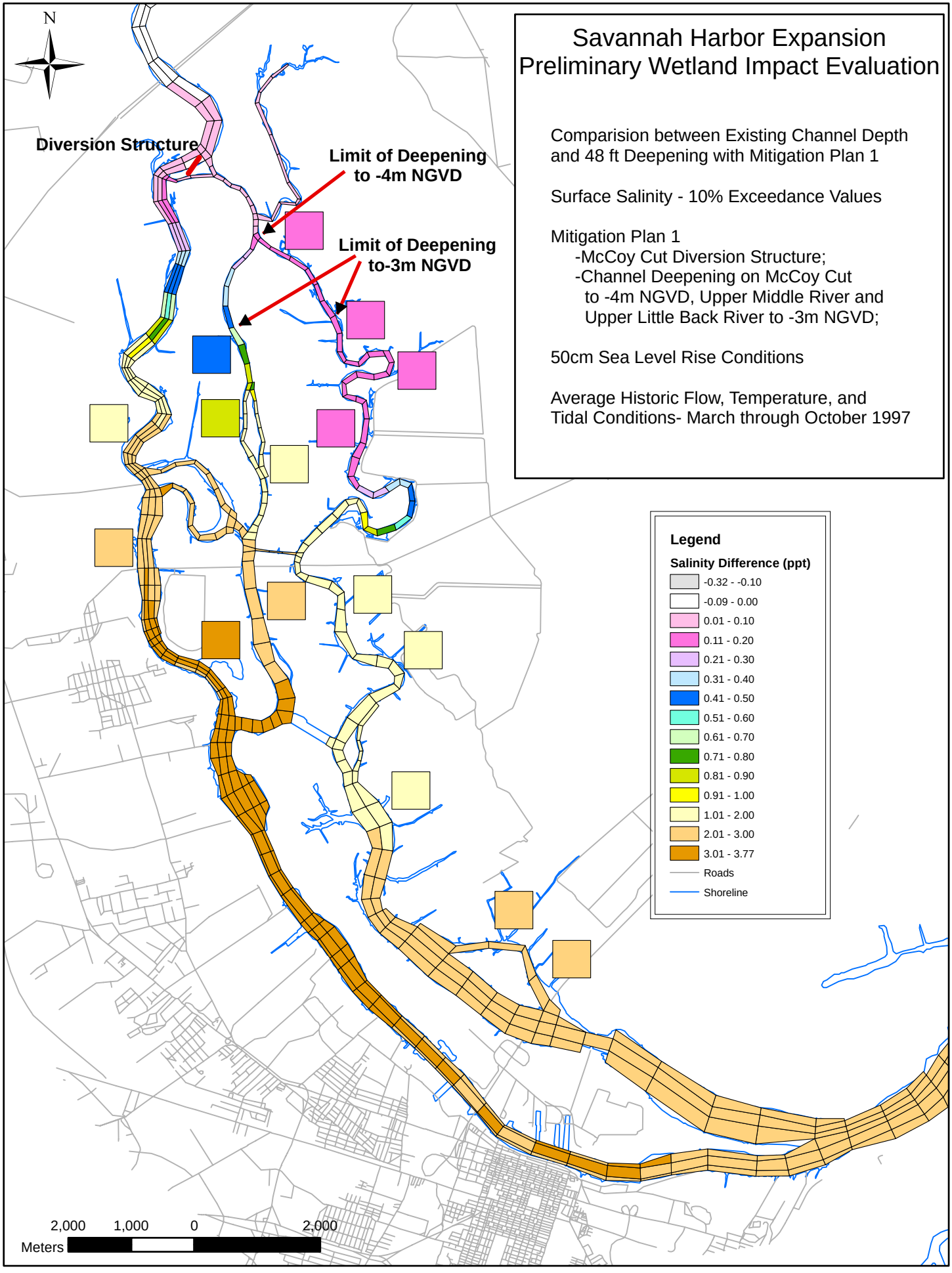

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
988.4 acres
345.8 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

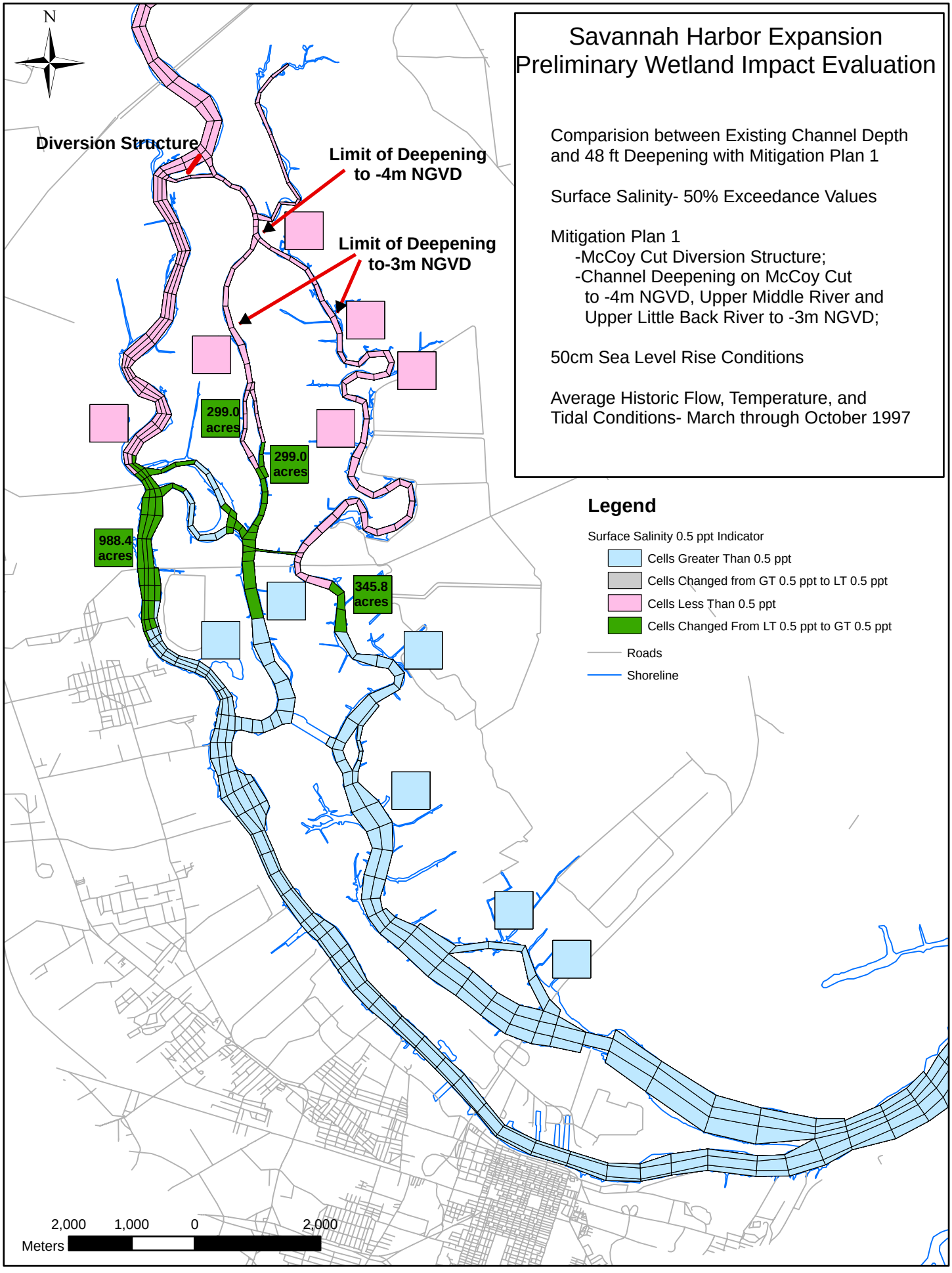

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

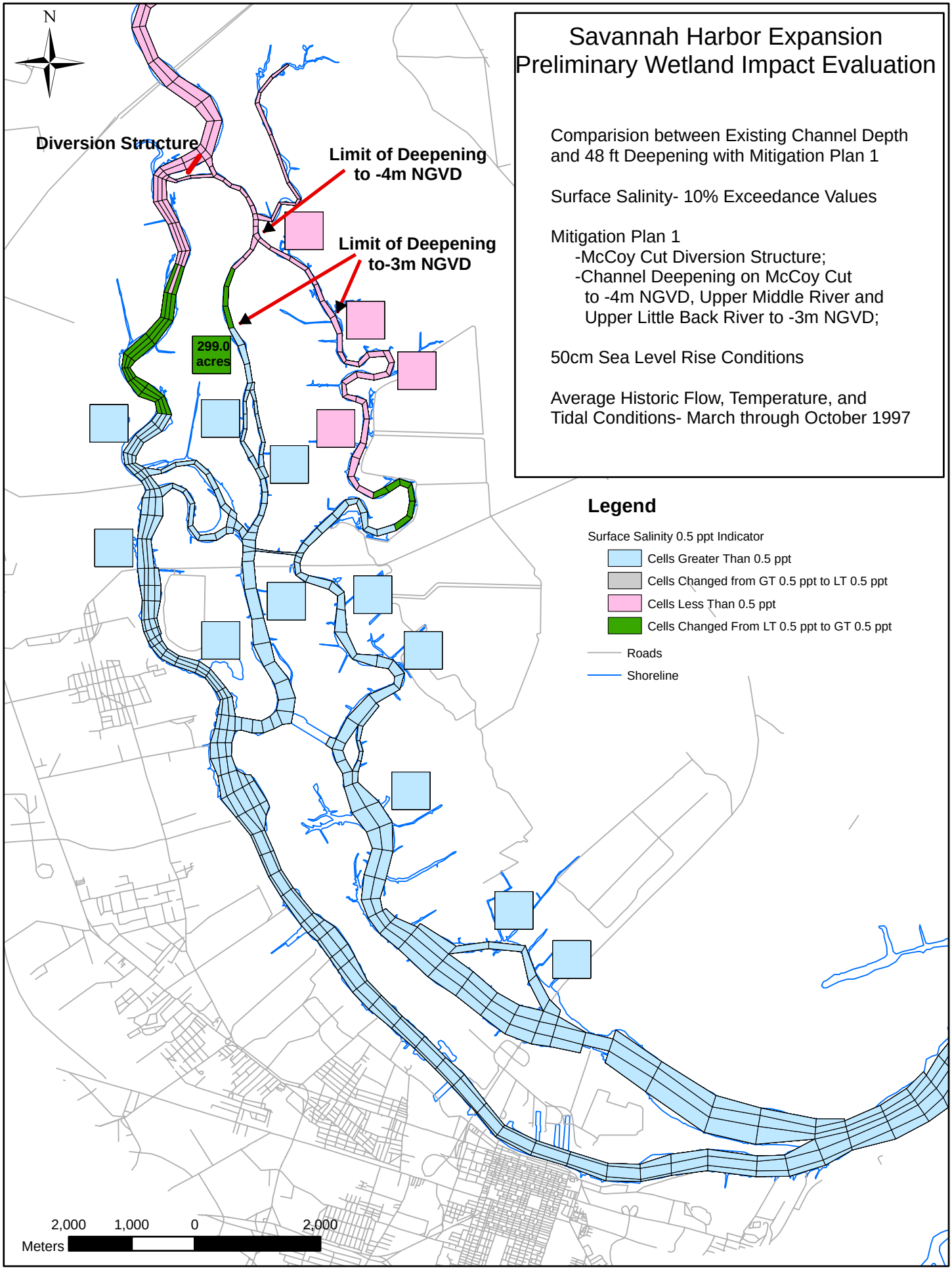
Sensitivity Analysis #2B



January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity - 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-0.32 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.00
3.01 - 3.77
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
299.0 acres
988.4 acres
345.8 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 50% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

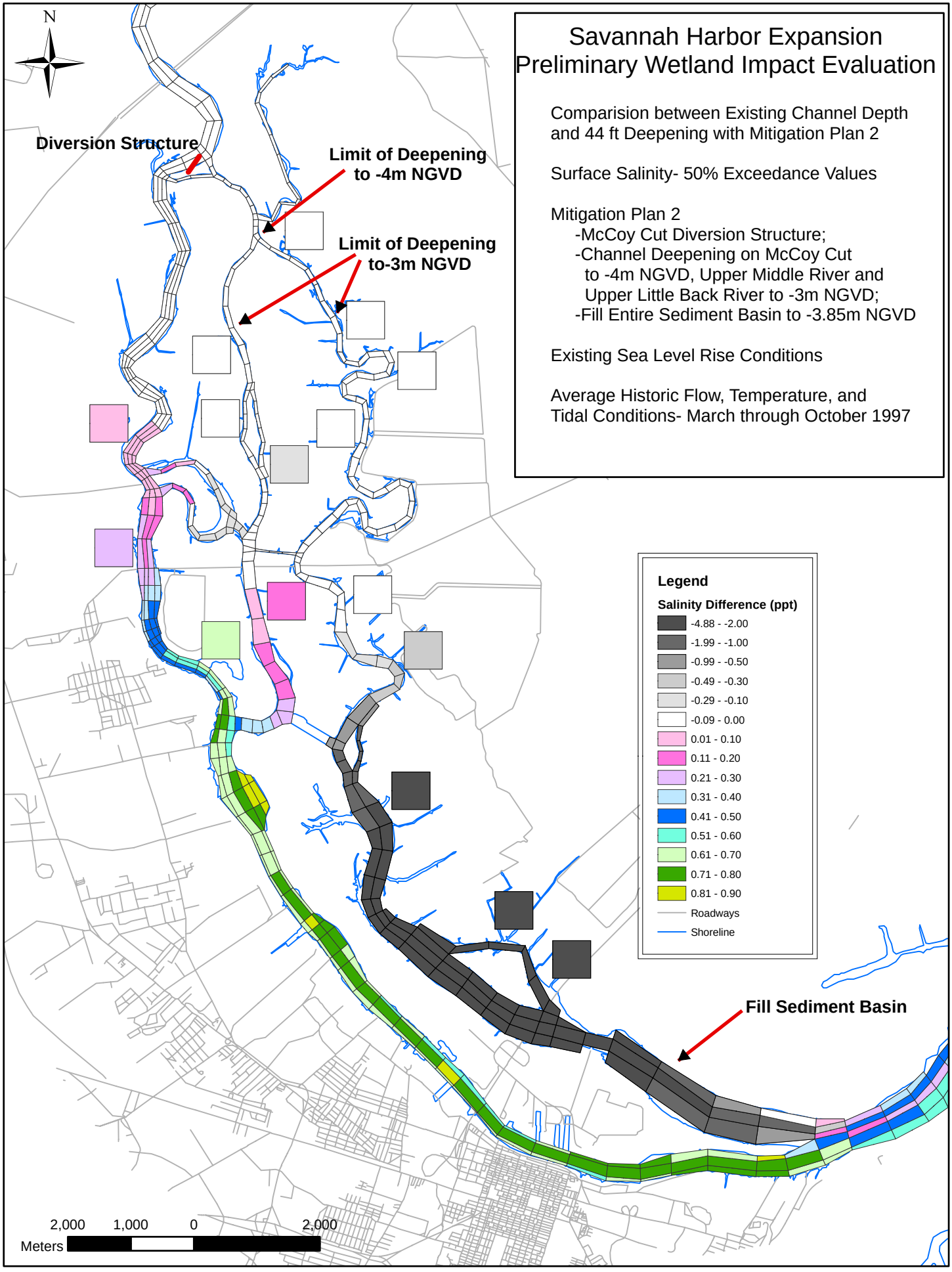

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 1
Surface Salinity- 10% Exceedance Values
Mitigation Plan 1
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

MITIGATION PLAN 2

- ***McCoy Cut Diversion Structure***
- ***Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD***
- ***Fill Entire Sediment Basin to -3.85m NGVD***

44-ft Deepening

Basic Evaluation



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

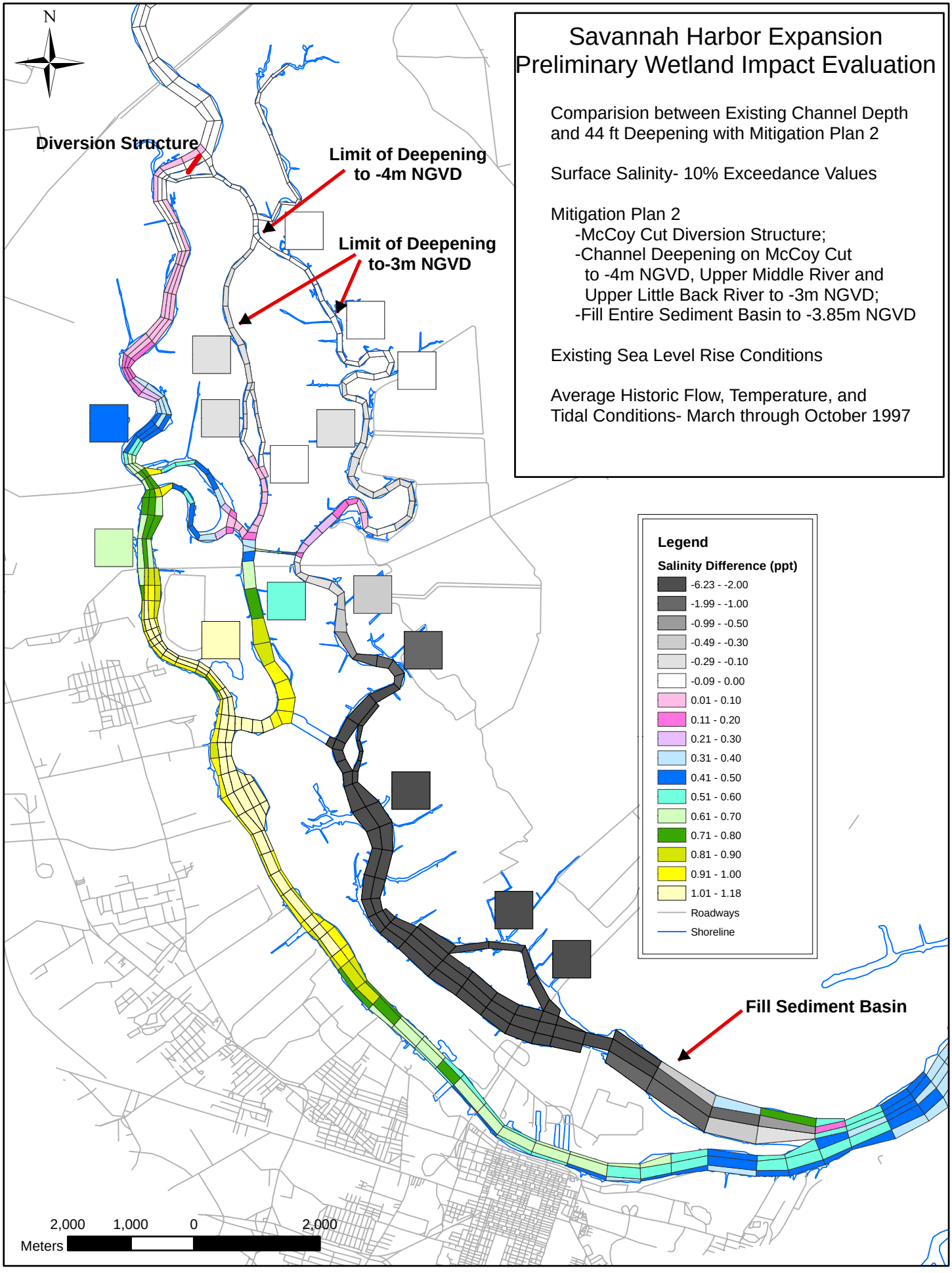
Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

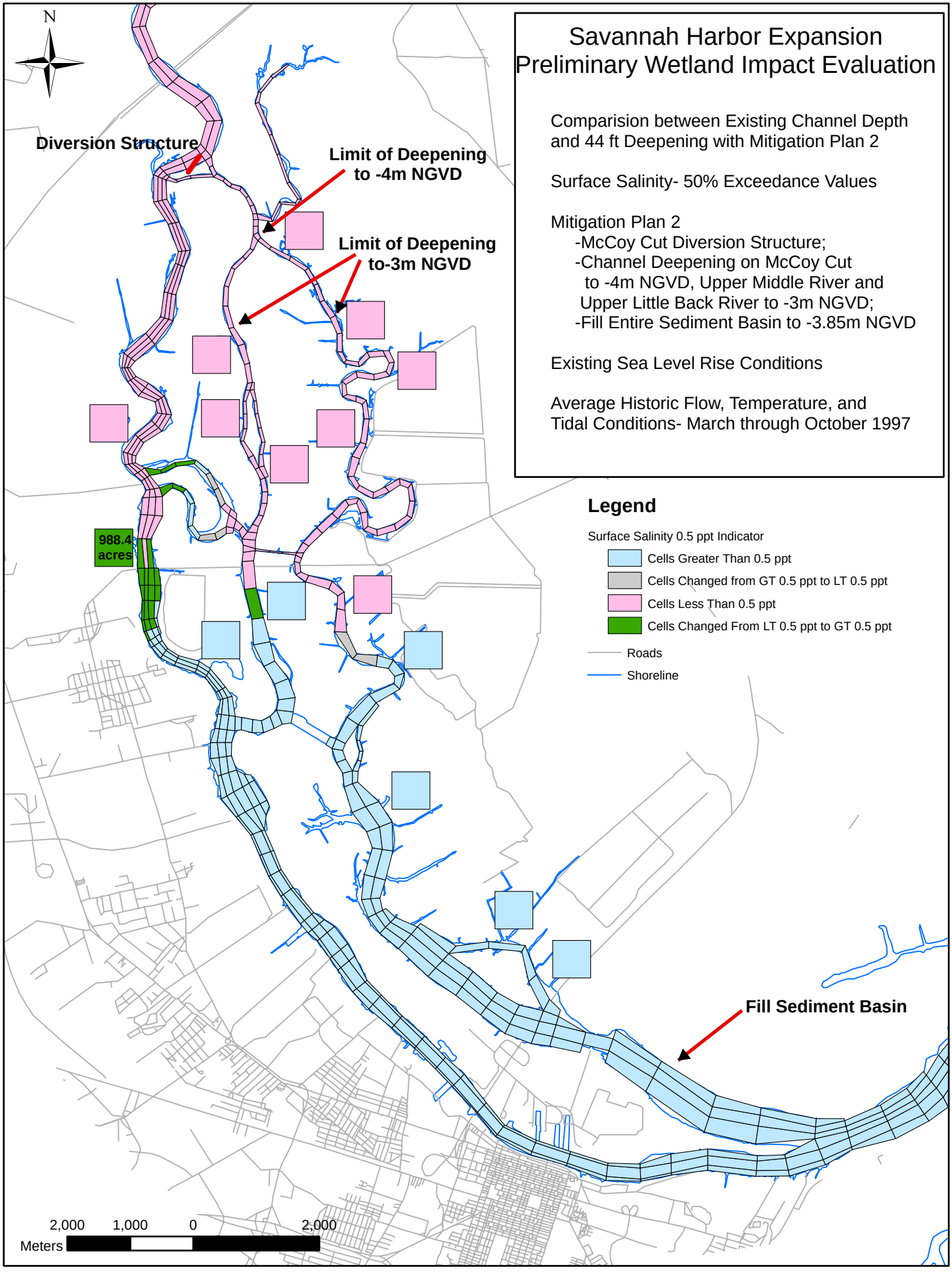
Surface Salinity- 10% Exceedance Values

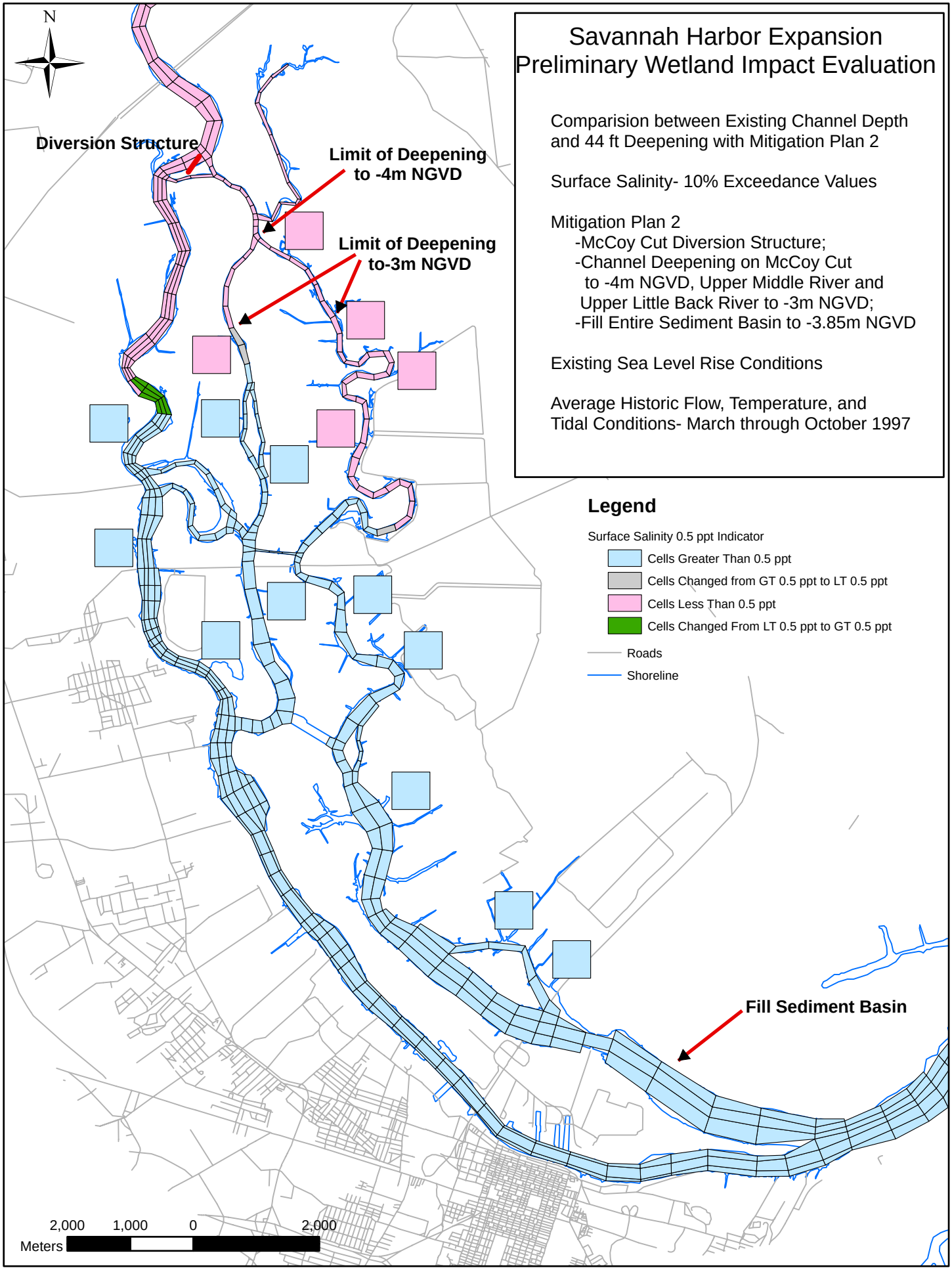
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
988.4 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

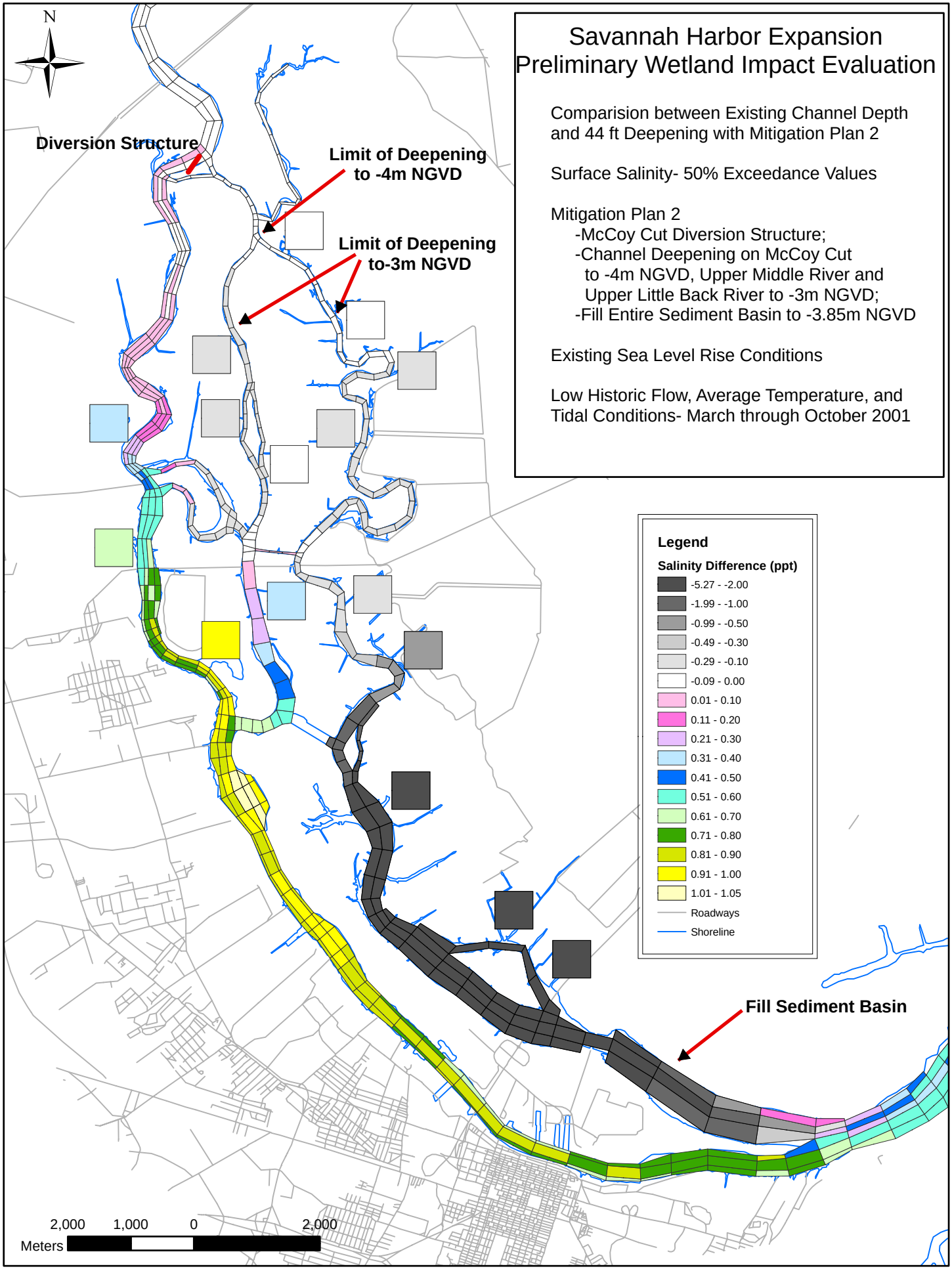
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #1



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

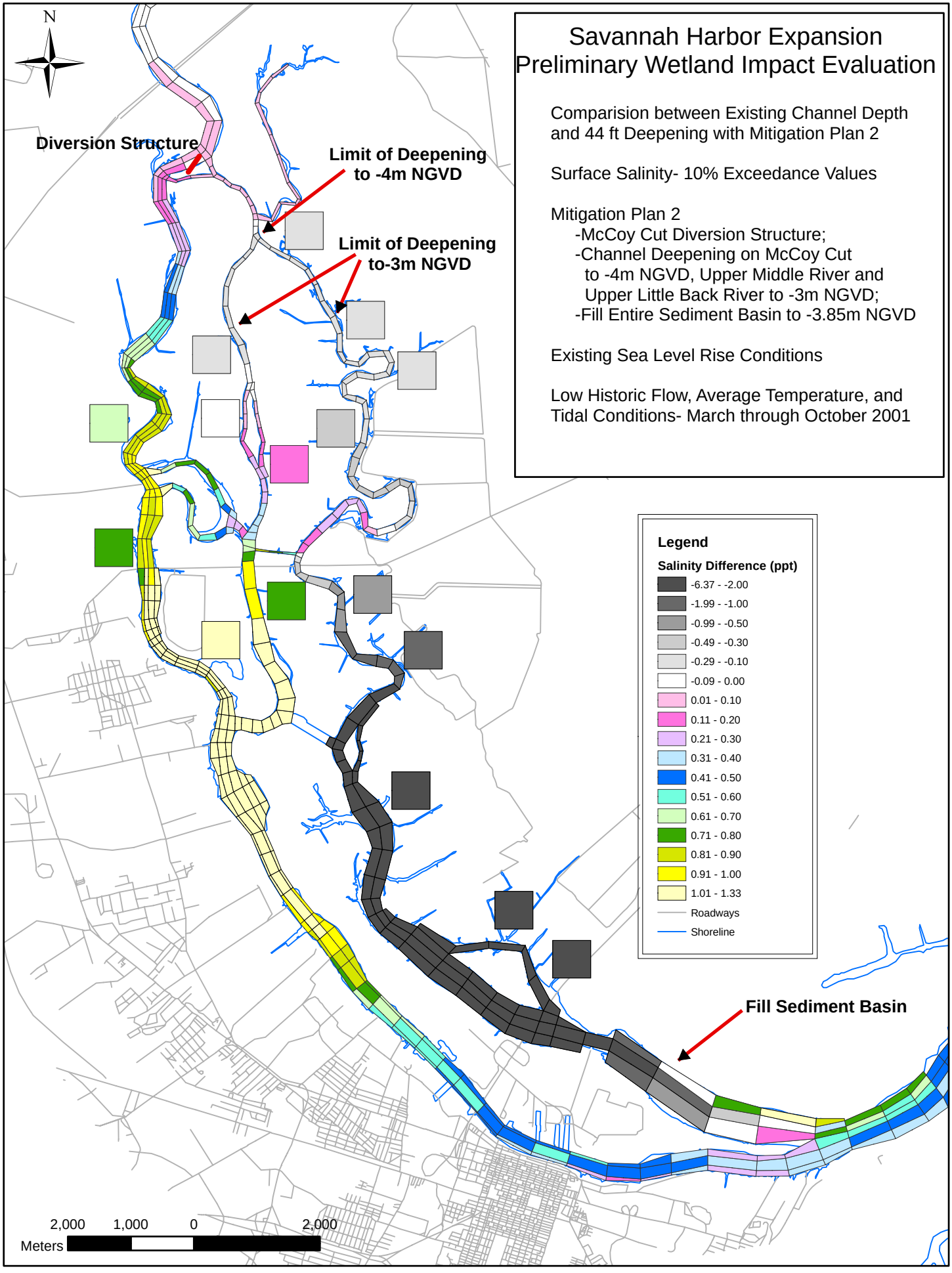
Surface Salinity- 50% Exceedance Values

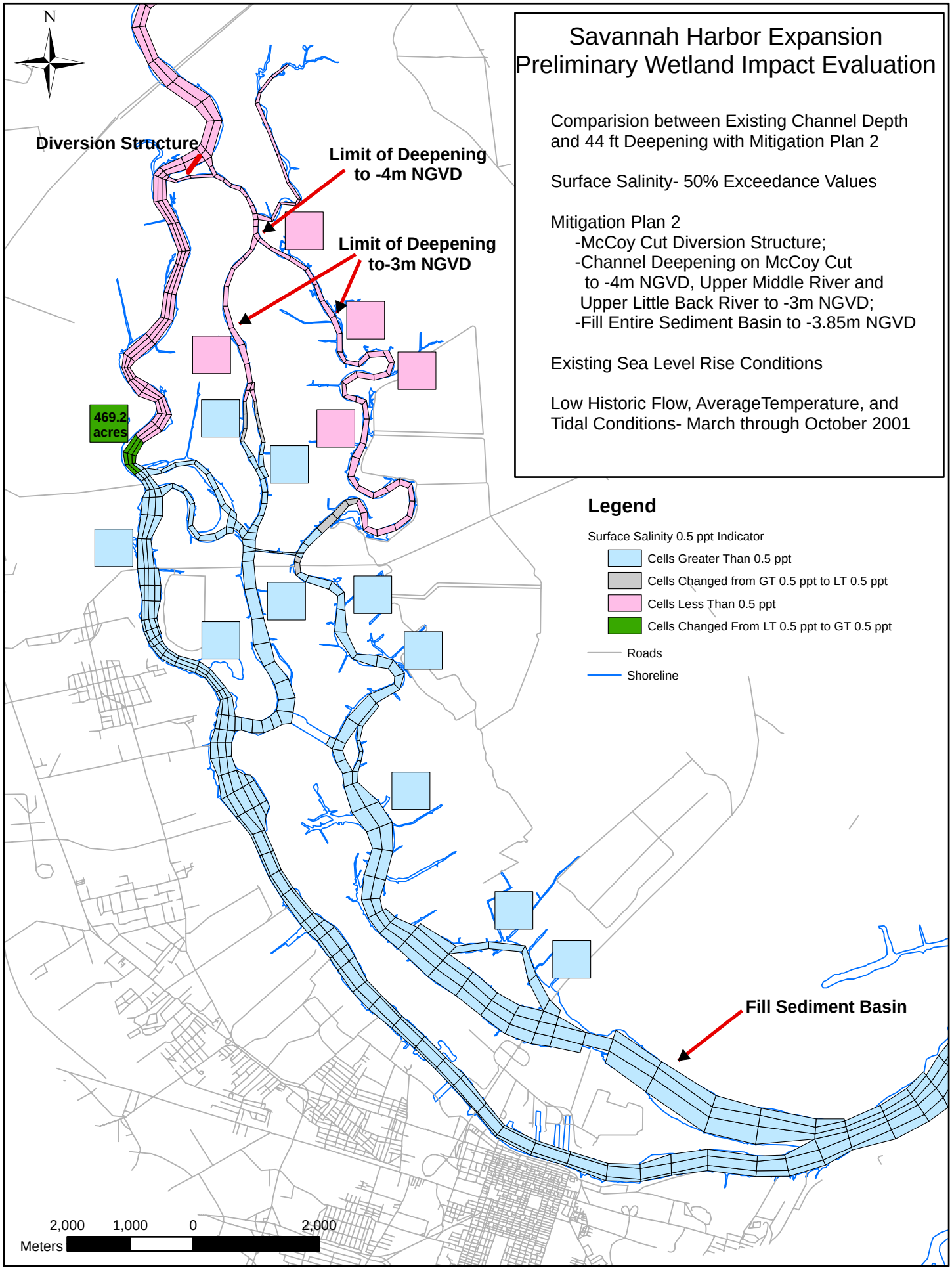
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

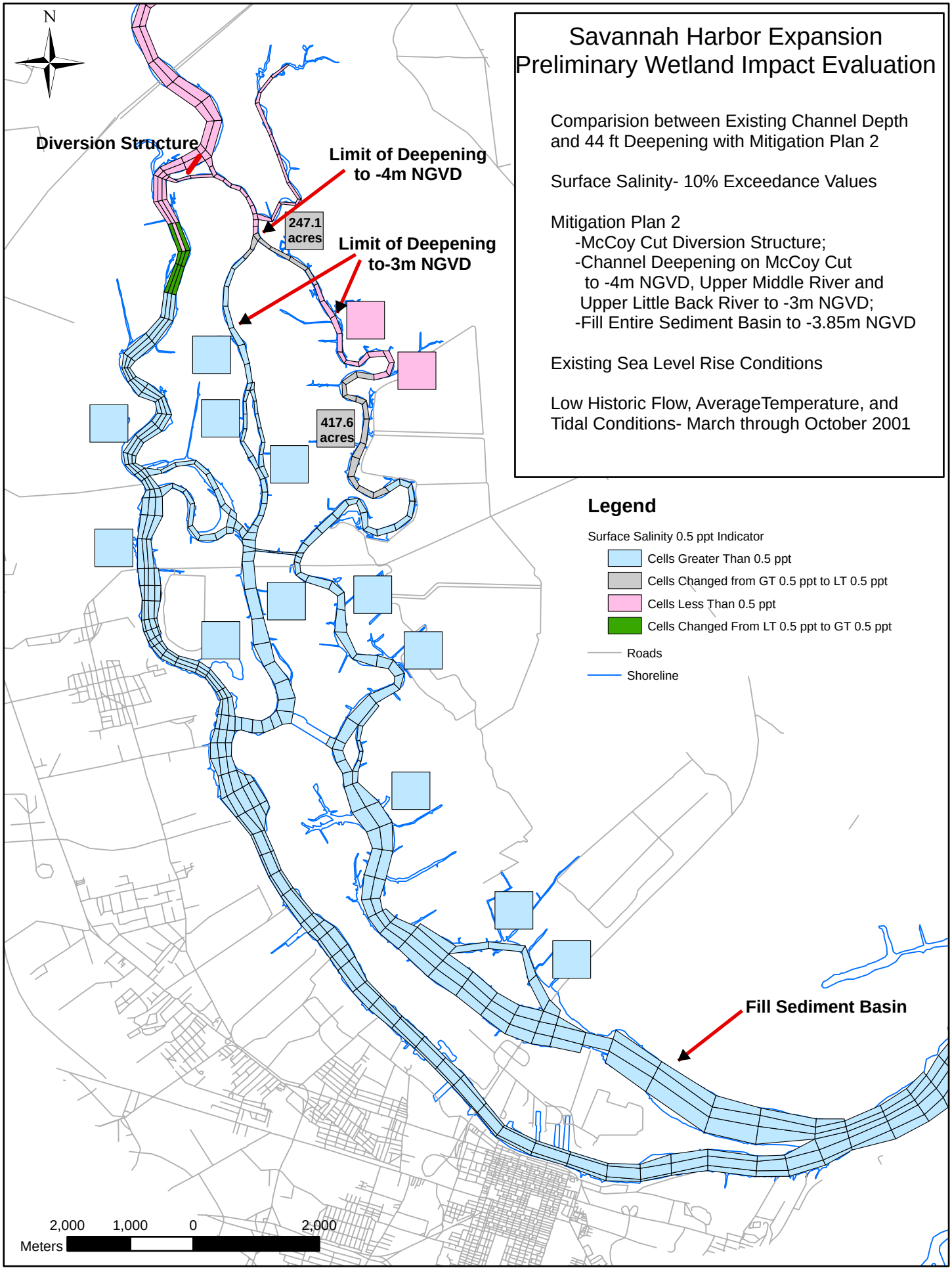
Existing Sea Level Rise Conditions

Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-6.37 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.33
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

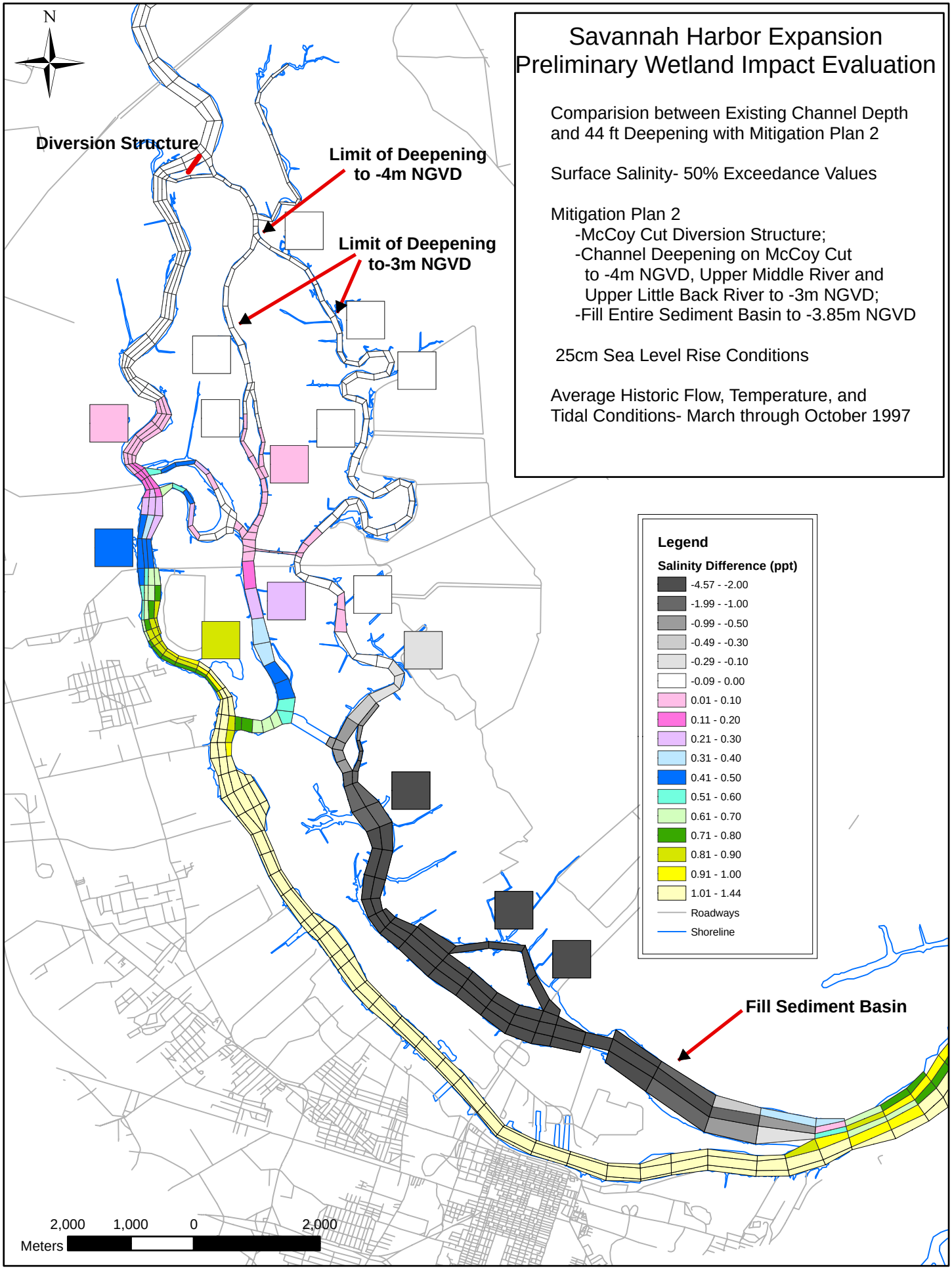
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #2A



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

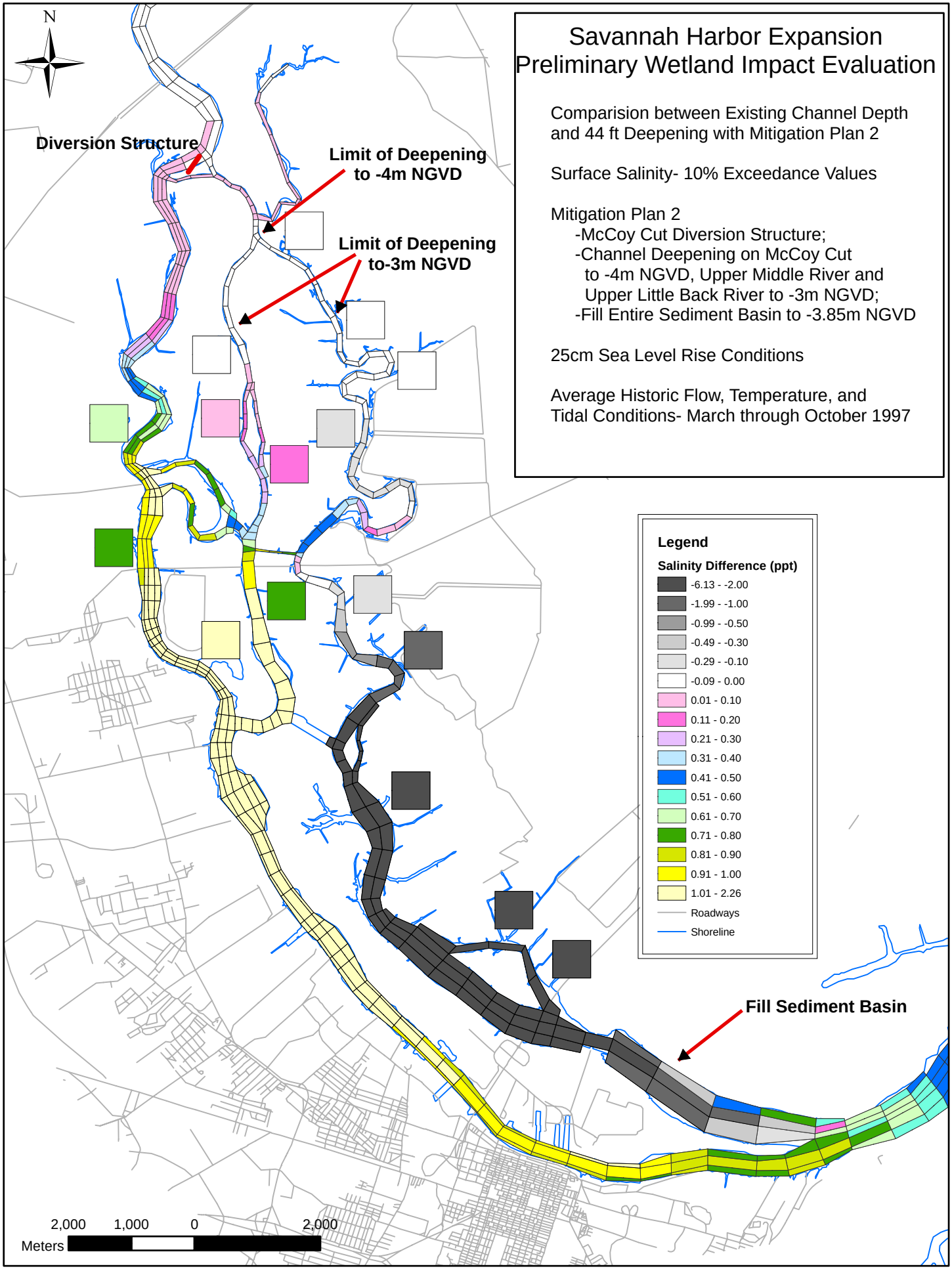
Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

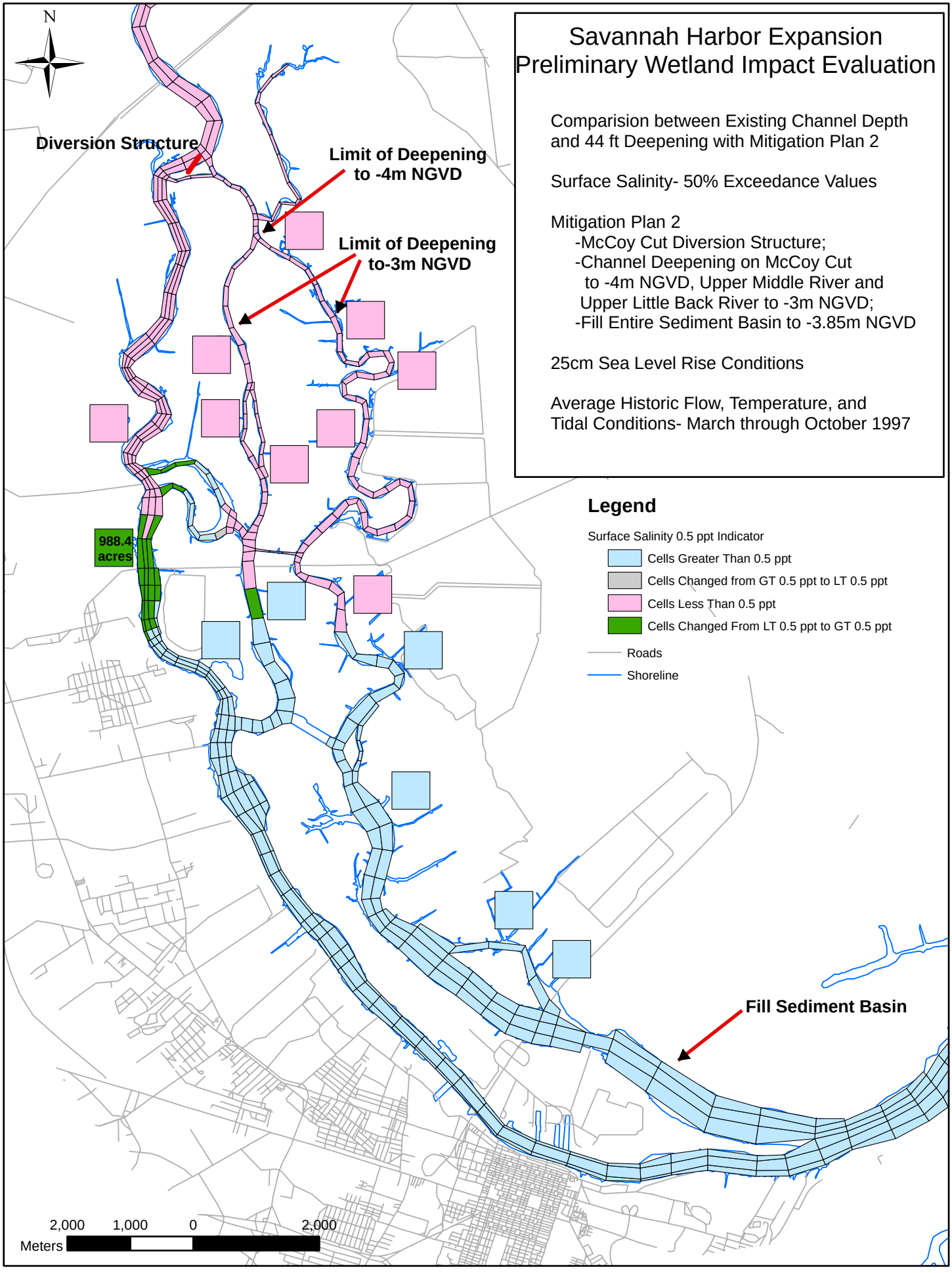
Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

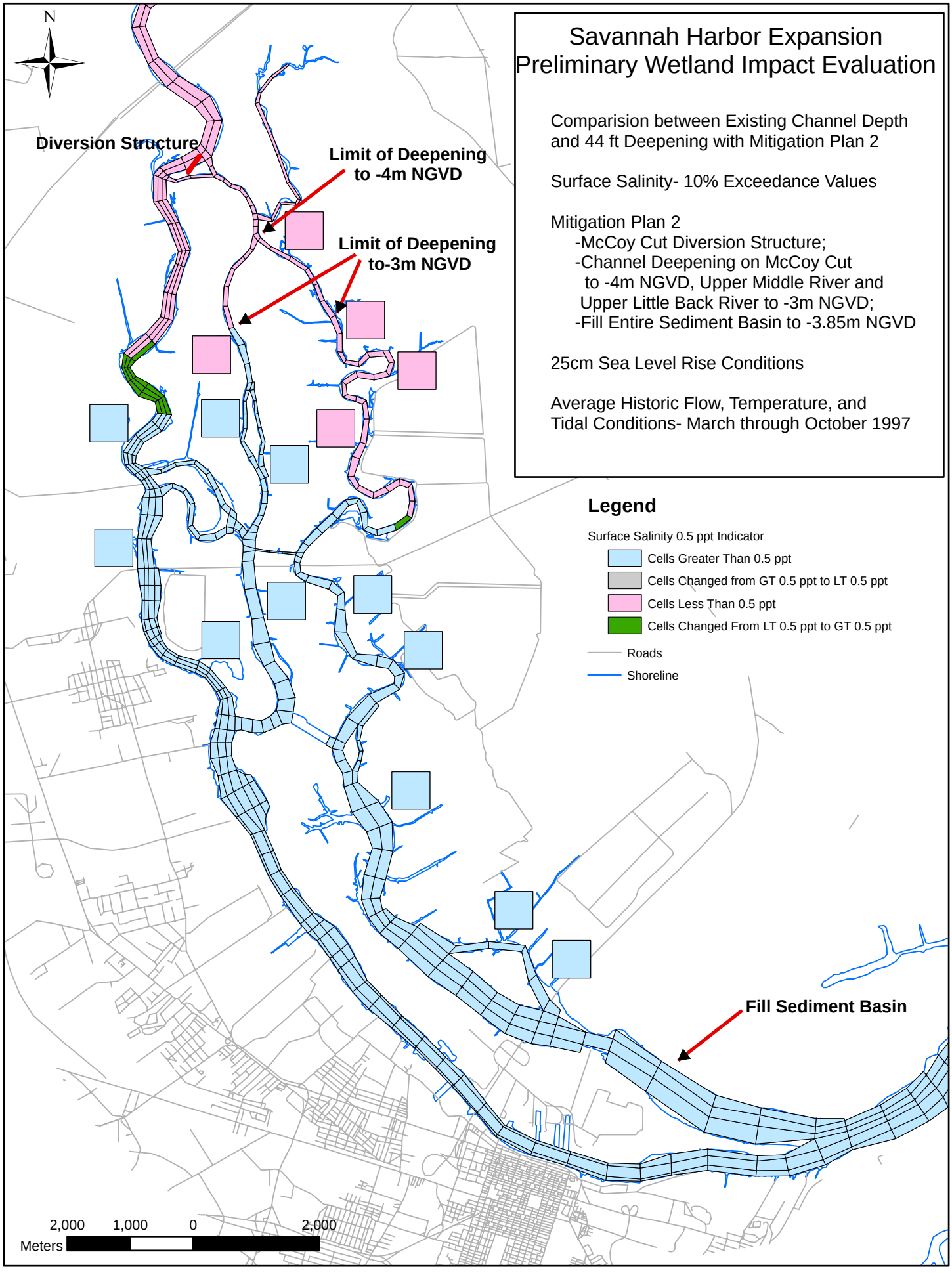
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

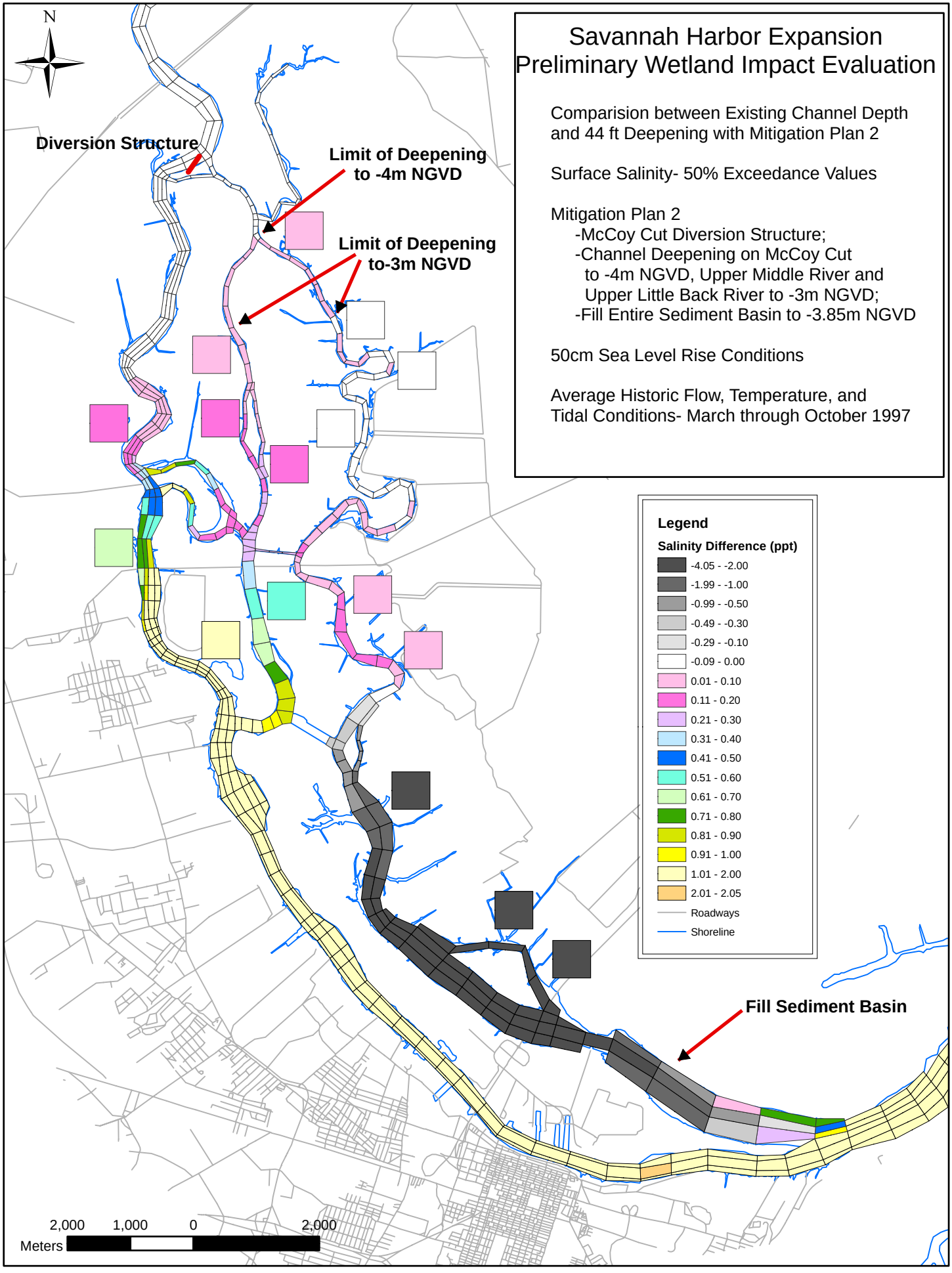
Surface Salinity 0.5 ppt Indicator

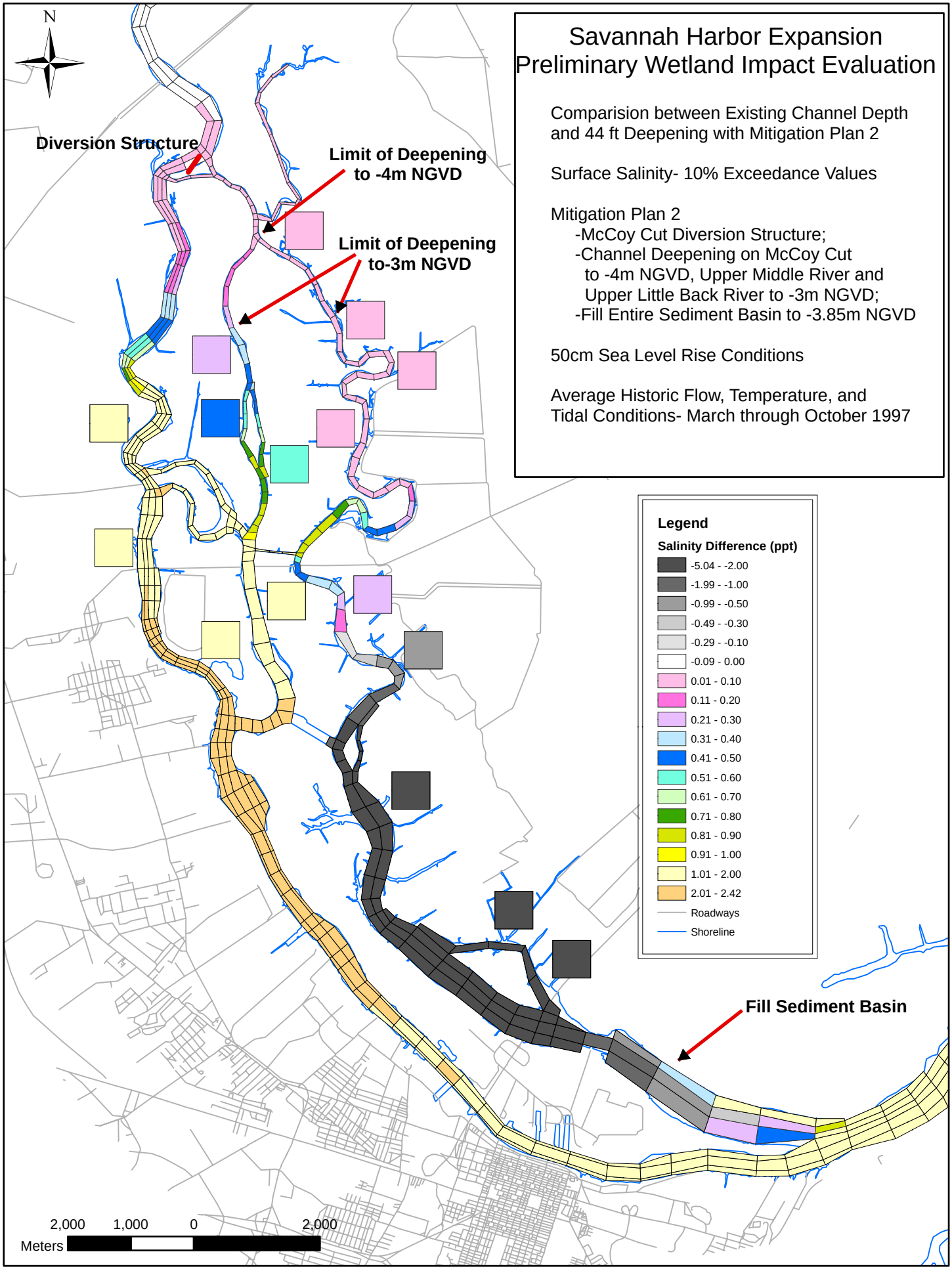
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

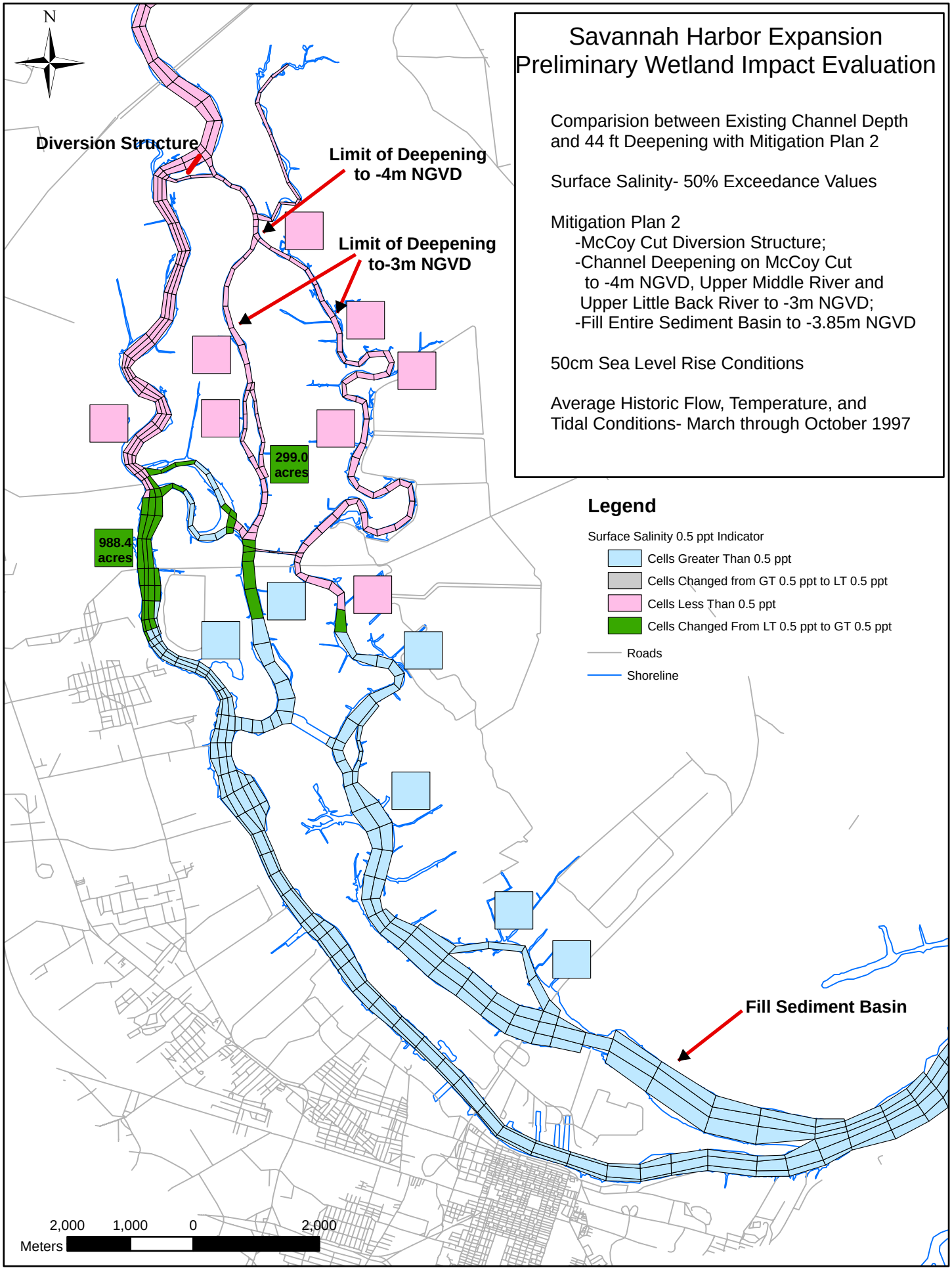
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2B


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.05 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.05
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-5.04 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.42
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

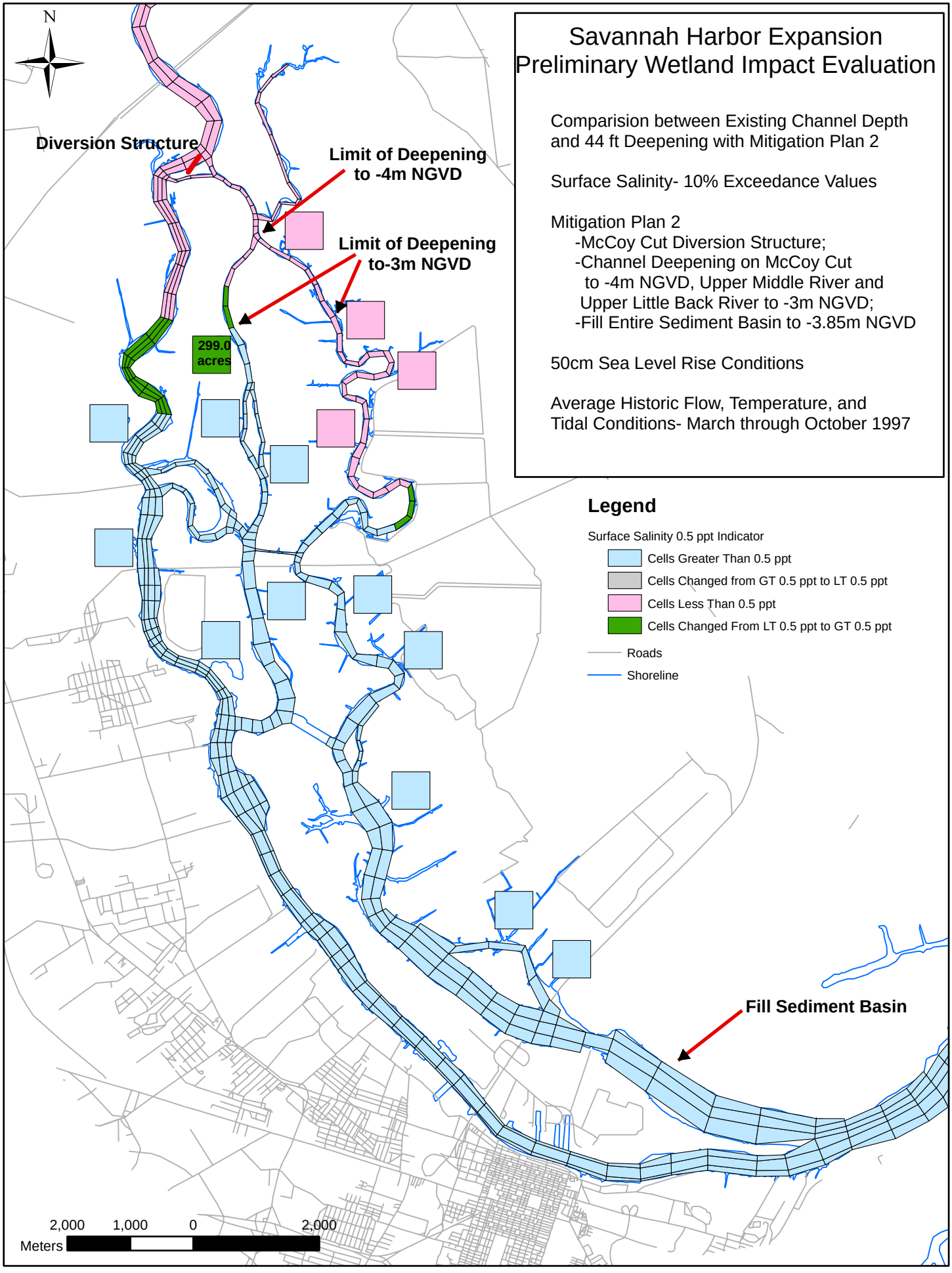
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

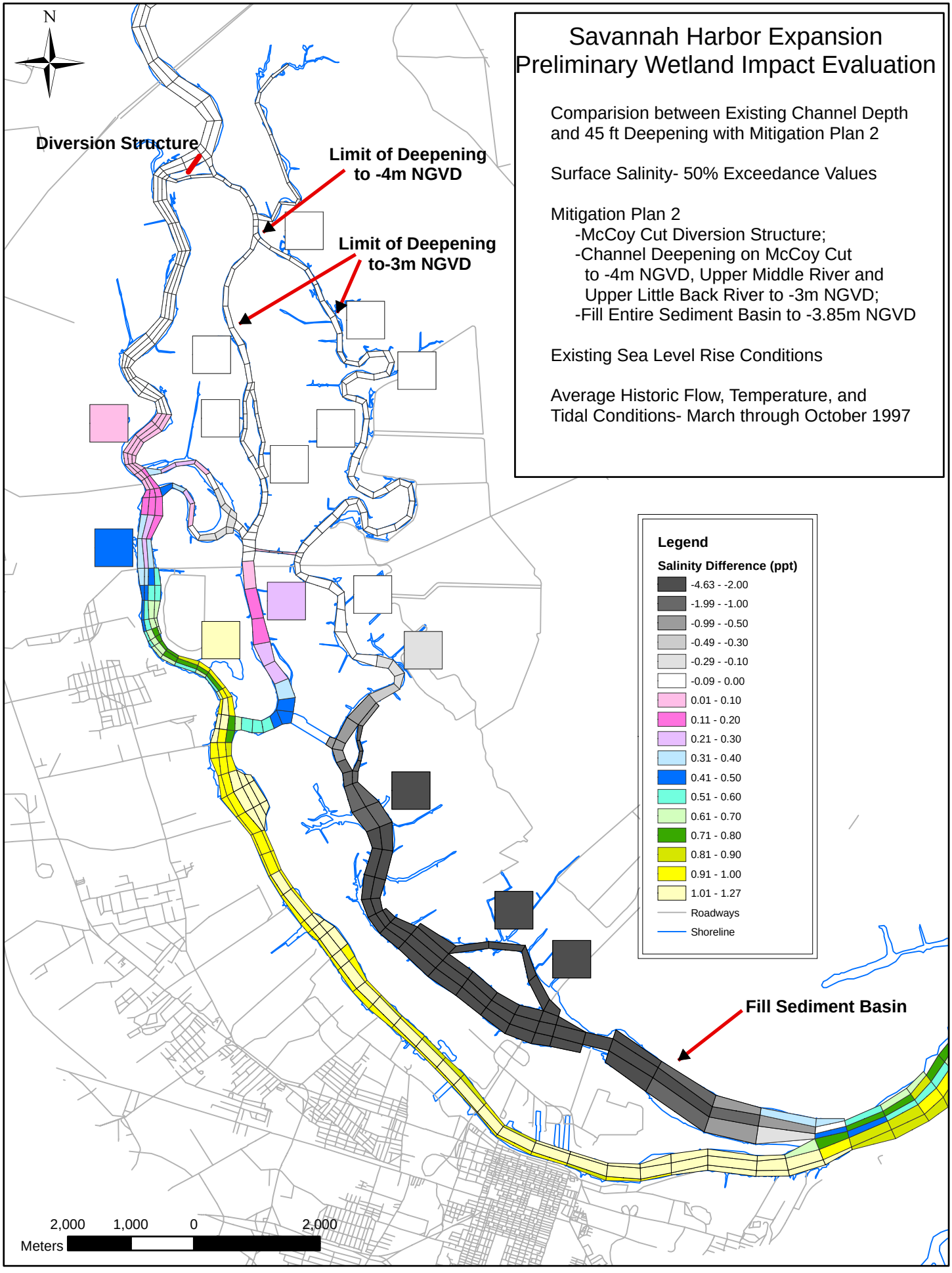
Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

45-ft Deepening

Basic Evaluation



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2

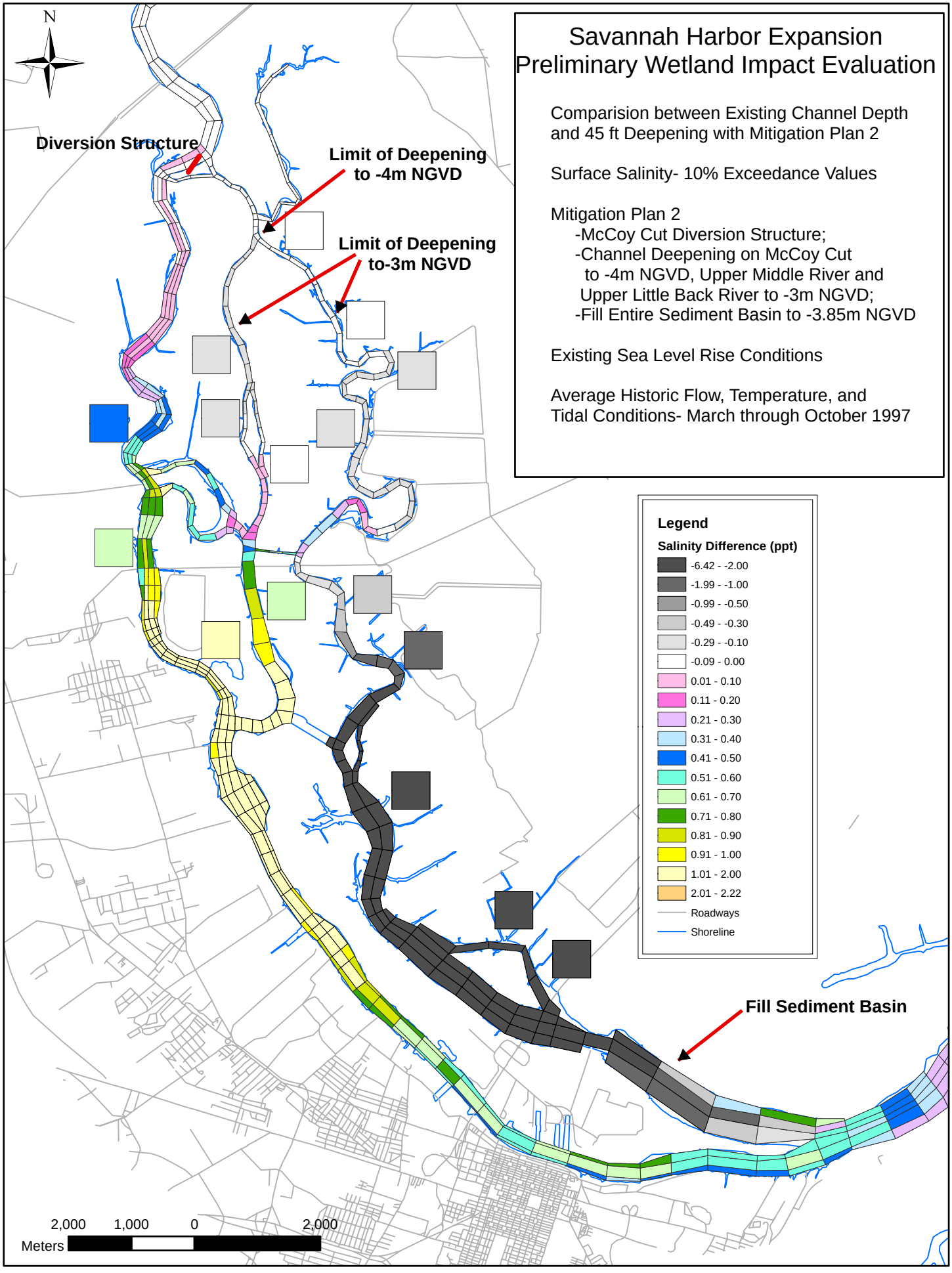
Surface Salinity- 50% Exceedance Values

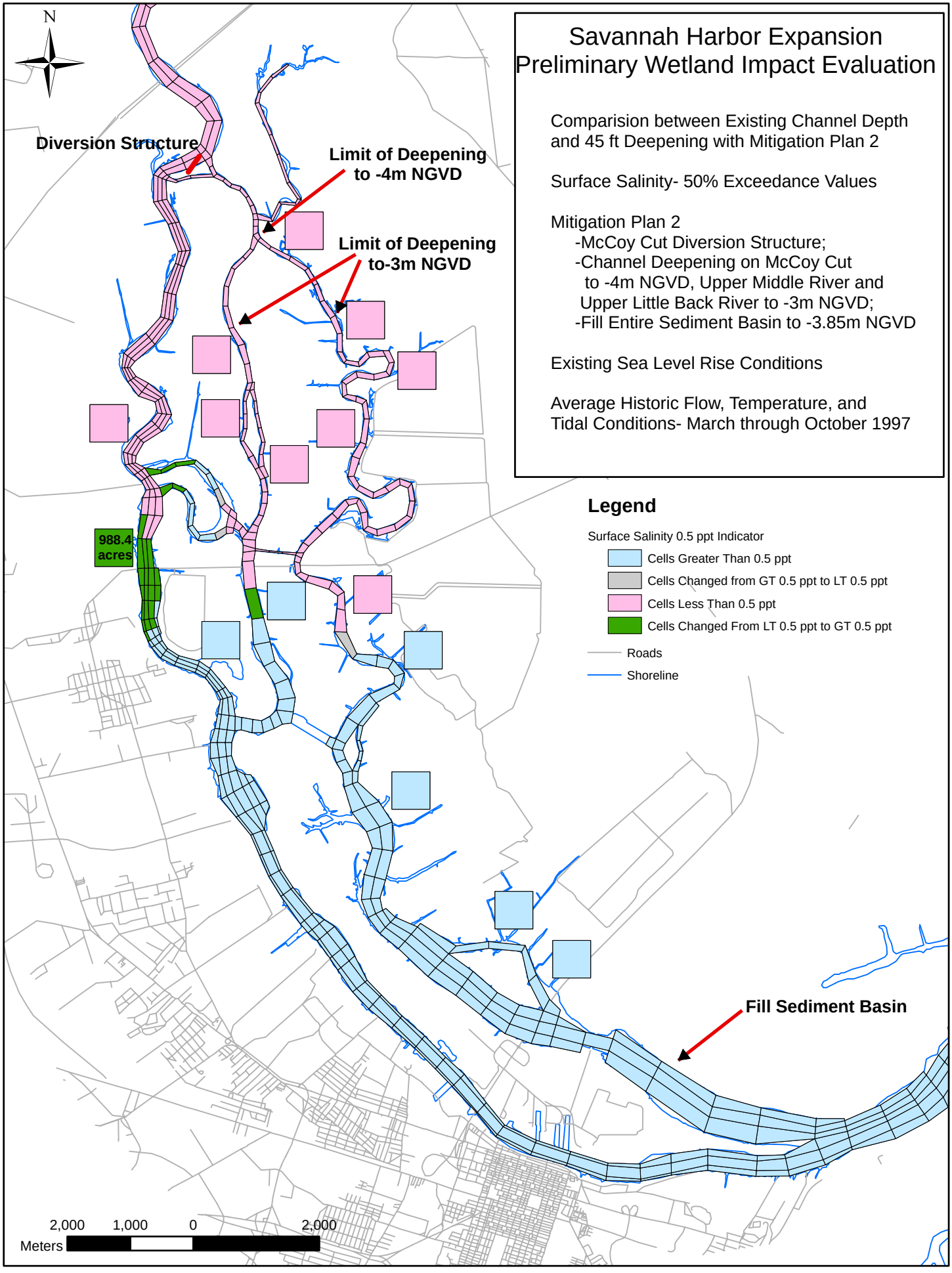
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-6.42 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.22
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

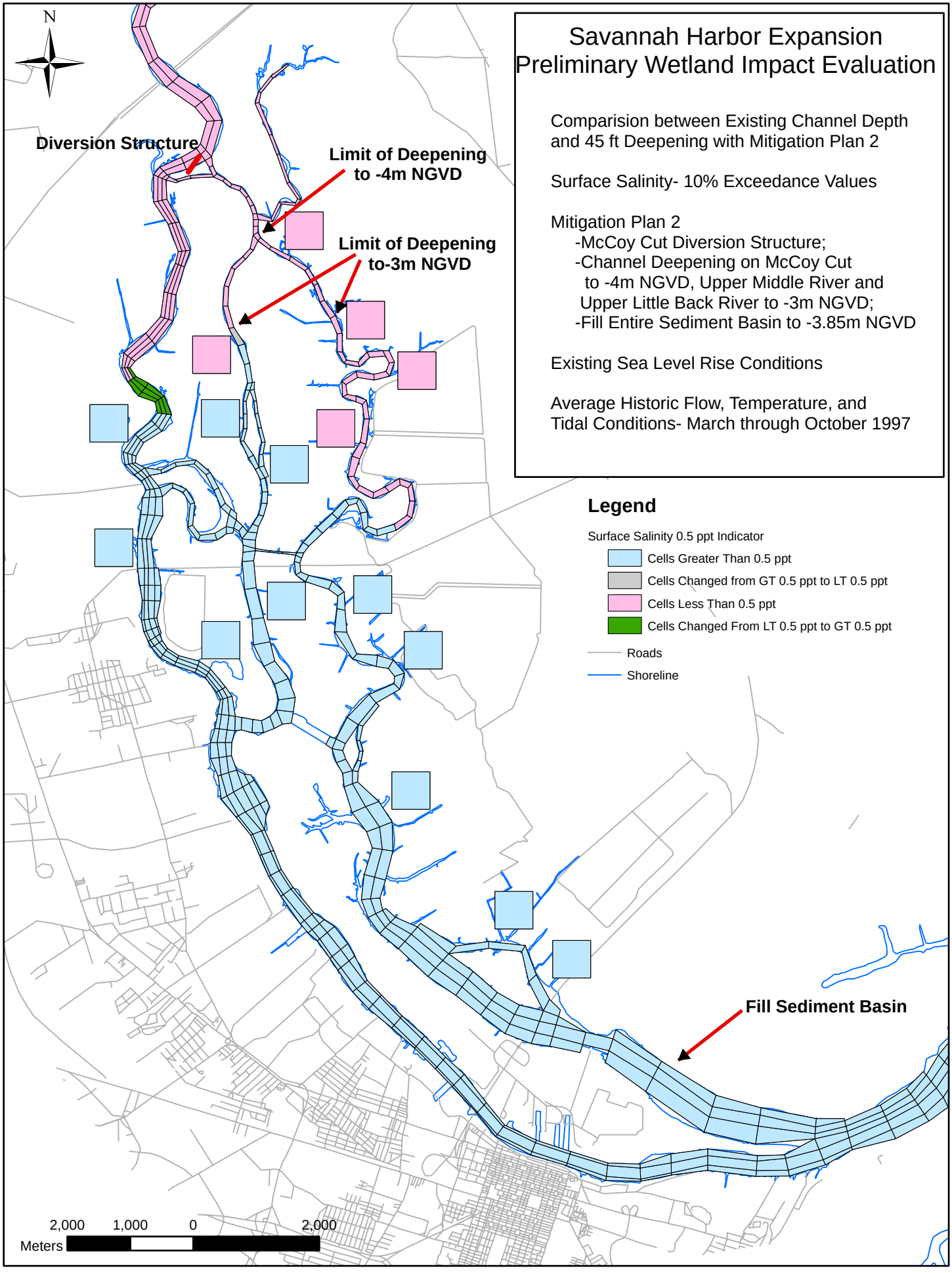
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

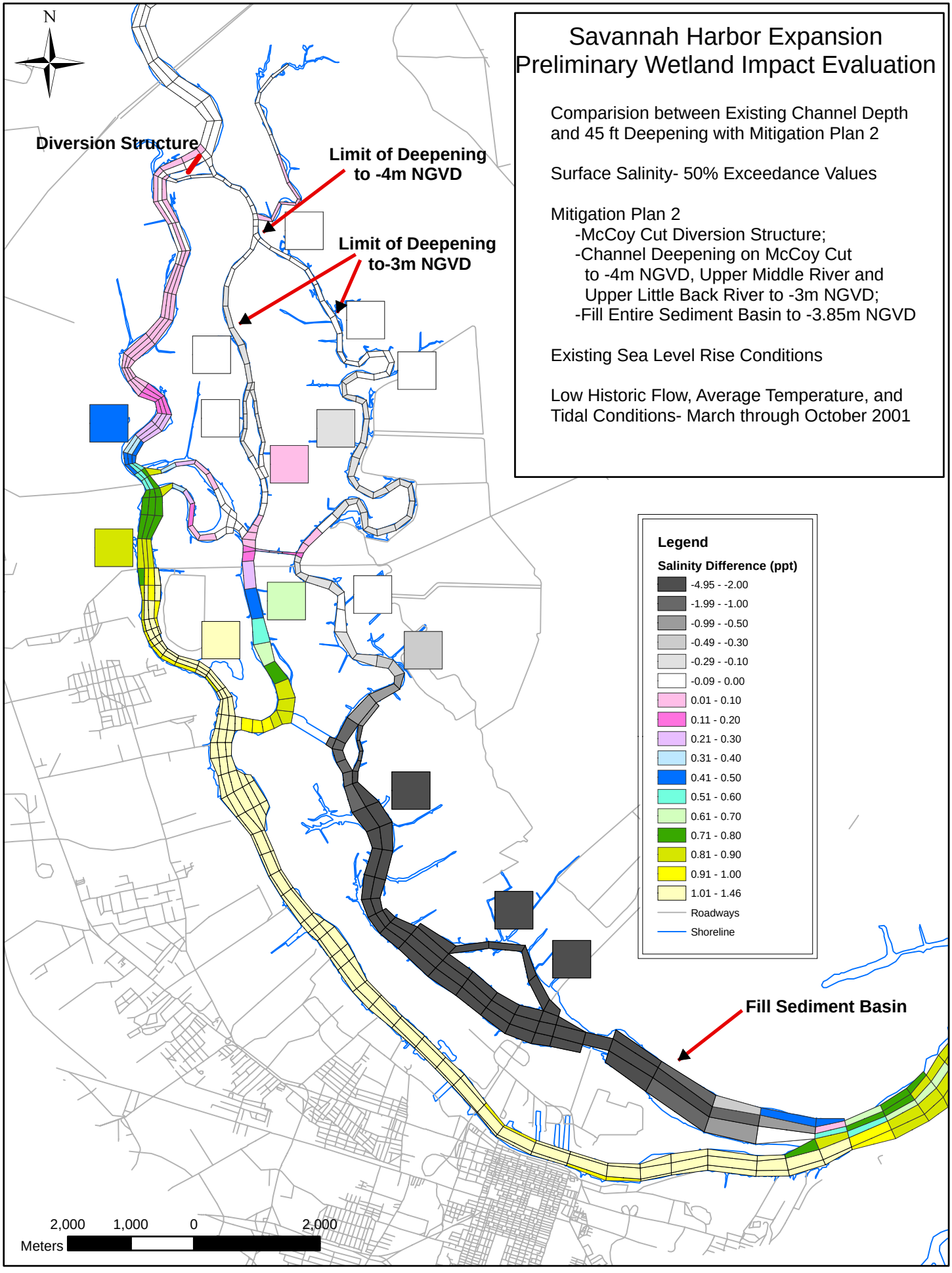
Surface Salinity 0.5 ppt Indicator

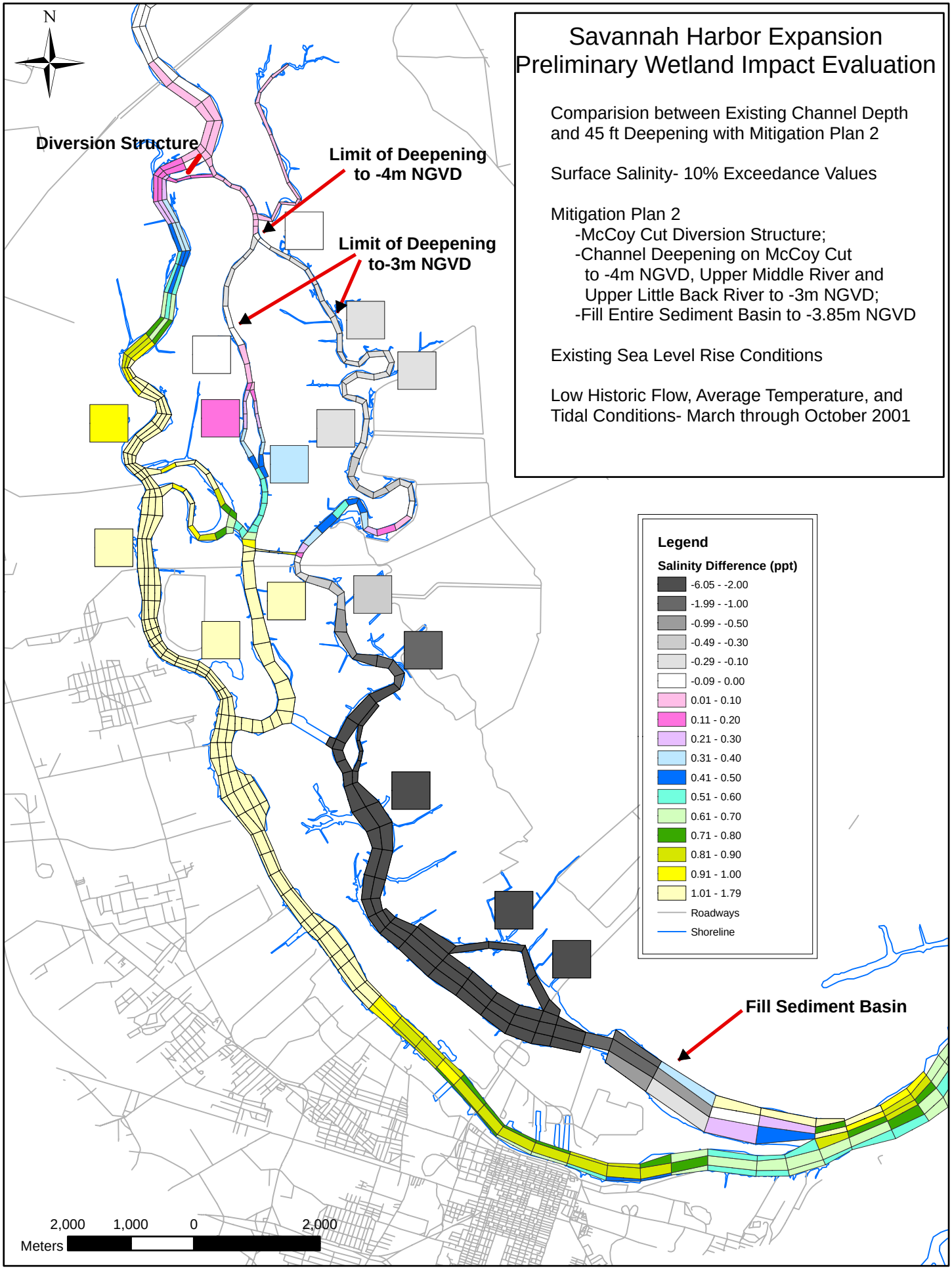
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

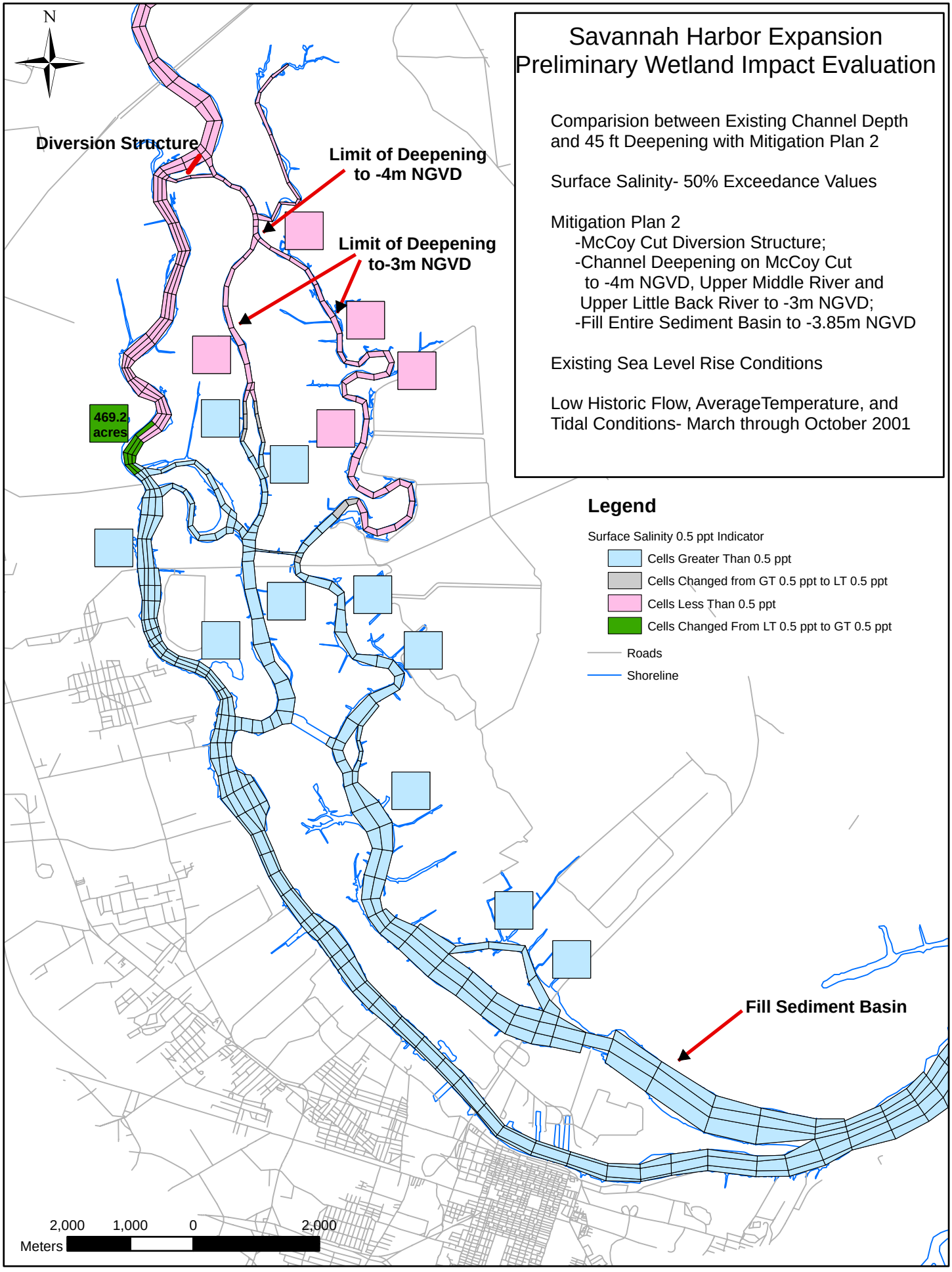
January 2007

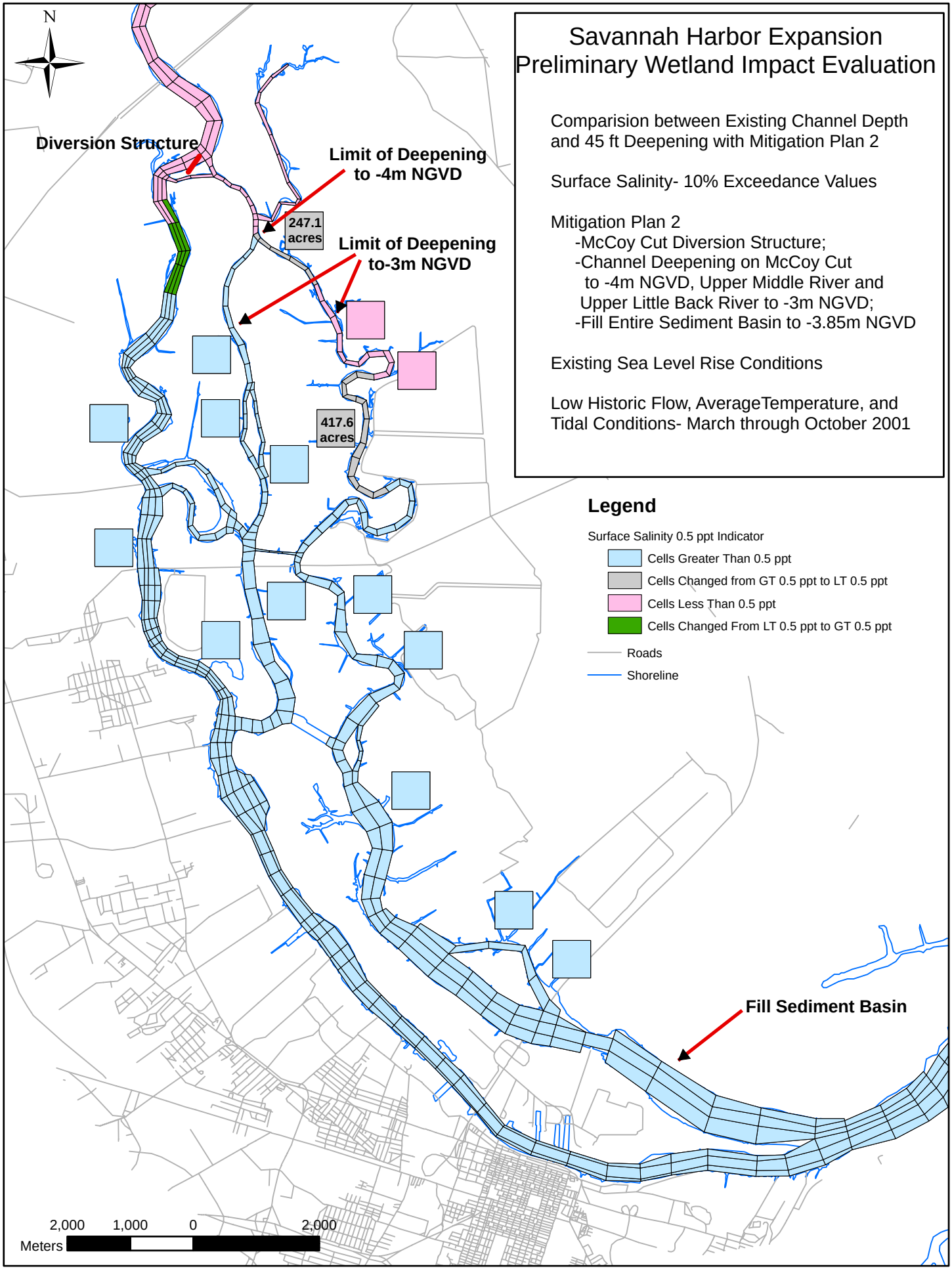

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #1


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-4.95 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.46
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-6.05 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.79
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

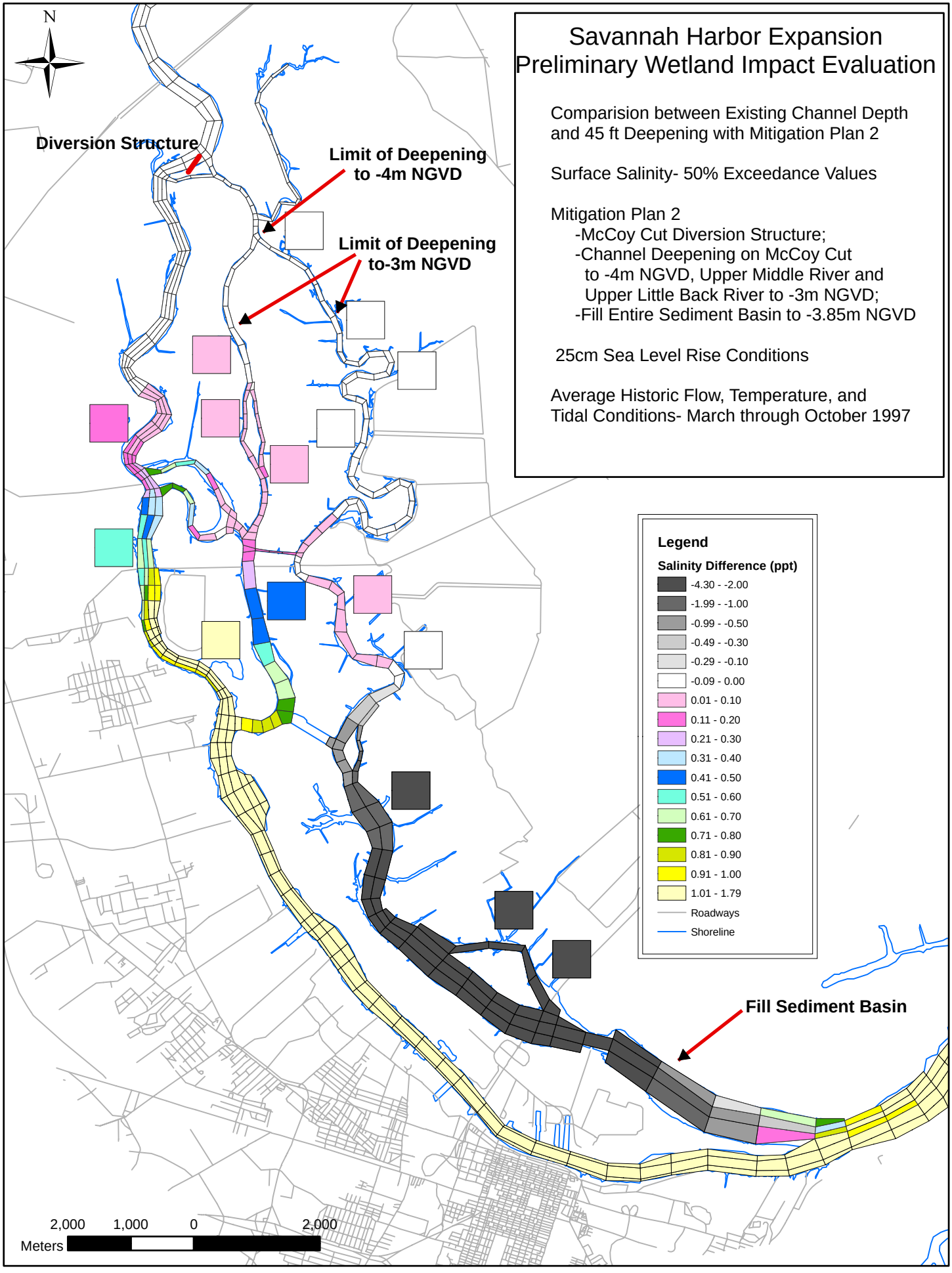
Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #2A



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2

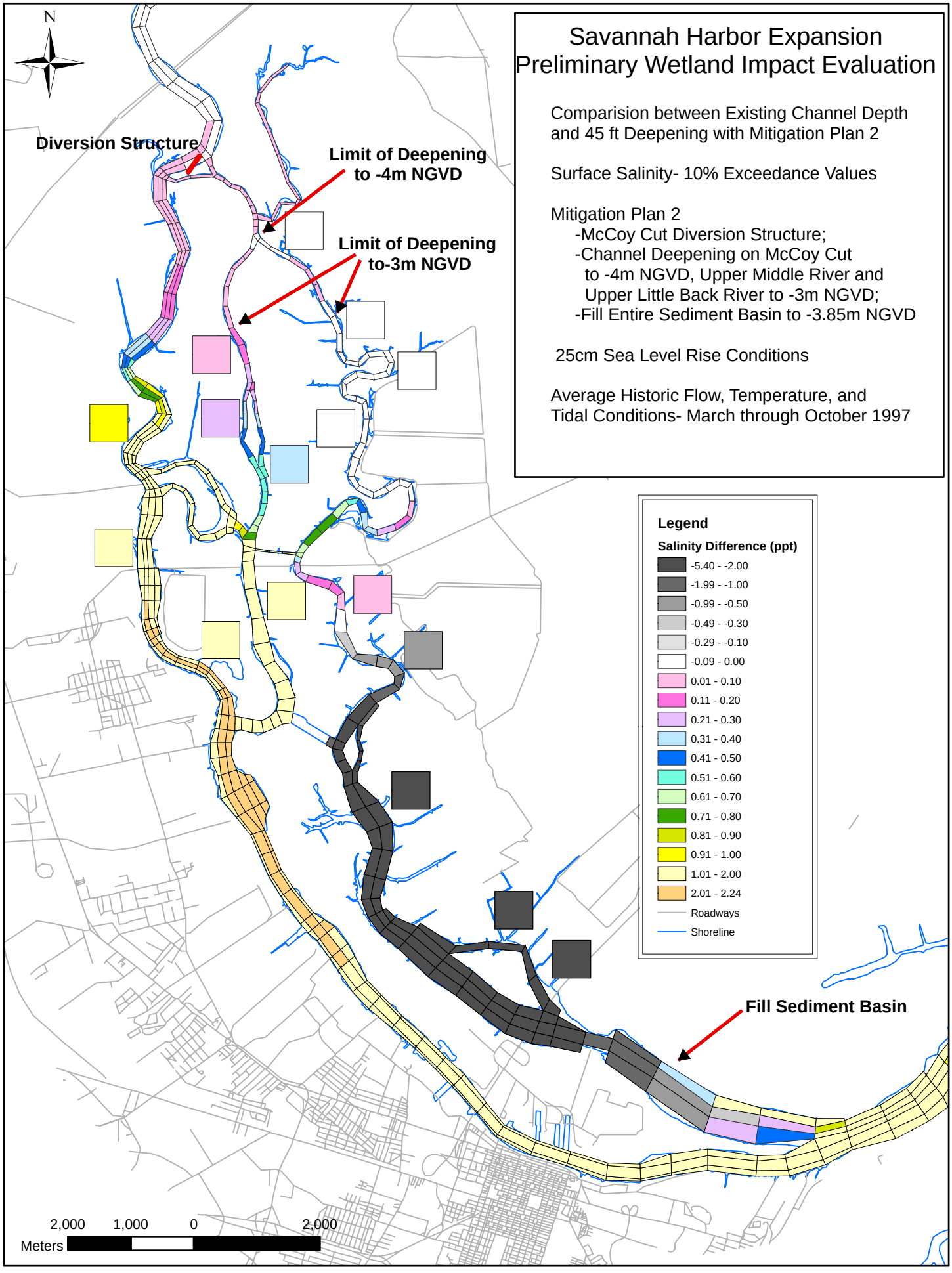
Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2

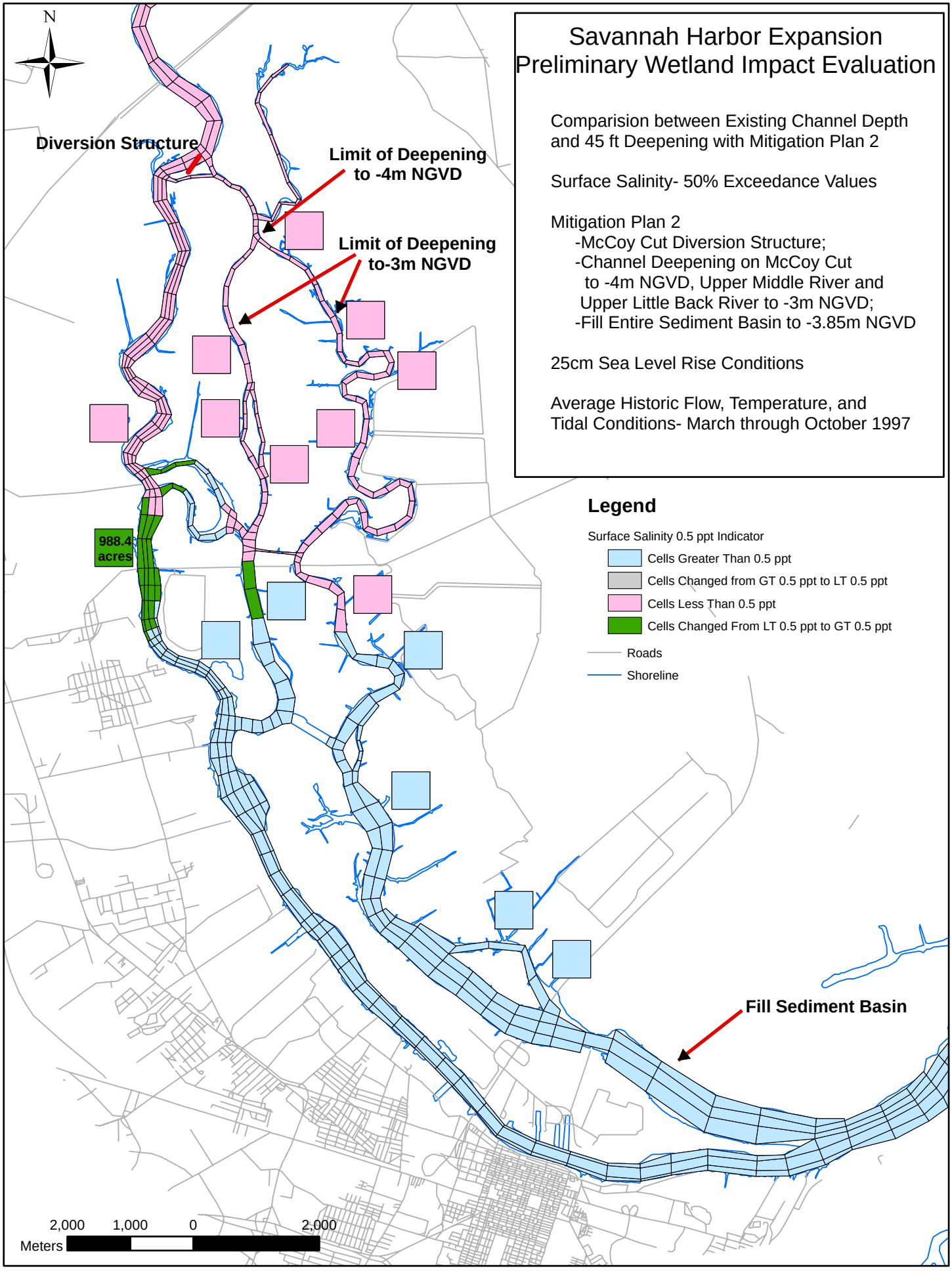
Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

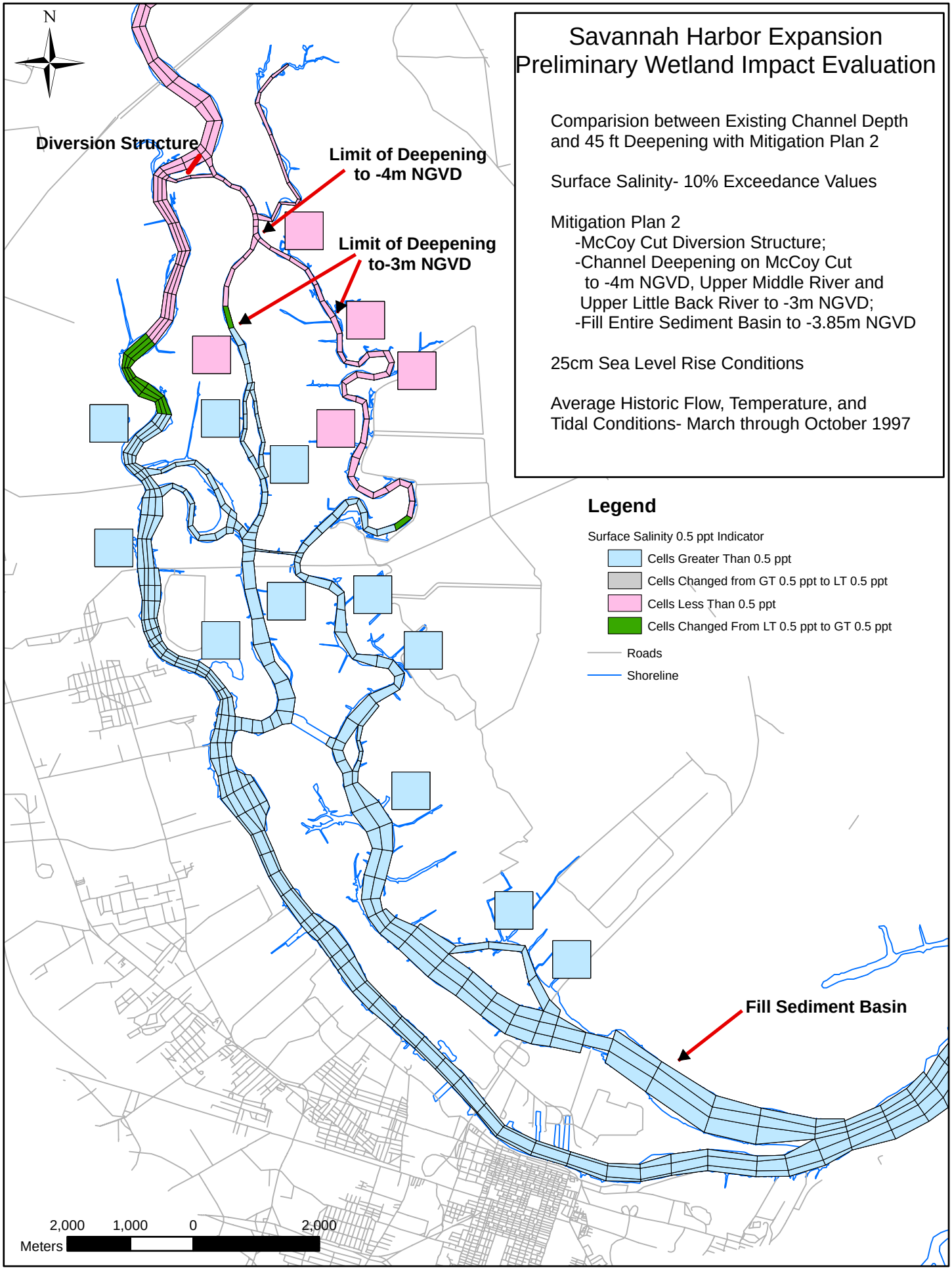
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

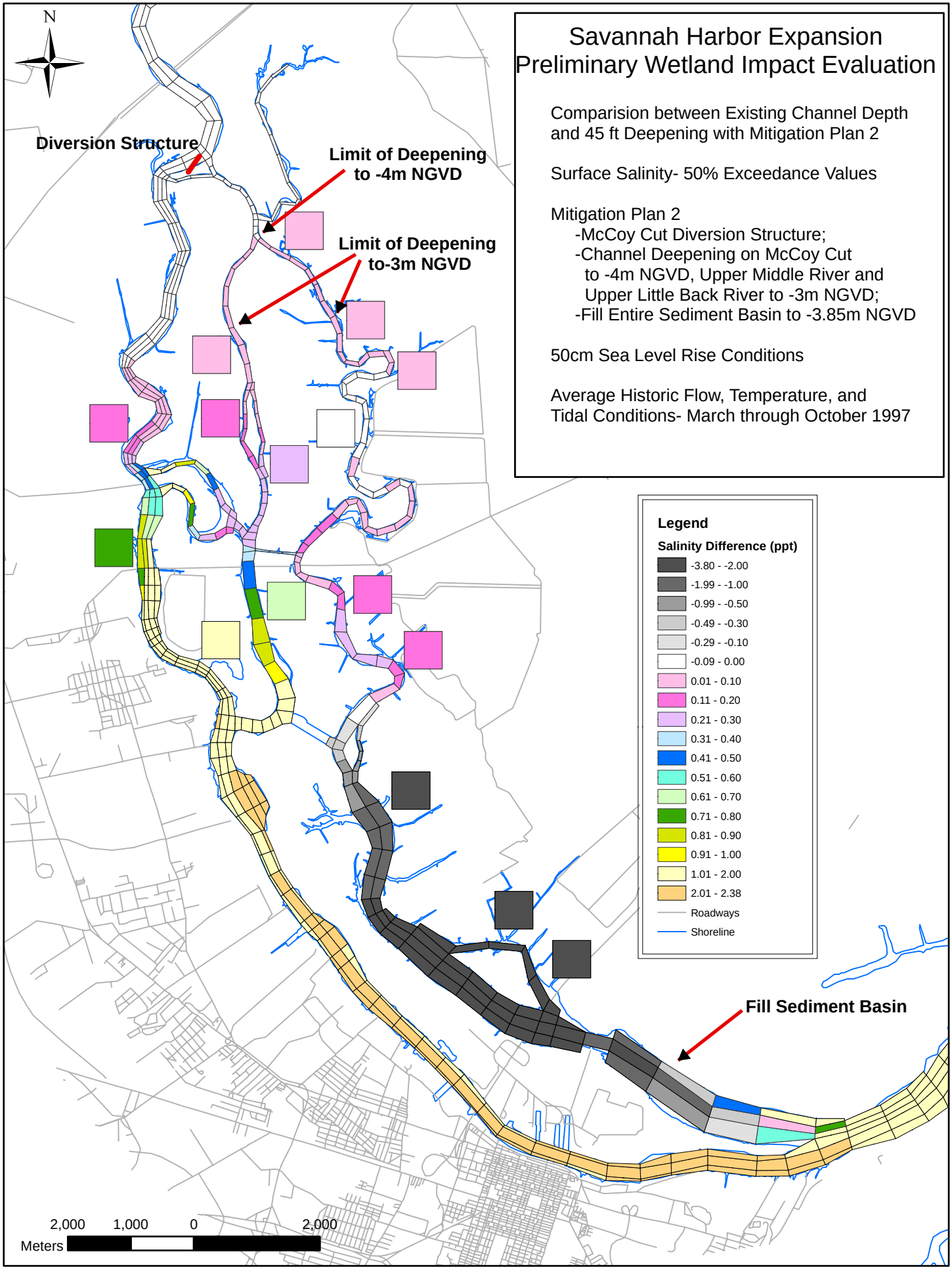
Surface Salinity 0.5 ppt Indicator

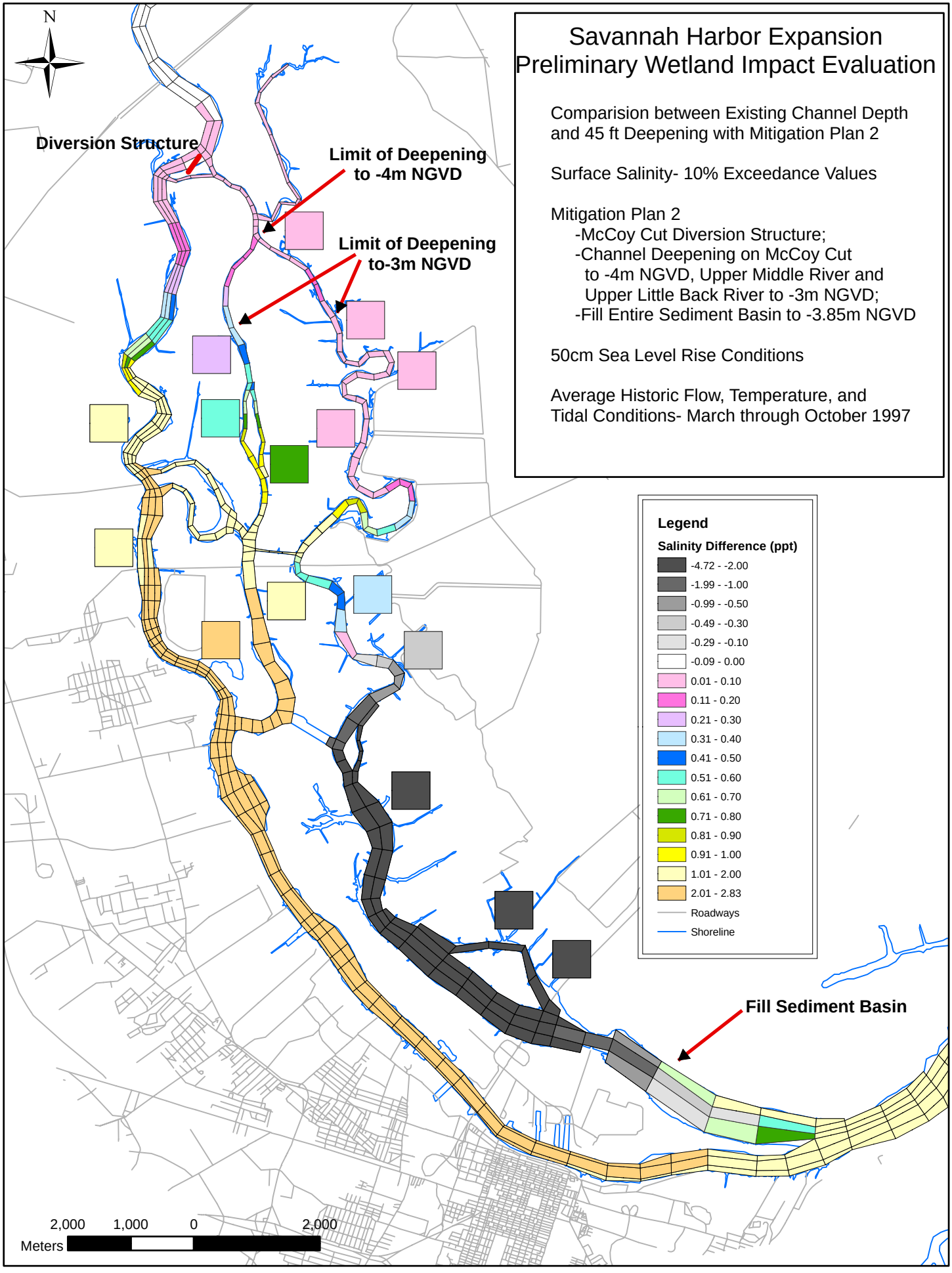
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

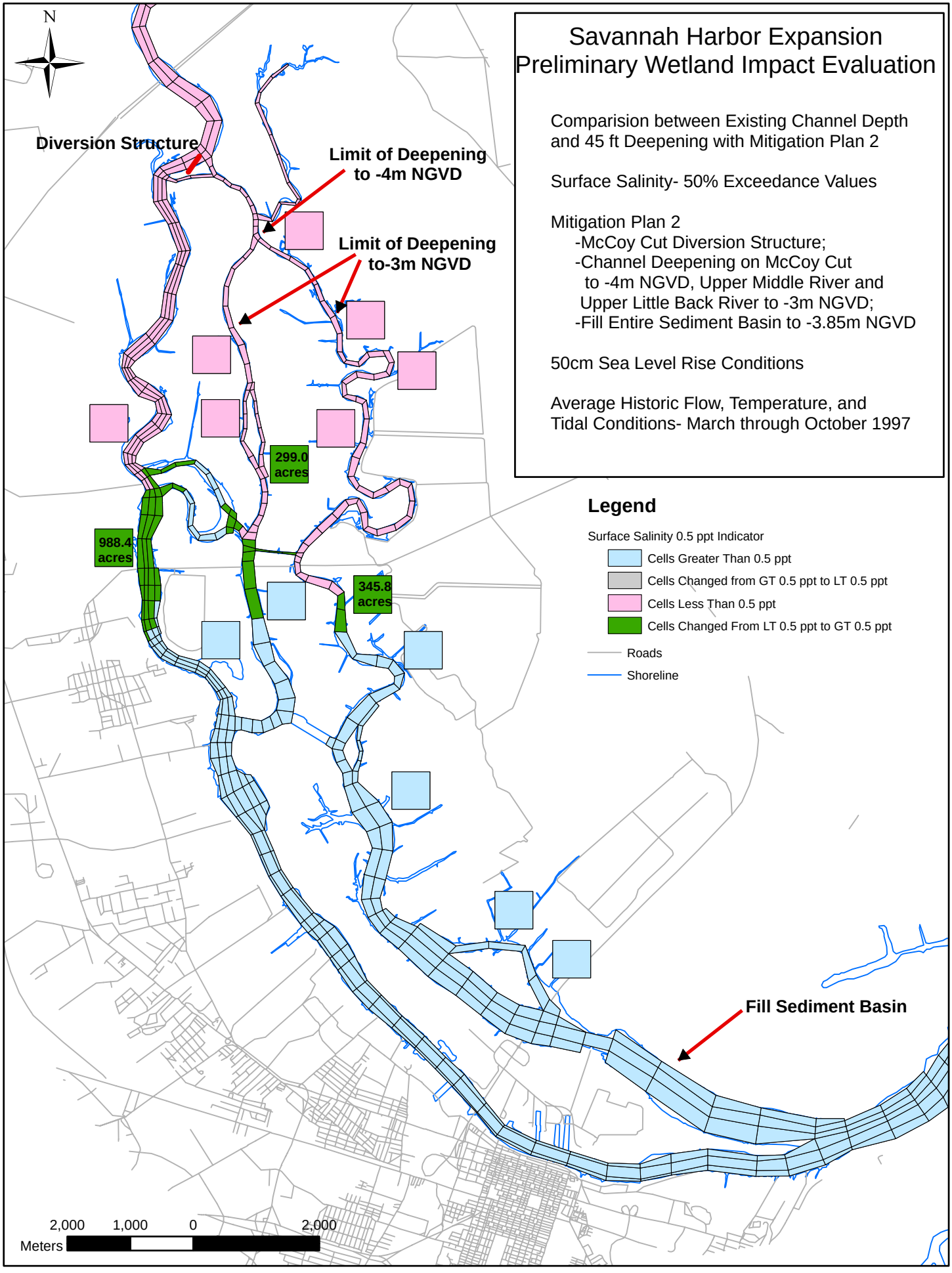
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2B


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.80 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.38
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.72 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.83
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

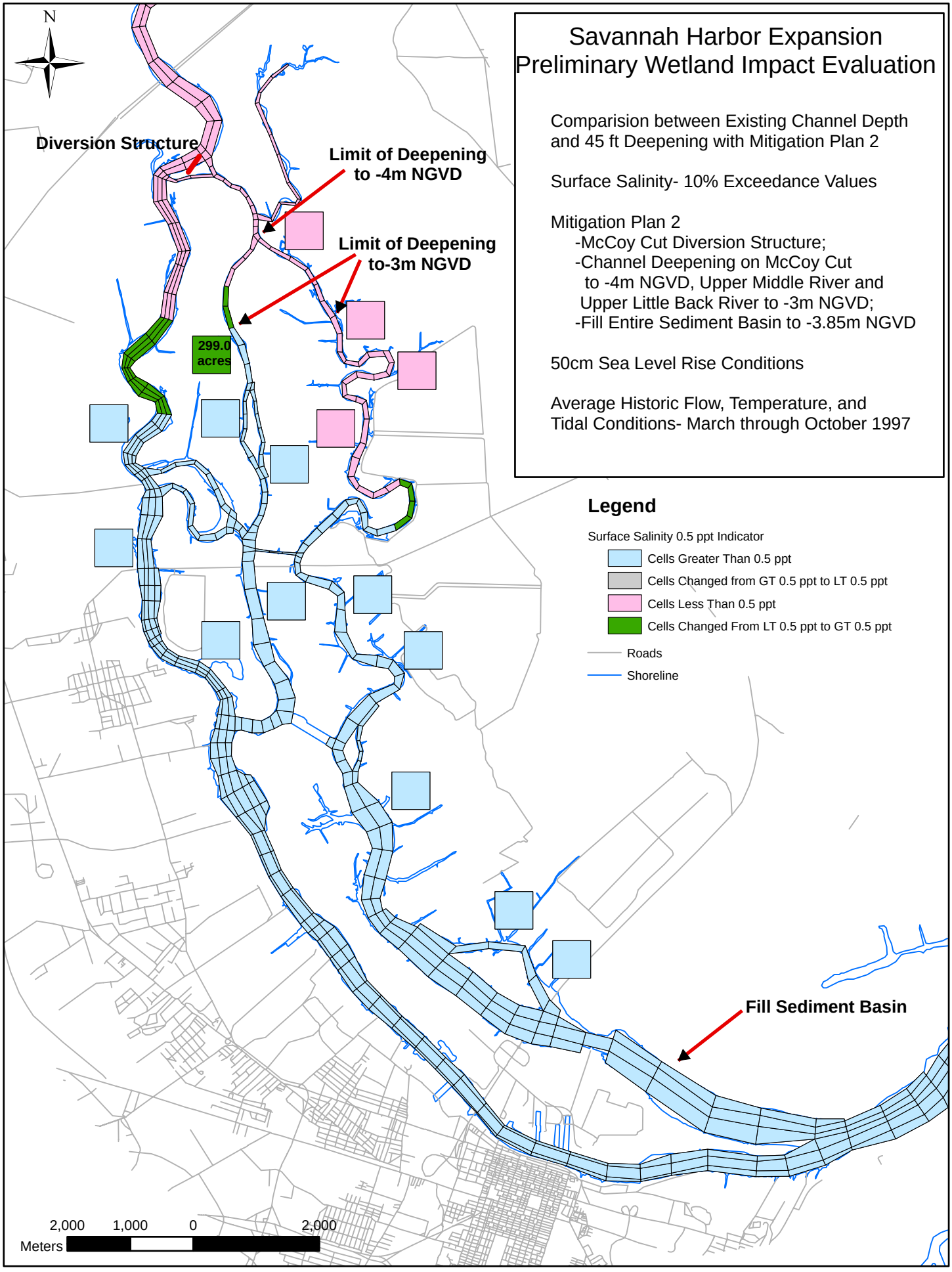
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

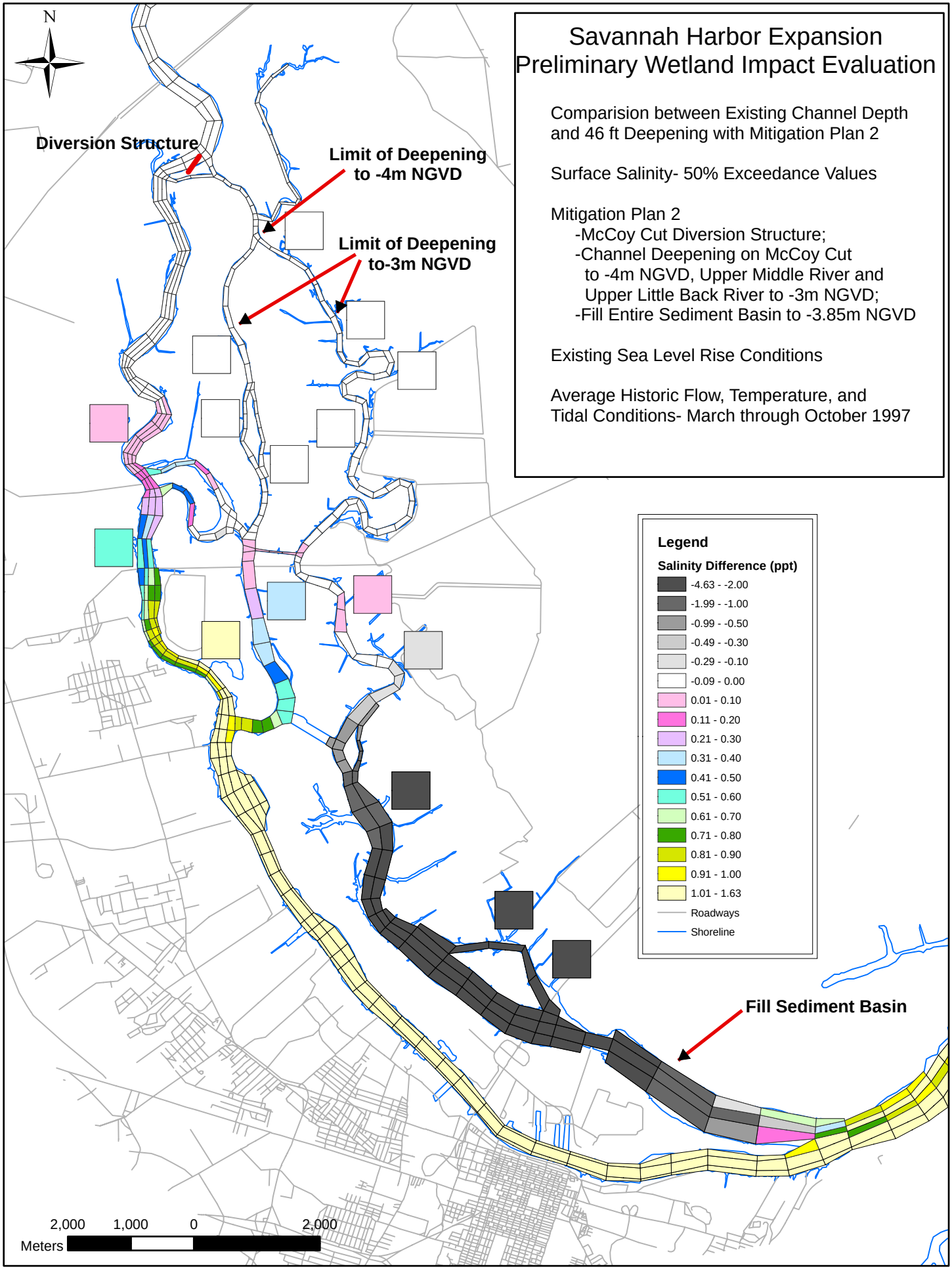
Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

46-ft Deepening

Basic Evaluation



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

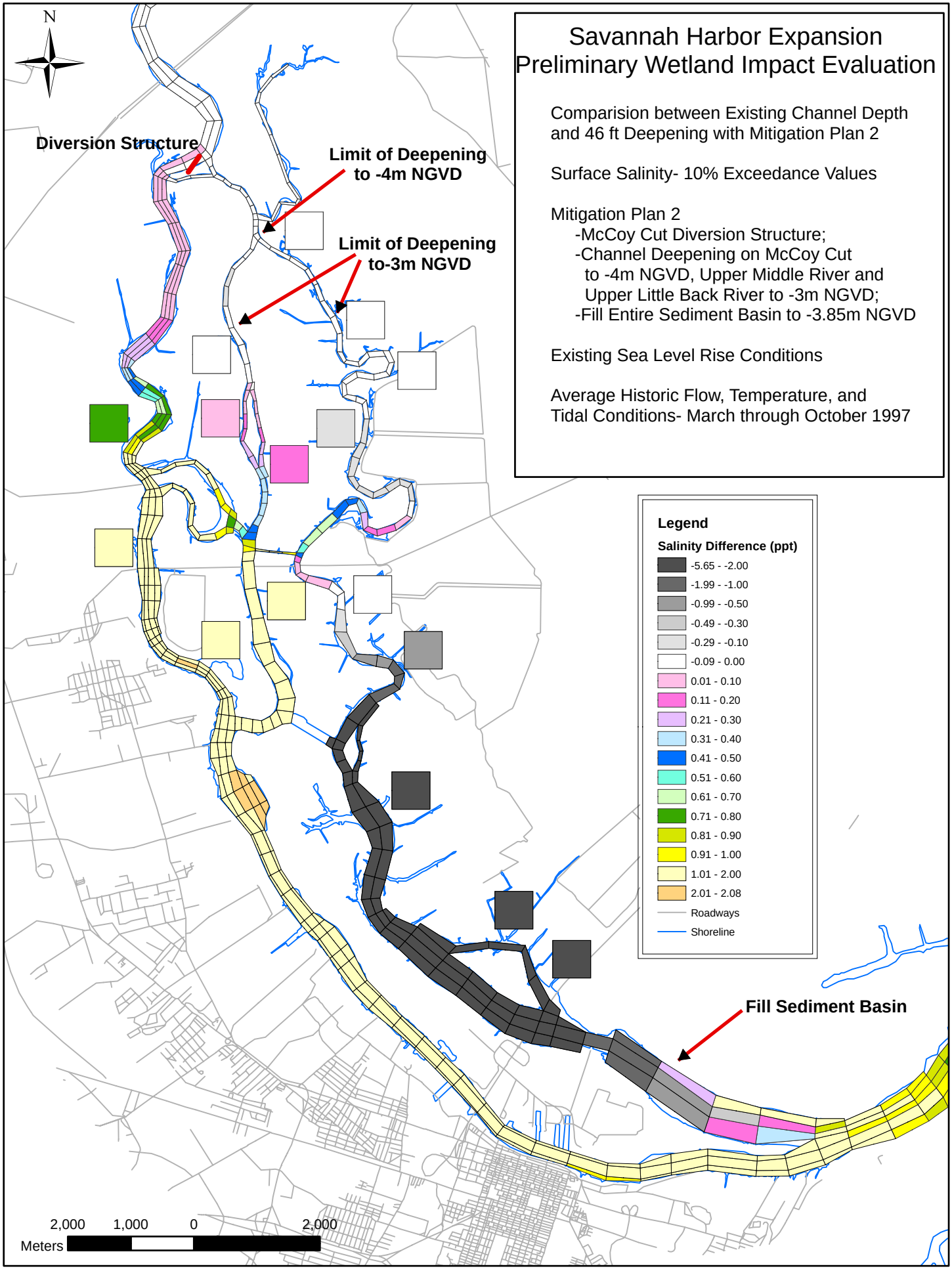
Surface Salinity- 50% Exceedance Values

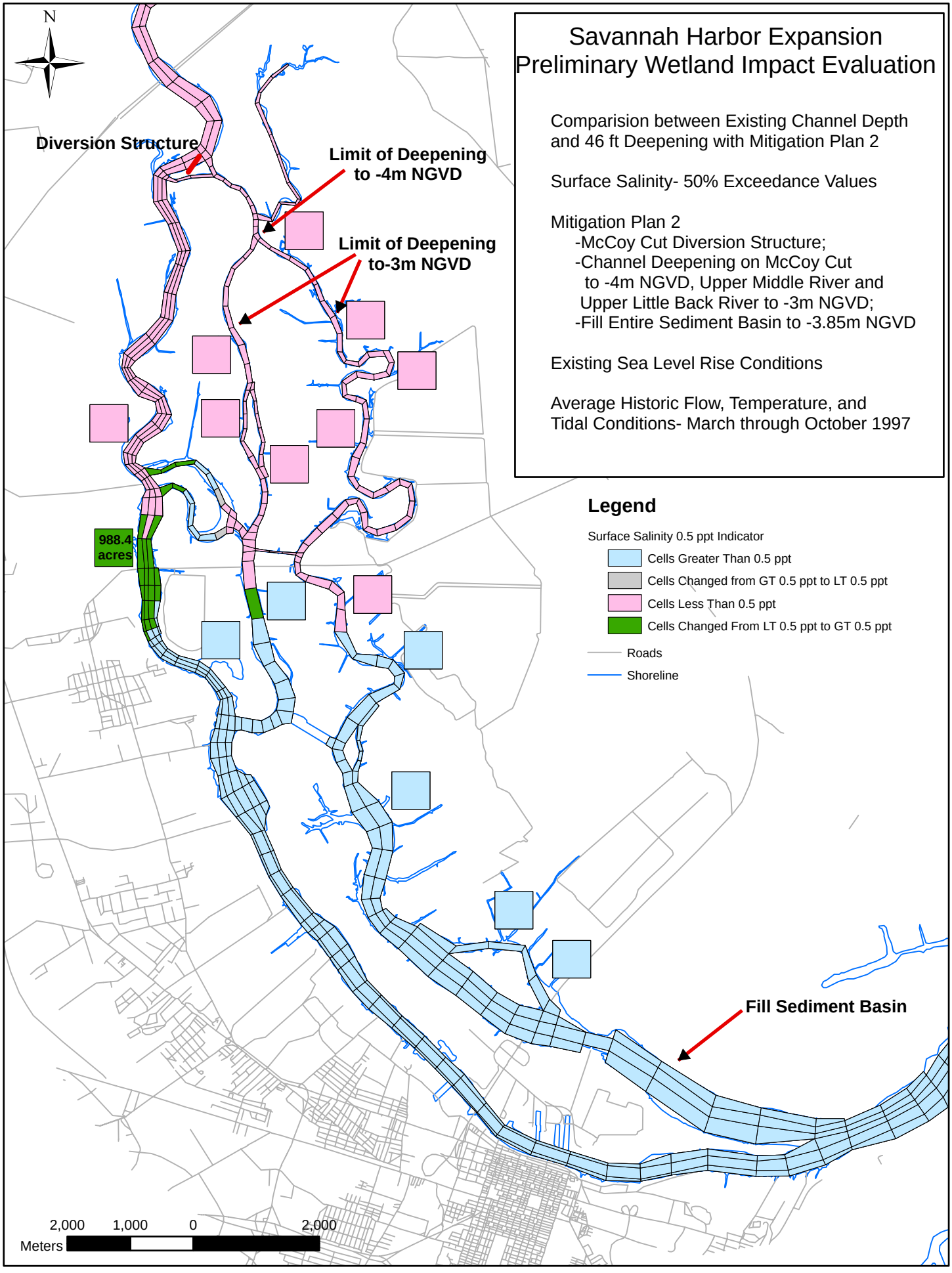
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-5.65 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.08
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

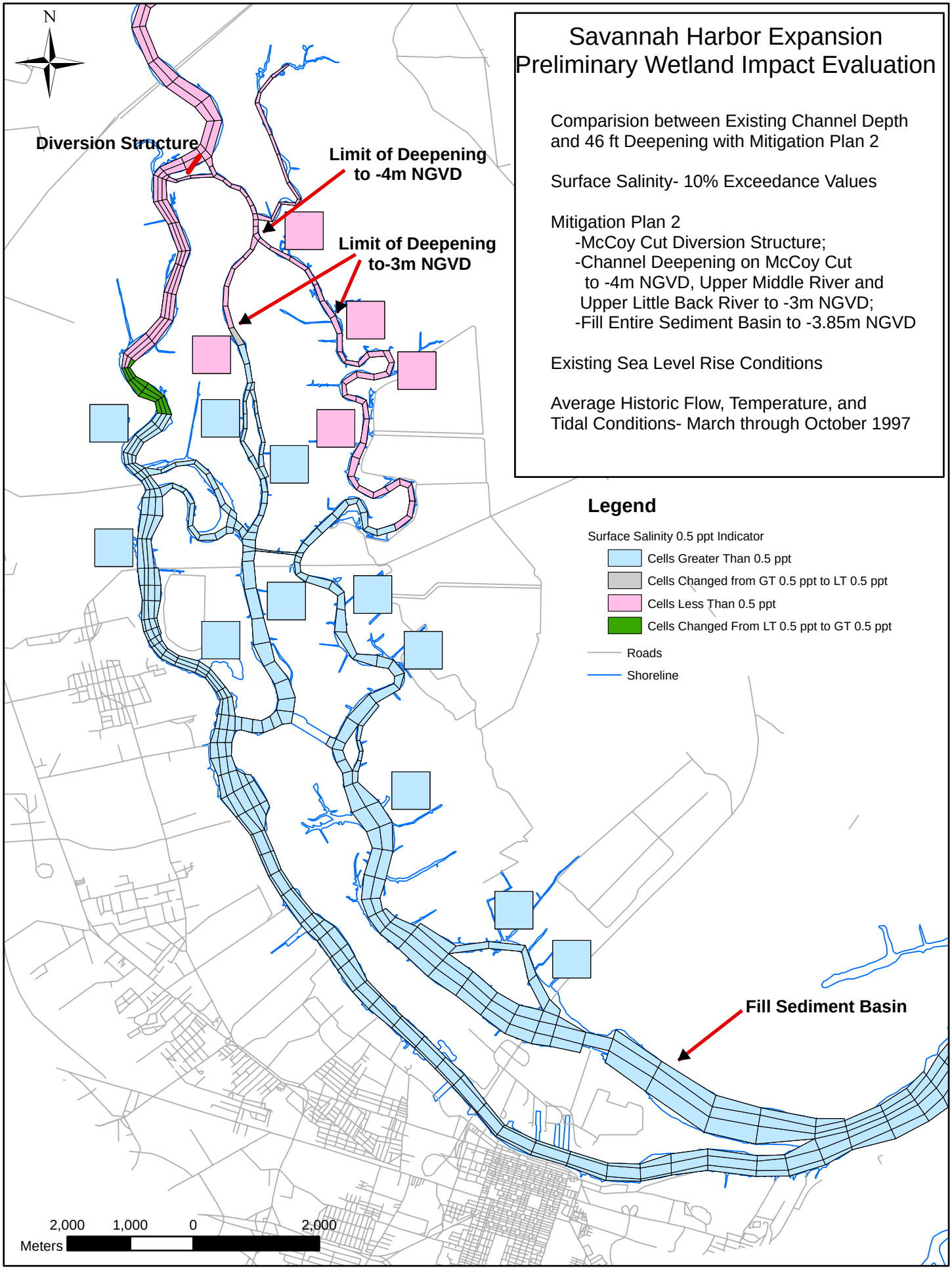
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

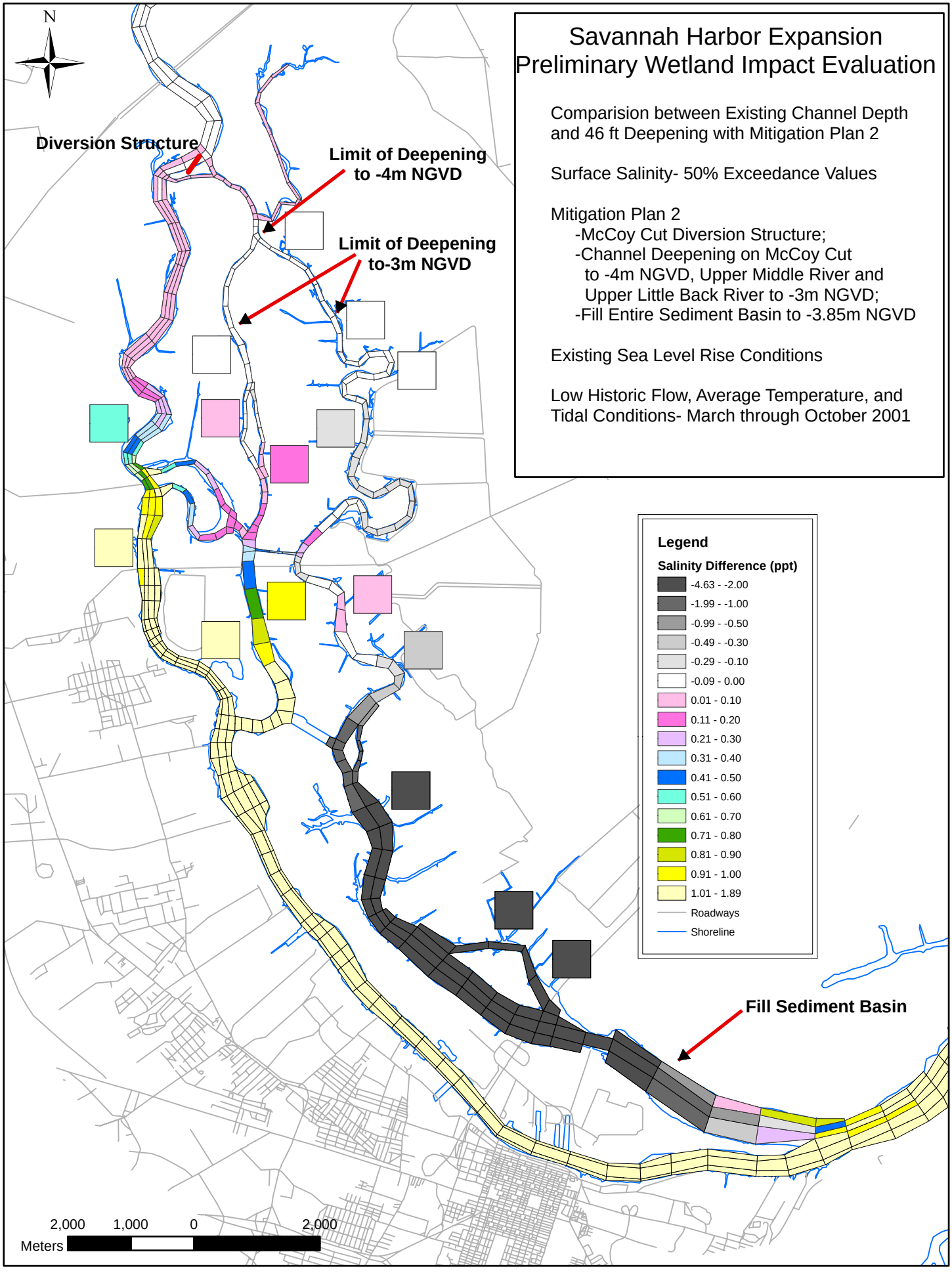
Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #1



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

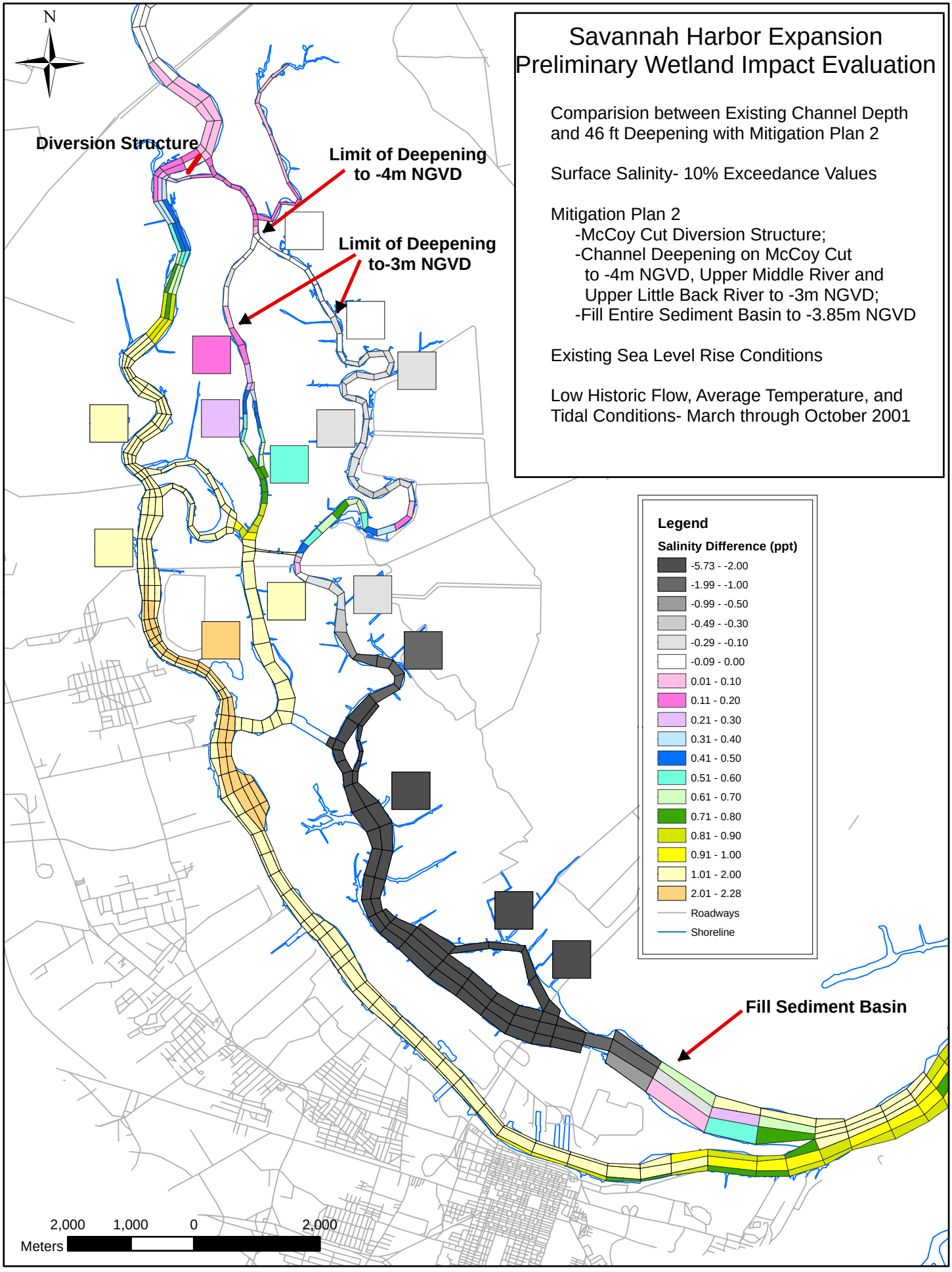
Surface Salinity- 50% Exceedance Values

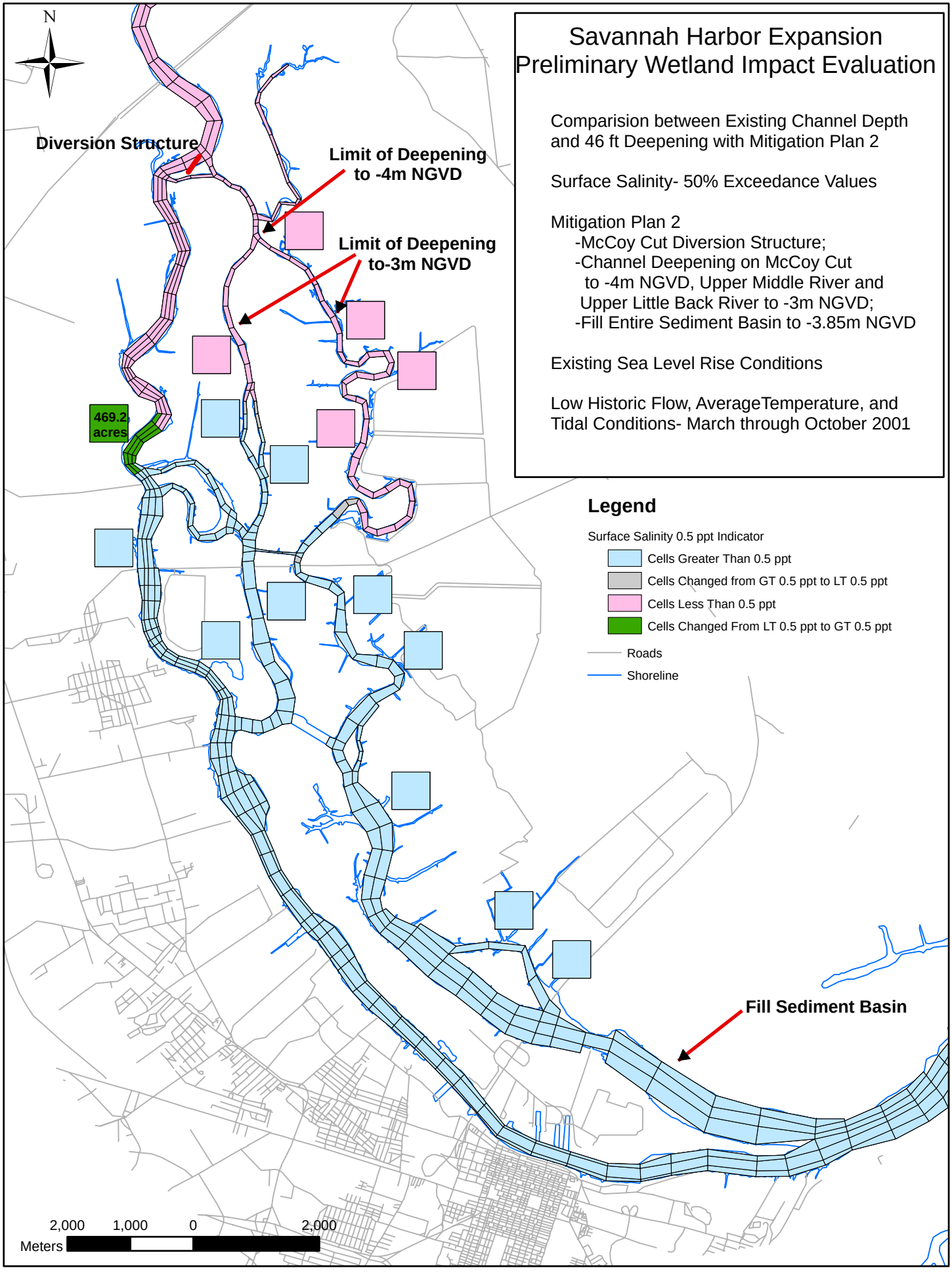
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-5.73 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.28
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

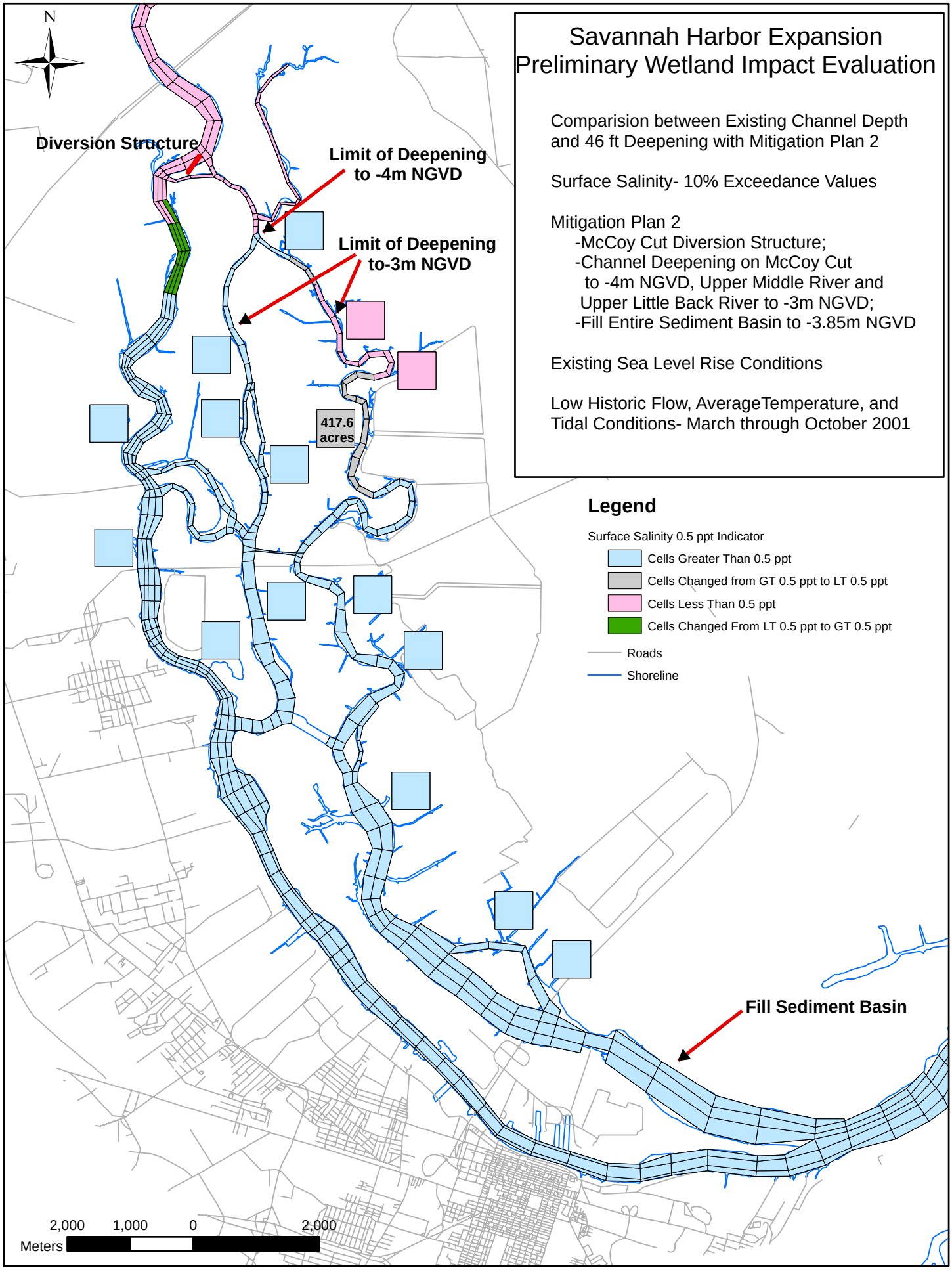
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

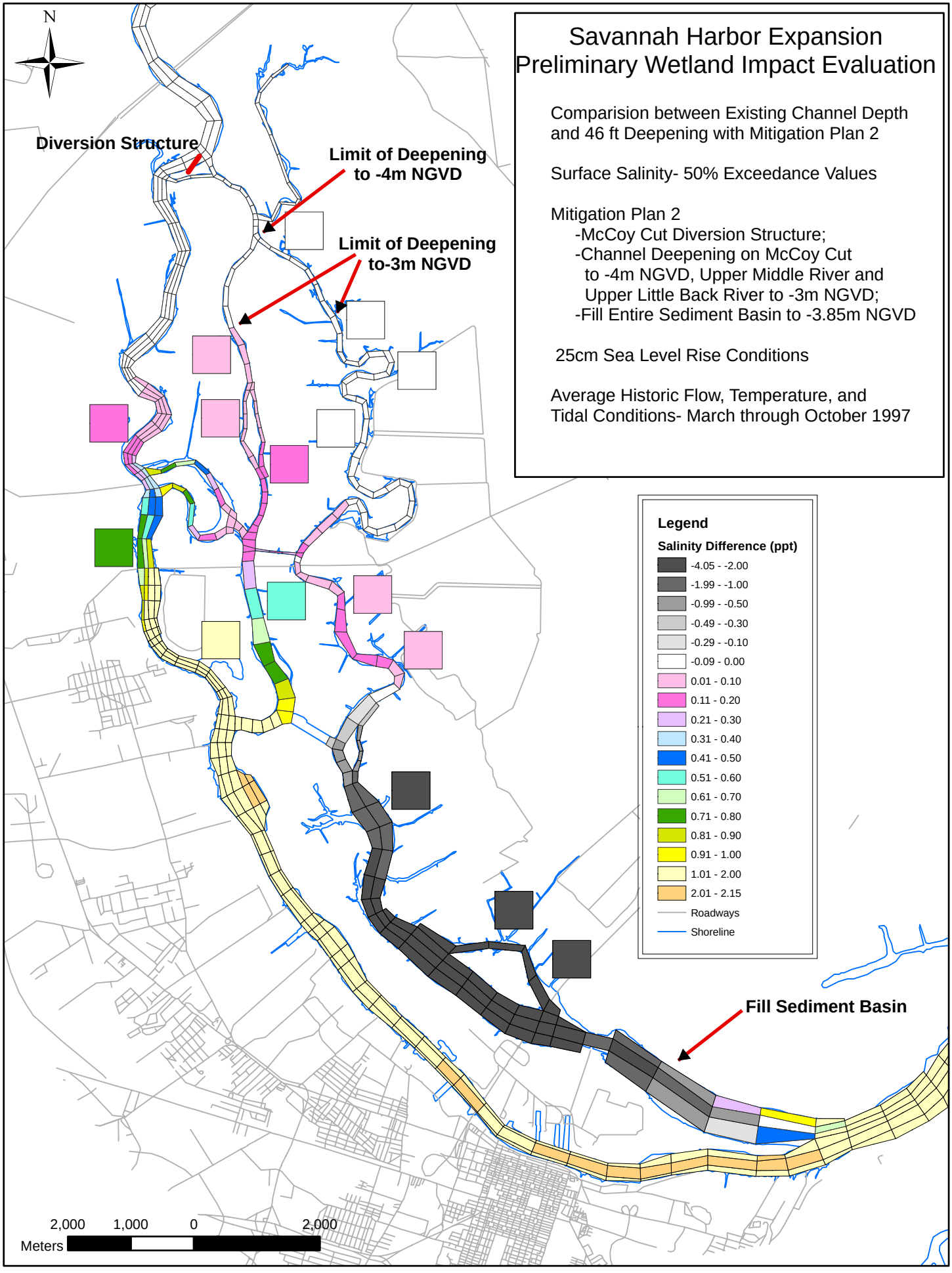
Legend

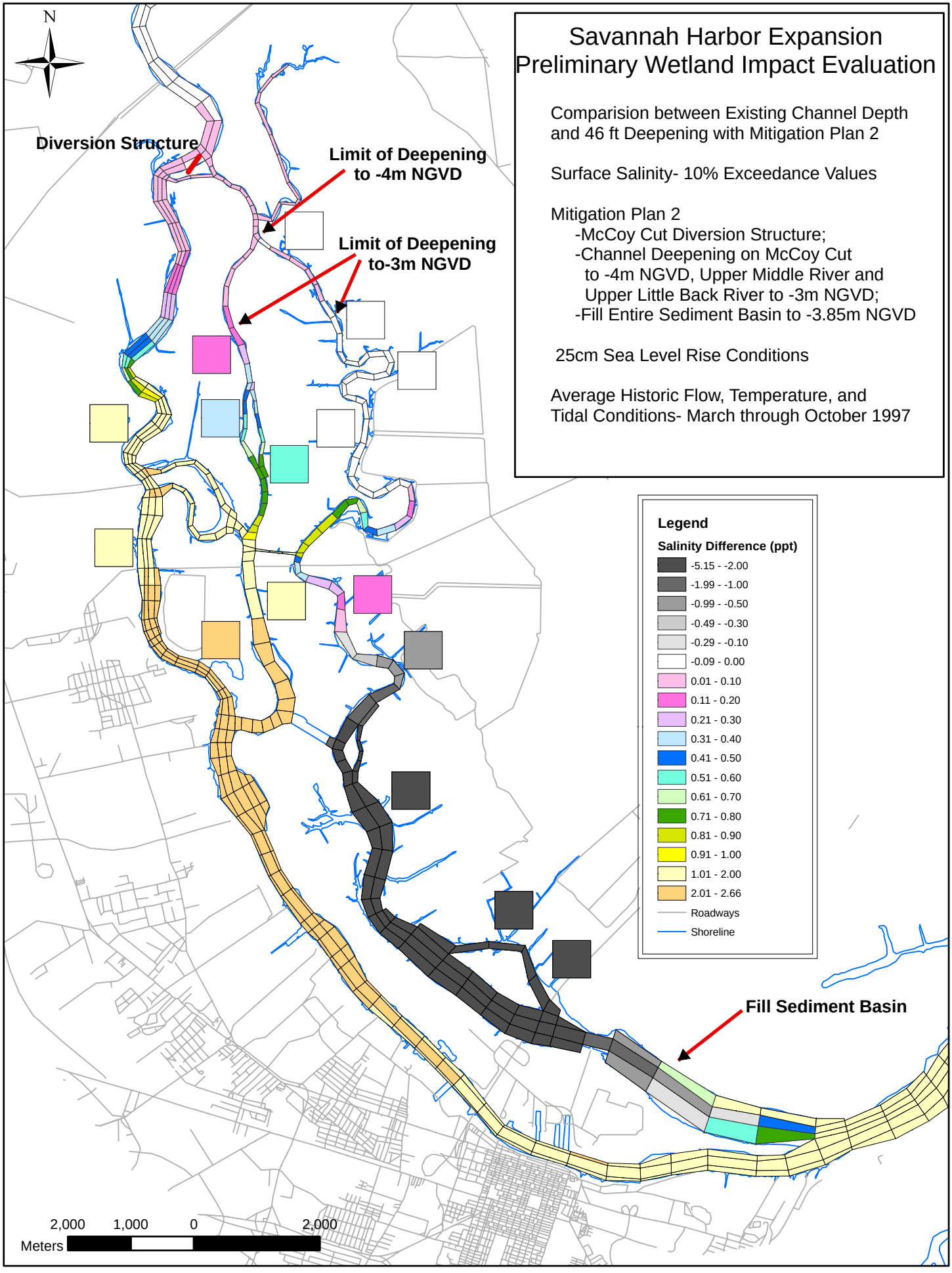
Surface Salinity 0.5 ppt Indicator

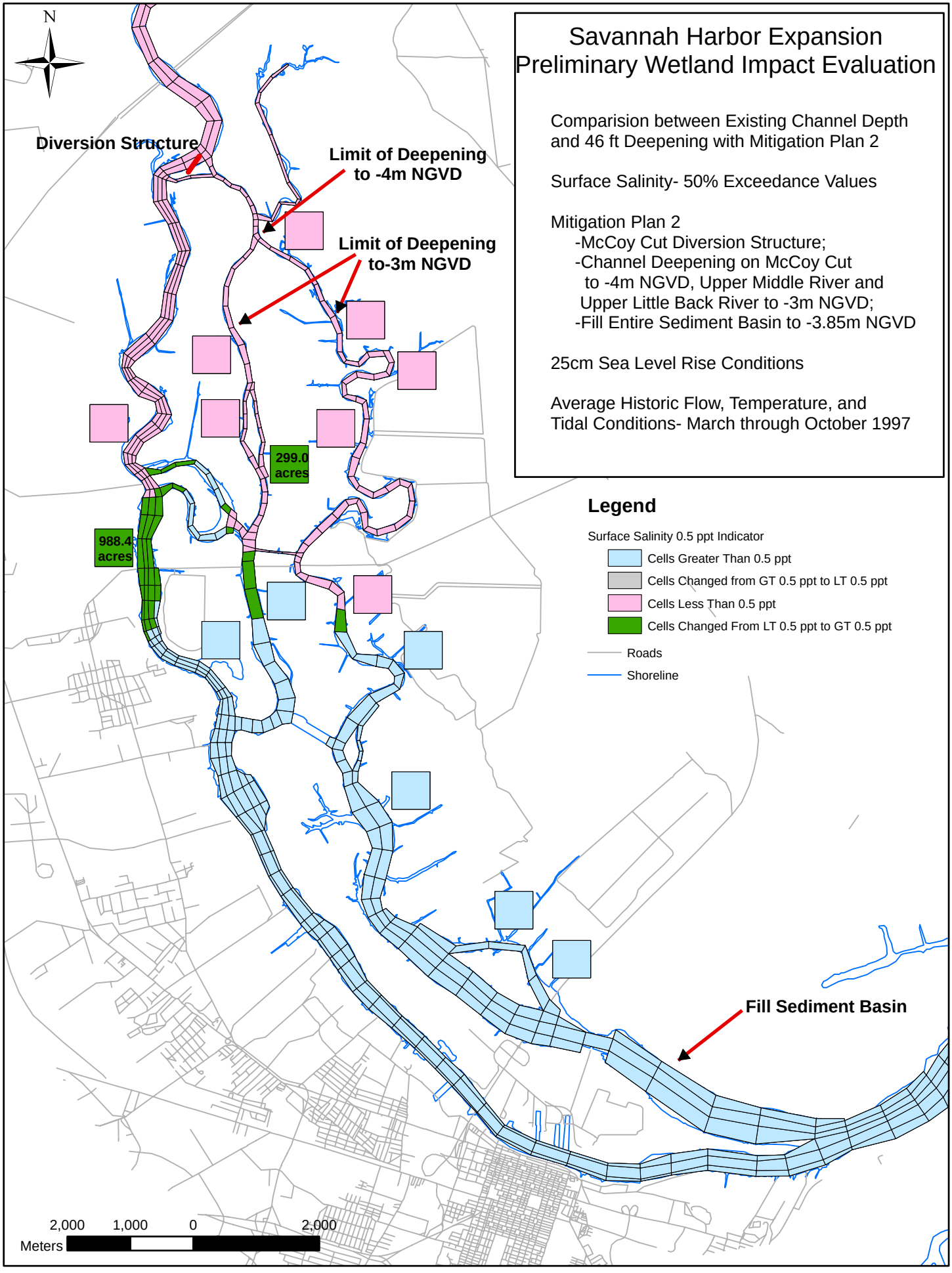
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #2A


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.05 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.15
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-5.15 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.66
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

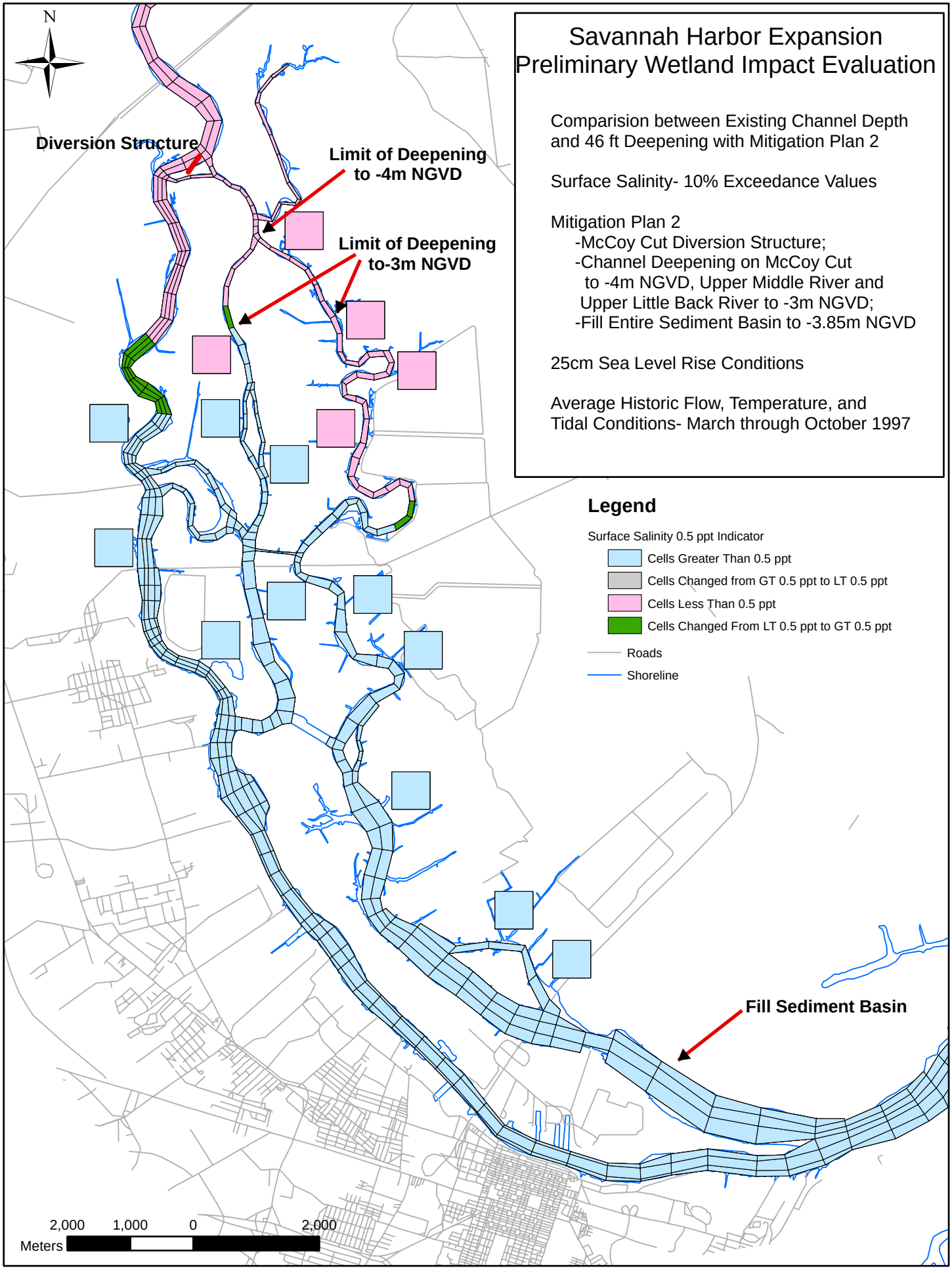
25cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

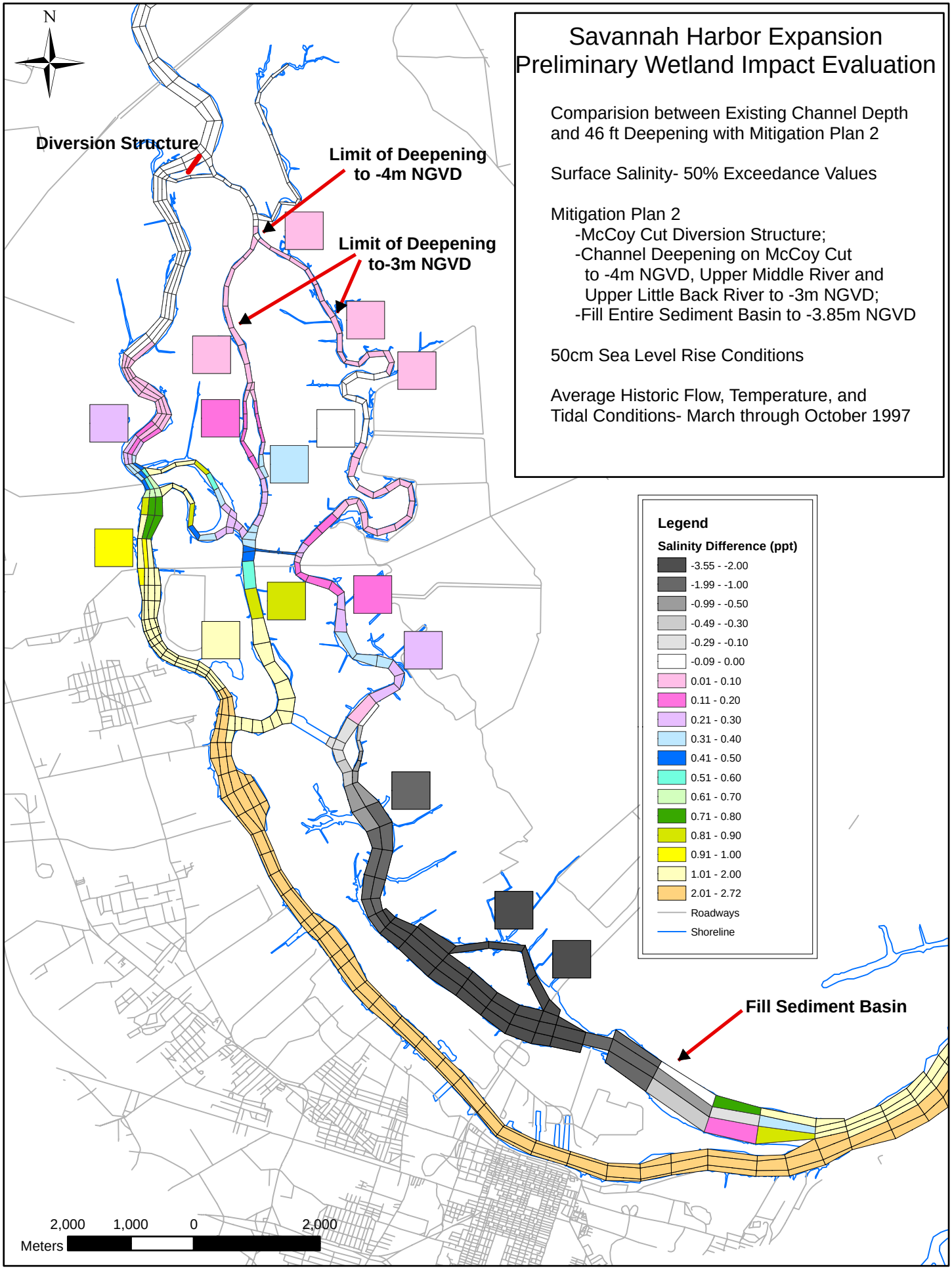
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #2B



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

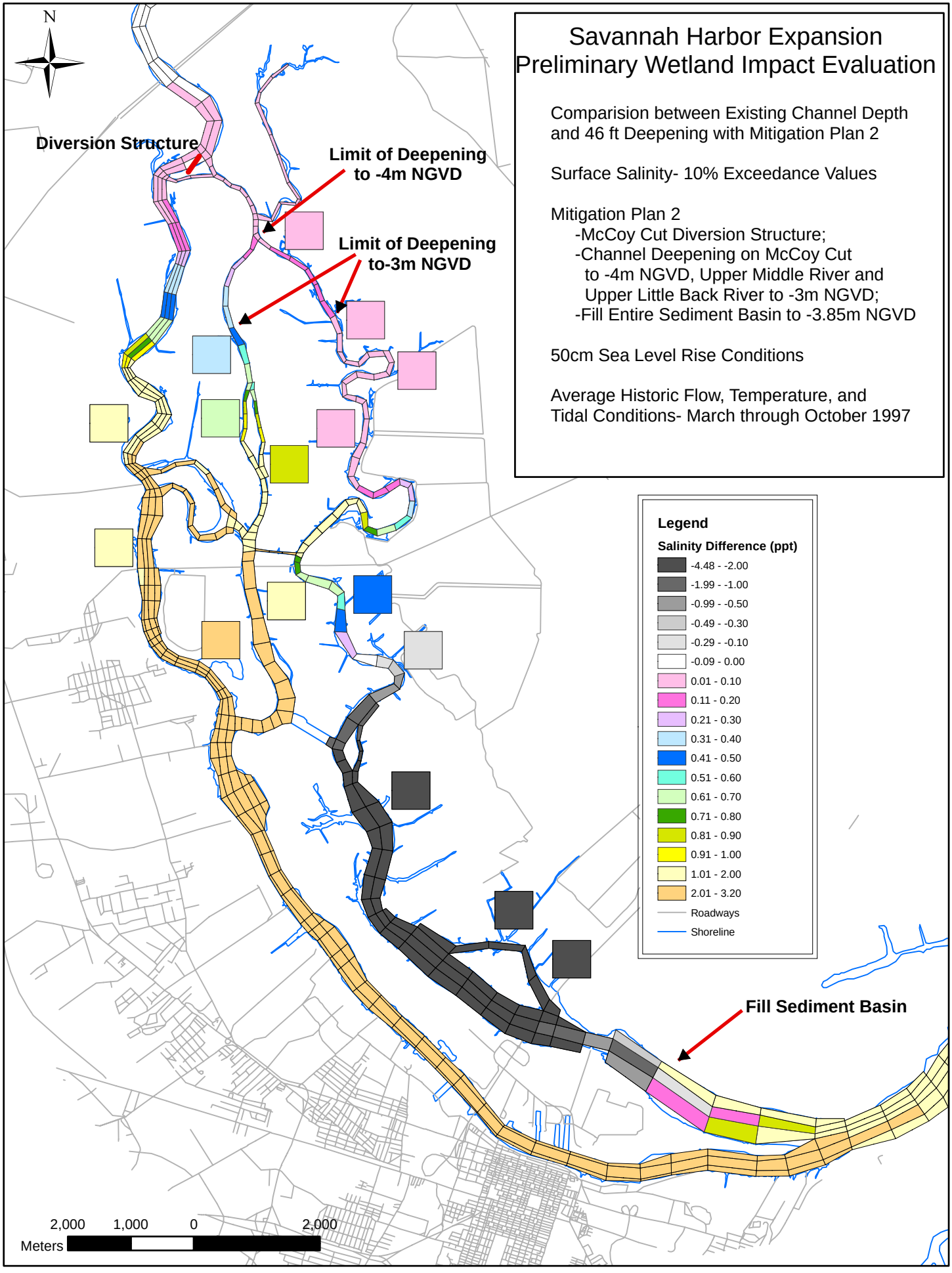
Surface Salinity- 50% Exceedance Values

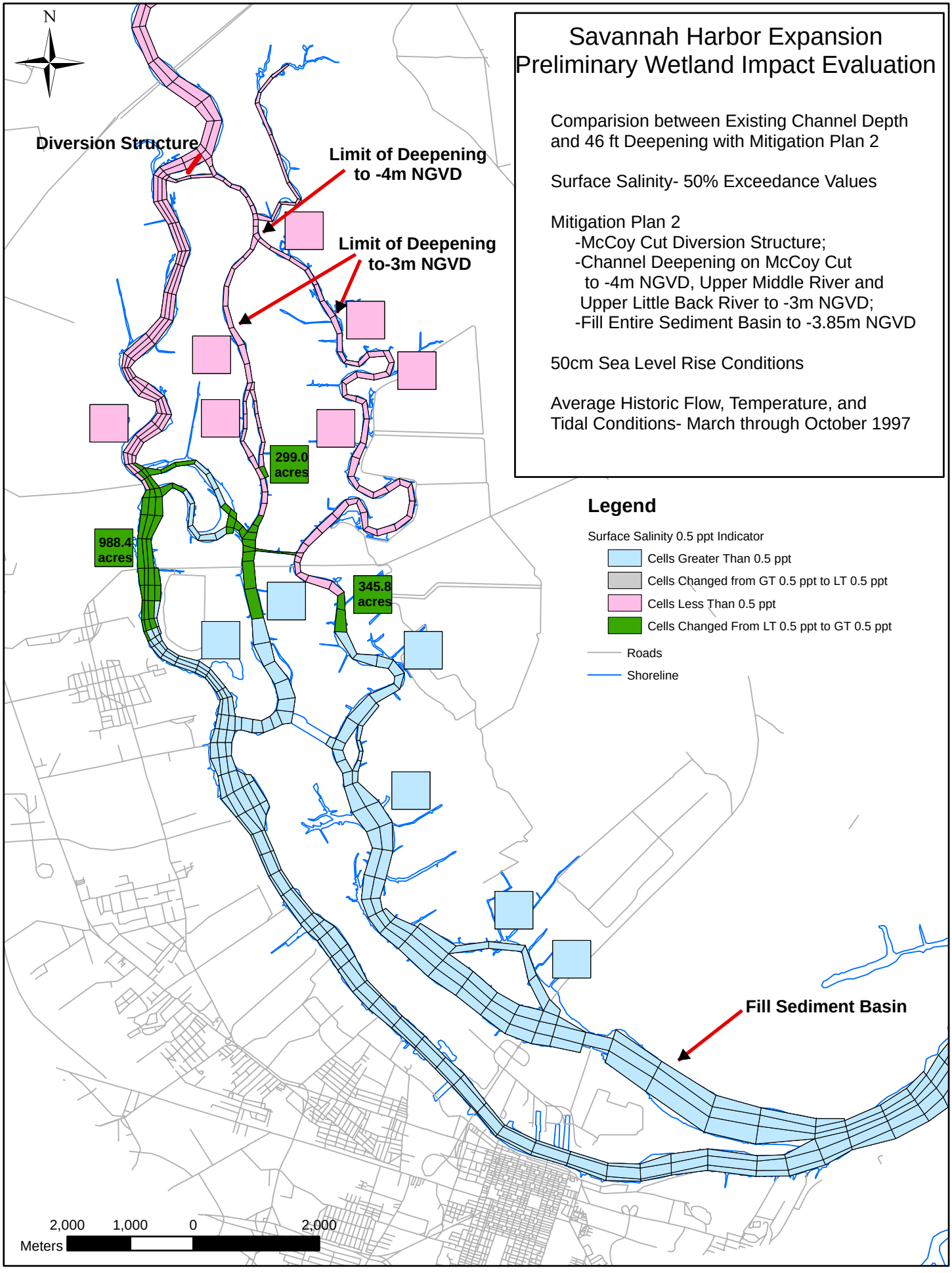
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.48 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.20
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

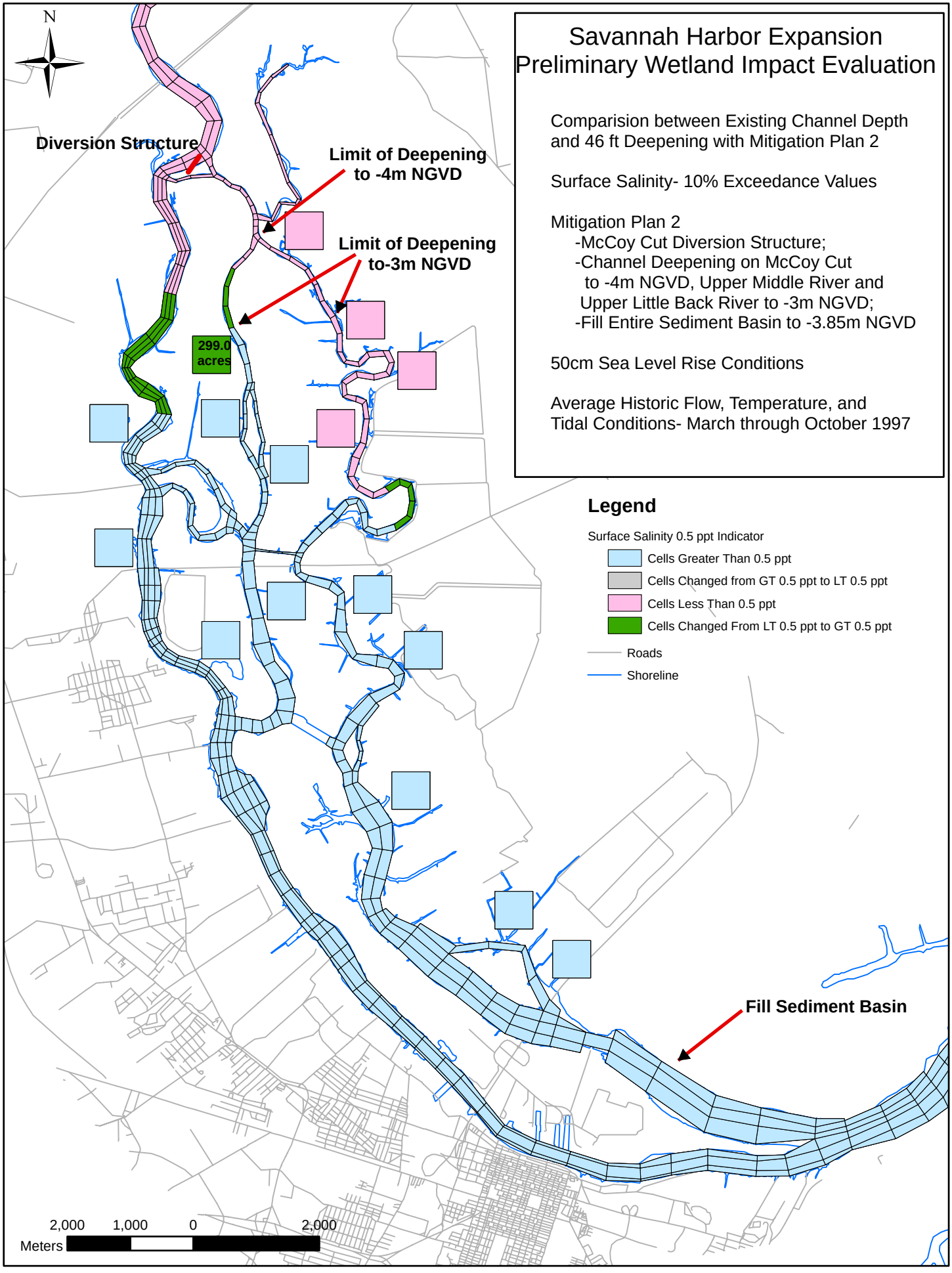
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

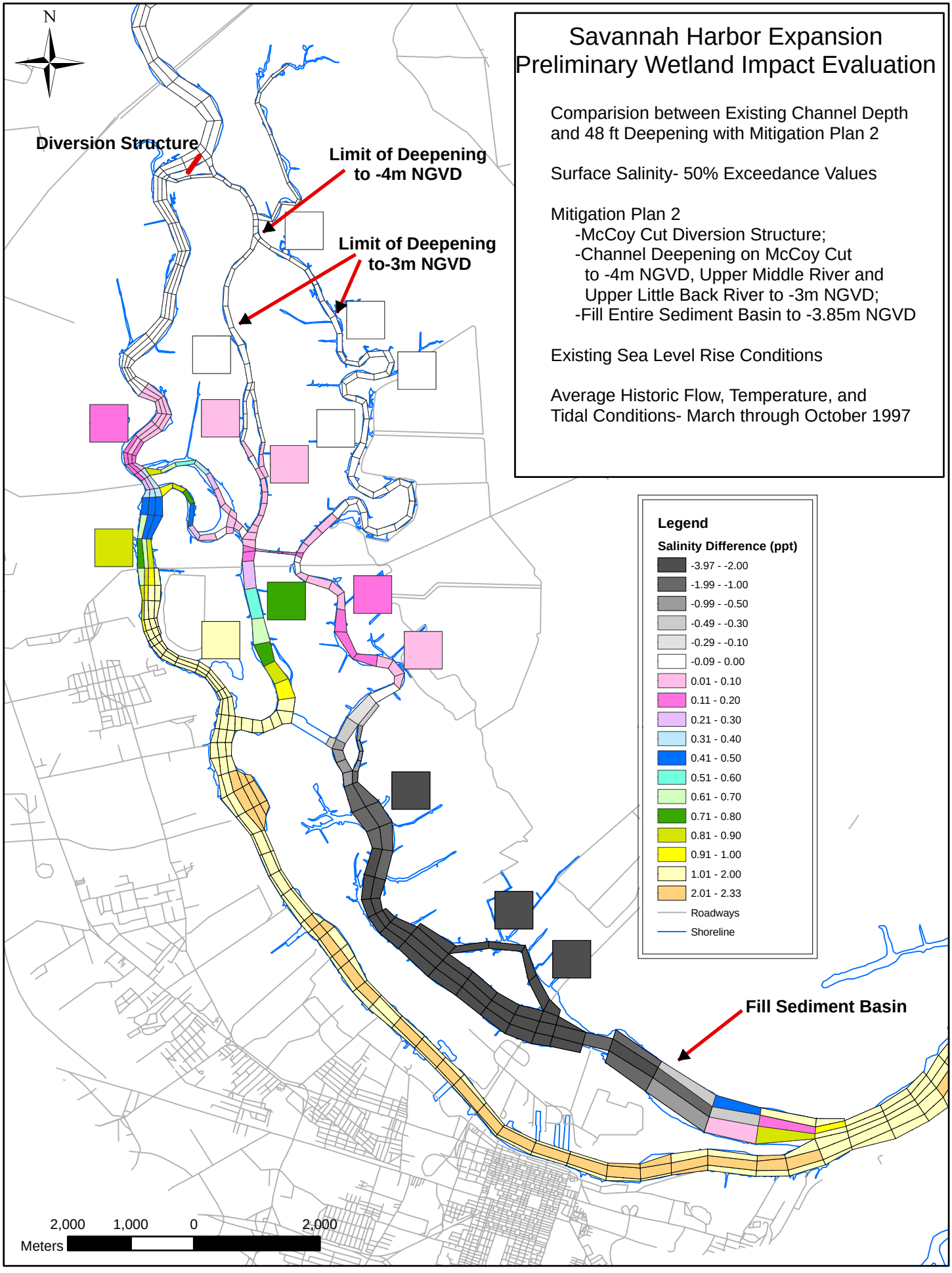
Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

48-ft Deepening

Basic Evaluation



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2

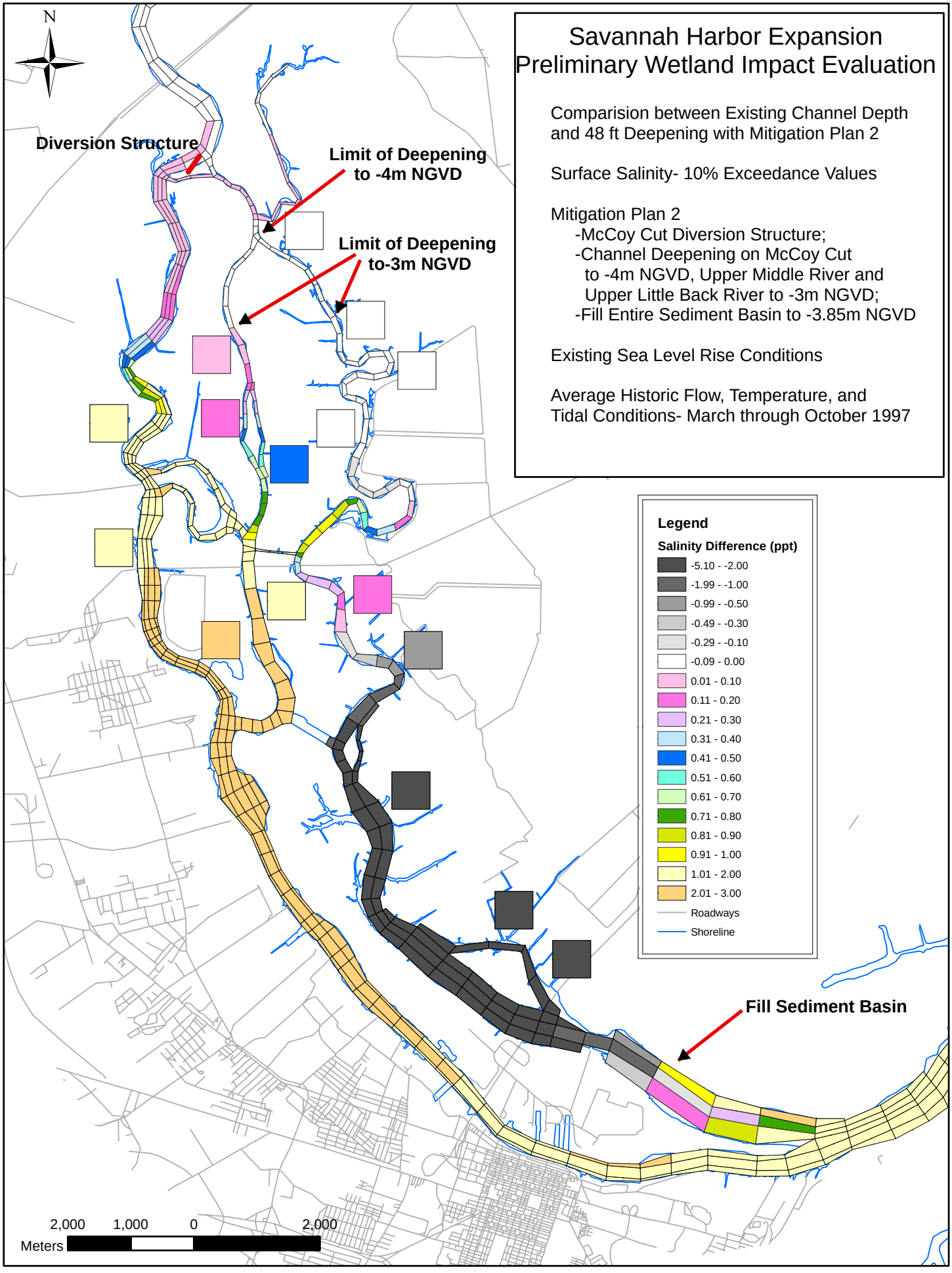
Surface Salinity- 50% Exceedance Values

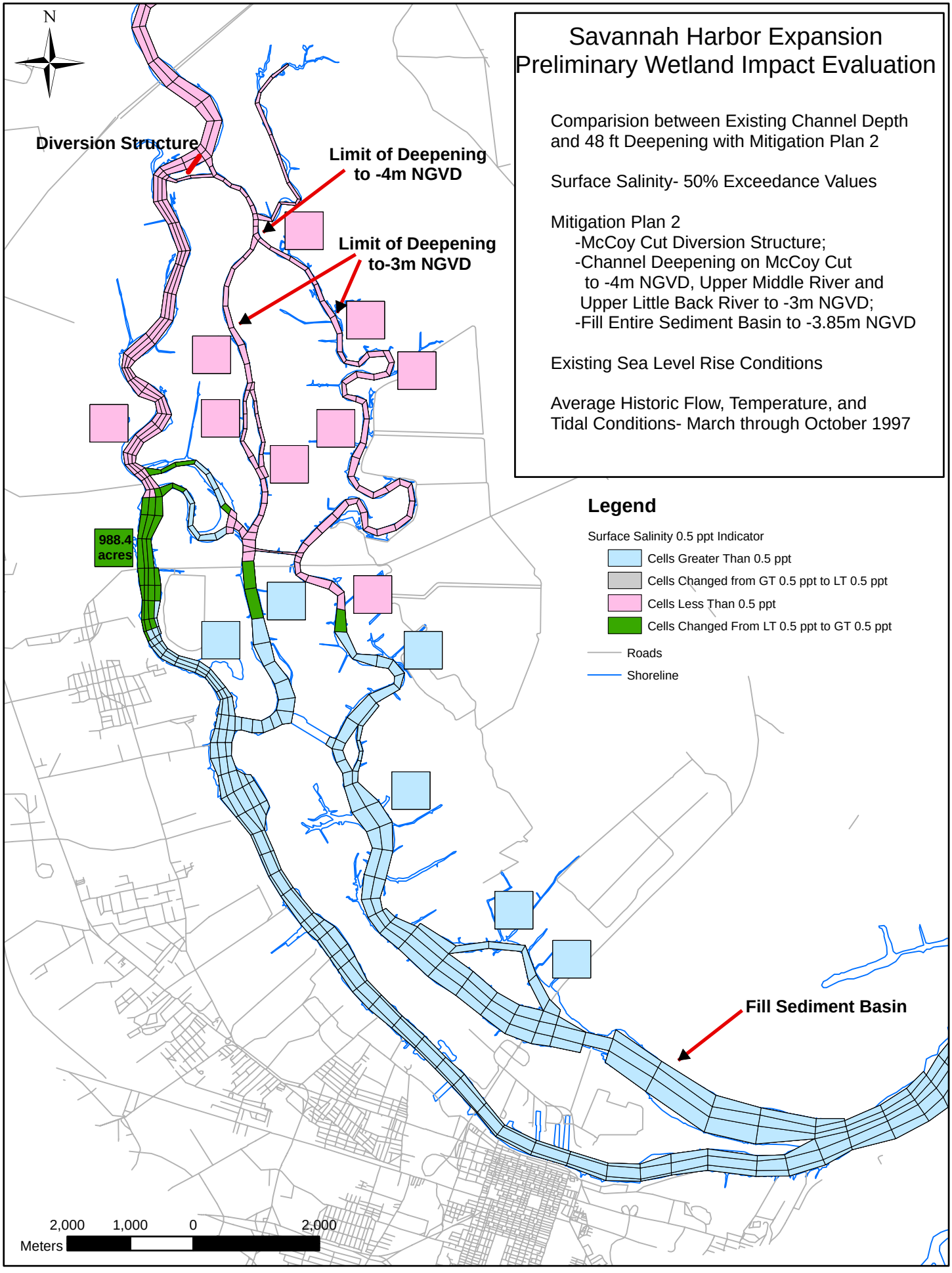
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

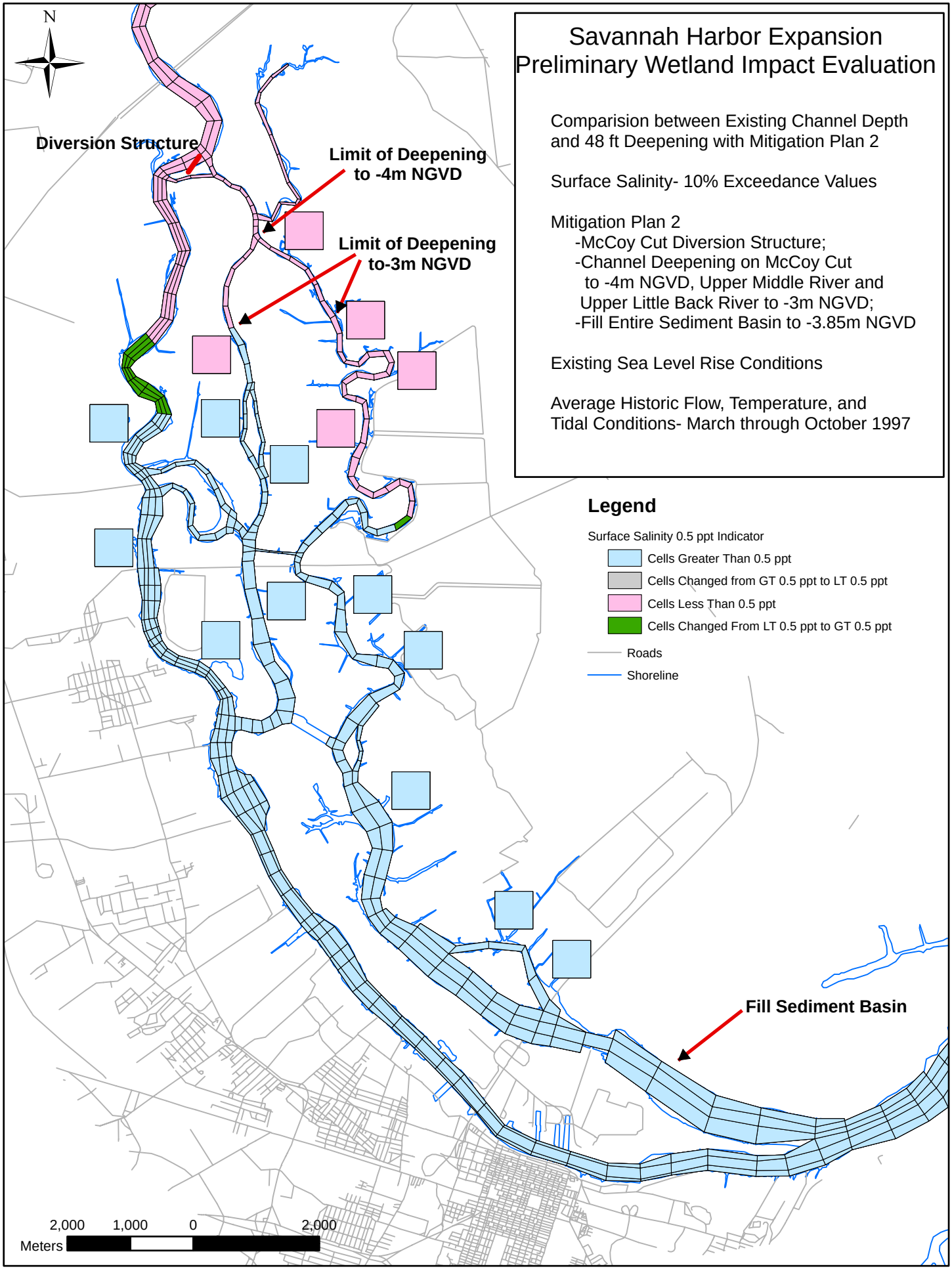
Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-5.10 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.00
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
988.4 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

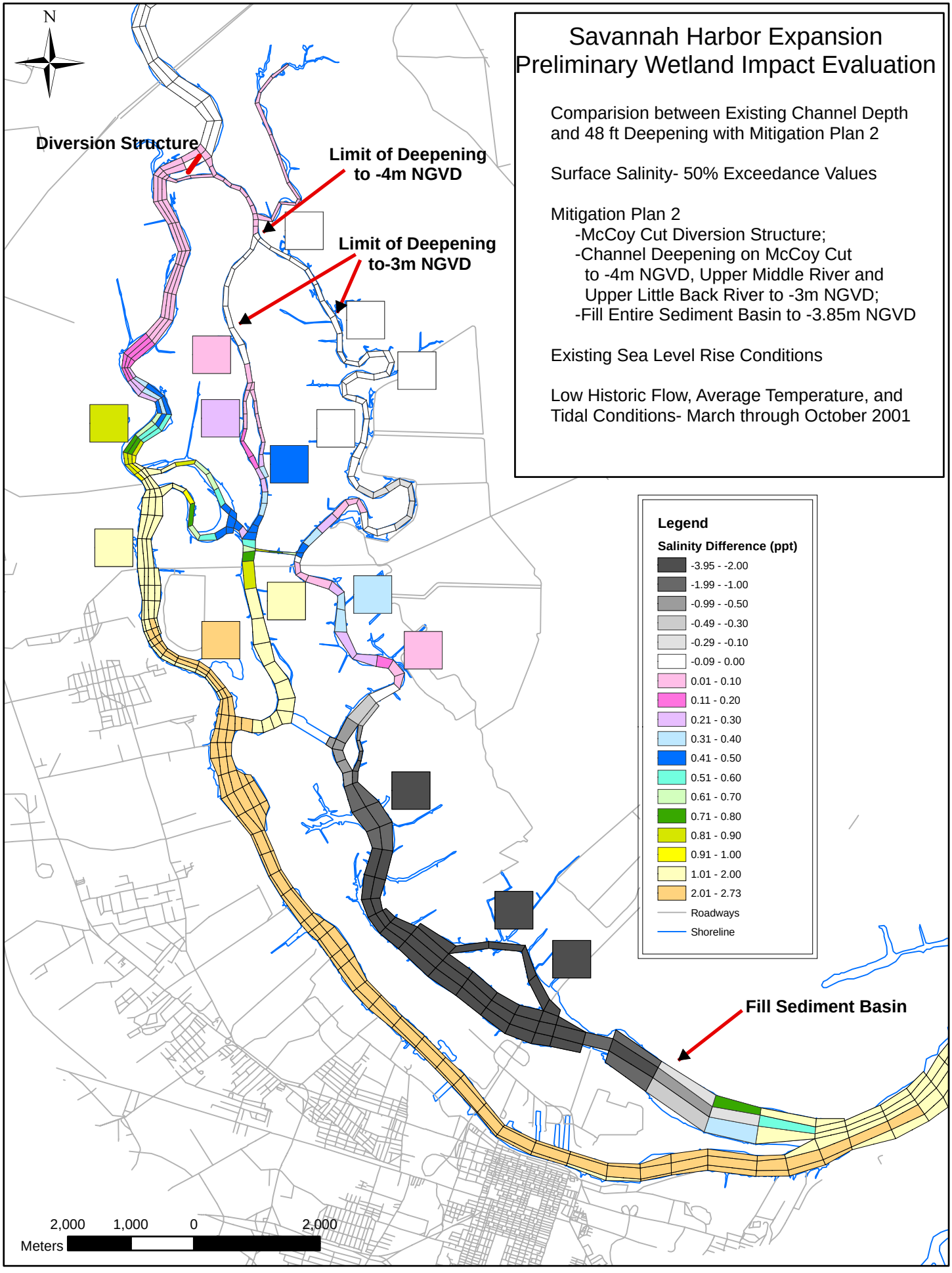
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

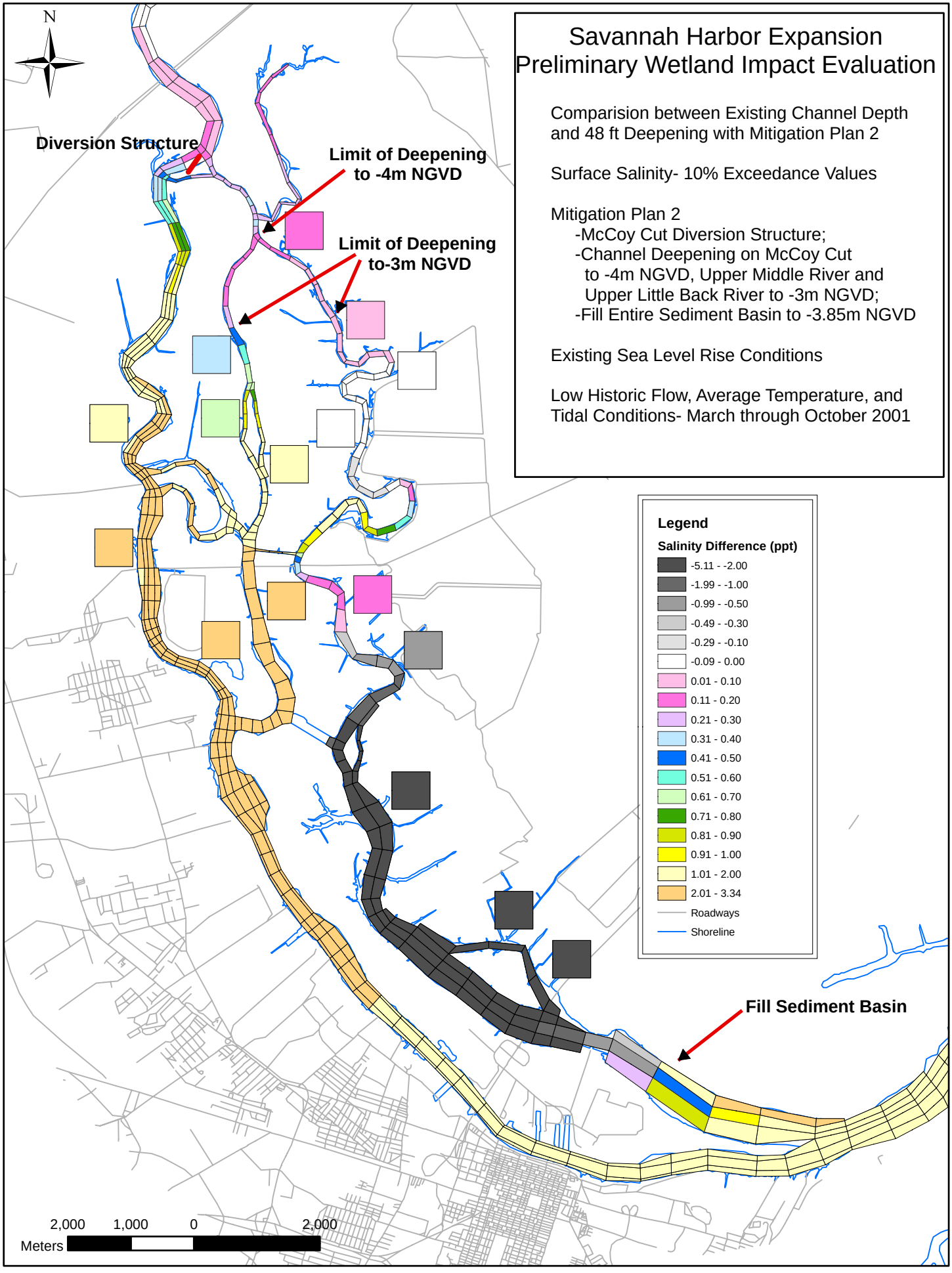
Legend

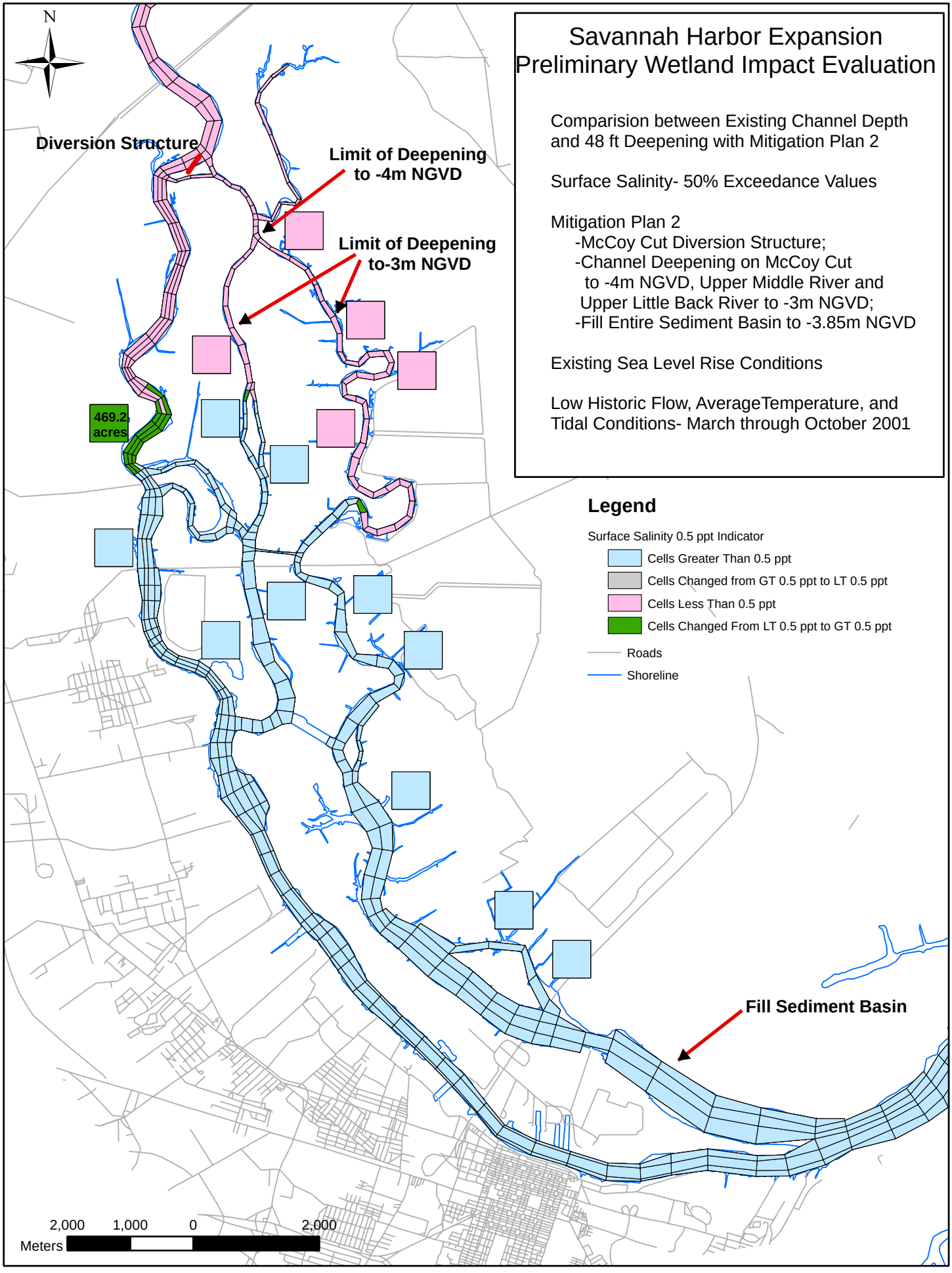
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

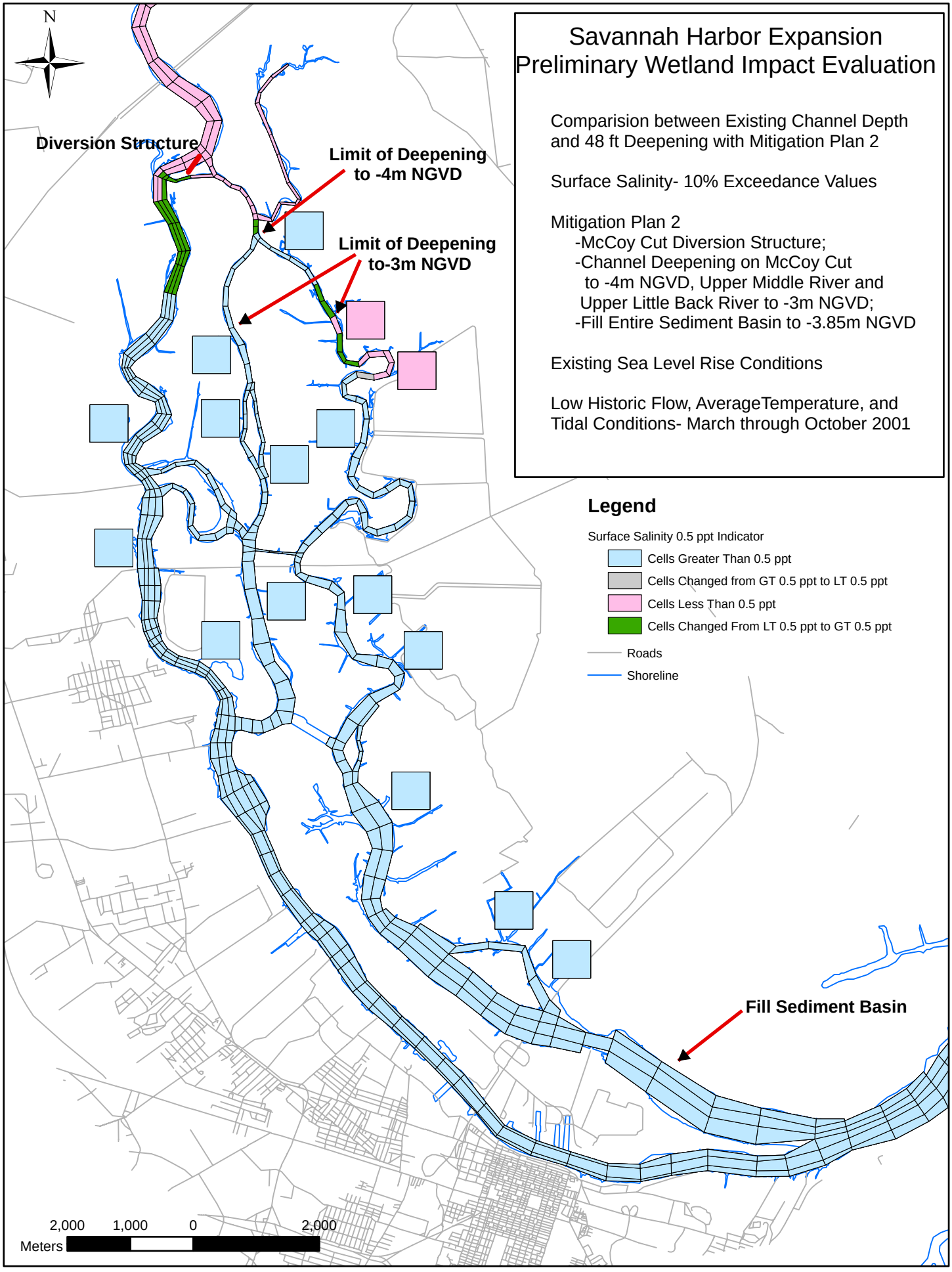
January 2007

Sensitivity Analysis #1


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-3.95 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.73
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-5.11 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.34
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2
Surface Salinity- 50% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
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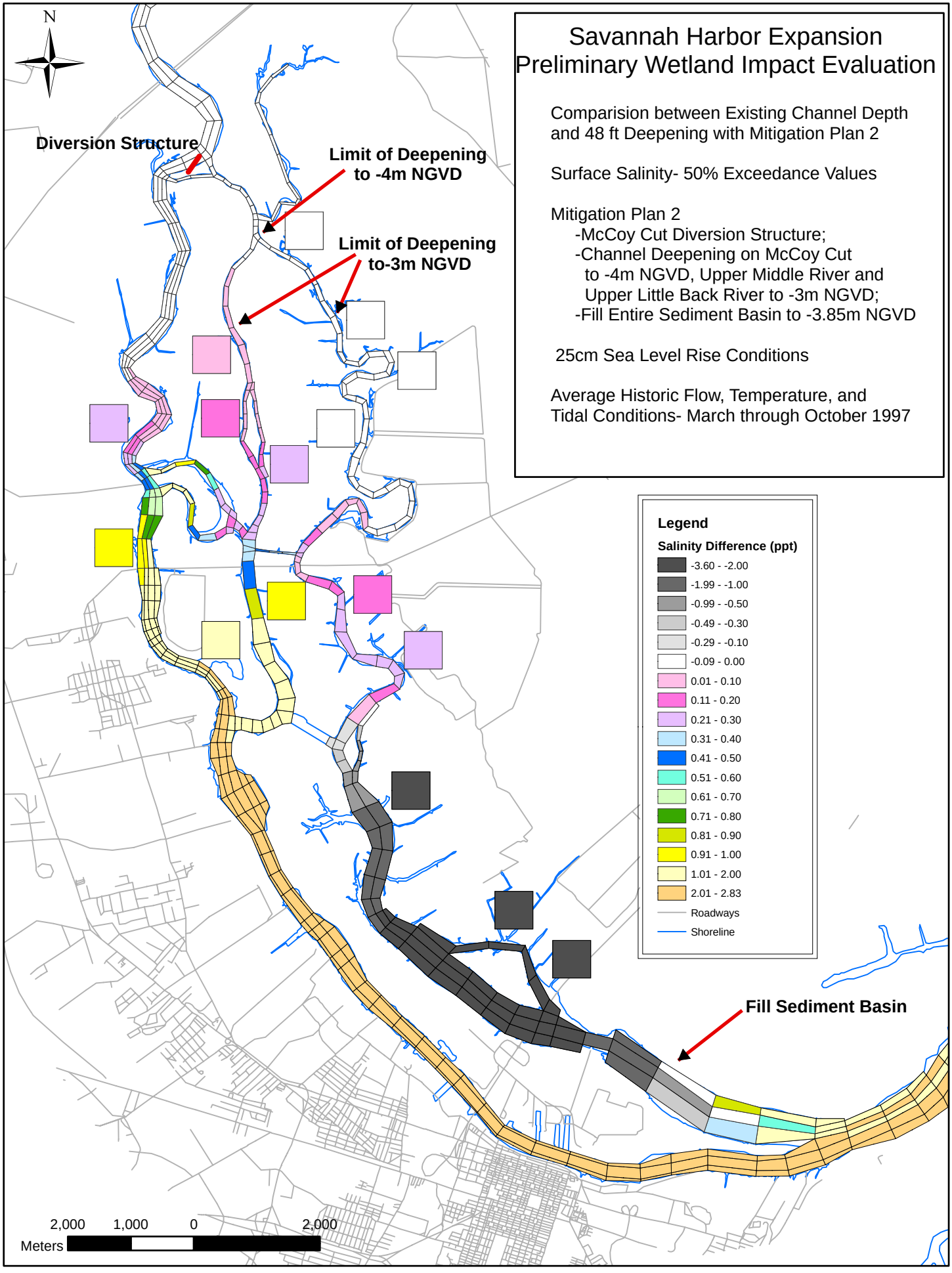
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2A



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2

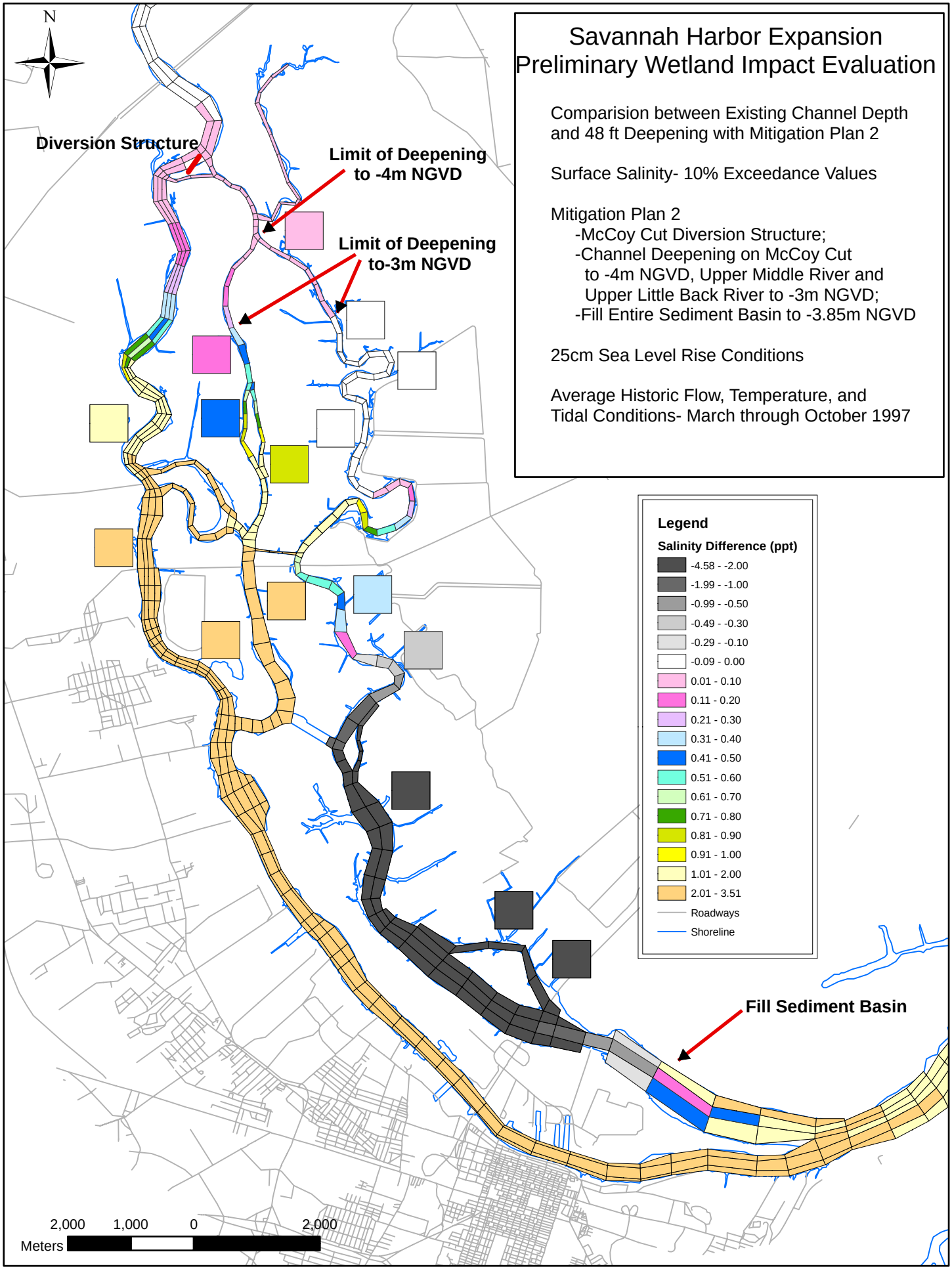
Surface Salinity- 50% Exceedance Values

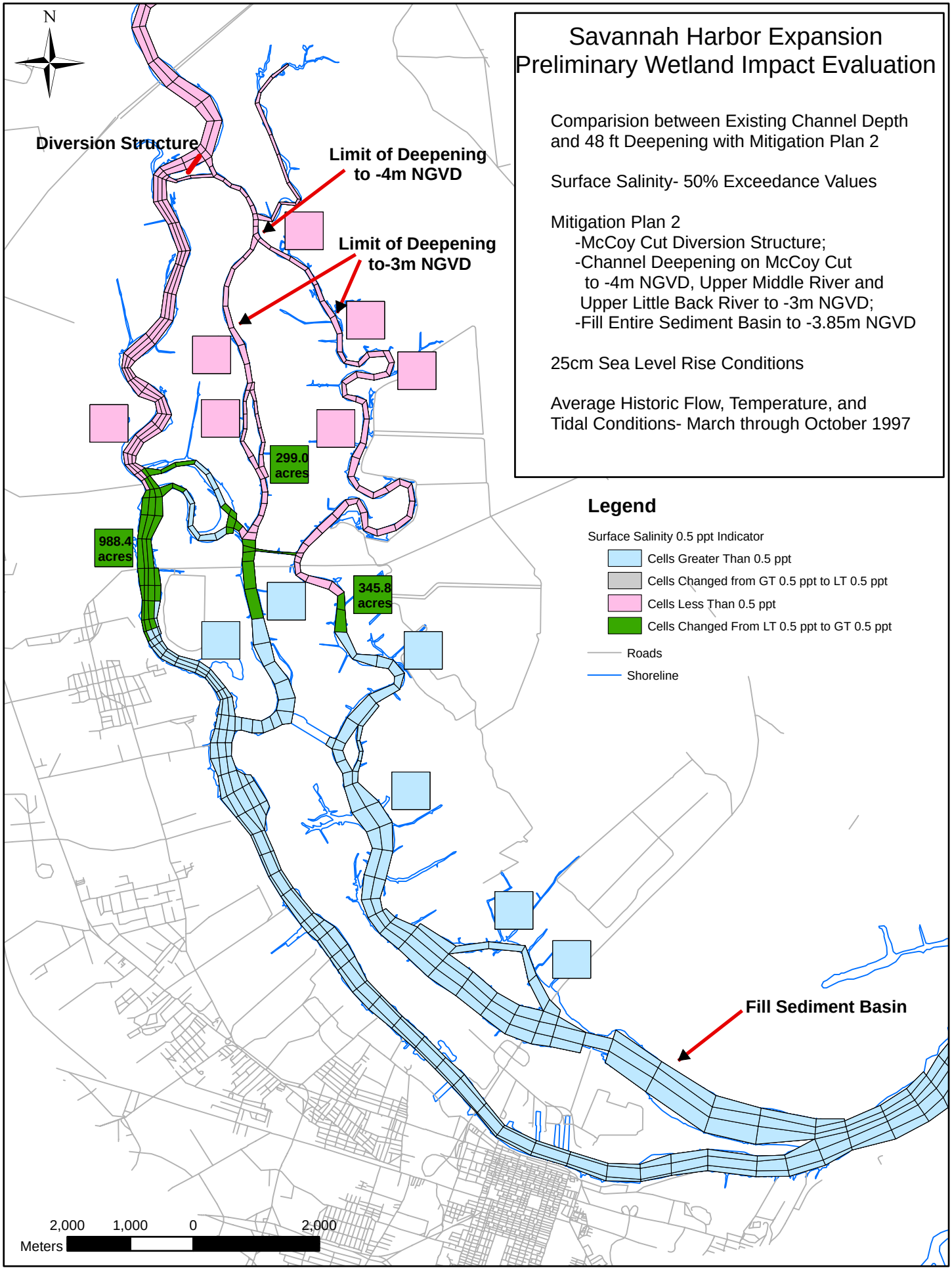
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.58 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.51
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

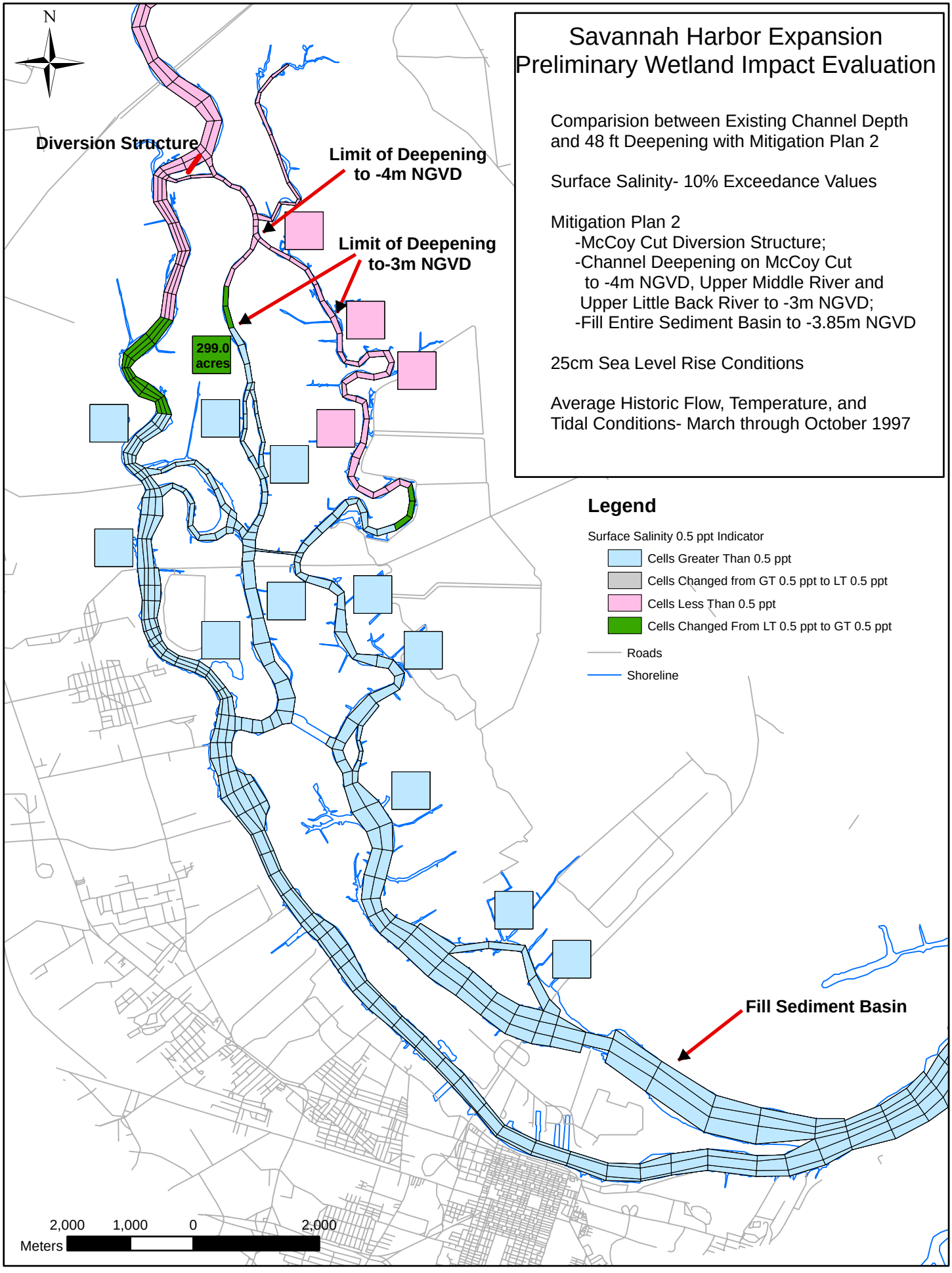
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

25cm Sea Level Rise Conditions

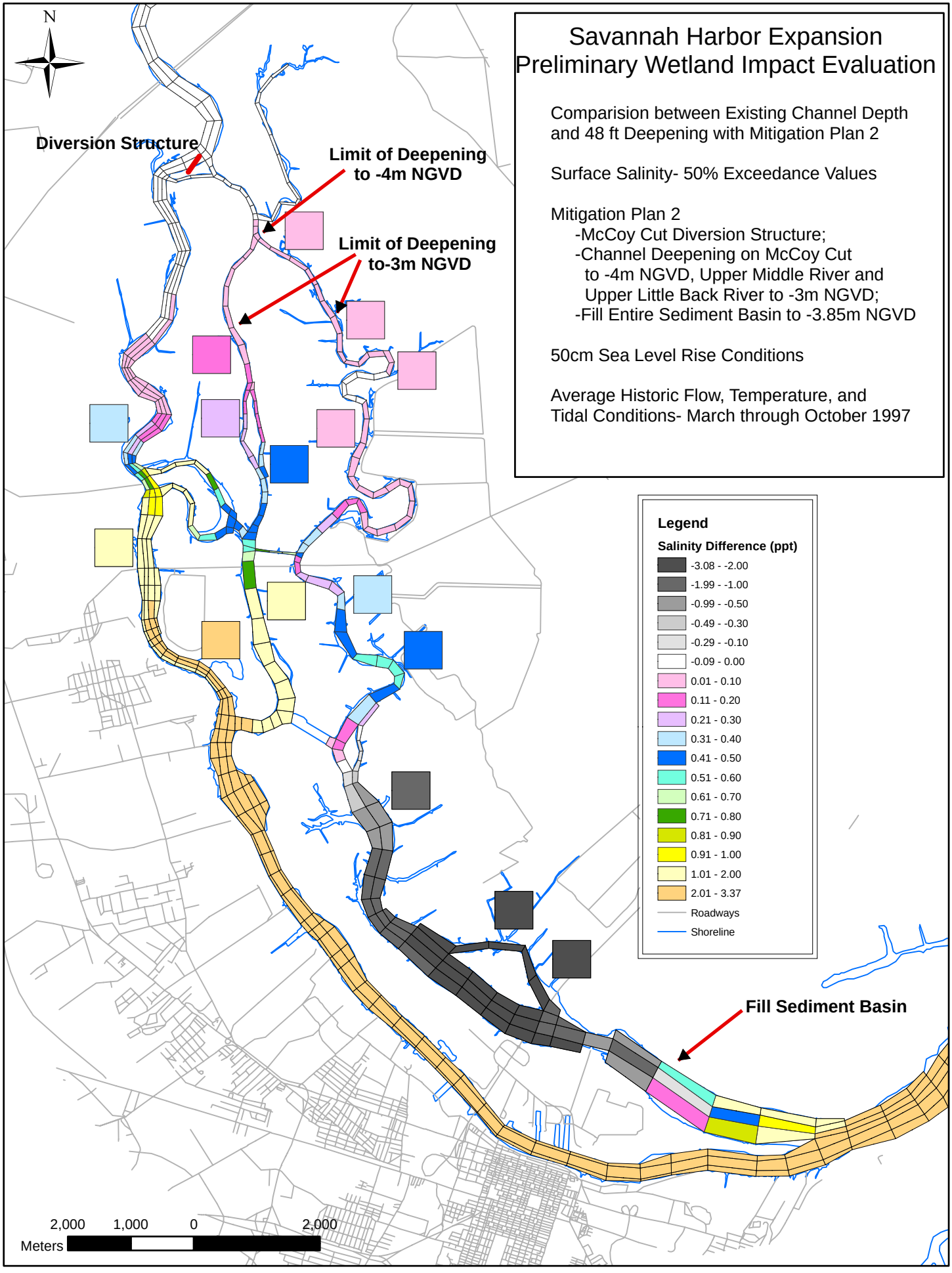
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #2B



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2

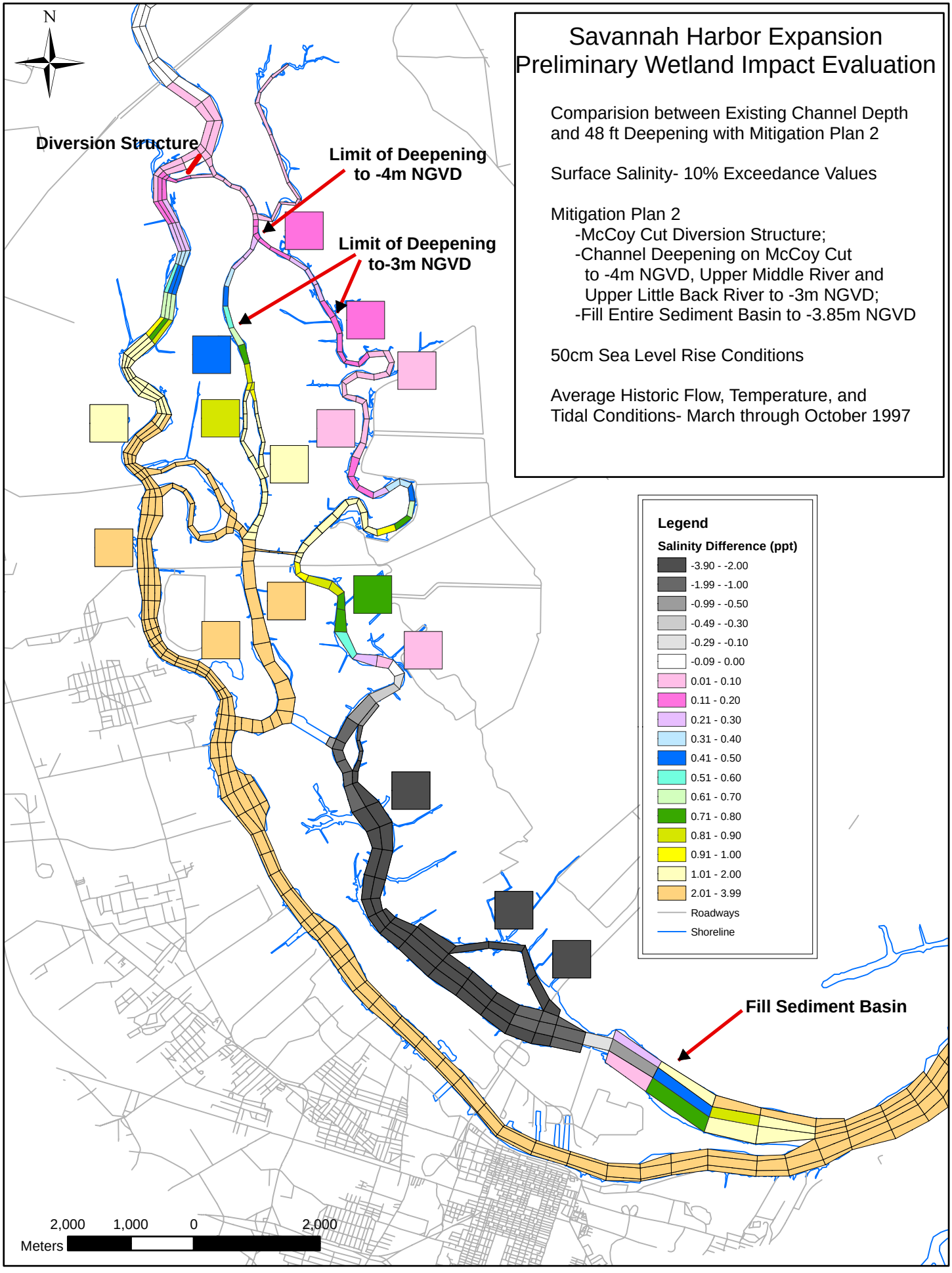
Surface Salinity- 50% Exceedance Values

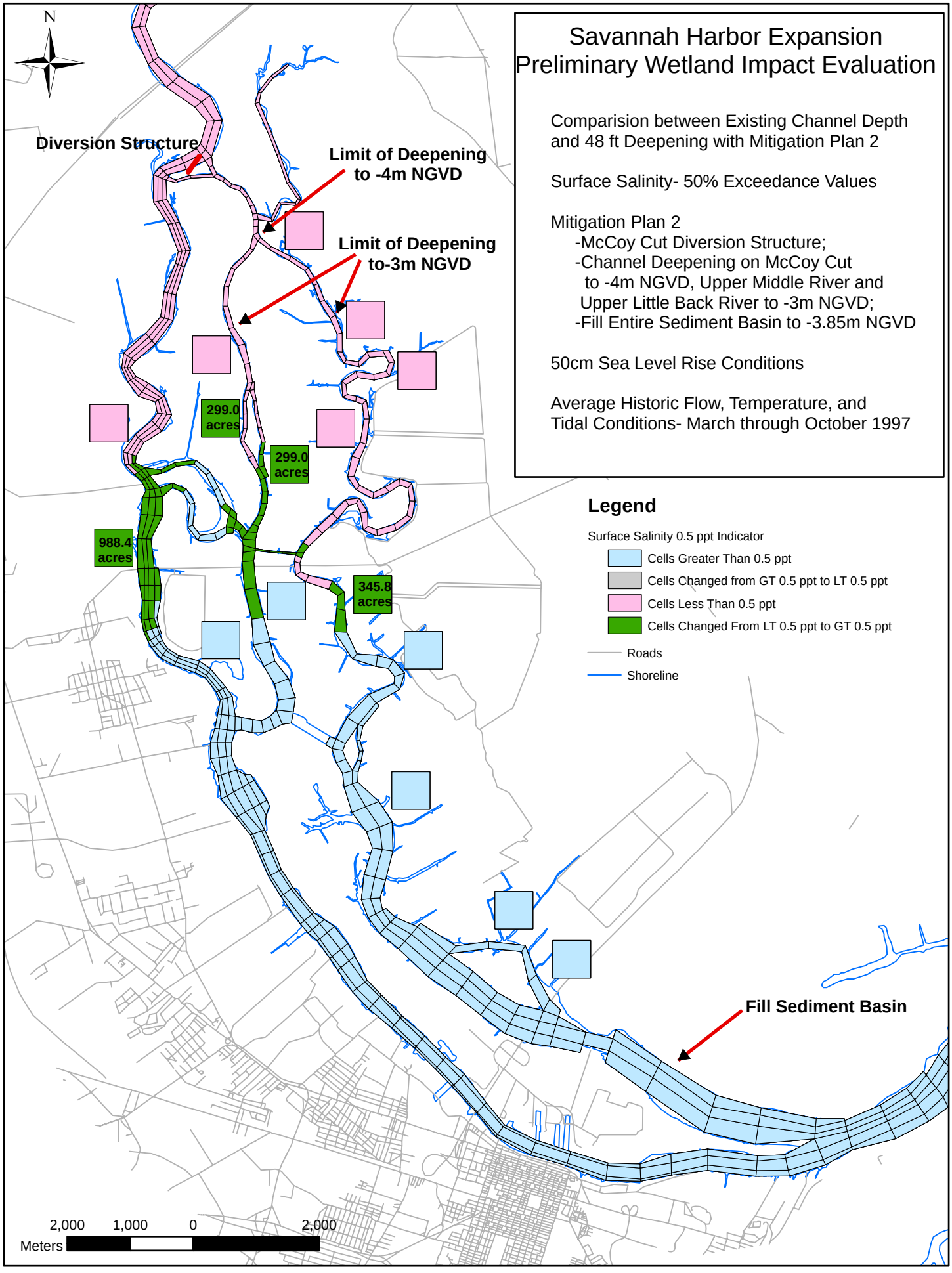
Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2
Surface Salinity- 10% Exceedance Values
Mitigation Plan 2
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.90 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.99
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2

Surface Salinity- 50% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

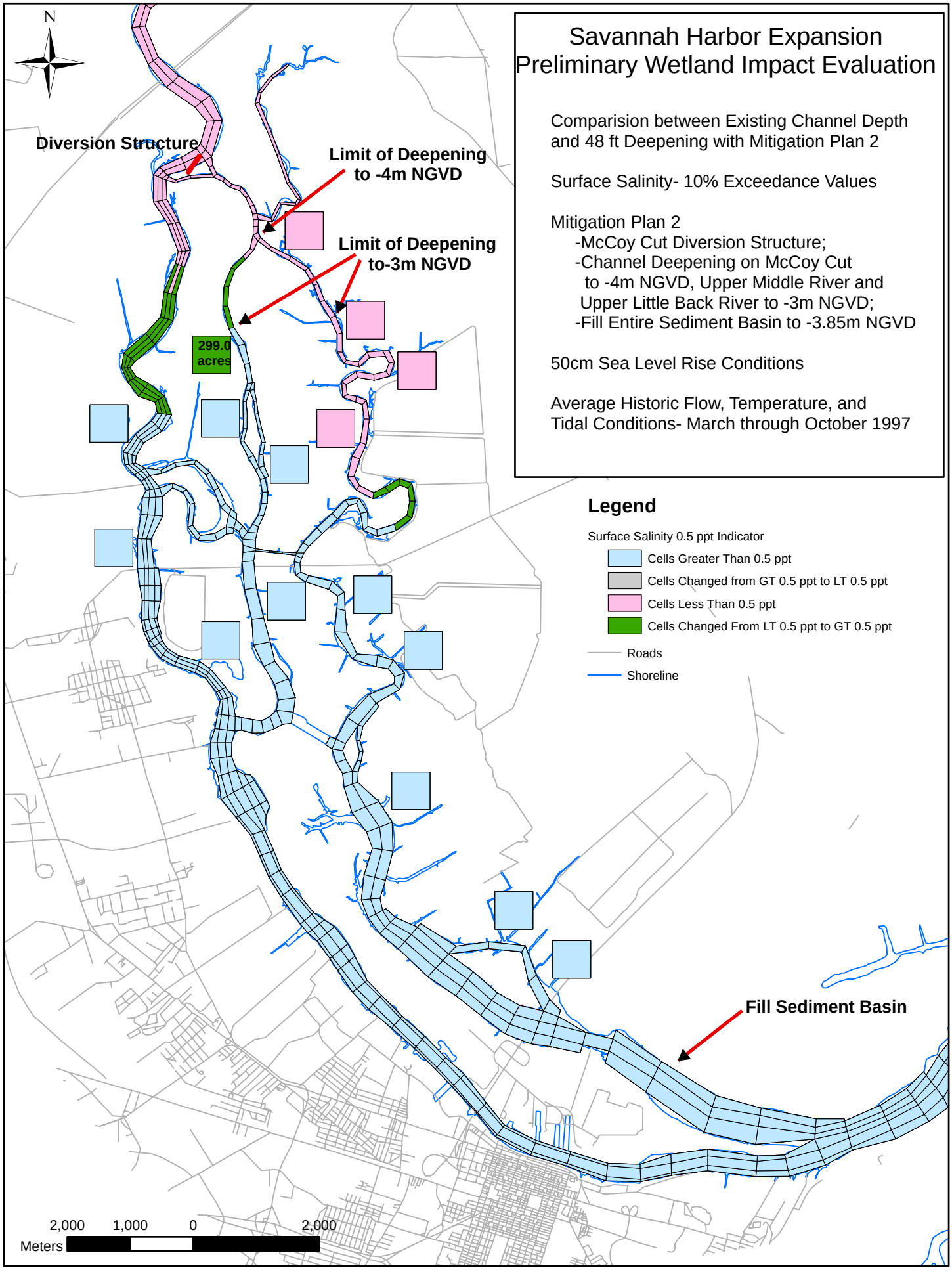
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 2

Surface Salinity- 10% Exceedance Values

Mitigation Plan 2
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD

50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

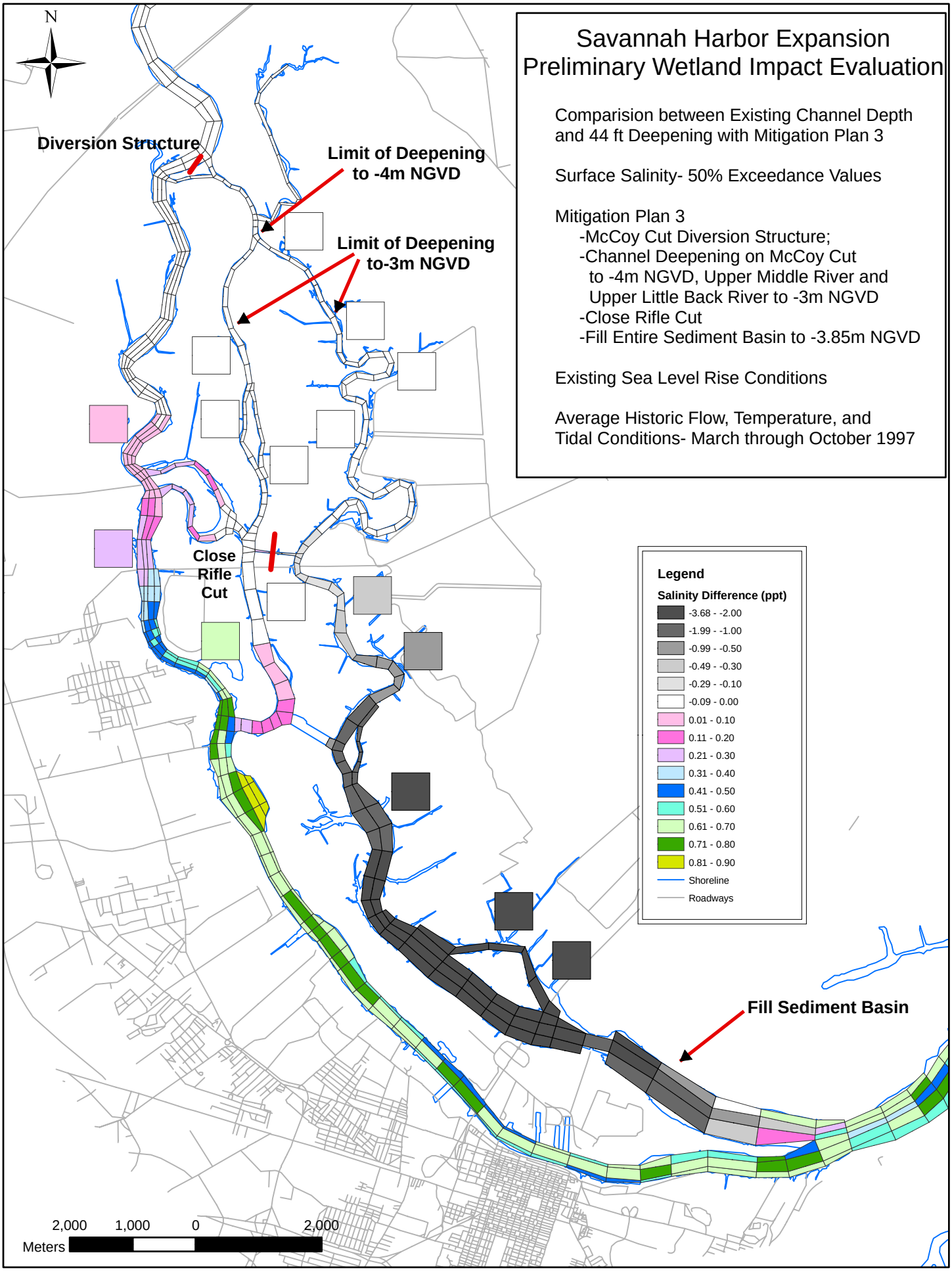
January 2007

MITIGATION PLAN 3

- ***McCoy Cut Diversion Structure***
- ***Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD***
- ***Fill Entire Sediment Basin to -3.85m NGVD***
- ***Close Rifle Cut***

44-ft Deepening

Basic Evaluation



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

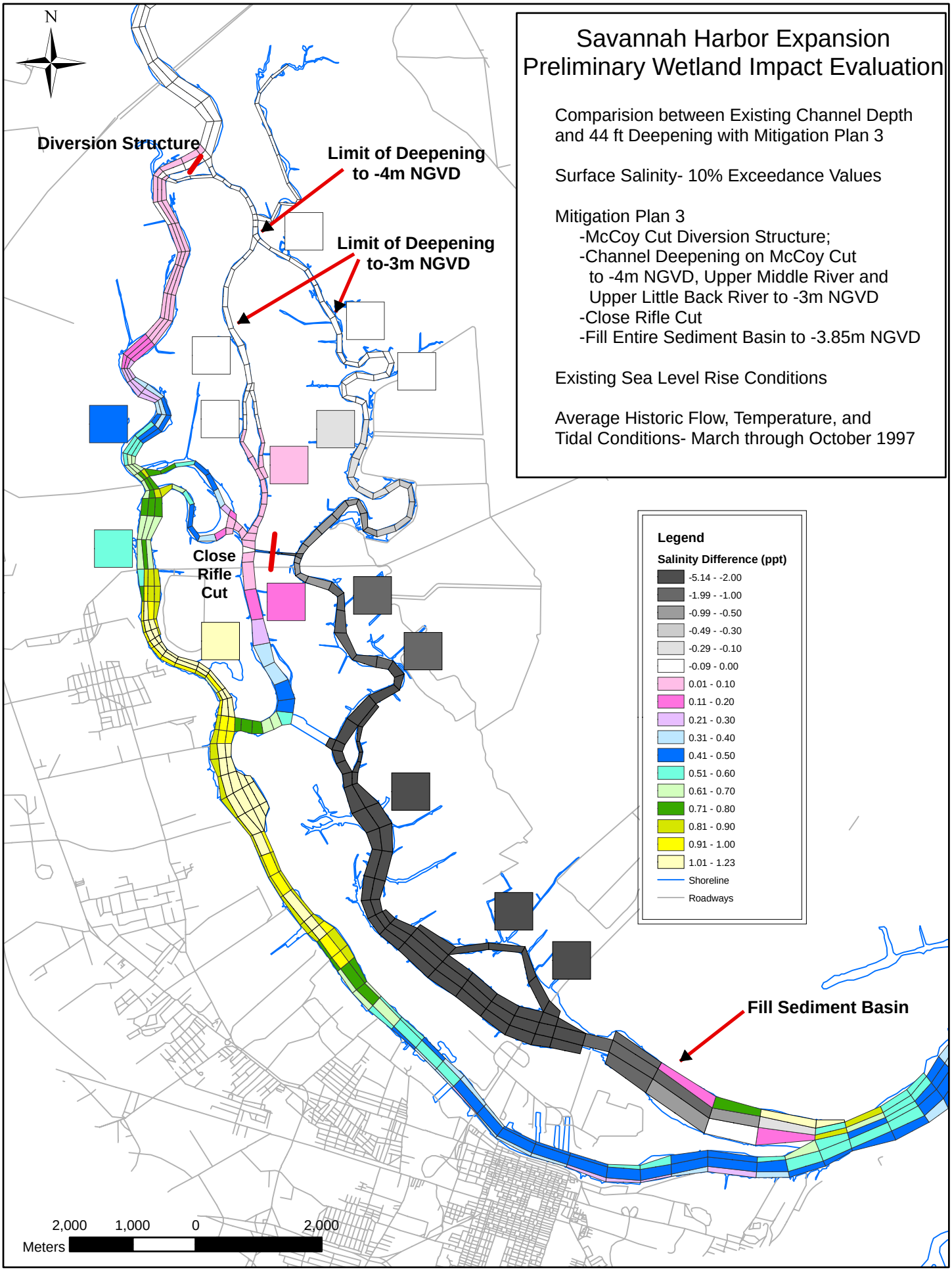
Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
- -Close Rifle Cut
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

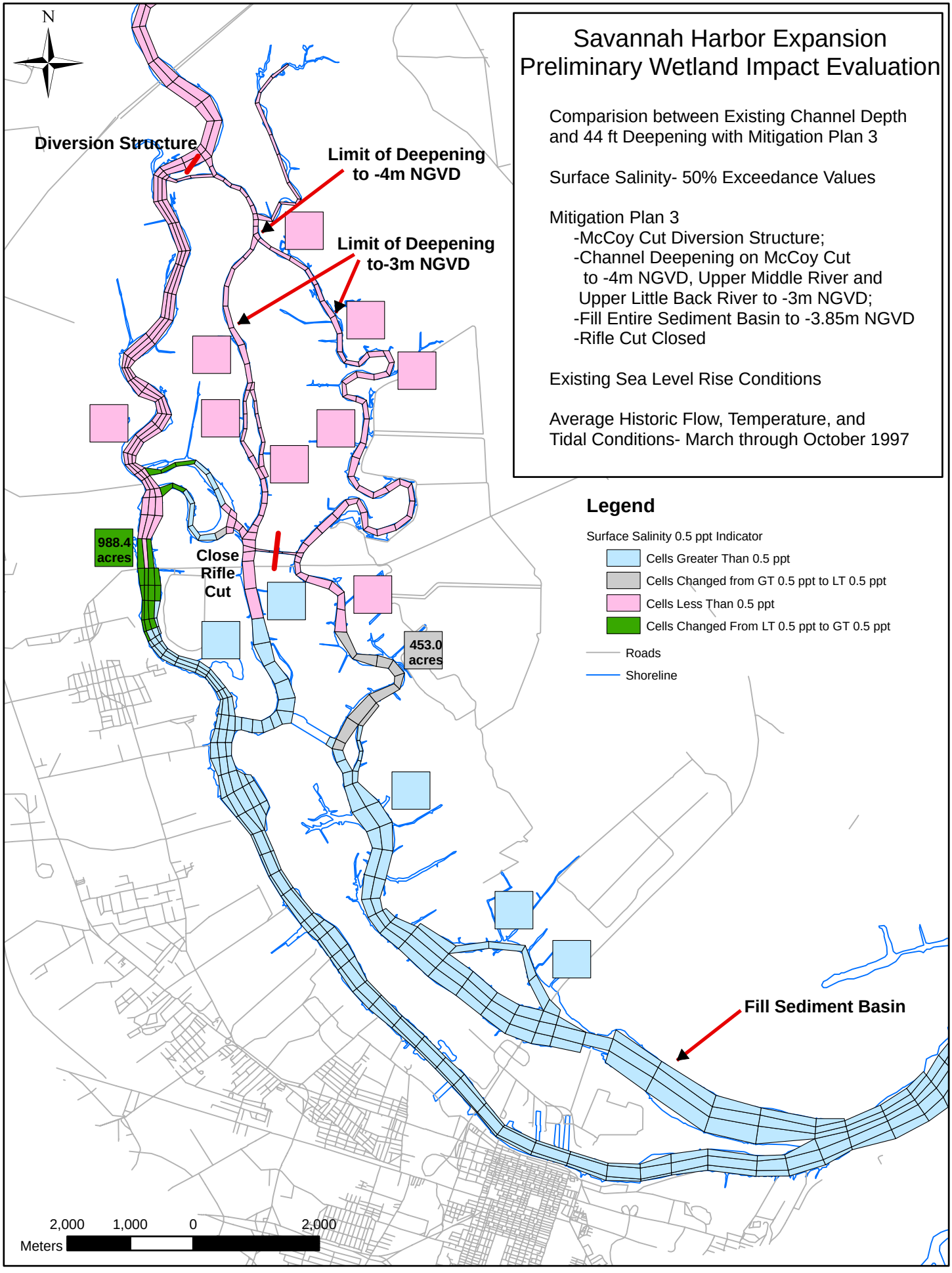
Surface Salinity- 10% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
- -Close Rifle Cut
- -Fill Entire Sediment Basin to -3.85m NGVD

Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

Existing Sea Level Rise Conditions

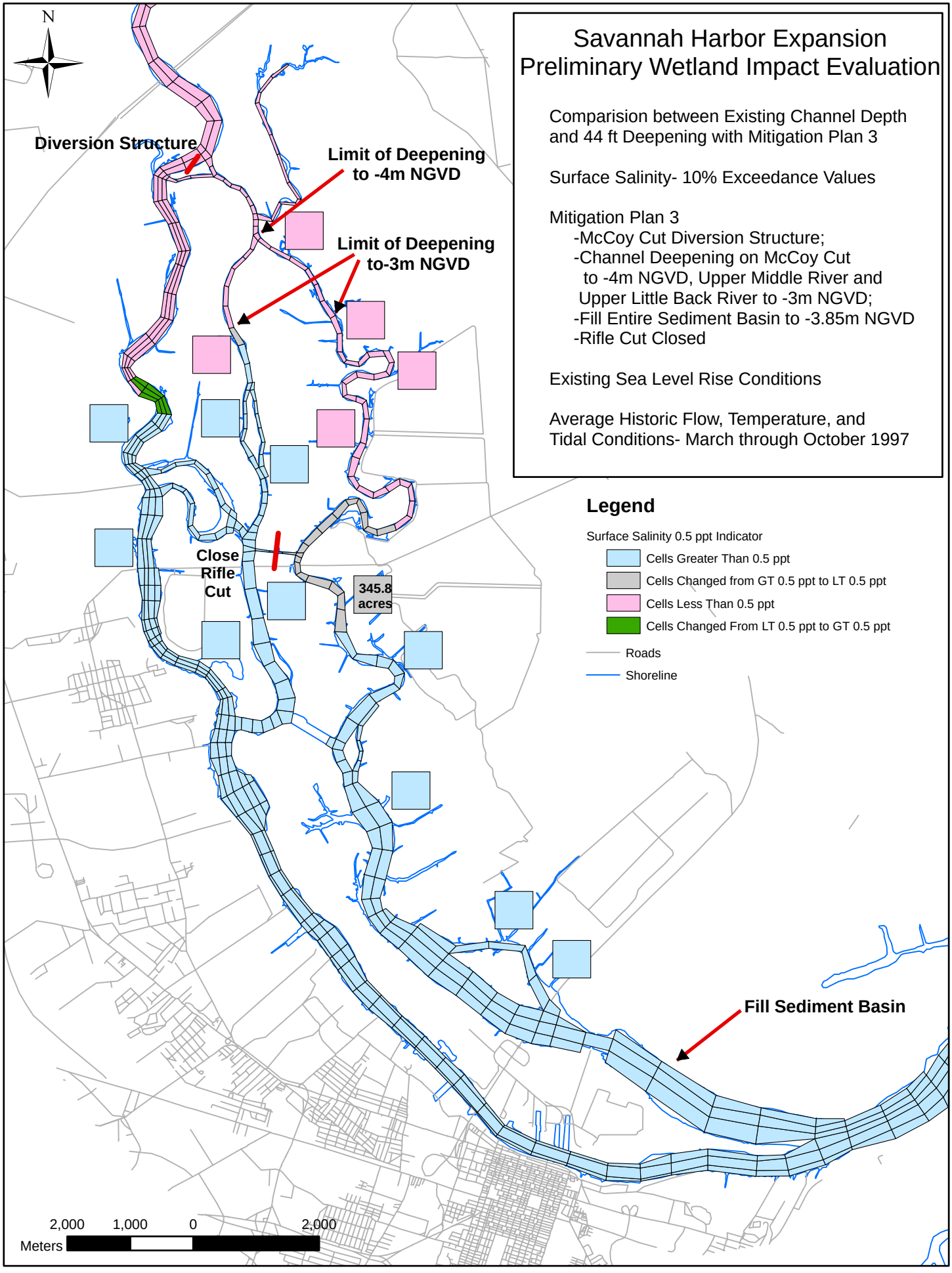
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

Surface Salinity- 10% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

Existing Sea Level Rise Conditions

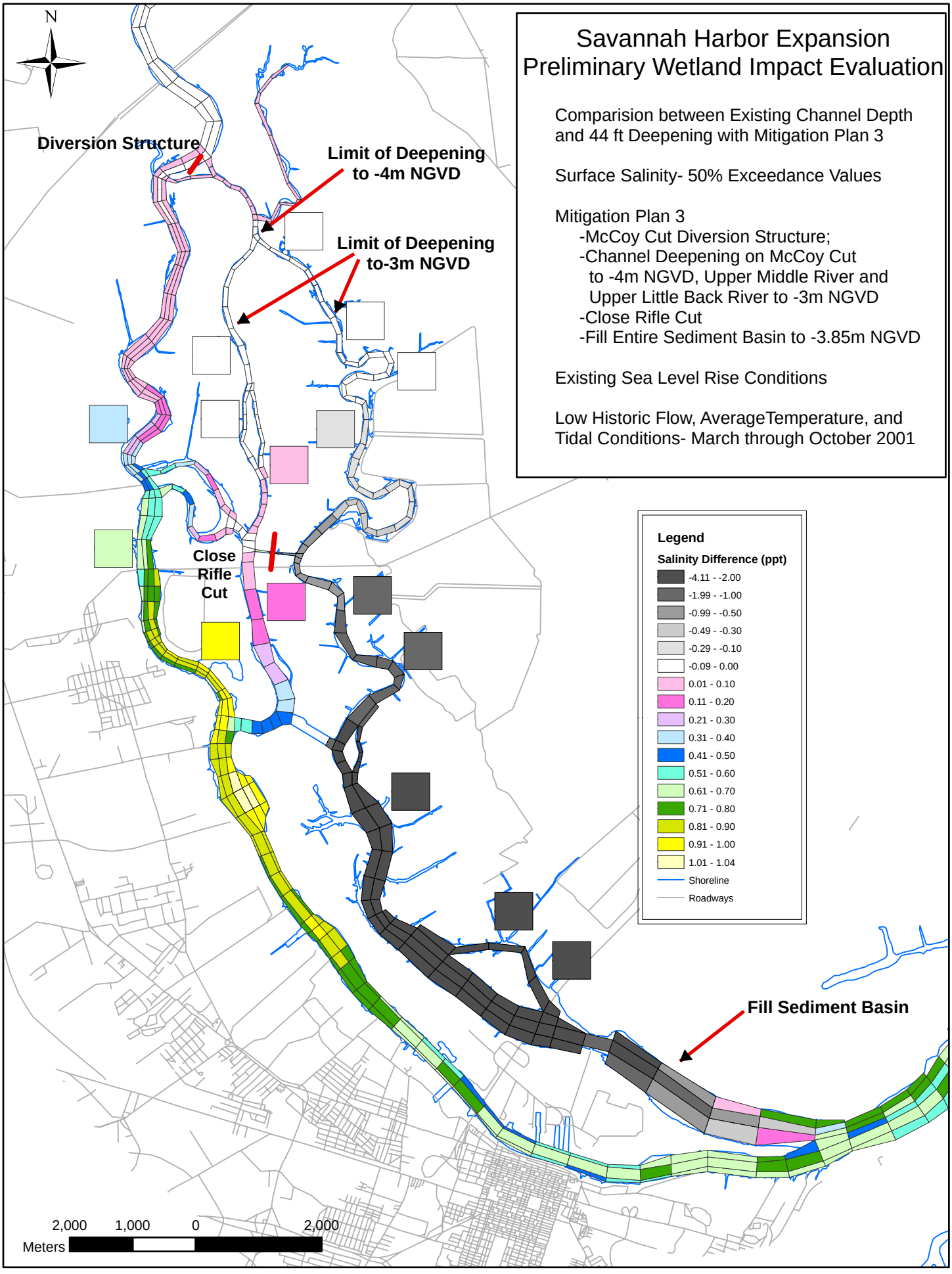
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

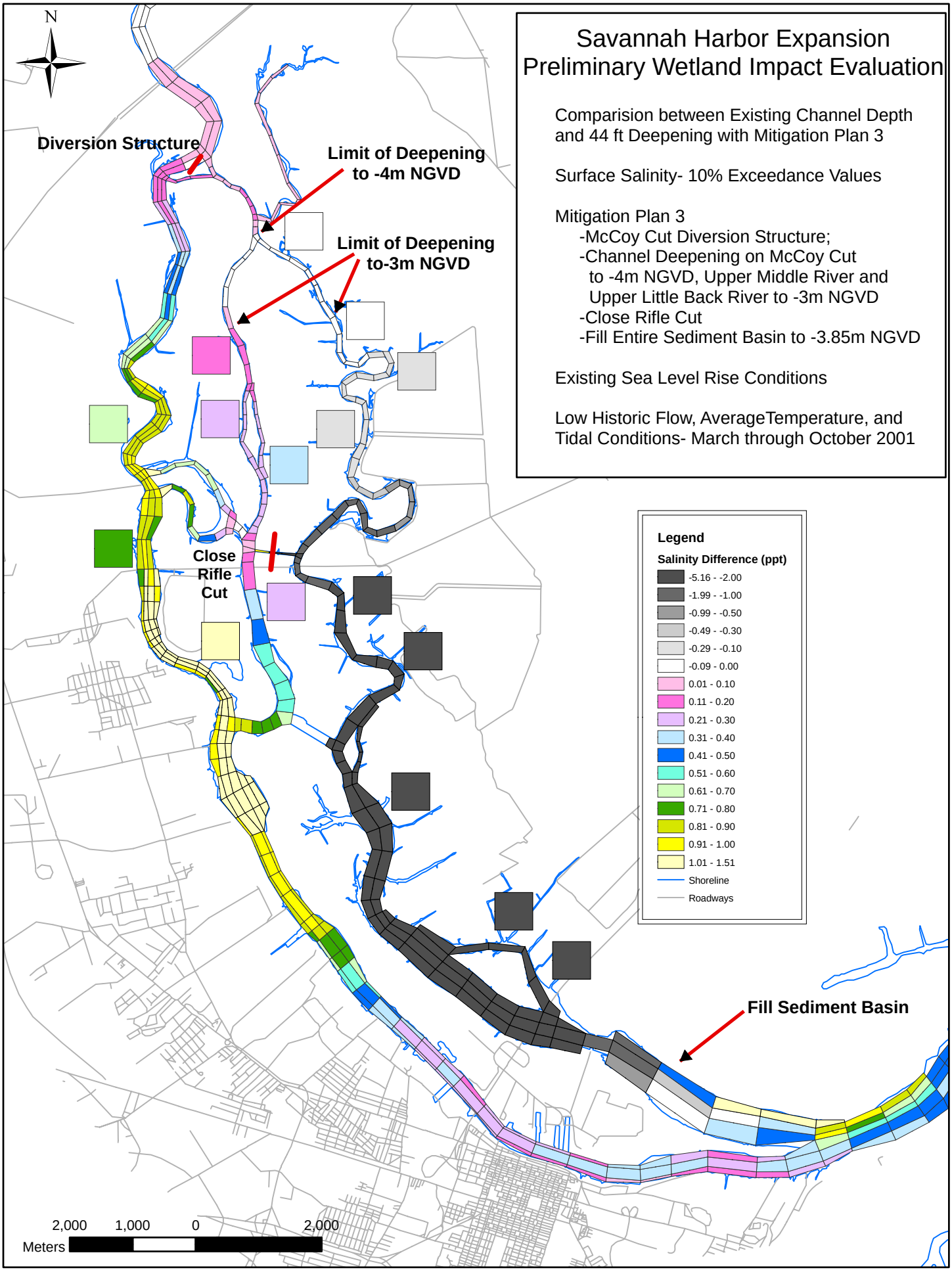
Legend

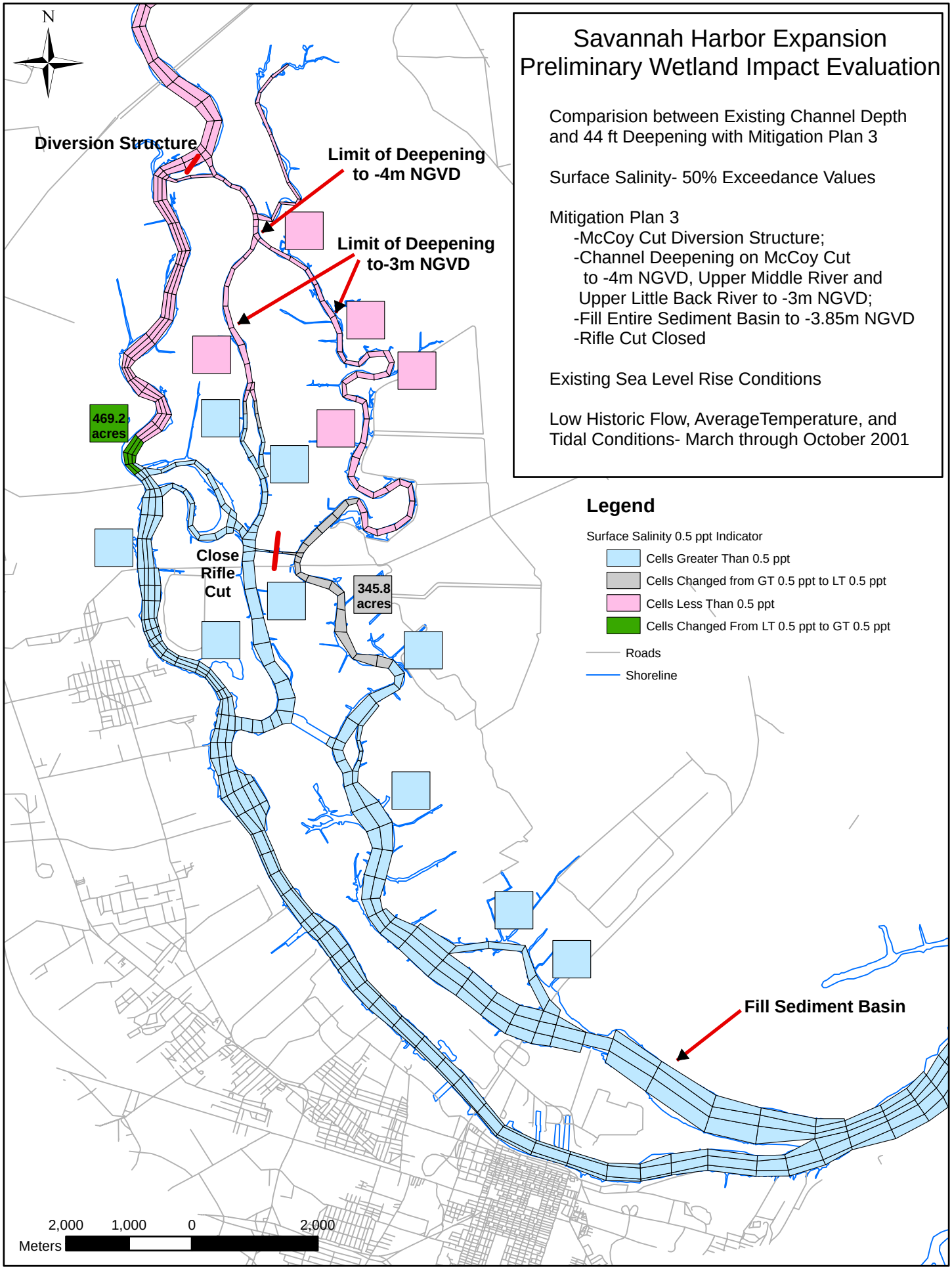
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #1


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-4.11 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.04
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-5.16 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.51
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

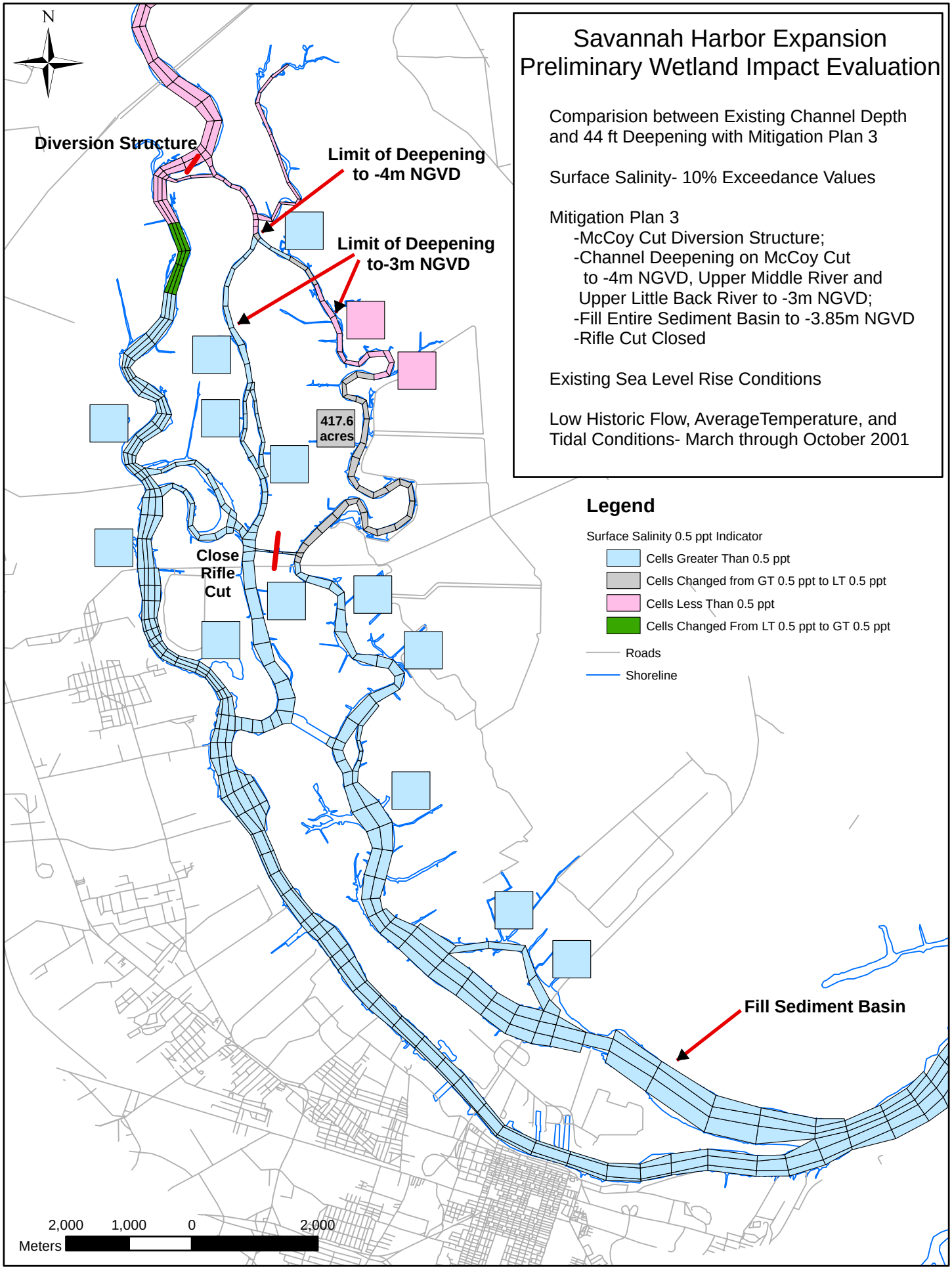
Existing Sea Level Rise Conditions

Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

Surface Salinity- 10% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

Existing Sea Level Rise Conditions

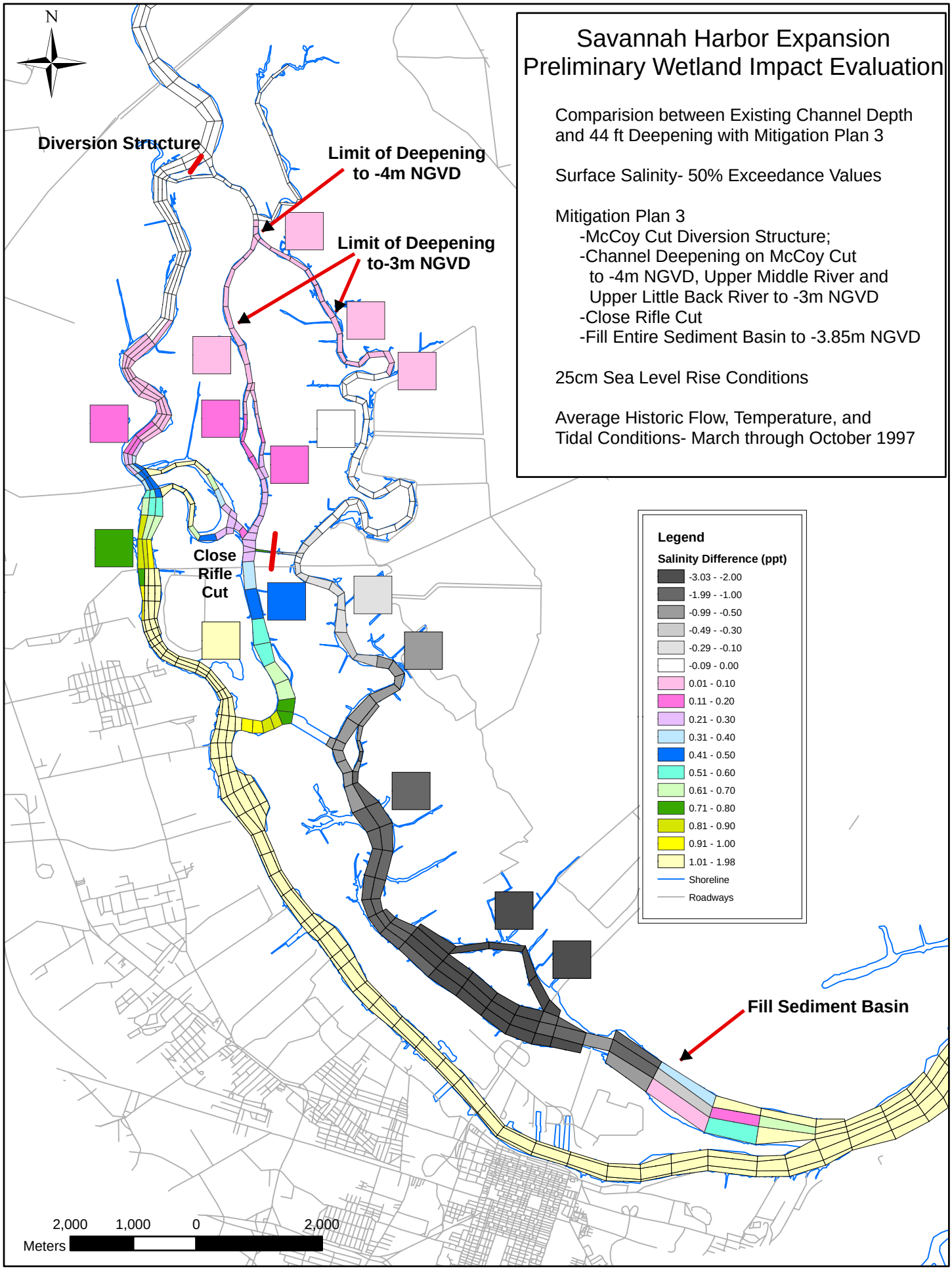
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

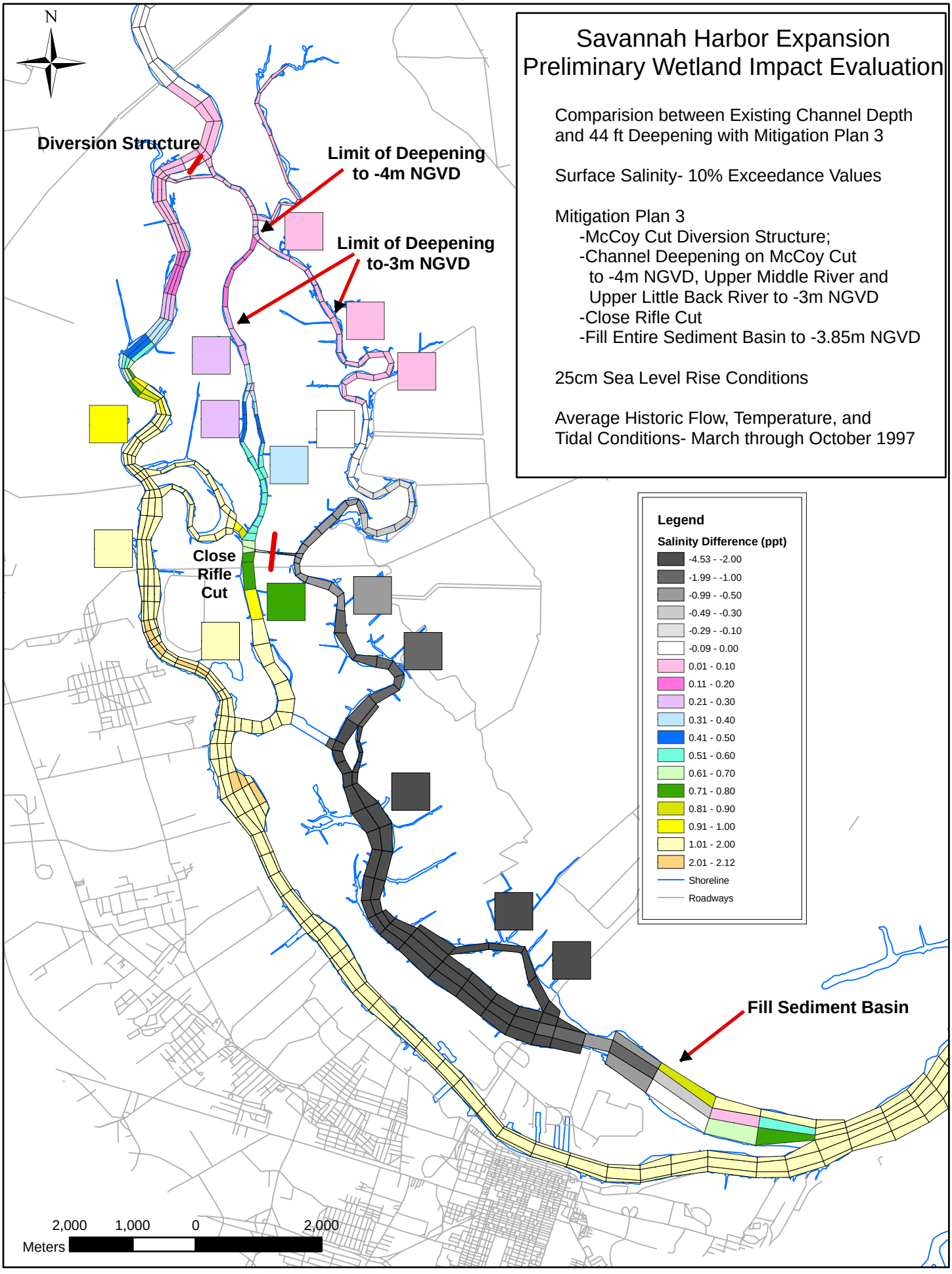
Legend

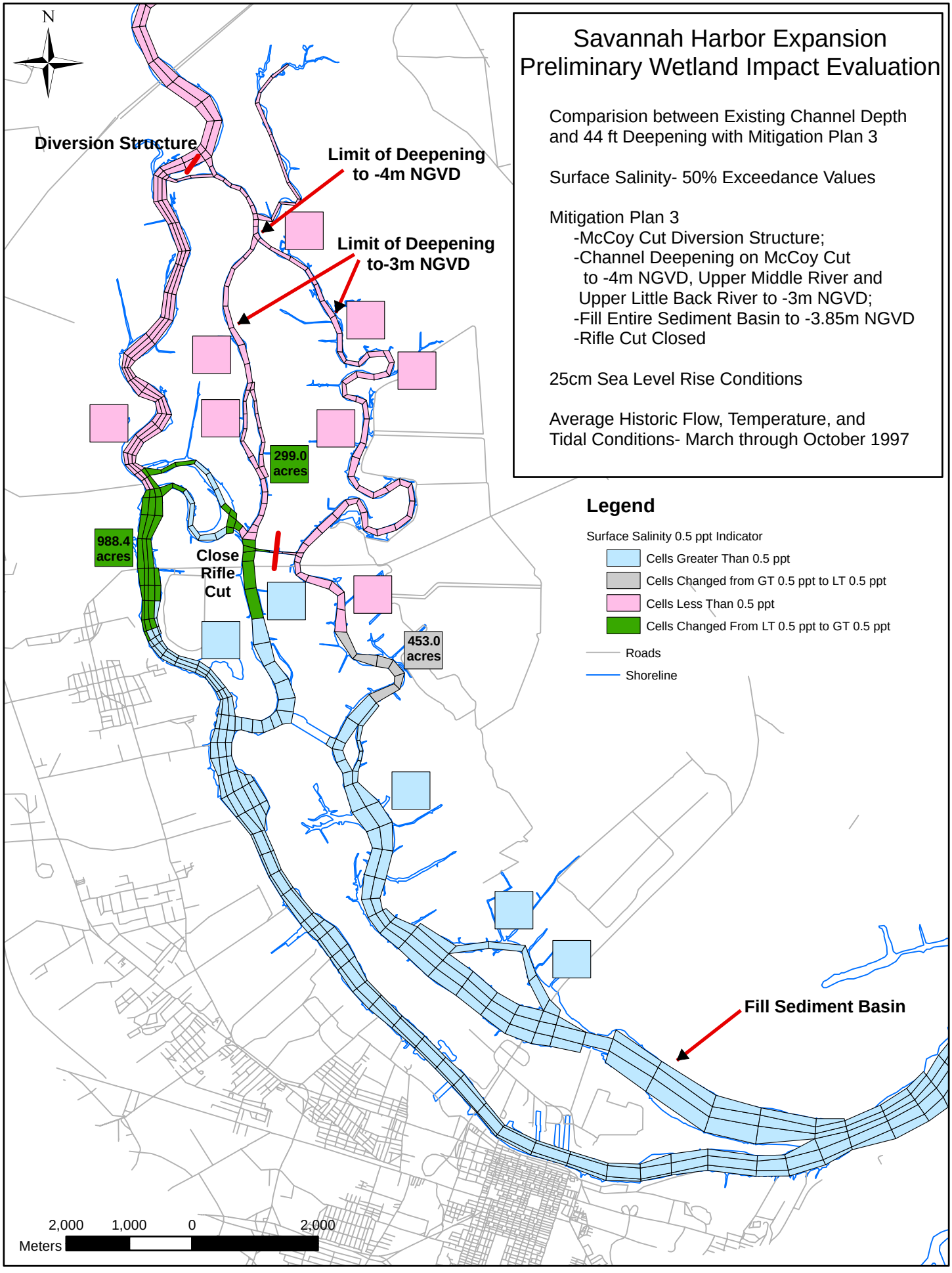
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #2A


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.03 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.98
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.53 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.12
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

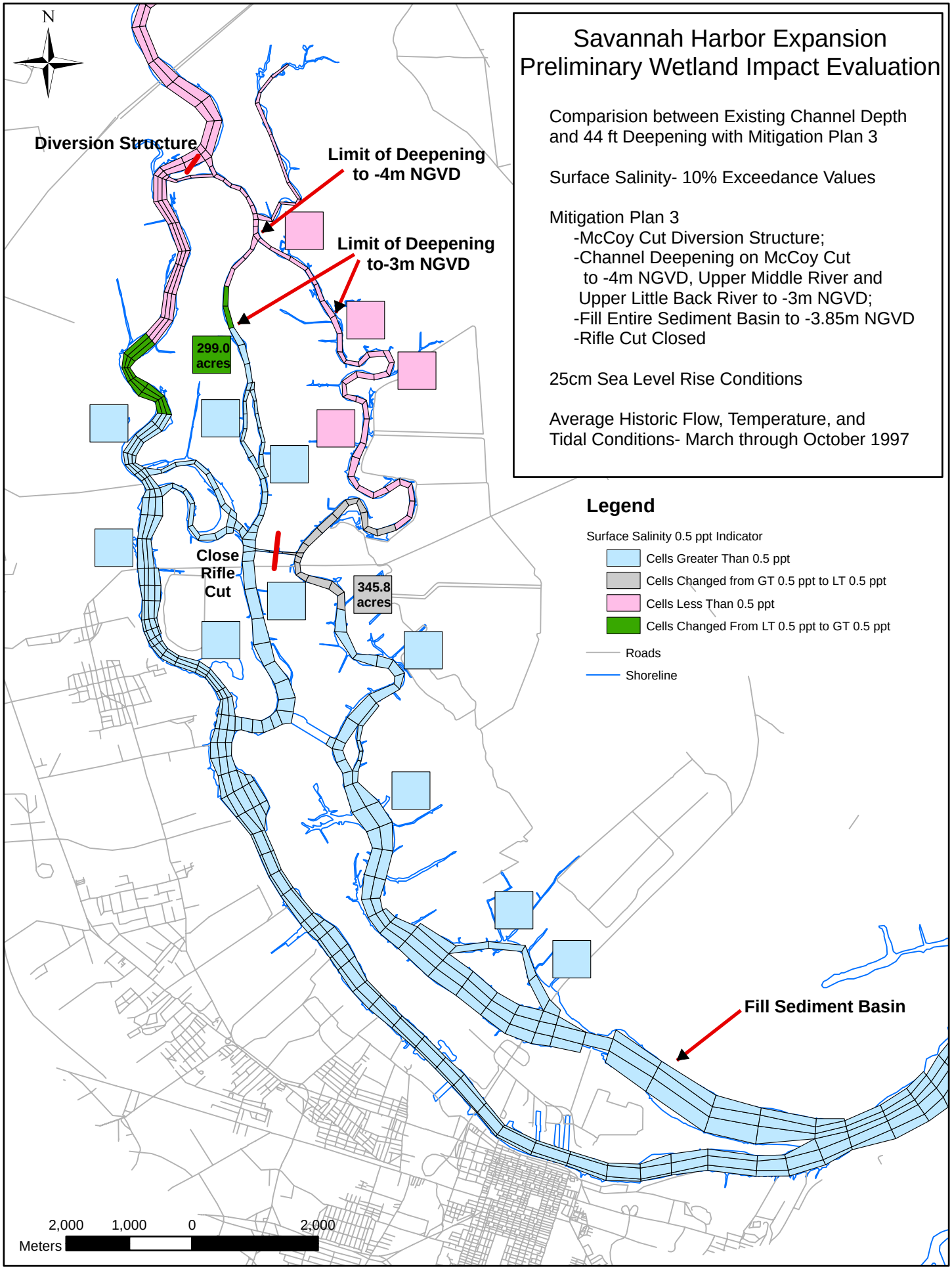
25cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

Surface Salinity- 10% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

25cm Sea Level Rise Conditions

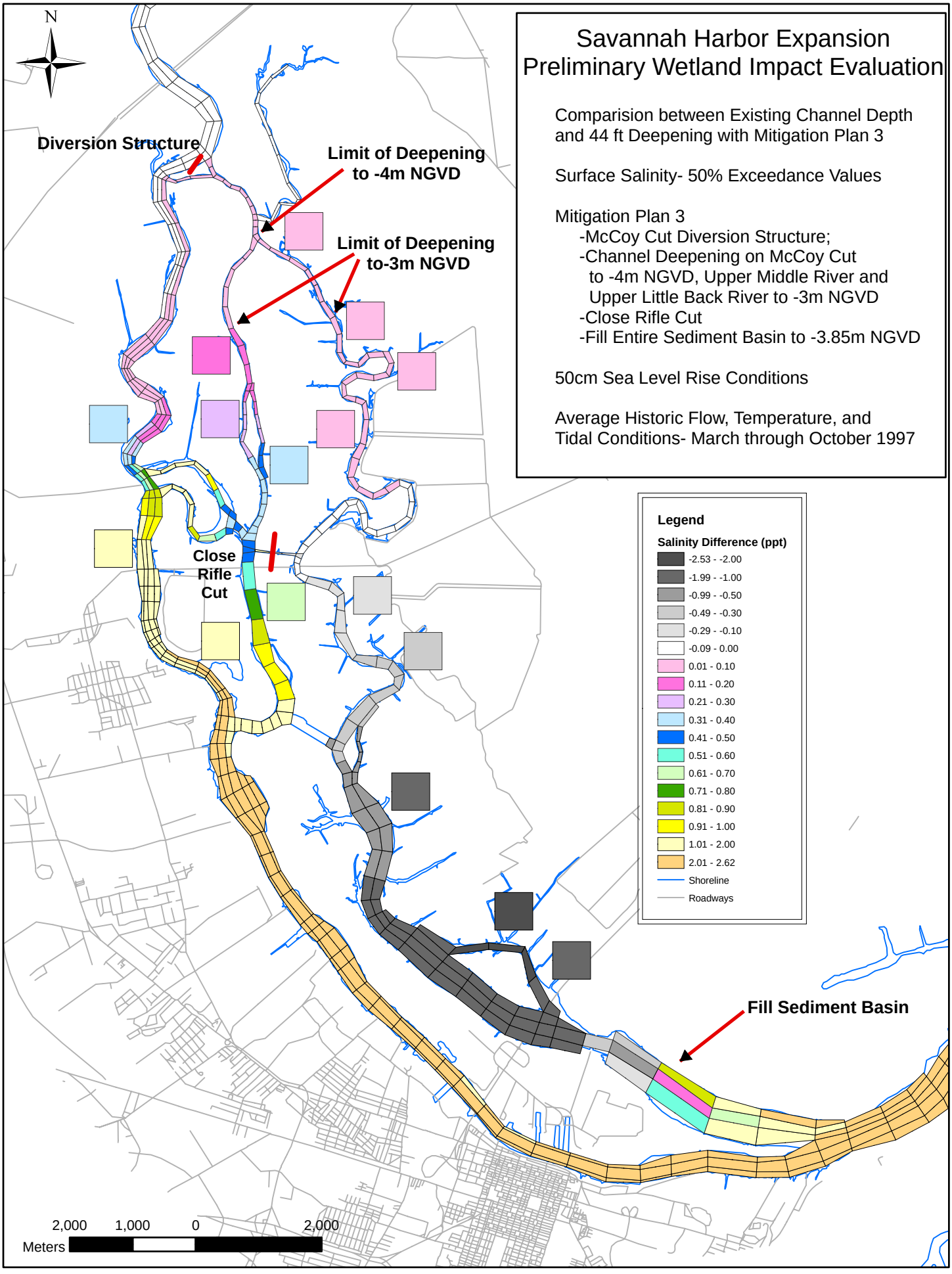
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

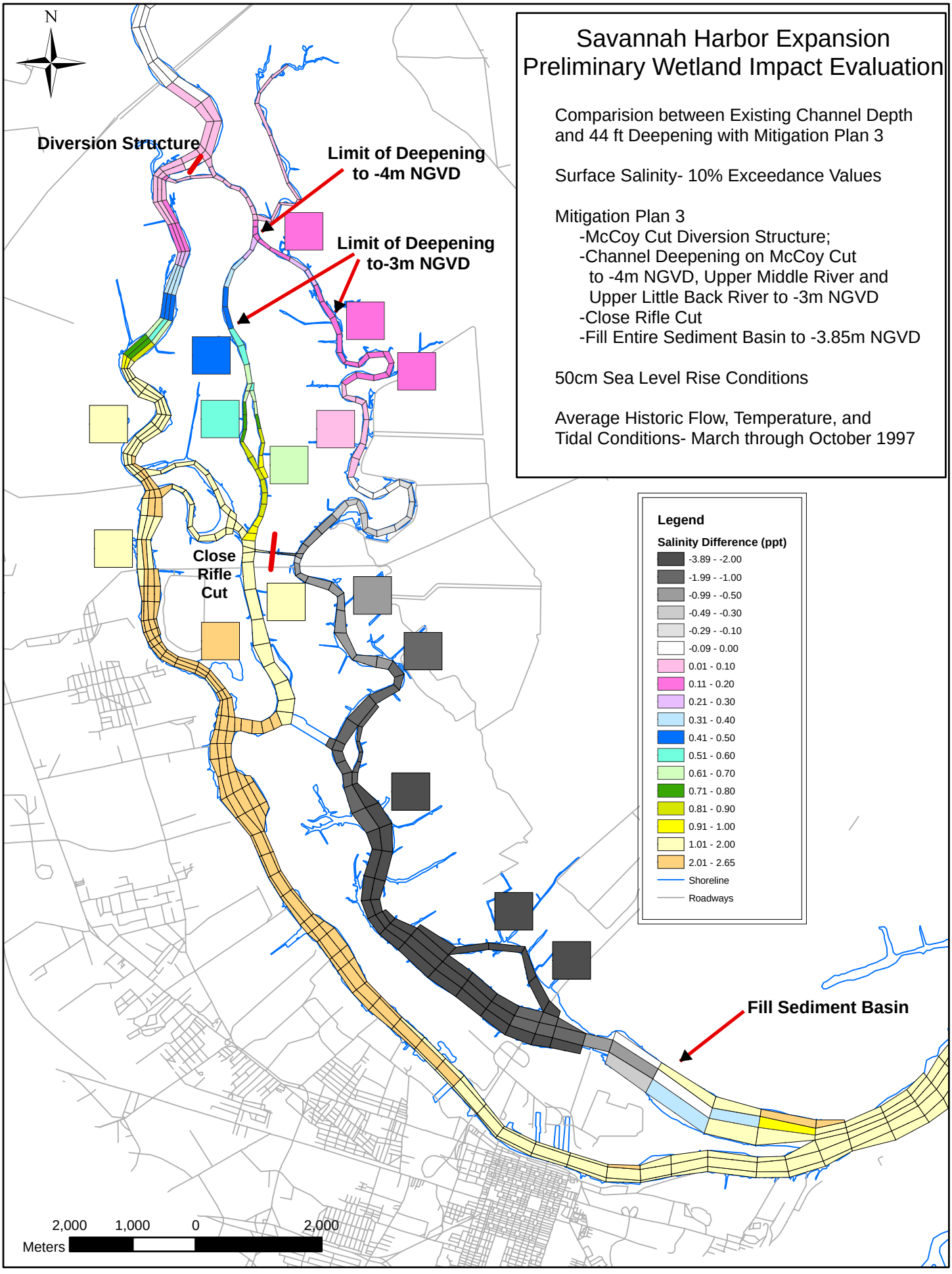
Legend

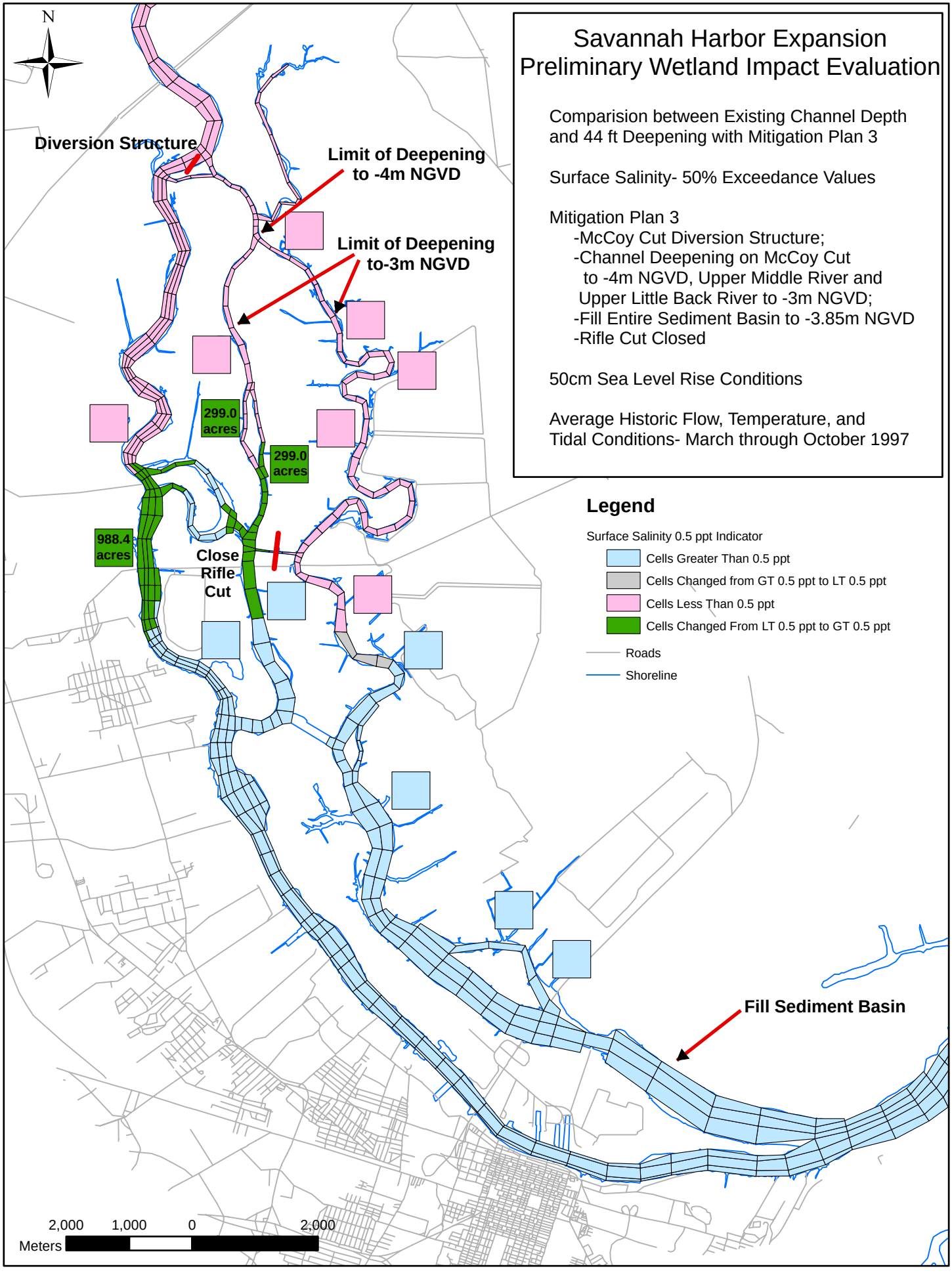
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #2B


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-2.53 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.62
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.89 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.65
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

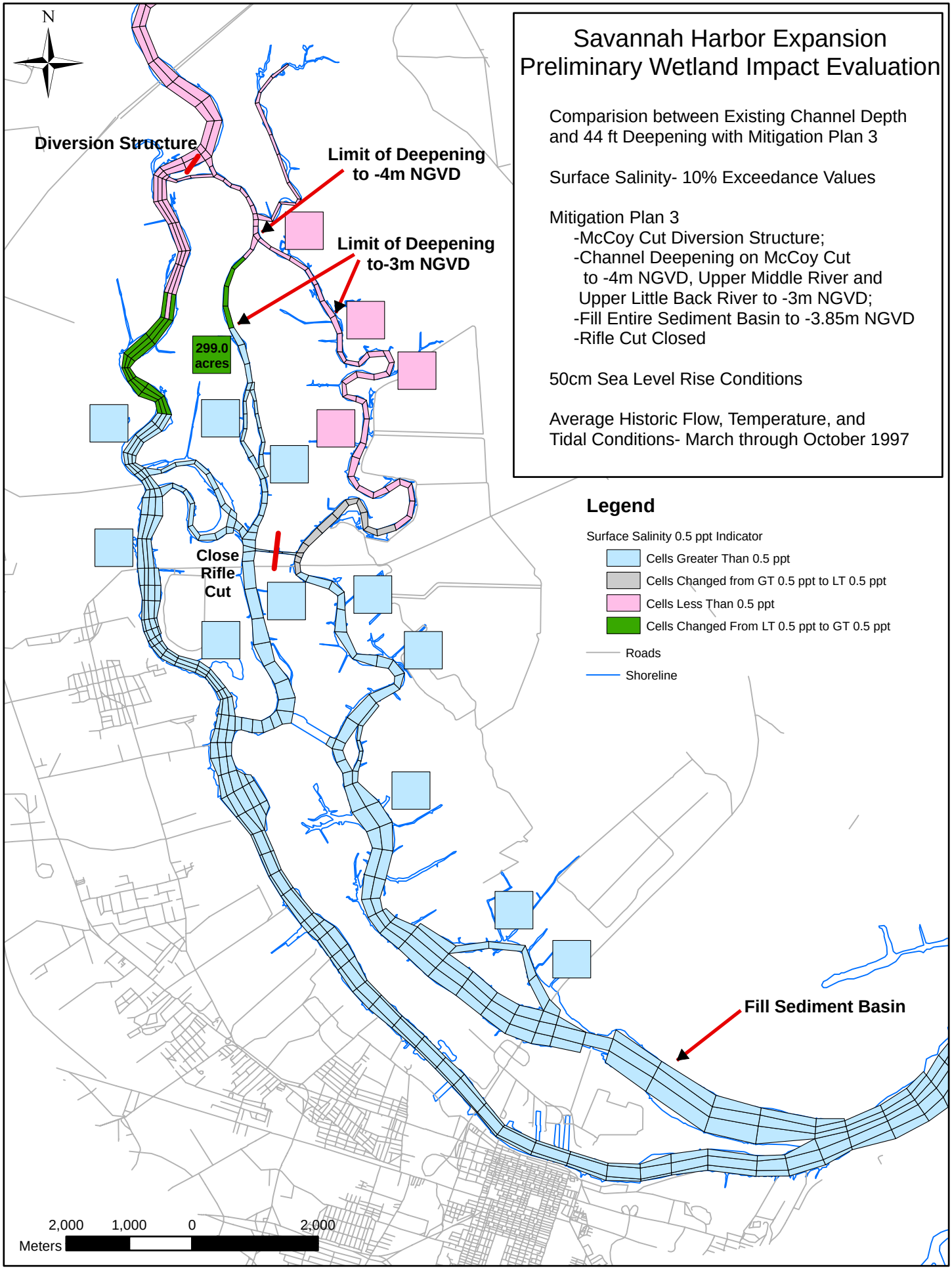
50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

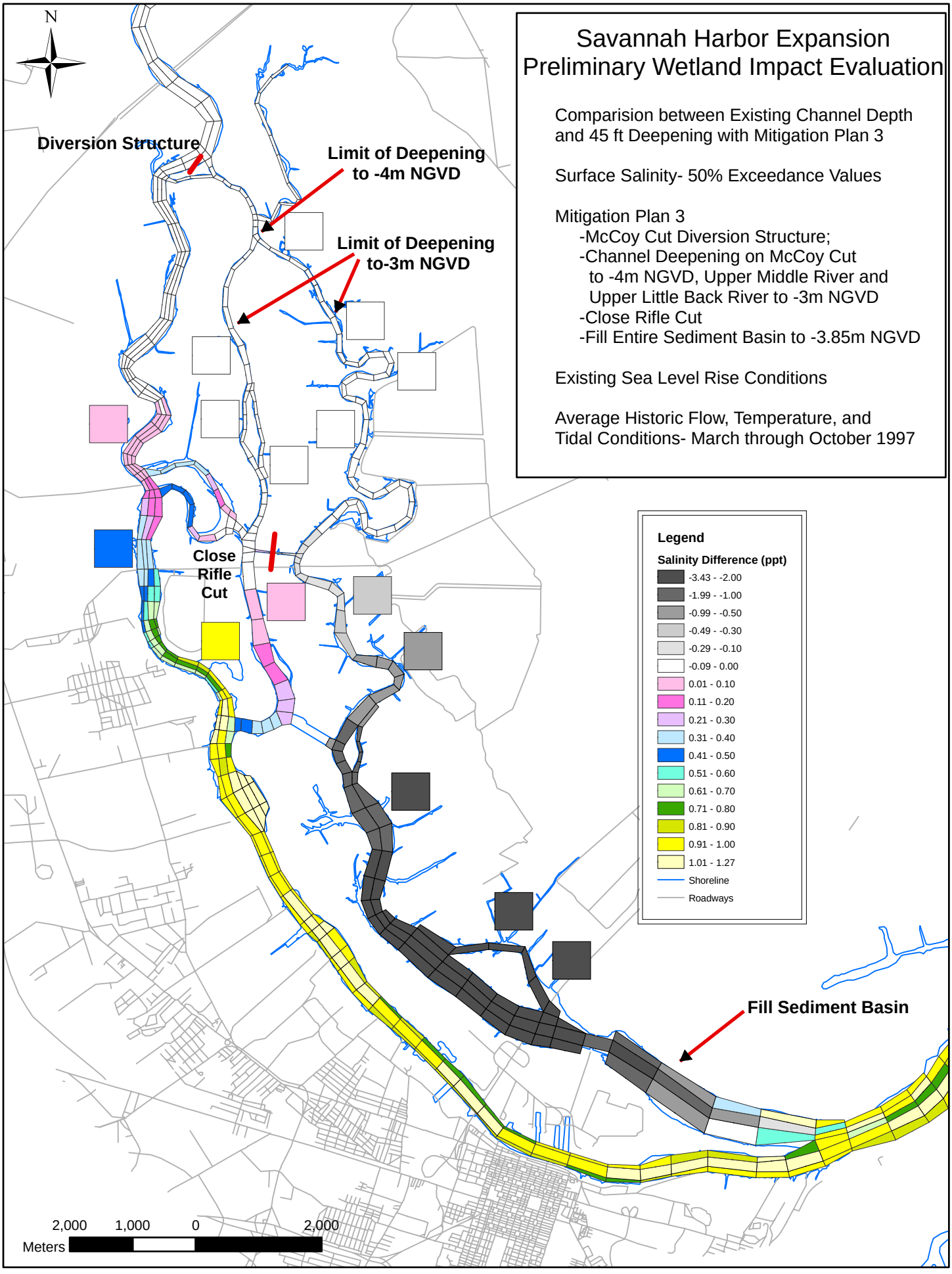
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

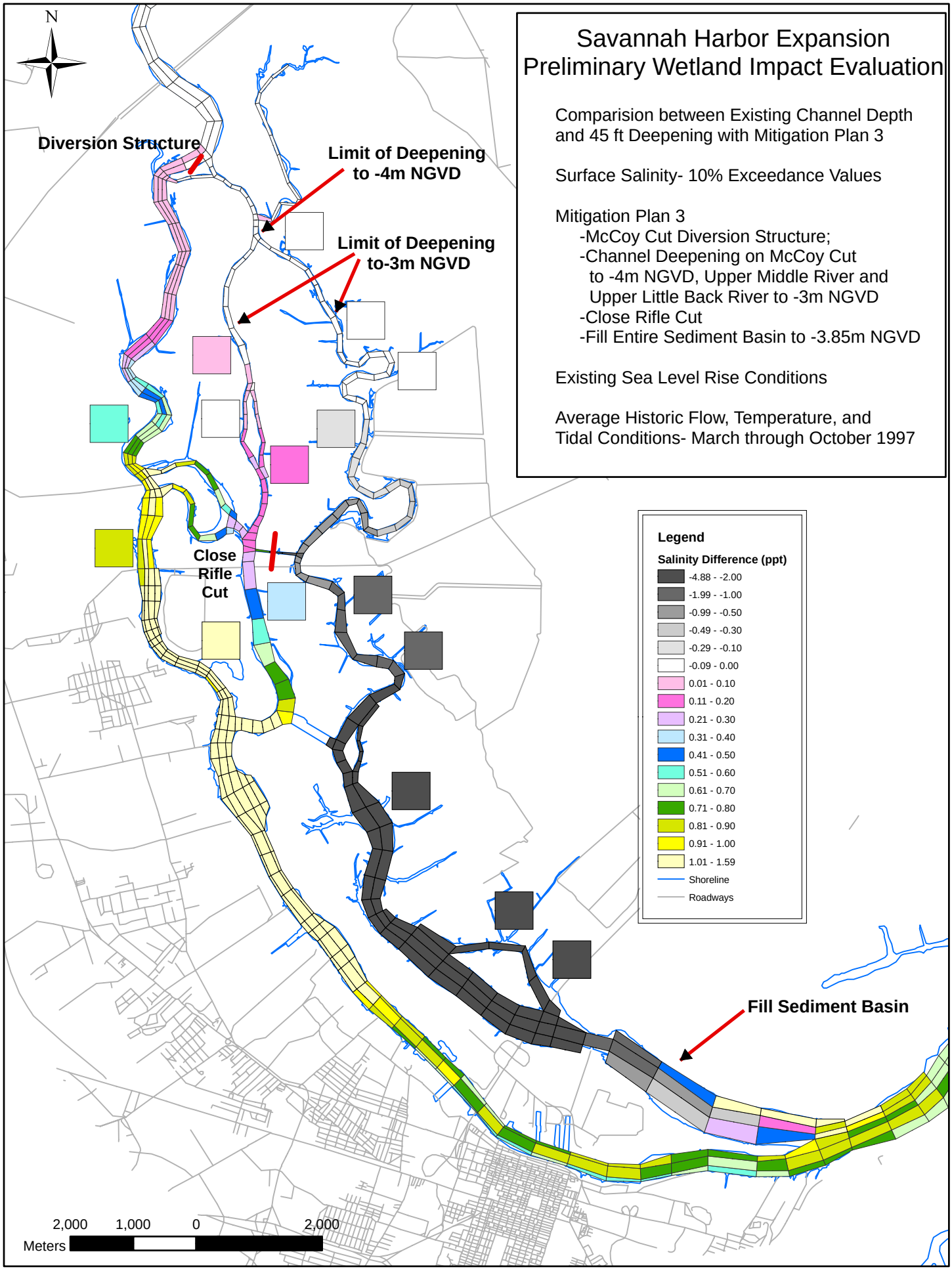
January 2007

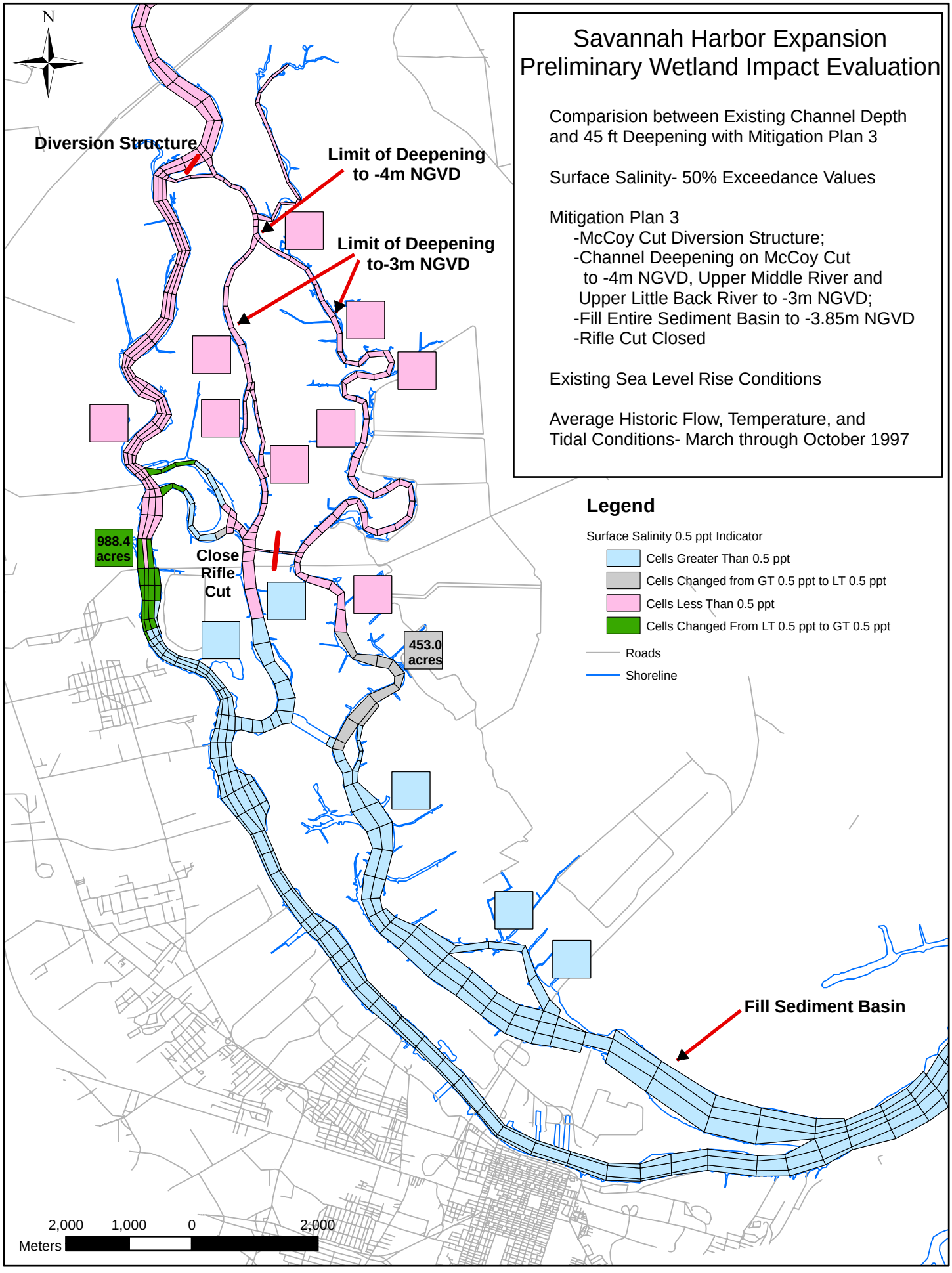

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

45-ft Deepening

Basic Evaluation


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.43 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.27
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.88 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.59
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

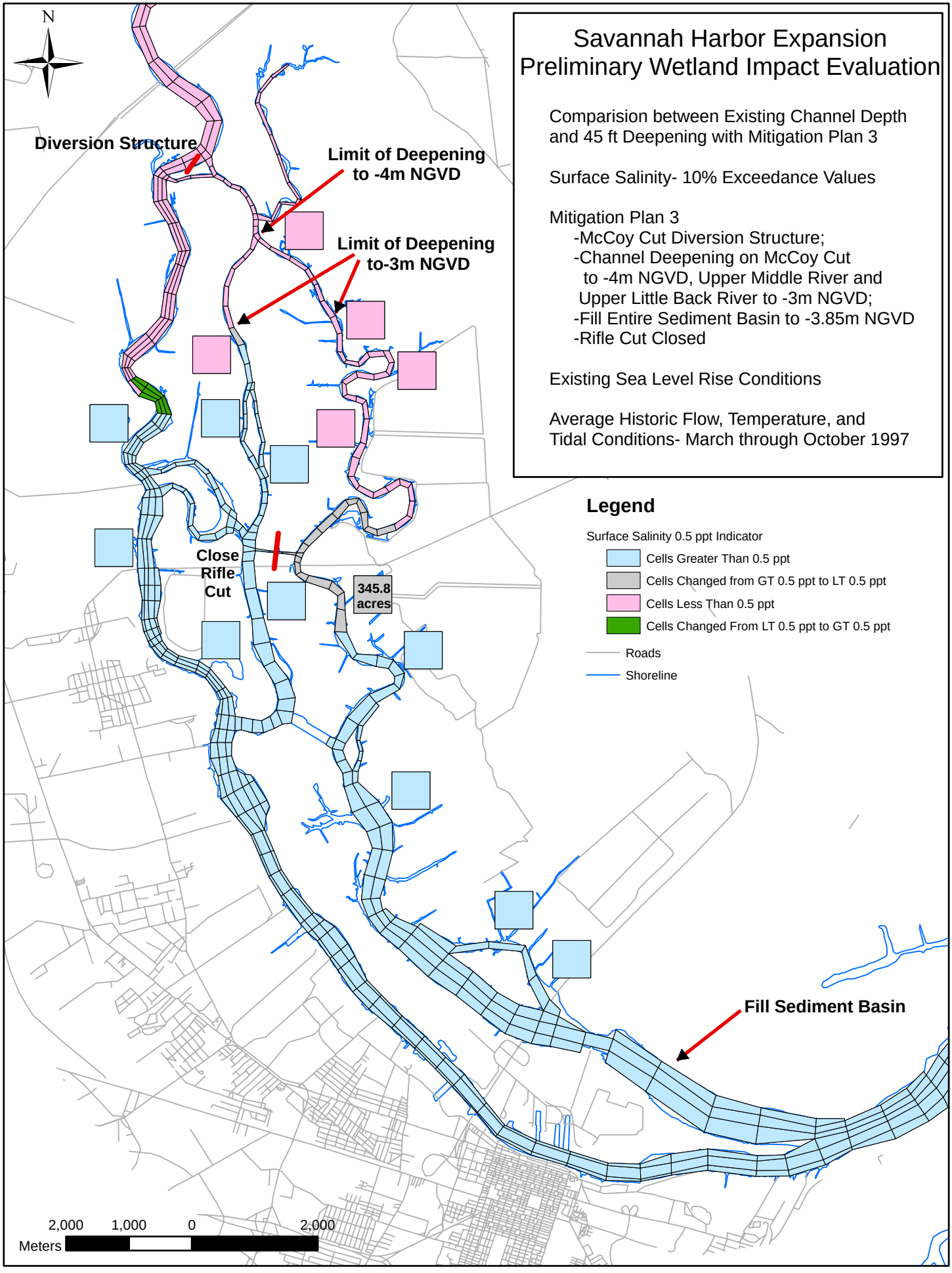
Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3

Surface Salinity- 10% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

Existing Sea Level Rise Conditions

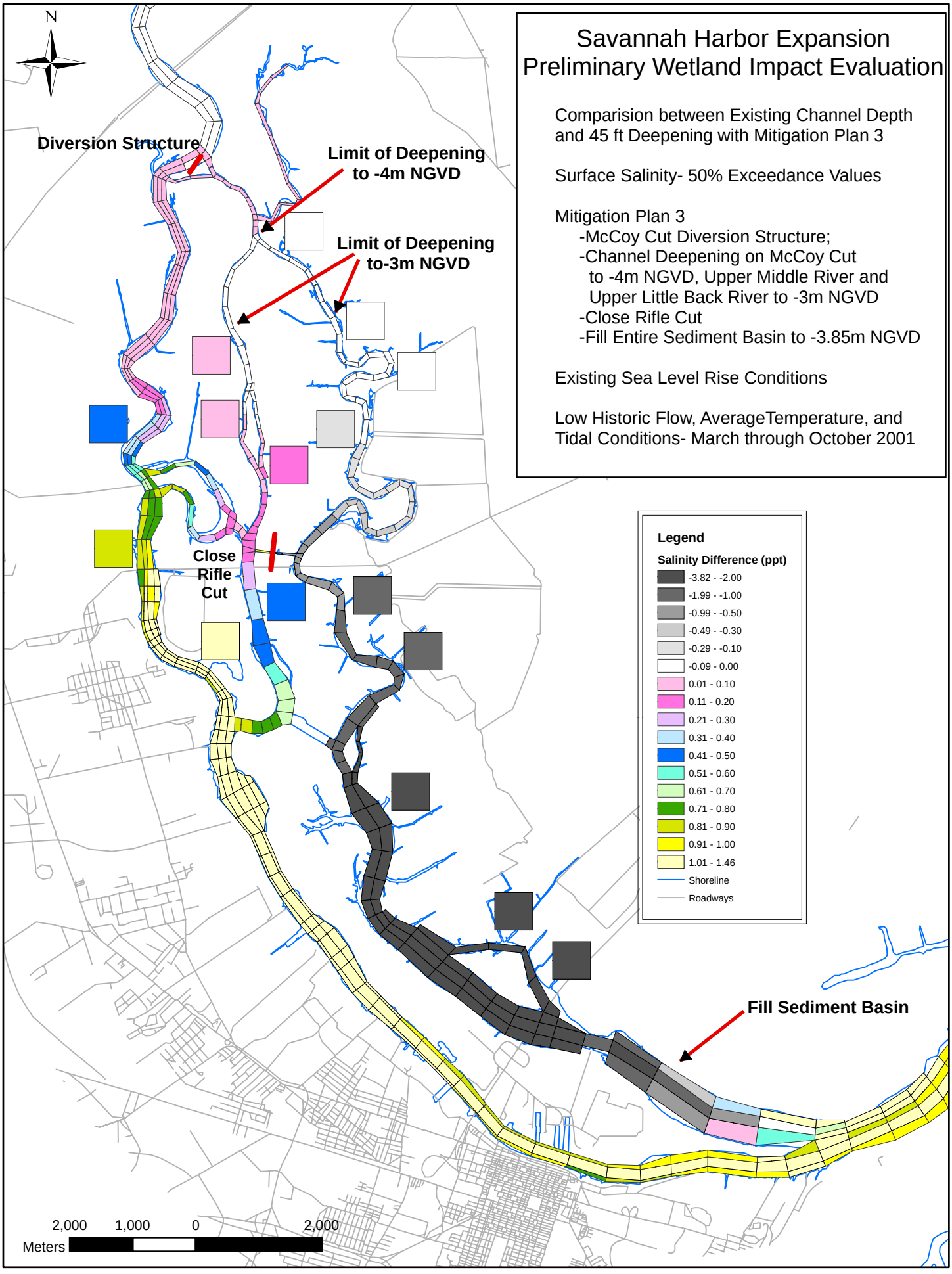
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

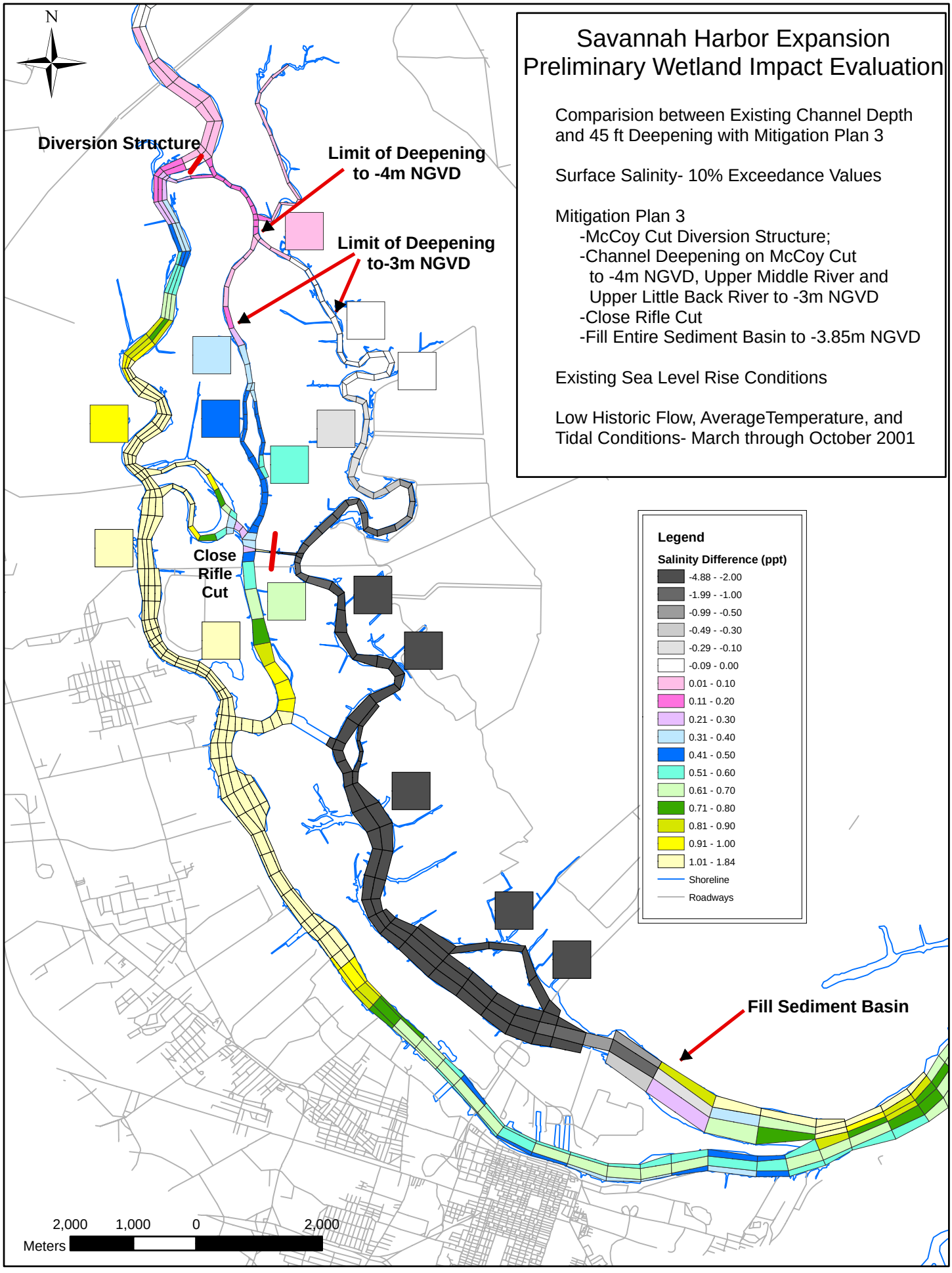
Legend

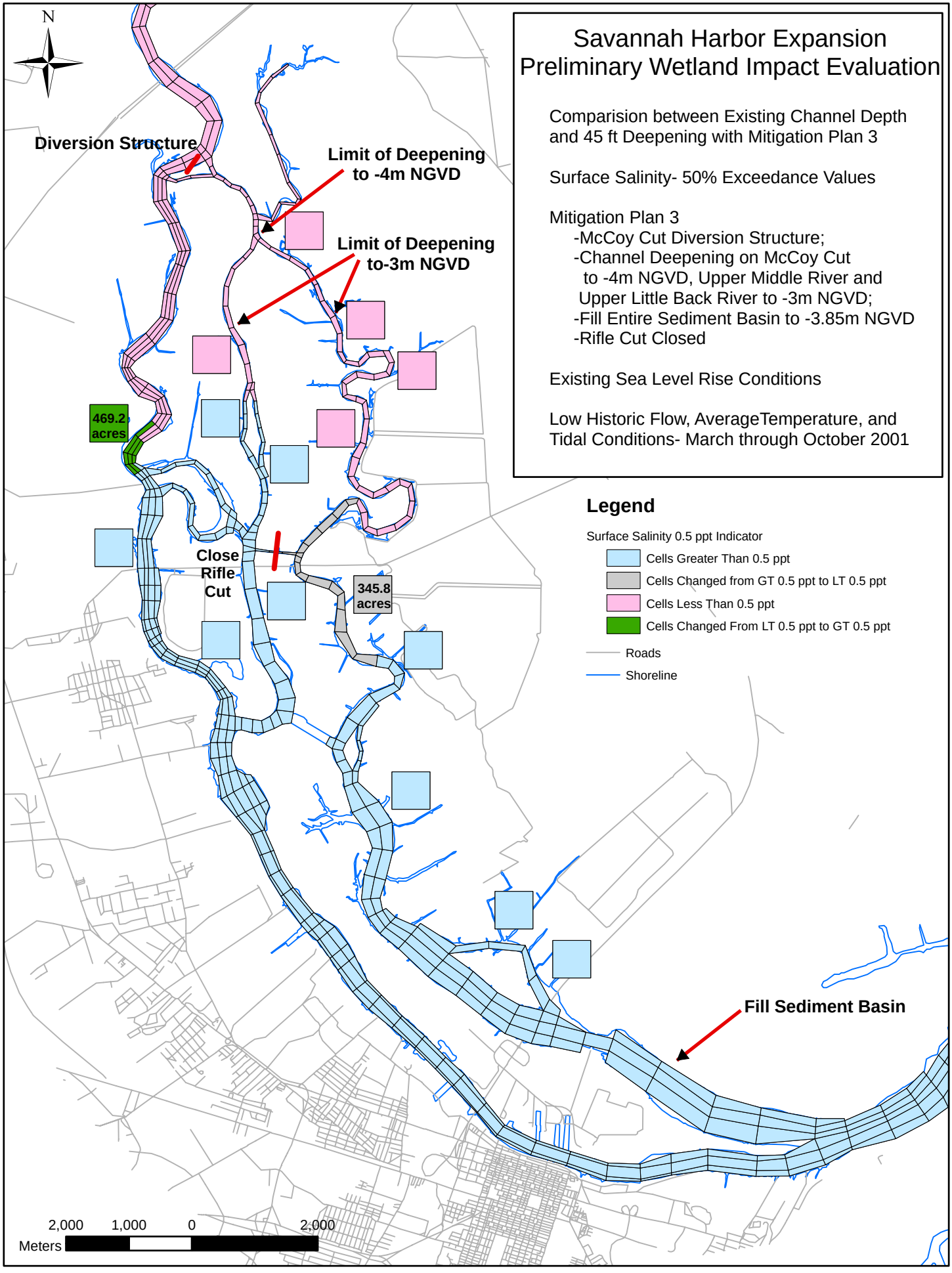
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

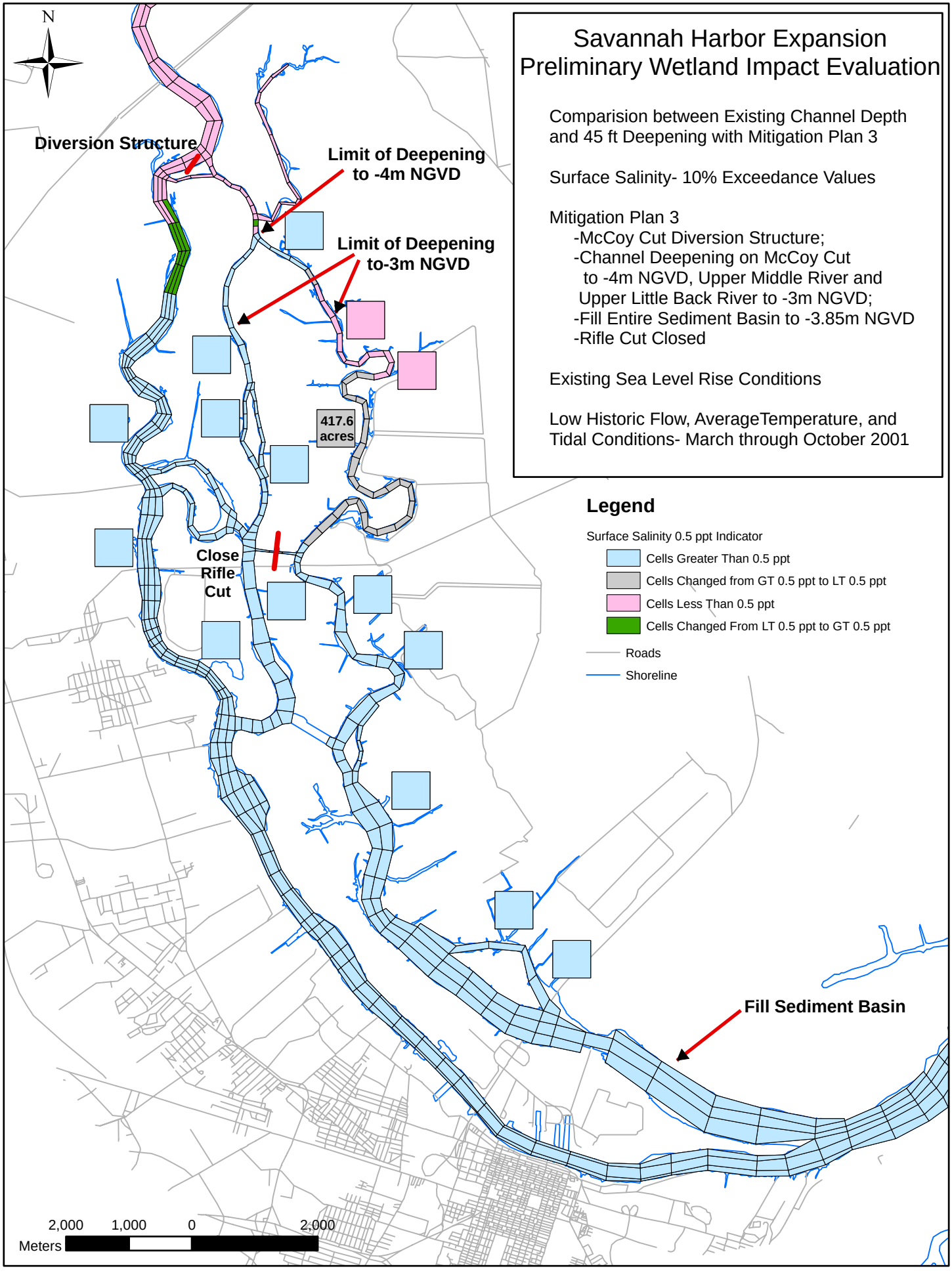
January 2007

Sensitivity Analysis #1


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-3.82 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.46
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-4.88 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.84
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
Close Rifle Cut
345.8 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3

Surface Salinity- 10% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

Existing Sea Level Rise Conditions

Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

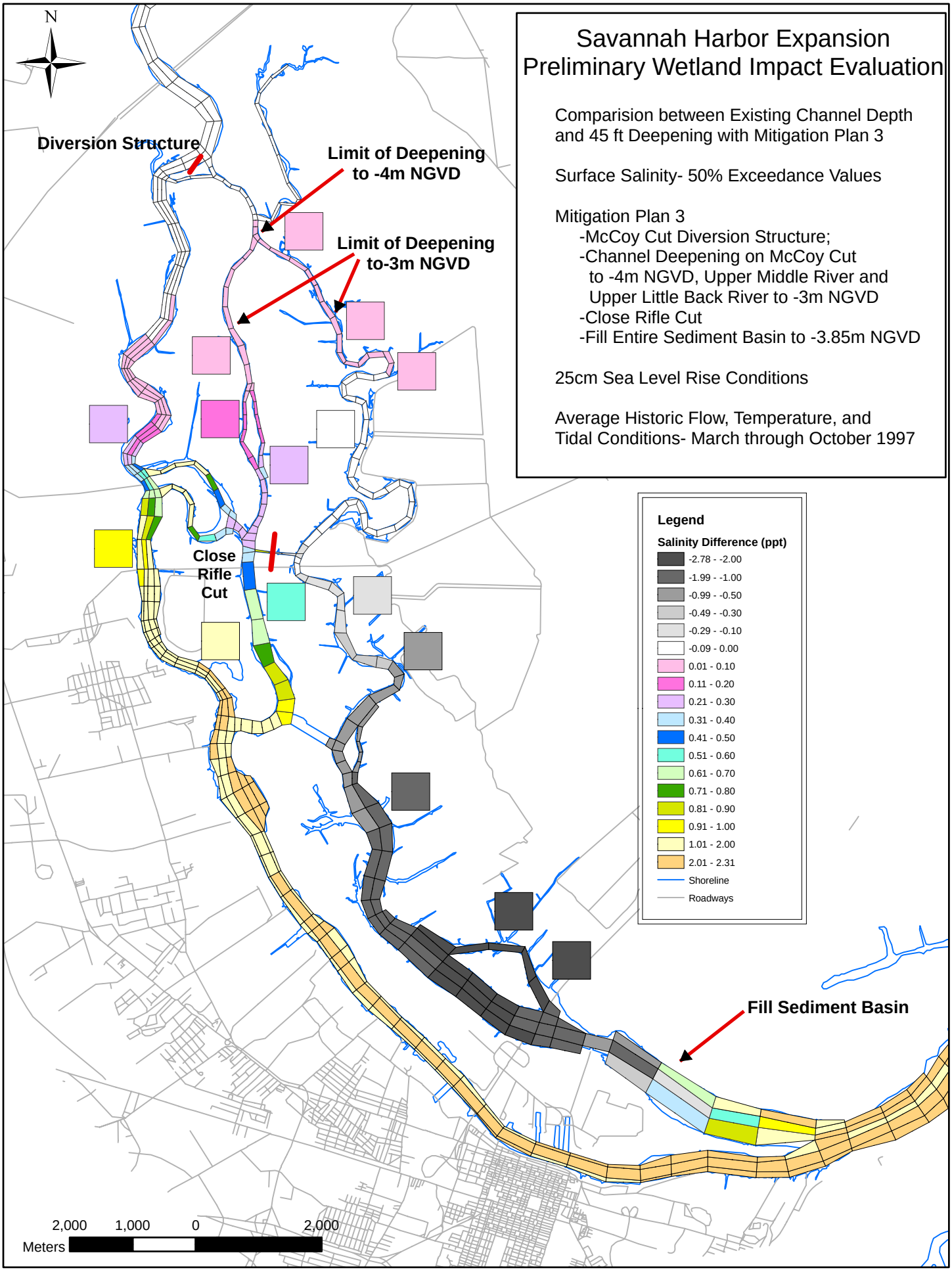
Legend

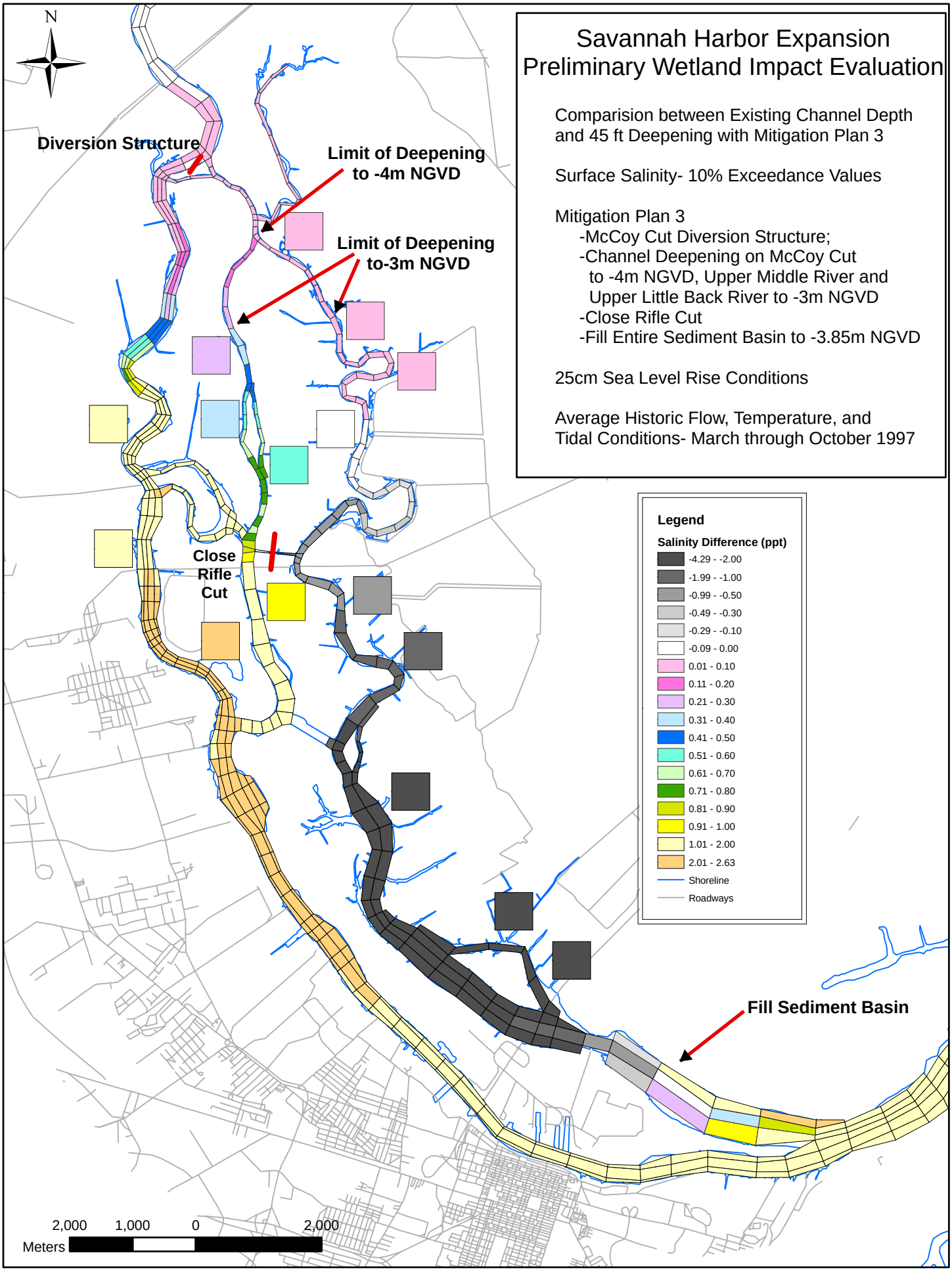
Surface Salinity 0.5 ppt Indicator

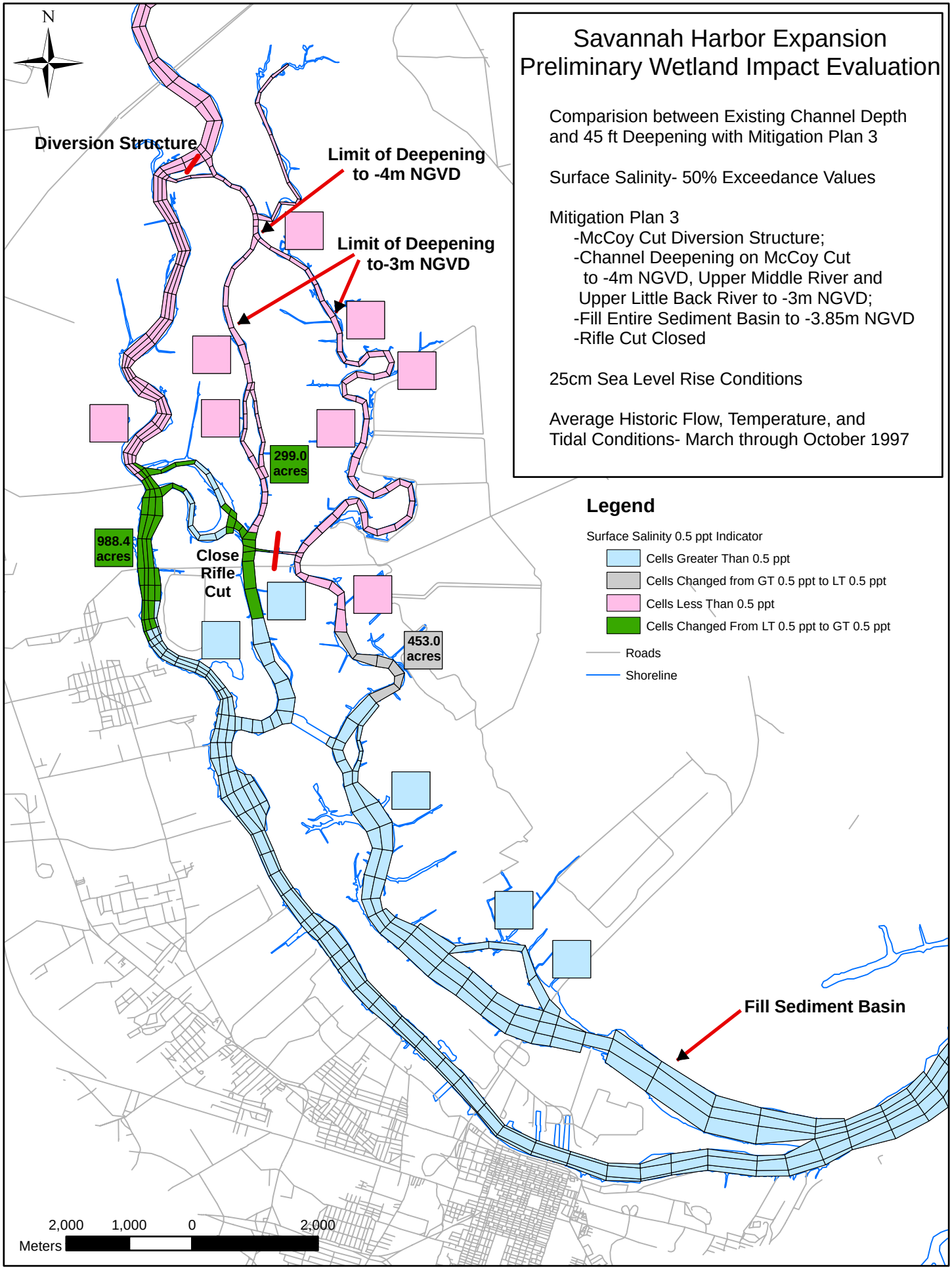
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

Sensitivity Analysis #2A


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-2.78 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.31
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.29 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.63
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

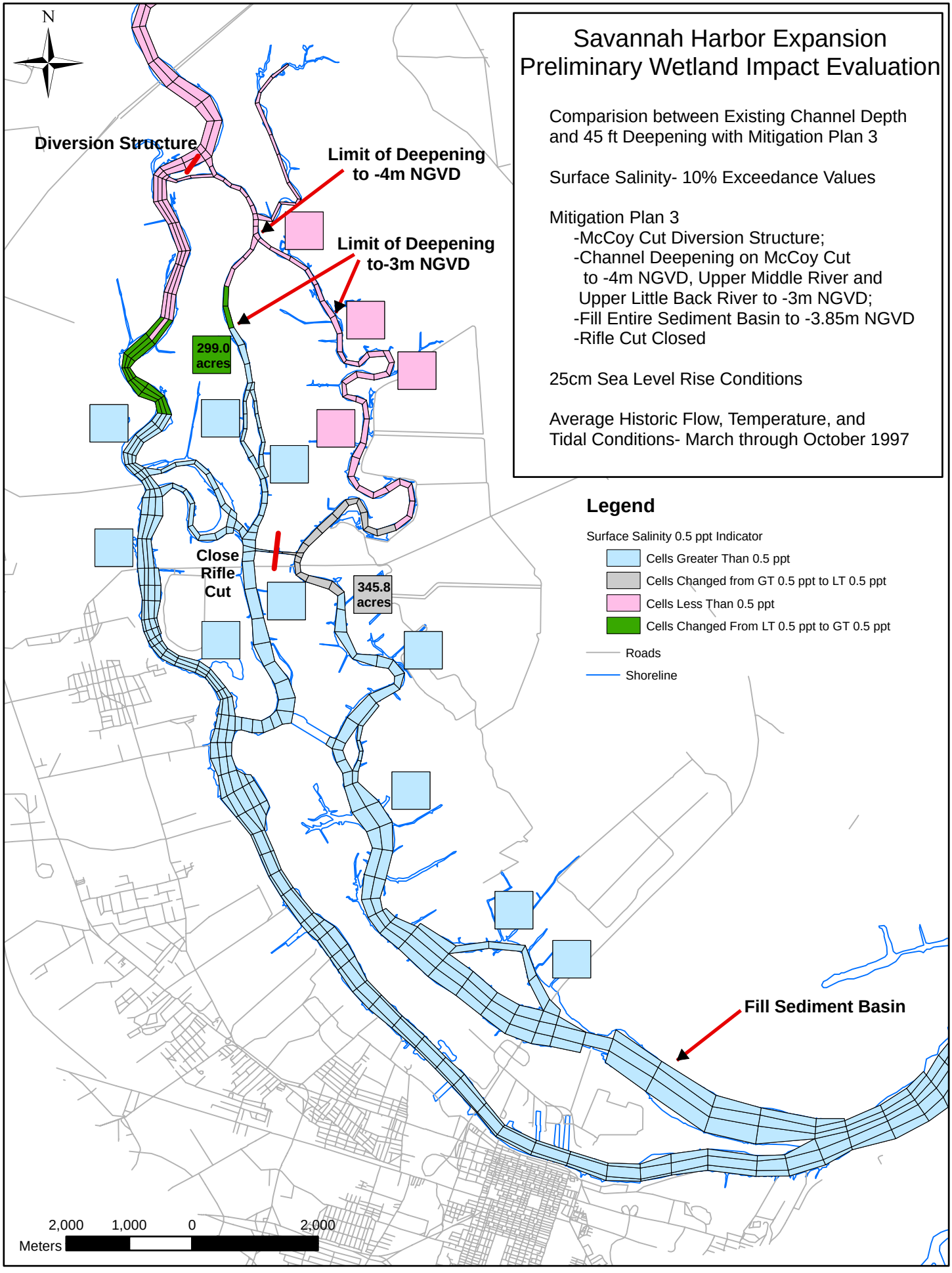
25cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

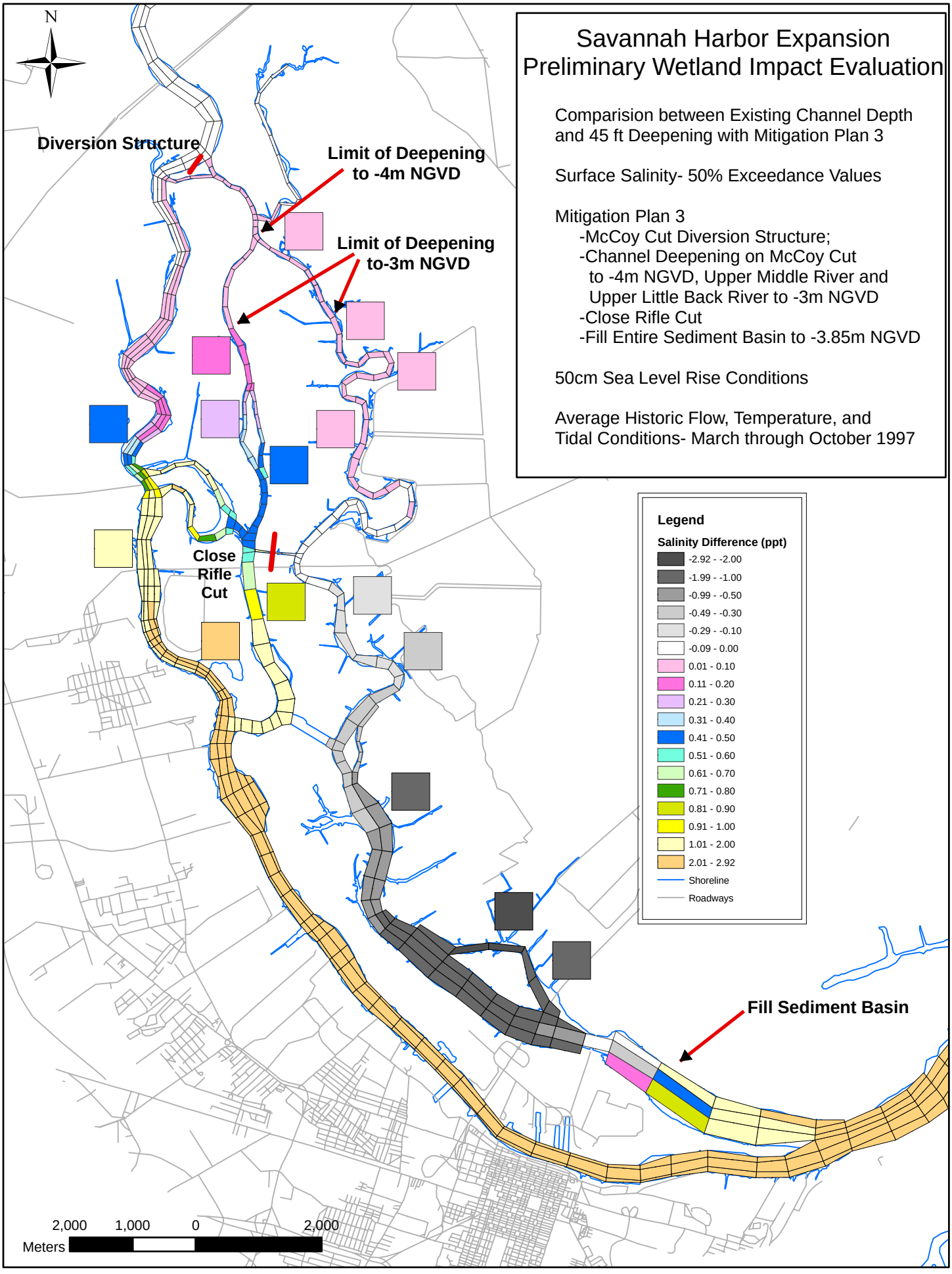
Legend

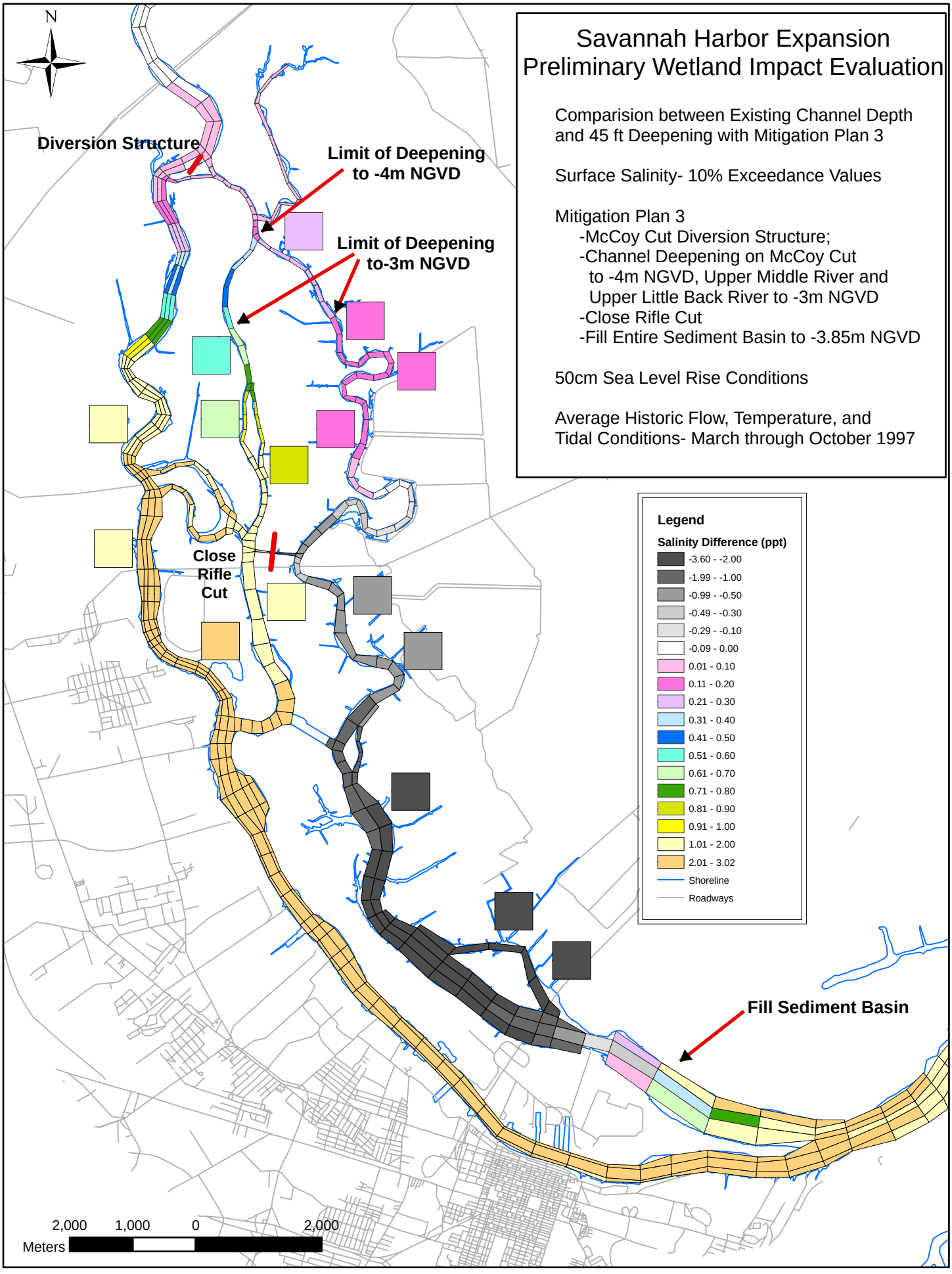
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

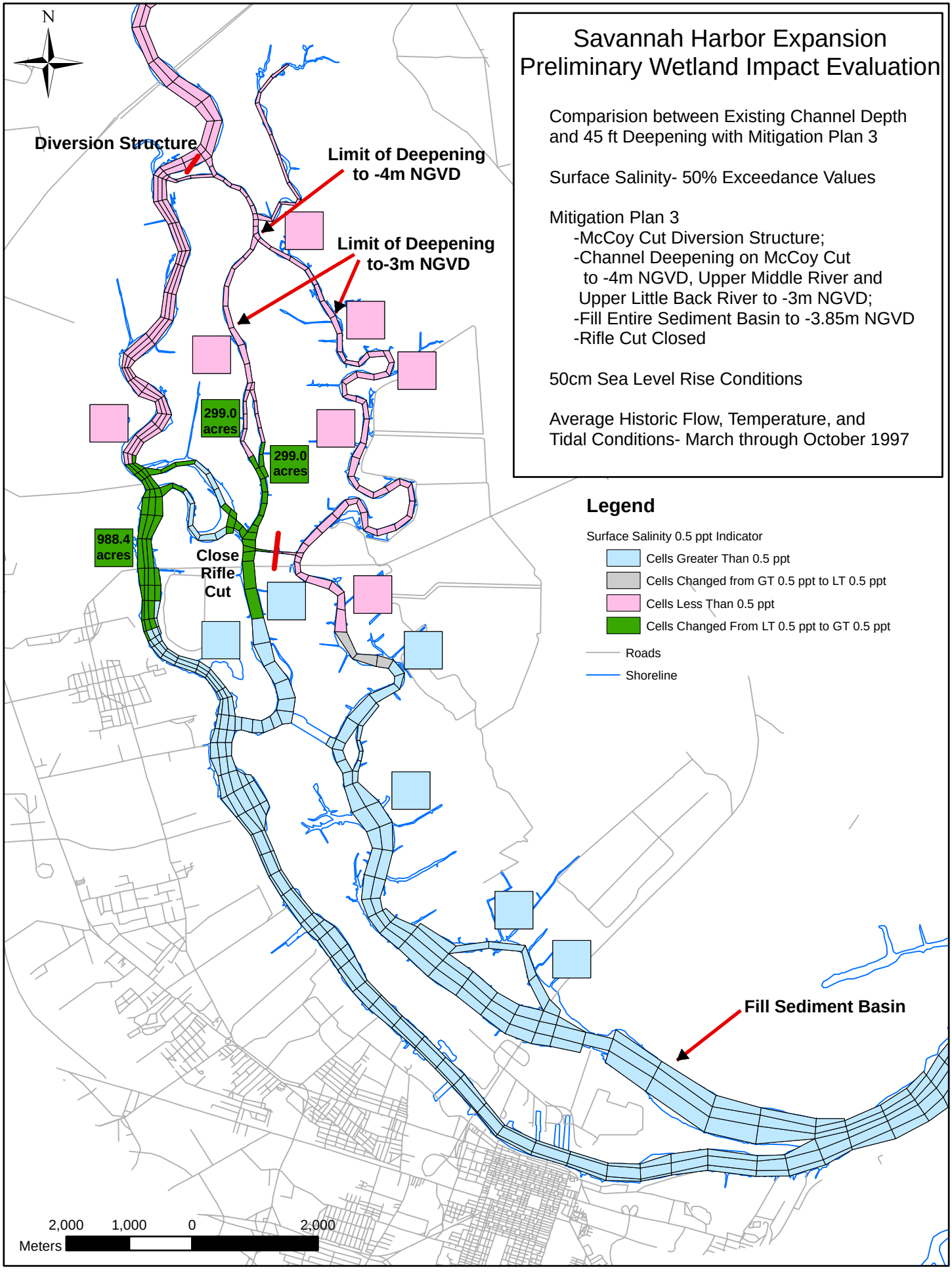
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Close Rifle Cut
345.8 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2B


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-2.92 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.92
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.60 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.02
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

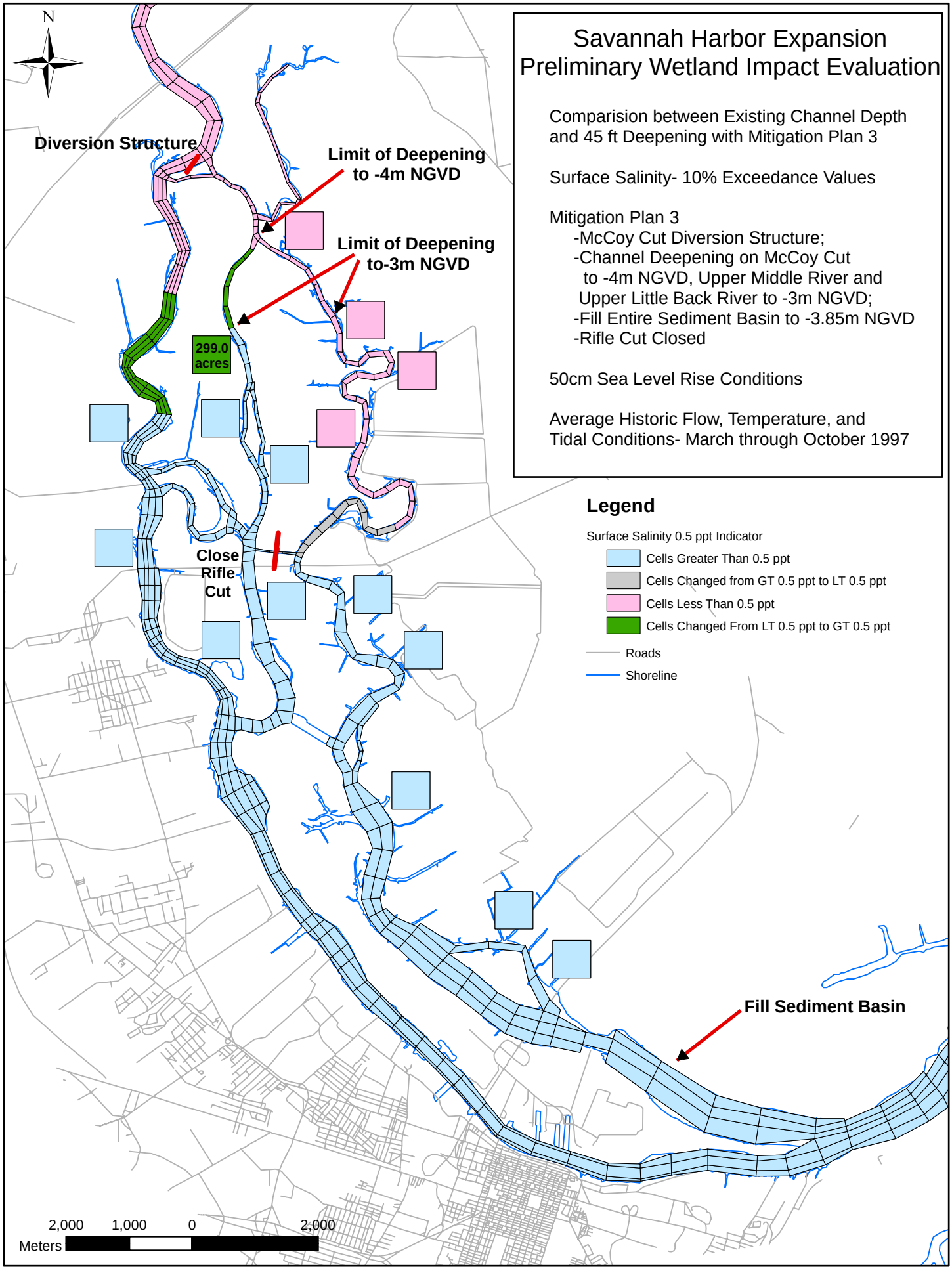
50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 45 ft Deepening with Mitigation Plan 3

Surface Salinity- 10% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

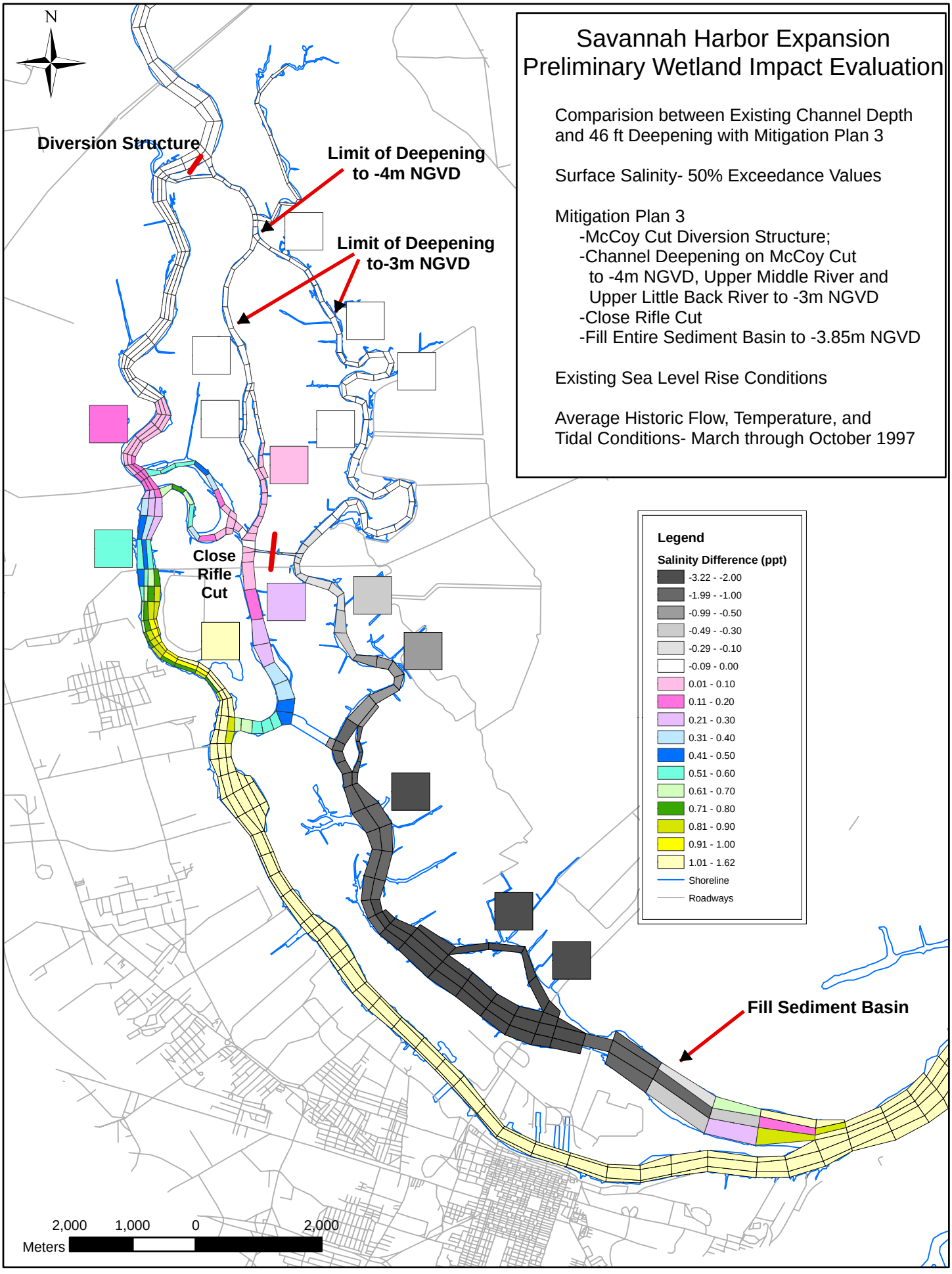
Legend

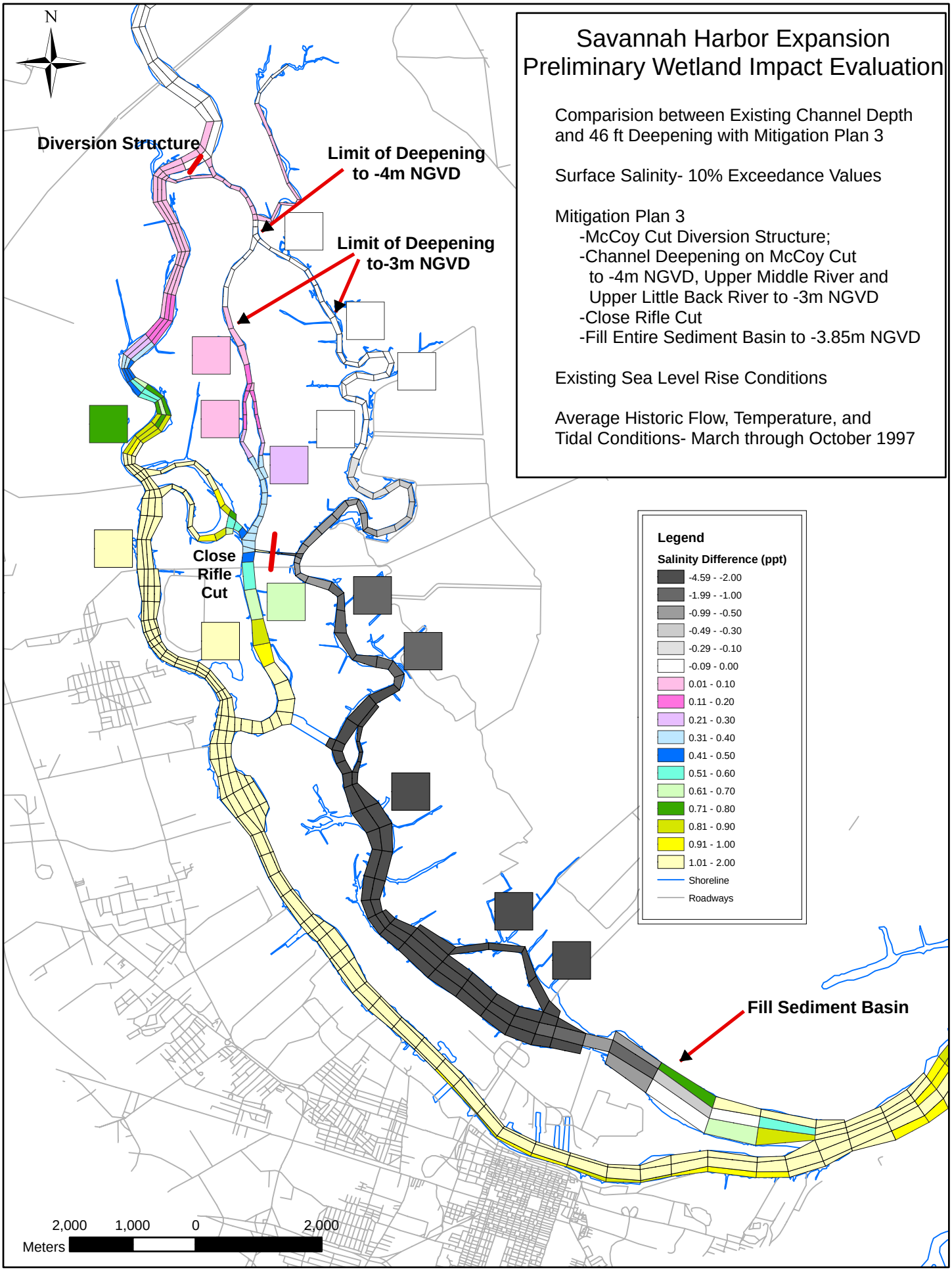
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

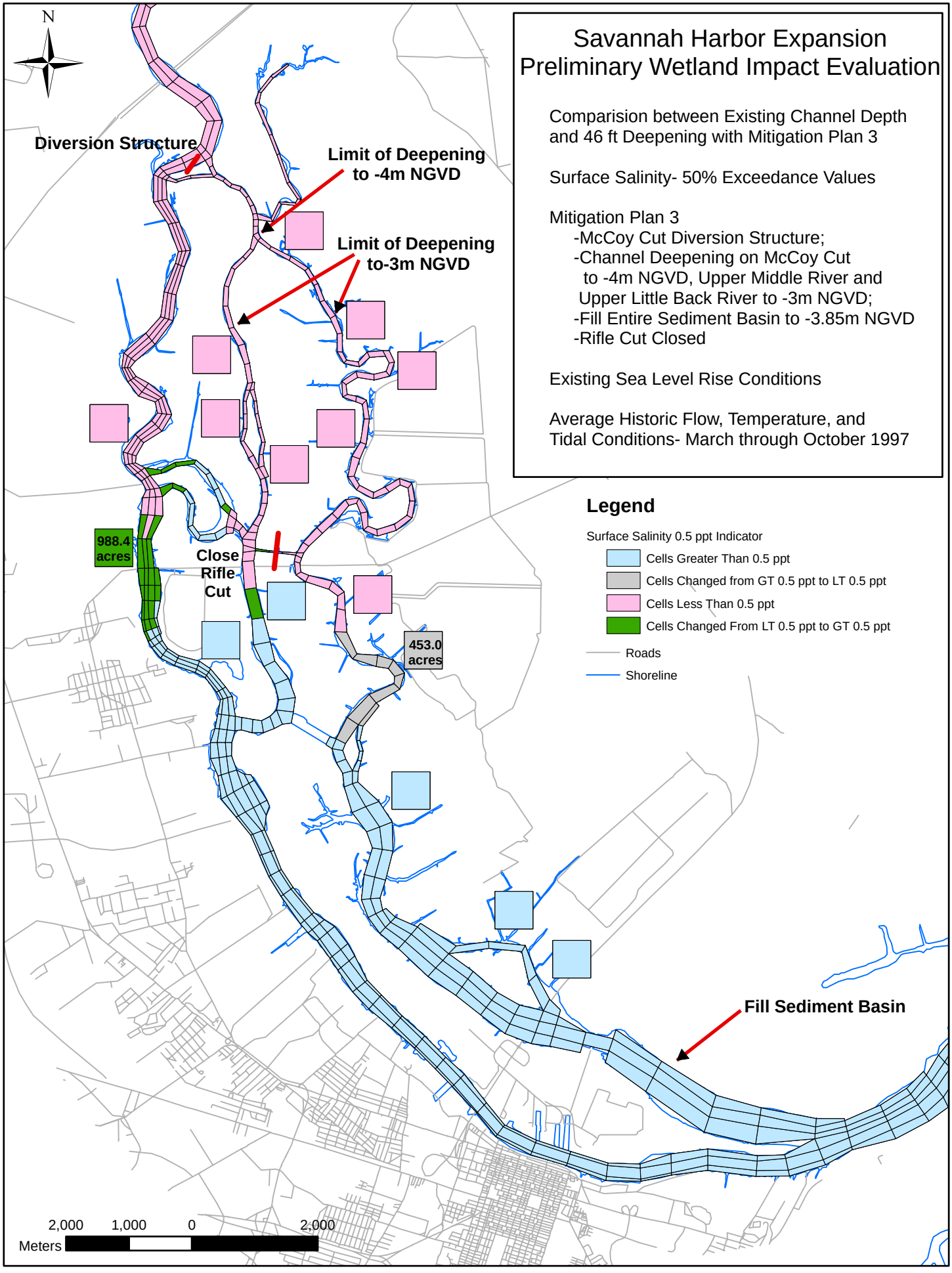
January 2007

46-ft Deepening

Basic Evaluation


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.22 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.62
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.59 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

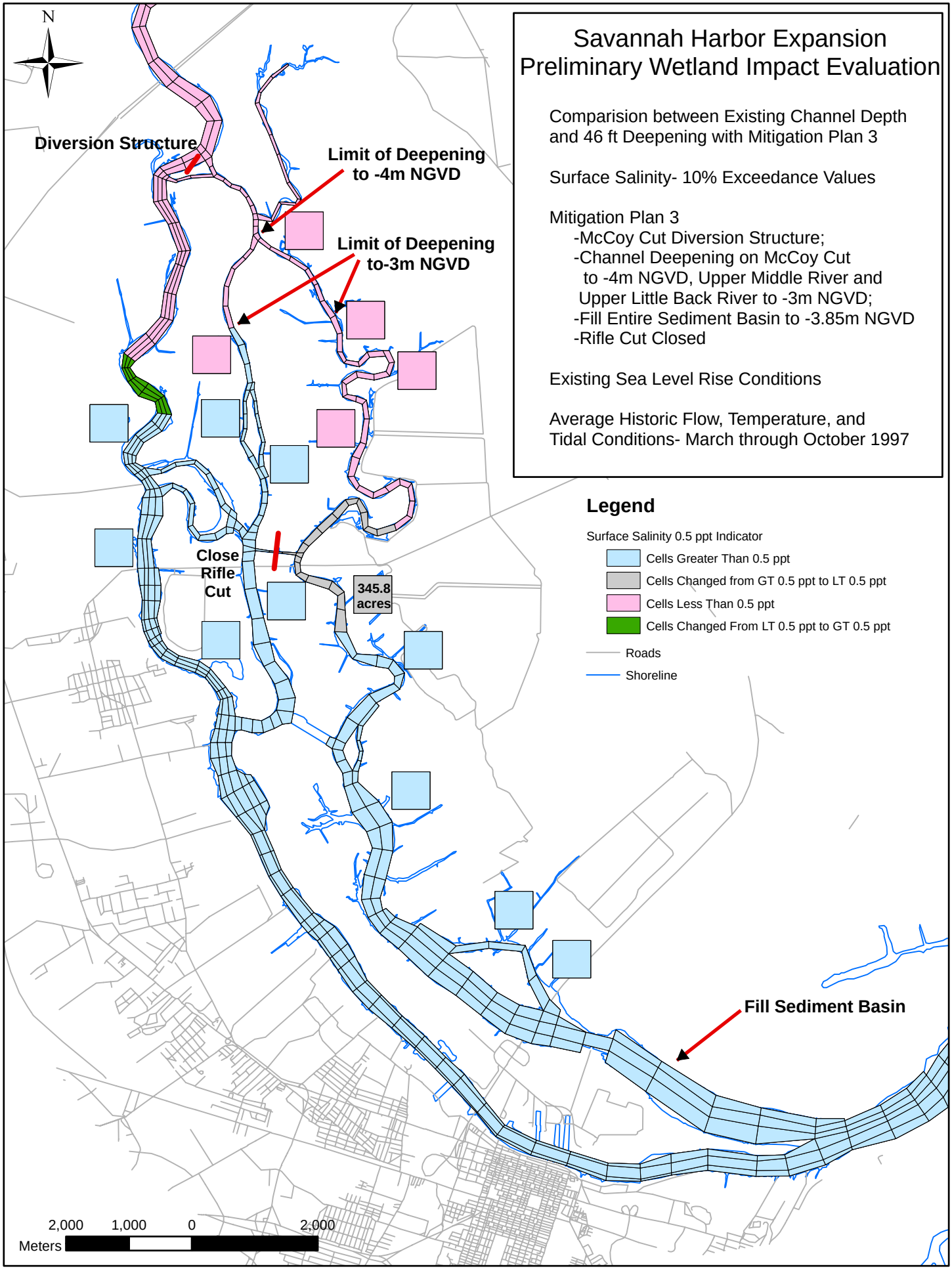
Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

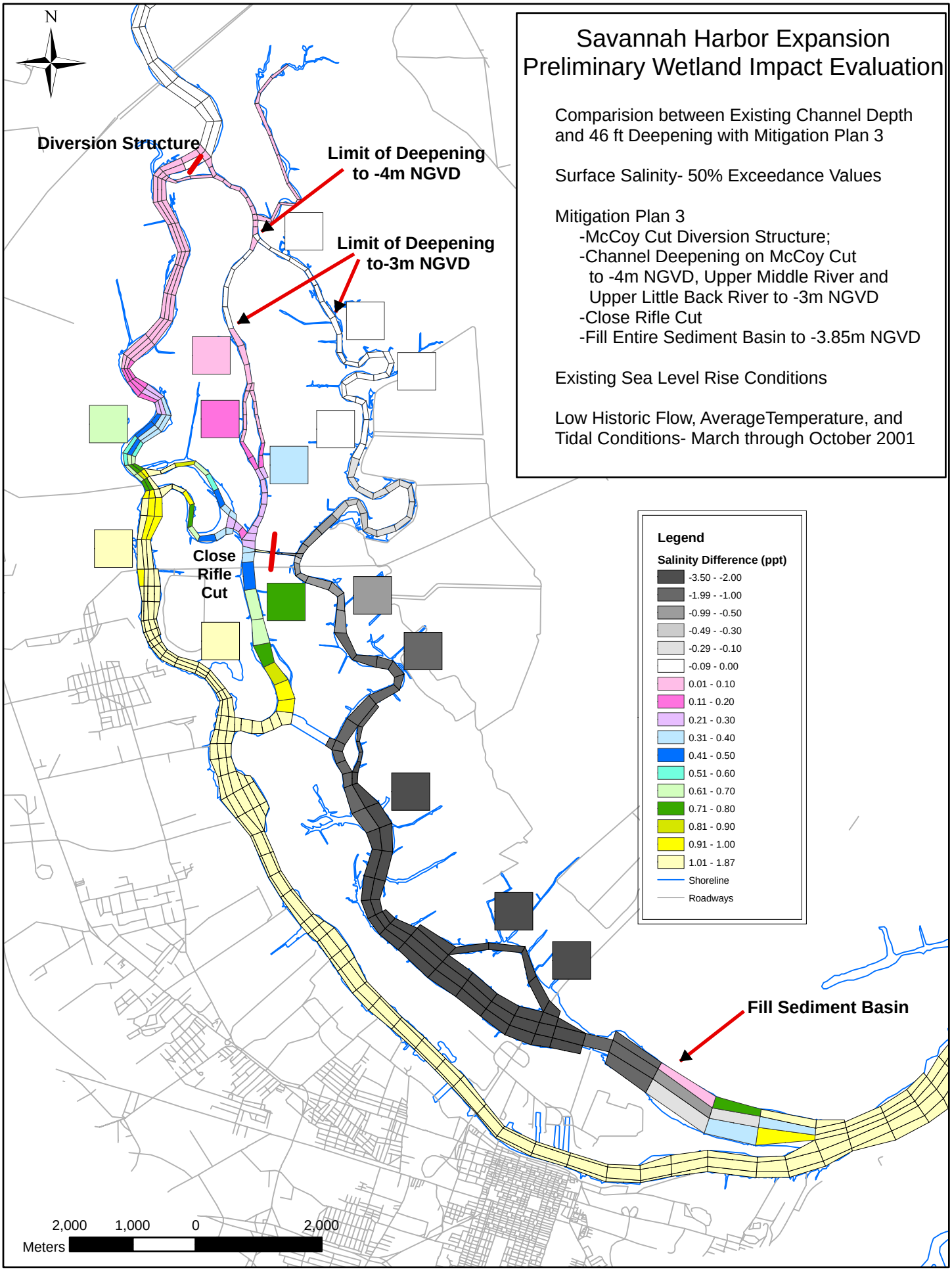
Legend

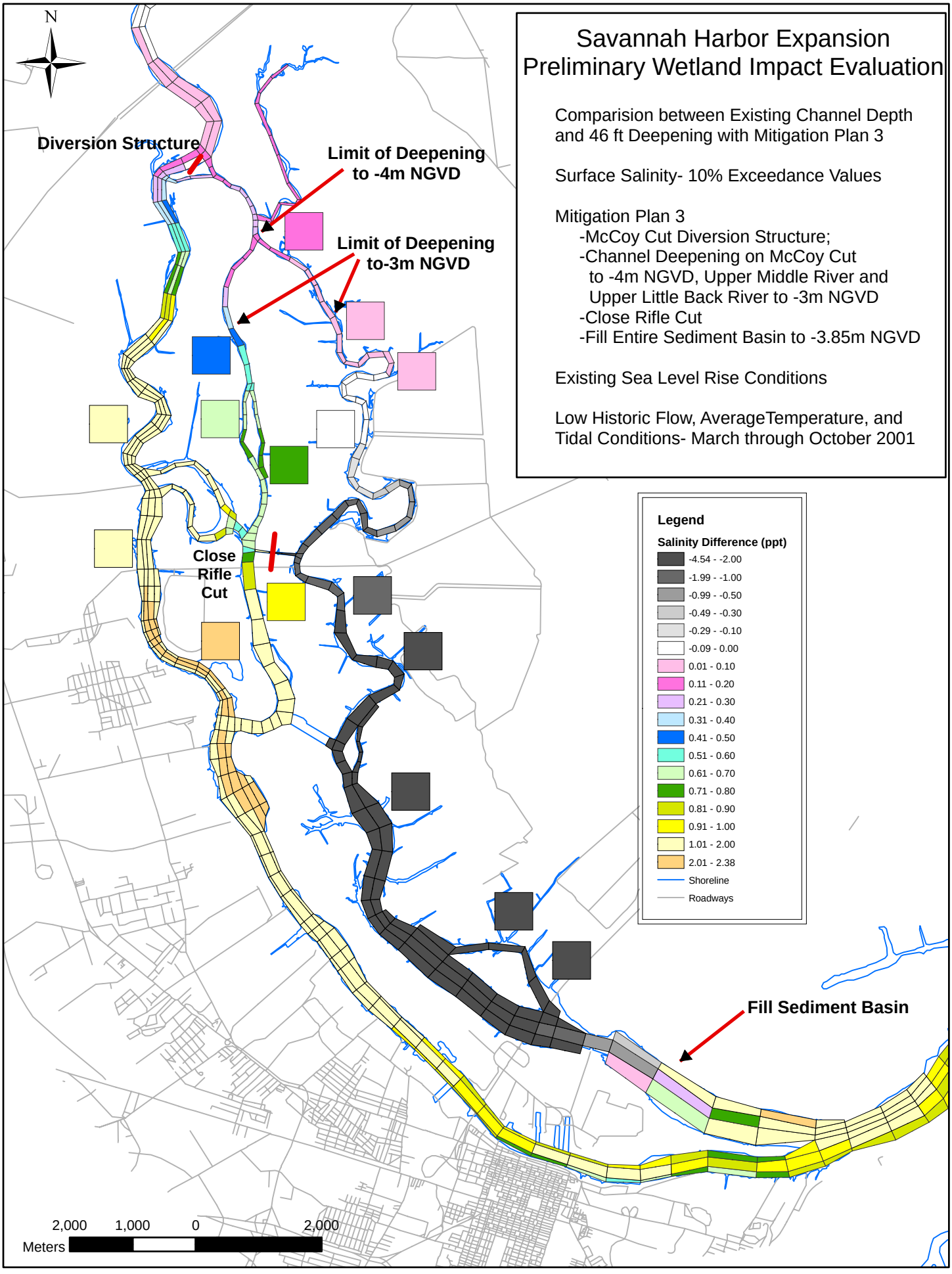
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

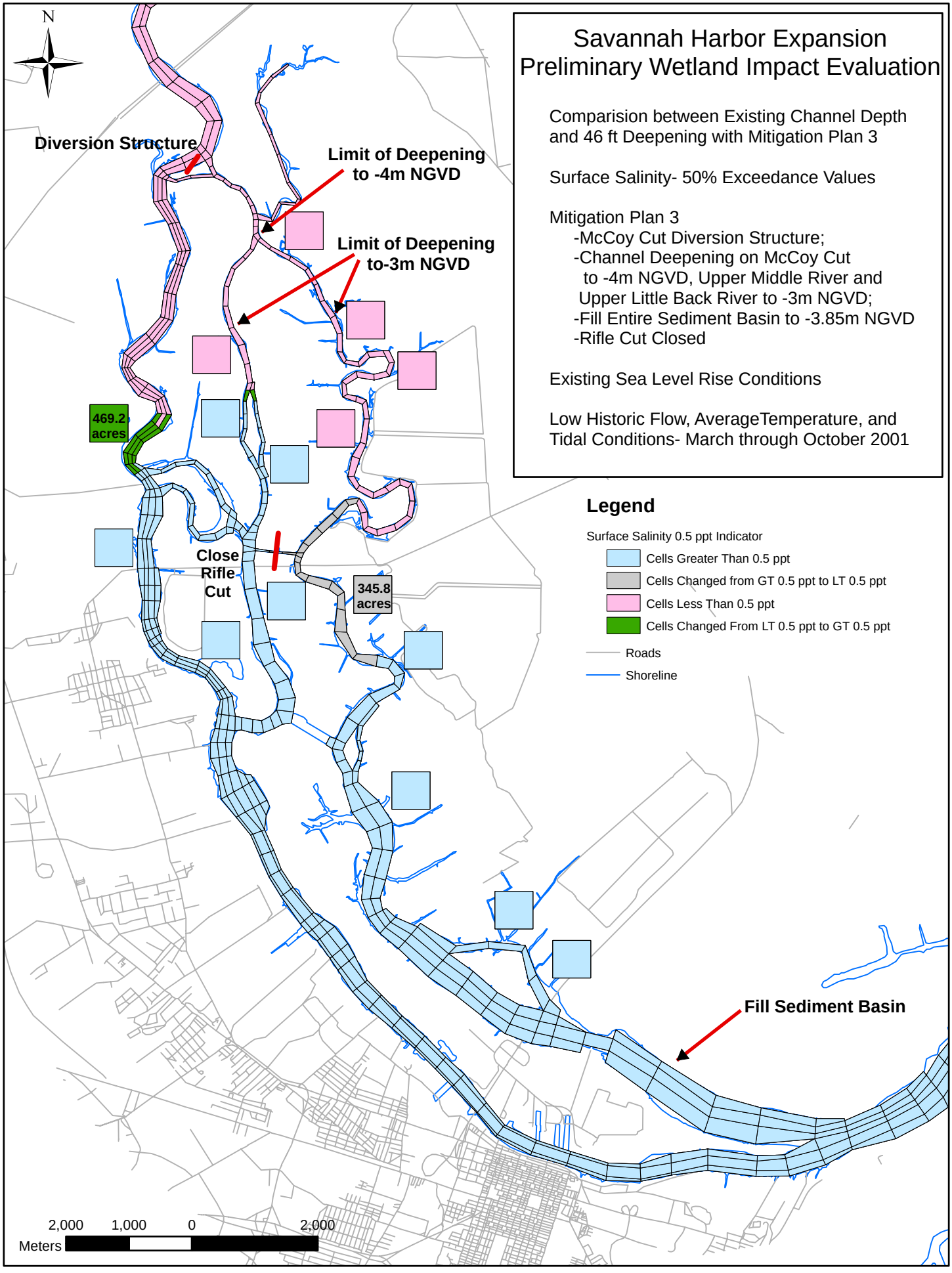
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
345.8 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #1


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-3.50 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 1.87
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-4.54 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.38
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

Existing Sea Level Rise Conditions

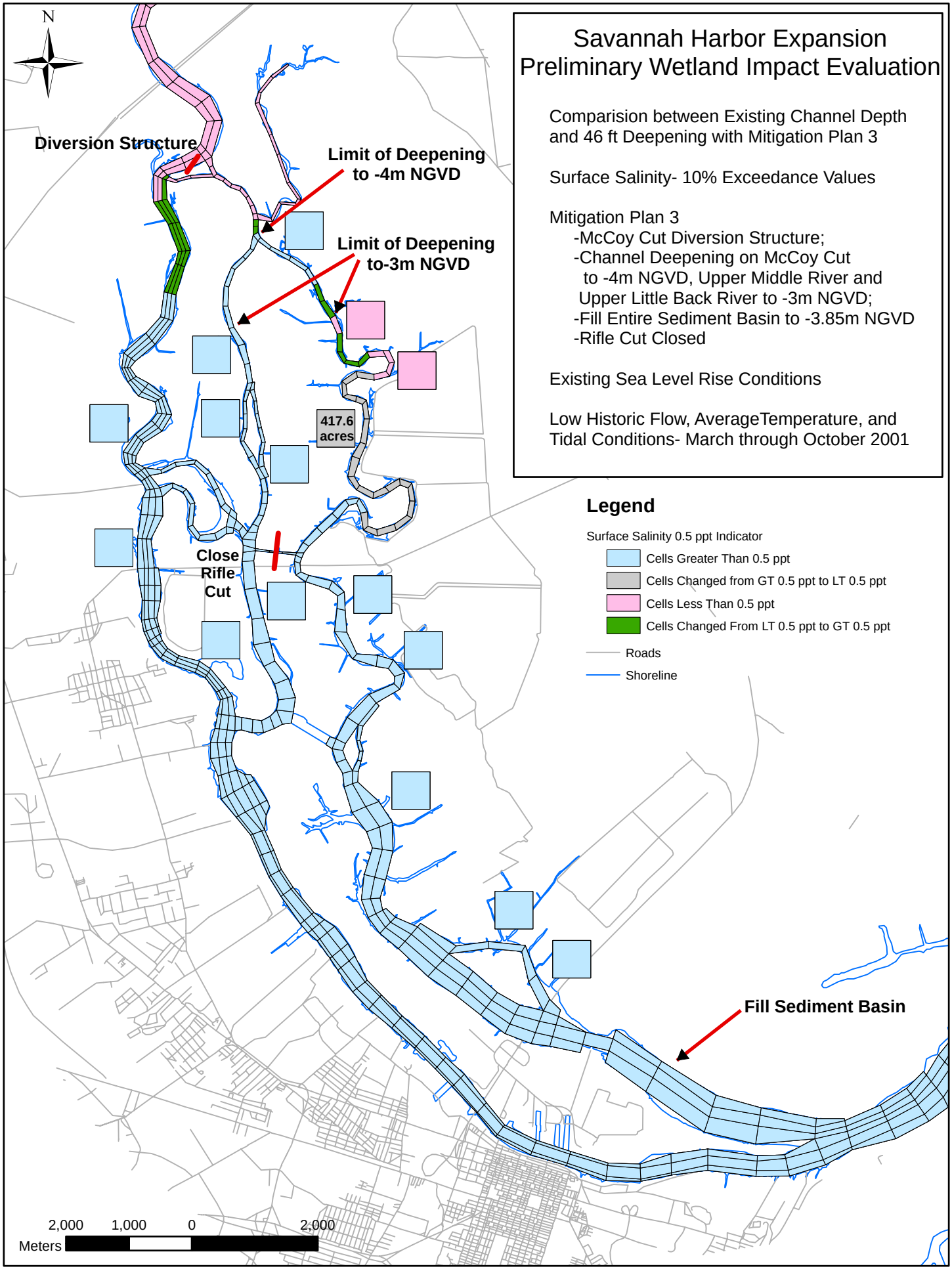
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3

Surface Salinity- 10% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

Existing Sea Level Rise Conditions

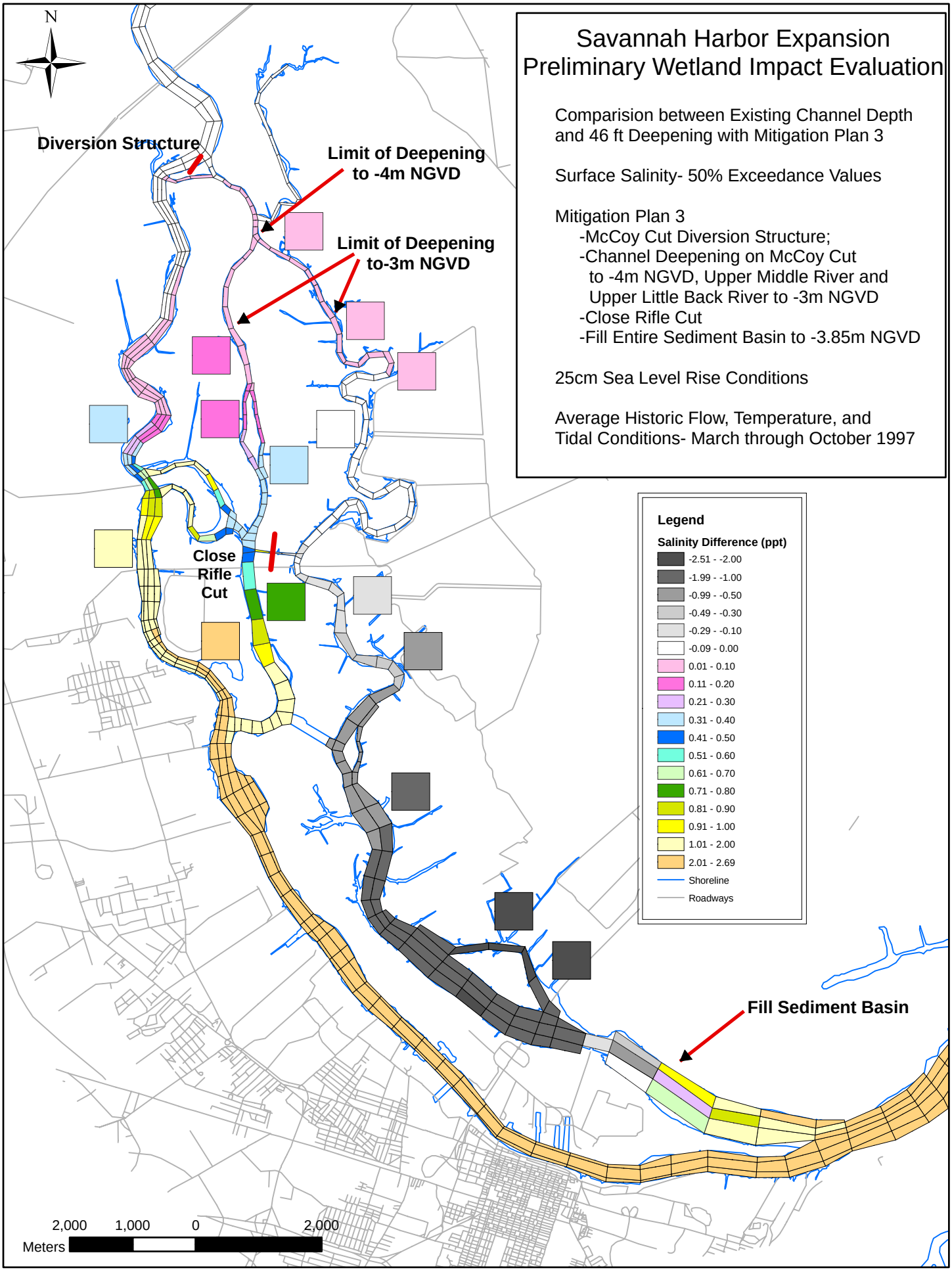
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

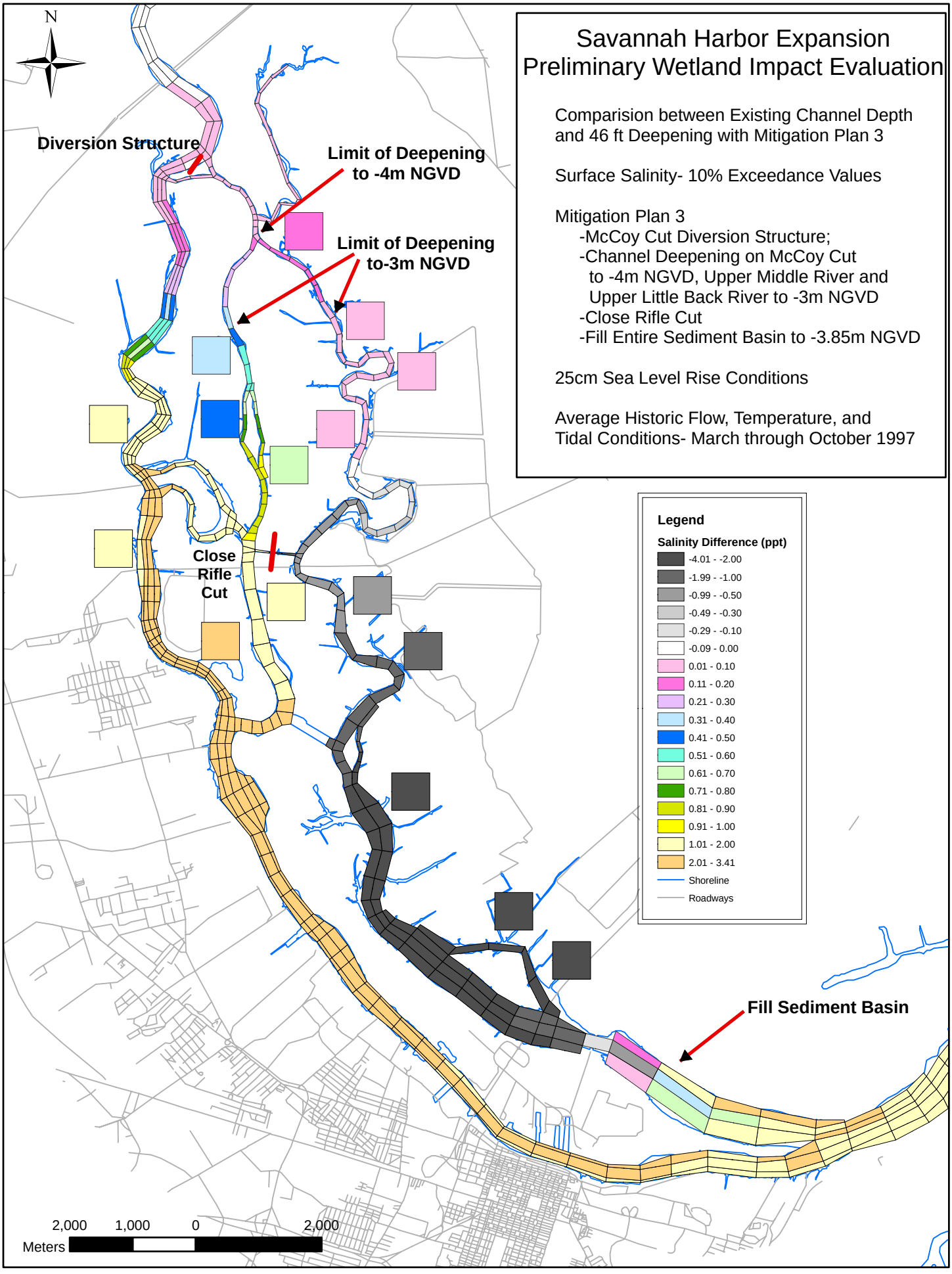
Legend

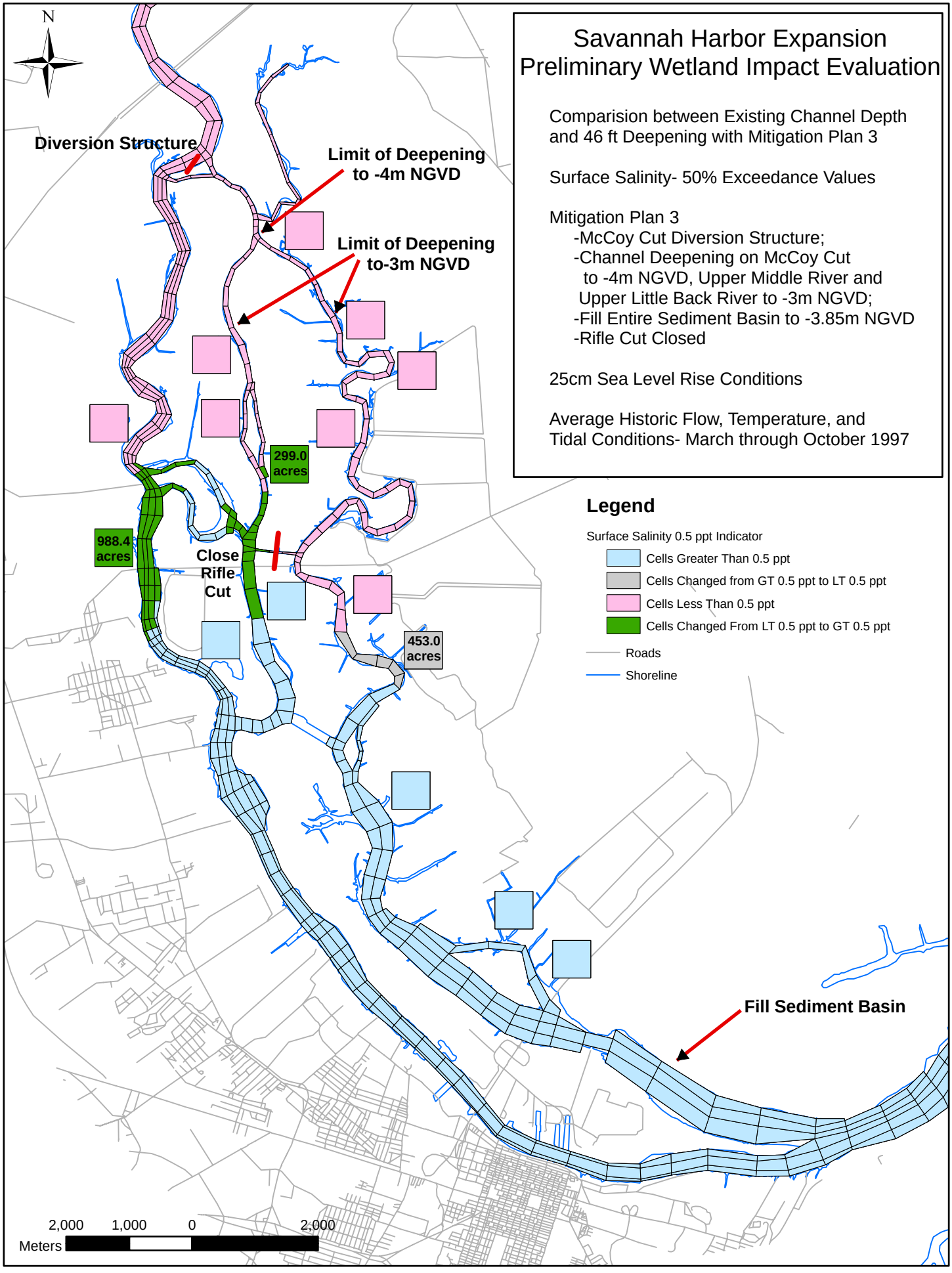
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

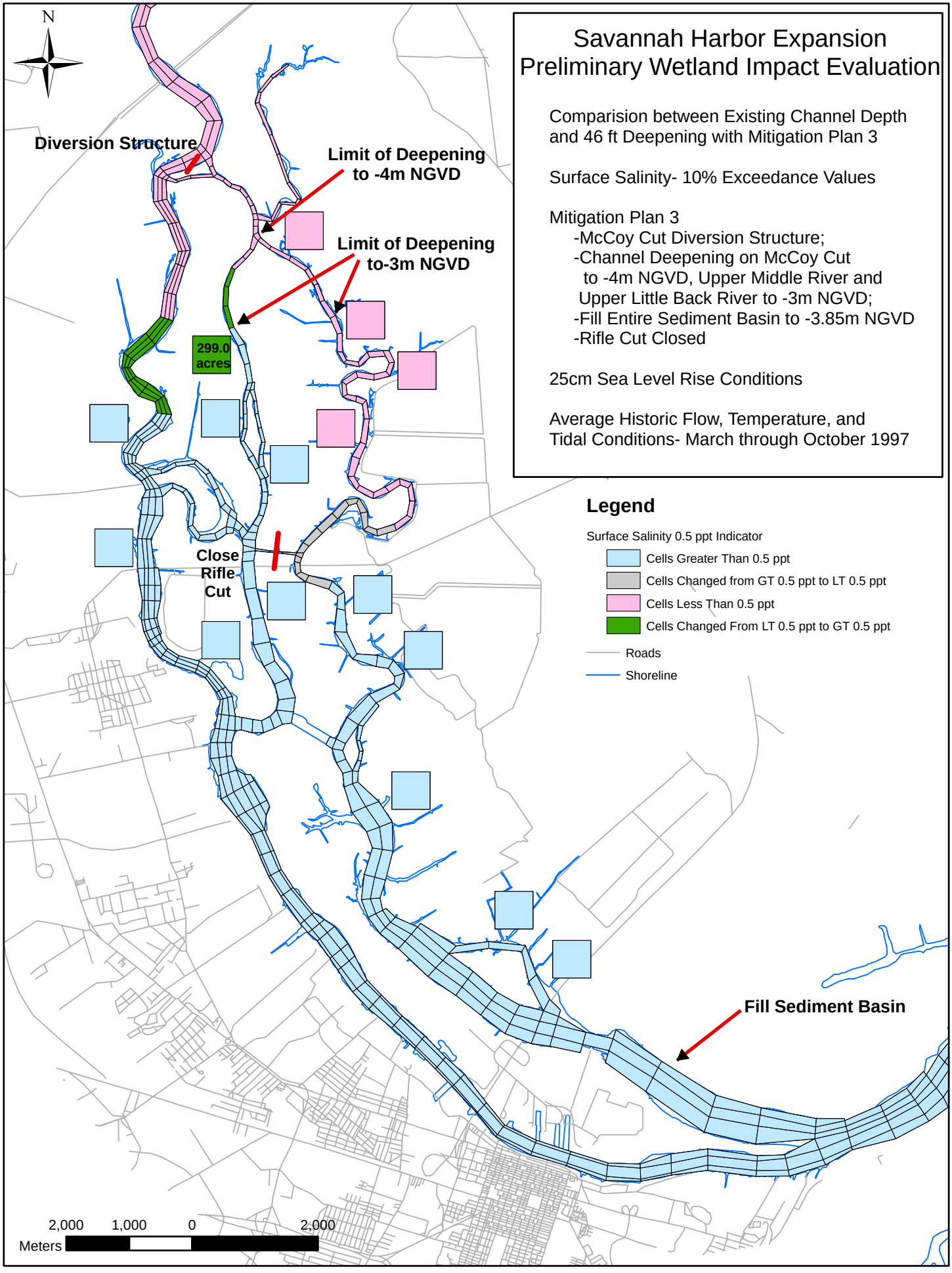
January 2007

Sensitivity Analysis #2A

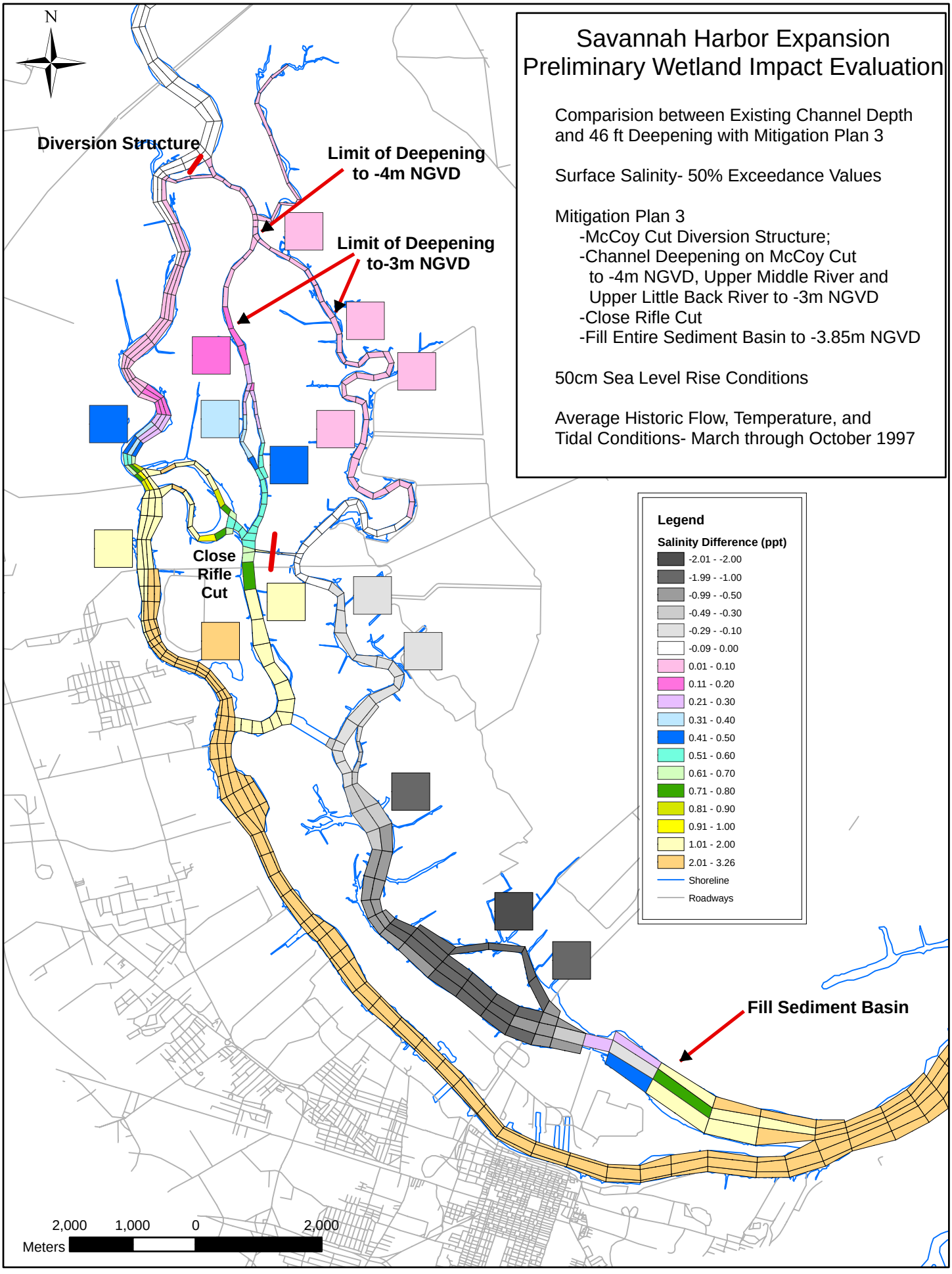

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-2.51 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.69
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007

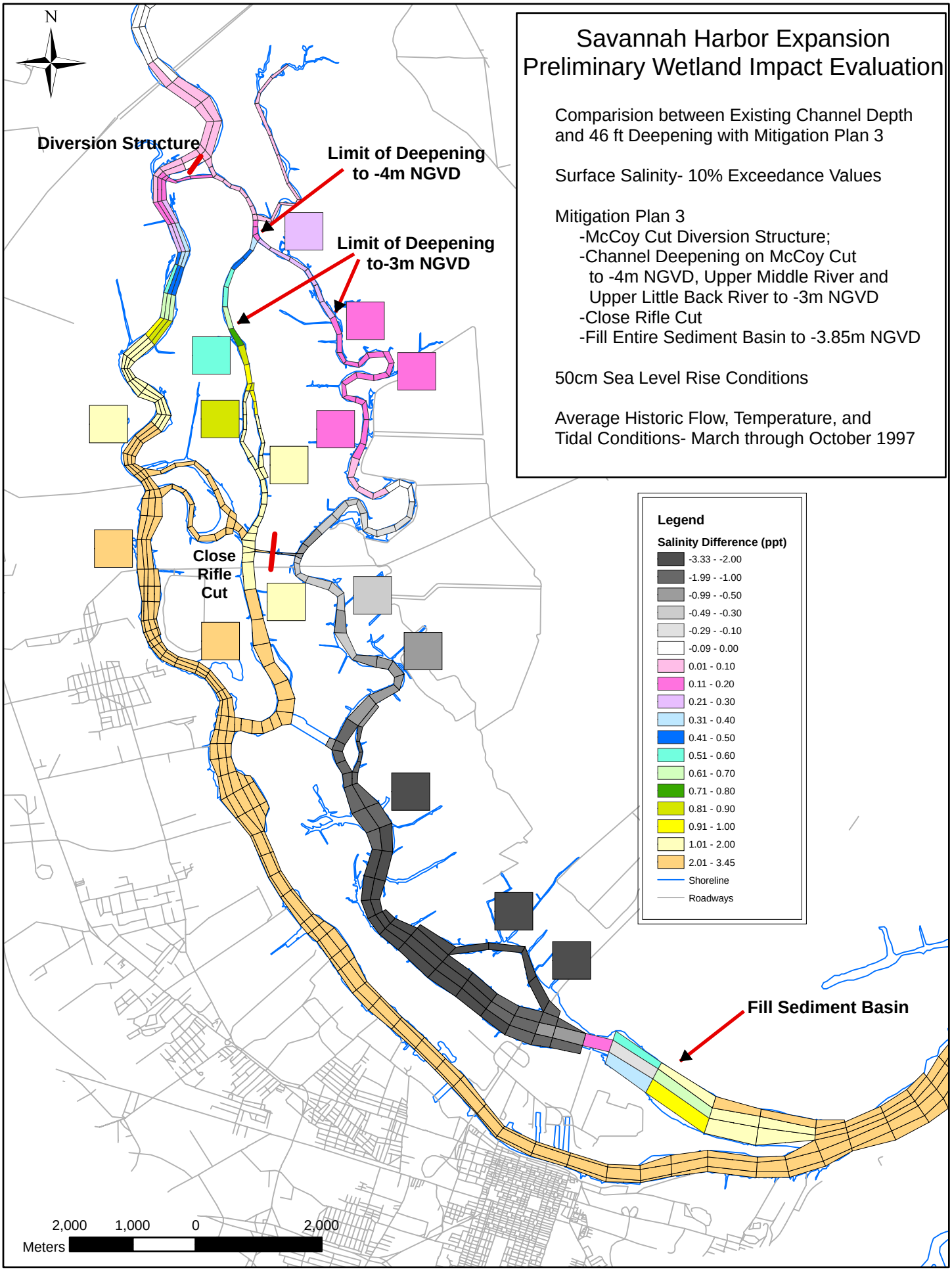

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.01 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.41
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007

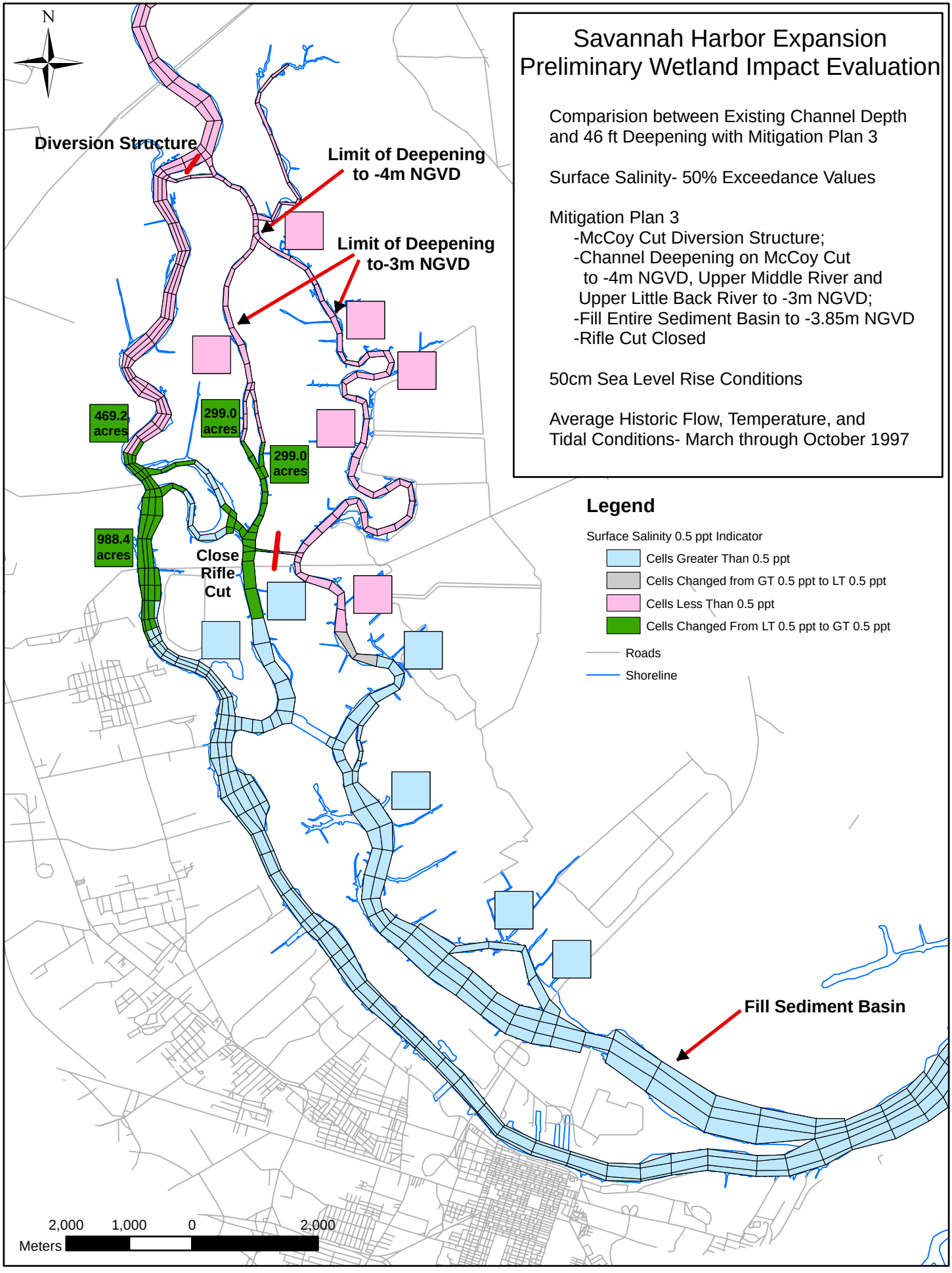

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
988.4 acres
Close Rifle Cut
453.0 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2B


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-2.01 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.26
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.33 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.45
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

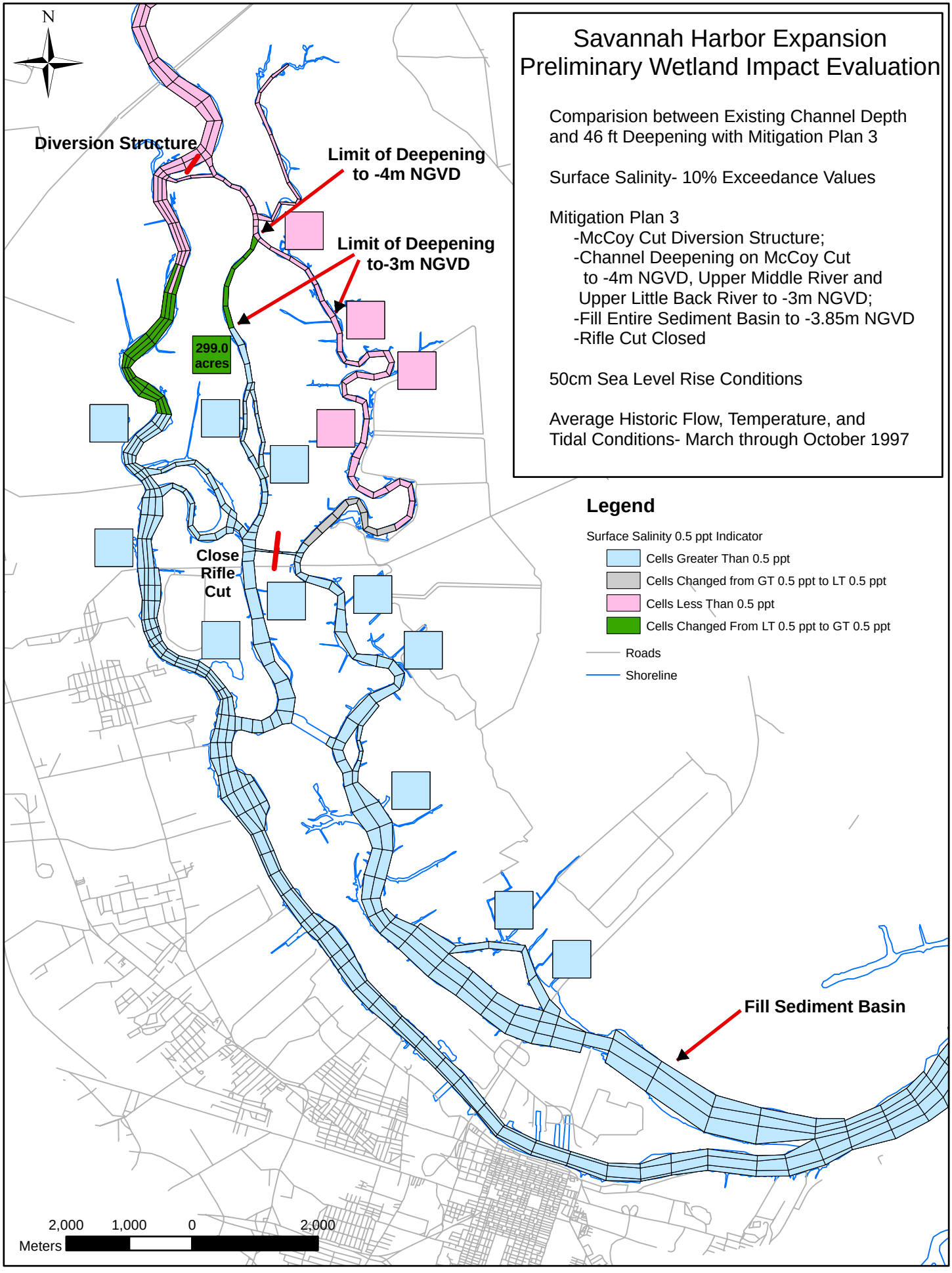
50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

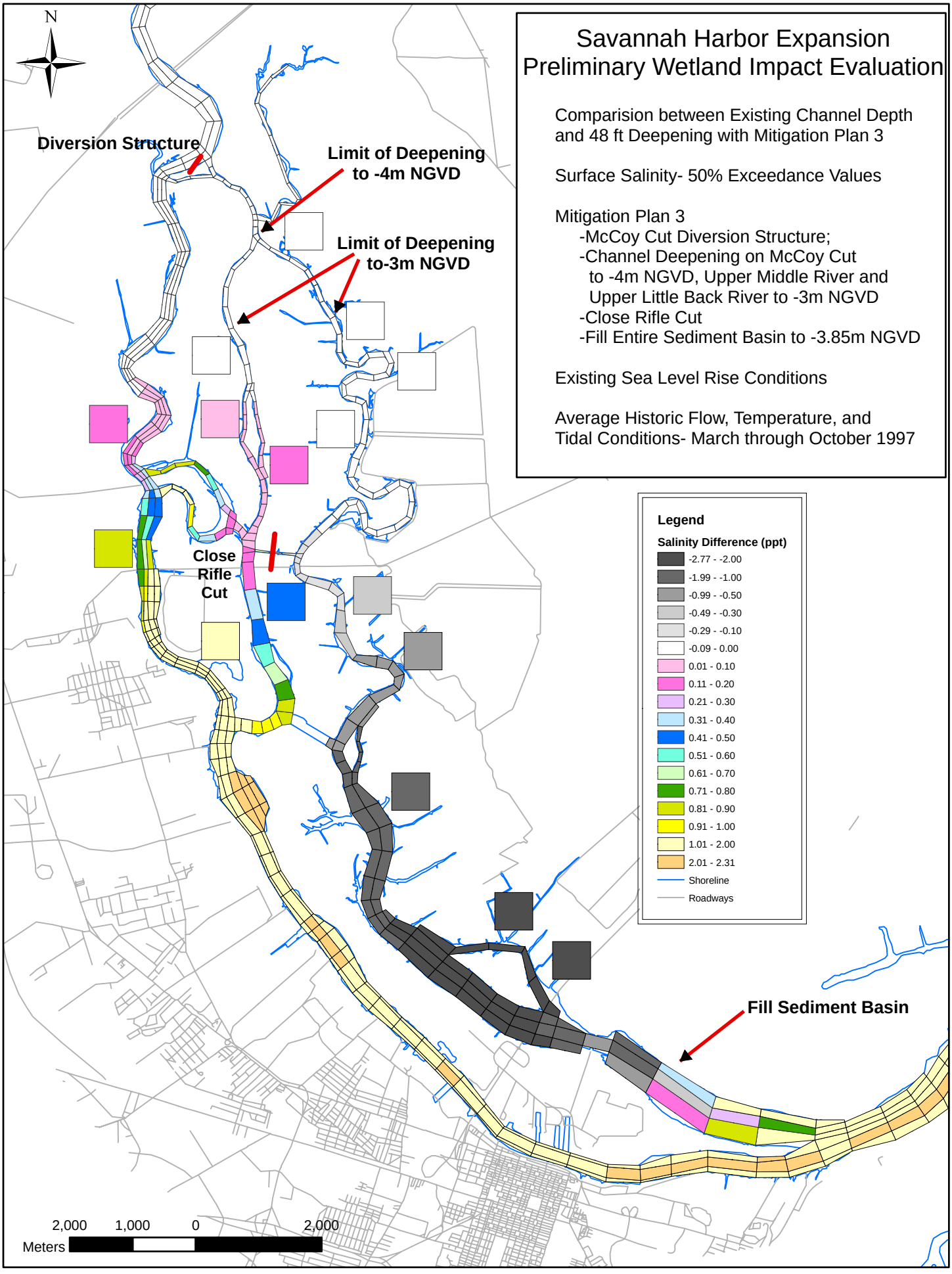
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

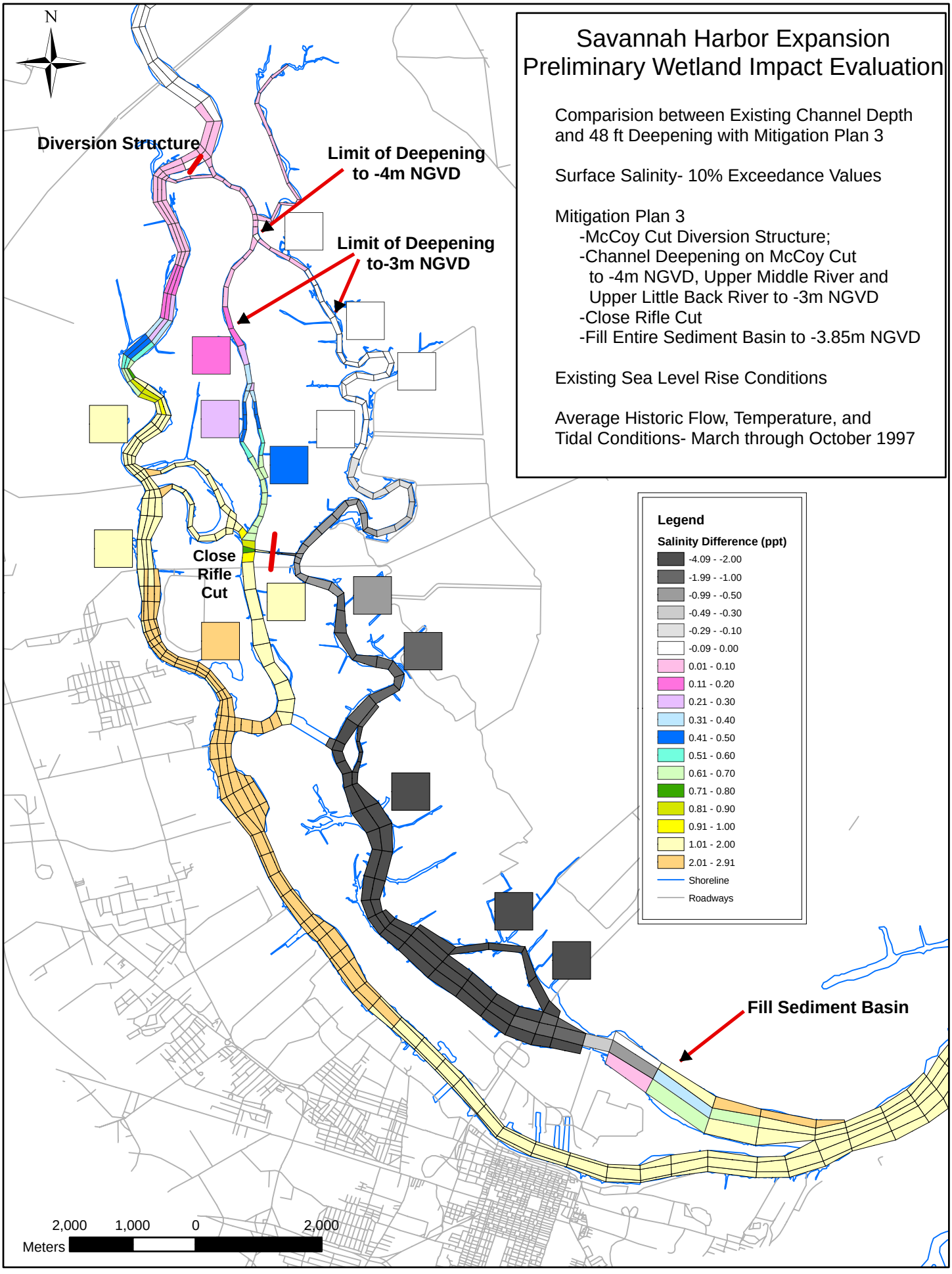
January 2007

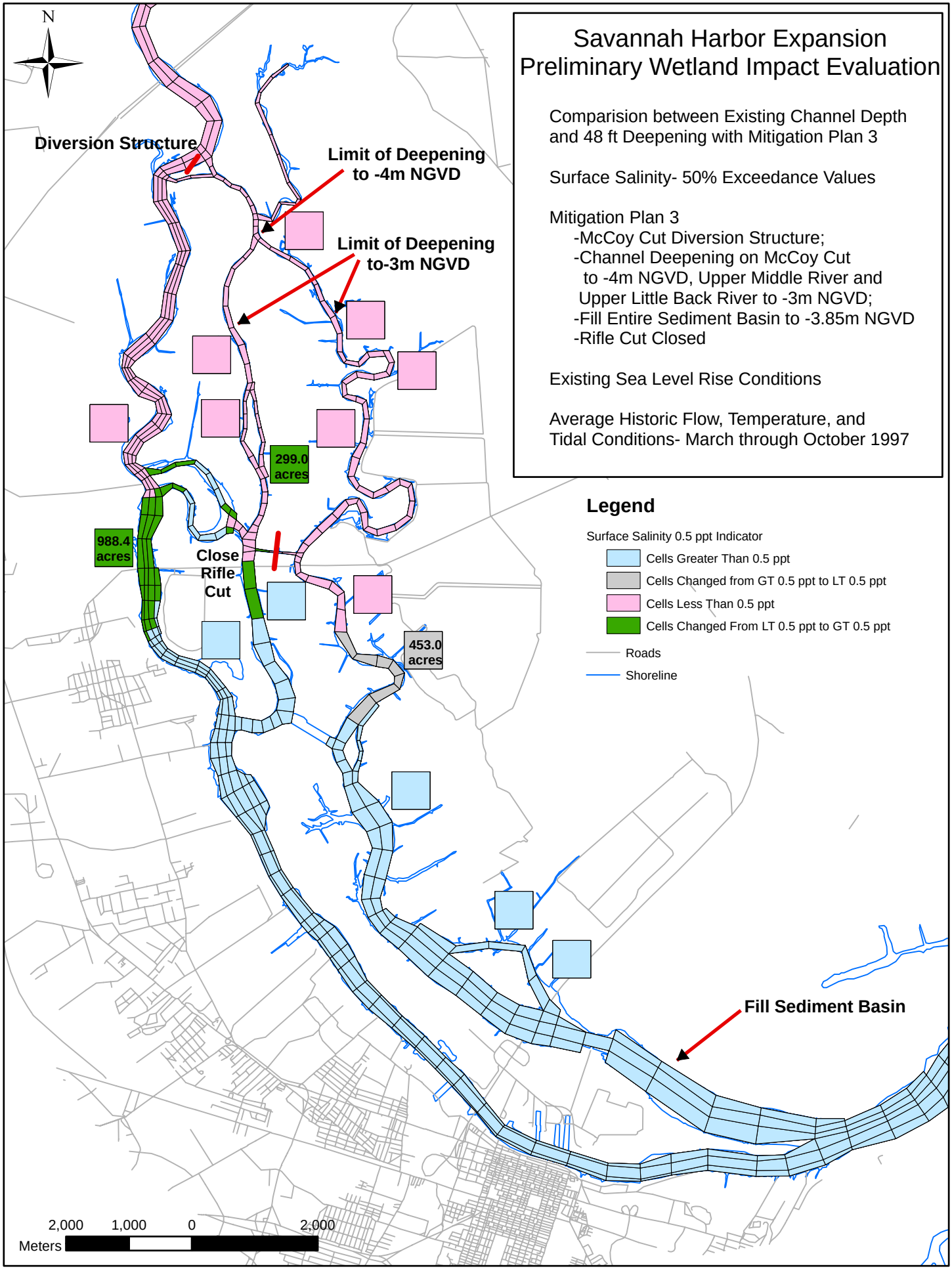

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 46 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

48-ft Deepening

Basic Evaluation


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-2.77 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.31
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-4.09 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.91
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

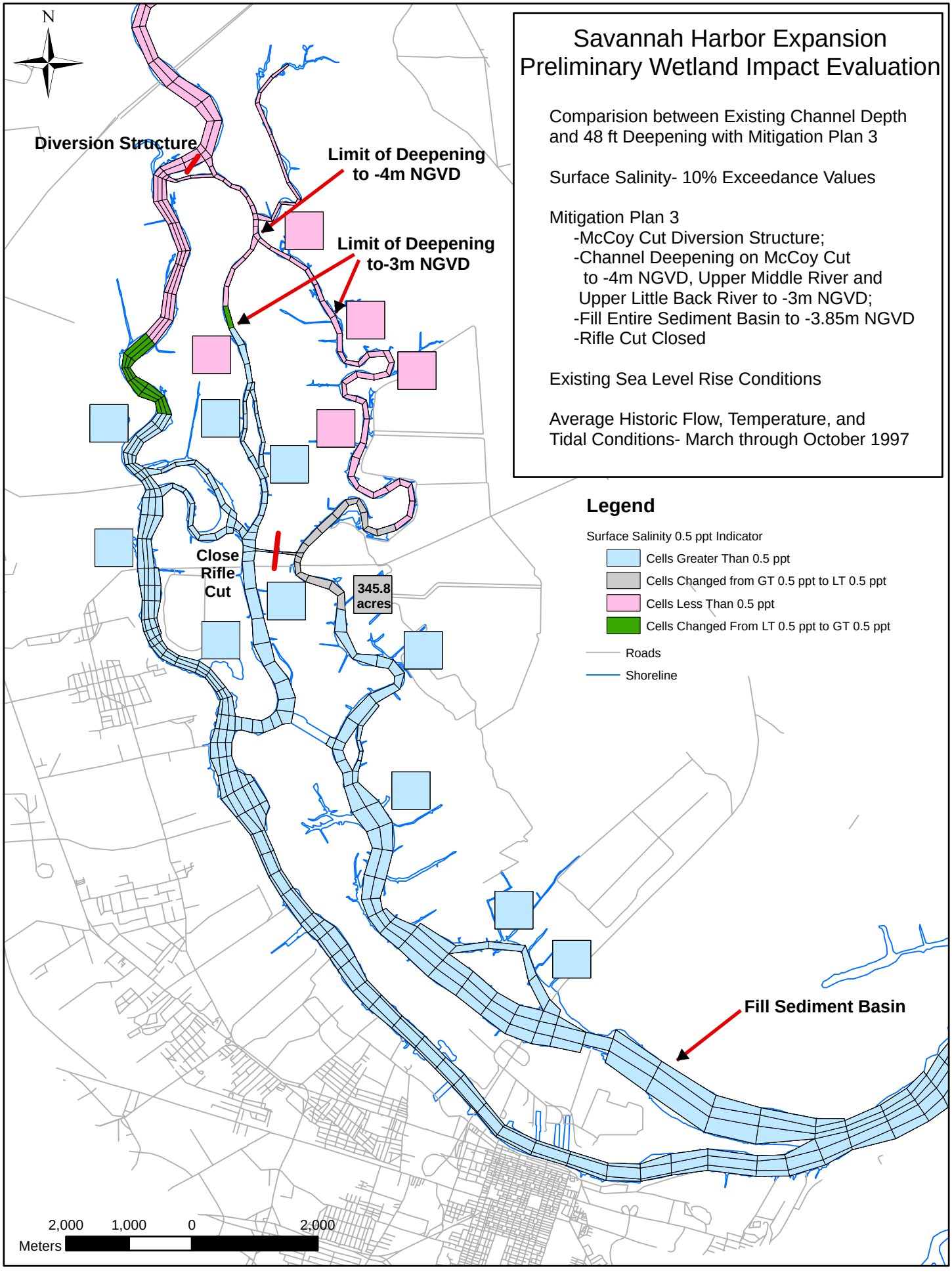
Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

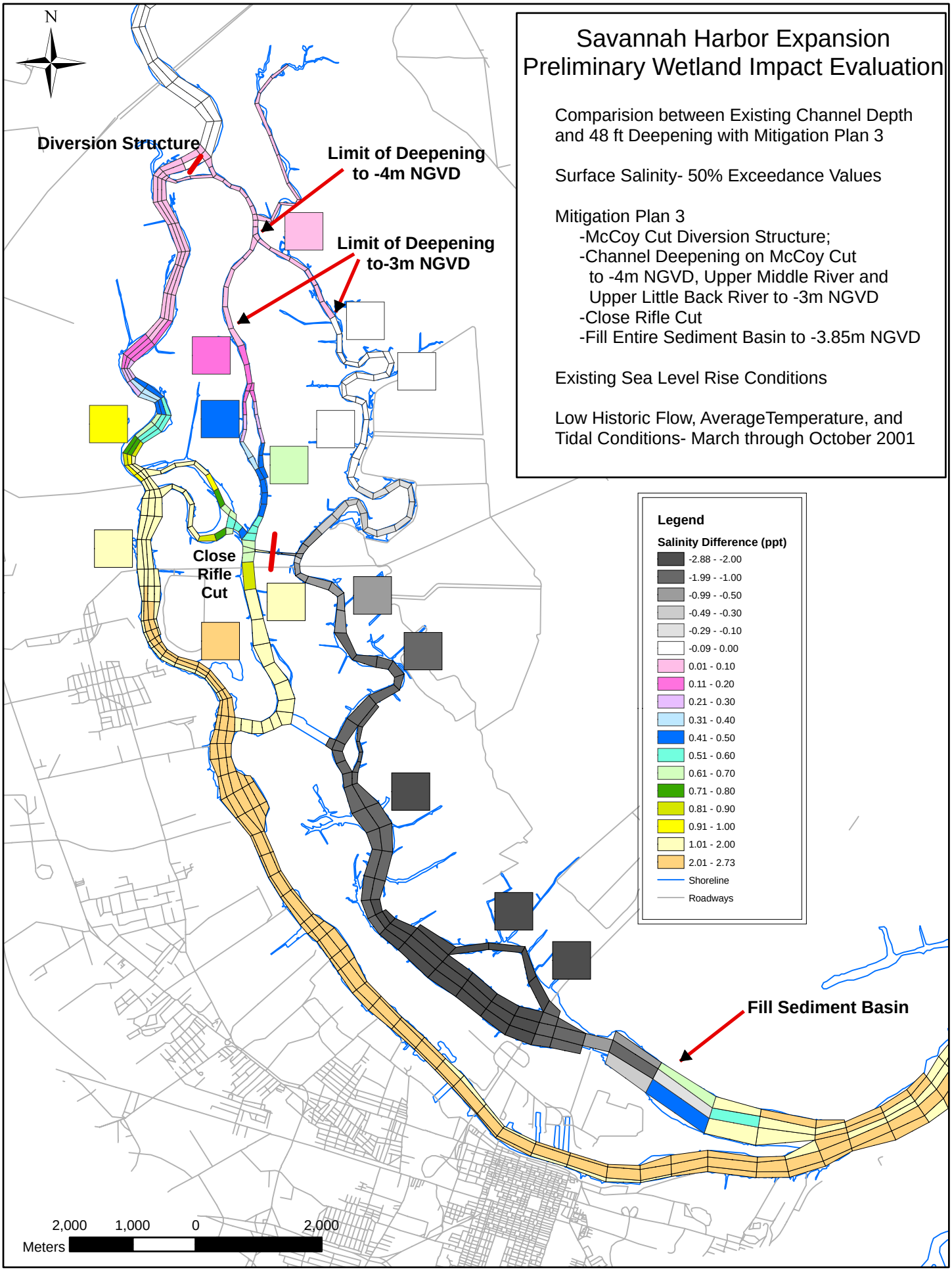
Legend

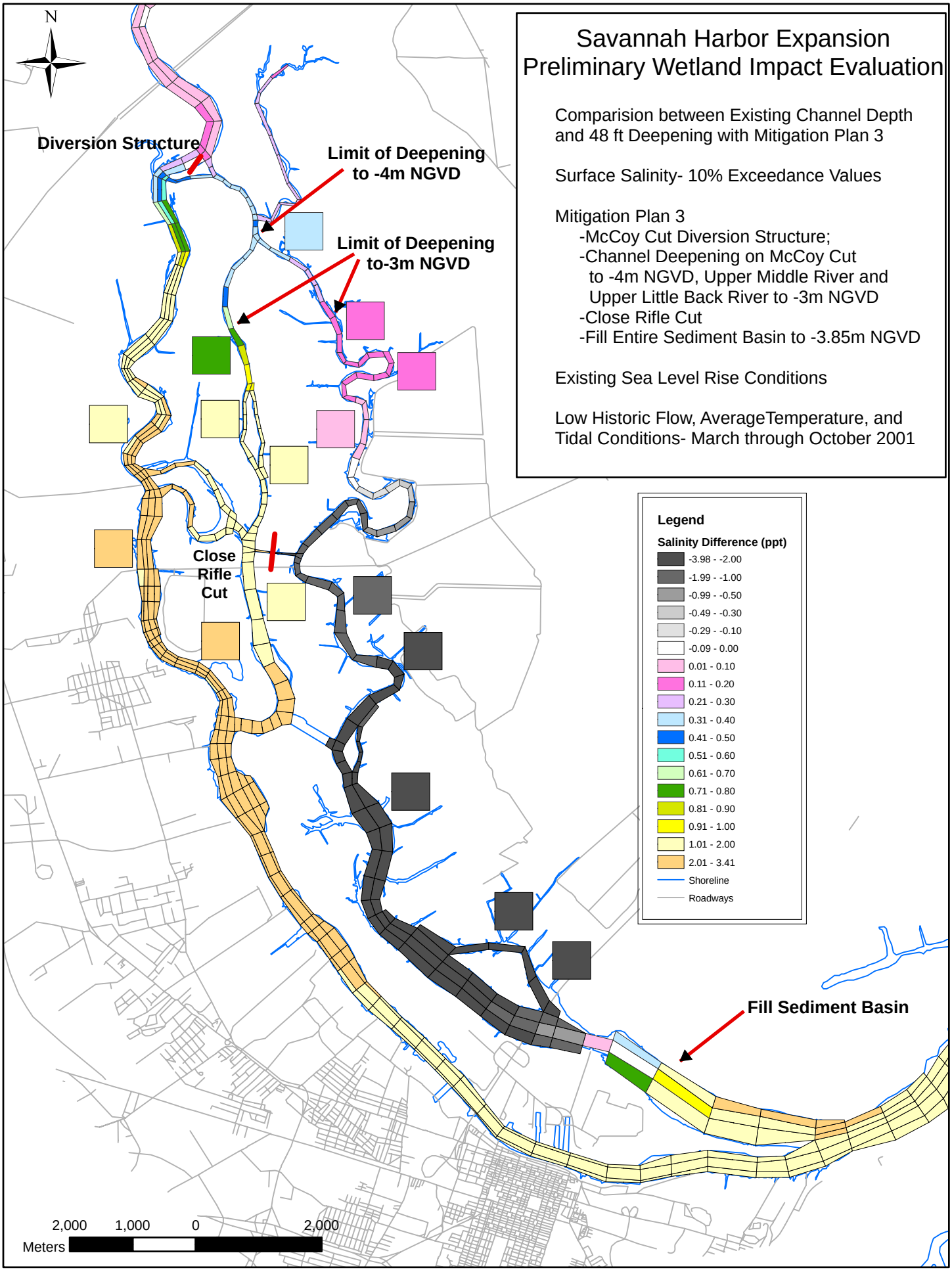
Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

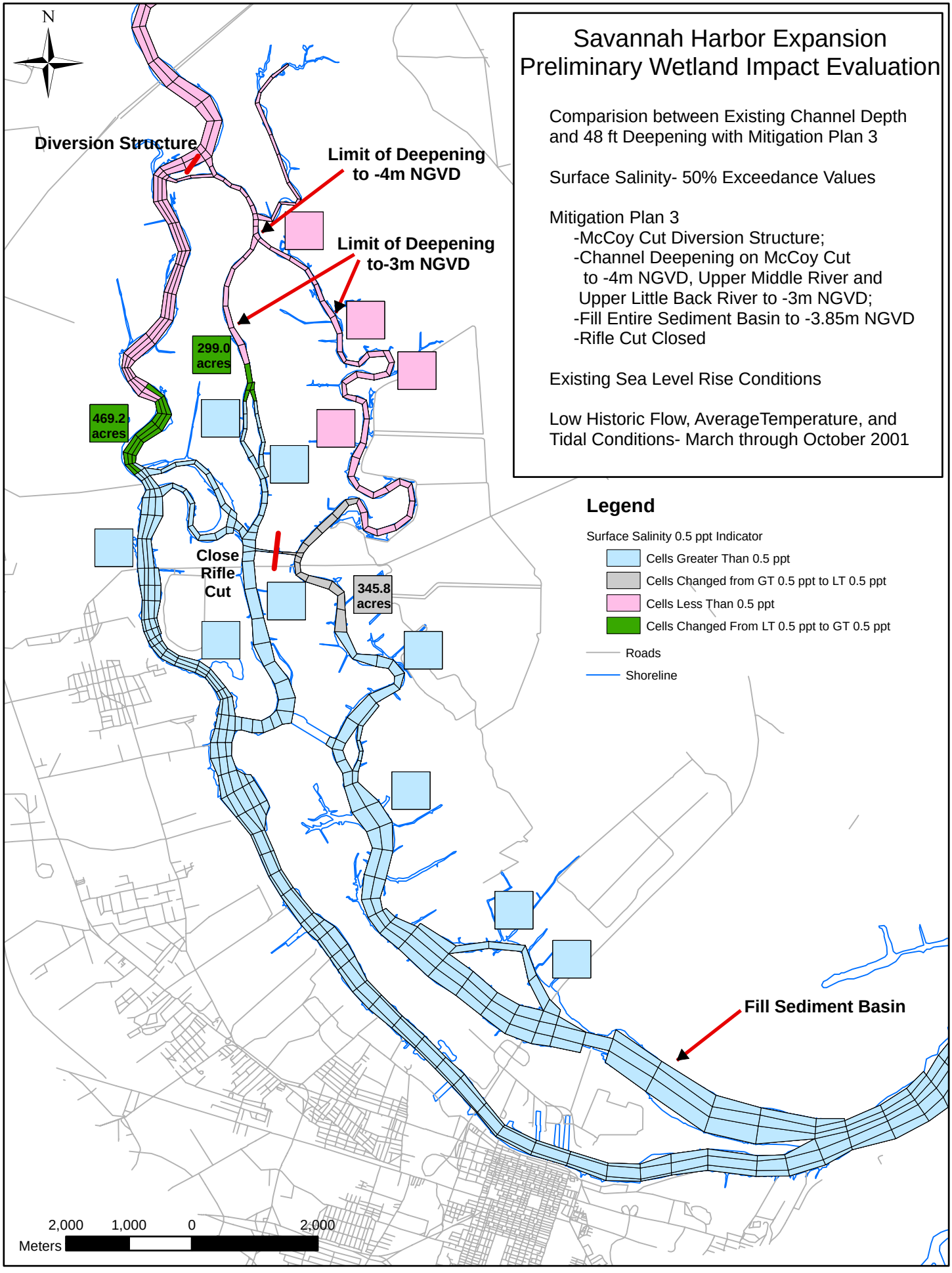
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
345.8 acres
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #1


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-2.88 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 2.73
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
Existing Sea Level Rise Conditions
Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001
Legend
Salinity Difference (ppt)
-3.98 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.41
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

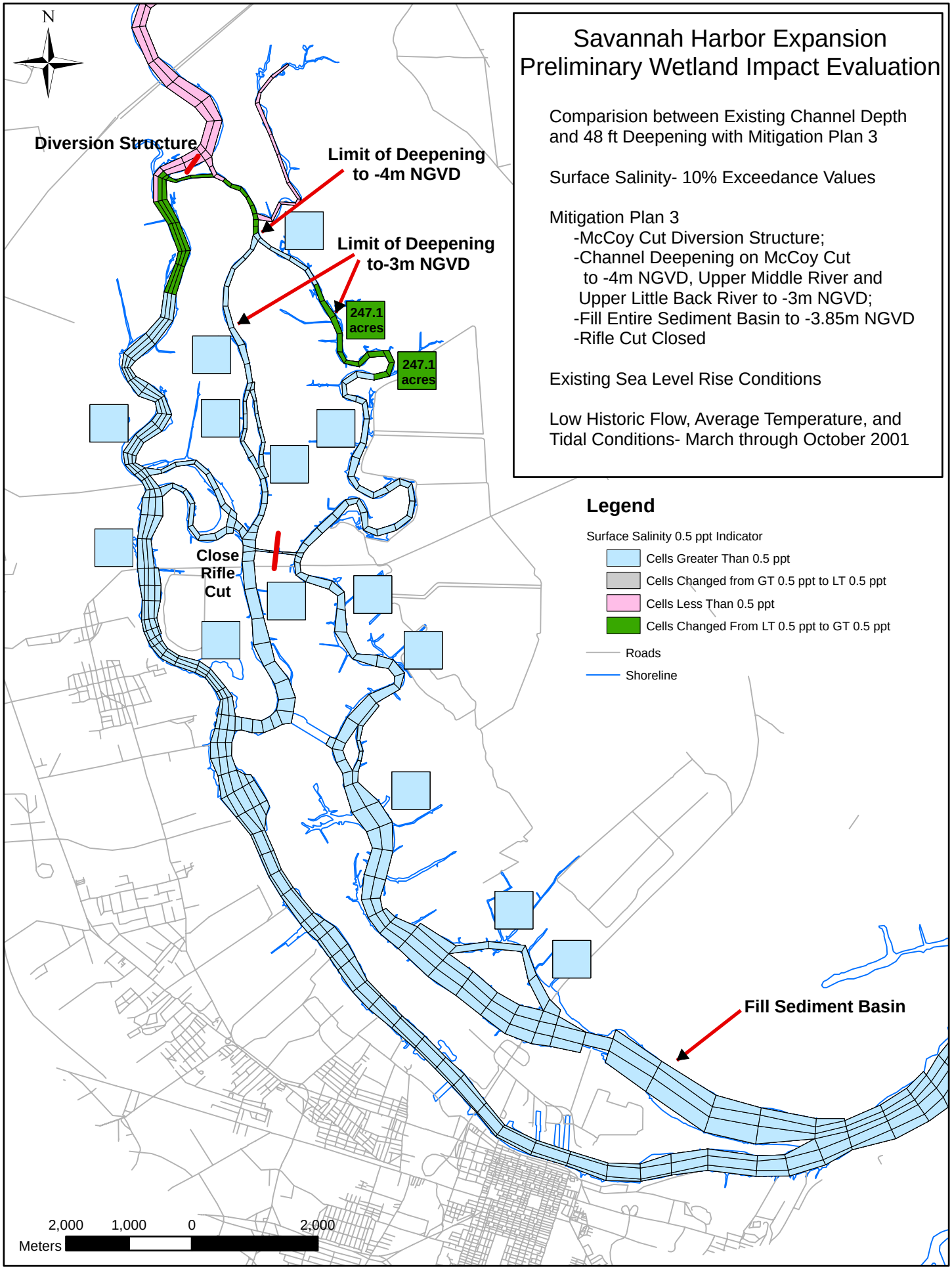
Existing Sea Level Rise Conditions

Low Historic Flow, AverageTemperature, and Tidal Conditions- March through October 2001

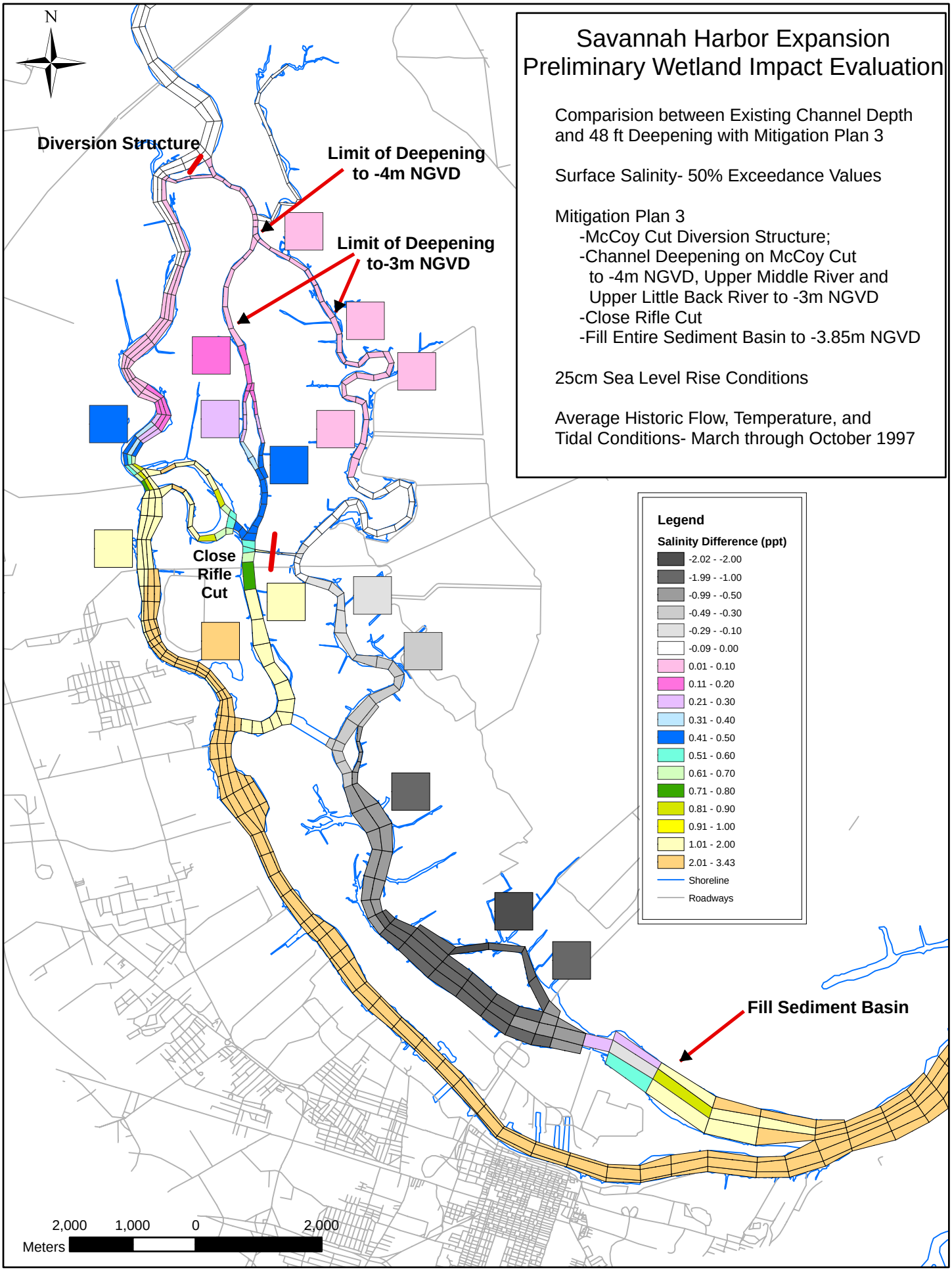
Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
247.1 acres
247.1 acres
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
Existing Sea Level Rise Conditions
Low Historic Flow, Average Temperature, and Tidal Conditions- March through October 2001
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2A



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3

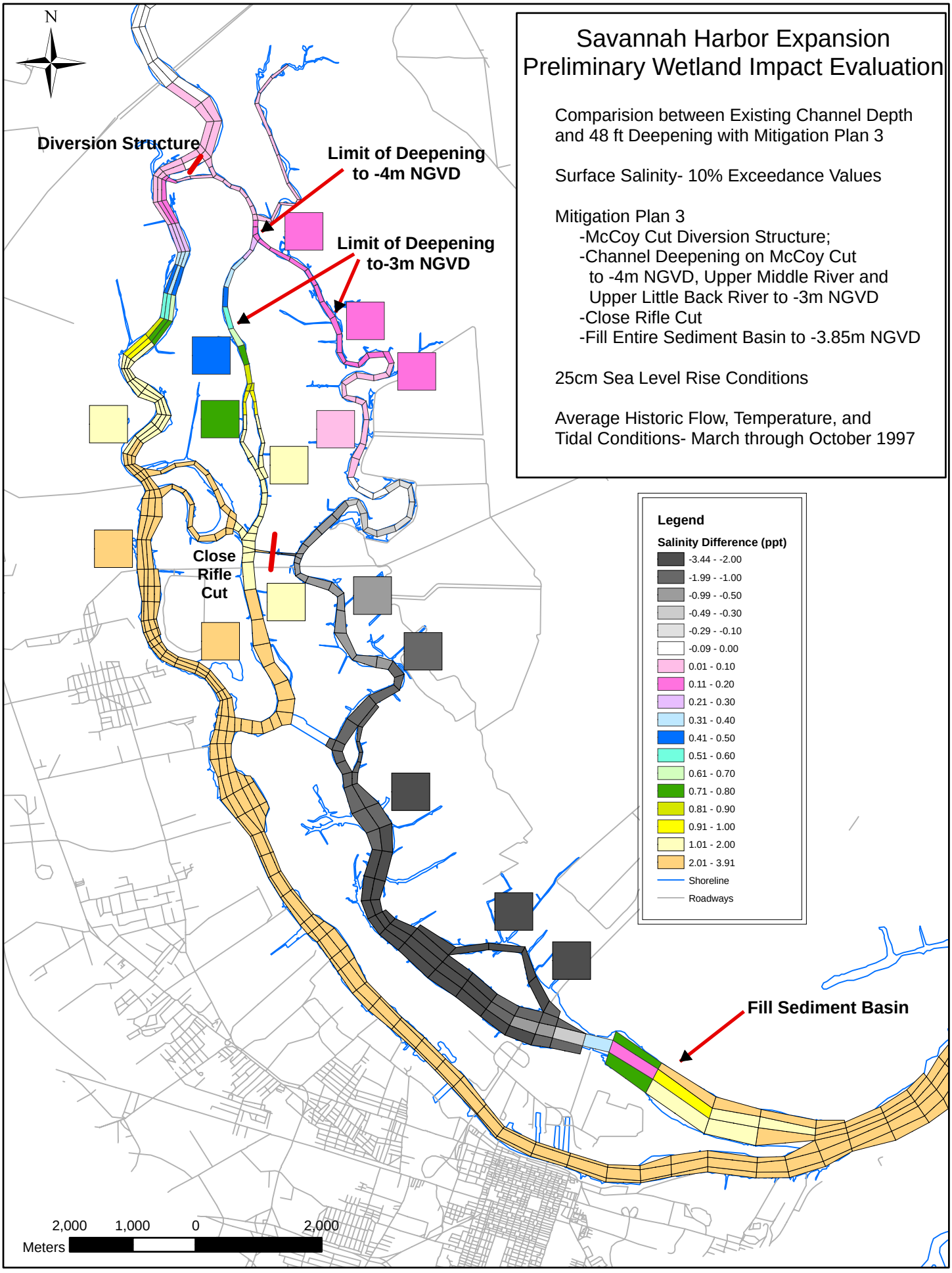
Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
- -Close Rifle Cut
- -Fill Entire Sediment Basin to -3.85m NGVD

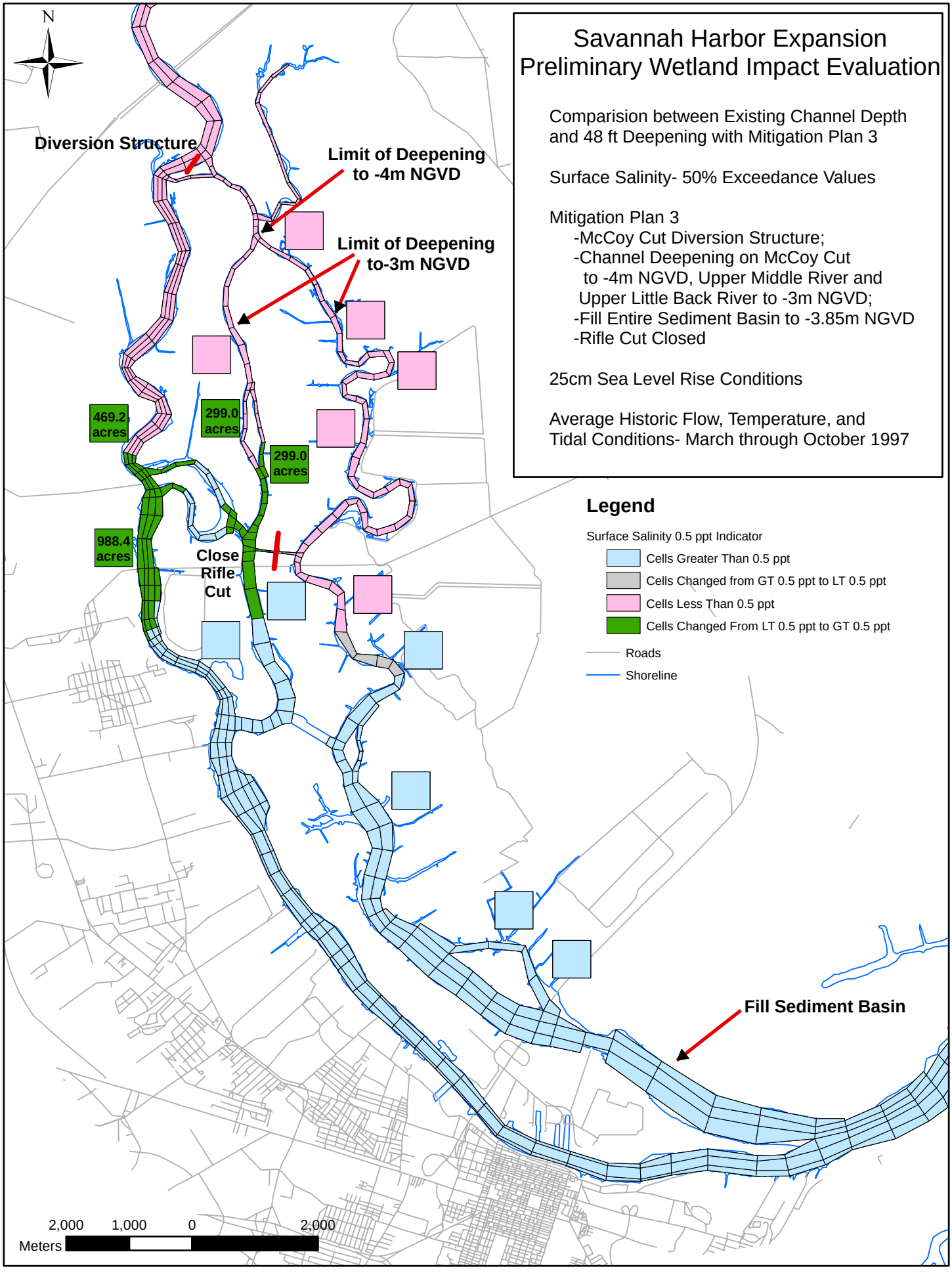
25cm Sea Level Rise Conditions

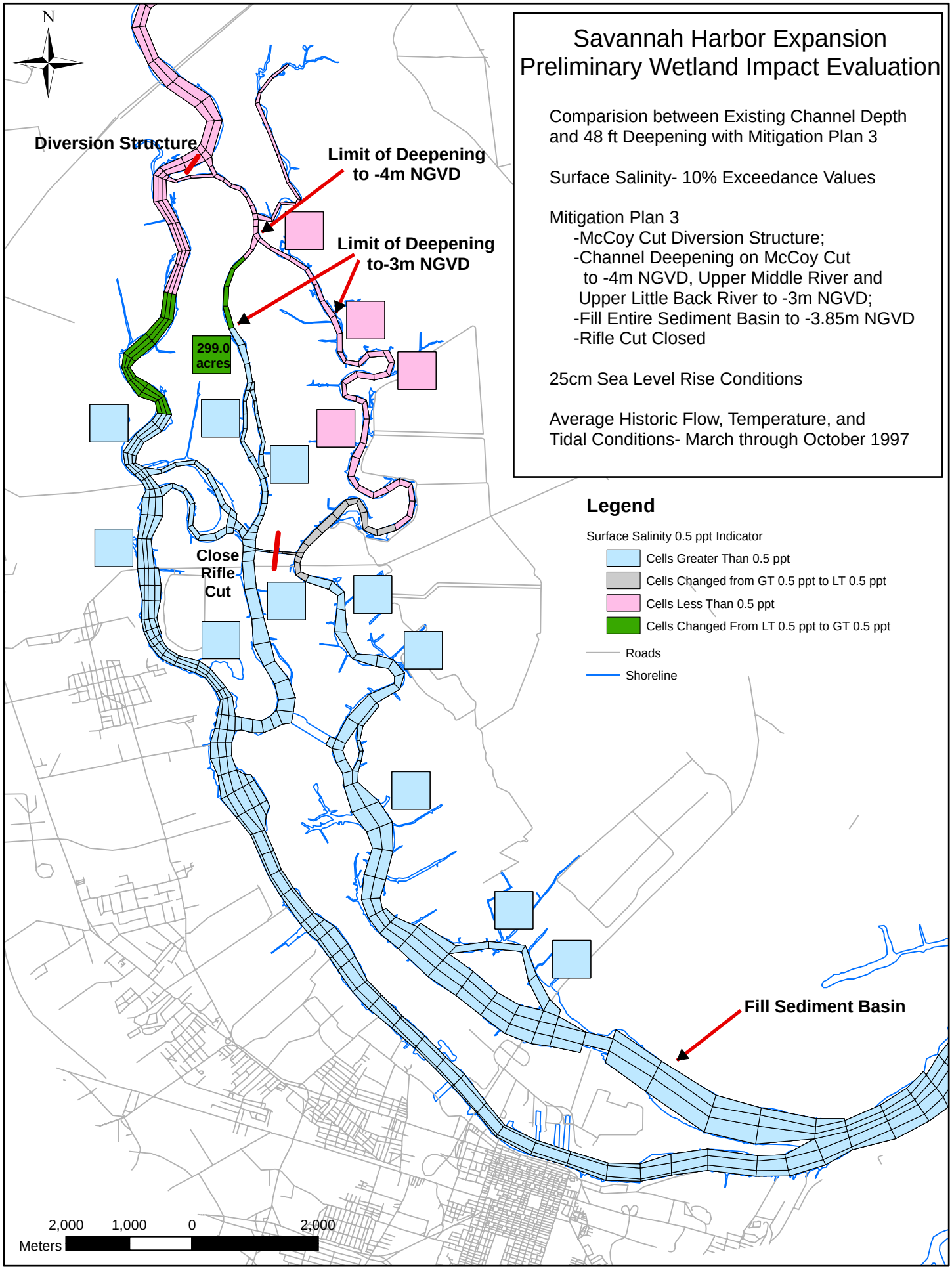
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007

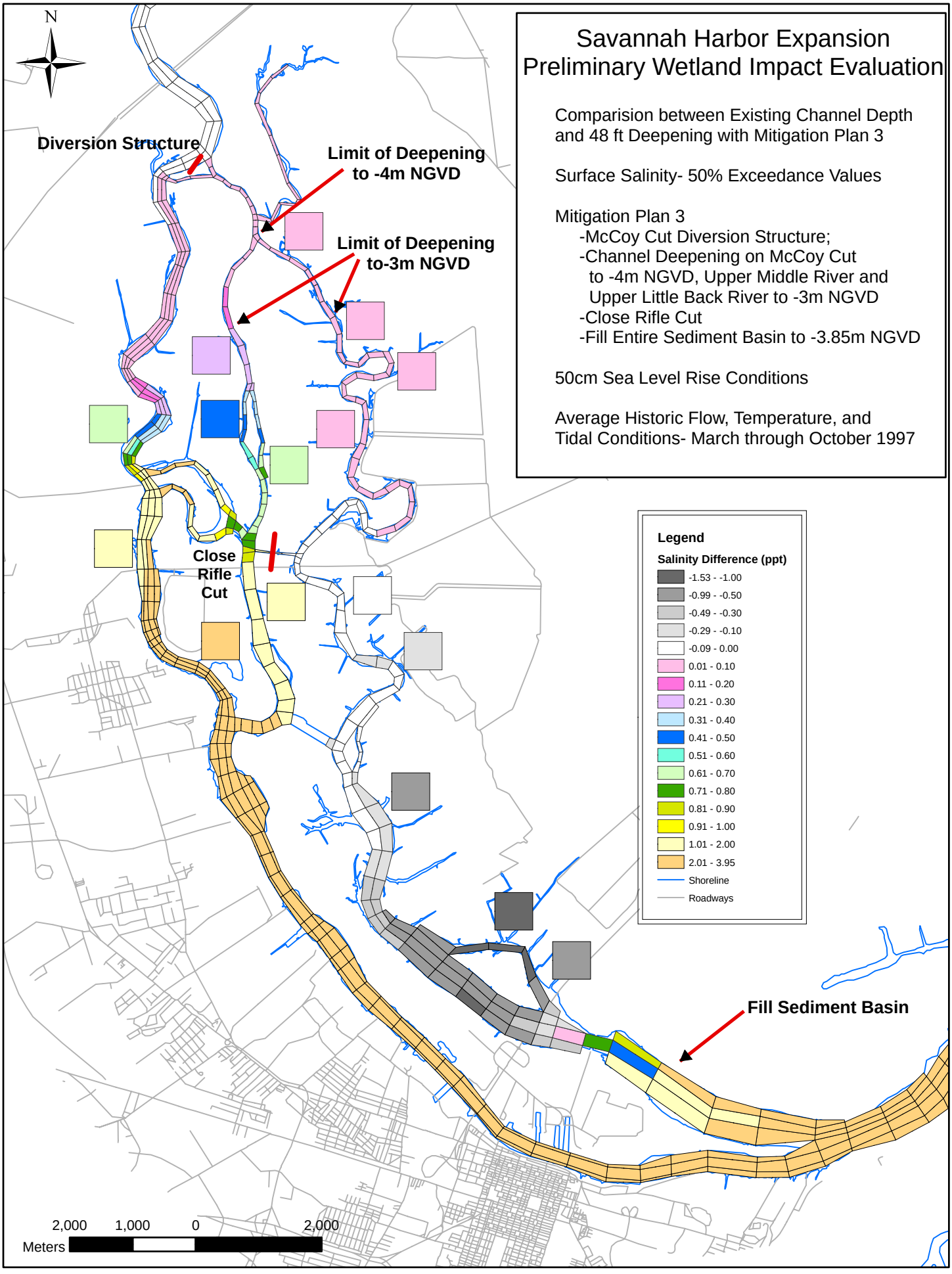


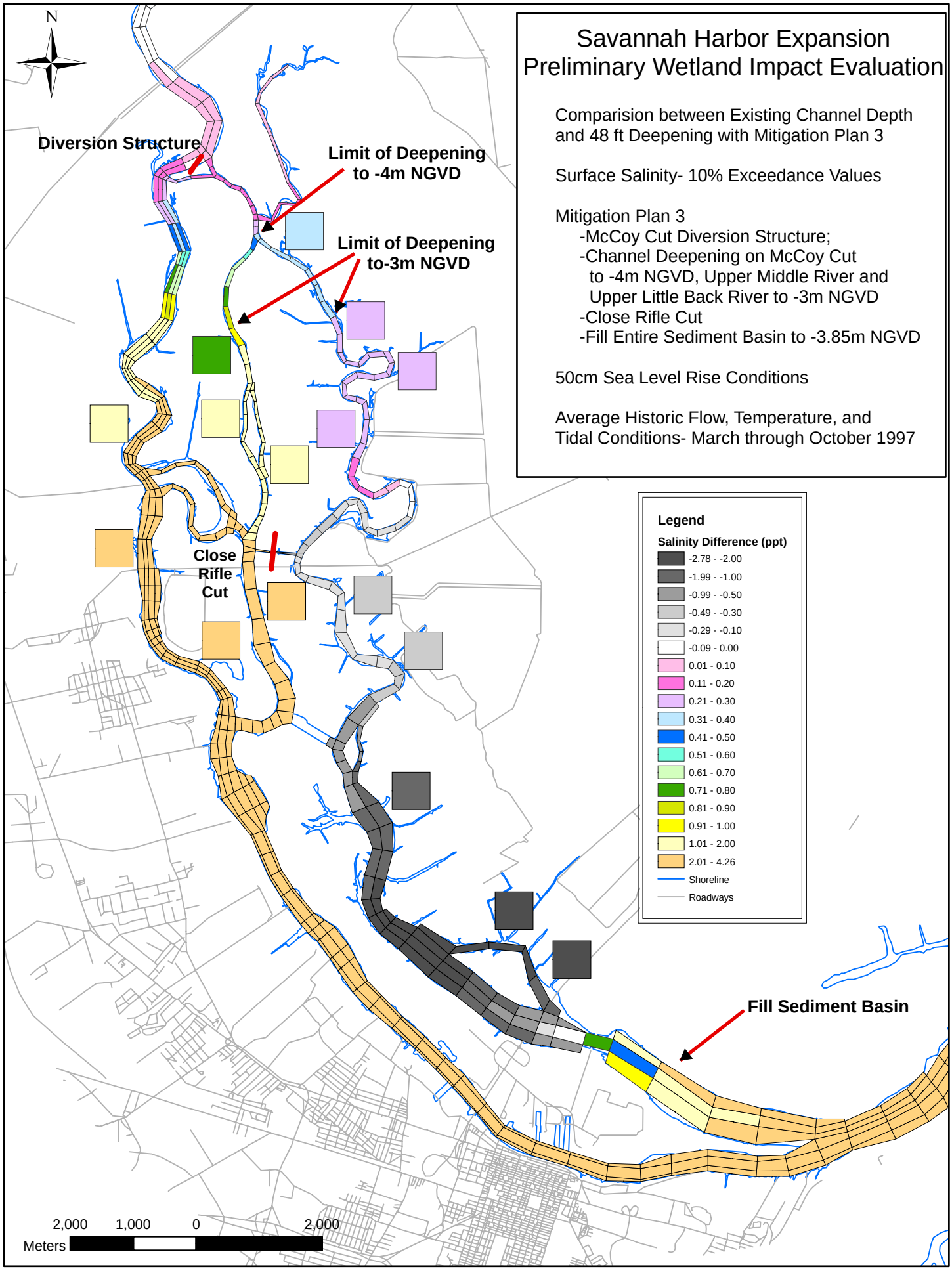
January 2007

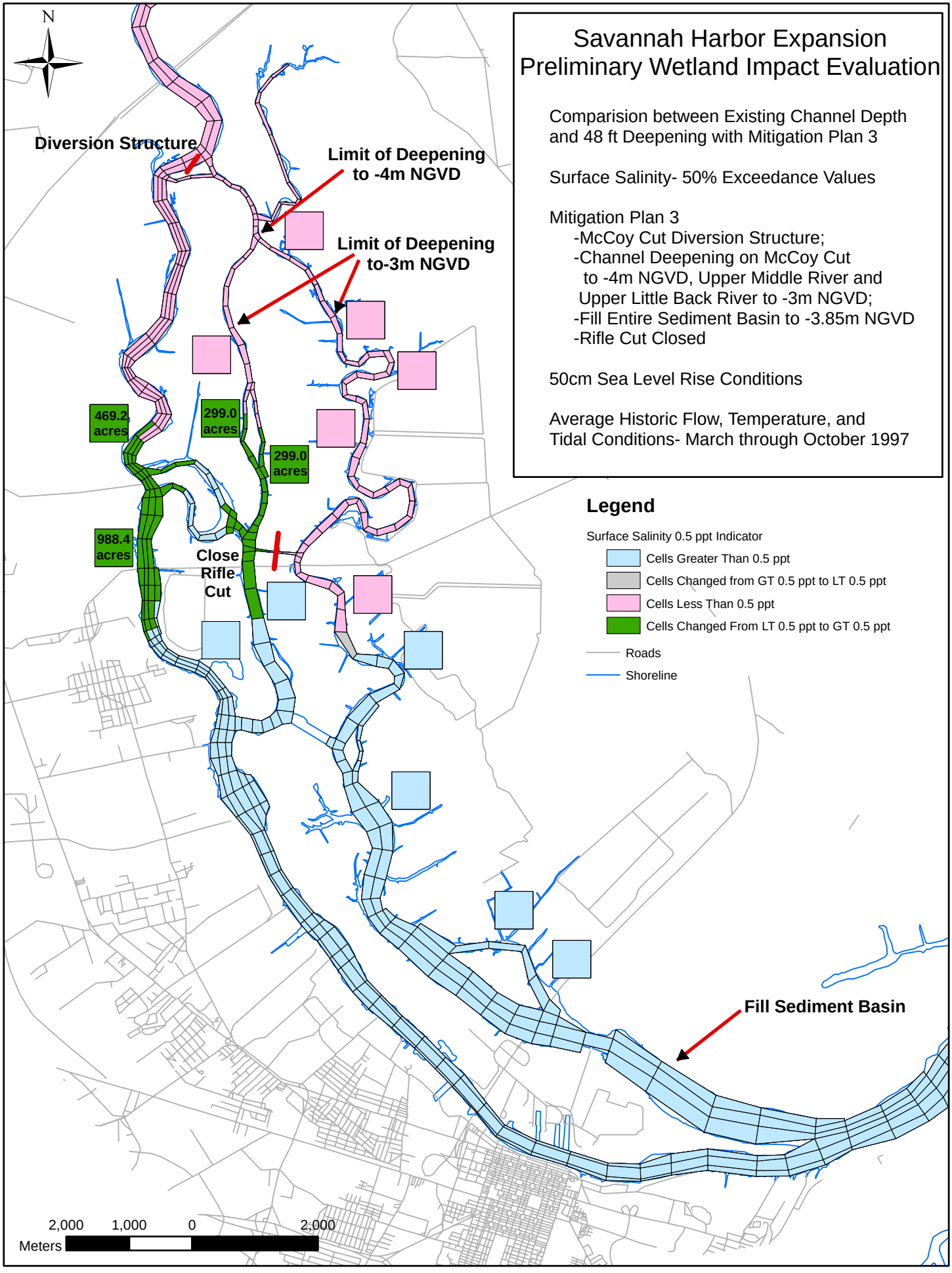

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
469.2 acres
299.0 acres
299.0 acres
988.4 acres
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
25cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

Sensitivity Analysis #2B


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 50% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-1.53 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.95
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD
-Close Rifle Cut
-Fill Entire Sediment Basin to -3.85m NGVD
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-2.78 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 4.26
Shoreline
Roadways
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3

Surface Salinity- 50% Exceedance Values

Mitigation Plan 3
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Fill Entire Sediment Basin to -3.85m NGVD
- -Rifle Cut Closed

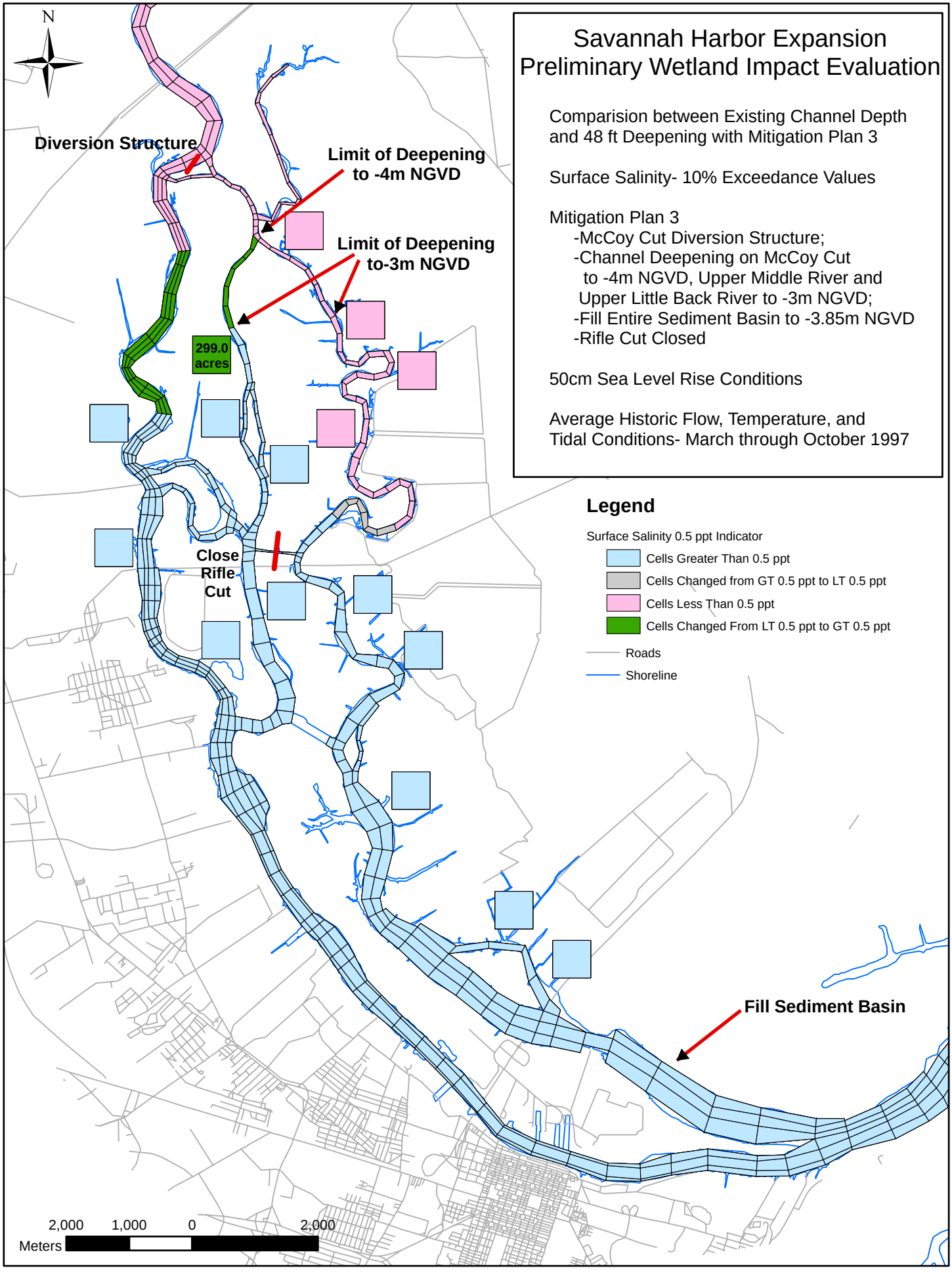
50cm Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator
- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007

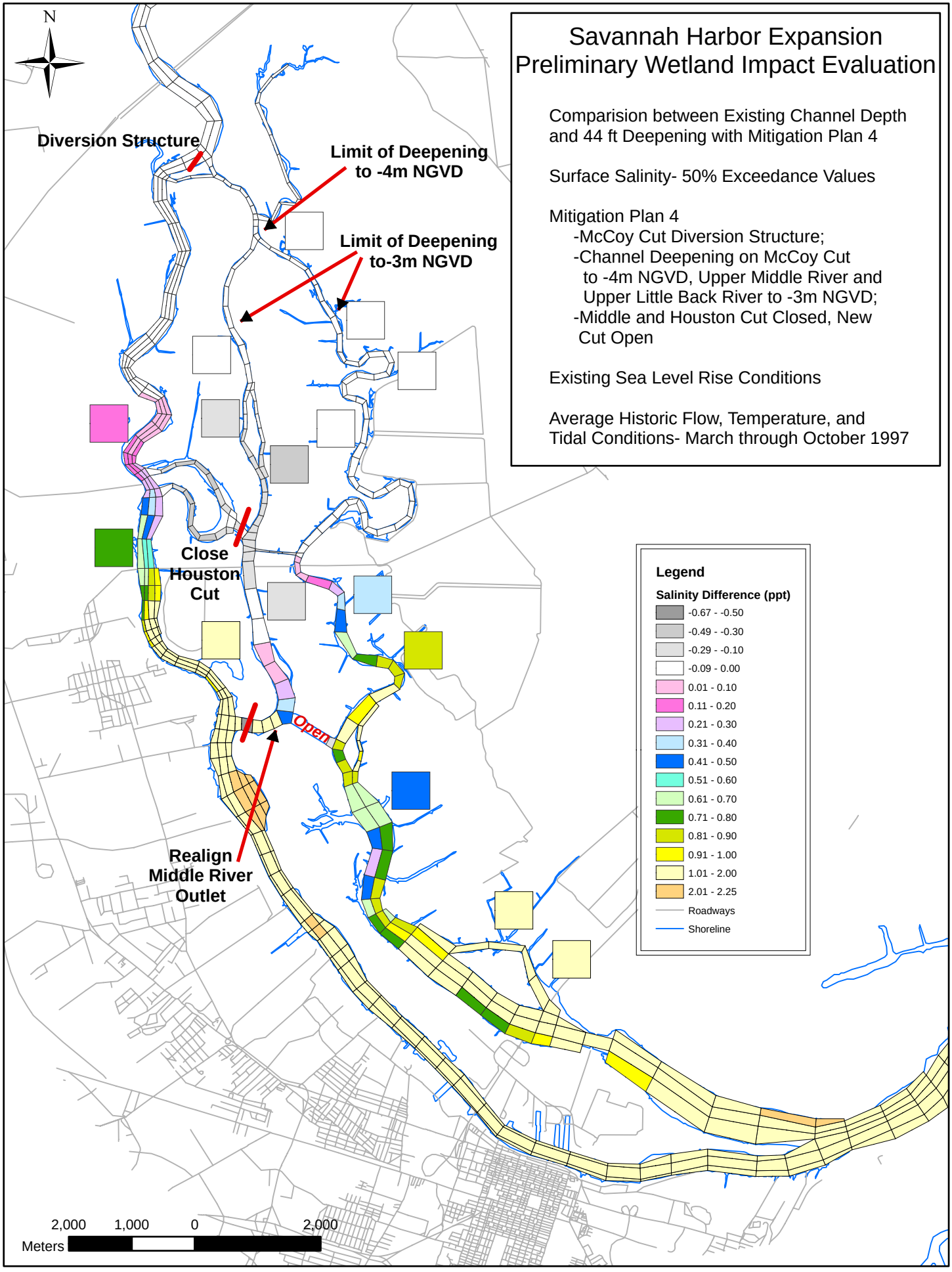

N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
299.0 acres
Close Rifle Cut
Fill Sediment Basin
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 48 ft Deepening with Mitigation Plan 3
Surface Salinity- 10% Exceedance Values
Mitigation Plan 3
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Fill Entire Sediment Basin to -3.85m NGVD
-Rifle Cut Closed
50cm Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Surface Salinity 0.5 ppt Indicator
Cells Greater Than 0.5 ppt
Cells Changed from GT 0.5 ppt to LT 0.5 ppt
Cells Less Than 0.5 ppt
Cells Changed From LT 0.5 ppt to GT 0.5 ppt
Roads
Shoreline
2,000 1,000 0 2,000
Meters
January 2007

MITIGATION PLAN 4

- ***McCoy Cut Diversion Structure***
- ***Channel Deepening on McCoy Cut to -4m NGVD and Upper Middle and Little Back River to -3m NGVD***
- ***Realign Middle River Outlet by Closing Middle River at Front River and Opening New Cut***
- ***Close Houston Cut***

44-ft Deepening

Basic Evaluation



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 4

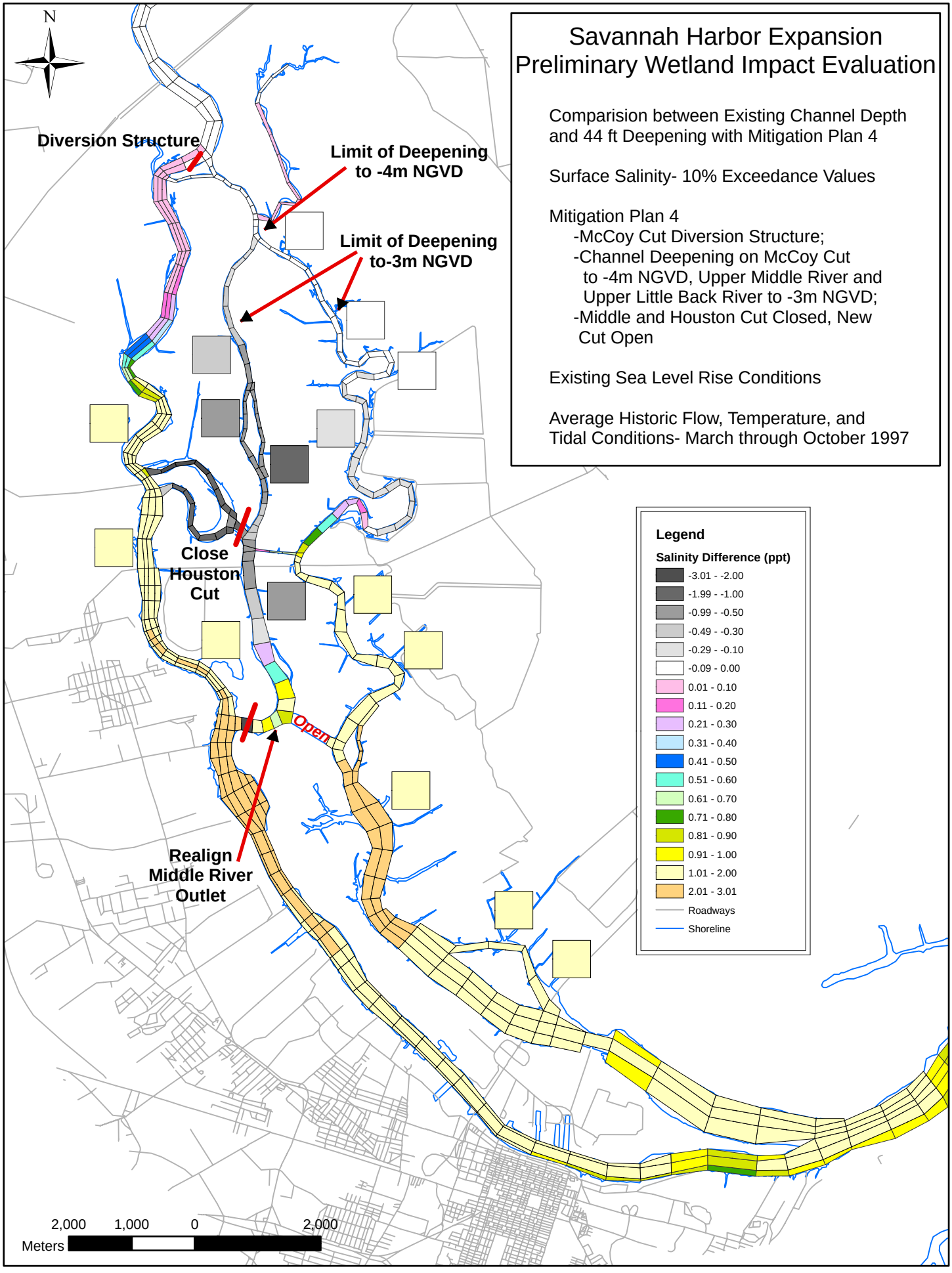
Surface Salinity- 50% Exceedance Values

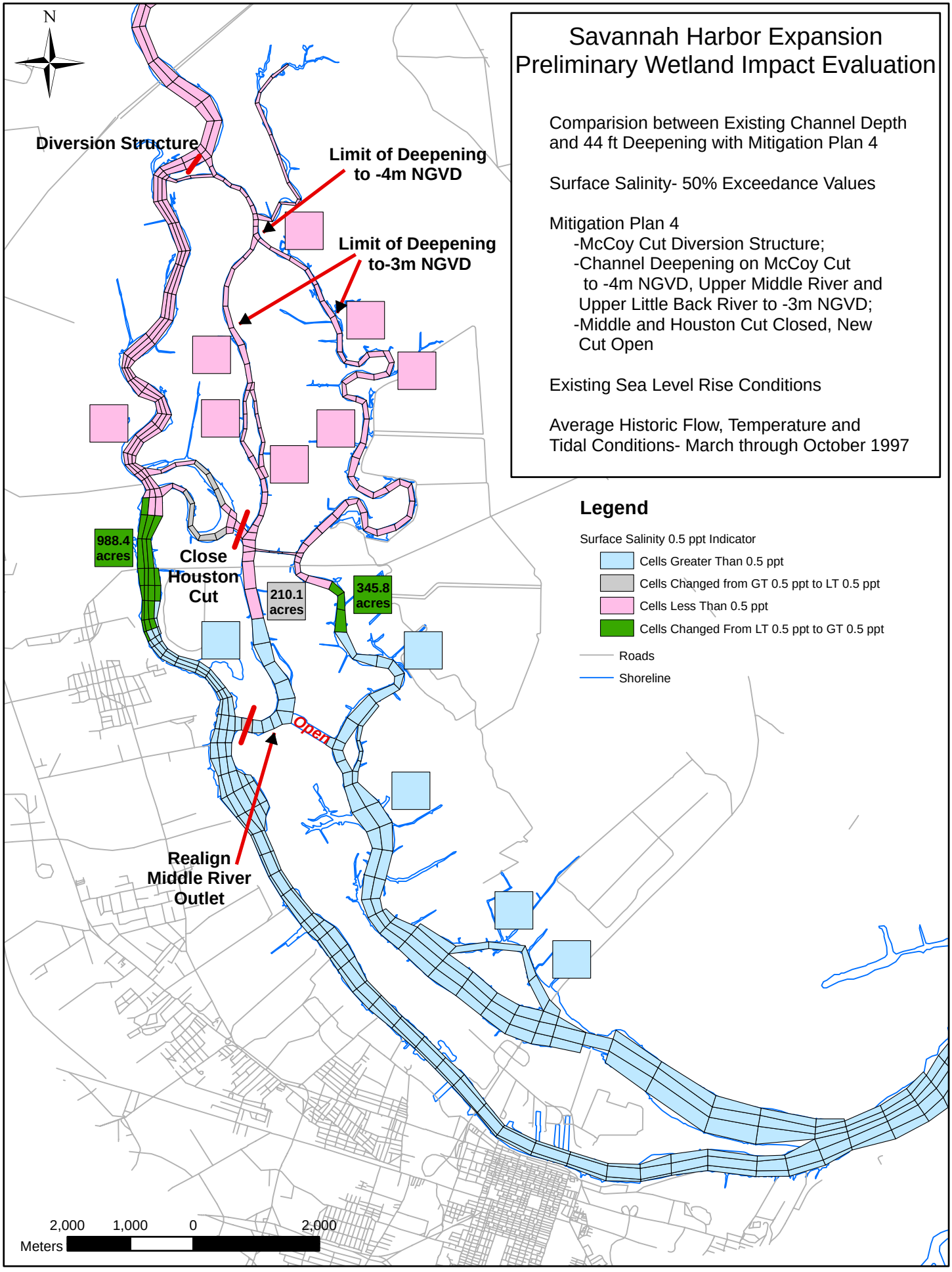
Mitigation Plan 4
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Middle and Houston Cut Closed, New Cut Open

Existing Sea Level Rise Conditions

Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997

January 2007


N
Diversion Structure
Limit of Deepening to -4m NGVD
Limit of Deepening to-3m NGVD
Close Houston Cut
Open
Realign Middle River Outlet
Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation
Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 4
Surface Salinity- 10% Exceedance Values
Mitigation Plan 4
-McCoy Cut Diversion Structure;
-Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
-Middle and Houston Cut Closed, New Cut Open
Existing Sea Level Rise Conditions
Average Historic Flow, Temperature, and Tidal Conditions- March through October 1997
Legend
Salinity Difference (ppt)
-3.01 - -2.00
-1.99 - -1.00
-0.99 - -0.50
-0.49 - -0.30
-0.29 - -0.10
-0.09 - 0.00
0.01 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.50
0.51 - 0.60
0.61 - 0.70
0.71 - 0.80
0.81 - 0.90
0.91 - 1.00
1.01 - 2.00
2.01 - 3.01
Roadways
Shoreline
2,000 1,000 0 2,000
Meters
January 2007



Savannah Harbor Expansion
Preliminary Wetland Impact Evaluation

Comparision between Existing Channel Depth and 44 ft Deepening with Mitigation Plan 4

Surface Salinity- 50% Exceedance Values

Mitigation Plan 4
- -McCoy Cut Diversion Structure;
- -Channel Deepening on McCoy Cut to -4m NGVD, Upper Middle River and Upper Little Back River to -3m NGVD;
- -Middle and Houston Cut Closed, New Cut Open

Existing Sea Level Rise Conditions

Average Historic Flow, Temperature and Tidal Conditions- March through October 1997

Legend

Surface Salinity 0.5 ppt Indicator

- Cells Greater Than 0.5 ppt
- Cells Changed from GT 0.5 ppt to LT 0.5 ppt
- Cells Less Than 0.5 ppt
- Cells Changed From LT 0.5 ppt to GT 0.5 ppt
- Roads
- Shoreline

January 2007