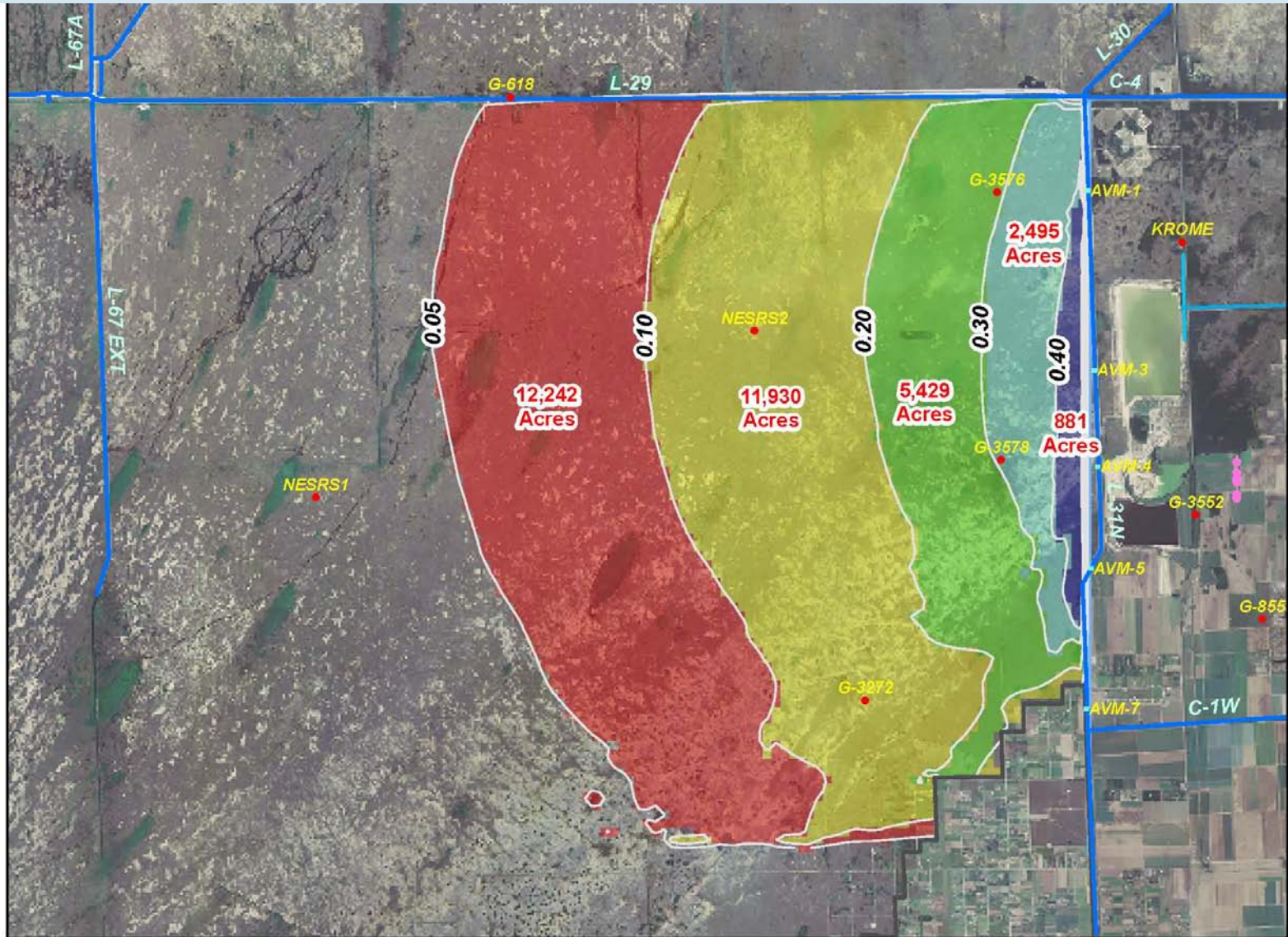


# L-31N Seepage Barrier WRAP Scoring

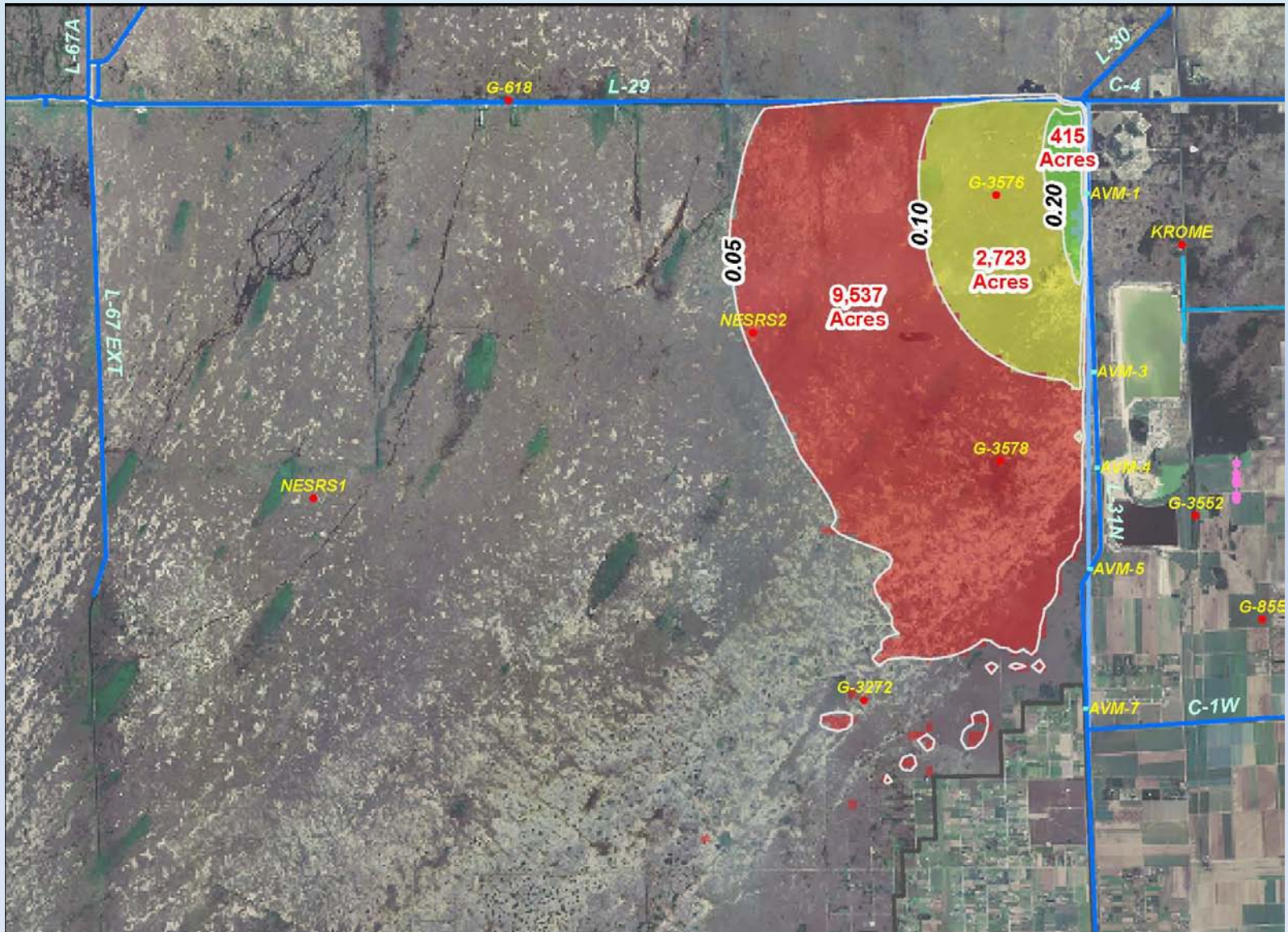
September 23, 2011

Area within Everglades National Park affected by a 7 mile long, 30 foot deep barrier during a typical wet season (average daily stage data from 7/1/2008 through 10/31/2008).



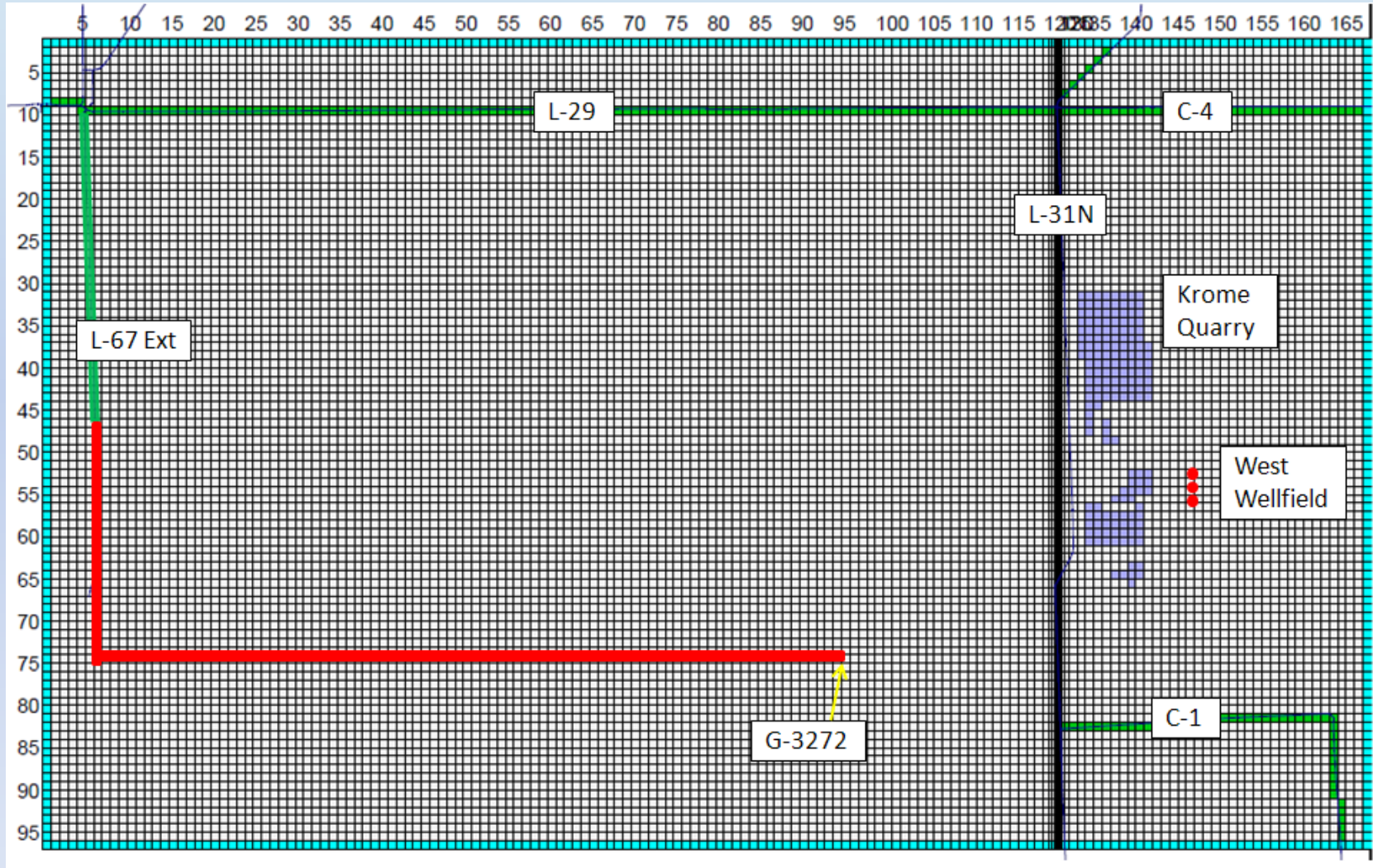


Area within Everglades National Park affected by a 2 mile long, 30 foot deep barrier during a typical wet season (average daily stage data from 7/1/2008 through 10/31/2008).

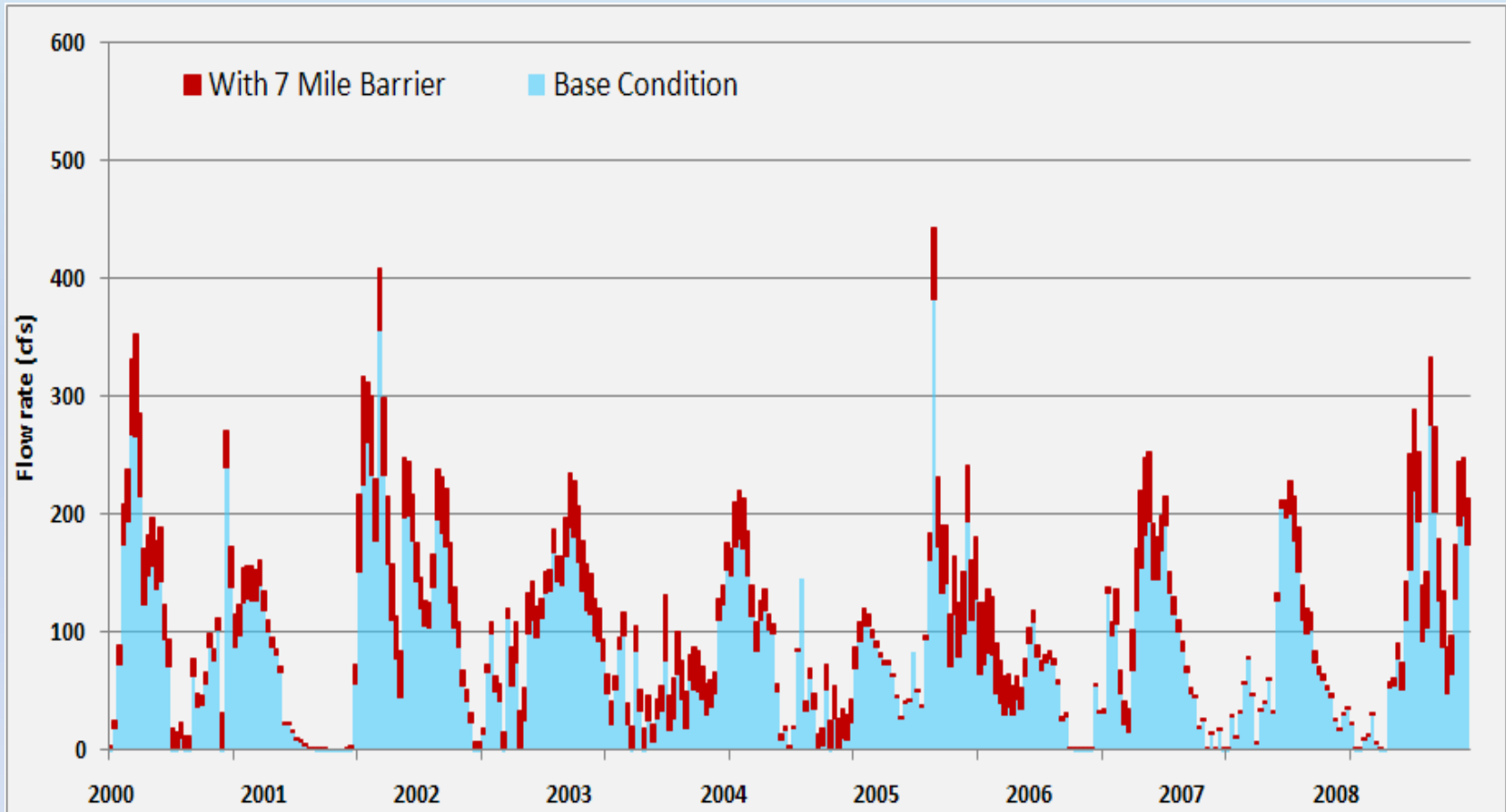




**Figure A-9.** The flow transect used for estimating change in sheetflow as a result of the seepage barrier are shown in red.



**Figure A-10.** Estimated net flow across the transect shown in Figure A-9, with and without the 7-mile, 30 foot deep seepage barrier.



**Table A-3.** Net change in flow through Northeast Shark River Slough at the transect in Figure A-9, as a percentage of the base flow. Shallow indicates a barrier depth of 18 feet and deep indicates a depth of 30 feet. The numbers following the depth designations refer to the length of the barrier, in miles, from Tamiami Trail to the south.

Average Percent Change in Flow for Various Seepage Barrier Configurations							
	Season	Shallow-7	Deep-7	Deep-2	Deep-1.5	Deep-1	Deep-7 (40 MGD)
Net Change for NESRS	Annual	8.7%	27.8%	8.2%	5.8%	3.2%	27.0%
	Wet	12.2%	37.5%	11.0%	7.7%	4.4%	36.1%
	Dry	5.6%	19.3%	5.6%	4.0%	2.1%	19.0%

# WRAP Scoring Categories

- Wildlife utilization
- Wetland Overstory/Shrub Canopy
- Wetland Vegetative Ground Cover
- Adjacent Upland/Wetland Buffer
- Field Indicators of Wetland Hydrology
- Water Quality Input and Treatment Systems

## Not Applicable

- Wetland Overstory/Shrub Canopy

## No Change

- Adjacent Upland/Wetland Buffer
- Water Quality Input and Treatment Systems



# Primary Benefit

## Field Hydrology

Wet season water depth increase (feet)	Hydrology WRAP score adjustment
0.3 or more	2/3 step (+0.67)
0.2 to 0.3	1/2 step (+0.50)
0.1 to 0.2	1/3 step (+0.33)
0.05 to 0.1	1/6 step (+0.17)

# Associated Benefits

## Wetland ground cover & Wildlife utilization

Wet season water depth increase (feet)	WRAP score adjustment
0.3 or more	1/2 step (+0.50)
0.2 to 0.3	1/3 step (+0.33)
0.1 to 0.2	1/6 step (+0.17)
Less than 0.1	none

# WRAP Score Calculation

Stage Change	Scoring Categories						WRAP	
	WU	WC	GC	HSB	HYD	WQ	Score	Lift
Baseline	2.00	0.00	2.00	3.00	2.00	3.00	0.80	N/A
>0.3 ft.	2.50	0.00	2.50	3.00	2.67	3.00	0.91	0.111
0.2 to 0.3 ft.	2.33	0.00	2.33	3.00	2.50	3.00	0.88	0.077
0.1 to 0.2 ft.	2.17	0.00	2.17	3.00	2.33	3.00	0.84	0.045
0.05 to 0.1 ft.	2.00	0.00	2.00	3.00	2.17	3.00	0.81	0.011

WU - Wildlife Utilization  
 WC - Wetland Canopy  
 GC - Wetland Ground Cover  
 HSB - Habitat Support/Buffer  
 HYD - Hydrology  
 WQ - Water Quality & Treatment

# Mitigation Credits

Stage Change	WRAP		Acreage		Mitigation Credits	
	Score	Lift	7-mile	2-mile	7-mile	2-mile
Baseline	0.80	N/A	N/A	N/A	N/A	N/A
>0.3 ft.	0.91	0.111	3,376	<b>0</b>	<b>376</b>	<b>0</b>
0.2 to 0.3 ft.	0.88	0.077	5,429	415	<b>420</b>	<b>32</b>
0.1 to 0.2 ft.	0.84	0.045	11,930	2,723	<b>533</b>	<b>122</b>
0.05 to 0.1 ft.	0.81	0.011	12,242	9,537	<b>139</b>	<b>108</b>
				<b>Totals</b>	<b>1467</b>	<b>262</b>