

Figure 2
Surface Water Quality - Total Suspended Solids
East Fonhill

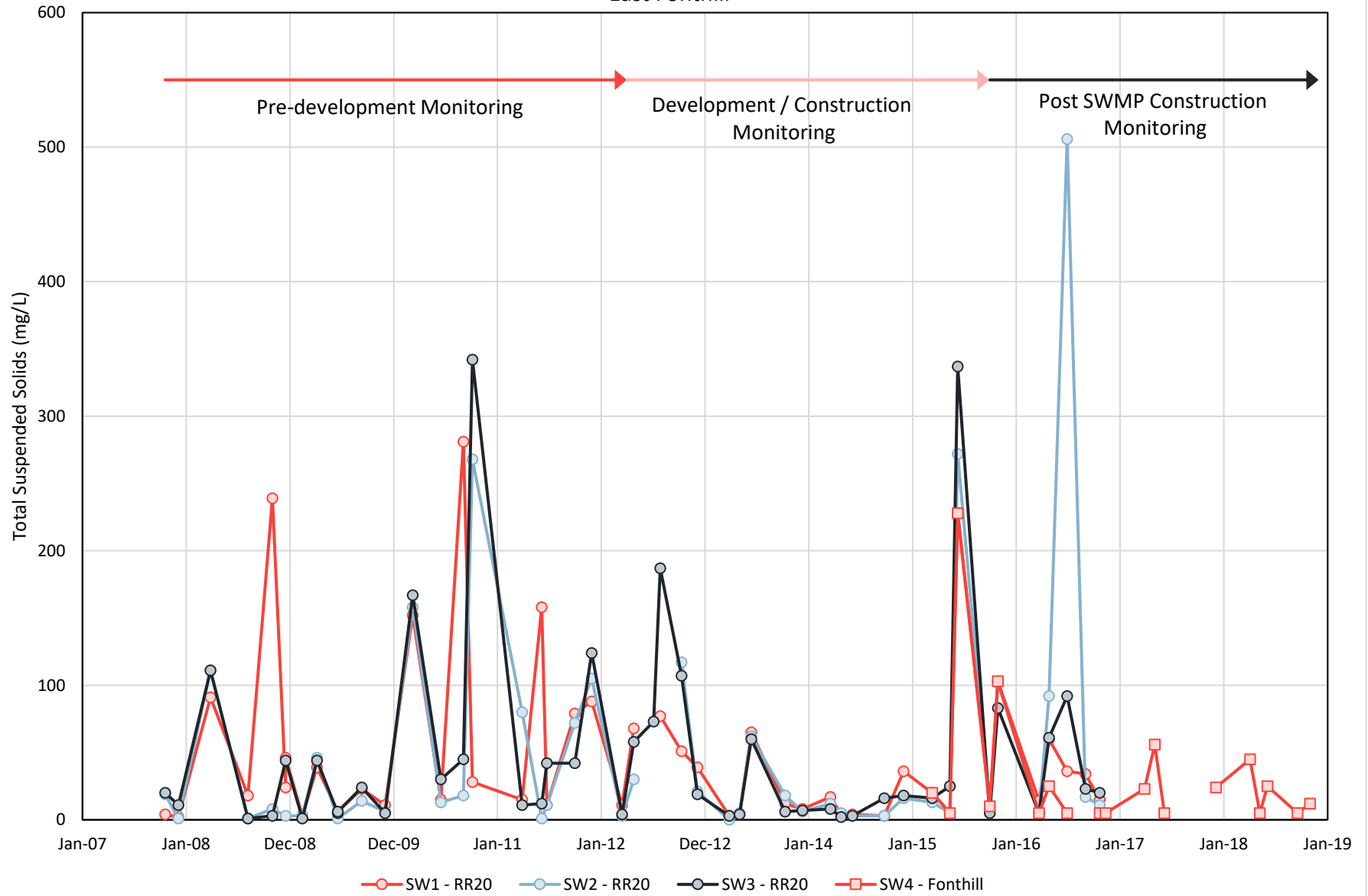


Figure 3
Surface Water Quality - Temperature
East Fonthill

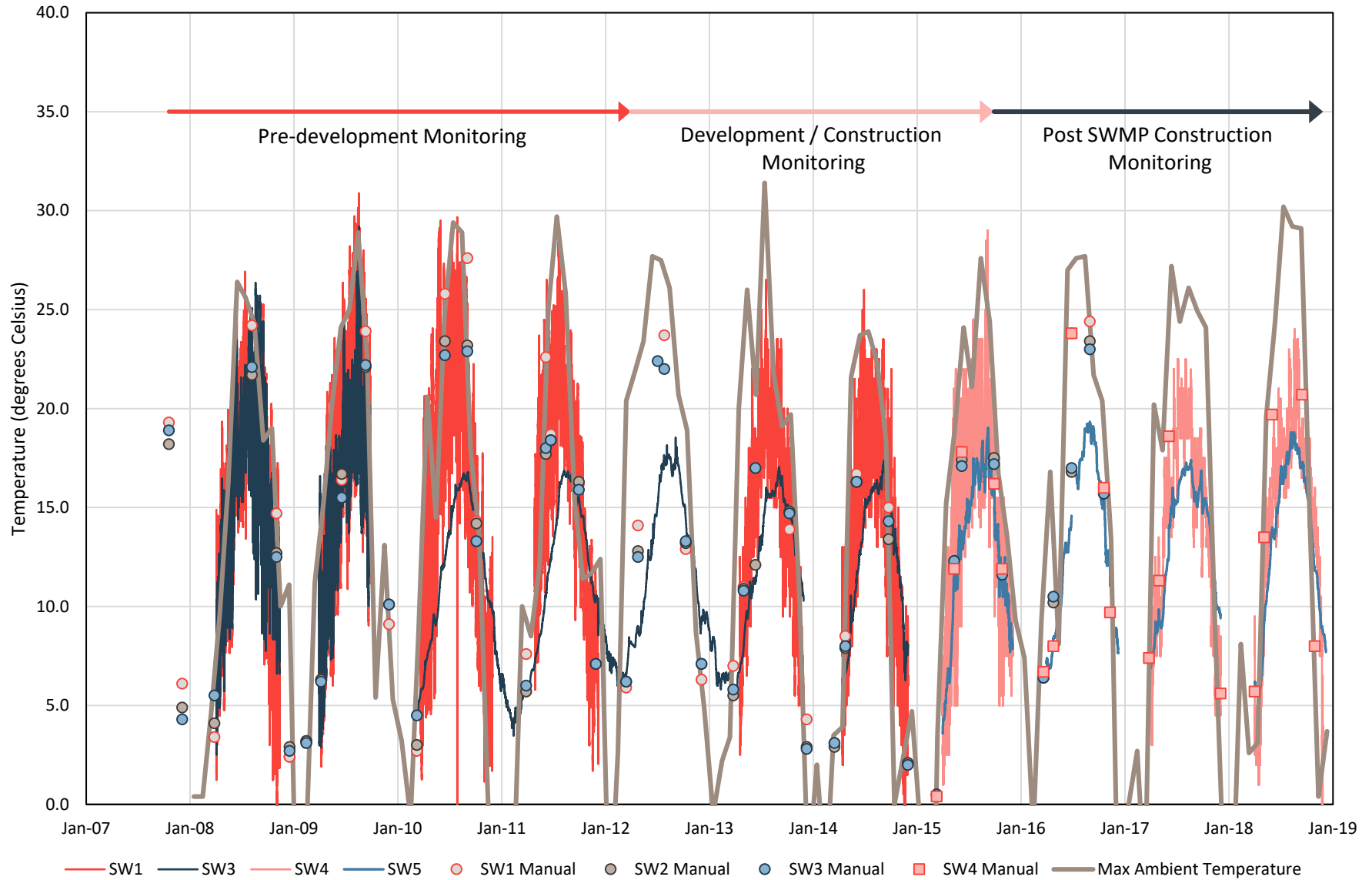
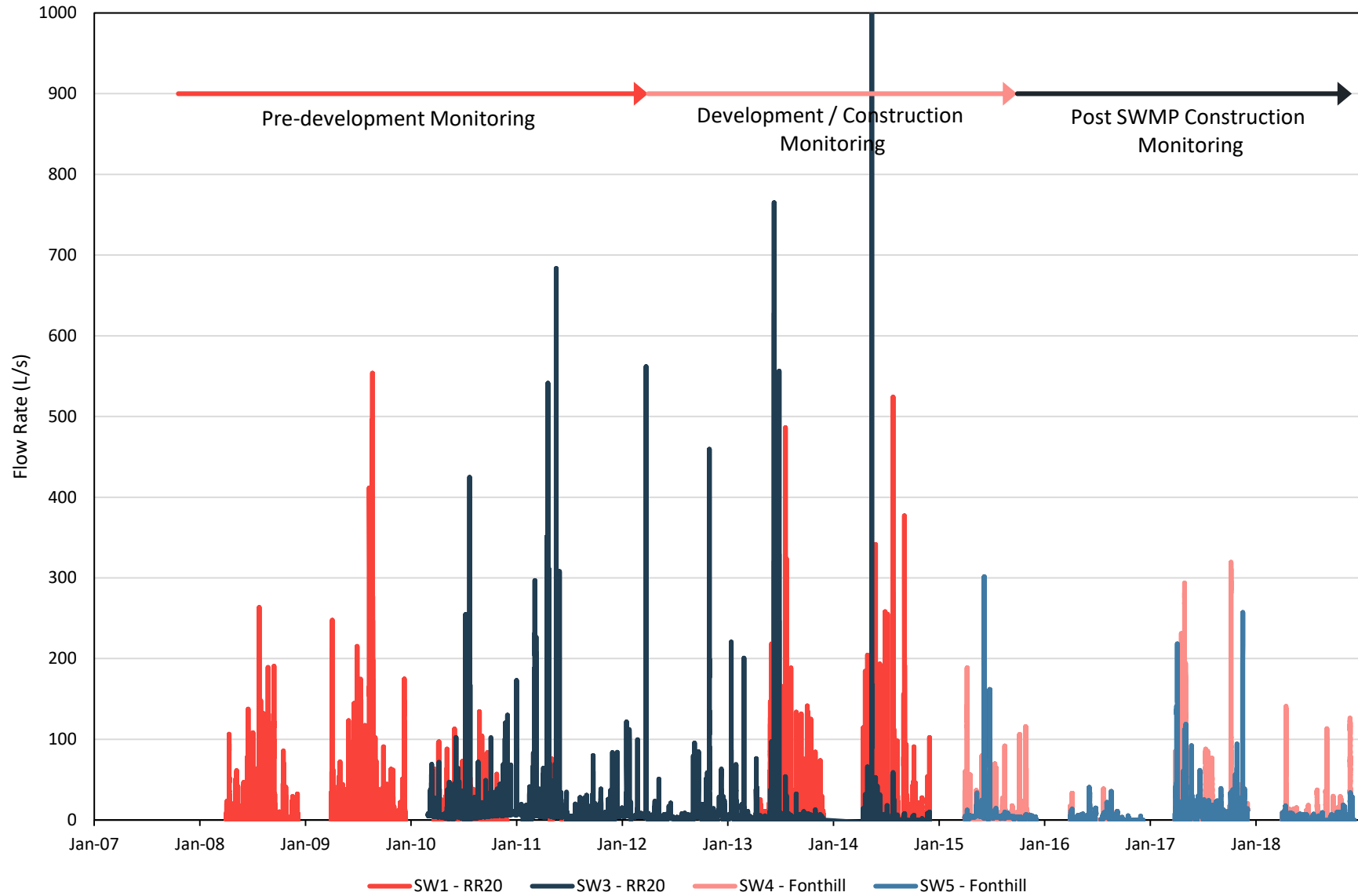
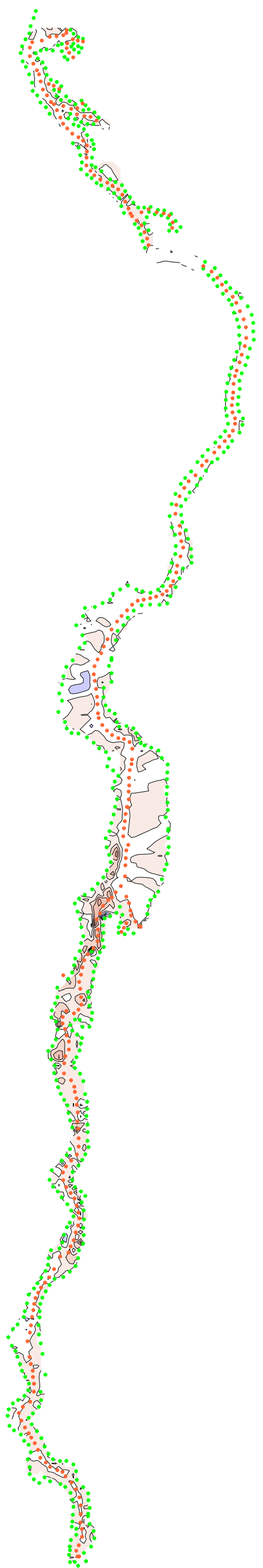


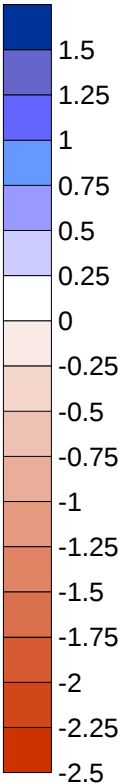
Figure 4
Surface Water Quantity - Flows
East Fonthill





- LEGEND:**
- TOP OF BANK WITH SURVEY POINTS (2008)
 - CENTRE LINE WITH SURVEY POINTS (2008)
 - 218— EROSION/ACCRETION CONTOUR (METRES)

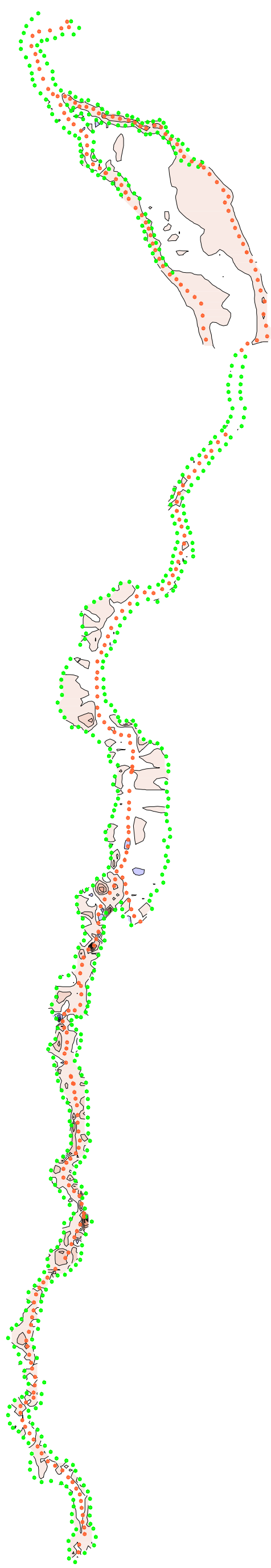
EROSION/ACCRETION COLOUR SCALE



RICE ROAD TRIBUTARY EROSION SURVEY 2008 MINUS 2007

PREDEVELOPMENT MONITORING REPORT
REGIONAL ROAD 20 REDEVELOPMENT
REGIONAL MUNICIPALITY OF NIAGARA

DATE: MARCH 2009	SCALE: 1:590
PROJECT: 1070359.00	REF.: H:\PROJECTS\2007\1070359\00\GRAPHICS\SURFER\2008\MINUS2007_SURVEY_RR20.SRF
 JAGGER HIMS LIMITED <i>Environmental Consulting Engineers</i>	FIGURE: 5.1



LEGEND:

- TOP OF BANK WITH SURVEY POINTS (2009)
- CENTRE LINE WITH SURVEY POINTS (2009)
- 218— EROSION/ACCRETION CONTOUR (METRES)

EROSION/ACCRETION COLOUR SCALE

1.5
1.25
1
0.75
0.5
0.25
0
-0.25
-0.5
-0.75
-1
-1.25
-1.5
-1.75
-2
-2.25
-2.5

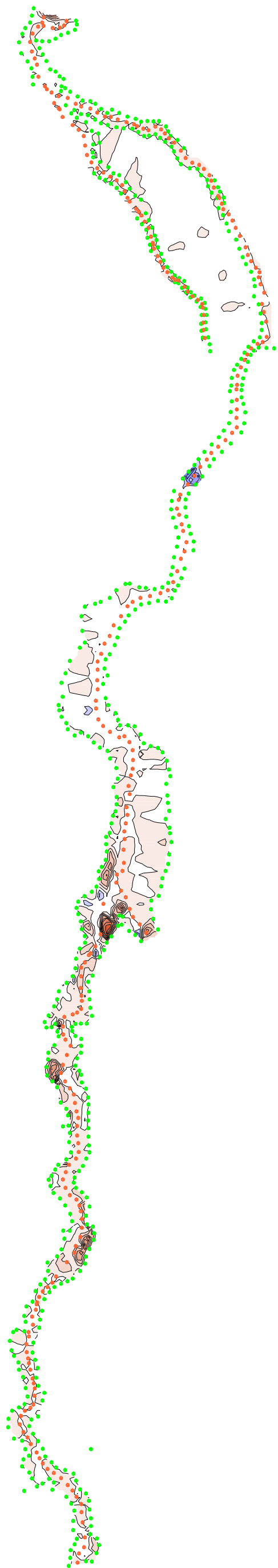
RICE ROAD TRIBUTARY EROSION SURVEY 2009 MINUS 2008

SURFACE WATER AND EROSION
MONITORING REPORT
REGIONAL ROAD 20 REDEVELOPMENT
REGIONAL MUNICIPALITY OF NIAGARA

DATE: MAY 2009	SCALE: 1:590
PROJECT: 1070359.00	REF.: \\PROJECTS\2007\1070359\00\GENIVAR\CS\REPORTS\REPORT SURFET\FIGURES\00MAIN\0008_SURVEY_FIGURE.DWG

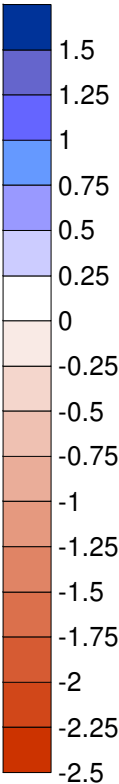
GENIVAR

FIGURE:
5.2



- LEGEND:**
- TOP OF BANK WITH SURVEY POINTS (2010)
 - CENTRE LINE WITH SURVEY POINTS (2010)
 - 218— EROSION/ACCRETION CONTOUR (METRES)

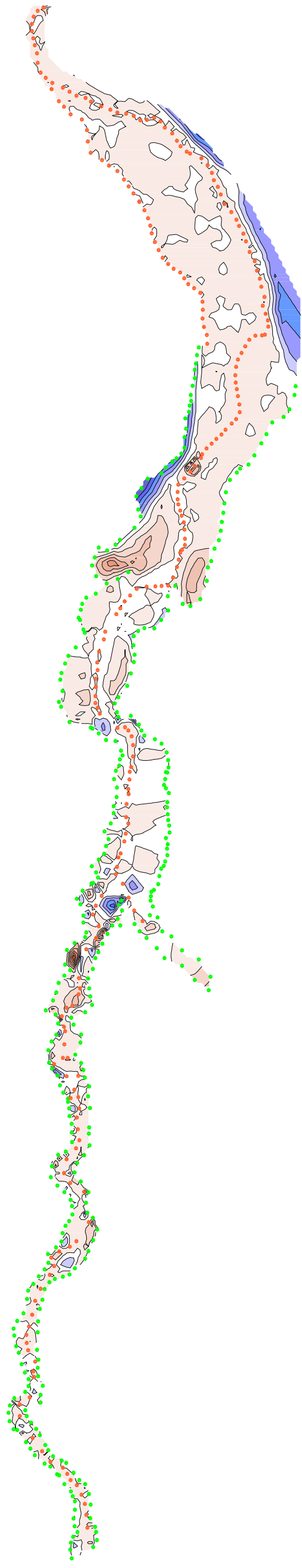
EROSION/ACCRETION COLOUR SCALE



RICE ROAD TRIBUTARY EROSION SURVEY 2010 MINUS 2009

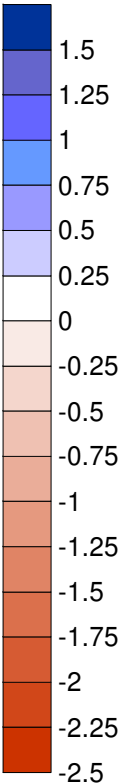
PRE-CONSTRUCTION MONITORING REPORT
REGIONAL ROAD 20 REDEVELOPMENT
REGIONAL MUNICIPALITY OF NIAGARA

DATE: APRIL 2011	SCALE: 1:590
PROJECT: 111-53018-00 A02	REF.: PROJECT/111-53018-00 PRE-CONSTRUCTION MONITORING REPORT/REGIONAL ROAD 20 REDEVELOPMENT/2010 MINUS 2009 EROSION SURVEY
GENIVAR	FIGURE: 5.3



- LEGEND:
- TOP OF BANK WITH SURVEY POINTS (2011)
 - CENTRE LINE WITH SURVEY POINTS (2011)
 - 218— EROSION/ACCRETION CONTOUR (METRES)

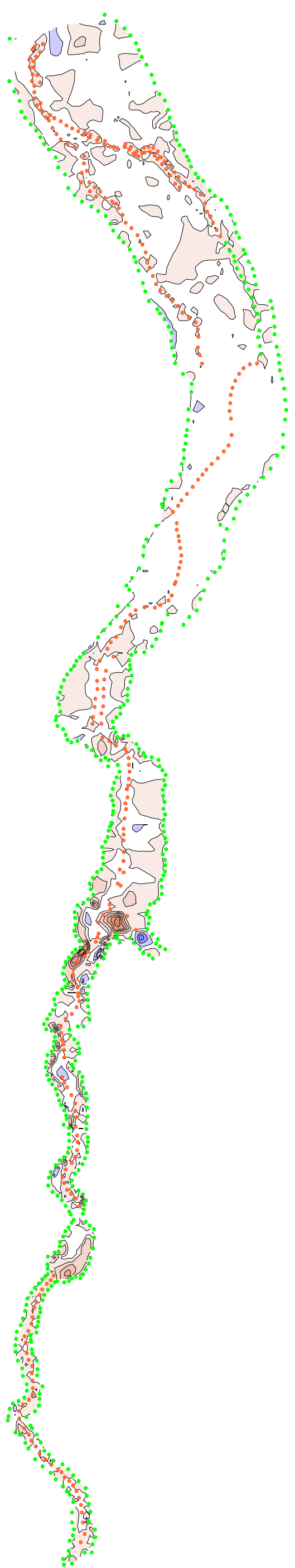
EROSION/ACCRETION COLOUR SCALE



RICE ROAD TRIBUTARY
EROSION SURVEY
2011 MINUS 2010

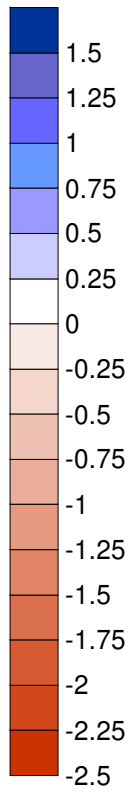
PRE-CONSTRUCTION MONITORING REPORT
REGIONAL ROAD 20 REDEVELOPMENT
REGIONAL MUNICIPALITY OF NIAGARA

DATE: APRIL 2011	SCALE: 1:590
PROJECT: 111-53018-00 A02	REF.: PROJECT/111-53018-00 PRE-CONSTRUCTION MONITORING REPORT/REGIONAL ROAD 20 REDEVELOPMENT/2011/EROSION SURVEY/2011 MINUS 2010
GENIVAR	FIGURE: 5.4



- LEGEND:**
- TOP OF BANK WITH SURVEY POINTS (2012)
 - CENTRE LINE WITH SURVEY POINTS (2012)
 - 218— EROSION/ACCRETION CONTOUR (METRES)

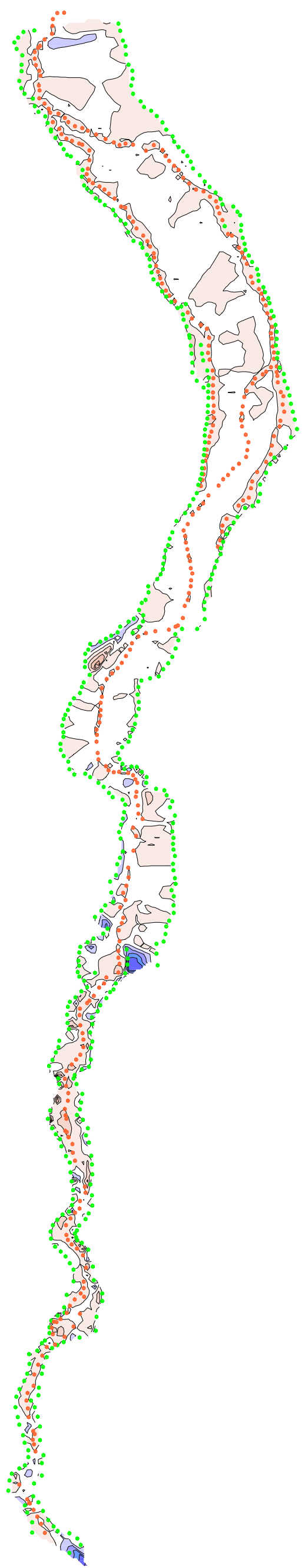
EROSION/ACCRETION COLOUR SCALE



RICE ROAD TRIBUTARY EROSION SURVEY 2012 MINUS 2011

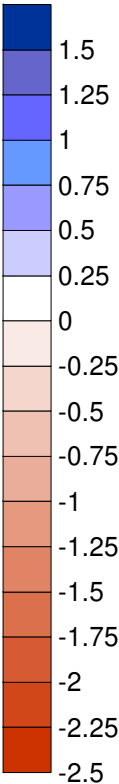
SURFACE WATER AND EROSION
2012 MONITORING REPORT
REGIONAL ROAD 20 REDEVELOPMENT
REGIONAL MUNICIPALITY OF NIAGARA

DATE: APRIL 2012	SCALE: 1:590
PROJECT: 111-53018-00	REF.: PROJECT 111-53018-00 - REGIONAL ROAD 20 REDEVELOPMENT - SURFACE WATER AND EROSION MONITORING REPORT - 2012 MINUS 2011
 GENIVAR	FIGURE: 5.5



- LEGEND:**
- TOP OF BANK WITH SURVEY POINTS (2013)
 - CENTRE LINE WITH SURVEY POINTS (2013)
 - 218— EROSION/ACCRETION CONTOUR (METRES)

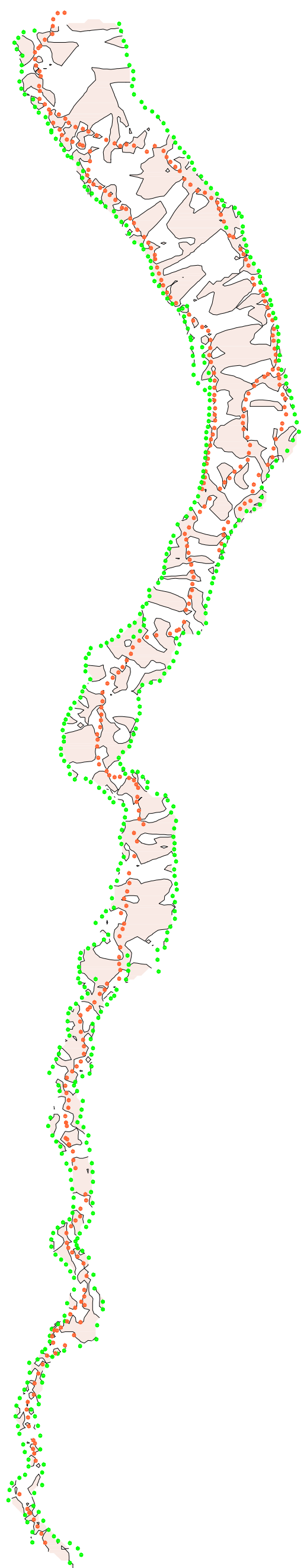
EROSION/ACCRETION COLOUR SCALE



RICE ROAD TRIBUTARY EROSION SURVEY 2013 MINUS 2012

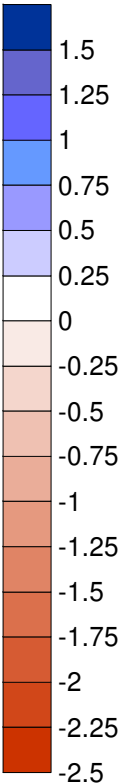
SURFACE WATER AND EROSION
2013 MONITORING REPORT
REGIONAL ROAD 20 REDEVELOPMENT
REGIONAL MUNICIPALITY OF NIAGARA

DATE: MAY 2013	SCALE: 1:590
PROJECT: 111-53018-00	REF.: PROJECT 111-53018-00 - REGIONAL ROAD 20 REDEVELOPMENT - SURFACE WATER AND EROSION MONITORING REPORT 2013
	FIGURE: 5.6



- LEGEND:**
- TOP OF BANK WITH SURVEY POINTS (2014)
 - CENTRE LINE WITH SURVEY POINTS (2014)
 - 218— EROSION/ACCRETION CONTOUR (METRES)

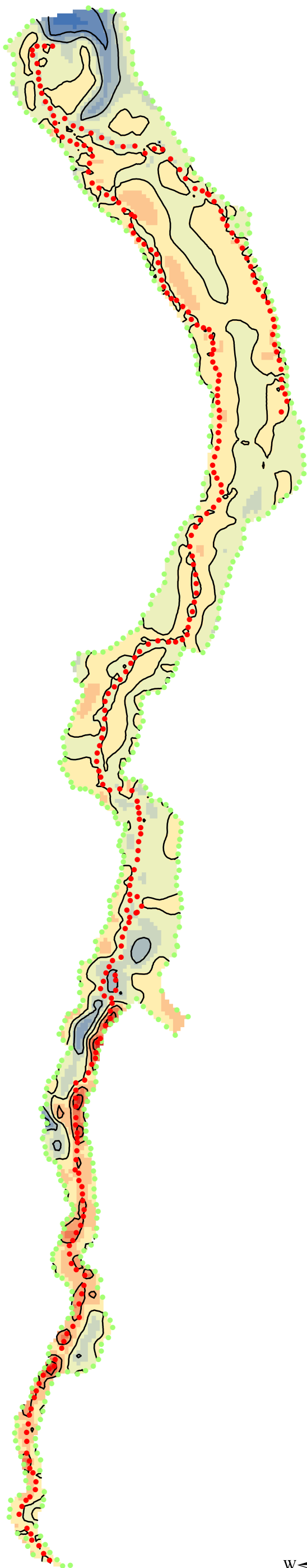
EROSION/ACCRETION COLOUR SCALE



RICE ROAD TRIBUTARY EROSION SURVEY 2014 MINUS 2013

SURFACE WATER AND EROSION
2014 MONITORING REPORT
REGIONAL ROAD 20 REDEVELOPMENT
REGIONAL MUNICIPALITY OF NIAGARA

DATE: MAY 2014	SCALE: 1:590
PROJECT: 111-53018-00	REF.: PROJECT: 111-53018-00 - REGIONAL ROAD 20 REDEVELOPMENT - SURFACE WATER AND EROSION MONITORING REPORT - 2014 MINUS 2013
	FIGURE: 5.7



LEGEND

- CENTRE LINE WITH SURVEY POINTS (2015)
- TOP OF BANK WITH SURVEY POINTS (2015)
- EROSION/ACCRETION CONTOUR (METRES)

EROSION/ACCRETION COLOUR SCALE

1.25 to 1.5
1 to 1.25
0.75 to 1
0.5 to 0.75
0.25 to 0.5
0 to 0.25
-0.25 to 0
-0.5 to -0.25
-0.75 to -0.5
-1 to -0.75
-1.25 to -1
-1.5 to -1.25

NEGATIVE NUMBERS REPRESENT
EROSION, POSITIVE NUMBERS
REPRESENT ACCRETION.

RICE ROAD TRIBUTARY EROSION SURVEY 2015 MINUS 2014

SURFACE WATER AND EROSION
2015 MONITORING REPORT
REGIONAL ROAD 20 REDEVELOPMENT
REGIONAL MUNICIPALITY OF NIAGARA

DATE: APRIL 2016

SCALE: 1:550

PROJECT: 111-53018-00 100-5

FILE. NO.:111-53018-00 100-5 F5



FIGURE

5.8



LEGEND

- CENTRE LINE WITH SURVEY POINTS (2016)
- TOP OF BANK WITH SURVEY POINTS (2016)

EROSION/ACCRETION COLOUR SCALE

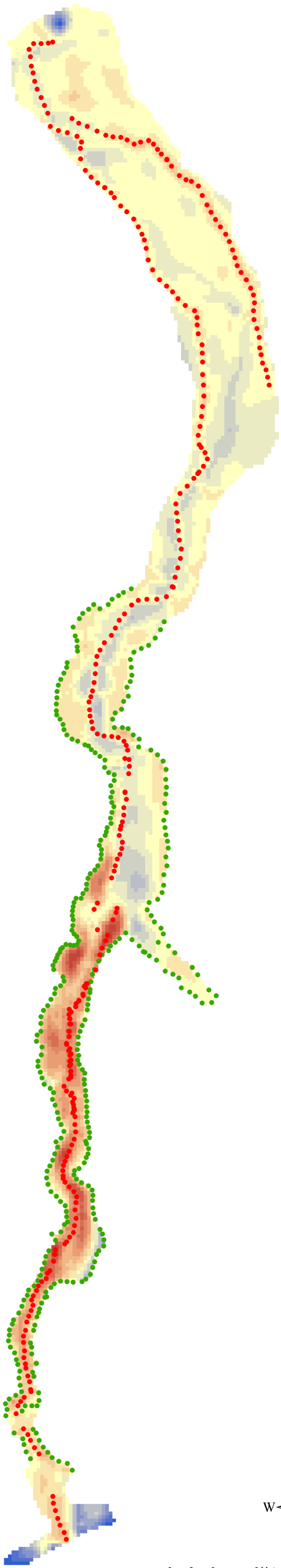
0.75 to 1
0.5 to 0.75
0.25 to 0.5
0 to 0.25
-0.25 to 0
-0.5 to -0.25
-0.75 to -0.5
-1 to -0.75
-1.25 to -1
-1.5 to -1.25

NEGATIVE NUMBERS REPRESENT
EROSION, POSITIVE NUMBERS
REPRESENT ACCRETION.



6 3 0 6 Metres

RICE ROAD TRIBUTARY EROSION SURVEY 2016 MINUS 2015		
SURFACE WATER AND EROSION 2016 MONITORING REPORT REGIONAL ROAD 20 REDEVELOPMENT REGIONAL MUNICIPALITY OF NIAGARA		
DATE: JUNE 2017	SCALE: 1:550	
PROJECT: 111-53018-00 100	FILE. NO.:111-53018-00 100 F5	
		FIGURE 5.9



LEGEND

- CENTRE LINE WITH SURVEY POINTS (2016)
- TOP OF BANK WITH SURVEY POINTS (2016)

EROSION/ACCRETION COLOUR SCALE

2 to 2.25
1.75 to 2
1.5 to 1.75
1.25 to 1.5
1 to 1.25
0.75 to 1
0.5 to 0.75
0.25 to 0.5
0 to 0.25
-0.25 to 0
-0.5 to -0.25
-0.75 to -0.5
-1 to -0.75
-1.25 to -1
-1.5 to -1.25
-1.75 to -1.5
-1.75 to -2

NEGATIVE NUMBERS REPRESENT
EROSION, POSITIVE NUMBERS
REPRESENT ACCRETION.



6 3 0 6 Metres

RICE ROAD TRIBUTARY EROSION SURVEY 2016 MINUS 2007		
SURFACE WATER AND EROSION 2016 MONITORING REPORT REGIONAL ROAD 20 REDEVELOPMENT REGIONAL MUNICIPALITY OF NIAGARA		
DATE: JUNE 2017	SCALE: 1:550	
PROJECT: 111-53018-00 100	FILE. NO.:111-53018-00 100 F4	
		FIGURE 6