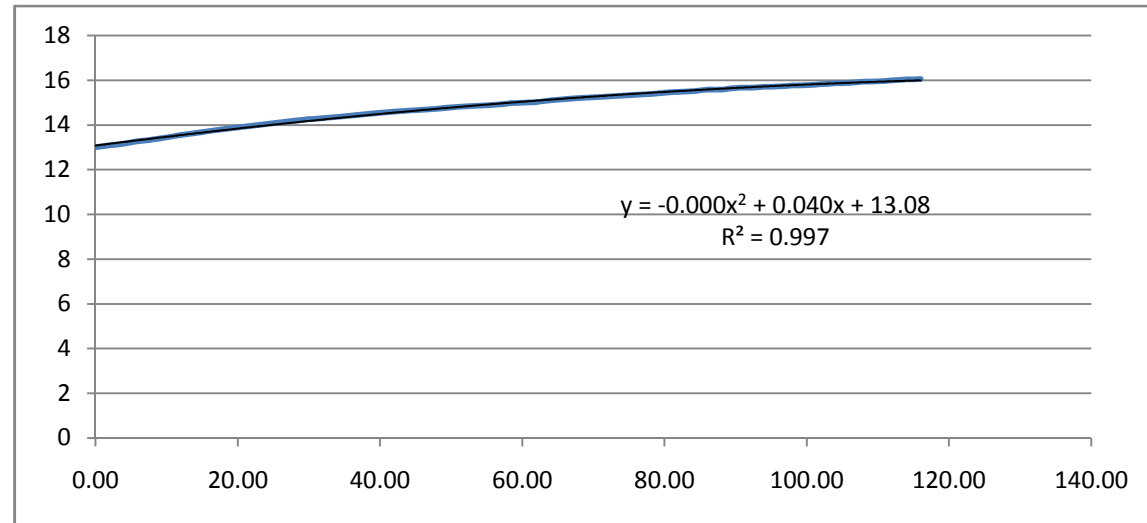


Mathematical prediction of the time and elevation of Altamaha River crest at Altamaha Park

10-Apr-09

Date	Hours	time utc	Stage feet	time dst
5-Apr	0.00	15:30	13	11:30:00 AM
	2.00	17:30	13.08	
	4.00	19:30	13.16	
6-Apr	6.00	21:30	13.27	
	8.00	23:30	13.34	
	10.00	1:30	13.44	
	12.00	3:30	13.55	
	14.00	5:30	13.63	
	16.00	7:30	13.73	
	18.00	9:30	13.8	
	20.00	11:30	13.89	
	22.00	13:30	13.96	
	24.00	15:30	14.05	
	26.00	17:30	14.11	
	28.00	19:30	14.19	
	30.00	21:30	14.26	
	32.00	23:30	14.3	
	7-Apr	34.00	1:30	14.37
		36.00	3:30	14.43
		38.00	5:30	14.48
		40.00	7:30	14.55
42.00		9:30	14.6	
44.00		11:30	14.64	
46.00		13:30	14.68	
48.00		15:30	14.73	
50.00		17:30	14.78	
52.00		19:30	14.84	
54.00		21:30	14.87	



$y = -0.0001x^2 + 0.0407x + 13.08$ Function with 0.9976 correlation

$dy/dx = -0.0002x + 0.0407$ Derivative

$dy/dx = 0.0407 - 0.0002x$

$0 = 0.0407 - 0.0002x$ For Maximum set deriv. = 0

$0.0002x = 0.0407$

$x = 0.0407/0.0002$ Solve for "x" (time in hours)

x = 203.5 Crest in hours from 11:30 am Sunday 4/5 4/13/2009 22:45 **(10:45:00 PM)**

$y = -0.0001(203.5)^2 + 0.0407(203.5) + 13.08$

y = Crest Elevation is predicted to be 17.22 ft.

	56.00	23:30	14.89
8-Apr	58.00	1:30	14.97
	60.00	3:30	15
	62.00	5:30	15.03
	64.00	7:30	15.11
	66.00	9:30	15.16
	68.00	11:30	15.2
	70.00	13:30	15.24
	72.00	15:30	15.28
	74.00	17:30	15.31
	76.00	19:30	15.36
	78.00	21:30	15.39
	80.00	23:30	15.44
9-Apr	82.00	1:30	15.49
	84.00	3:30	15.52
	86.00	5:30	15.58
	88.00	7:30	15.59
	90.00	9:30	15.66
	92.00	11:30	15.67
	94.00	13:30	15.71
	96.00	15:30	15.73
	98.00	17:30	15.77
	100.00	19:30	15.79
	102.00	21:30	15.83
	104.00	23:30	15.87
10-Apr	106.00	1:30	15.89
	108.00	3:30	15.94
	110.00	5:30	15.96
	112.00	7:30	16
	114.00	9:30	16.04
	116.00	11:30	16.061
	118.00	13:30	
	120.00	15:30	
	122.00	17:30	

	124.00	19:30
	126.00	21:30
	128.00	23:30
11-Apr	130.00	1:30
	132.00	3:30
	134.00	5:30
	136.00	7:30
	138.00	9:30
	140.00	11:30
	142.00	13:30
	144.00	15:30
	146.00	17:30
	148.00	19:30
	150.00	21:30
	152.00	23:30
12-Apr	154.00	1:30
	156.00	3:30
	158.00	5:30
	160.00	7:30
	162.00	9:30
	164.00	11:30
	166.00	13:30
	168.00	15:30
	170.00	17:30
	172.00	19:30
	174.00	21:30
	176.00	23:30
13-Apr	178.00	1:30
	180.00	3:30
	182.00	5:30
	184.00	7:30
	186.00	9:30
	188.00	11:30
	190.00	13:30

	192.00	15:30			
	194.00	17:30			
	196.00	19:30			
	198.00	21:30			
	200.00	23:30			
14-Apr	<u>202.00</u>	1:30			
	<u>203.50</u>	<u>2:45</u>	<u>Predicted crest at Altamaha Park</u>	<u>10:45 PM</u>	<u>11-Apr</u>
	<u>204.00</u>	3:30			