Severn Sound Environmental Association

Tiny Beaches Investigation 2005

Canada

Canada-Ontario Agreement
Respecting the Great Lakes Basin Ecosystem

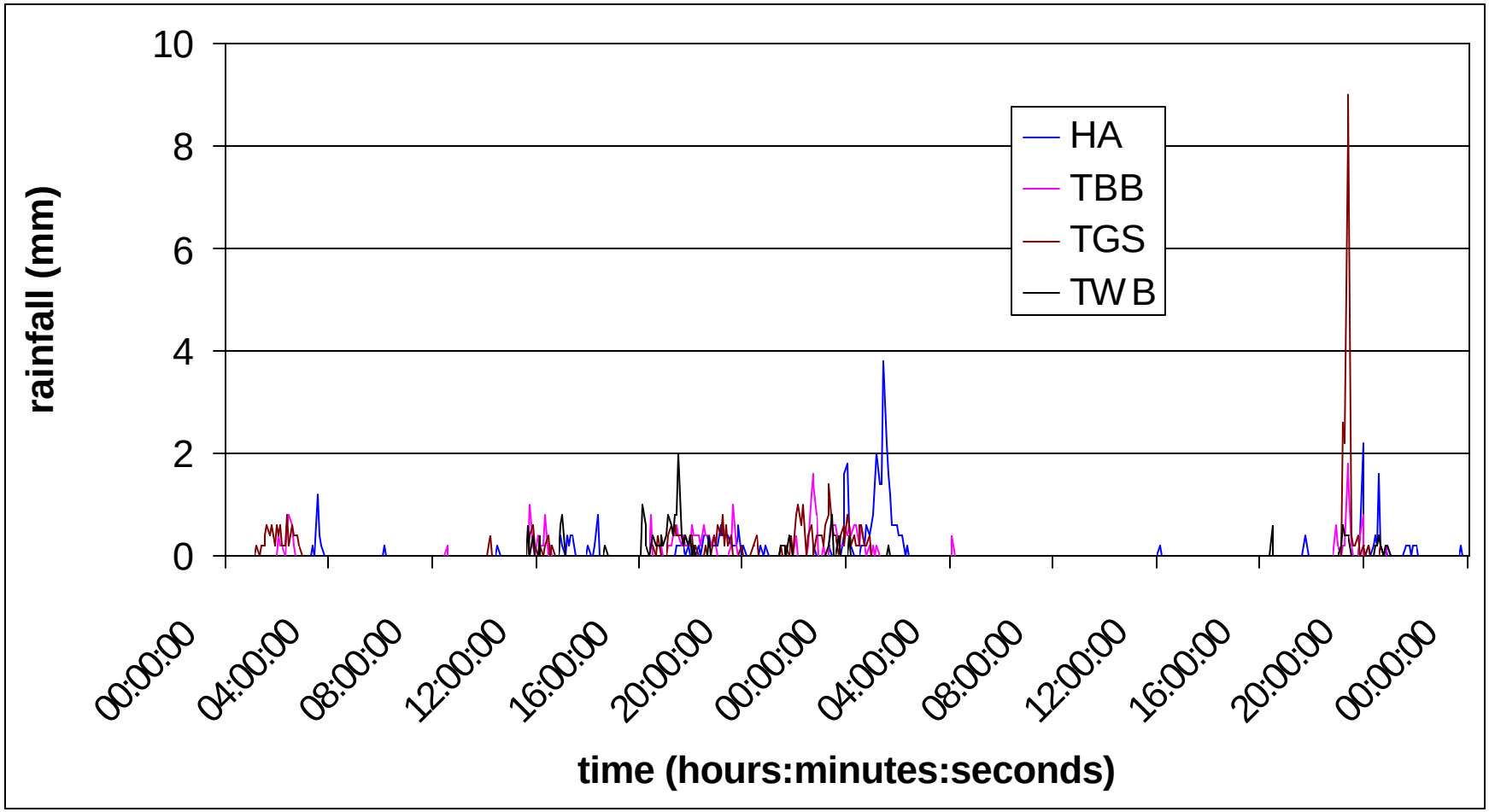
Ontario

Outline

- Rainfall measurement
- Stream investigations
- Air photo interpretation
- Sediment investigations
- Research by others

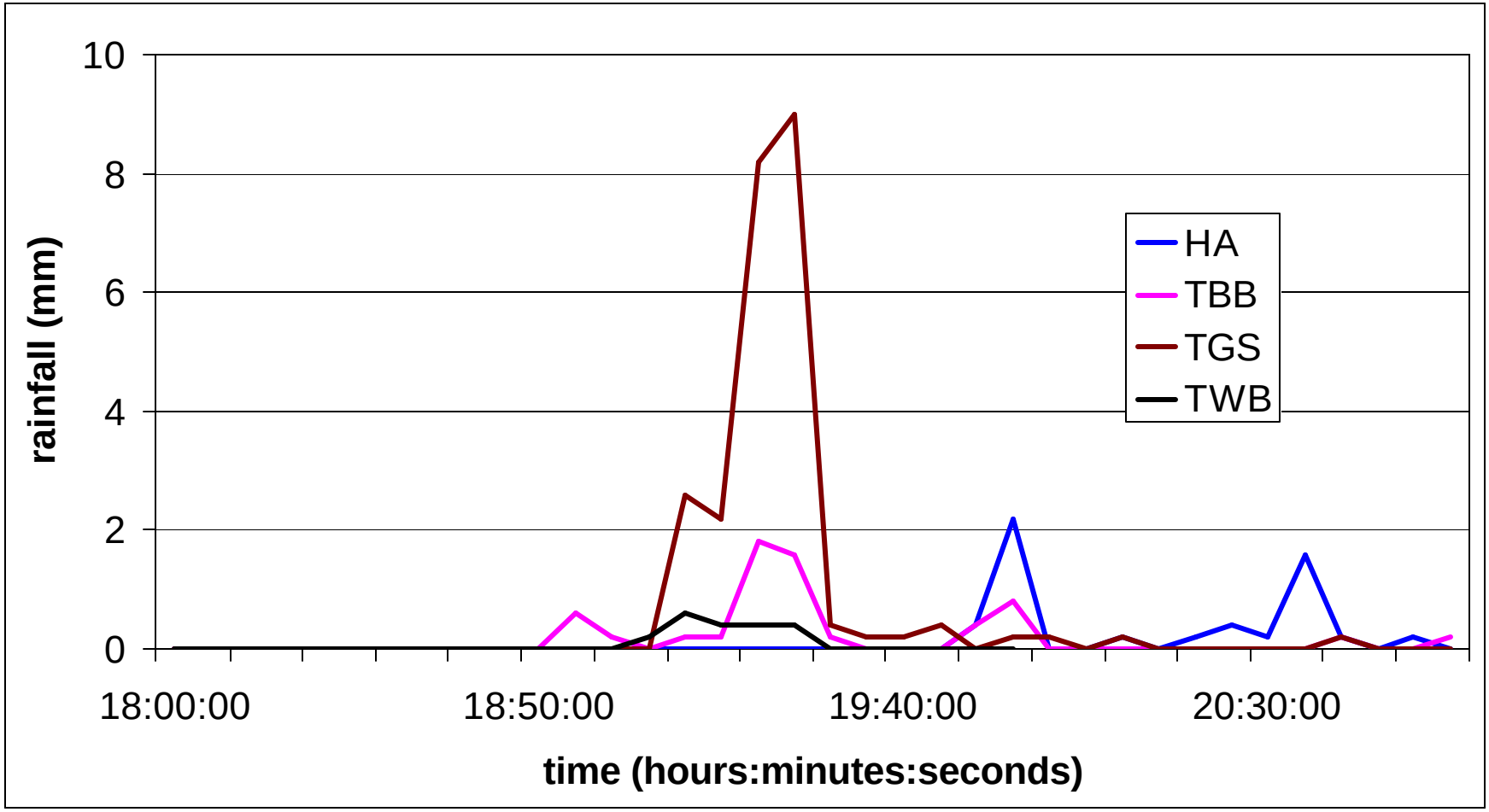
Tipping-bucket Recording Rain gauge (Model TB3)

Rain event on June 13 &14, 2005

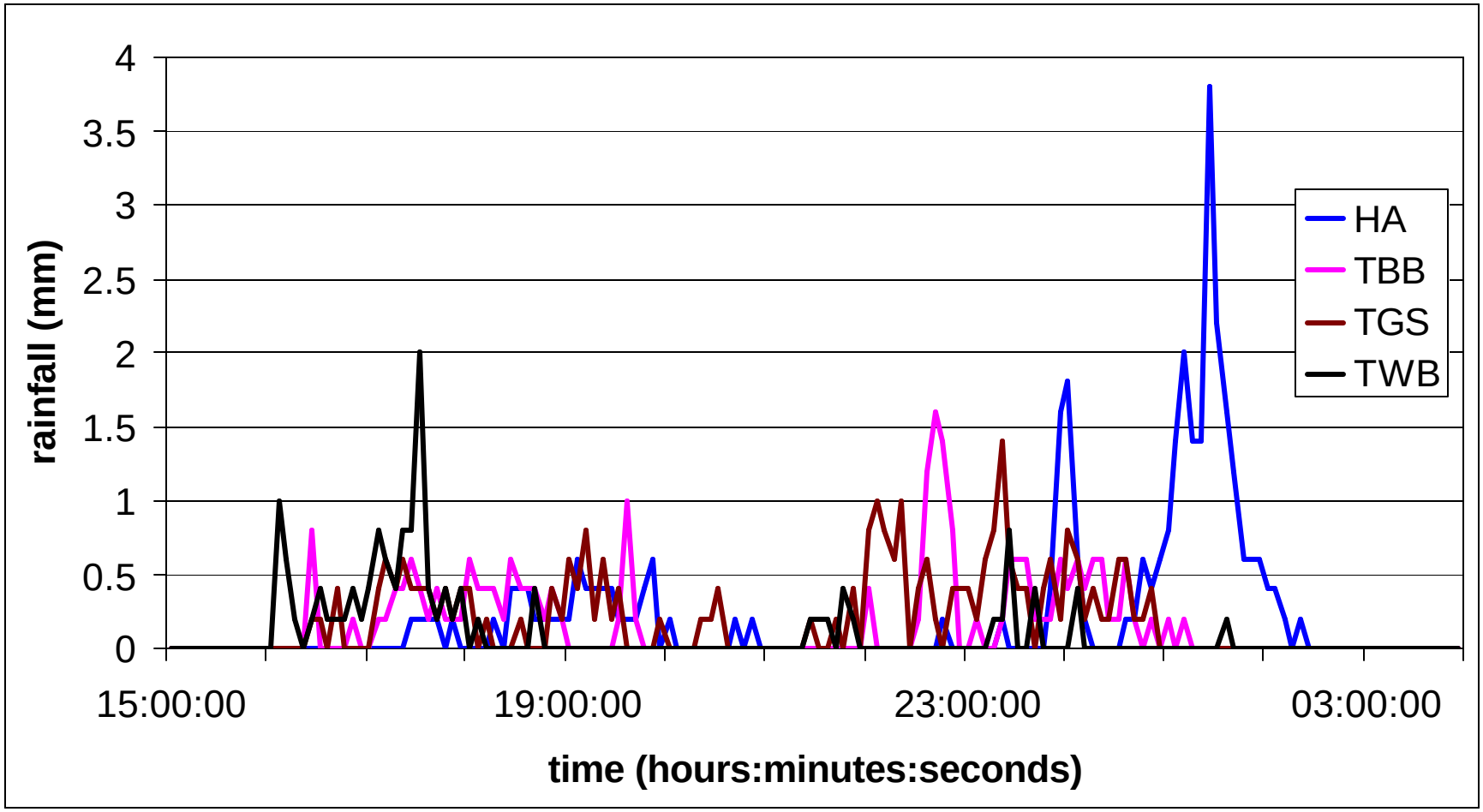


(average daily rainfall = 42.1 mm from June 13 05 08:00 to June 14 05 07:55)

Rain event on June 14, 2005 18:00 to 21:00

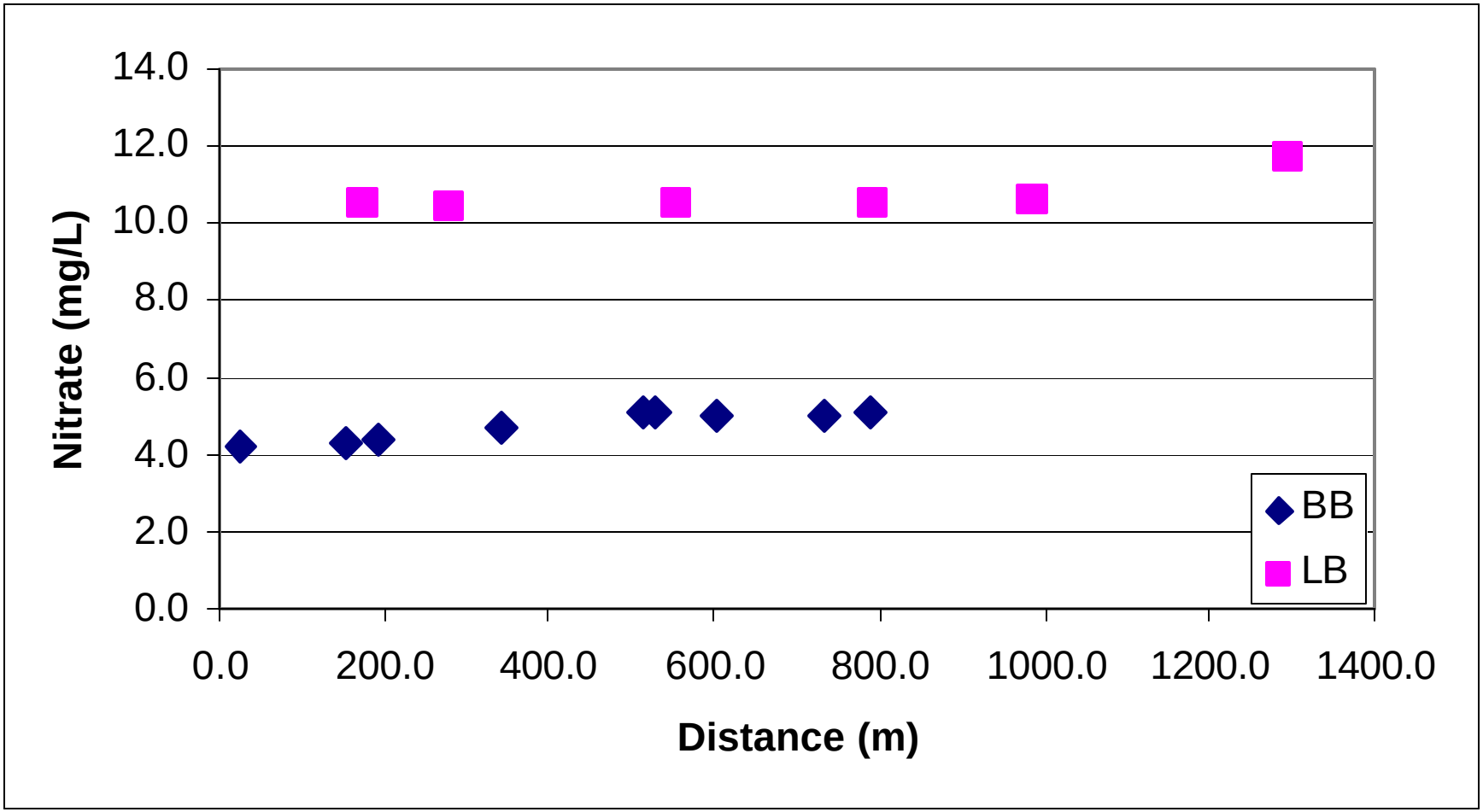


Rain event from June 13, 15:00 to June 14, 03:00

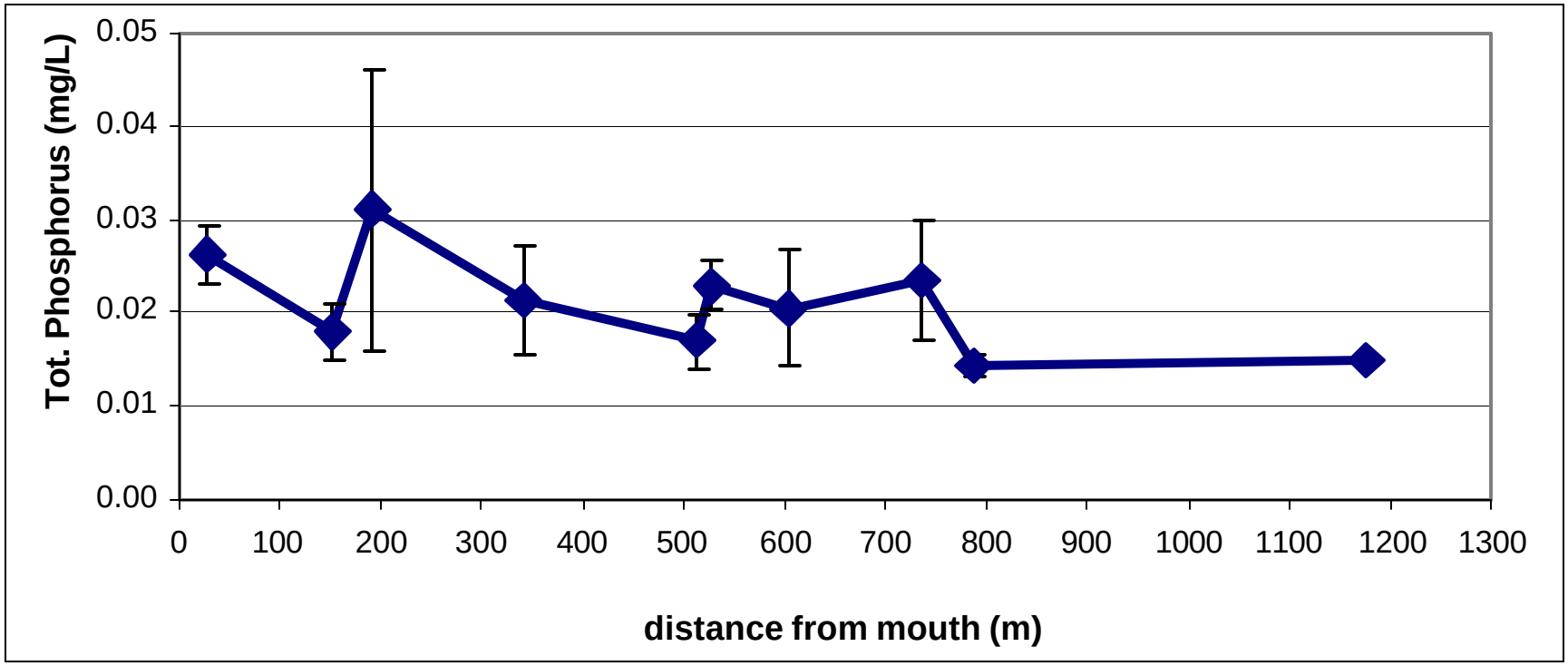



Balm Bch Creek
Little Balm Bch Creek
Balm Beach
13
10
9
BB3
8
11
7
6
5
12
14
4
15
BB1
2
3
1
16
BB4
17
18
Meters
200
100
0
N
W
E
S

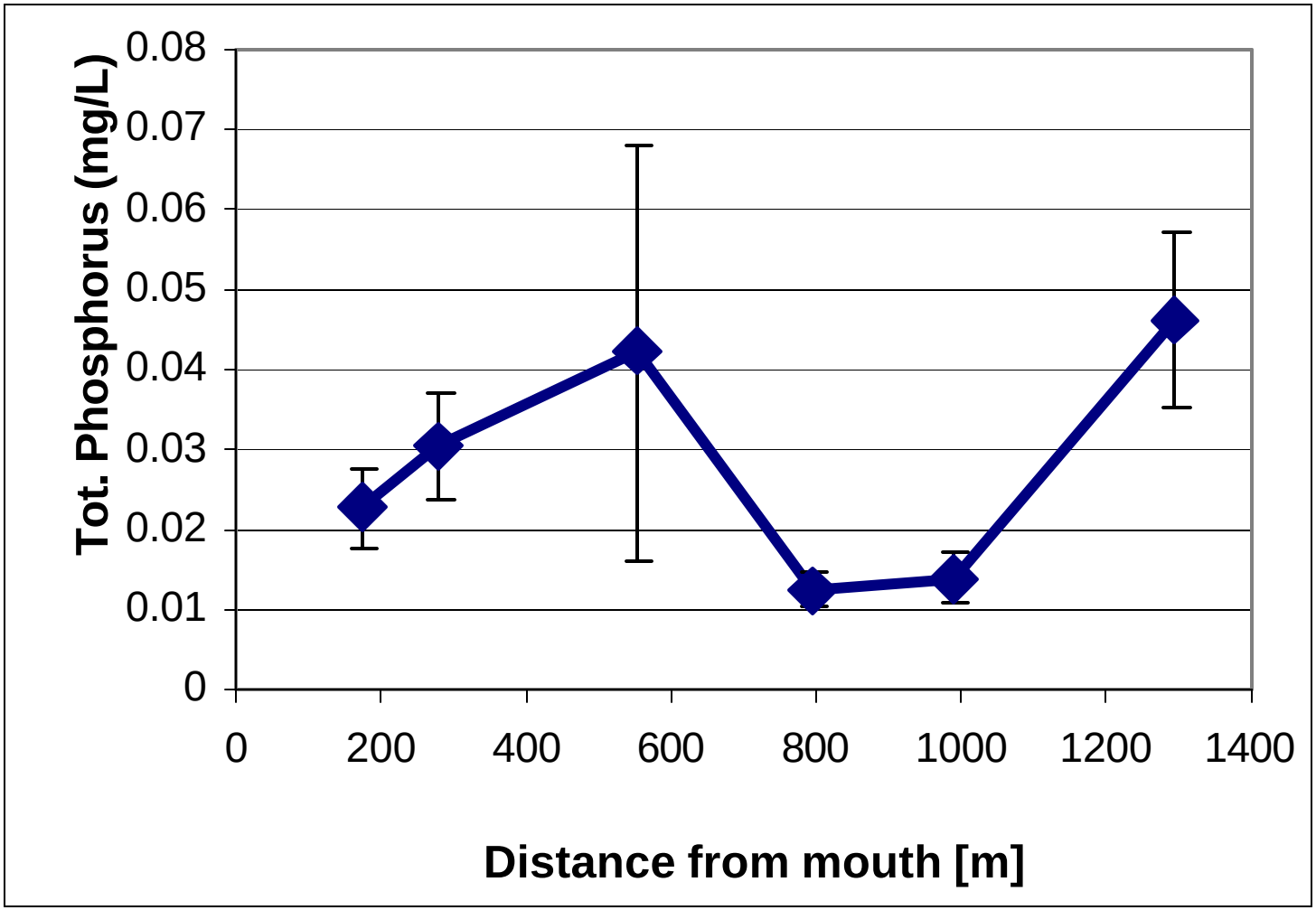
Mean quality profile of Big and Little Balm Creek 2005 (Average of 4 sample runs, except for upstream point)



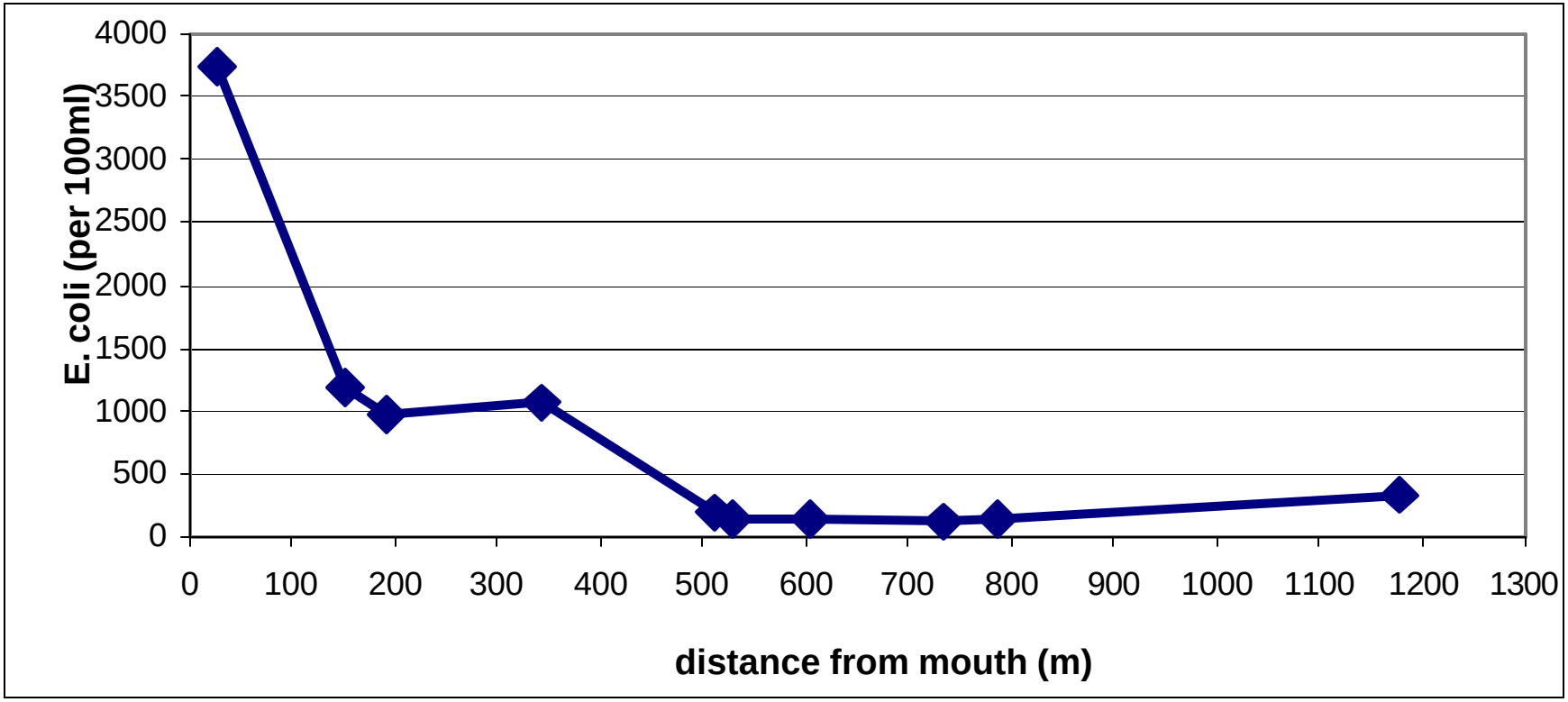
Mean quality profile of Big Balm Stream 2005 (Average of 4 sample runs, except for upstream point)



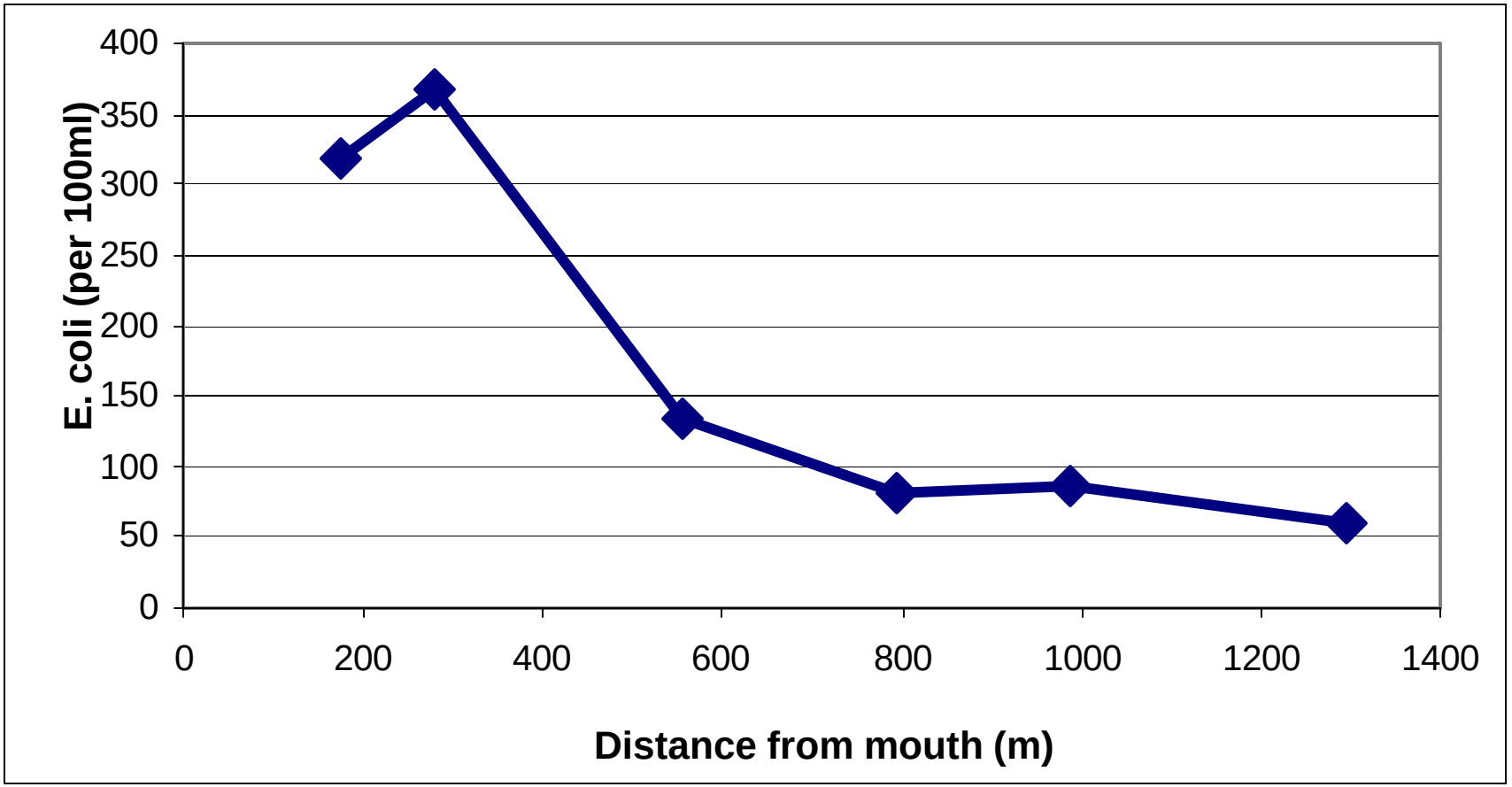
Mean quality profile of Little Balm Stream 2005 (Average of 4 sample runs, except for upstream point)

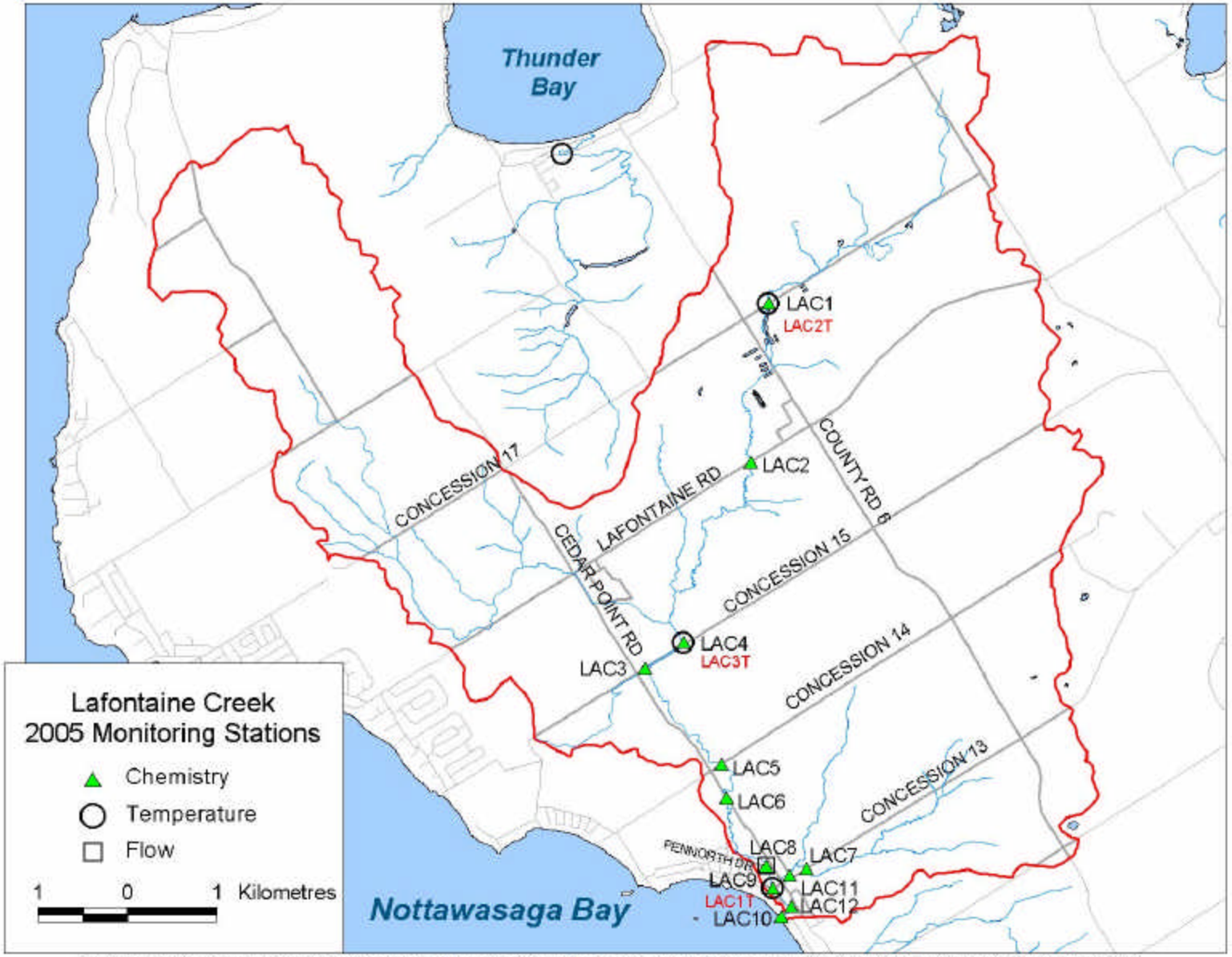


Mean quality profile of Big Balm Stream 2005 (Geomean of 4 sample runs, except for upstream point)



Mean quality profile of Little Balm Stream 2005 (Average of 4 sample runs, except for upstream point)





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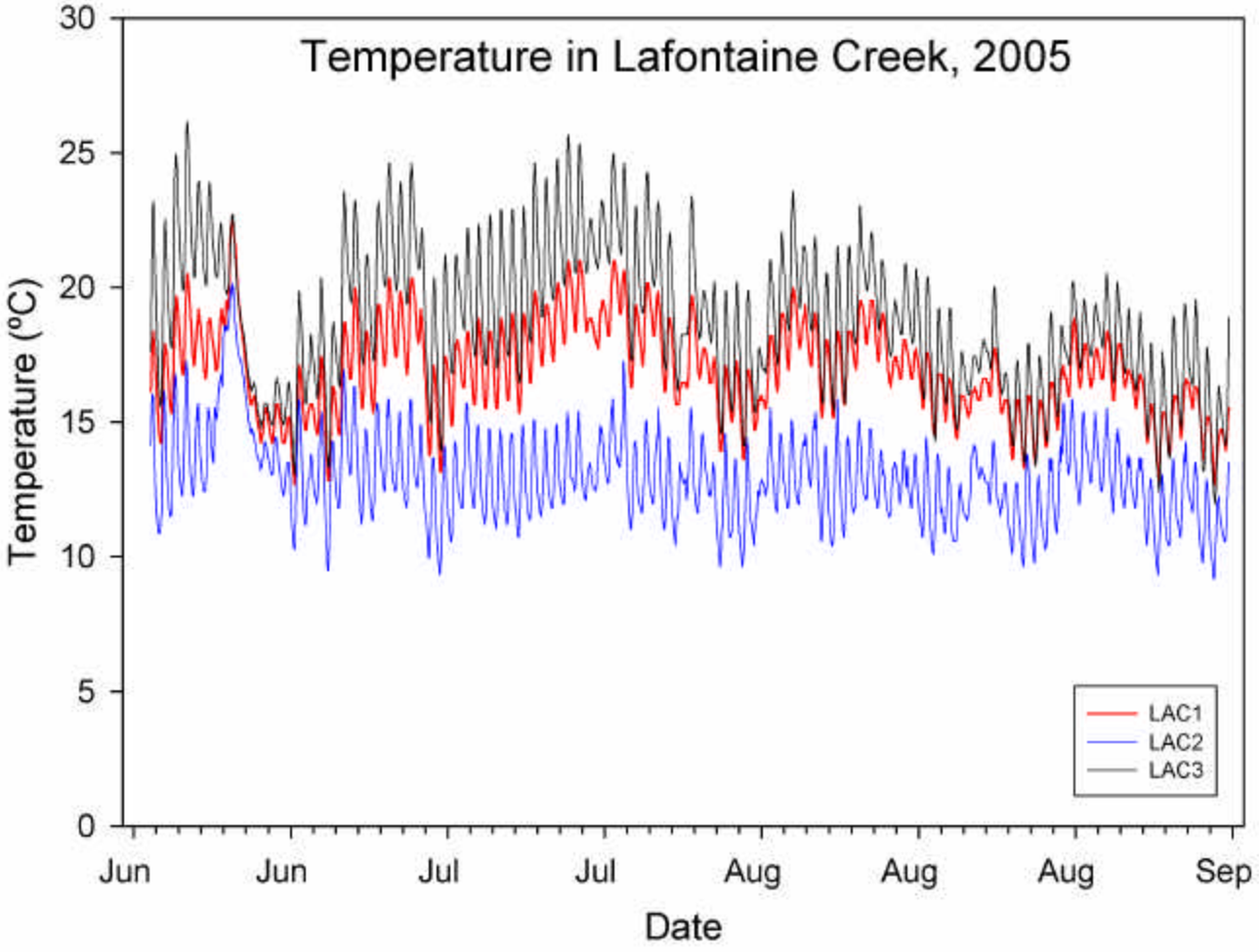

Temperature in Lafontaine Creek, 2005
Temperature (°C)
30
25
20
15
10
5
0
Jun
Jun
Jul
Jul
Aug
Aug
Aug
Sep
Date
LAC1
LAC2
LAC3

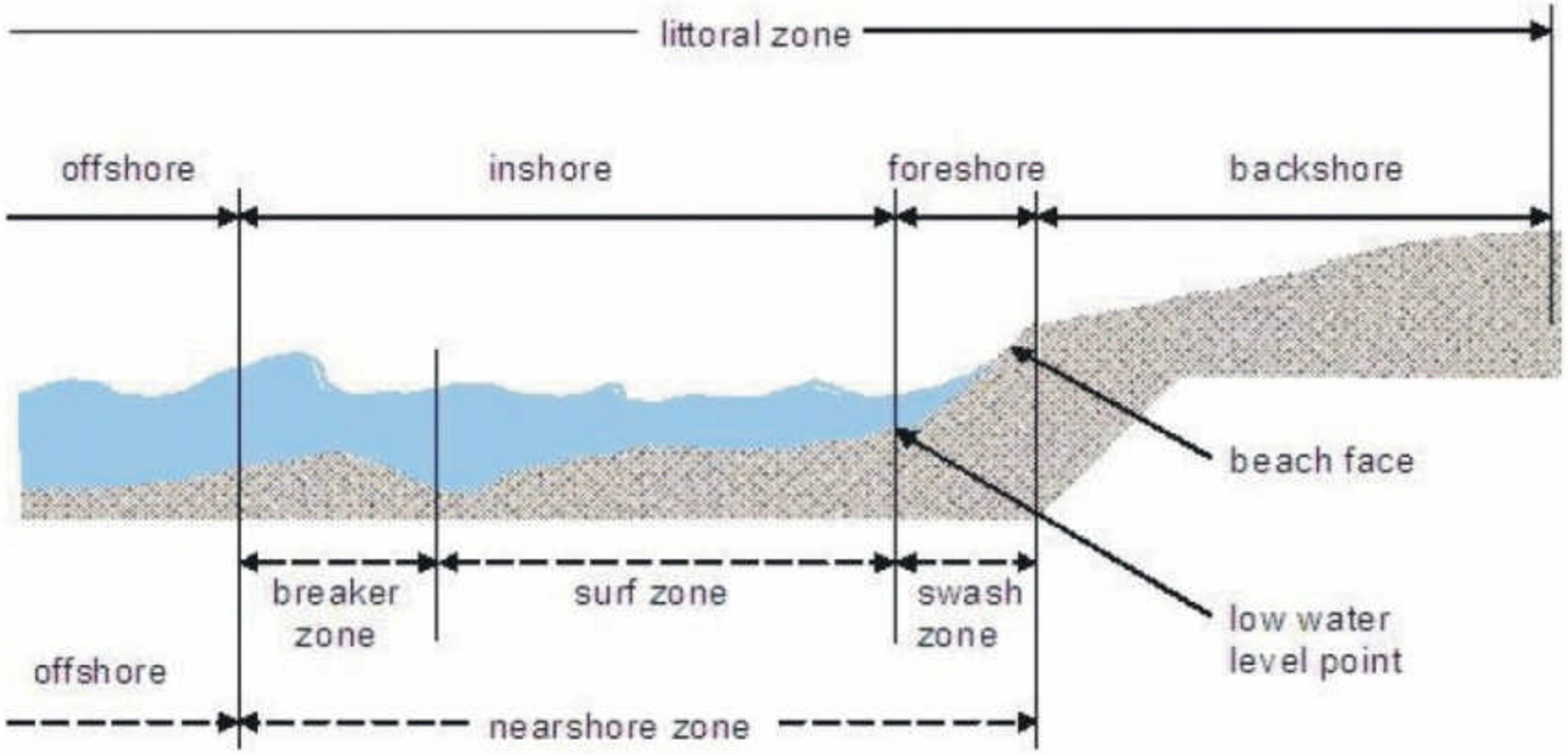
Sediment Investigation


2005
2004

July 25, 2005

STA	E.coli
7	130
8	
9	60
10	140
11	90
12	< 10
13	< 10
14	60
15	< 10
16	10
17	< 10
18	20
19	50
20	< 10
21	< 10

Research by others



Conclusions

- Rainfall can be variable N to S, E to W
- Sources still coming from streams to beach areas
- Fine sediment transport still affecting some beaches, especially those with sheltering coastal structures
- Other work should also help interpret beach quality in future – especially the significance of the swash zone findings as they become available

Recommendations

- Partnership to provide enhanced water quality modeling in the Tiny Township Coast should be sought in 2006 in conjunction with other studies
- Investigation of streams as sources and beaches should continue