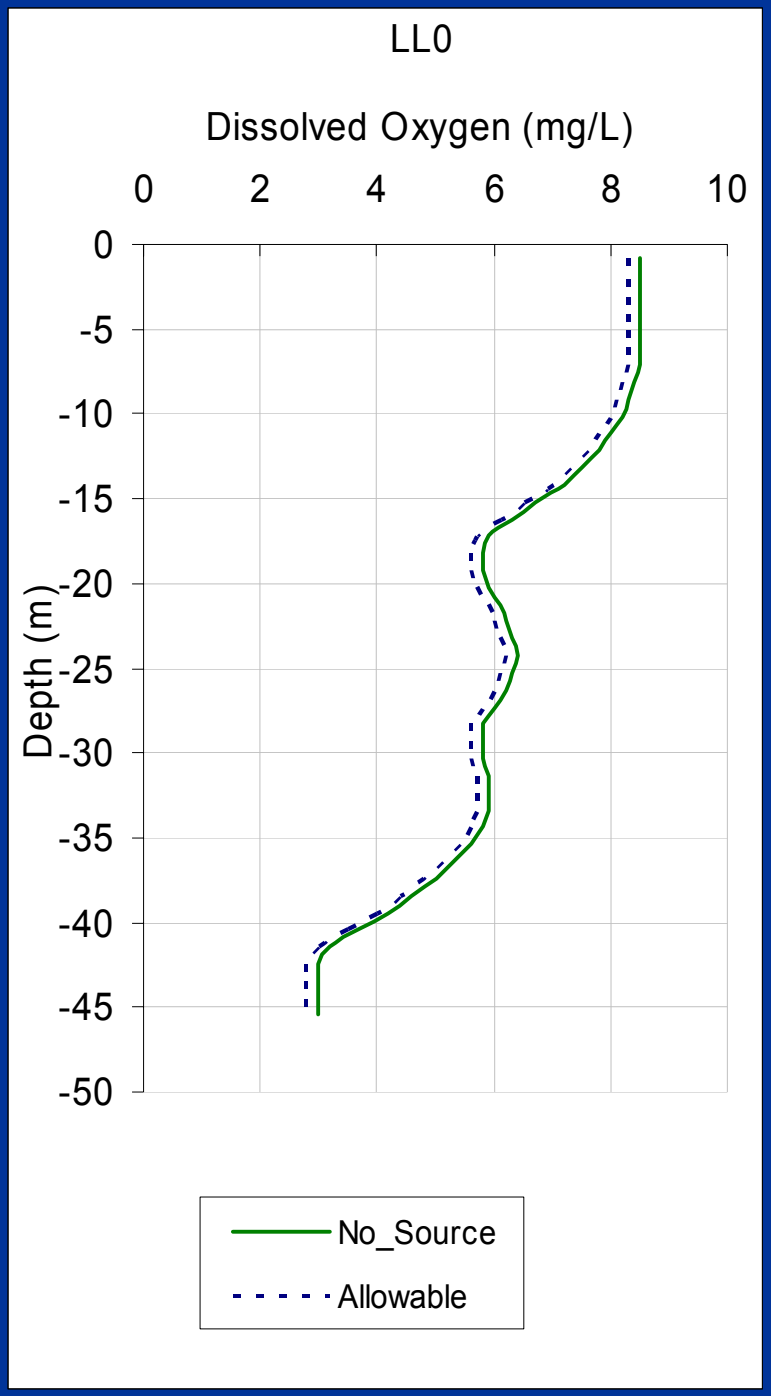
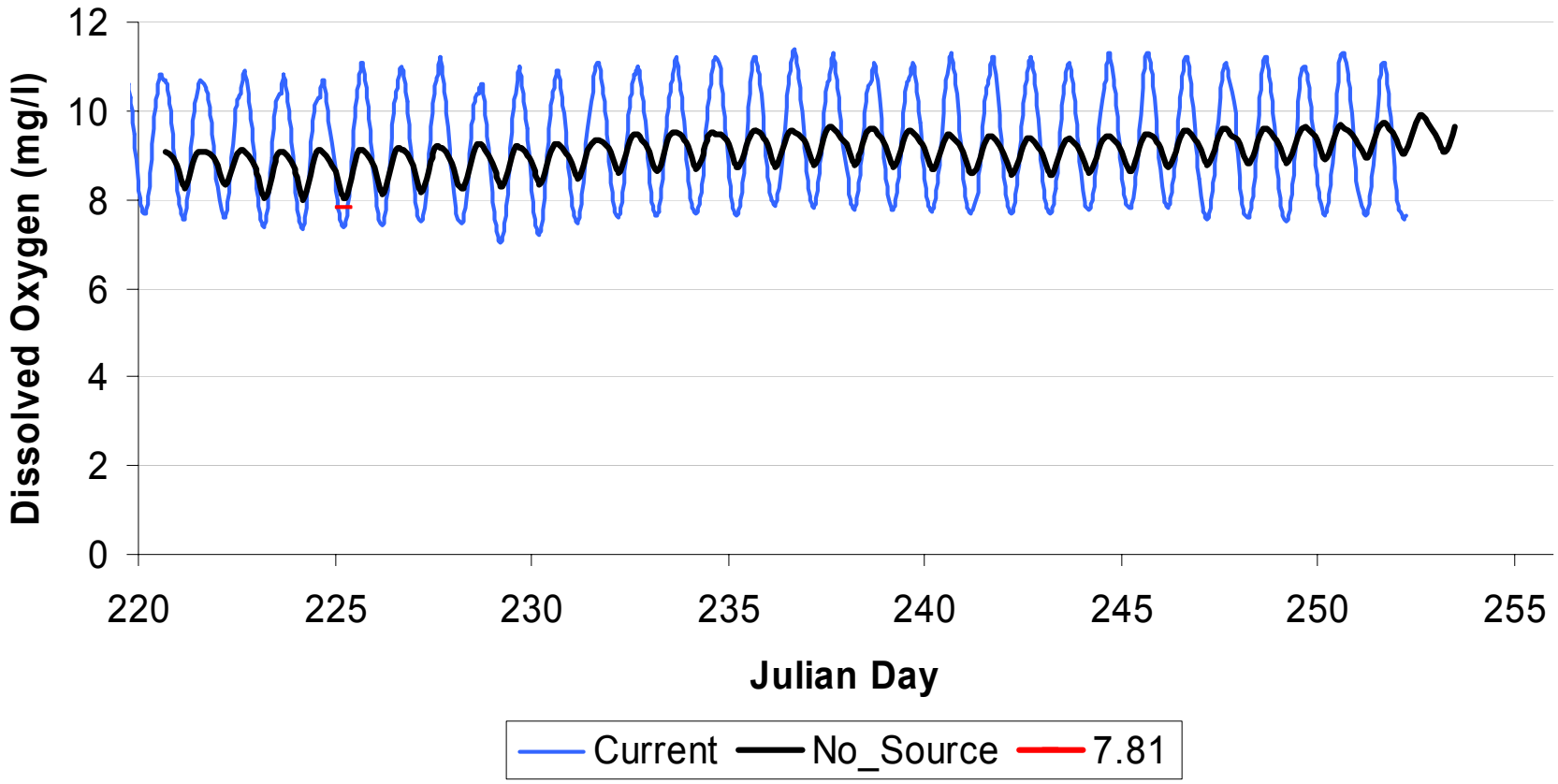
# Preliminary Modeling Results

# Dissolved Oxygen Criterion

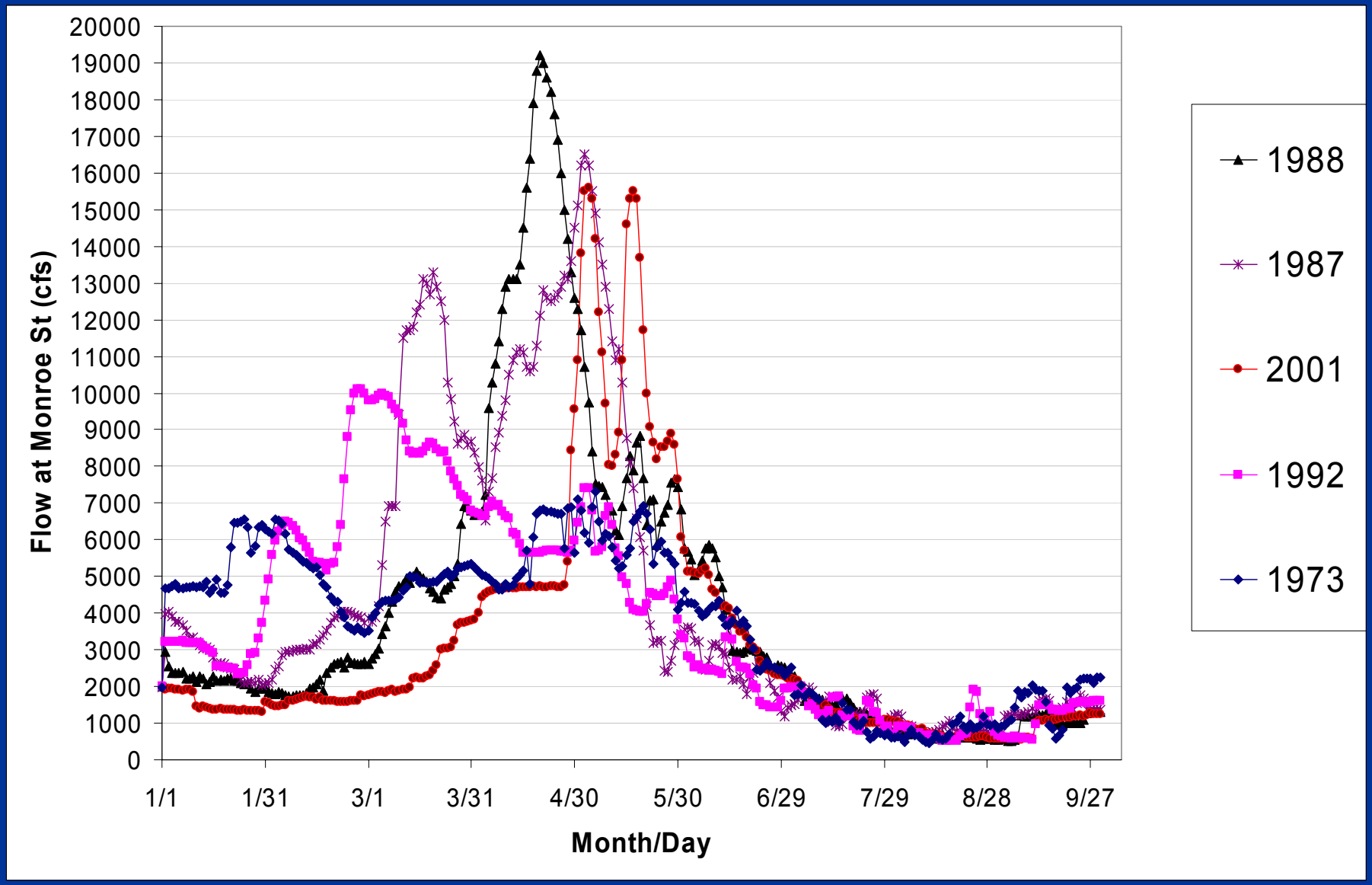
- LONG LAKE:
  - No Measurable Decrease from Natural Conditions
- SPOKANE RIVER:
  - Shall Exceed 8.0 mg/L

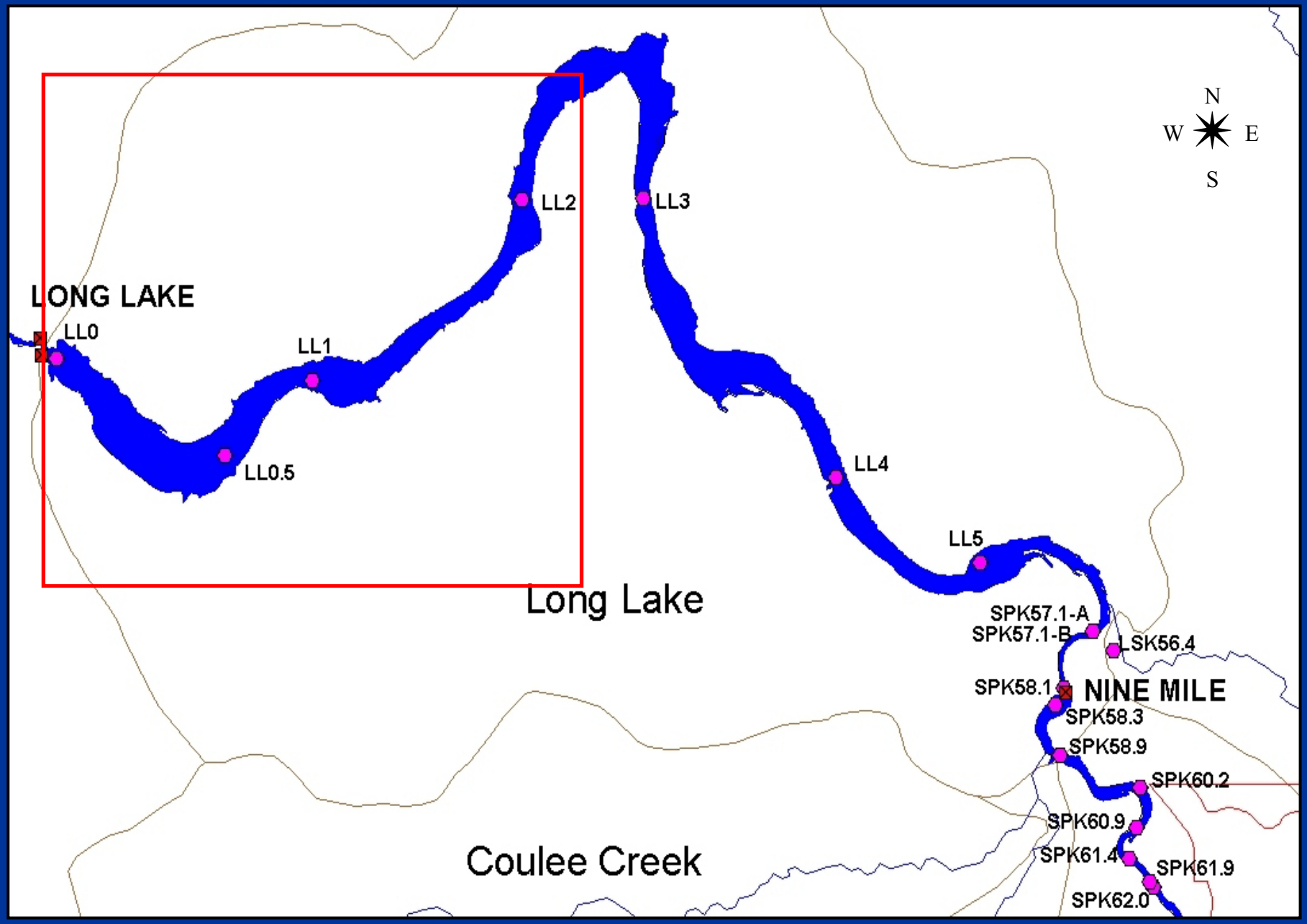

LL0
Dissolved Oxygen (mg/L)
0
2
4
6
8
10
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
Depth (m)
No_Source
Allowable

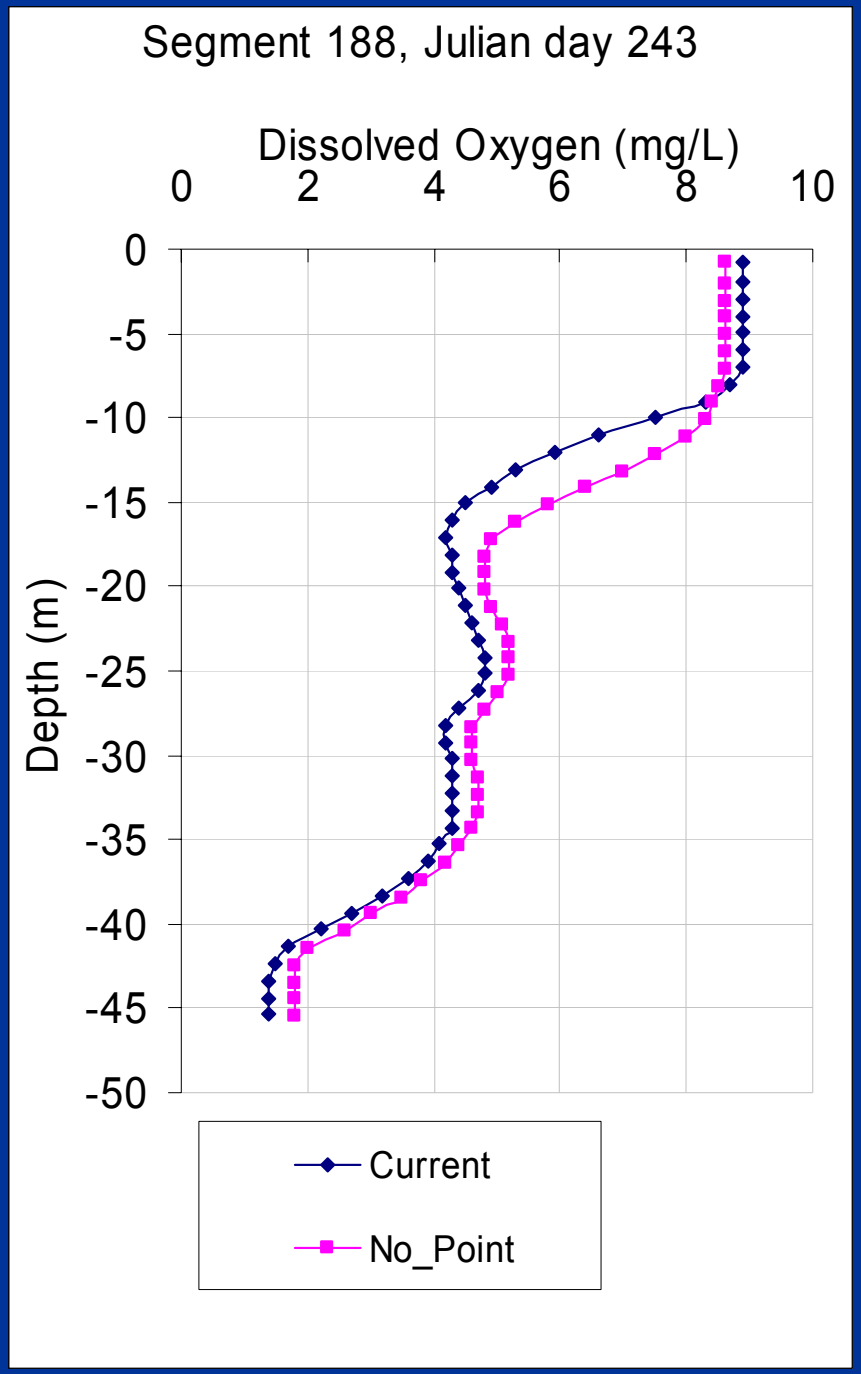

Dissolved Oxygen (mg/l)
12
10
8
6
4
2
0
220
225
230
235
240
245
250
255
Julian Day
Current
No_Source
7.81

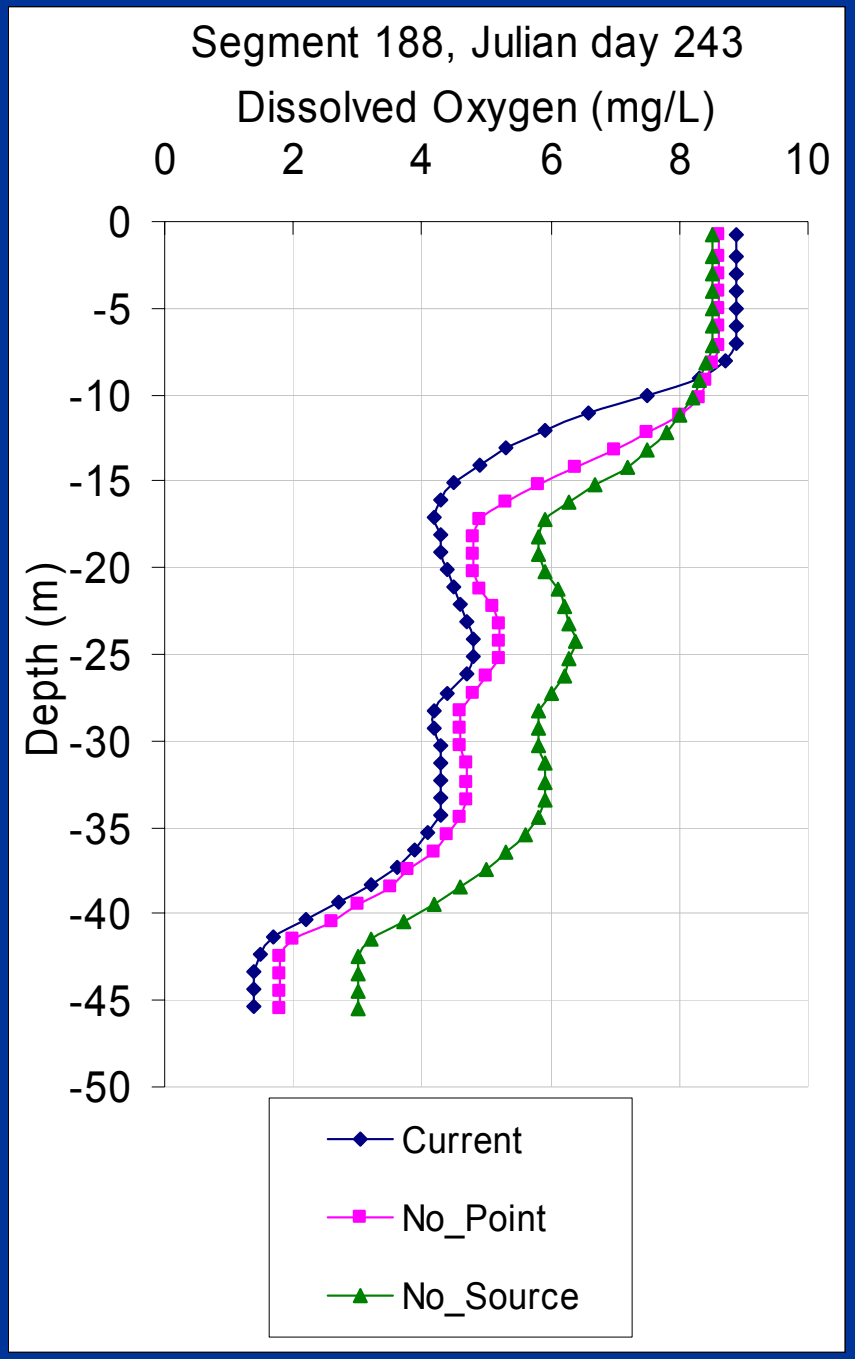
# Critical Conditions

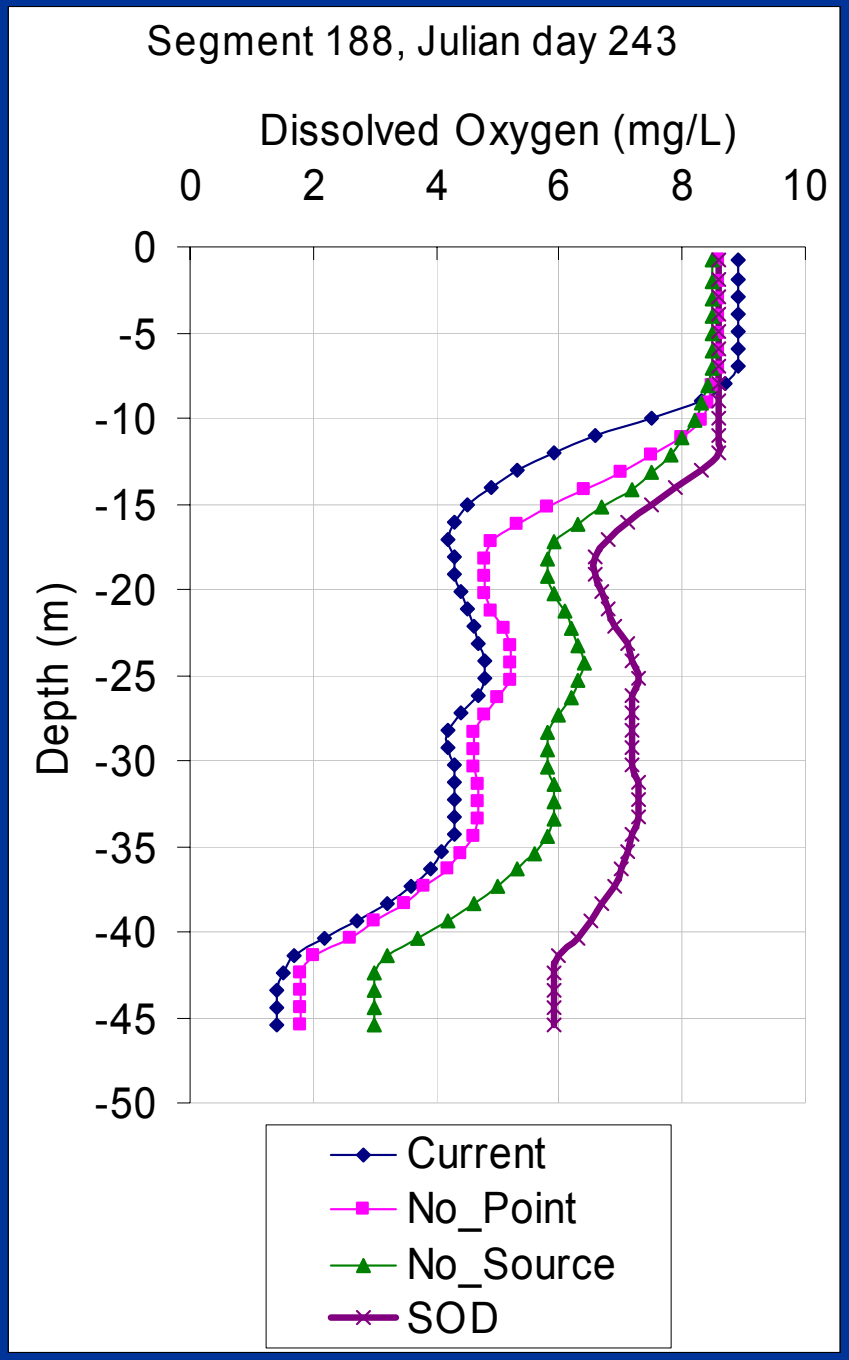
- YEAR 2001

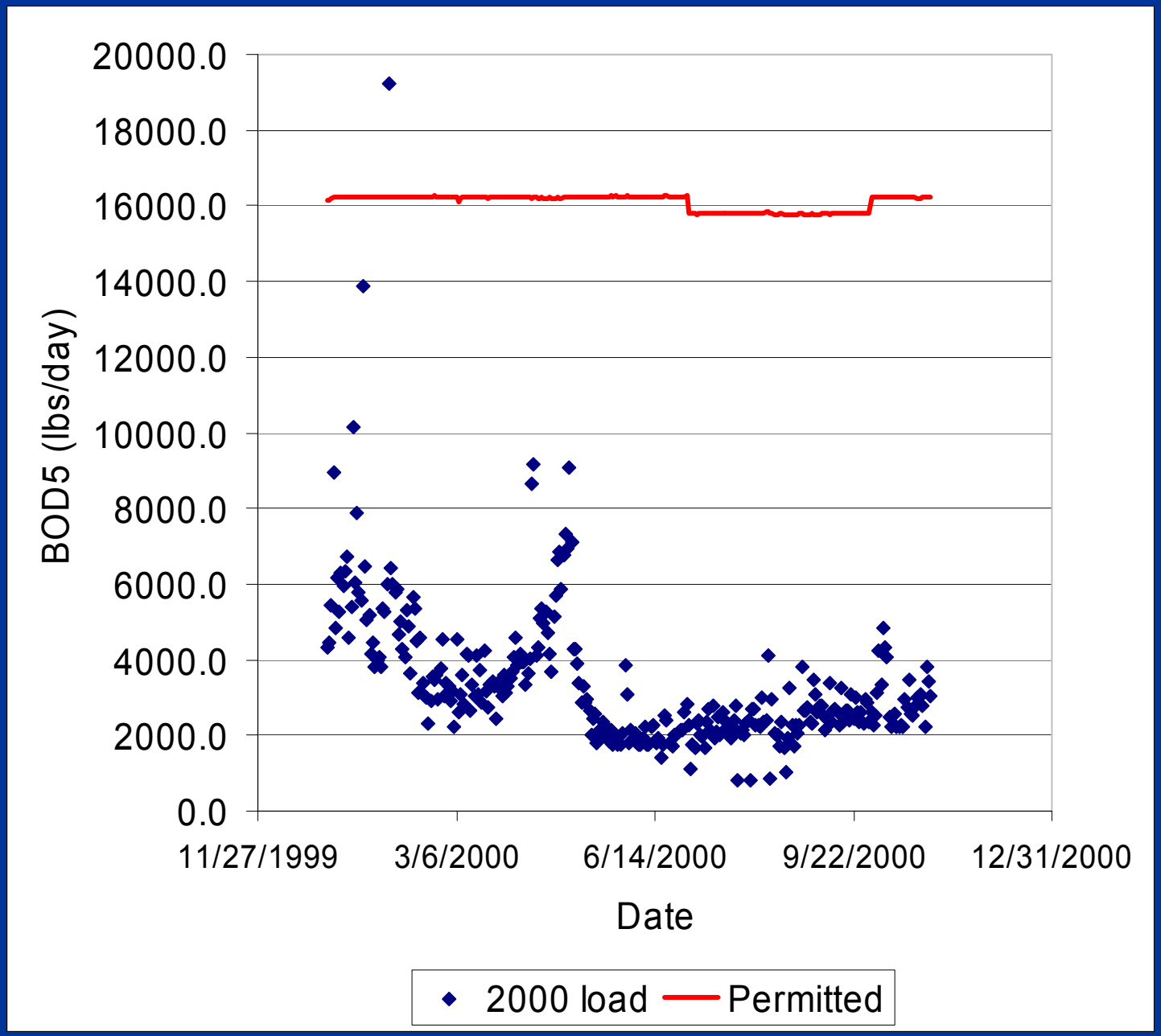

Flow at Monroe St (cfs)
20000
19000
18000
17000
16000
15000
14000
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1/1
1/31
3/1
3/31
4/30
5/30
6/29
7/29
8/28
9/27
Month/Day
1988
1987
2001
1992
1973

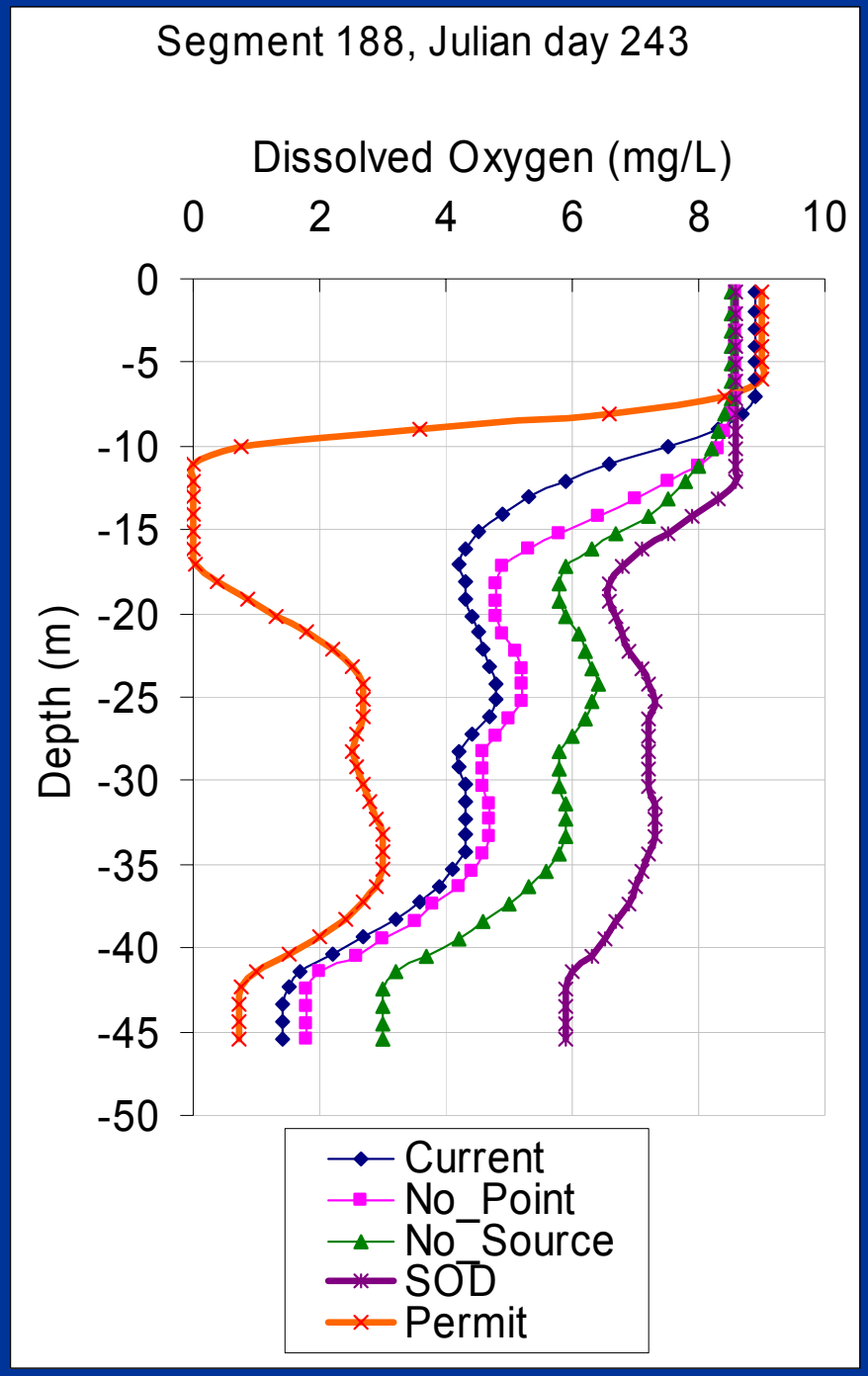

N
W
E
S
LONG LAKE
LL0
LL0.5
LL1
LL2
LL3
LL4
LL5
Long Lake
SPK57.1-A
SPK57.1-B
LSK56.4
SPK58.1
NINE MILE
SPK58.3
SPK58.9
SPK60.2
SPK60.9
SPK61.4
SPK61.9
SPK62.0
Coulee Creek

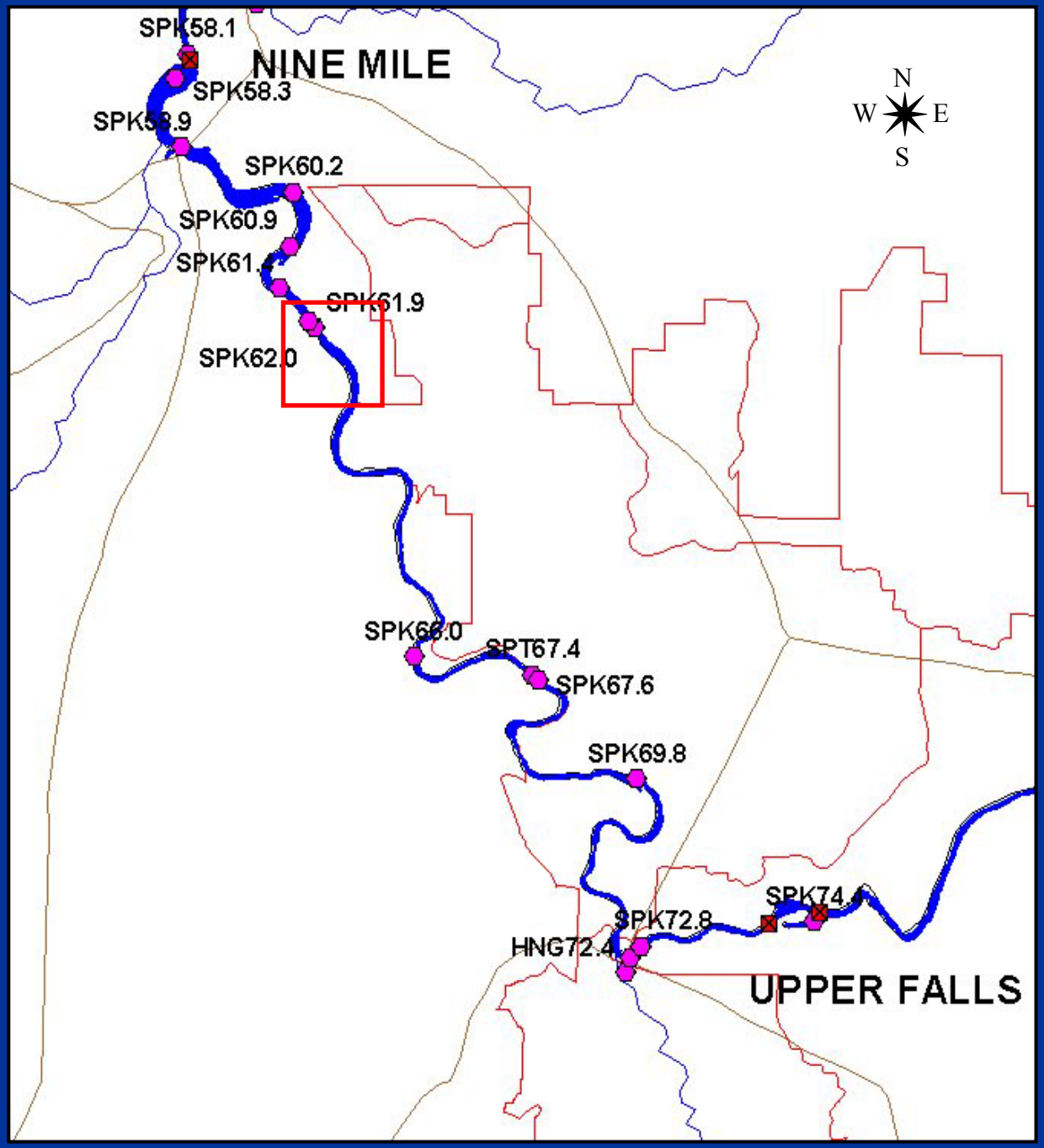

Segment 188, Julian day 243
Dissolved Oxygen (mg/L)
0
2
4
6
8
10
Depth (m)
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
Current
No_Point

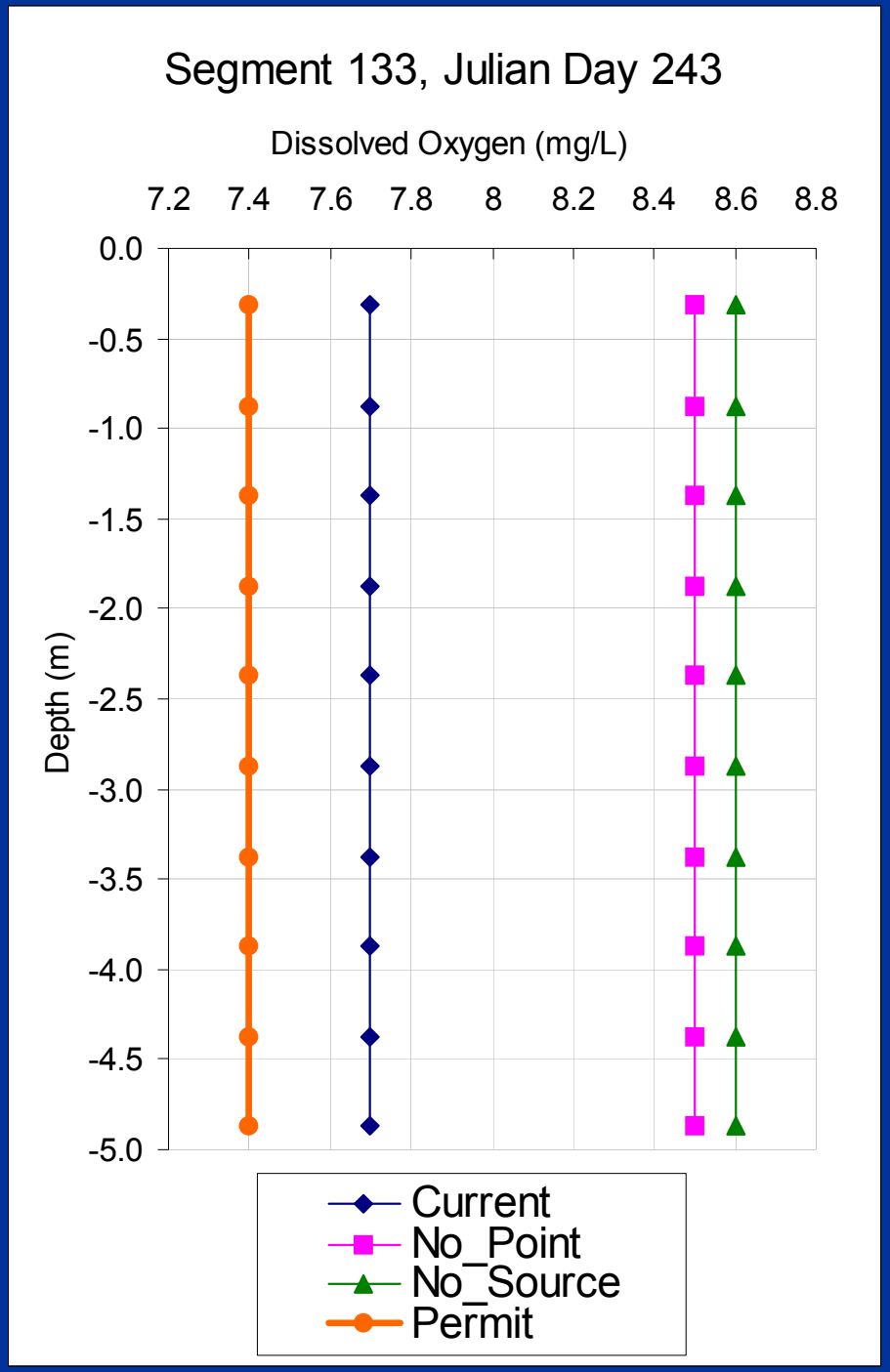

Segment 188, Julian day 243
Dissolved Oxygen (mg/L)
0
2
4
6
8
10
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
Depth (m)
Current
No_Point
No_Source

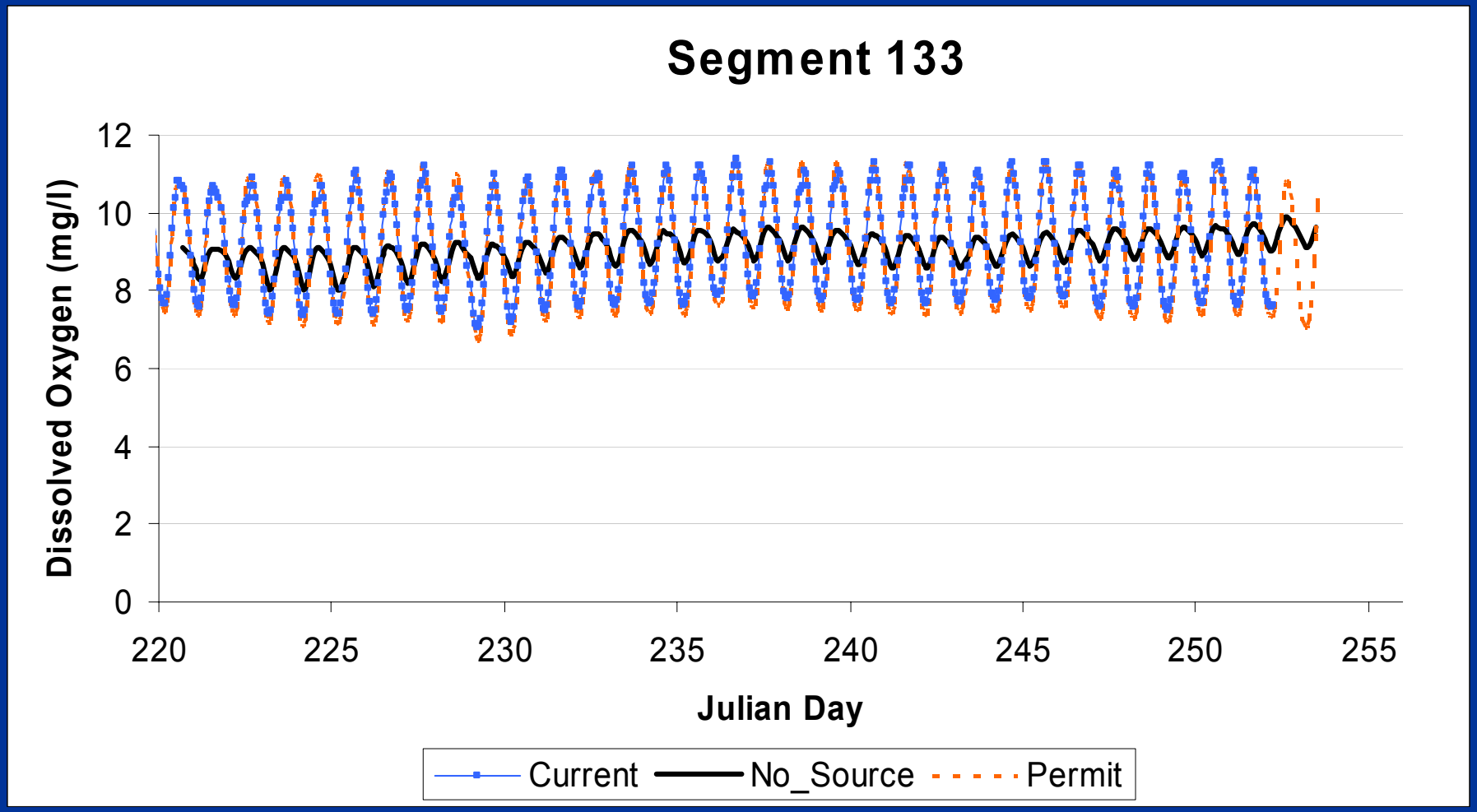

Segment 188, Julian day 243
Dissolved Oxygen (mg/L)
0
2
4
6
8
10
Depth (m)
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
Current
No_Point
No_Source
SOD

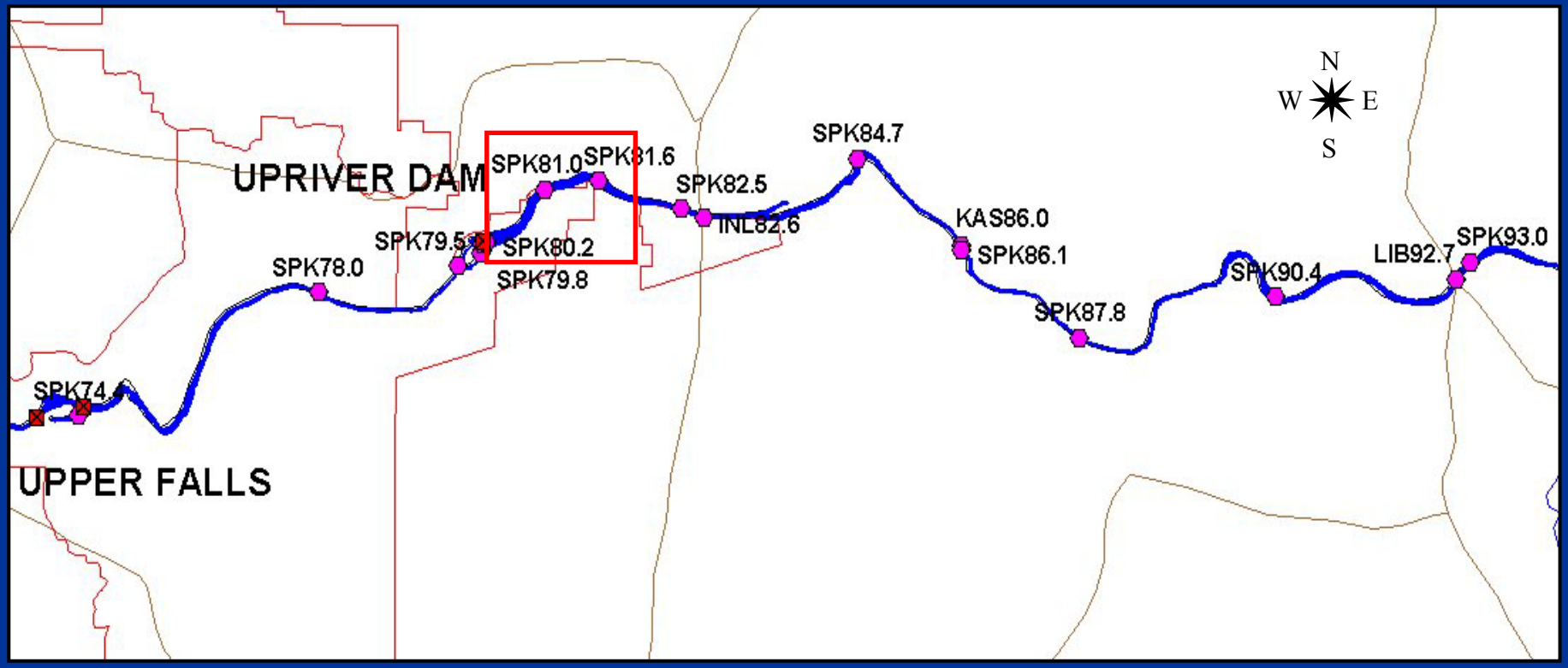

20000.0
18000.0
16000.0
14000.0
12000.0
10000.0
8000.0
6000.0
4000.0
2000.0
0.0
BOD5 (lbs/day)
11/27/1999
3/6/2000
6/14/2000
9/22/2000
12/31/2000
Date
2000 load
Permitted

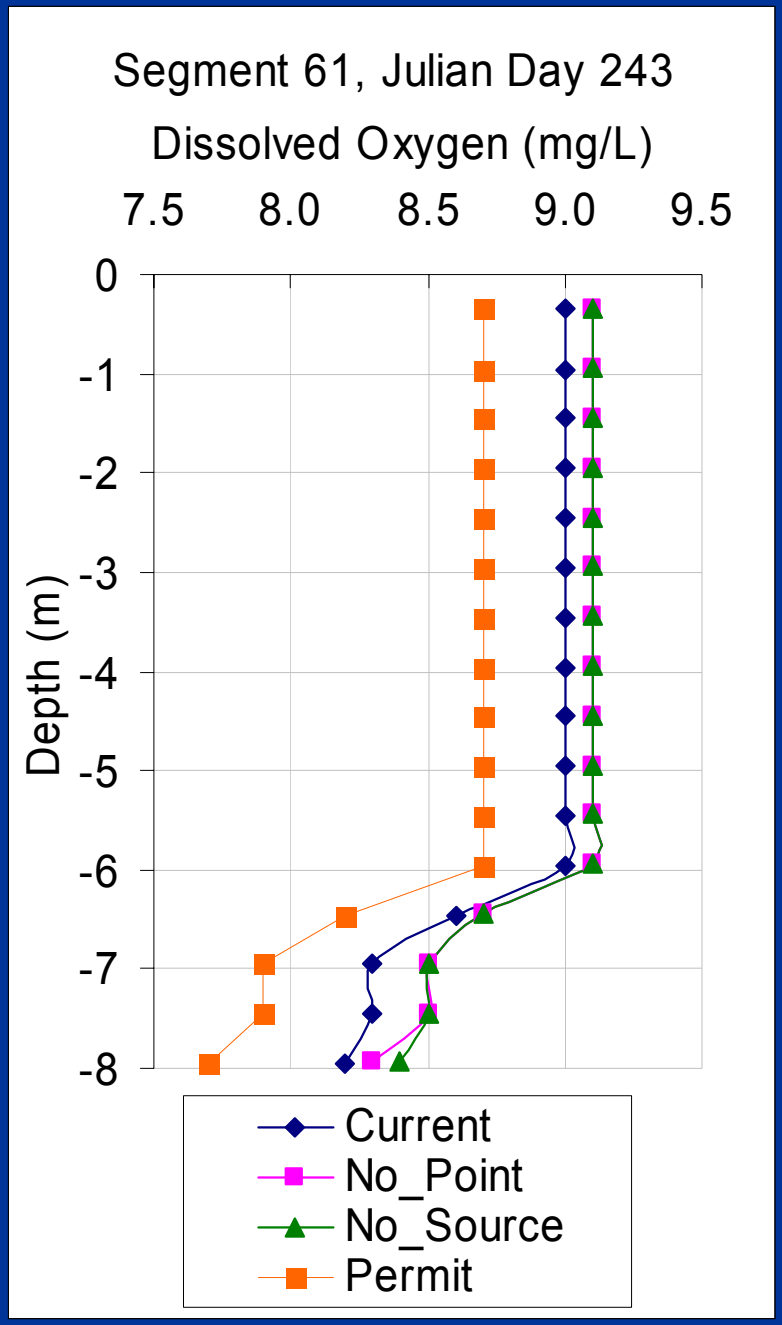

Segment 188, Julian day 243
Dissolved Oxygen (mg/L)
0
2
4
6
8
10
Depth (m)
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
Current
No_Point
No_Source
SOD
Permit

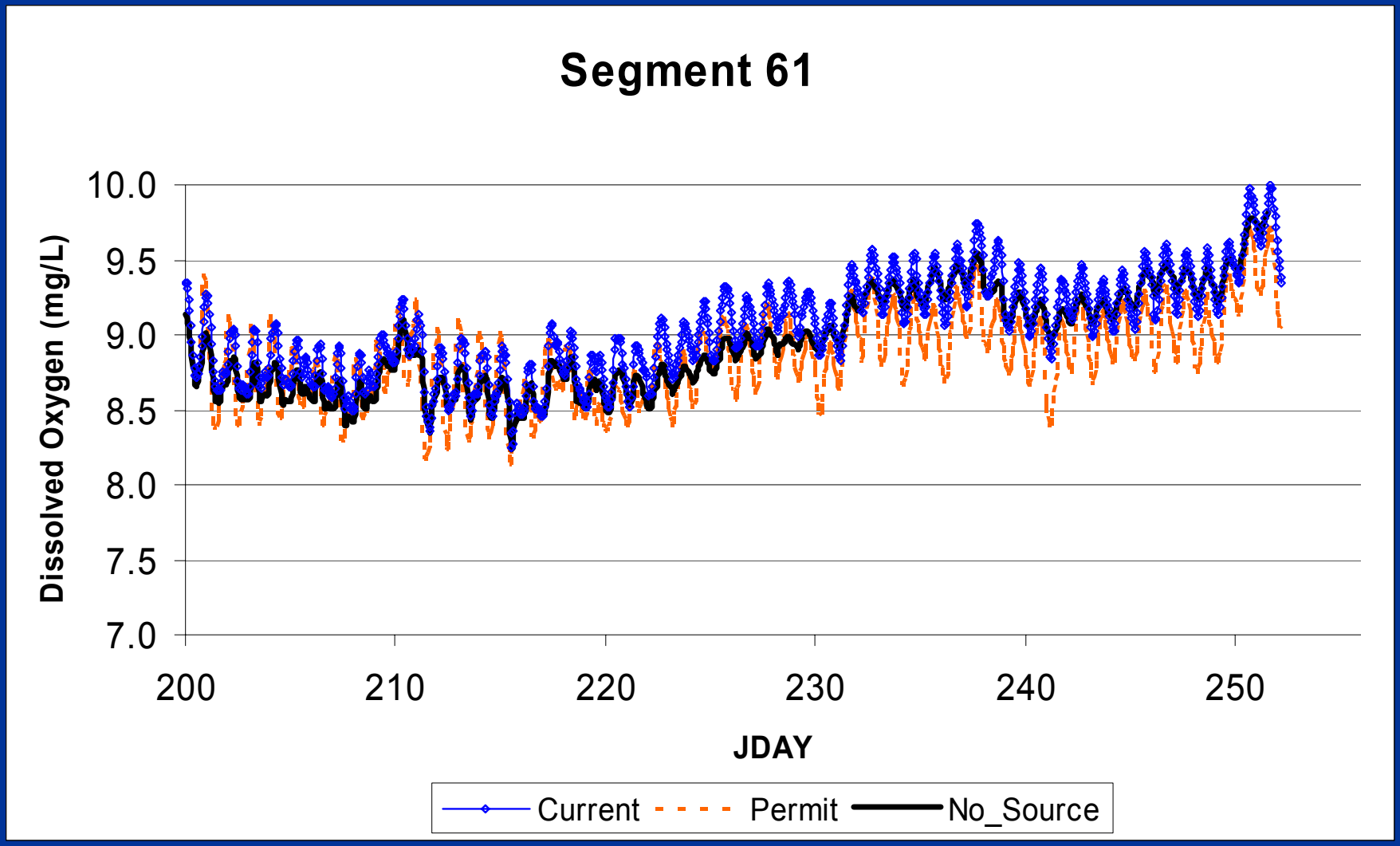

SPK58.1
NINE MILE
SPK58.3
SPK58.9
SPK60.2
SPK60.9
SPK61.4
SPK61.9
SPK62.0
SPK66.0
SPT67.4
SPK67.6
SPK69.8
SPK72.8
HNG72.4
UPPER FALLS
N
W
E
S


Segment 133, Julian Day 243
Dissolved Oxygen (mg/L)
7.2
7.4
7.6
7.8
8
8.2
8.4
8.6
8.8
Depth (m)
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0
-4.5
-5.0
Current
No_Point
No_Source
Permit


Segment 133
Dissolved Oxygen (mg/l)
12
10
8
6
4
2
0
220
225
230
235
240
245
250
255
Julian Day
Current
No_Source
Permit


N
W
E
S
UPRIVER DAM
SPK81.0
SPK81.6
SPK82.5
INL82.6
SPK84.7
KAS86.0
SPK86.1
SPK87.8
SPK90.4
LIB92.7
SPK93.0
SPK79.5
SPK80.2
SPK79.8
SPK78.0
SPK74.4
UPPER FALLS


Segment 61, Julian Day 243
Dissolved Oxygen (mg/L)
7.5
8.0
8.5
9.0
9.5
0
-1
-2
-3
-4
-5
-6
-7
-8
Depth (m)
Current
No_Point
No_Source
Permit


Segment 61
Dissolved Oxygen (mg/L)
10.0
9.5
9.0
8.5
8.0
7.5
7.0
200
210
220
230
240
250
JDAY
Current
Permit
No_Source

# Preliminary Conclusions

- Greatest Effects
- Diurnal Changes
- Current Loads
- Permit BOD5 Limits
- Critical Area – Long Lake