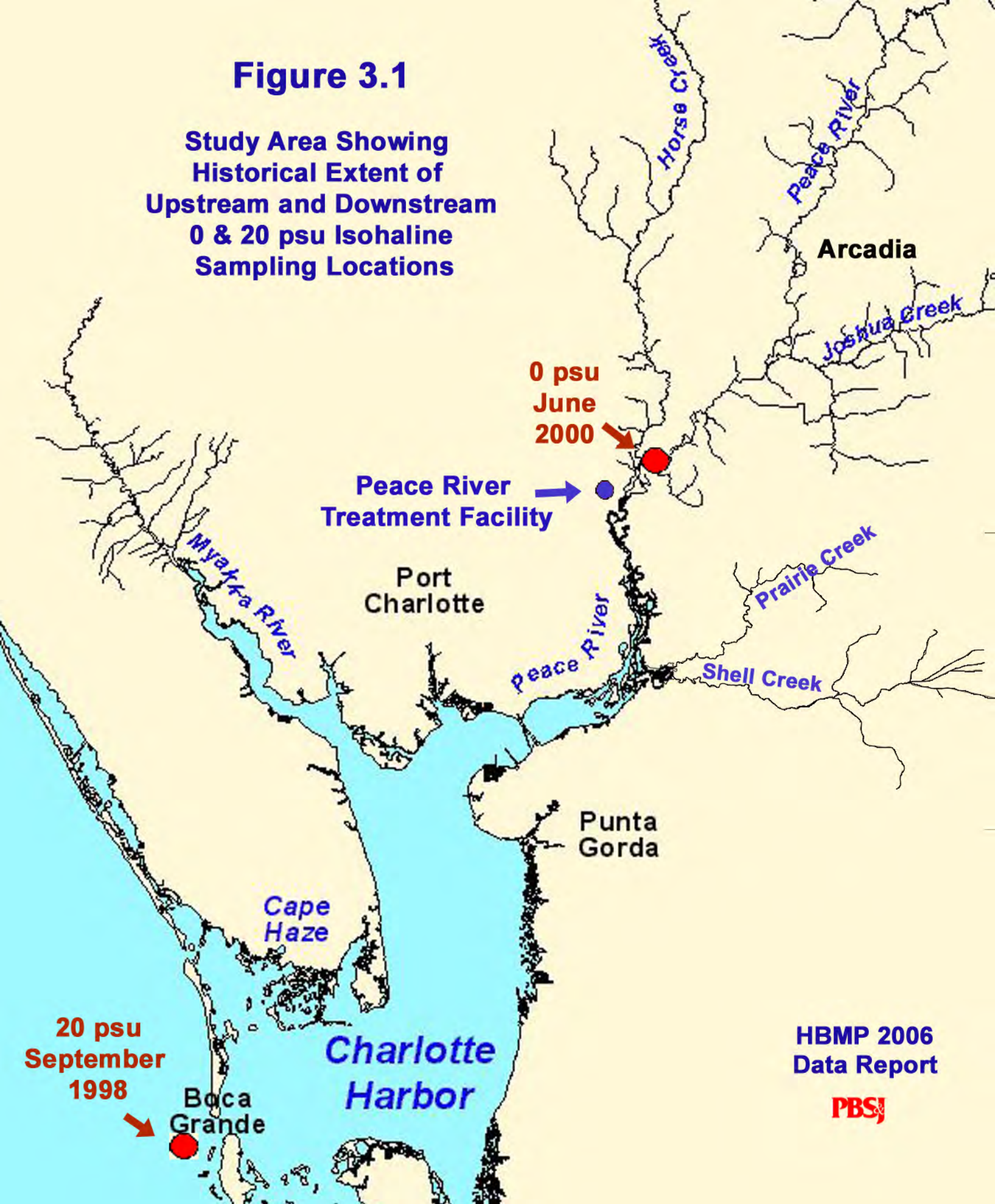


Figure 3.1

**Study Area Showing
Historical Extent of
Upstream and Downstream
0 & 20 psu Isohaline
Sampling Locations**



**HBMP 2006
Data Report**

PBS

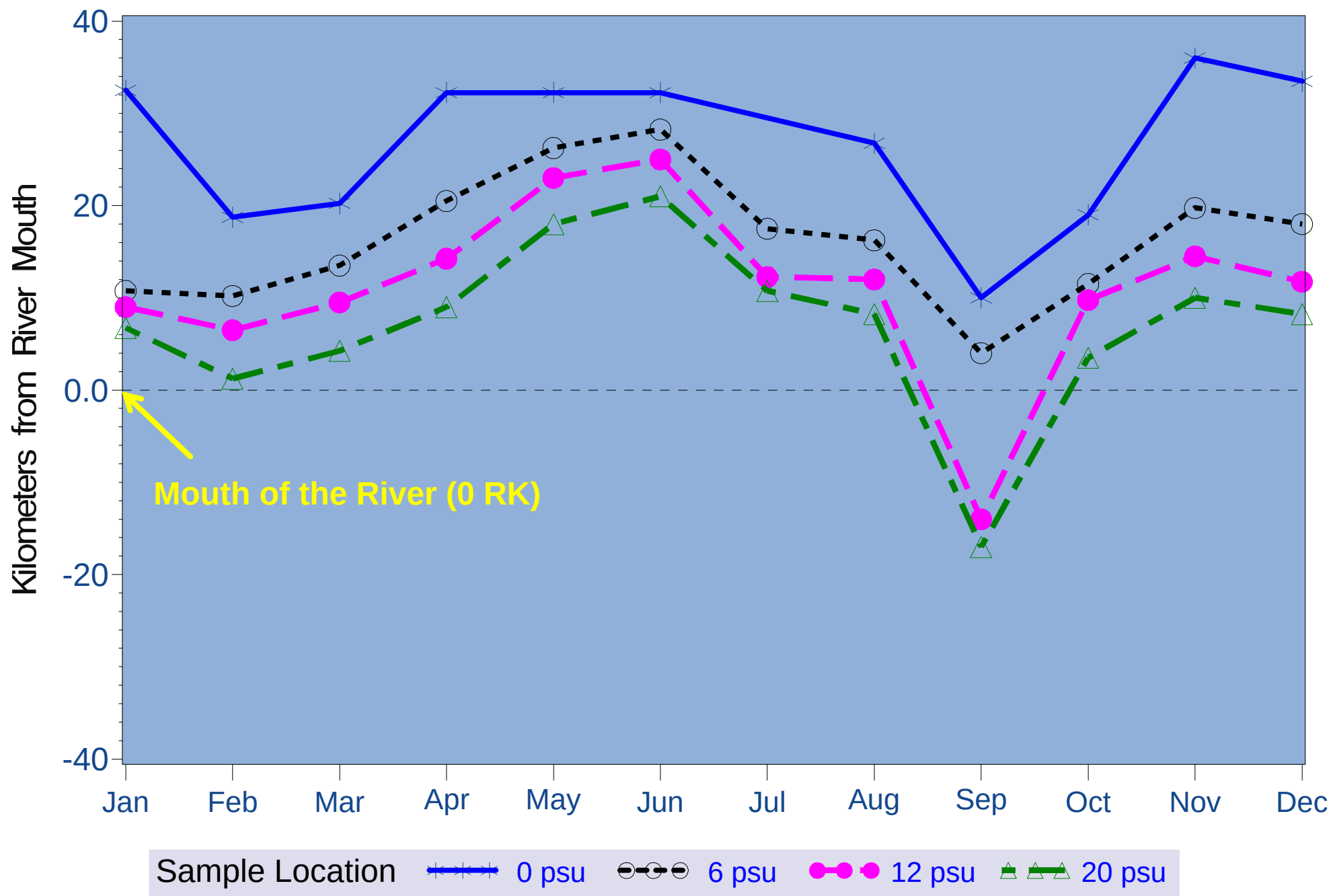


Figure 3.2 Relative distance (km) from the mouth of the river (2006)

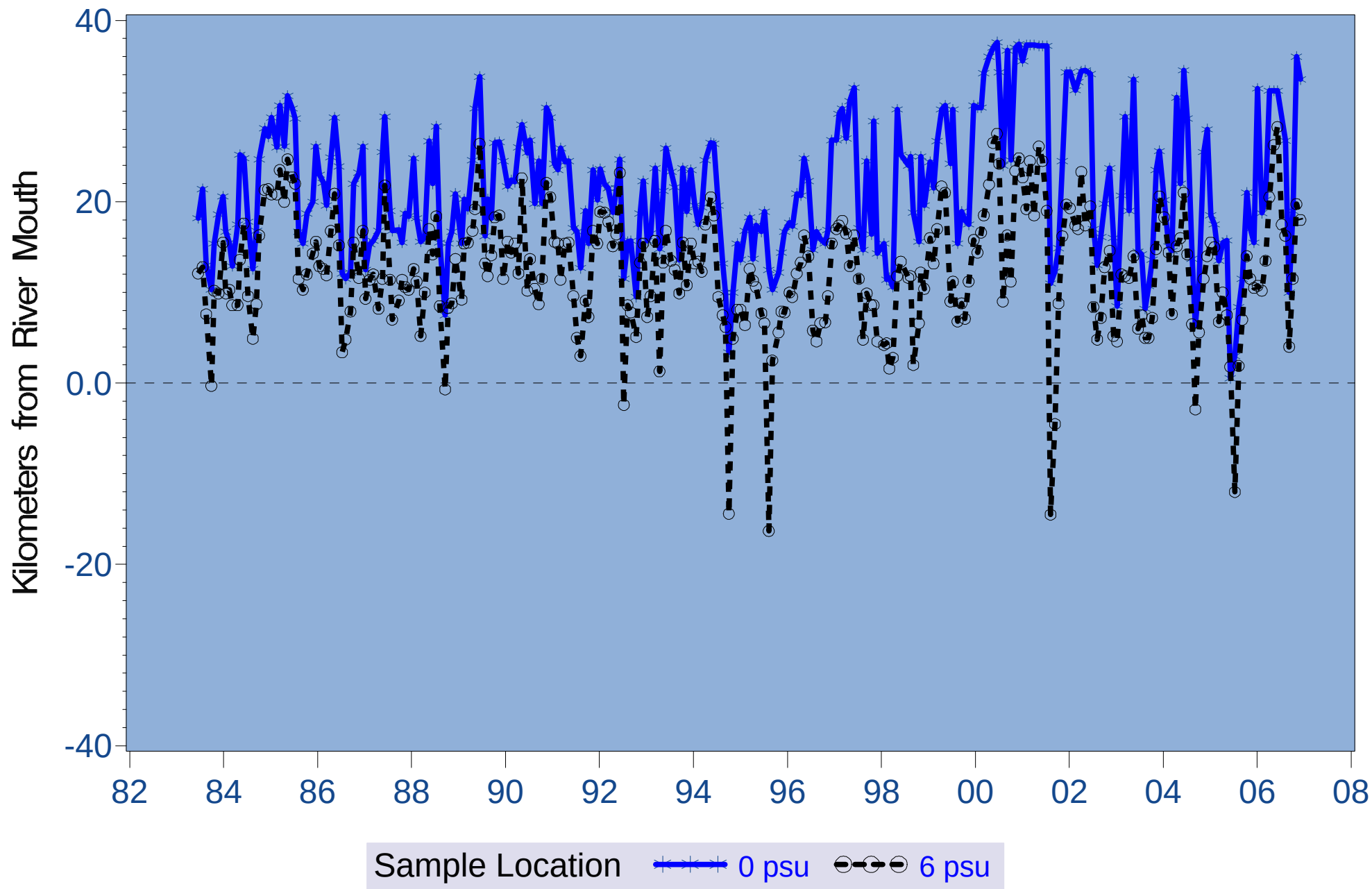


Figure 3.3 Relative distance (km) from the mouth of the river of 0 and 6 psu salinity sampling zones (1983-2006)

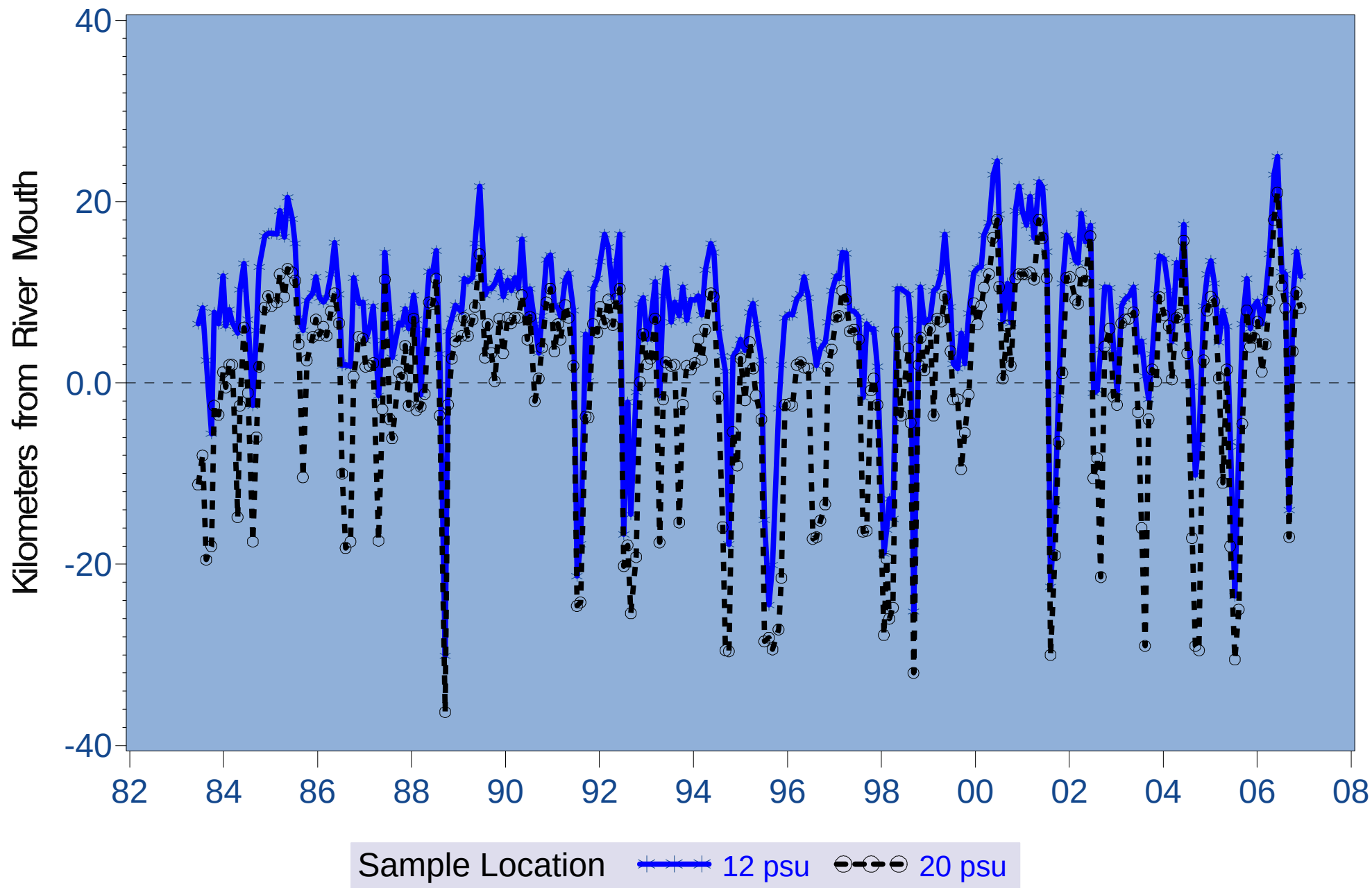


Figure 3.4 Relative distance (km) from the mouth of the river of 12 and 20 psu salinity sampling zones (1983-2006)

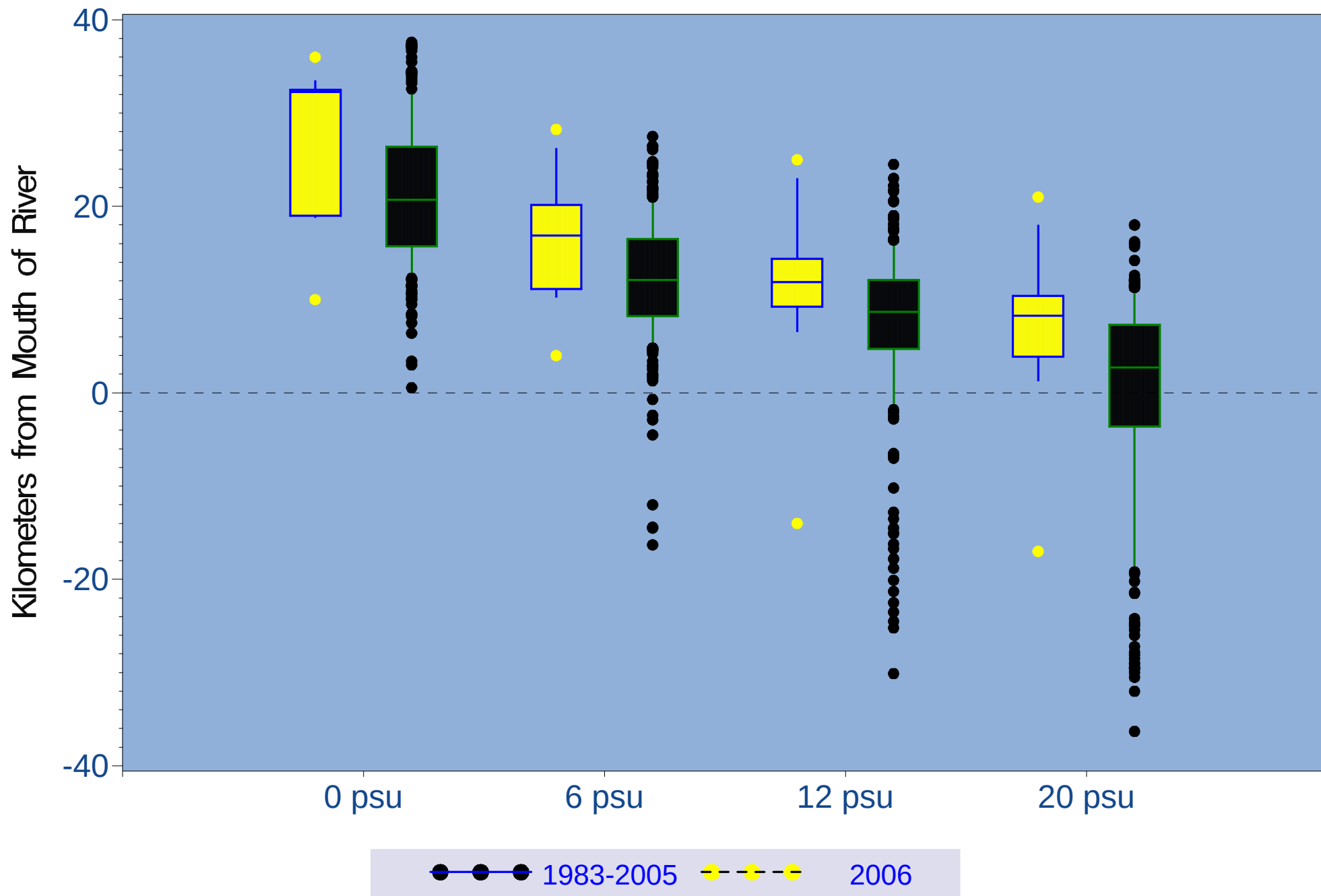


Figure 3.5 Box & whiskers of distance (km) of salinity zones from the mouth of the river

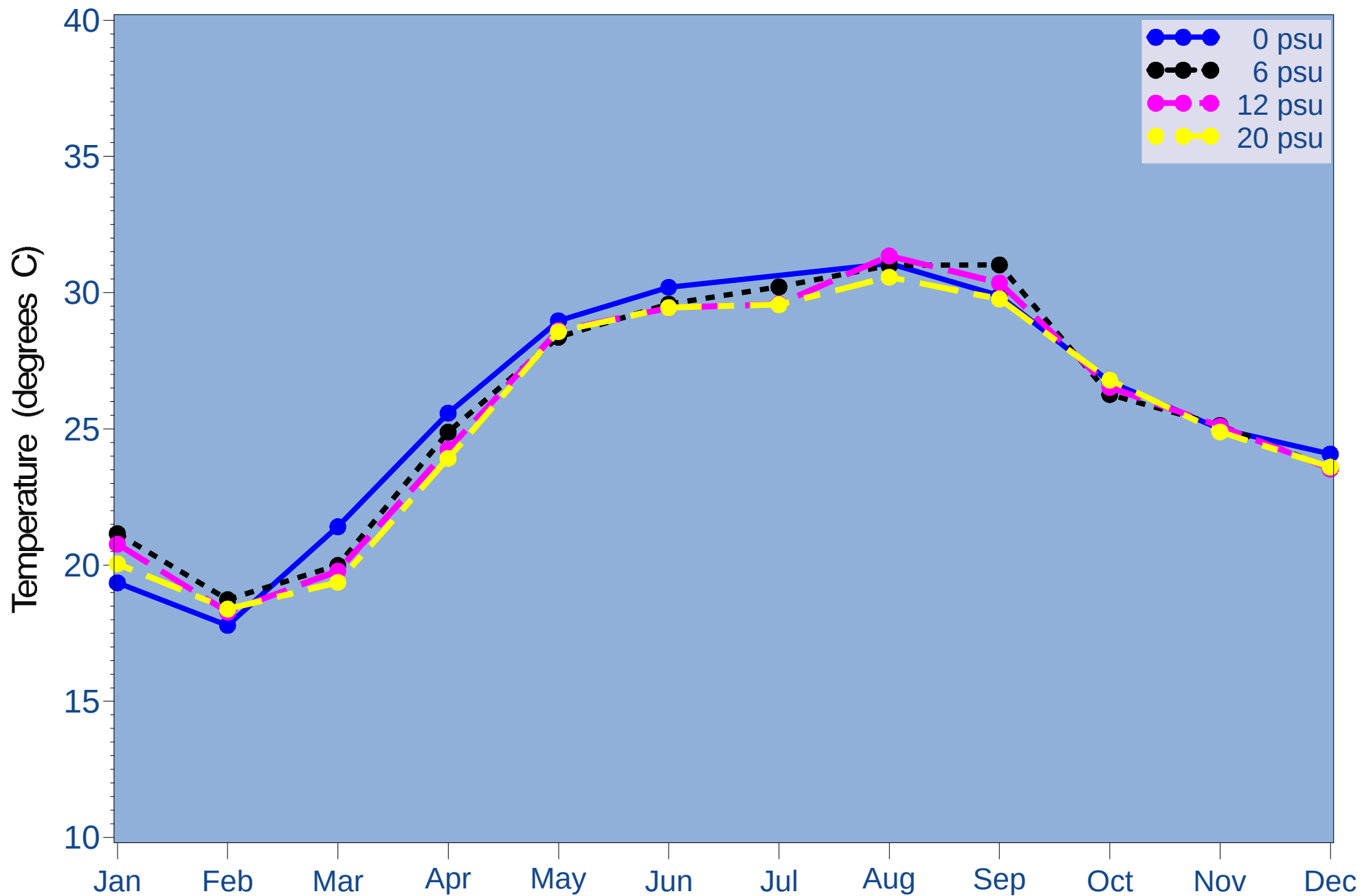


Figure 3.6 Monthly temperature at each of the four salinity based sampling zones (2006)

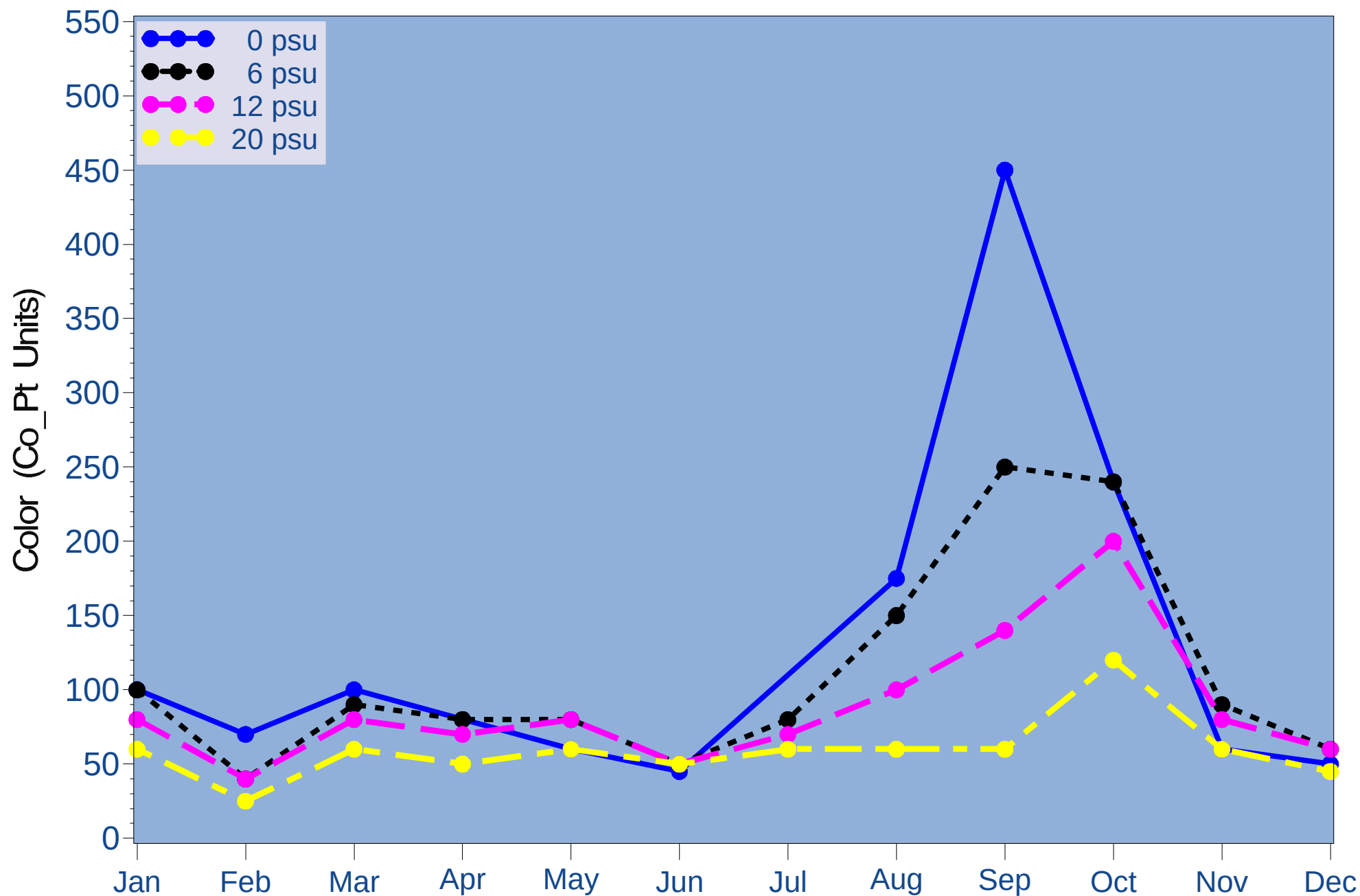


Figure 3.7 Monthly color at each of the four salinity based sampling zones (2006)

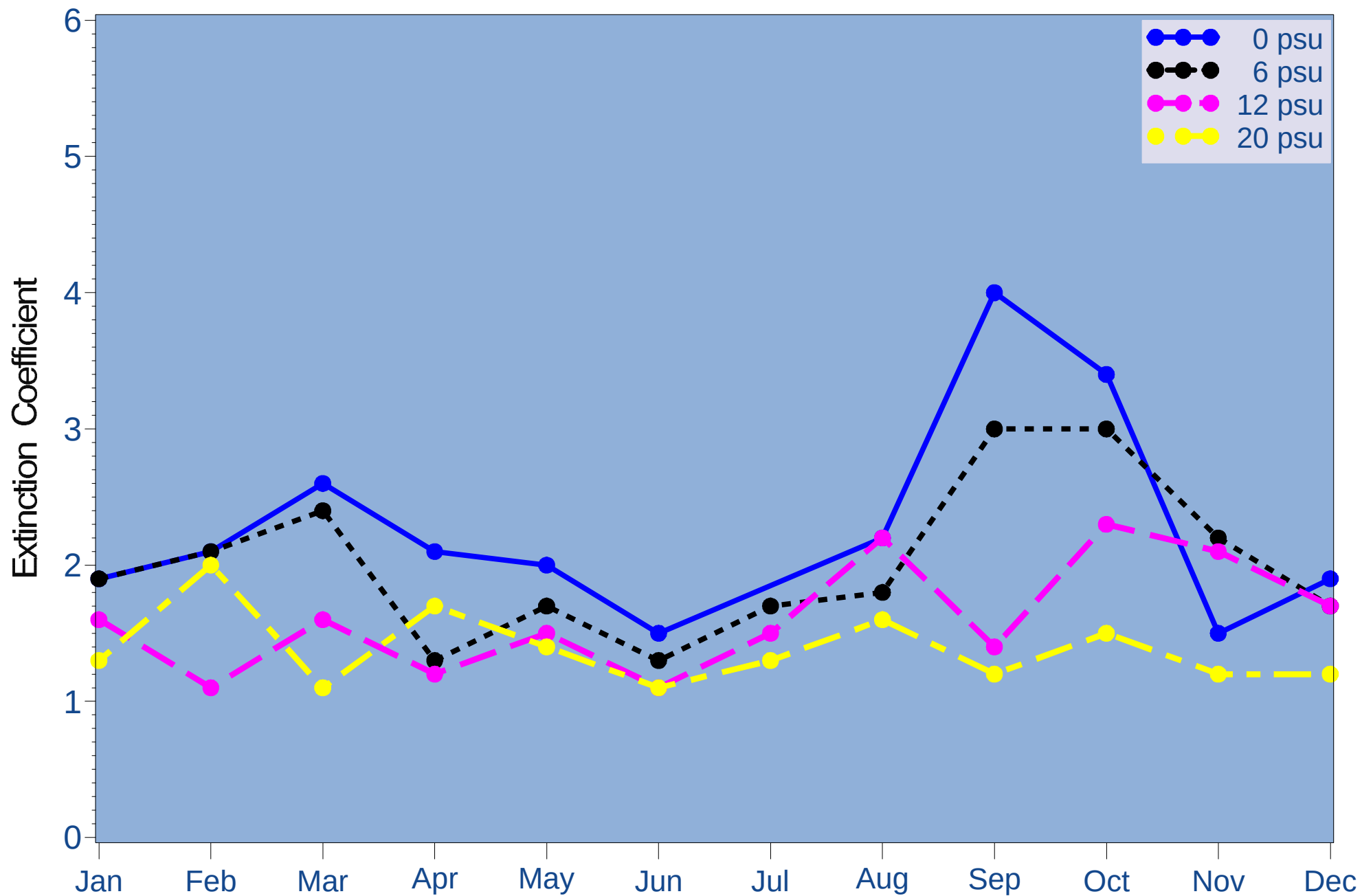


Figure 3.8 Monthly extinction coefficient at each of the salinity based sampling zones (2006)

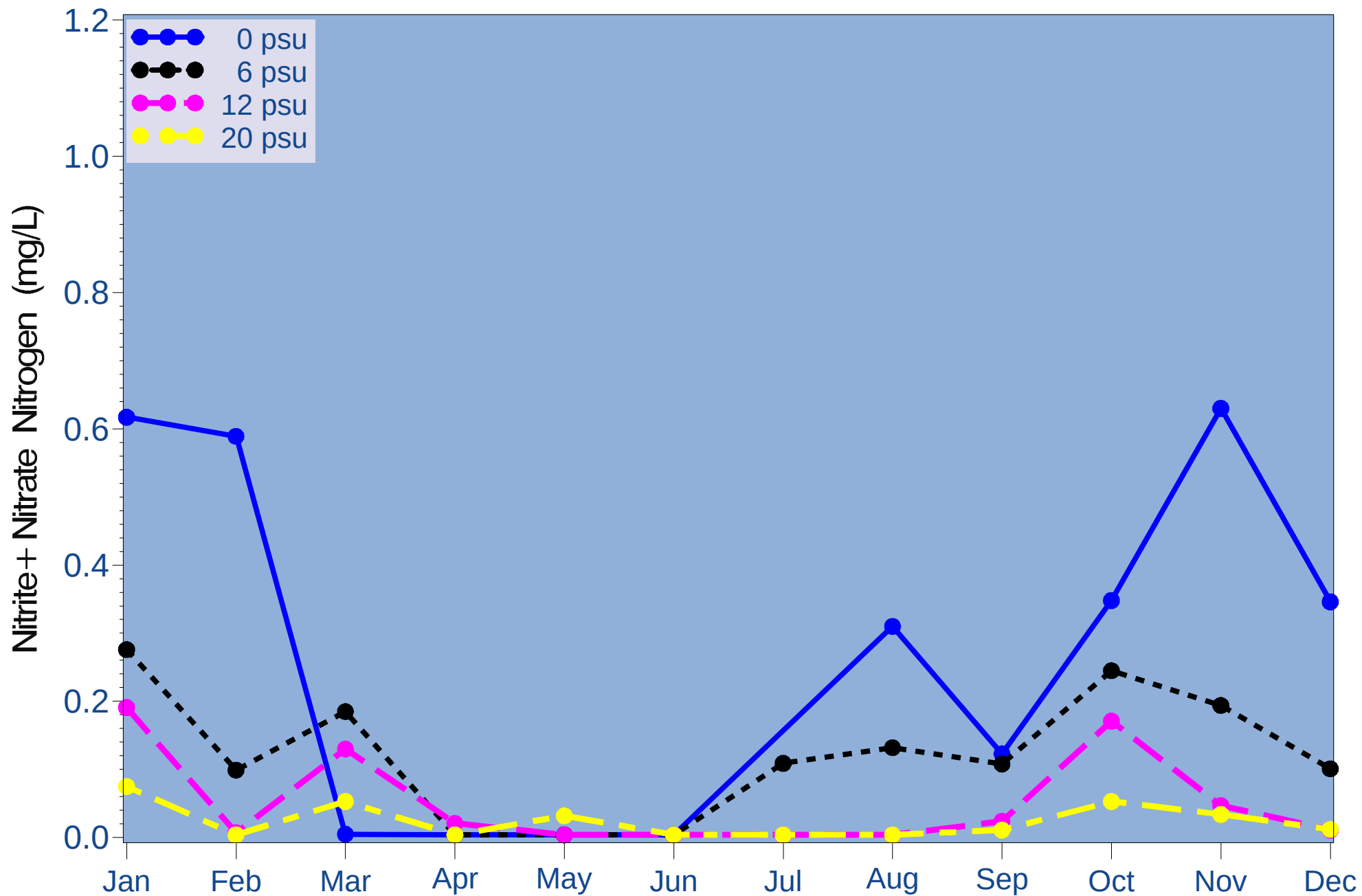


Figure 3.9 Monthly nitrite+nitrate nitrogen at each of the four salinity based sampling zones (2006)

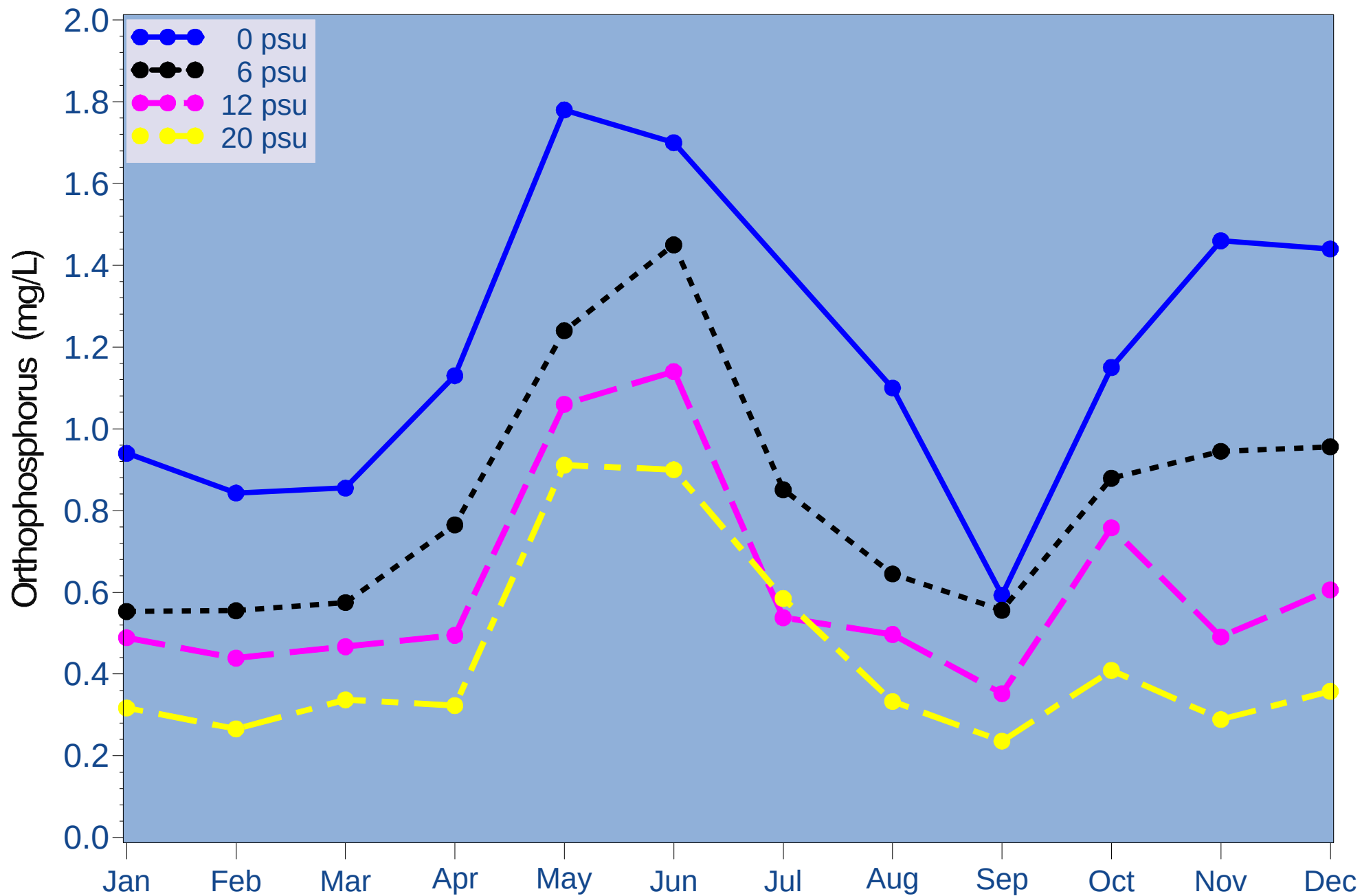


Figure 3.10 Monthly orthophosphorus at each of the four salinity based sampling zones (2006)

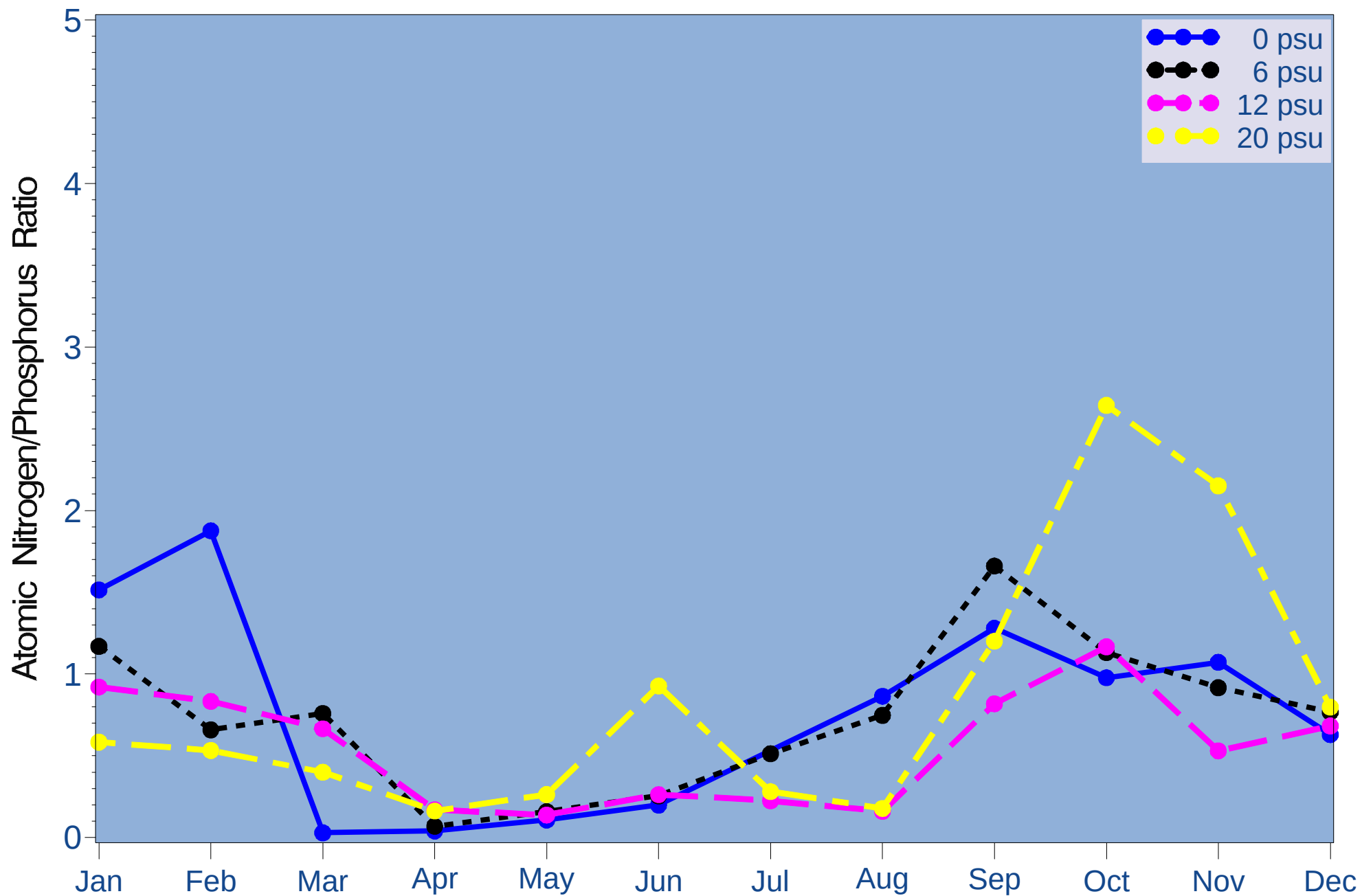


Figure 3.11 Monthly Atomic N/P ratio at each of the four salinity based sampling zones (2006)

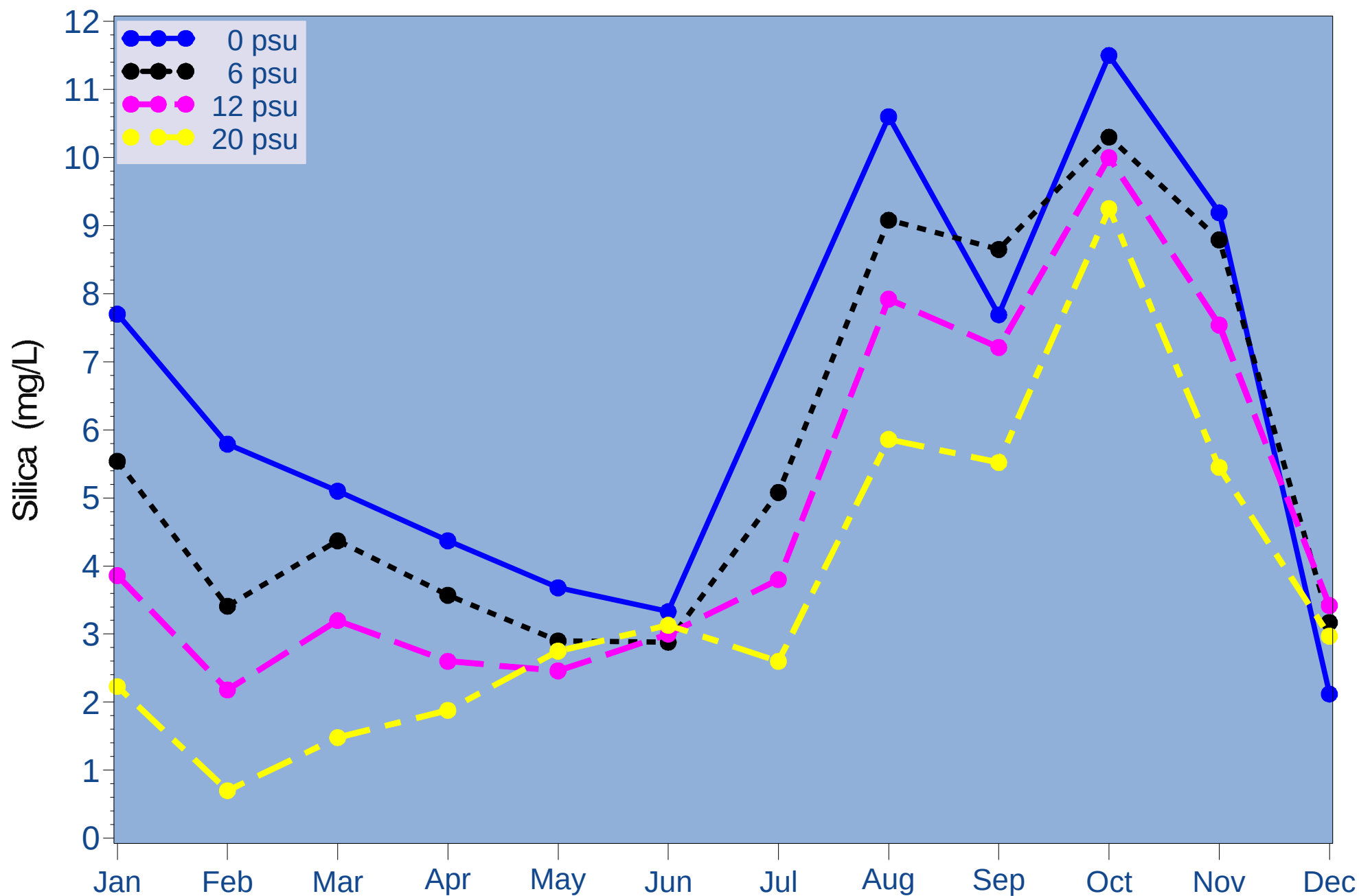


Figure 3.12 Monthly silica at each of the four salinity based sampling zones (2006)

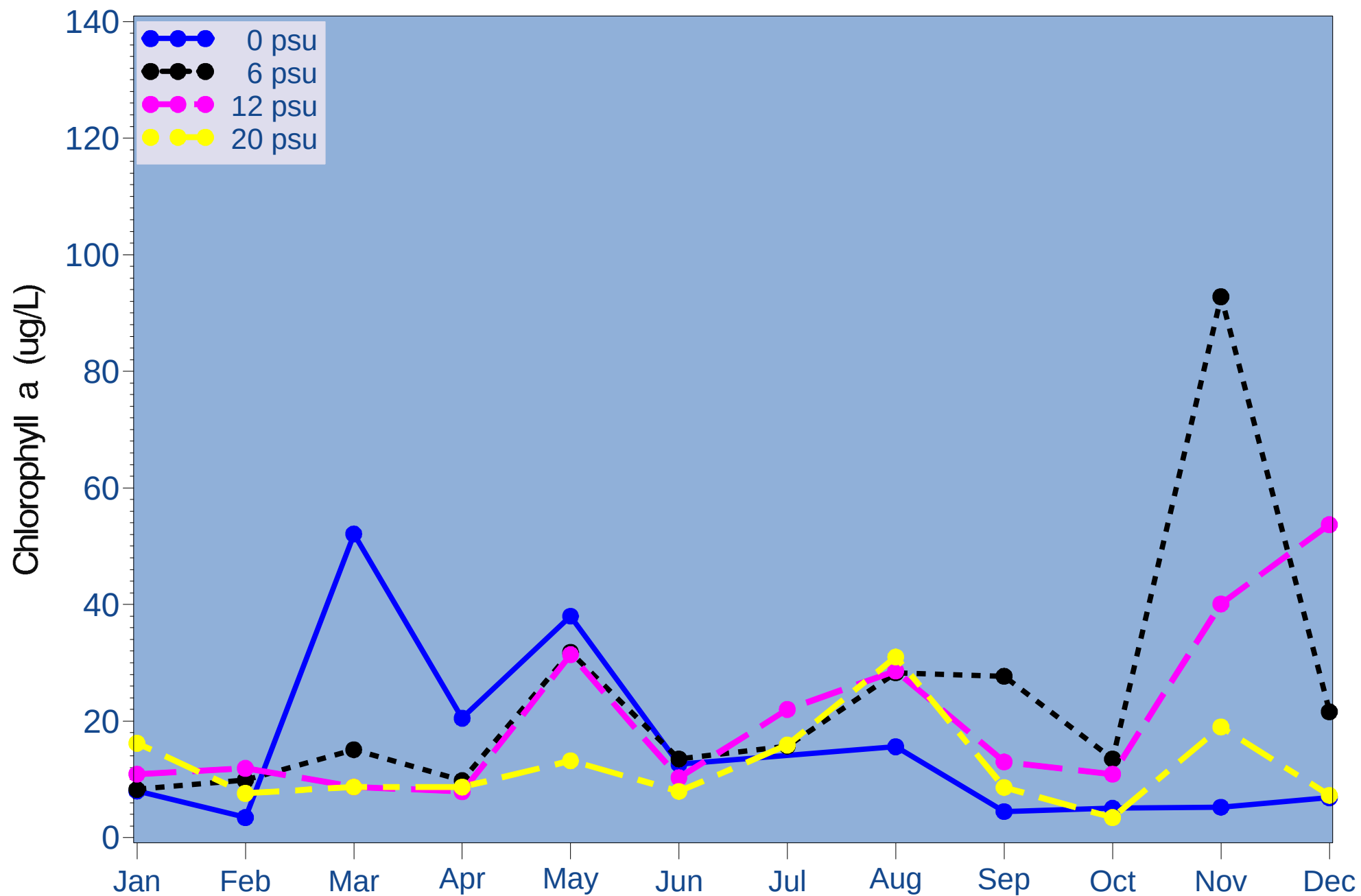


Figure 3.13 Monthly chlorophyll a at each of the four salinity based sampling zones (2006)

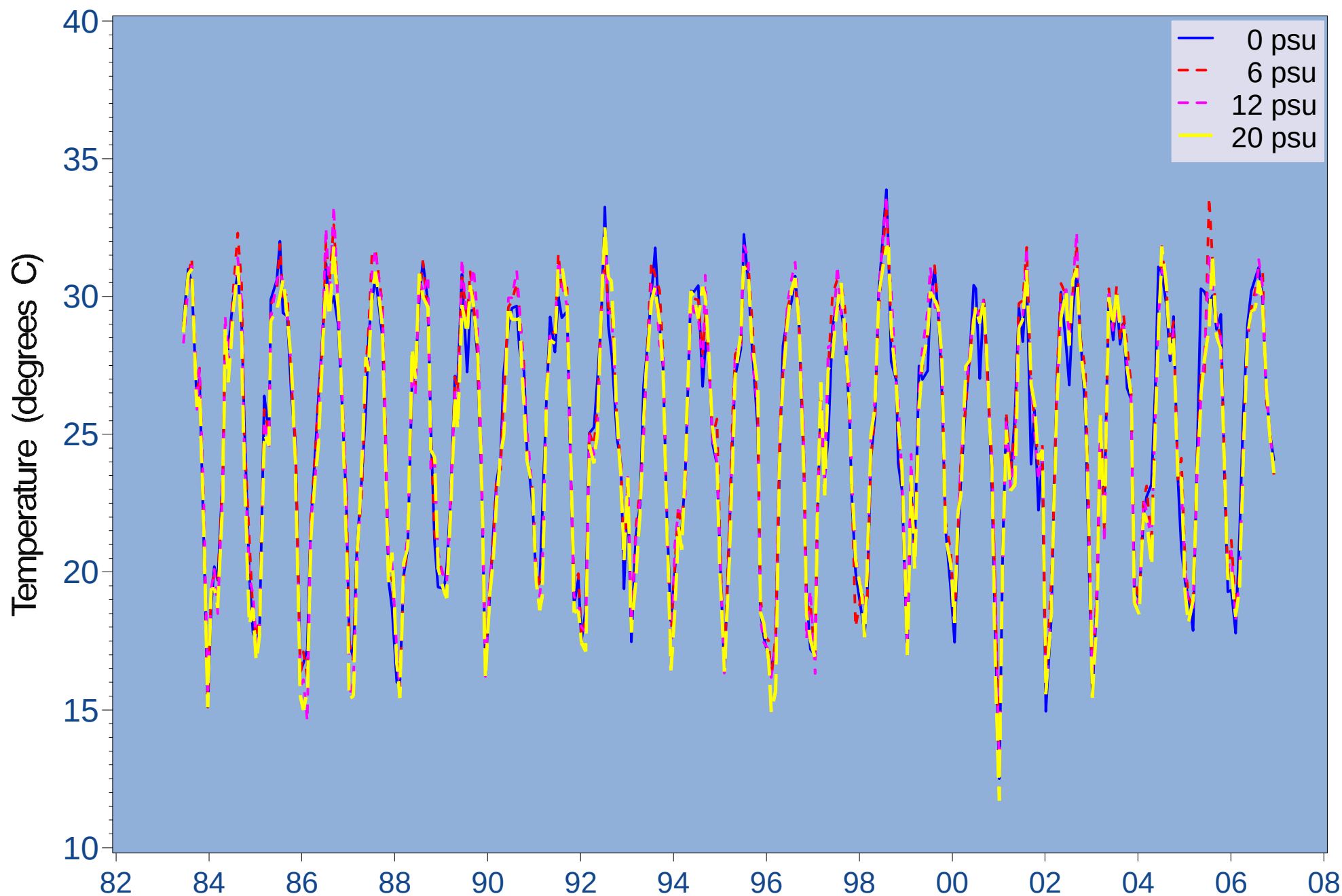


Figure 3.14 Monthly temperature at each isohaline based sampling zone (1983-2006)

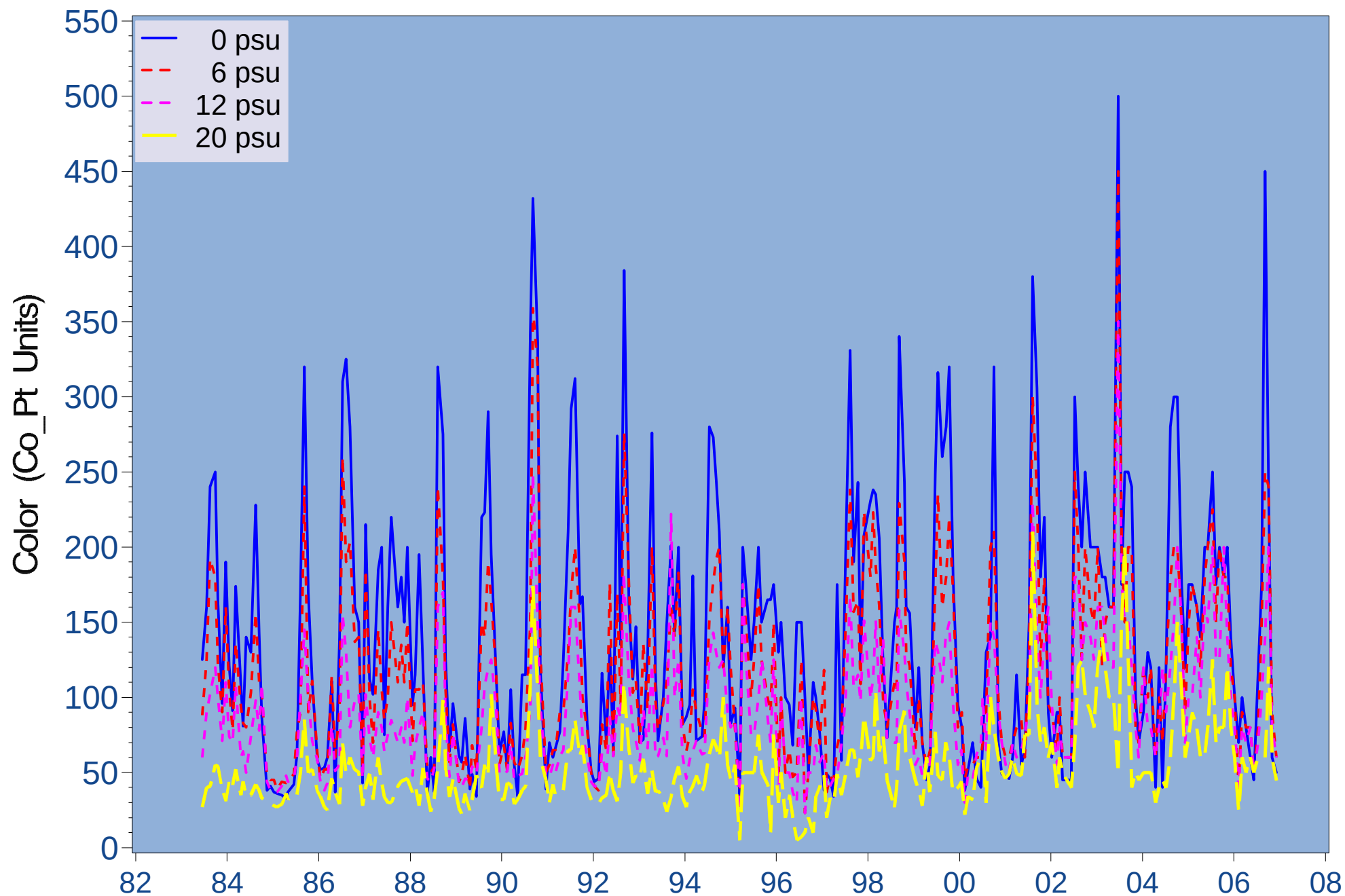


Figure 3.15 Monthly color at each isohaline based sampling zone (1983-2006)

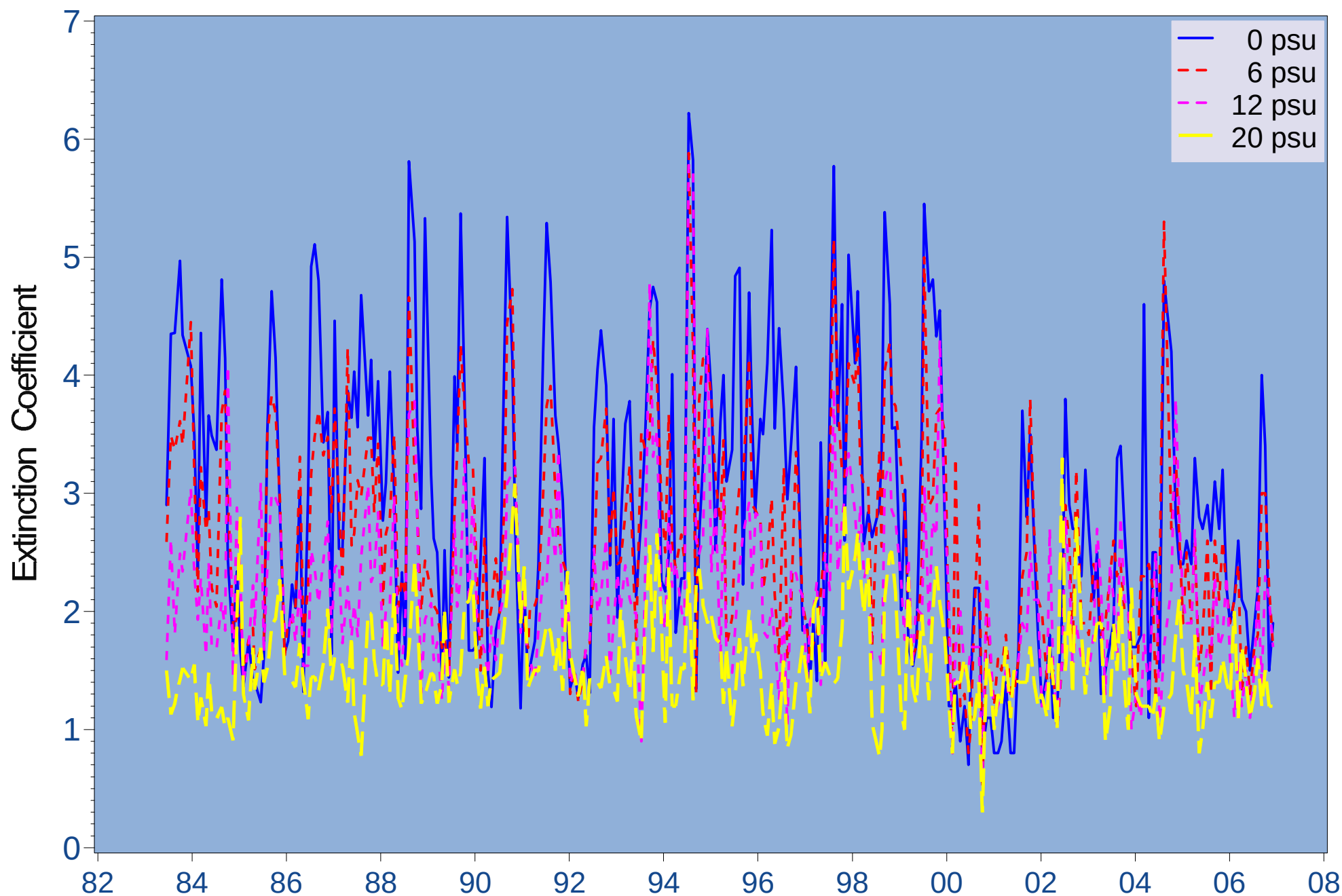


Figure 3.16 Monthly extinction coefficient at each isohaline based sampling zone (1983-2006)

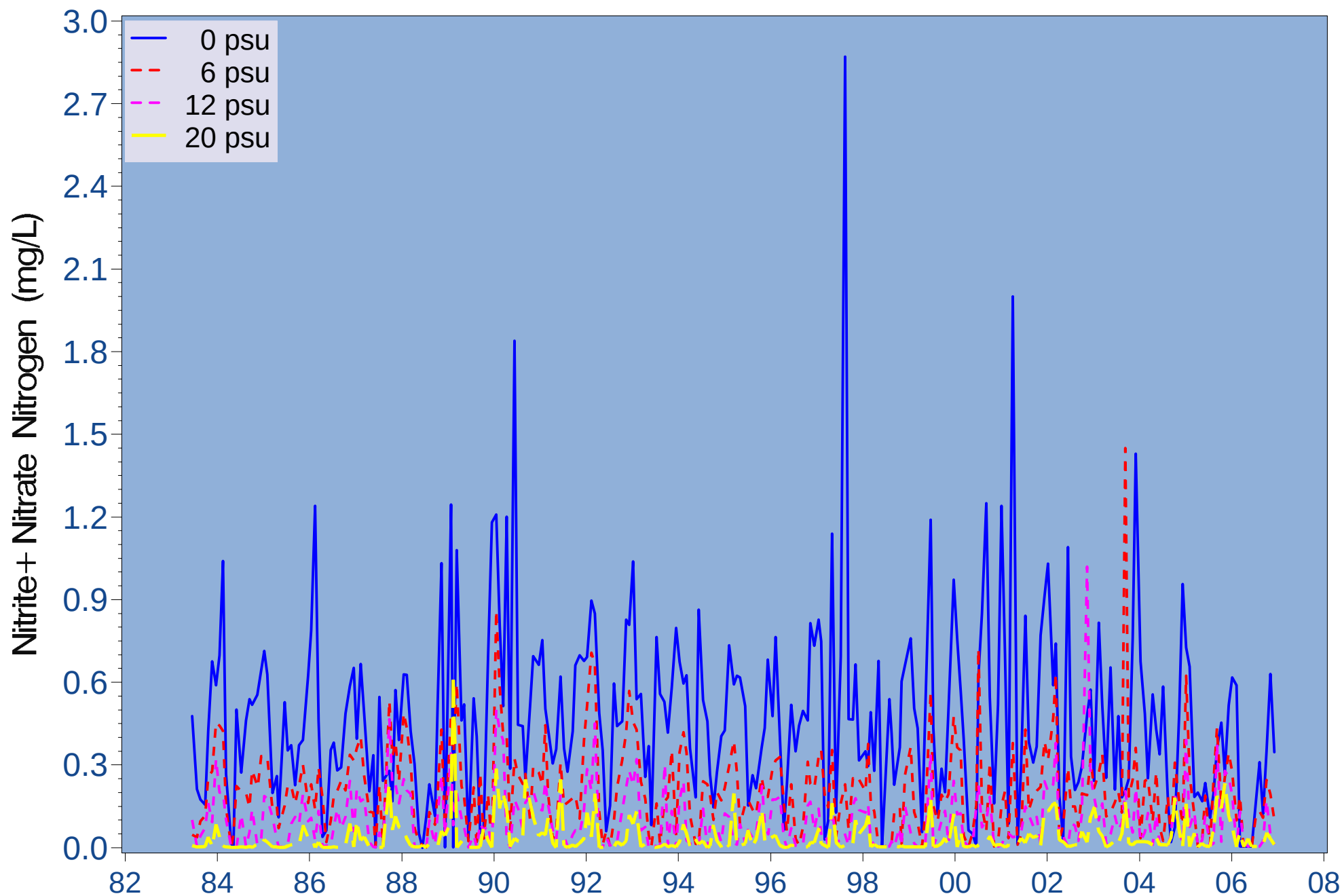


Figure 3.17 Monthly nitrite/nitrate at each isohaline based sampling zone (1983-2006)

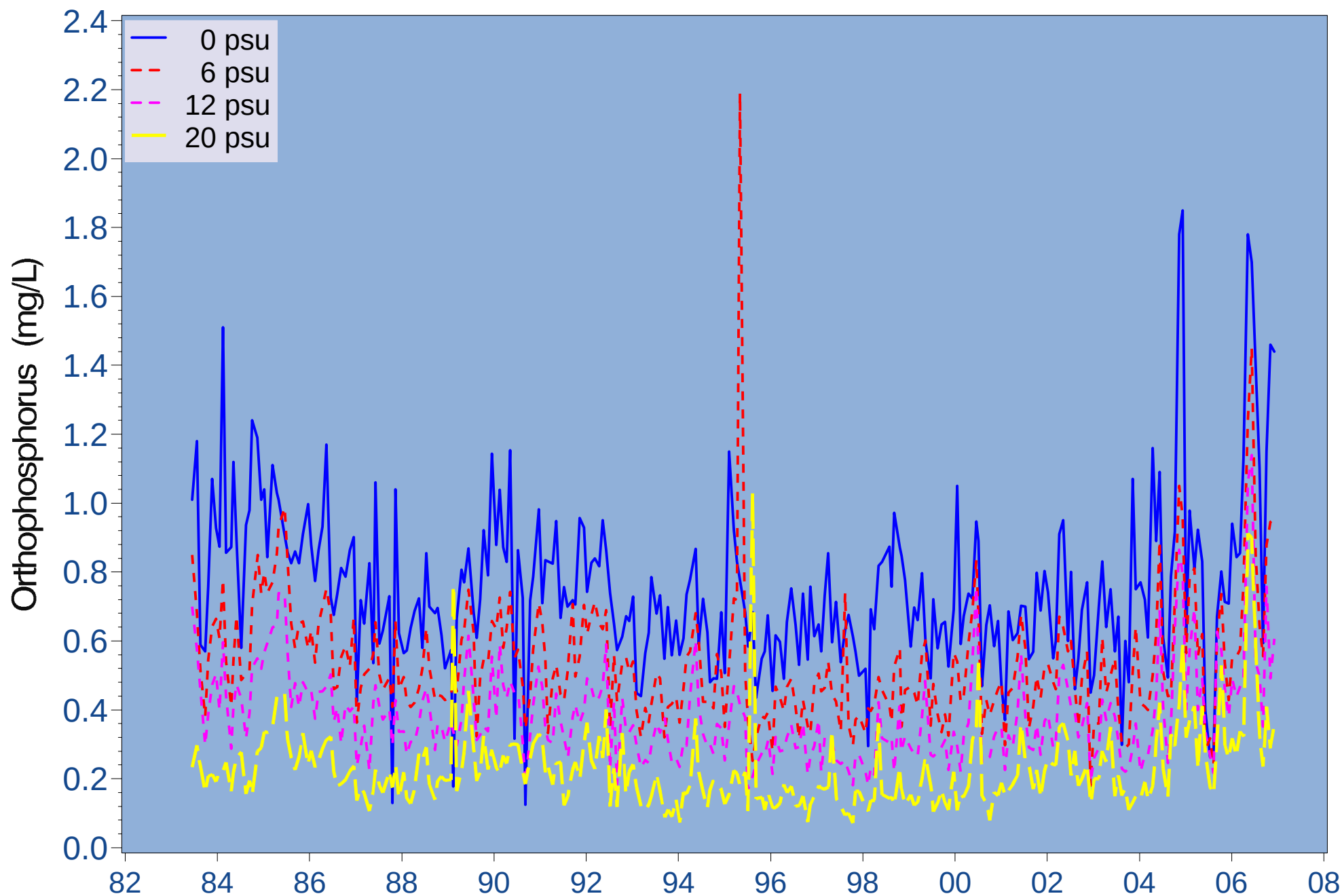


Figure 3.18 Monthly orthophosphorus at each isohaline based sampling zone (1983-2006)

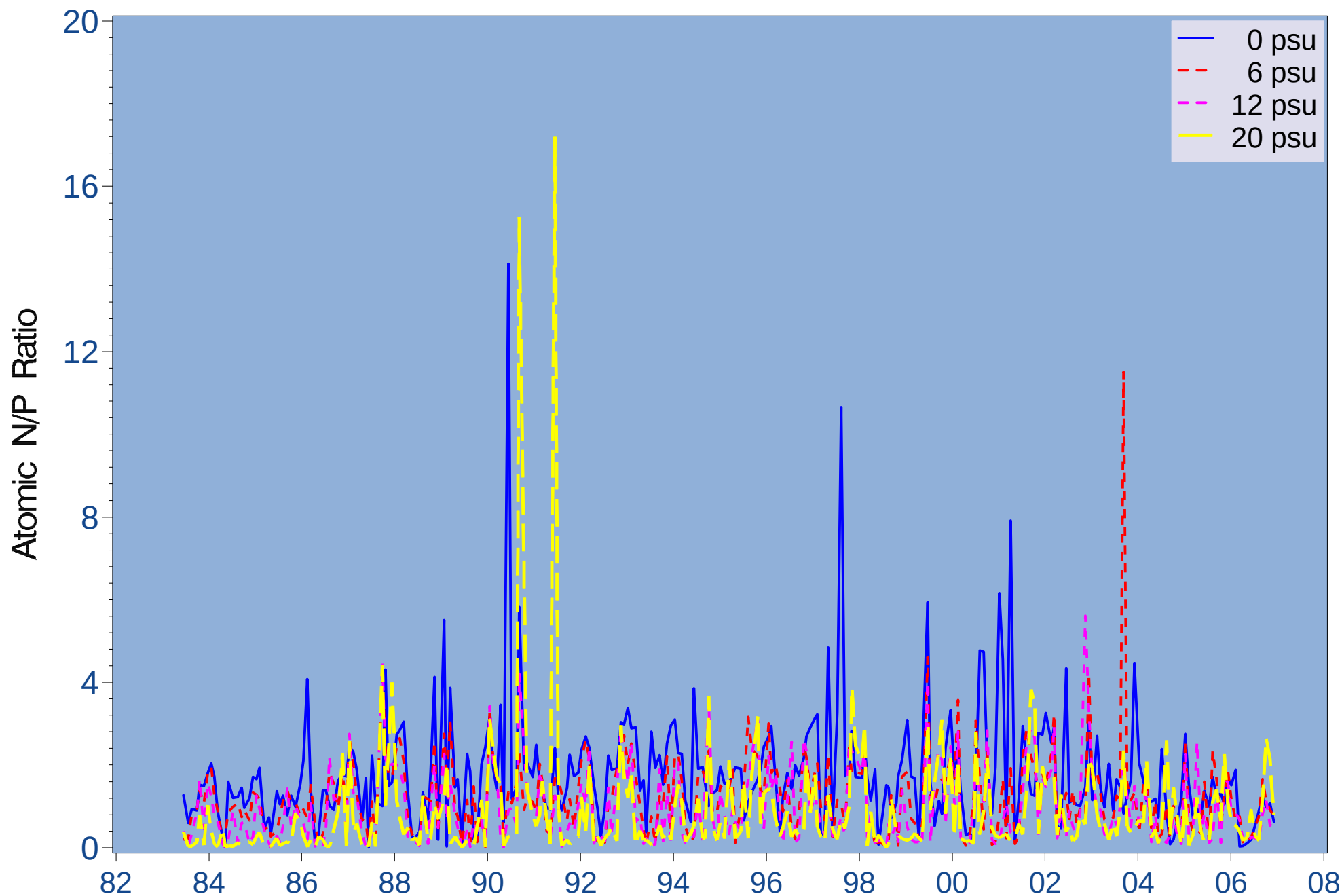


Figure 3.19 Monthly atomic nitrogen/phosphorus ratio at each isohaline based sampling zone (1983-2006)

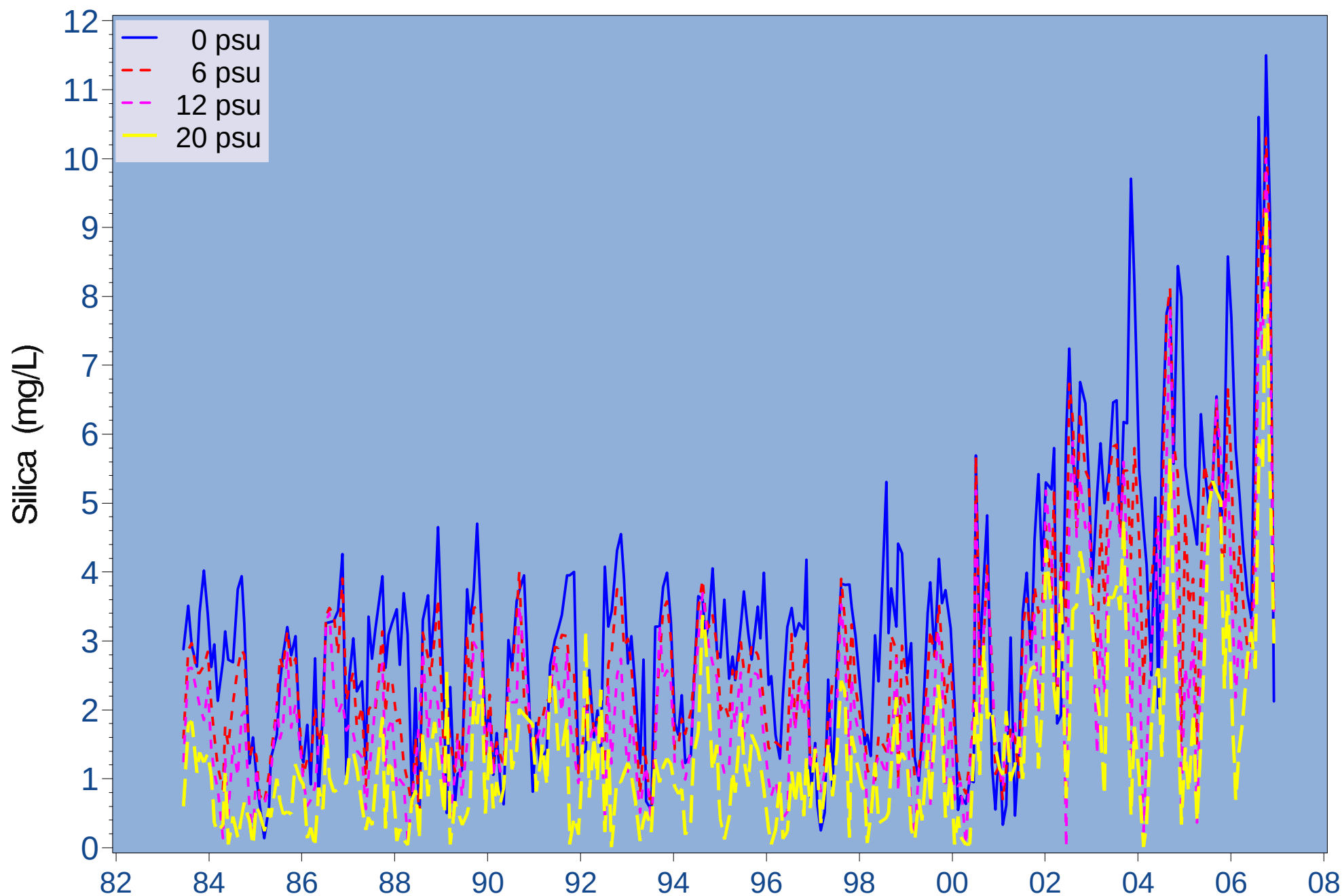


Figure 3.20 Monthly silica at each isohaline based sampling zone (1983-2006)

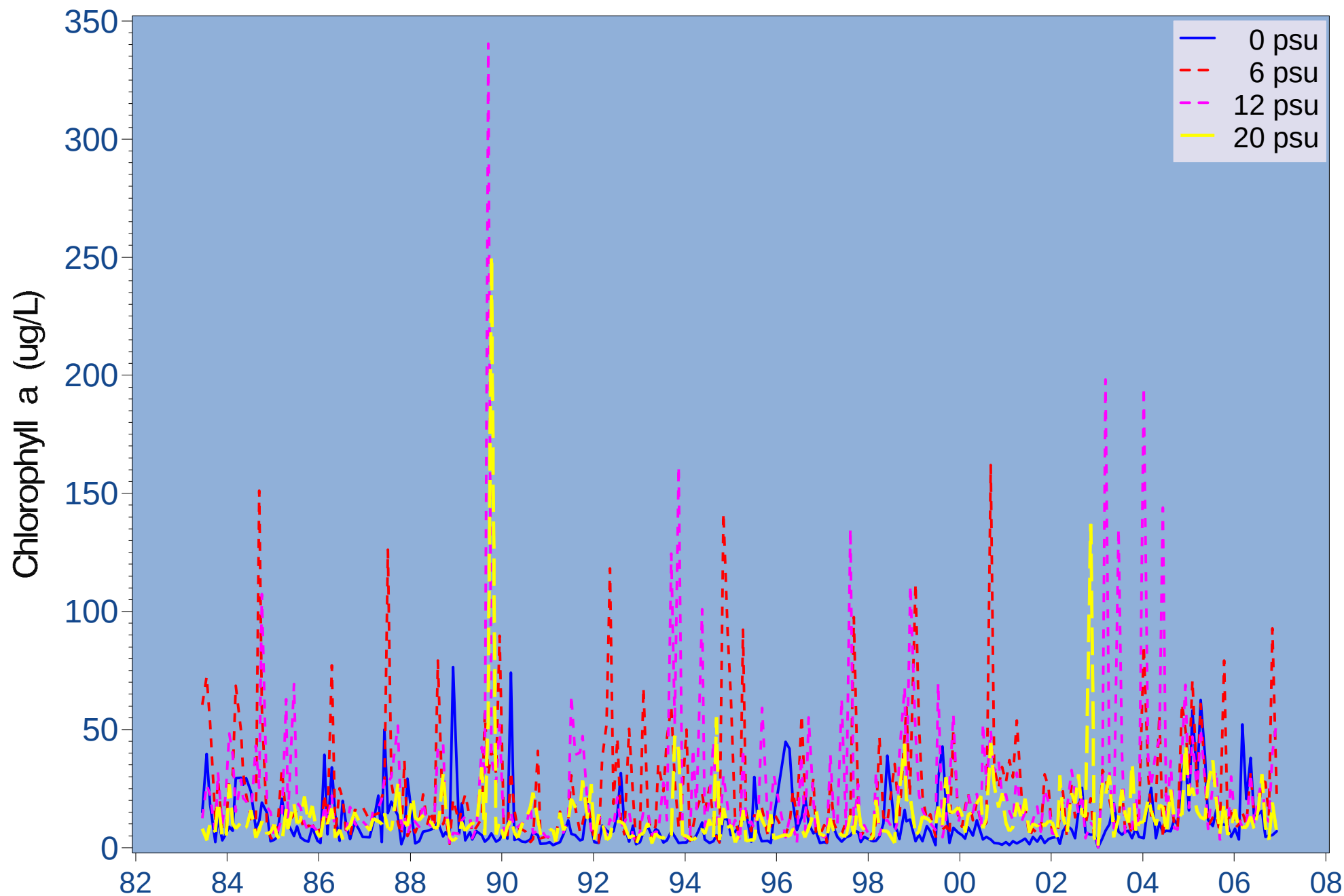


Figure 3.21a Monthly chlorophyll a (ug/L) at each isohaline based sampling zone (1983-2006)

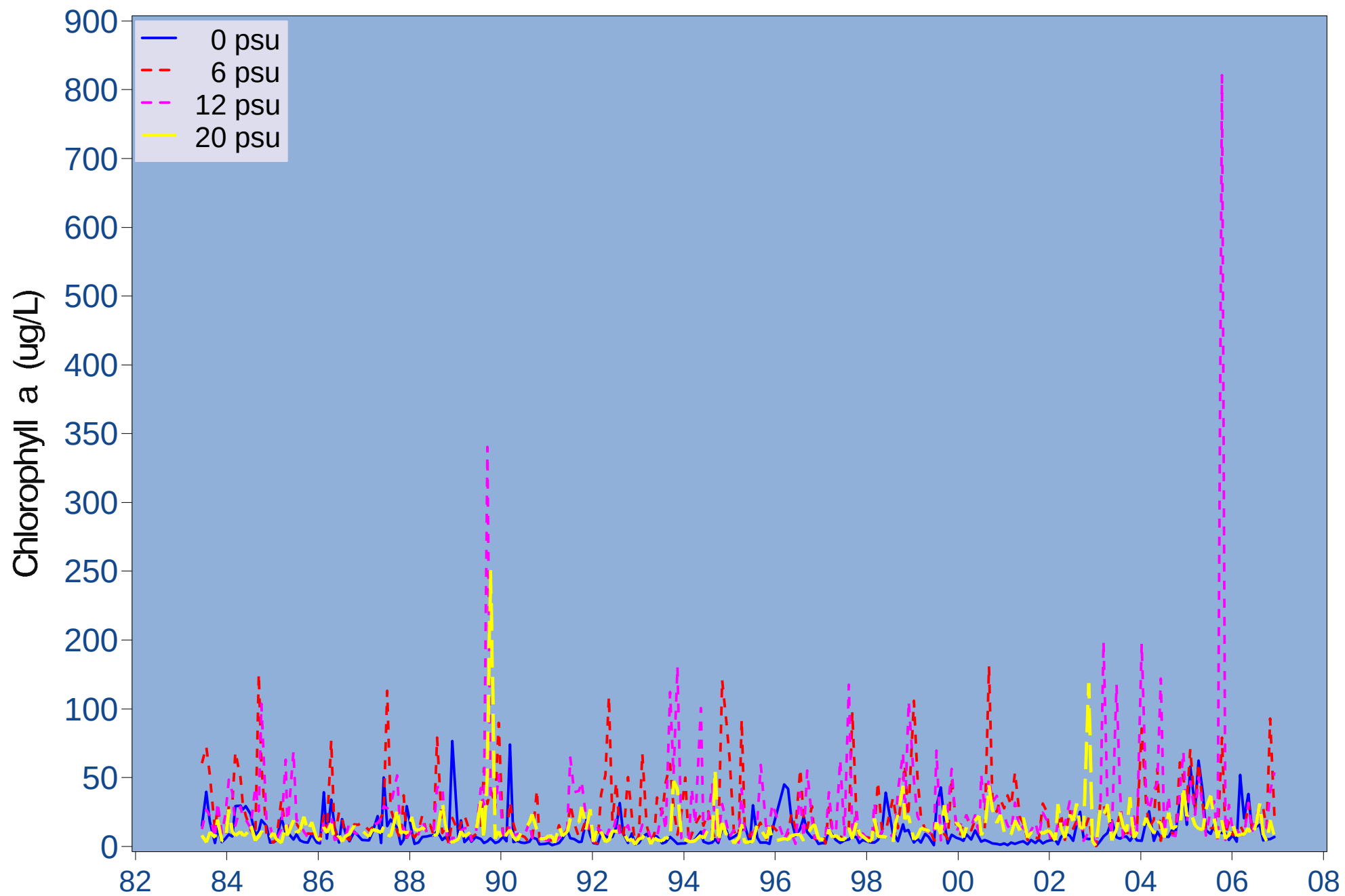


Figure 3.21b Monthly chlorophyll a (ug/L) at each isohaline based sampling zone (1983-2006)

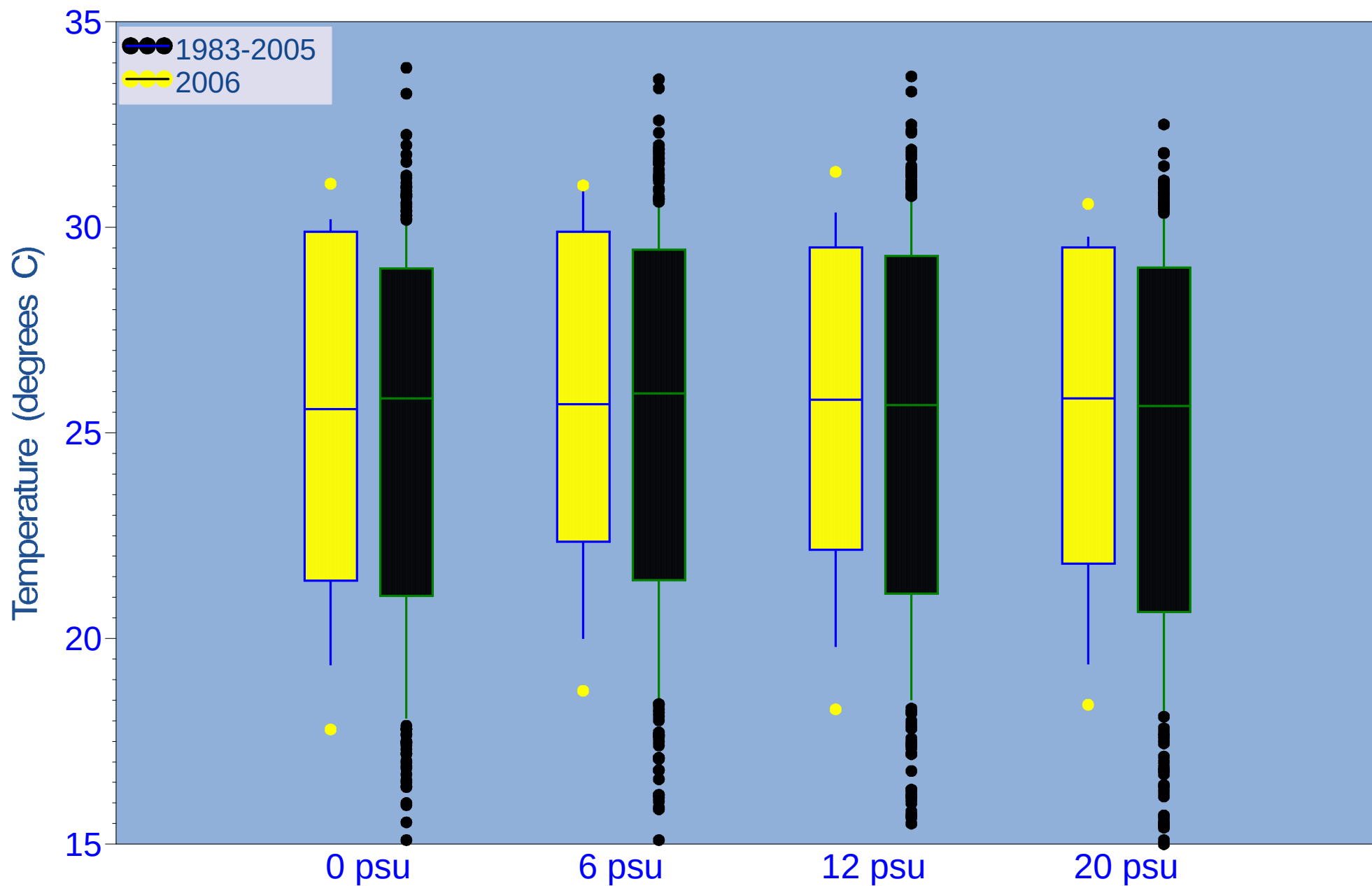


Figure 3.22 Box and whisker plots of temperature at salinity sampling zones

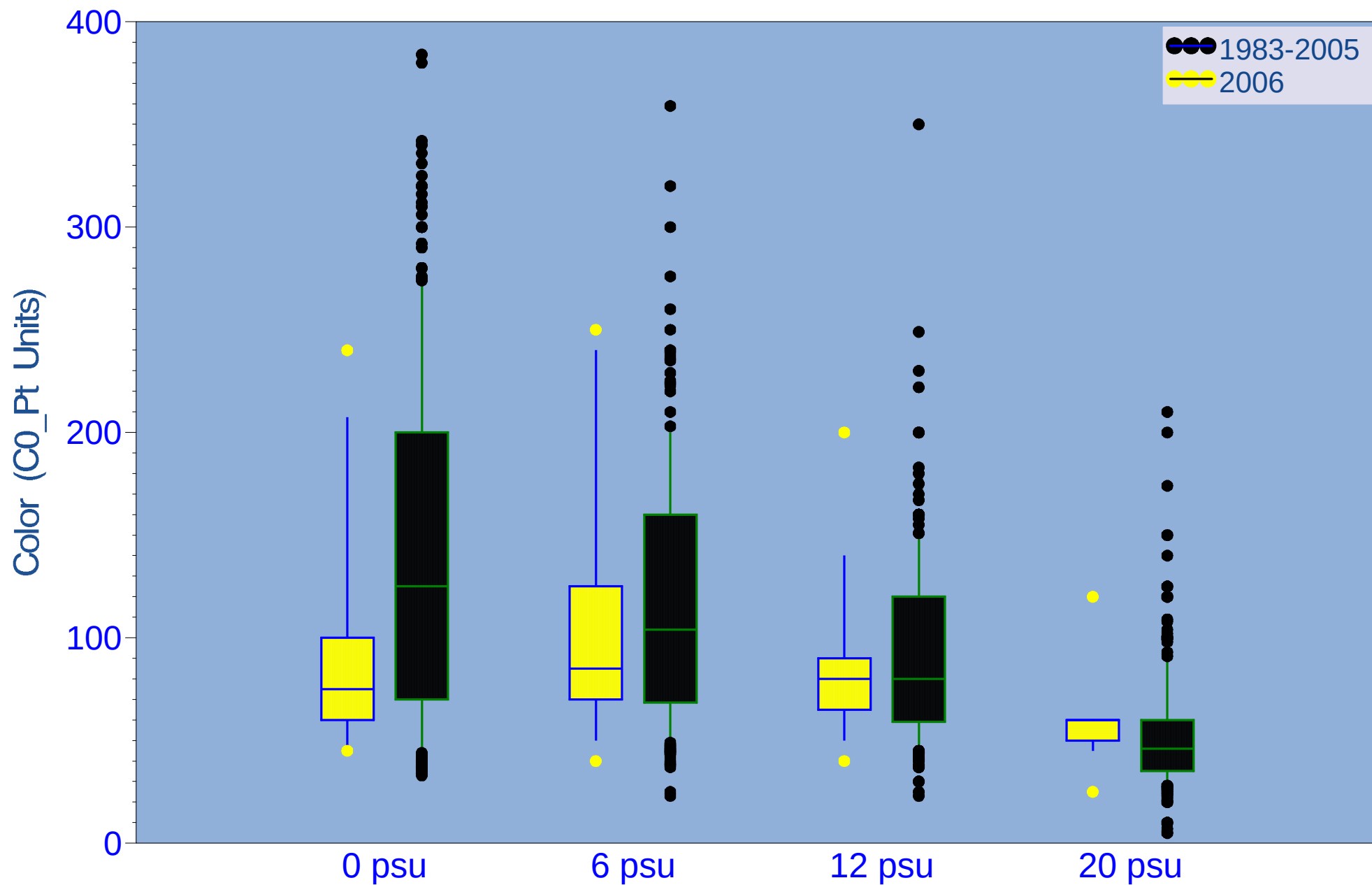


Figure 3.23 Box and whisker plots of Color at salinity sampling zones

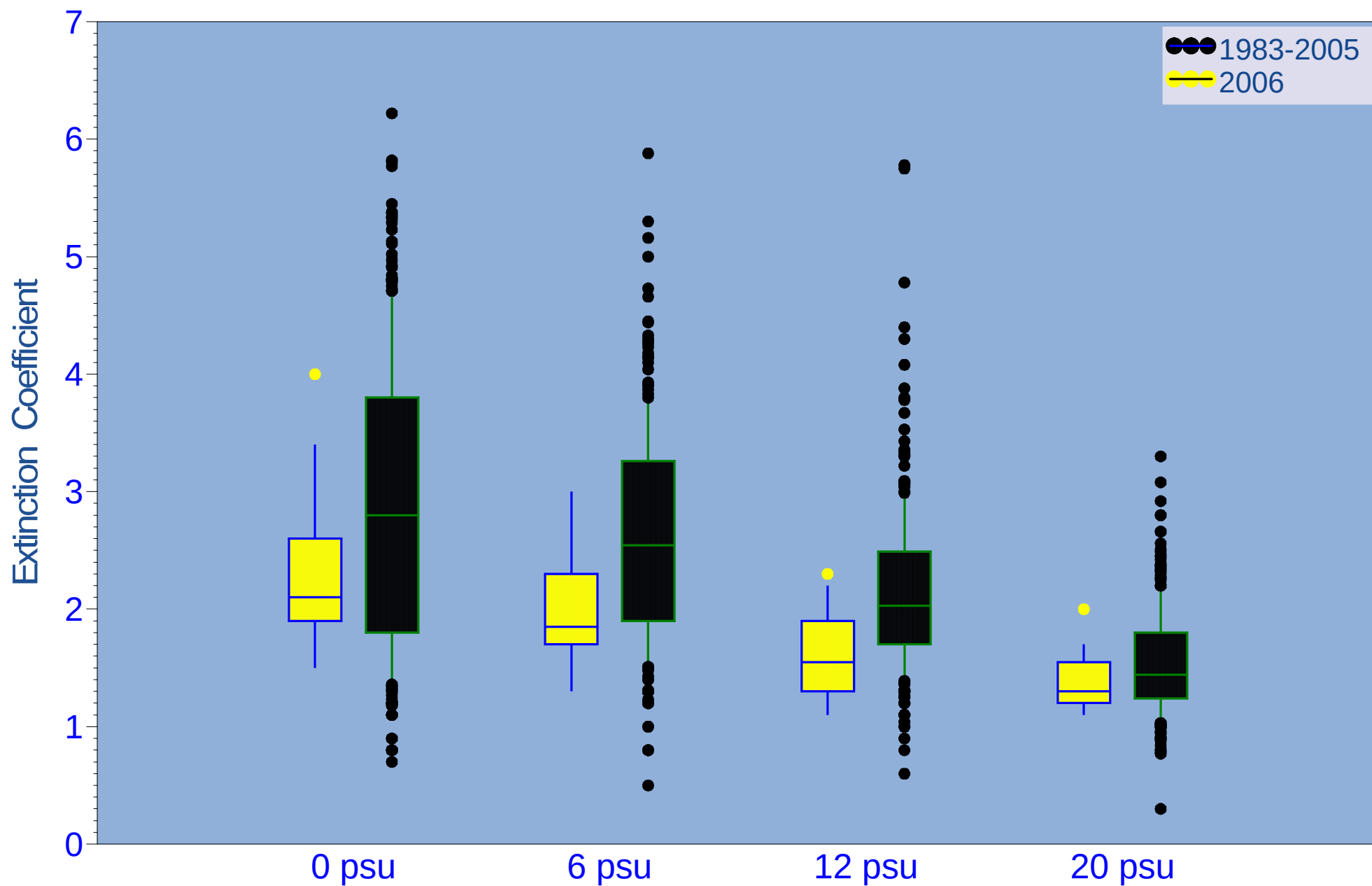


Figure 3.24 Box and whisker plots of extinction coefficient at salinity sampling zones

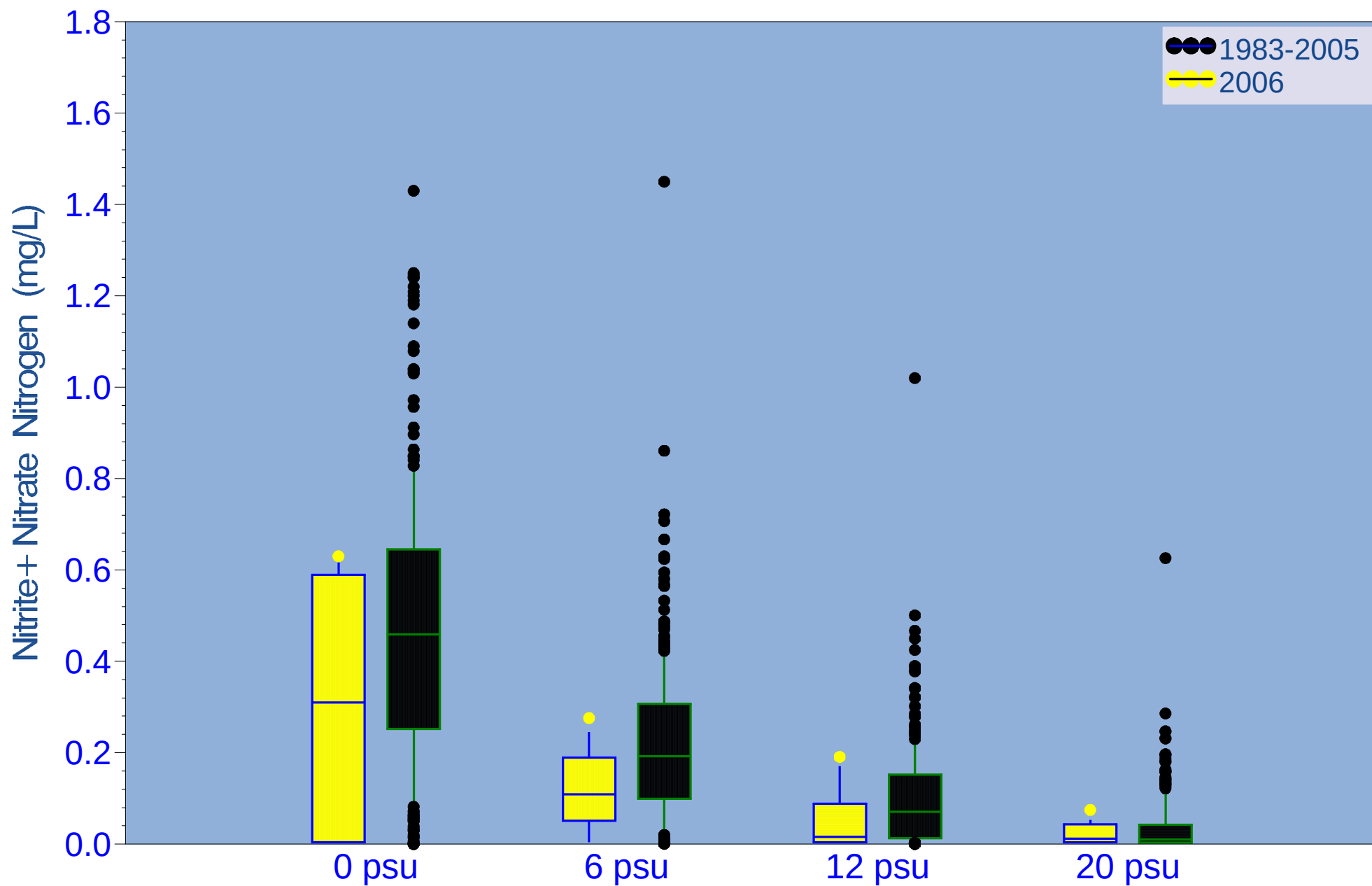


Figure 3.25 Box and whisker plots of nitrite/nitrate at salinity sampling zones

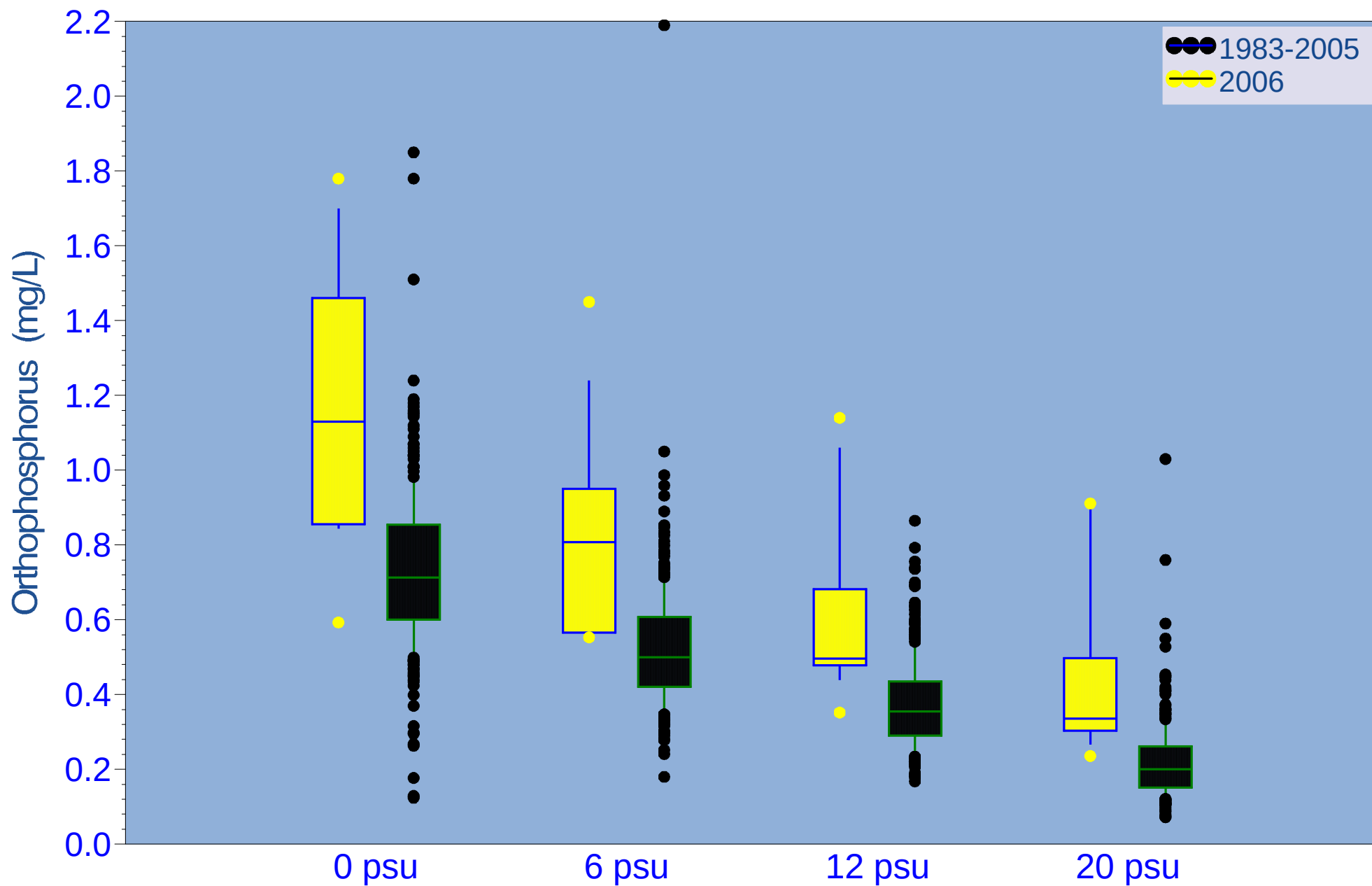


Figure 3.26 Box and whisker plots of ortho-phosphorus at salinity sampling zones

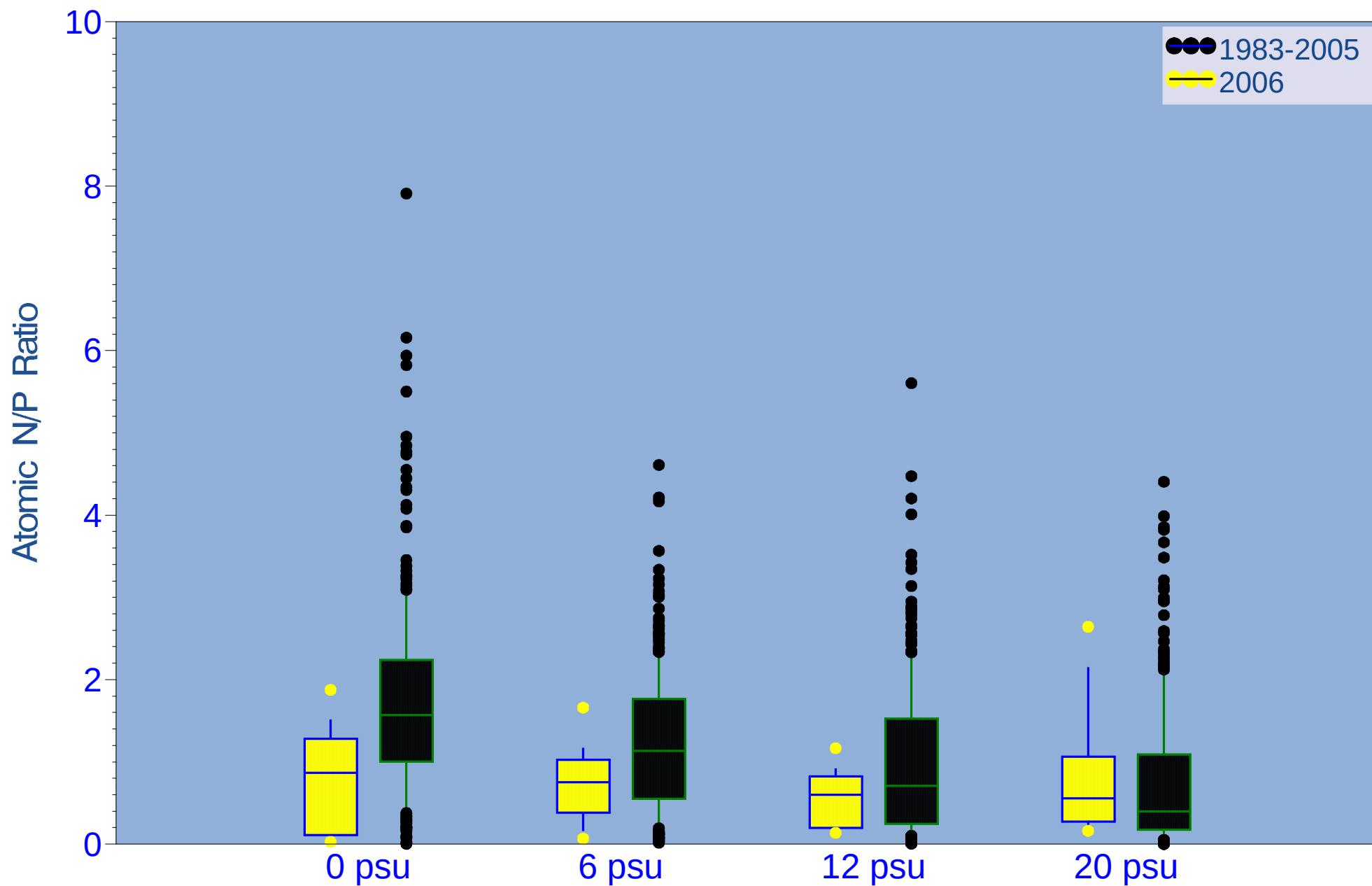


Figure 3.27 Box and whisker plots of atomic N/P ratio at salinity sampling zones

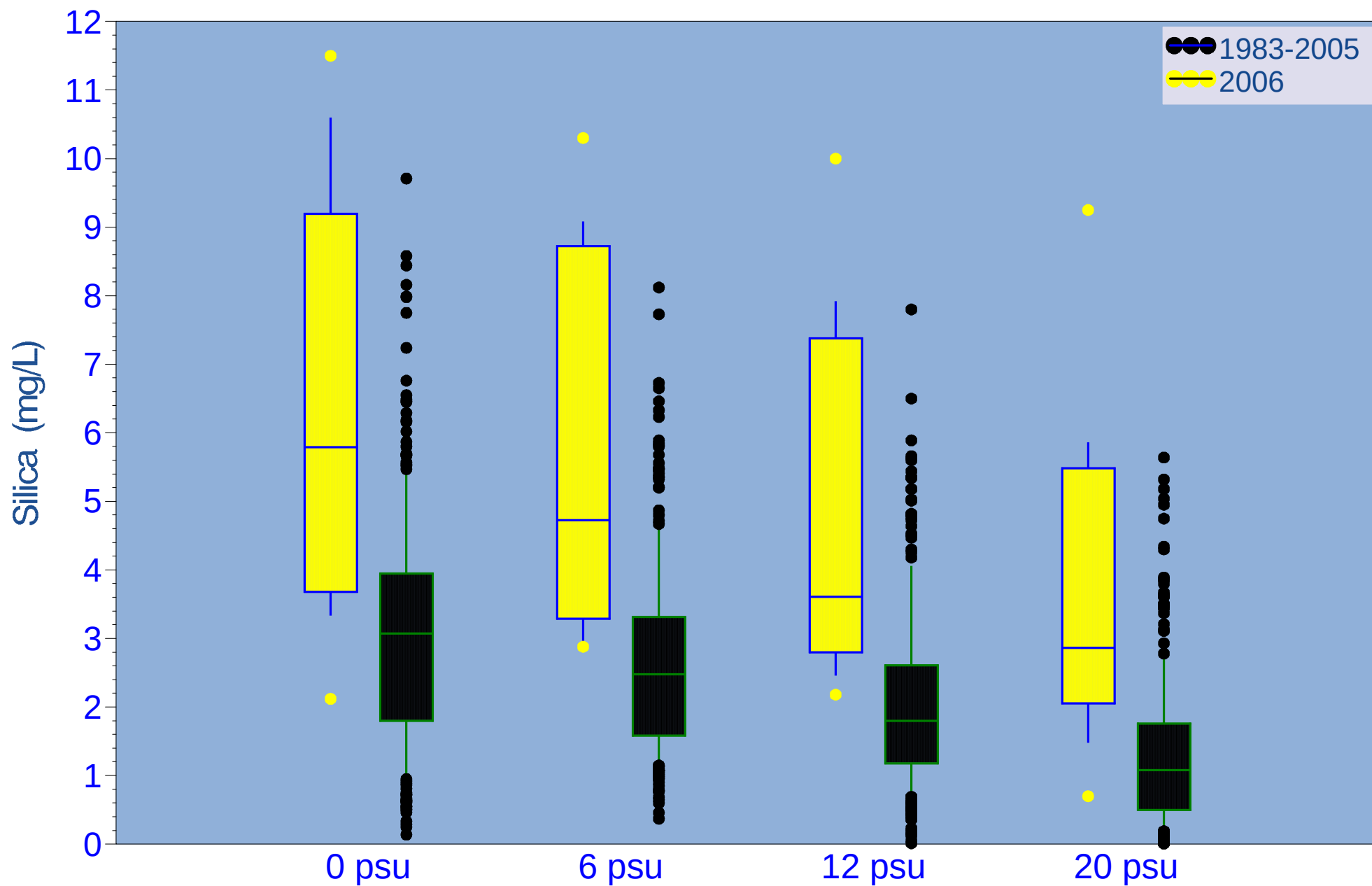


Figure 3.28 Box and whisker plots of silica at salinity sampling zones

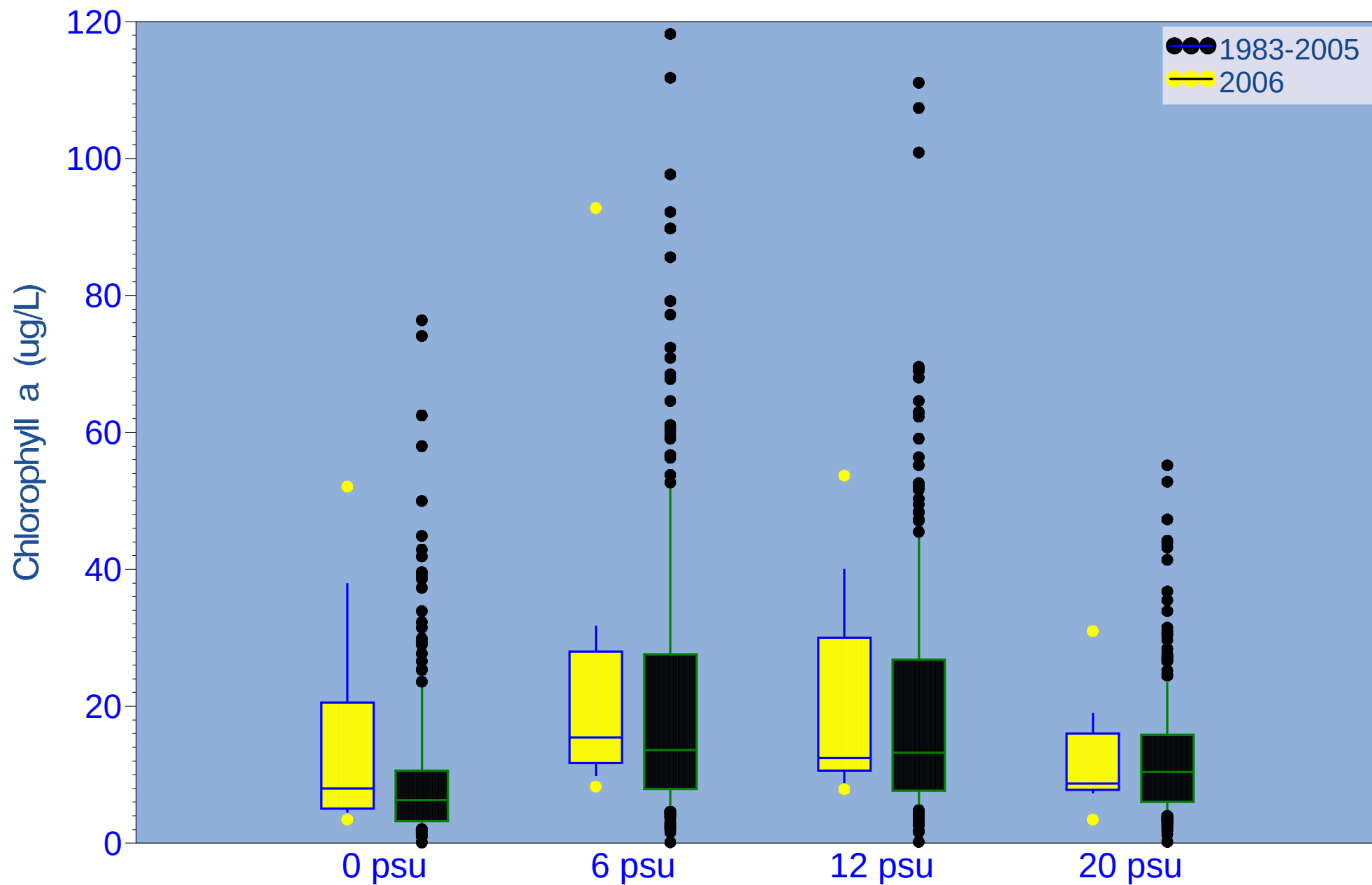
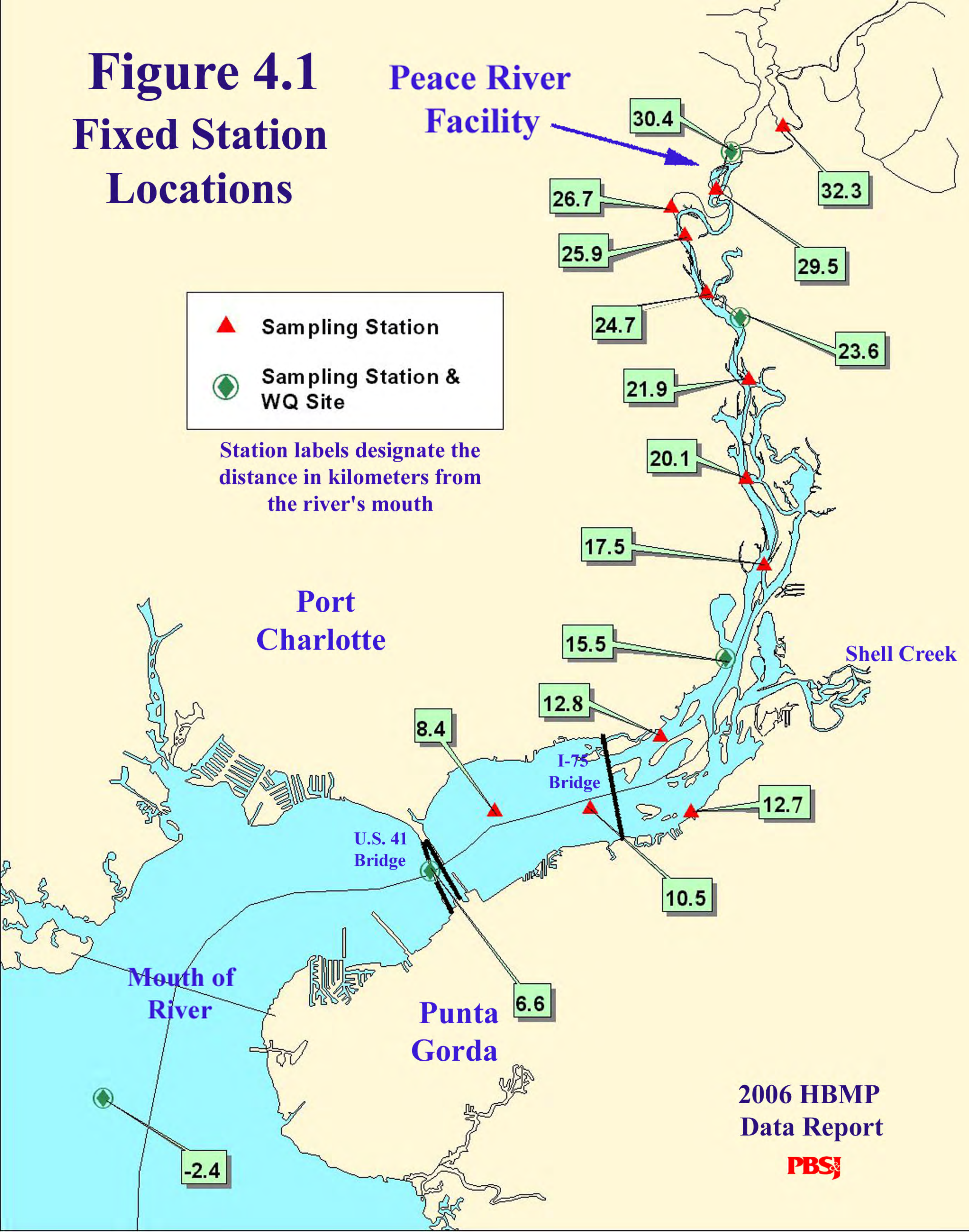


Figure 3.29 Box and whisker plots of chlorophyll a (ug/L) at salinity sampling zones

Figure 4.1 Fixed Station Locations



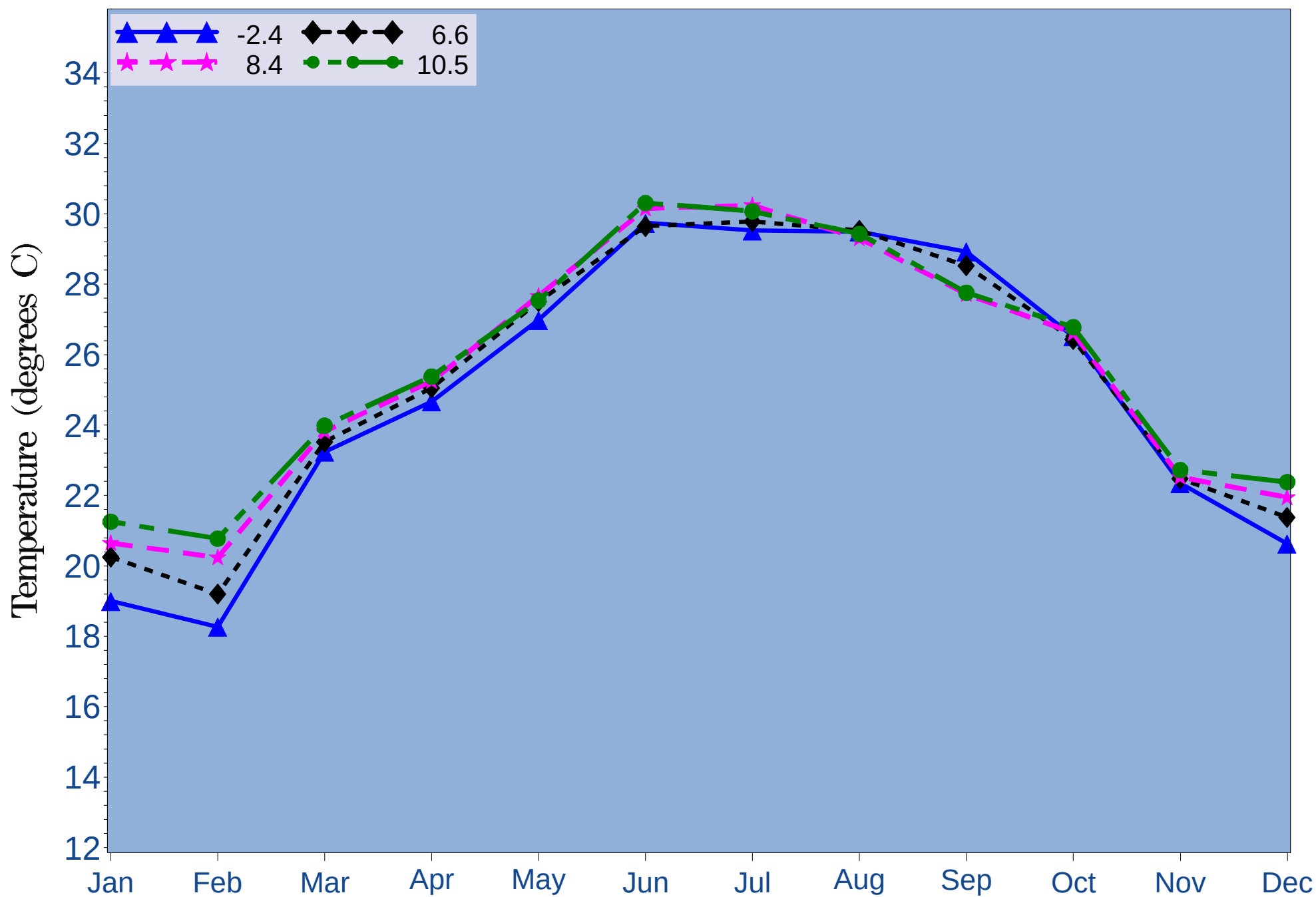


Figure 4.2a 2006 Mean monthly Mean monthly temperature at river kilometers -2.4, 6.6, 8.4 and 10.5

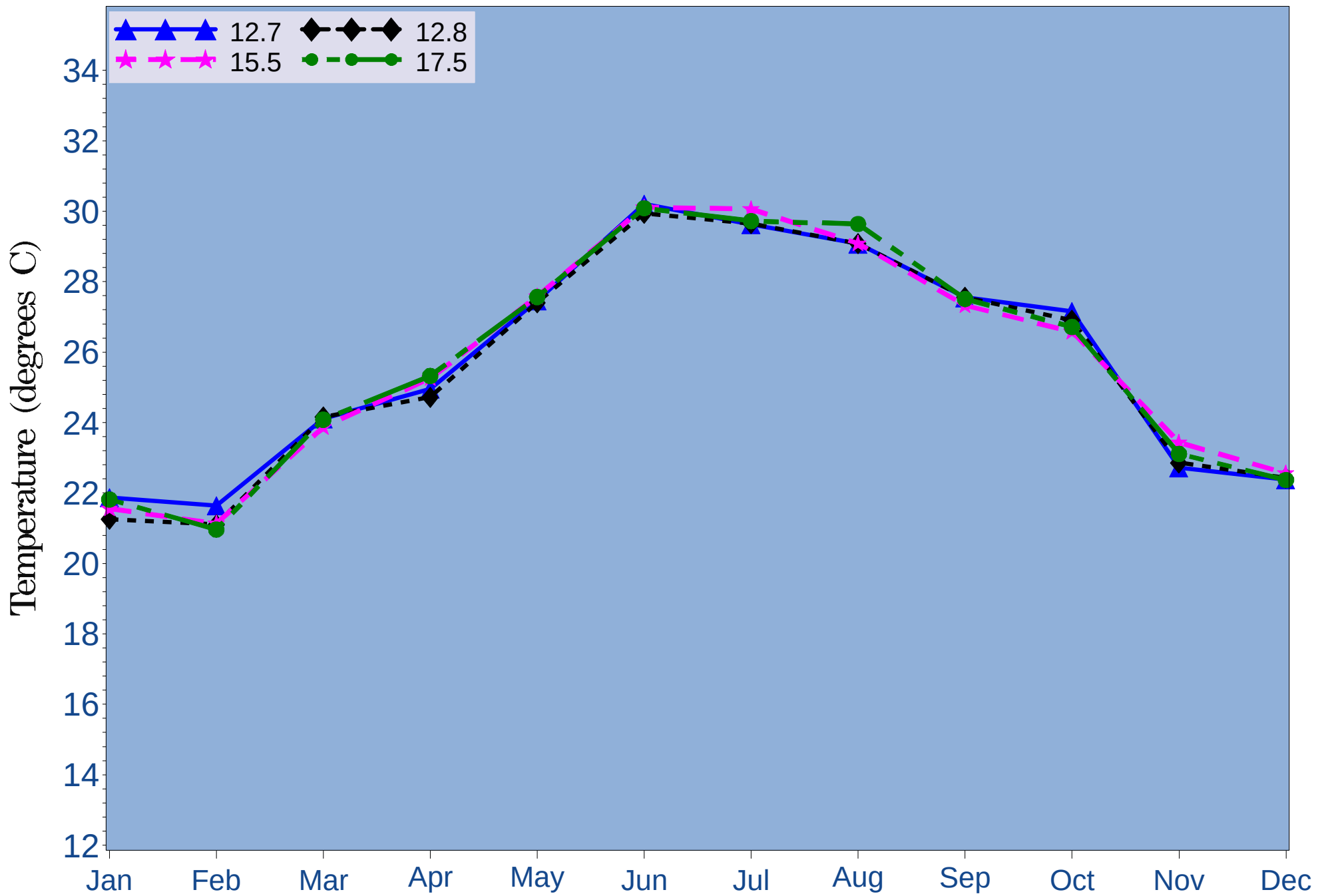


Figure 4.2b 2006 Mean monthly temperature at river kilometers 12.7, 12.8, 15.5 and 17.5

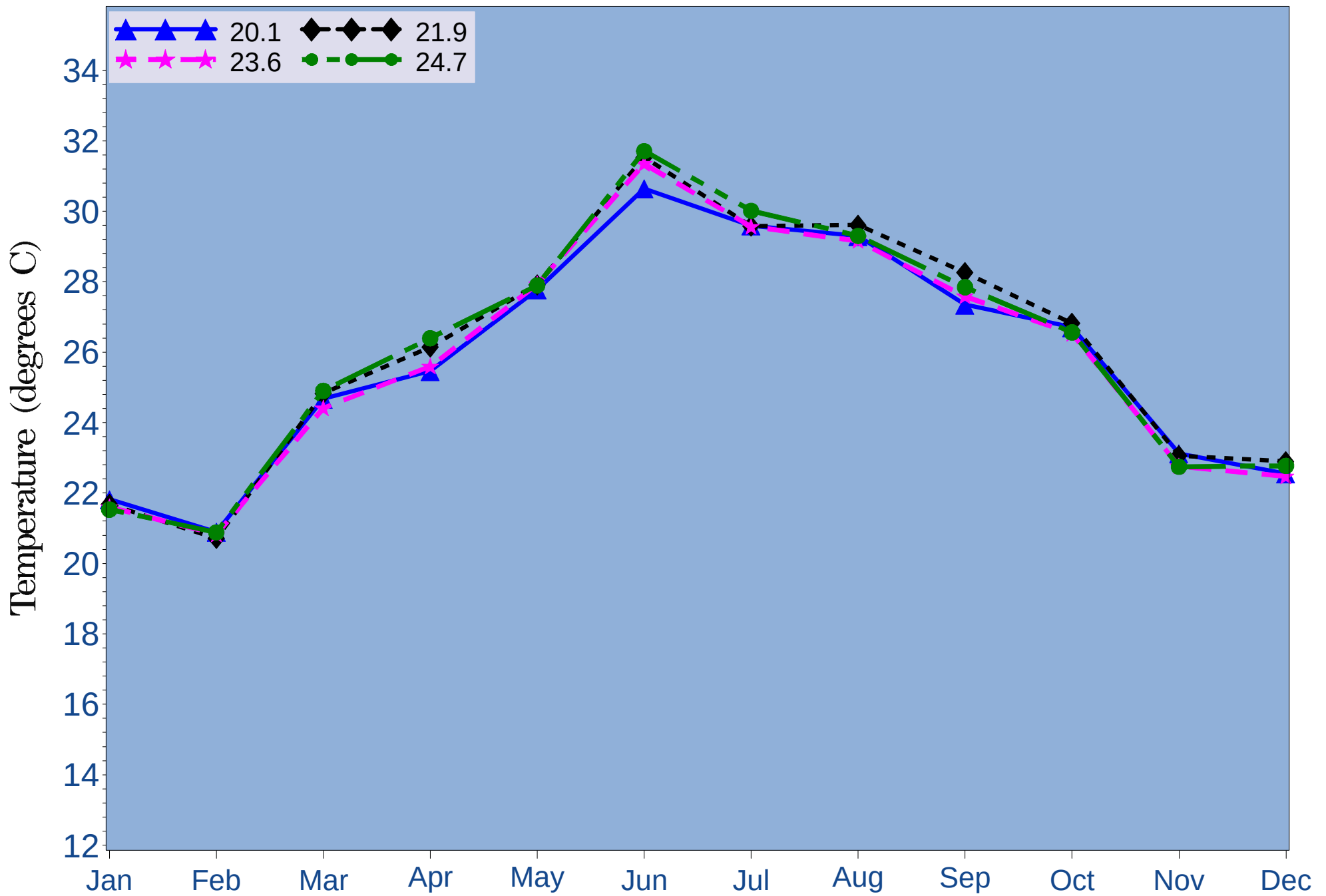


Figure 4.2c 2006 Mean monthly temperature at river kilometers 20.1, 21.9, 23.6 and 24.7

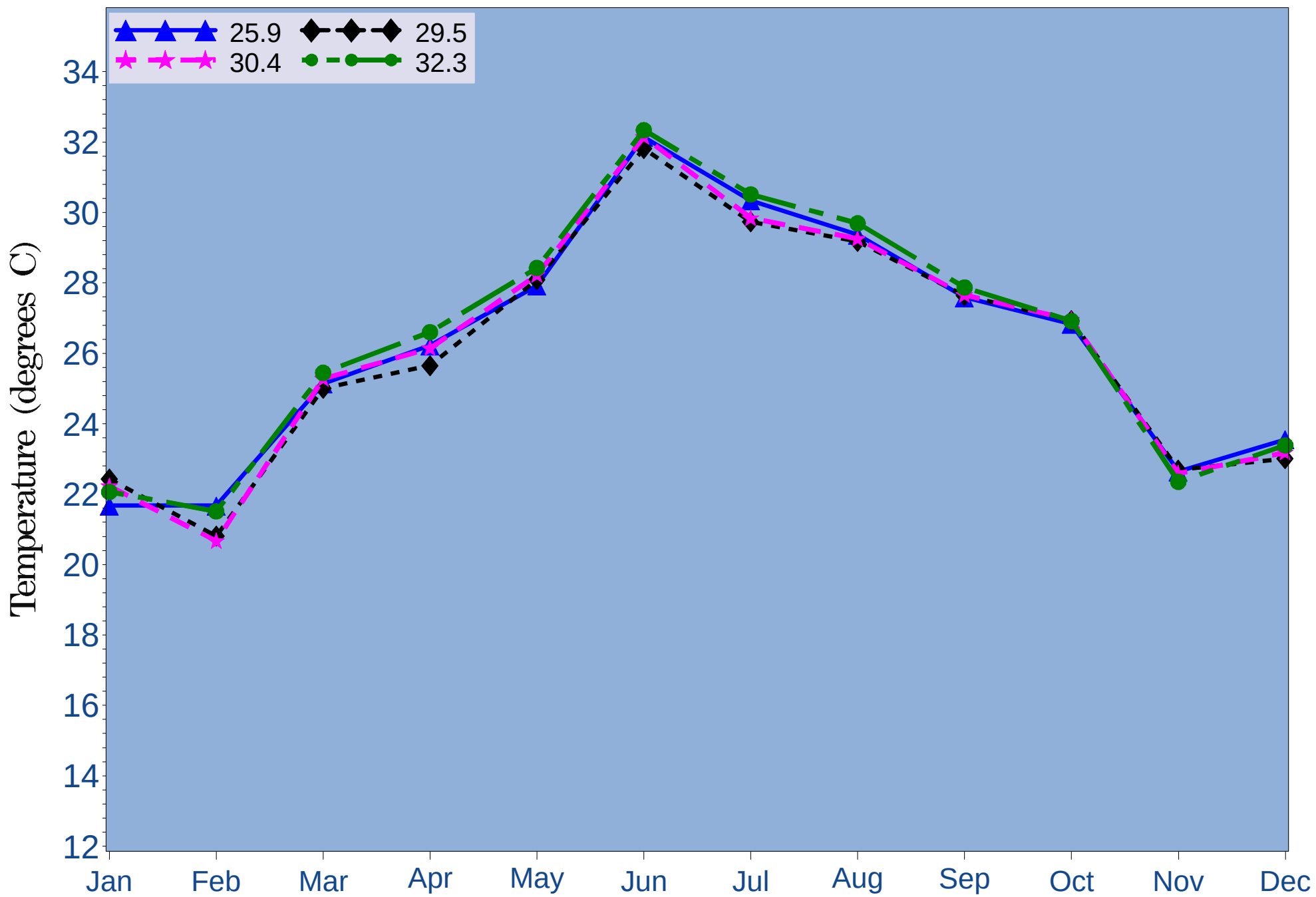


Figure 4.2d 2006 Mean monthly temperature at river kilometers 25.9, 29.5, 30.4 and 32.3

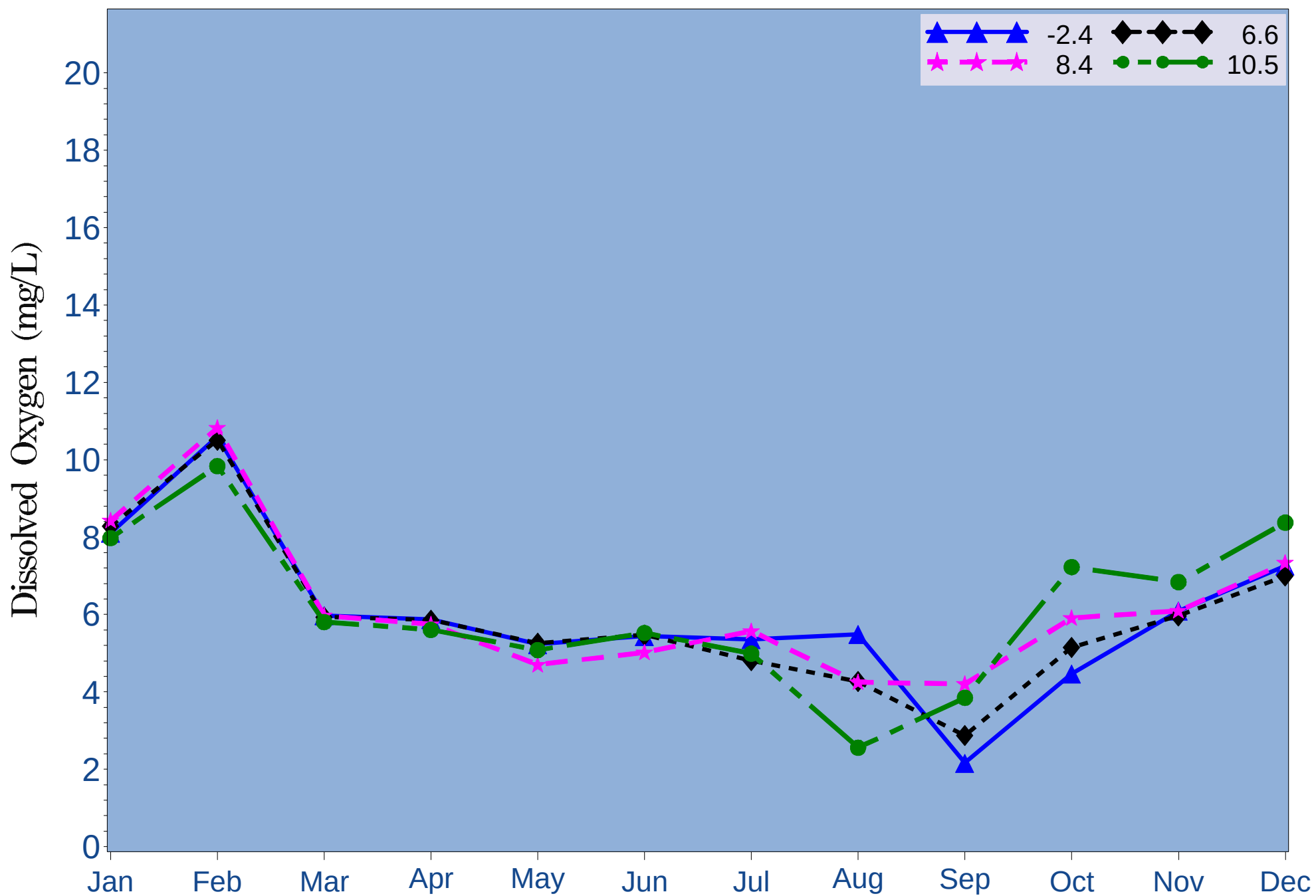


Figure 4.3a 2006 Mean monthly dissolved oxygen at river kilometers -2.4, 6.6, 8.4 and 10.5

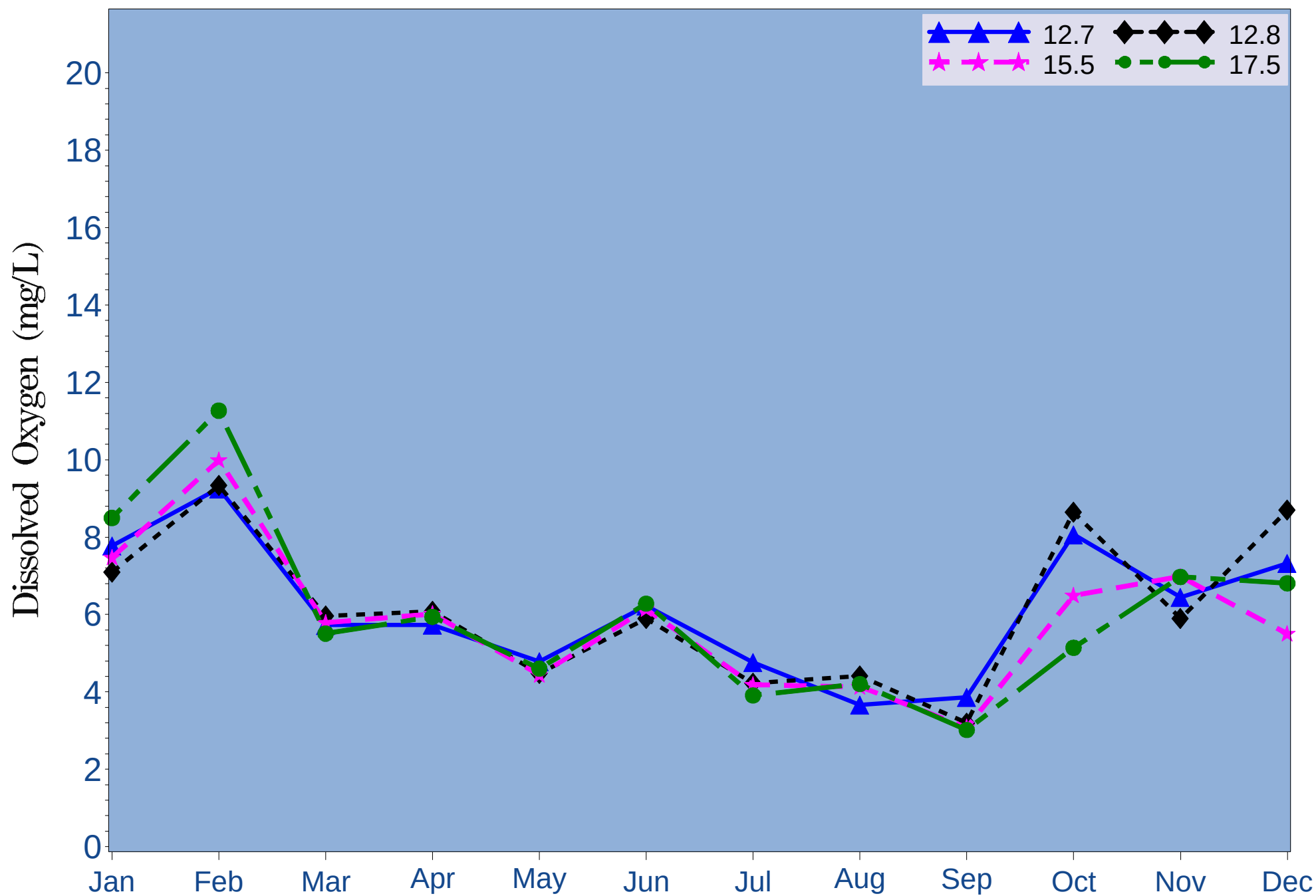


Figure 4.3b 2006 Mean monthly dissolved oxygen at river kilometers 12.7, 12.8, 15.5 and 17.5

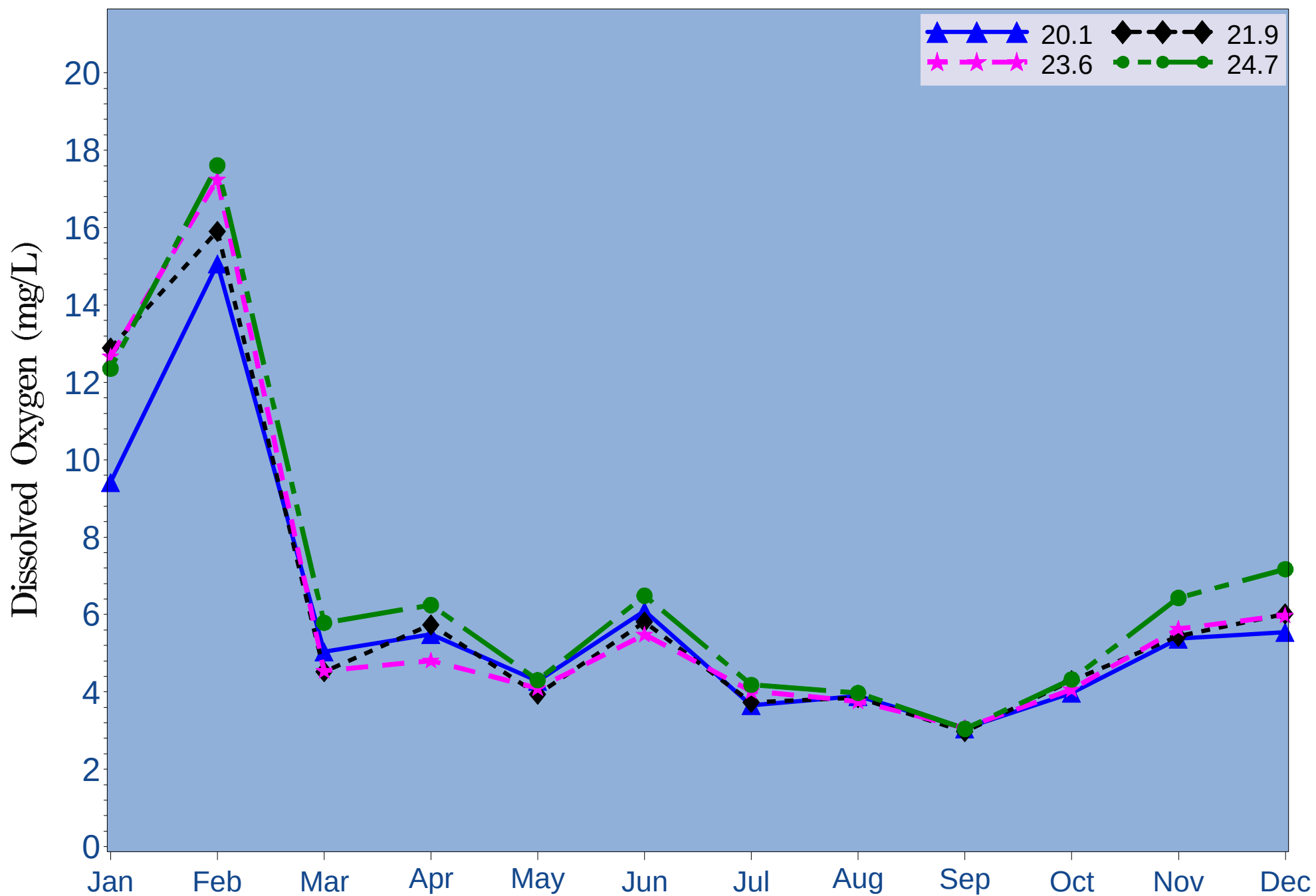


Figure 4.3c 2006 Mean monthly dissolved oxygen at river kilometers 20.1, 21.9, 23.6 and 24.7

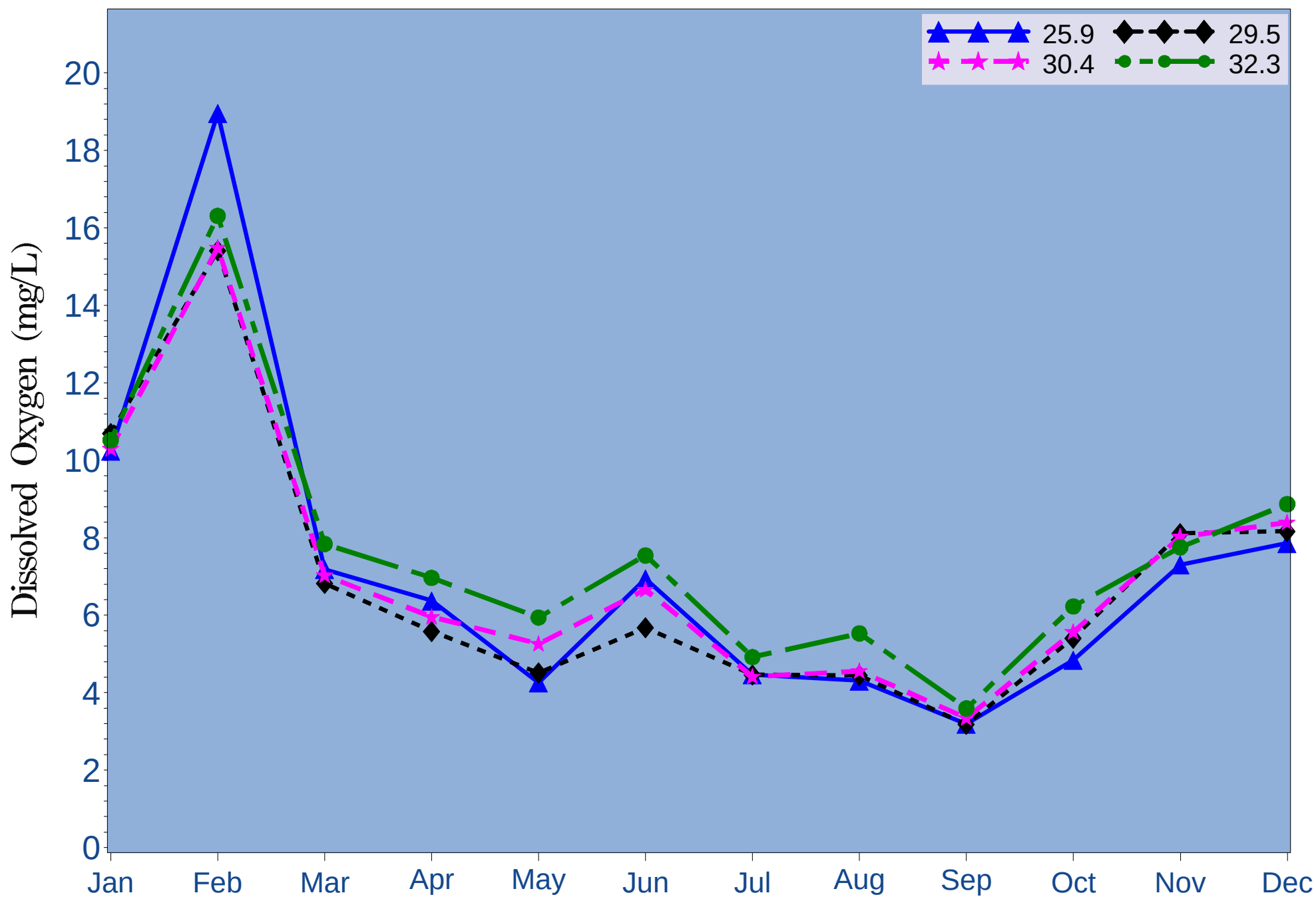


Figure 4.3d 2006 Mean monthly dissolved oxygen at river kilometers 25.9, 29.5, 30.4 and 32.3

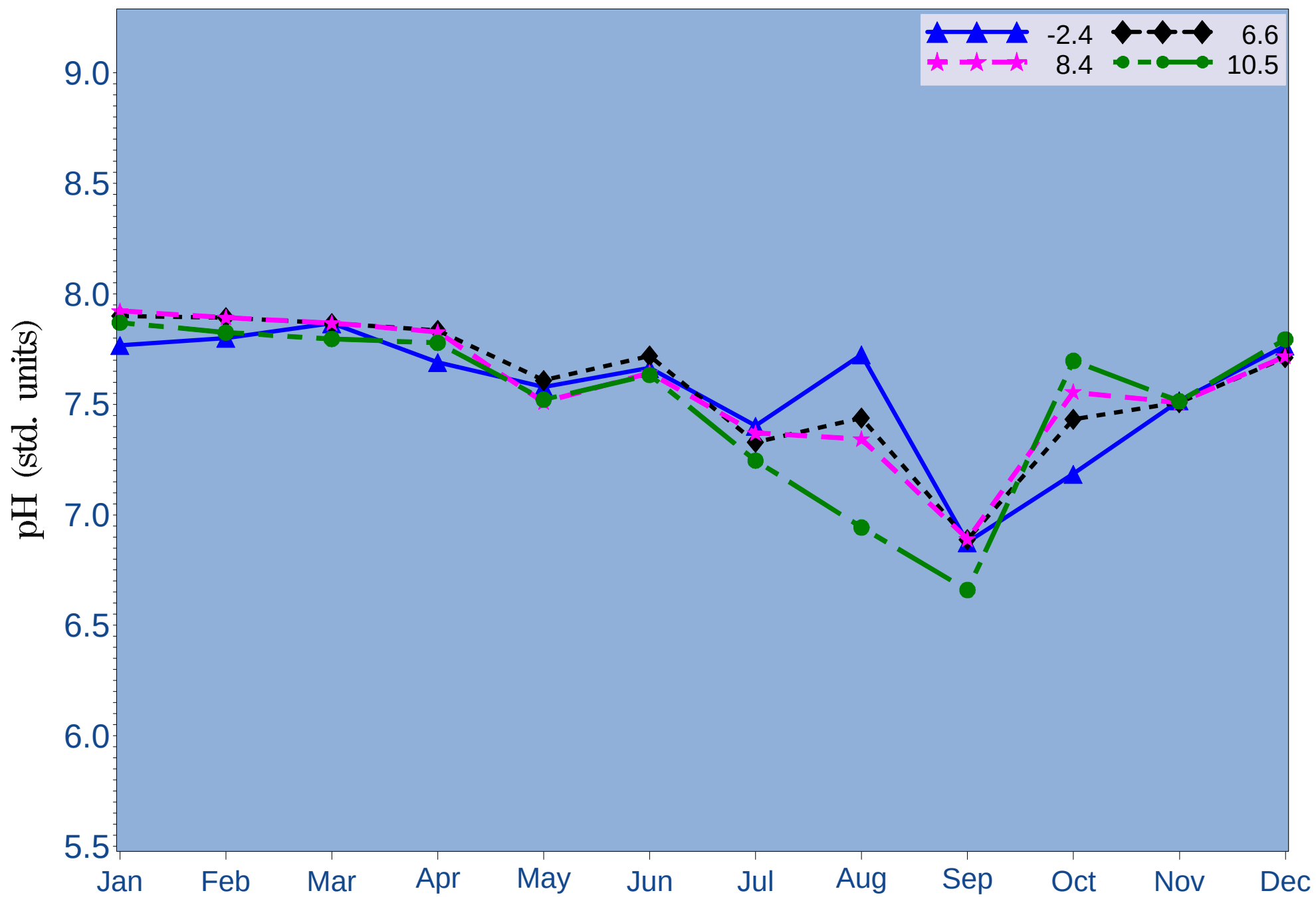


Figure 4.4a 2006 Mean monthly pH at river kilometers -2.4, 6.6, 8.4 and 10.5

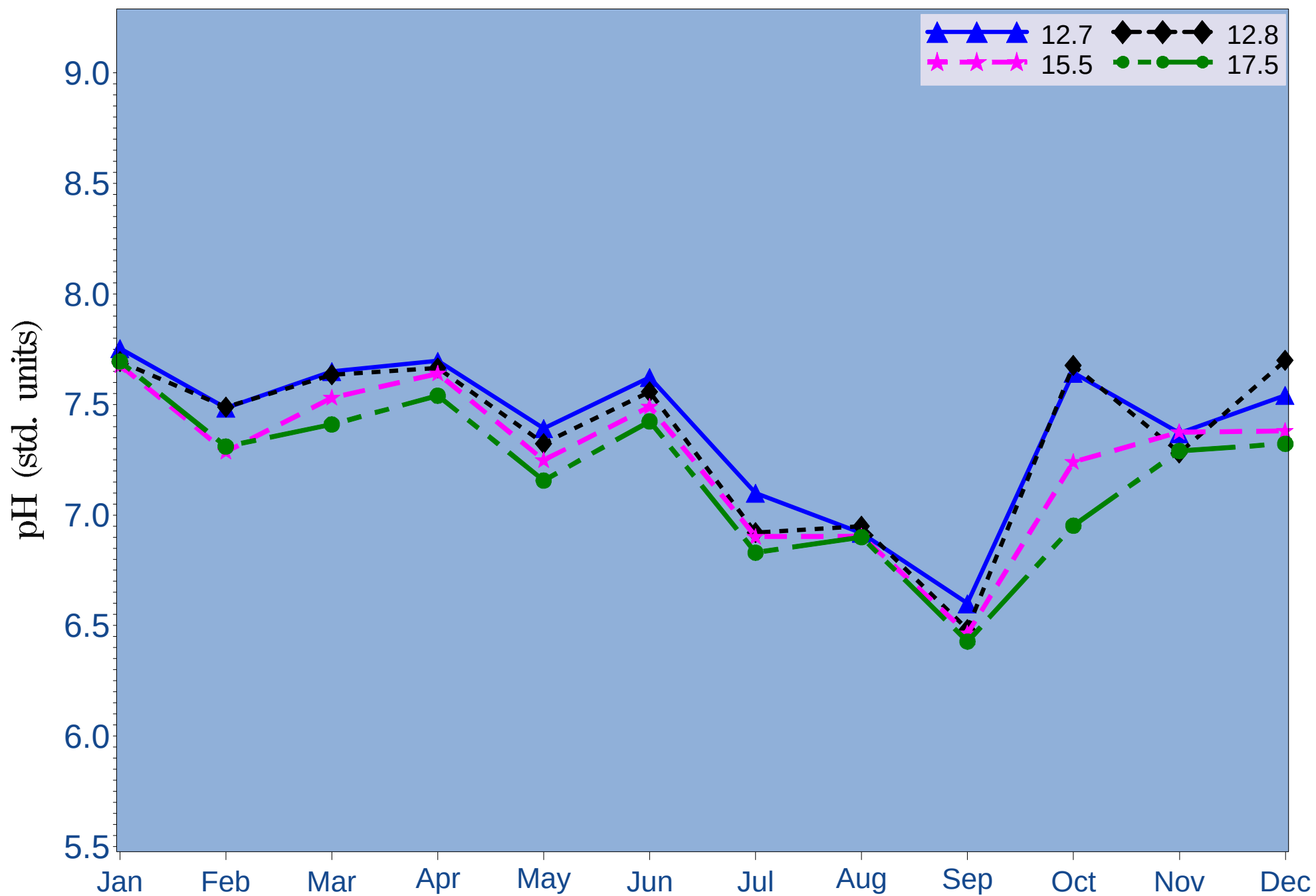


Figure 4.4b 2006 Mean monthly pH at river kilometers 12.7, 12.8, 15.5 and 17.5

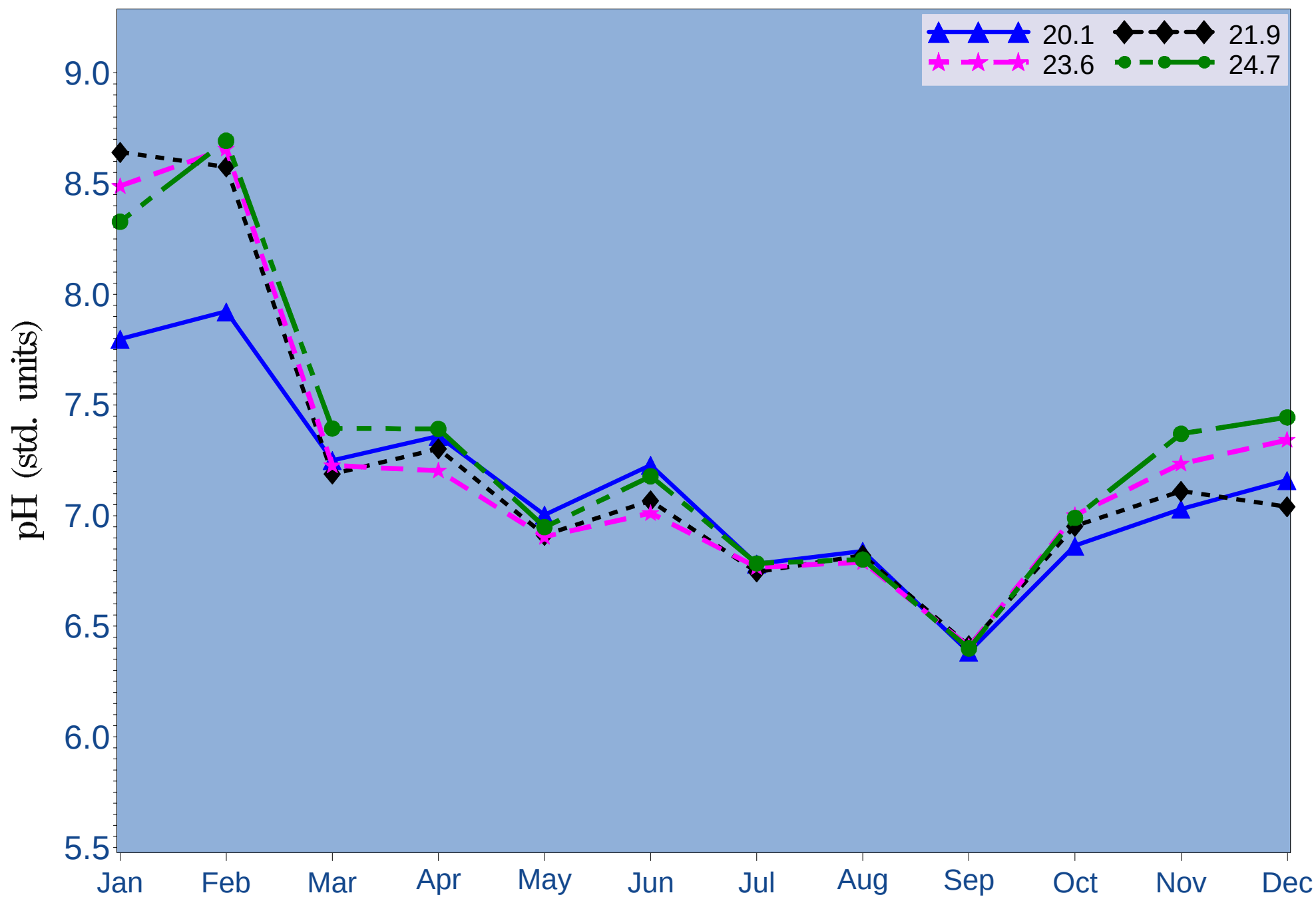


Figure 4.4c 2006 Mean monthly pH at river kilometers 20.1, 21.9, 23.6 and 24.7

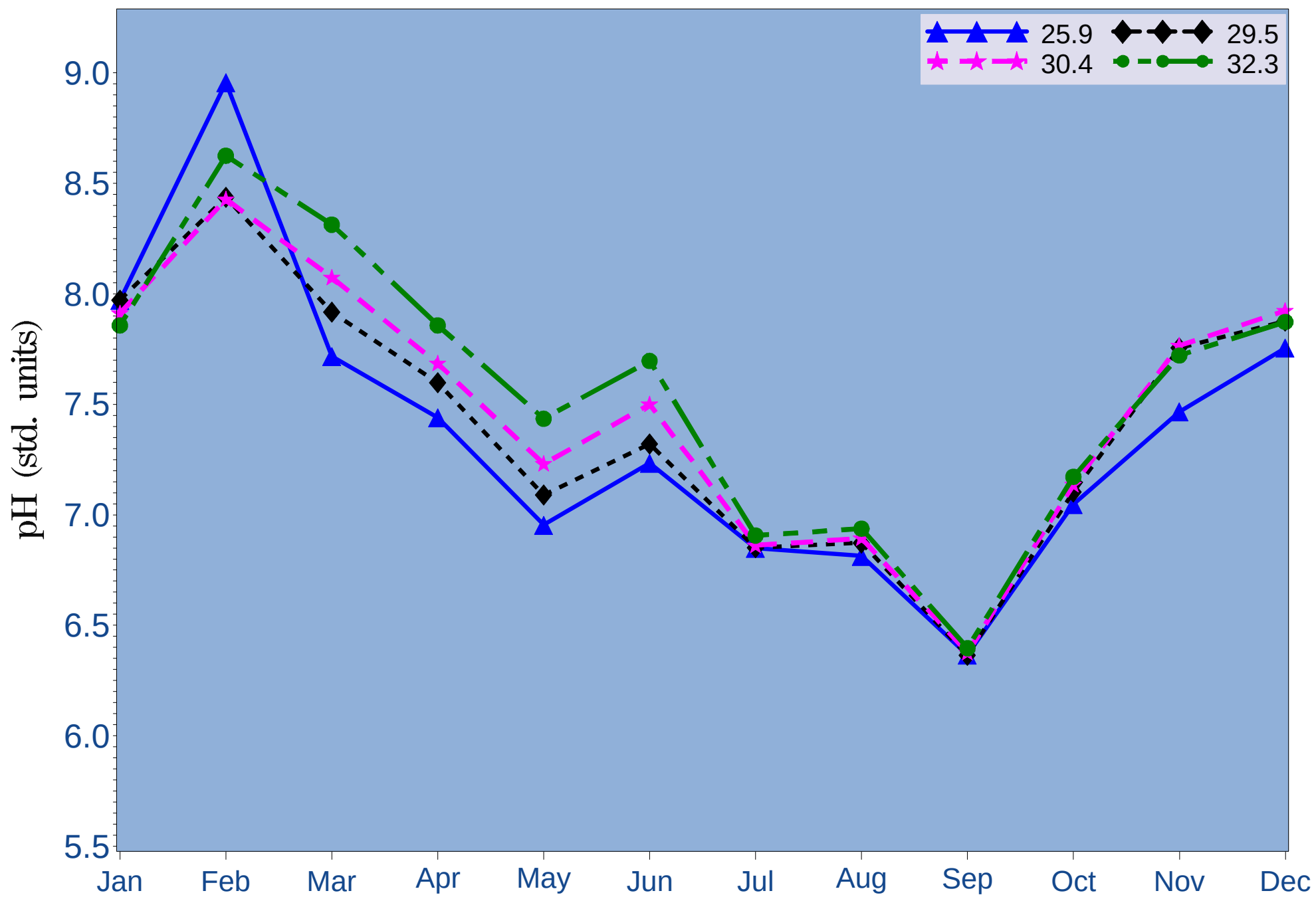


Figure 4.4d 2006 Mean monthly pH at river kilometers 25.9, 29.5, 30.4 and 32.3

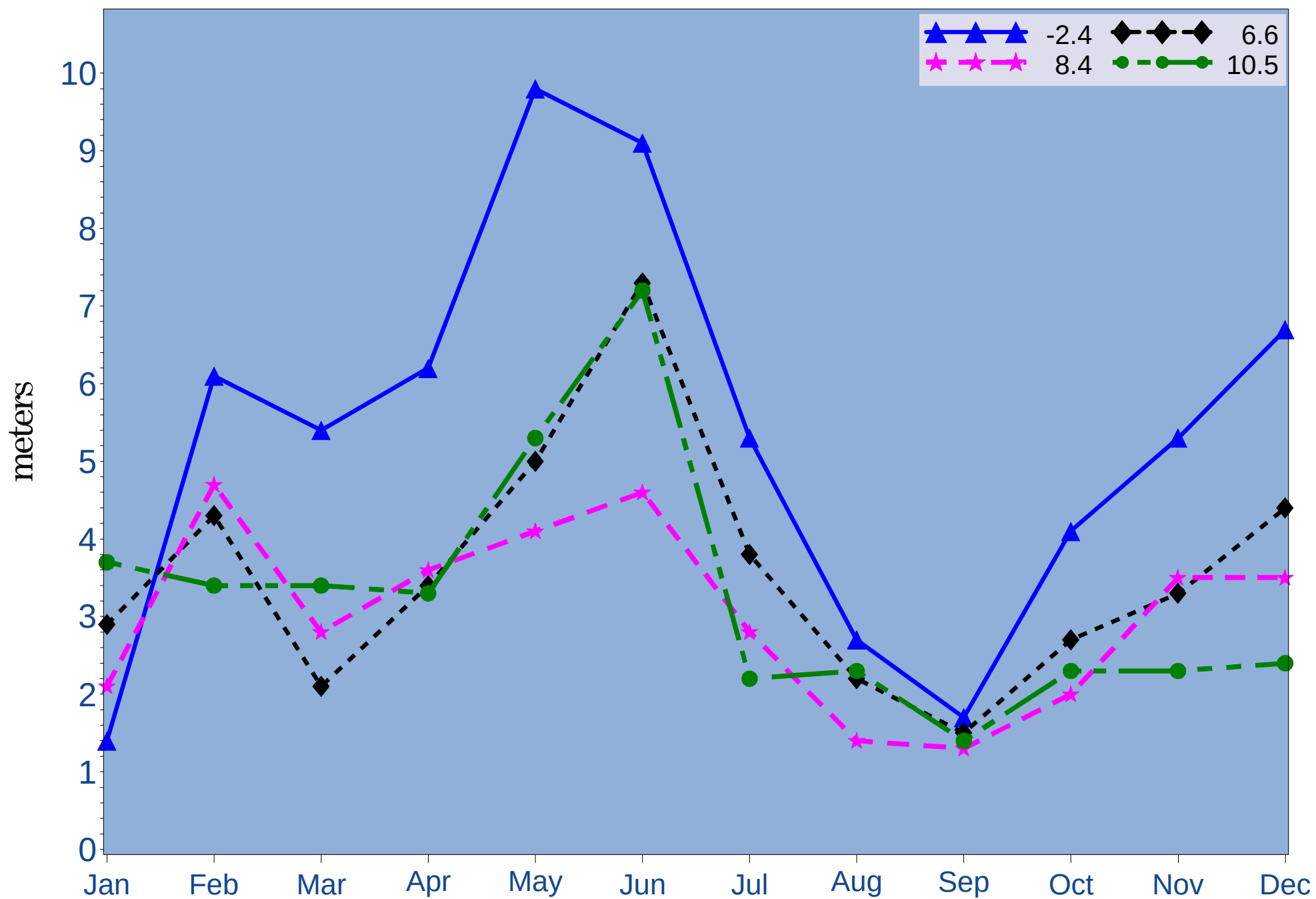


Figure 4.5a 2006 Monthly 1% light depth at river kilometers -2.4, 6.6, 8.4 and 10.5

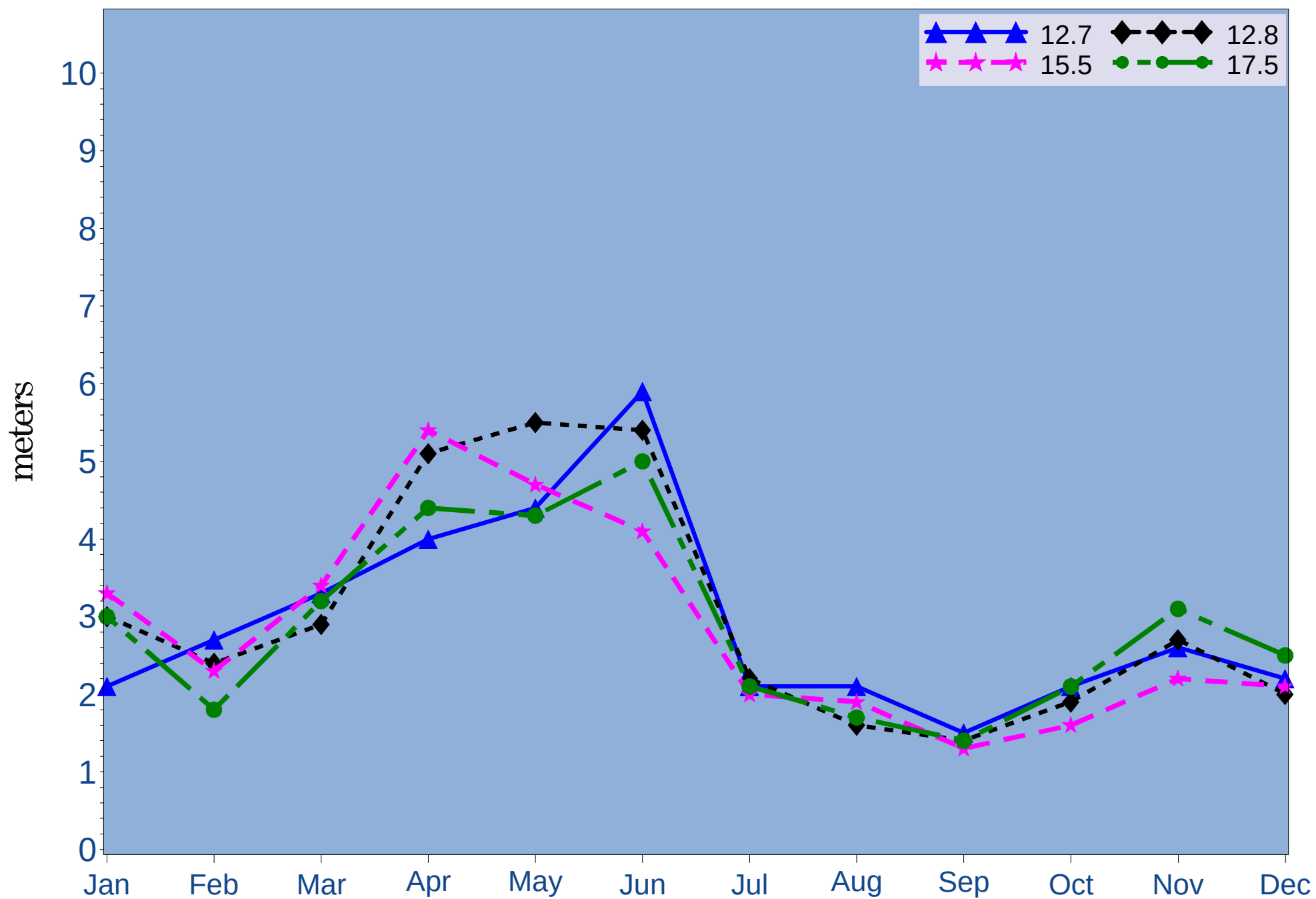


Figure 4.5b 2006 Monthly 1% light depth at river kilometers 12.7, 12.8, 15.5 and 17.5

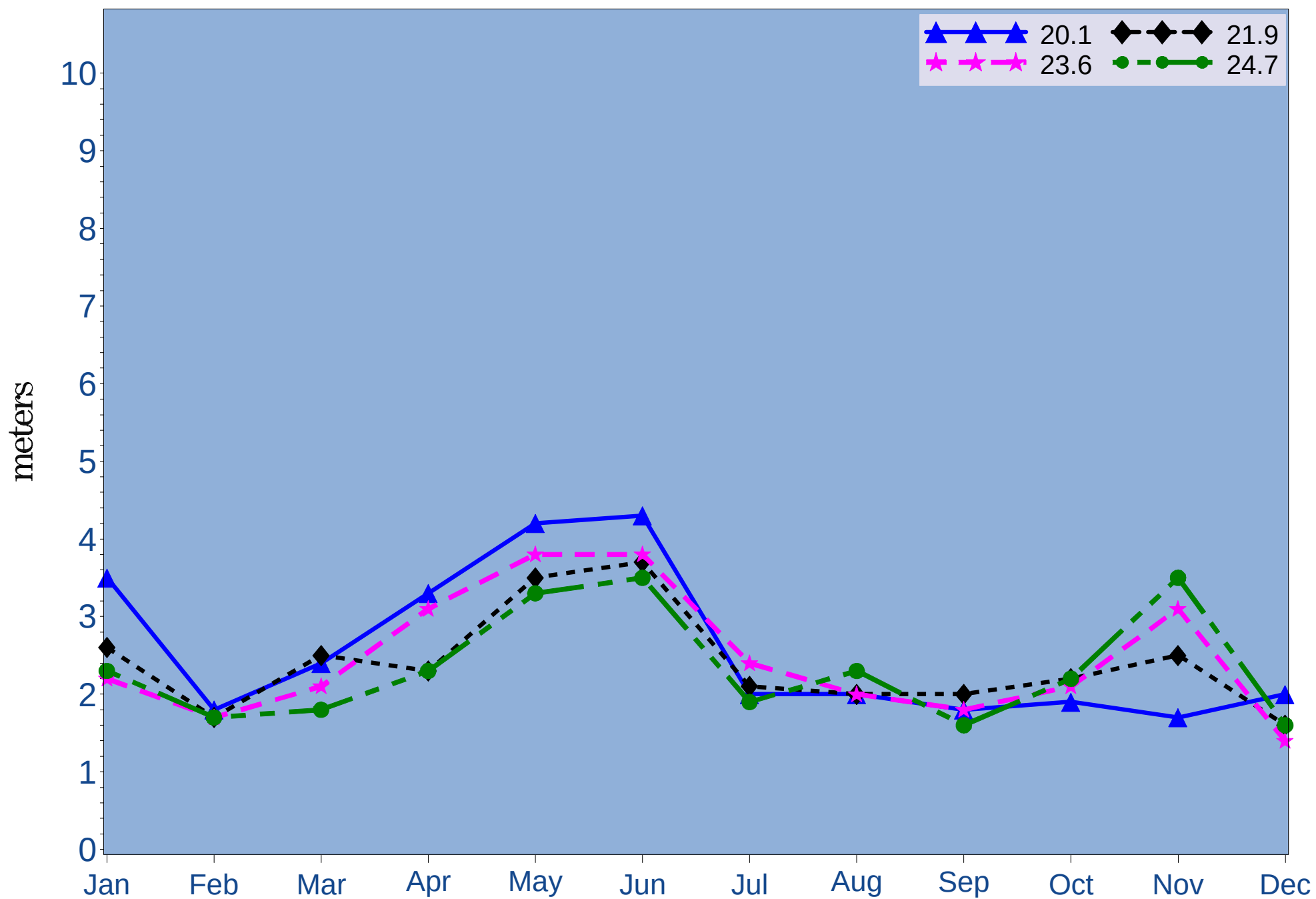


Figure 4.5c 2006 Monthly 1% light depth at river kilometers 20.1, 21.9, 23.6 and 24.7

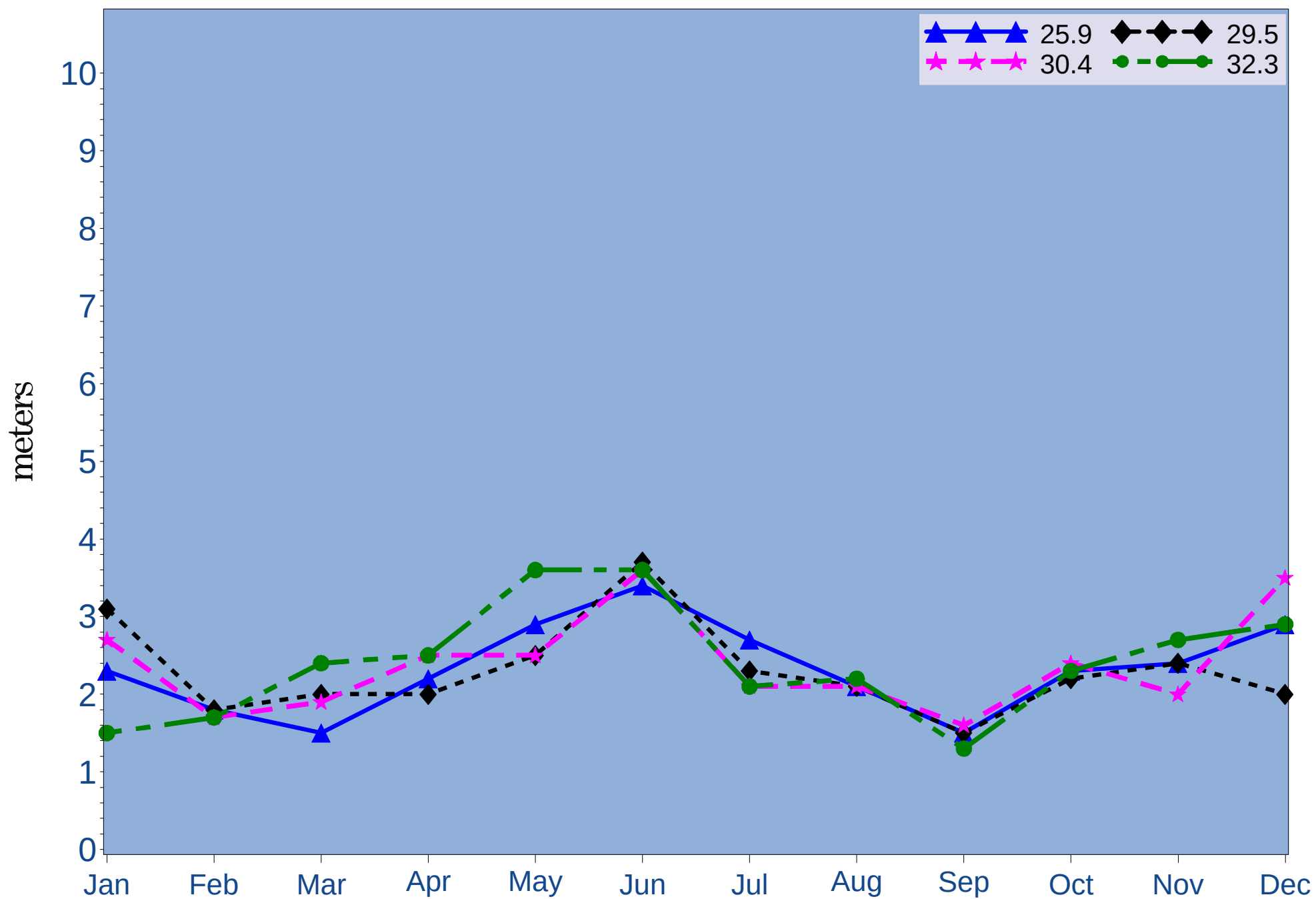


Figure 4.5d 2006 Monthly 1% light depth at river kilometers 25.9, 29.5, 30.4 and 32.3

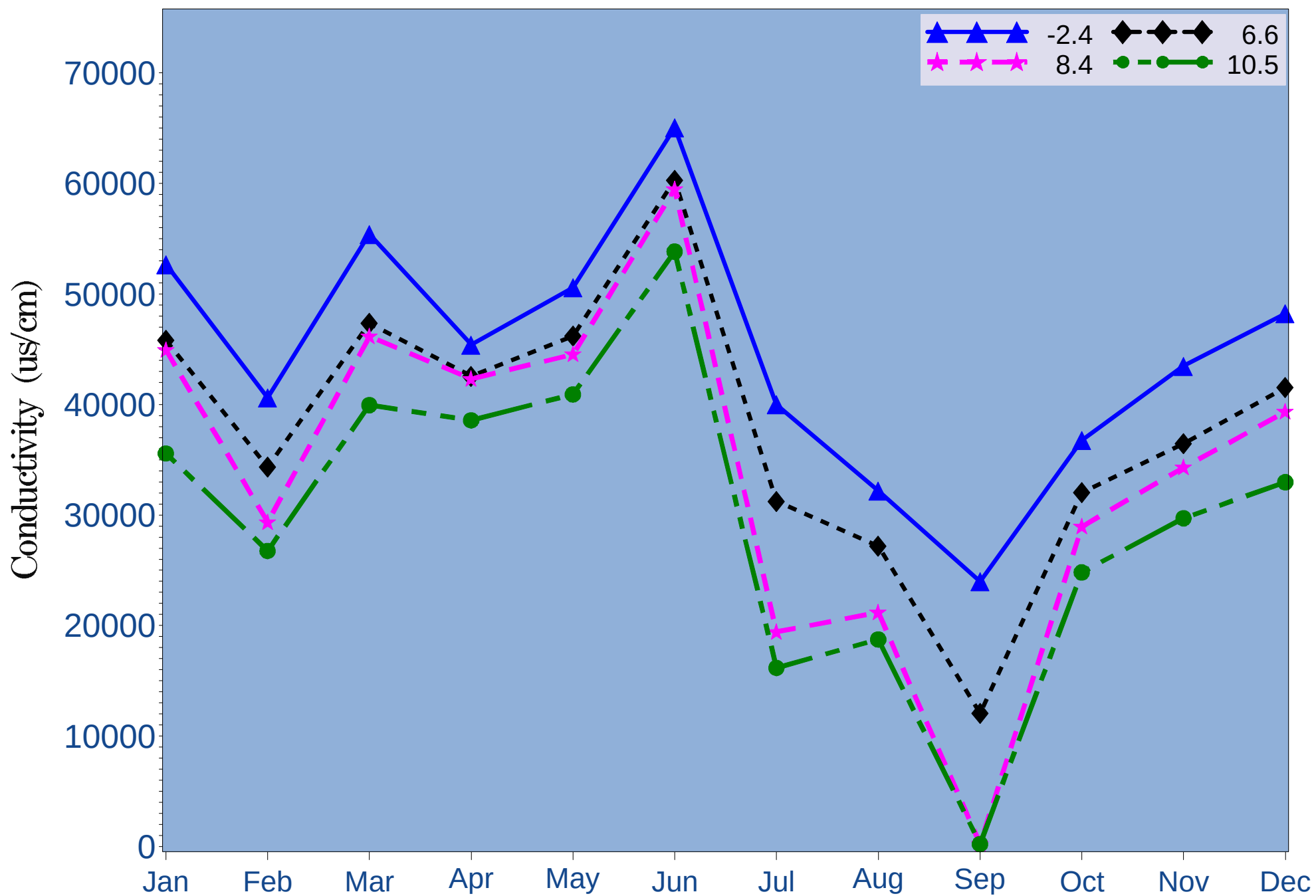


Figure 4.6a 2006 Mean monthly specific conductance at river kilometers -2.4, 6.6, 8.4 and 10.5

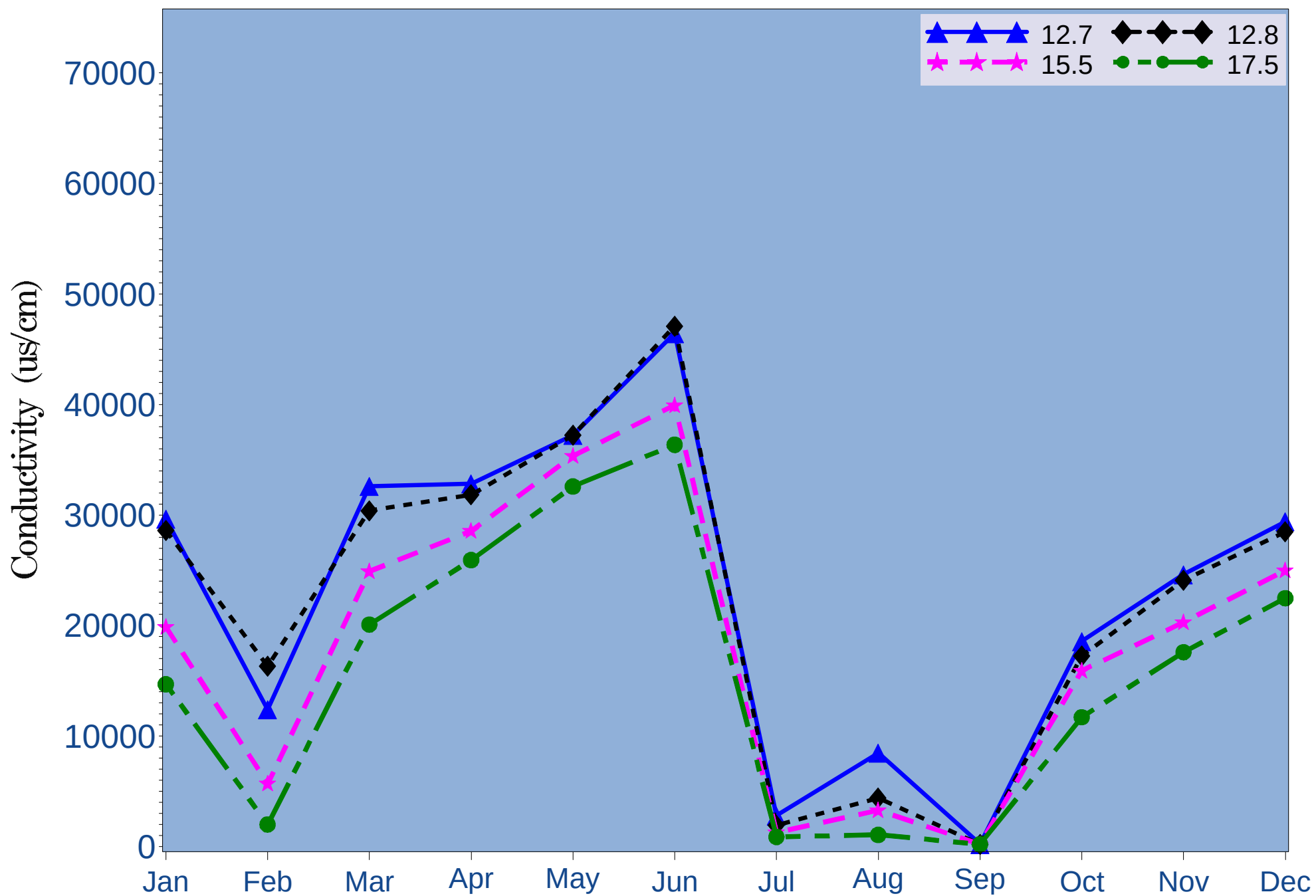


Figure 4.6b 2006 Mean monthly specific conductance at river kilometers 12.7, 12.8, 15.5 and 17.5

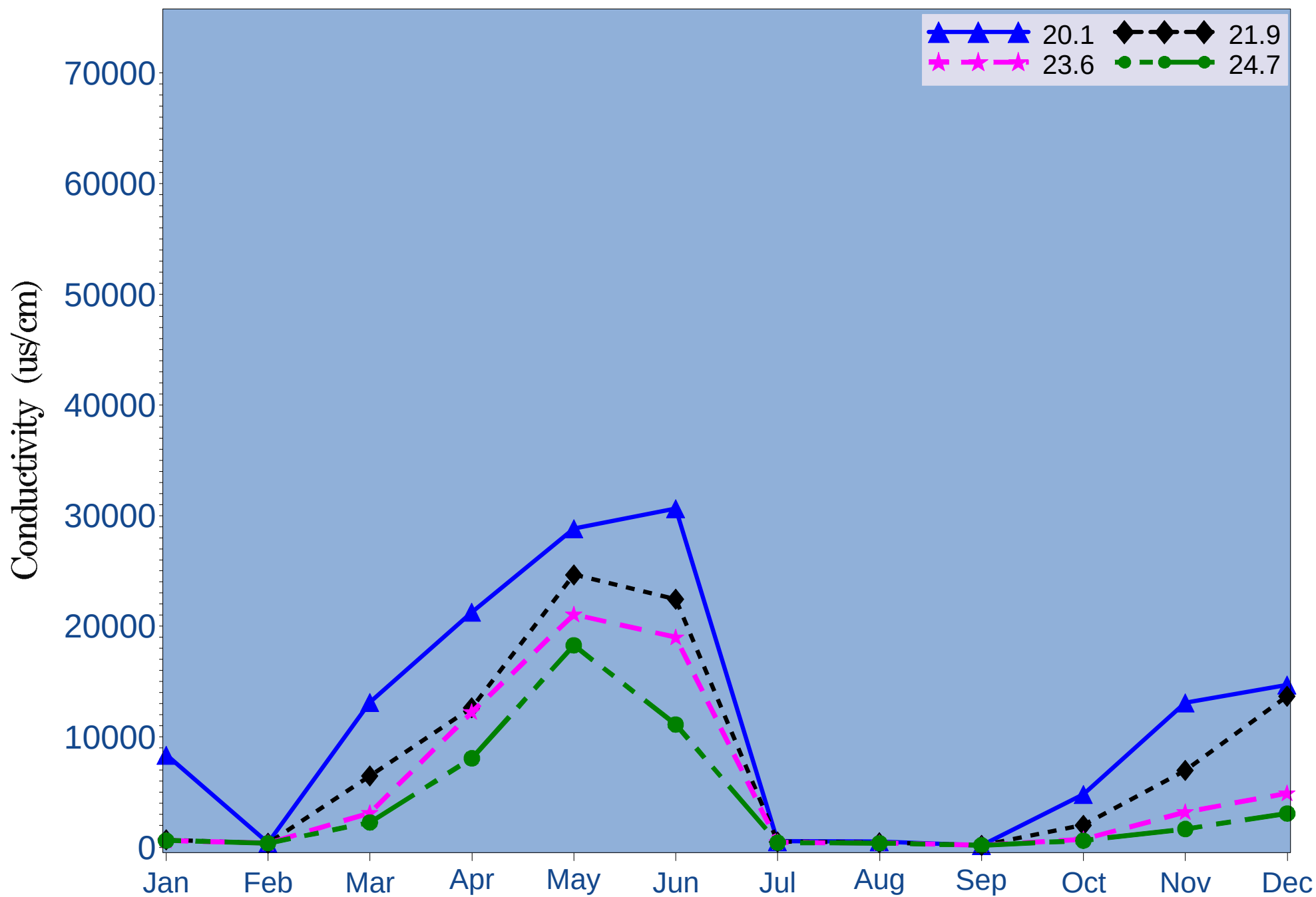


Figure 4.6c 2006 Mean monthly specific conductance at river kilometers 20.1, 21.9, 23.6 and 24.7

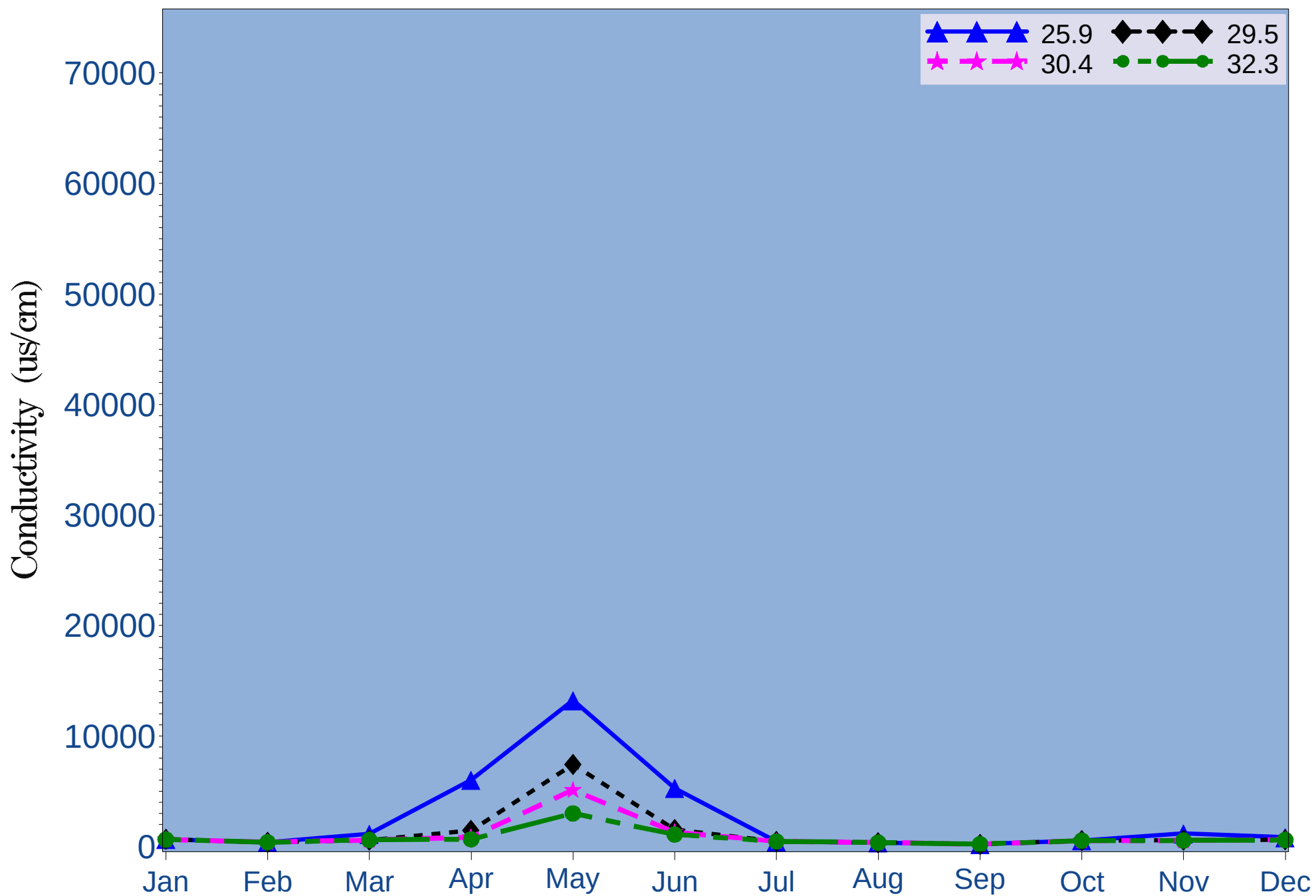


Figure 4.6d 2006 Mean monthly specific conductance at river kilometers 25.9, 29.5, 30.4 and 32.3

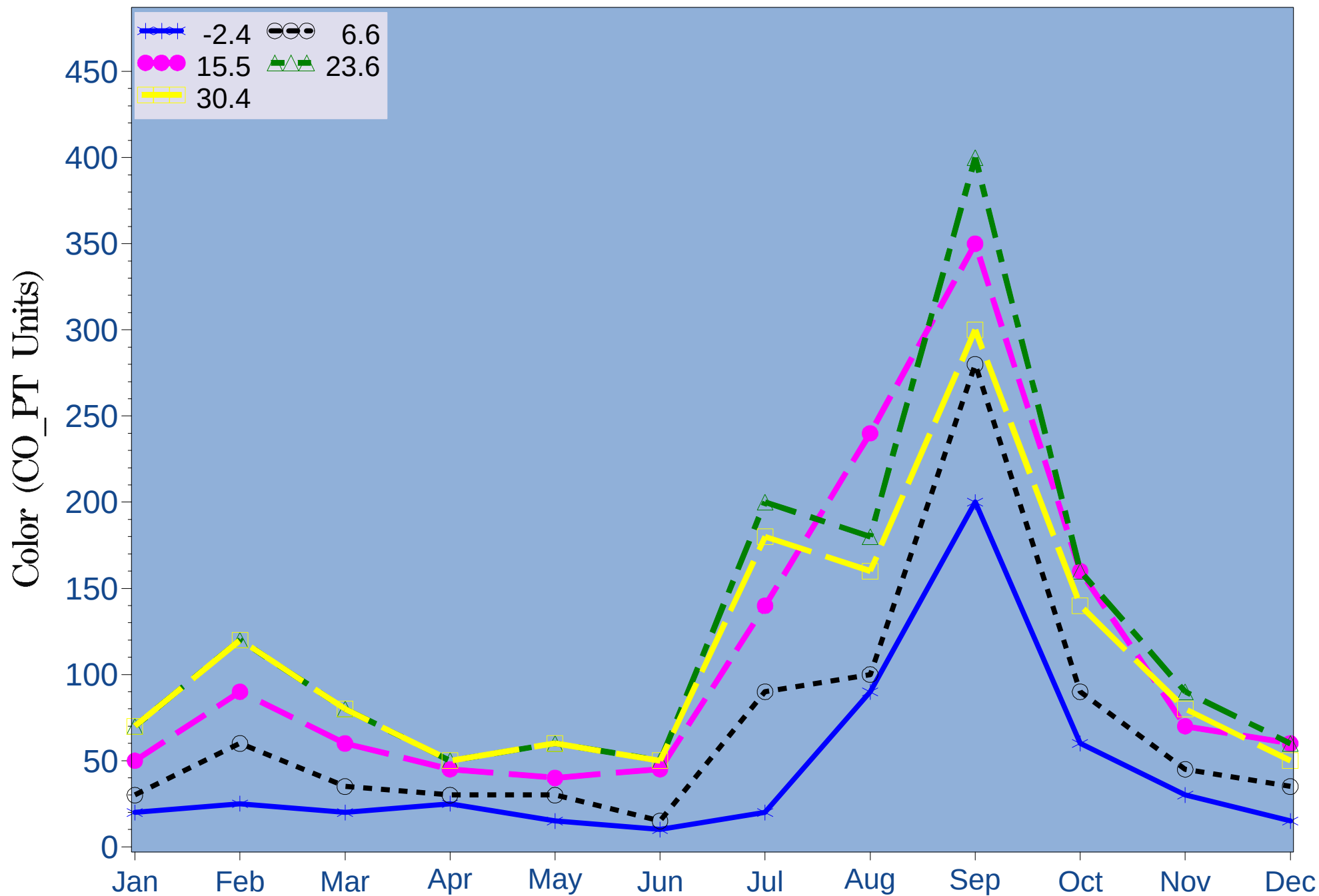


Figure 4.7a Surface color at fixed sampling stations (2006)

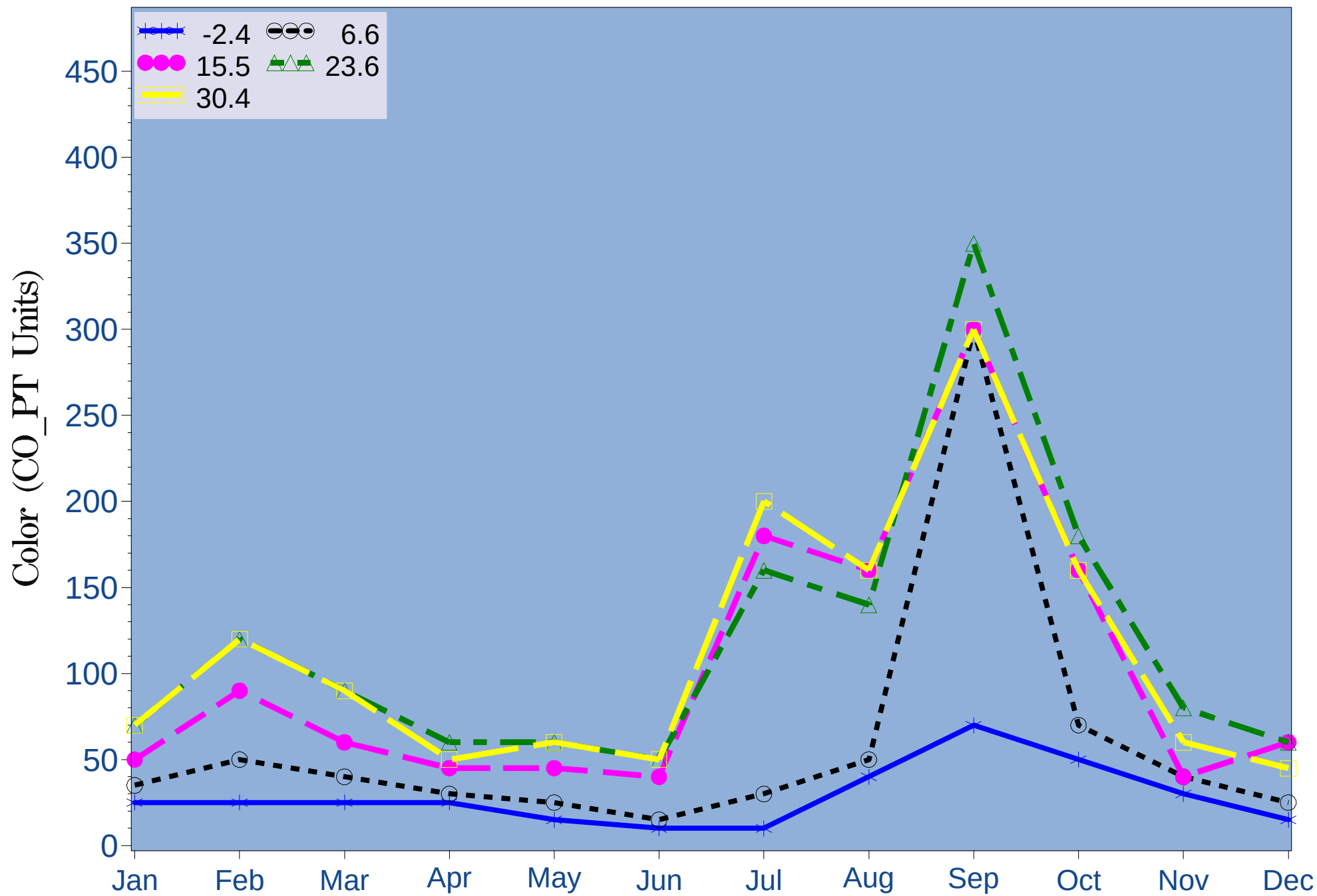


Figure 4.7b Bottom color at fixed sampling stations (2006)

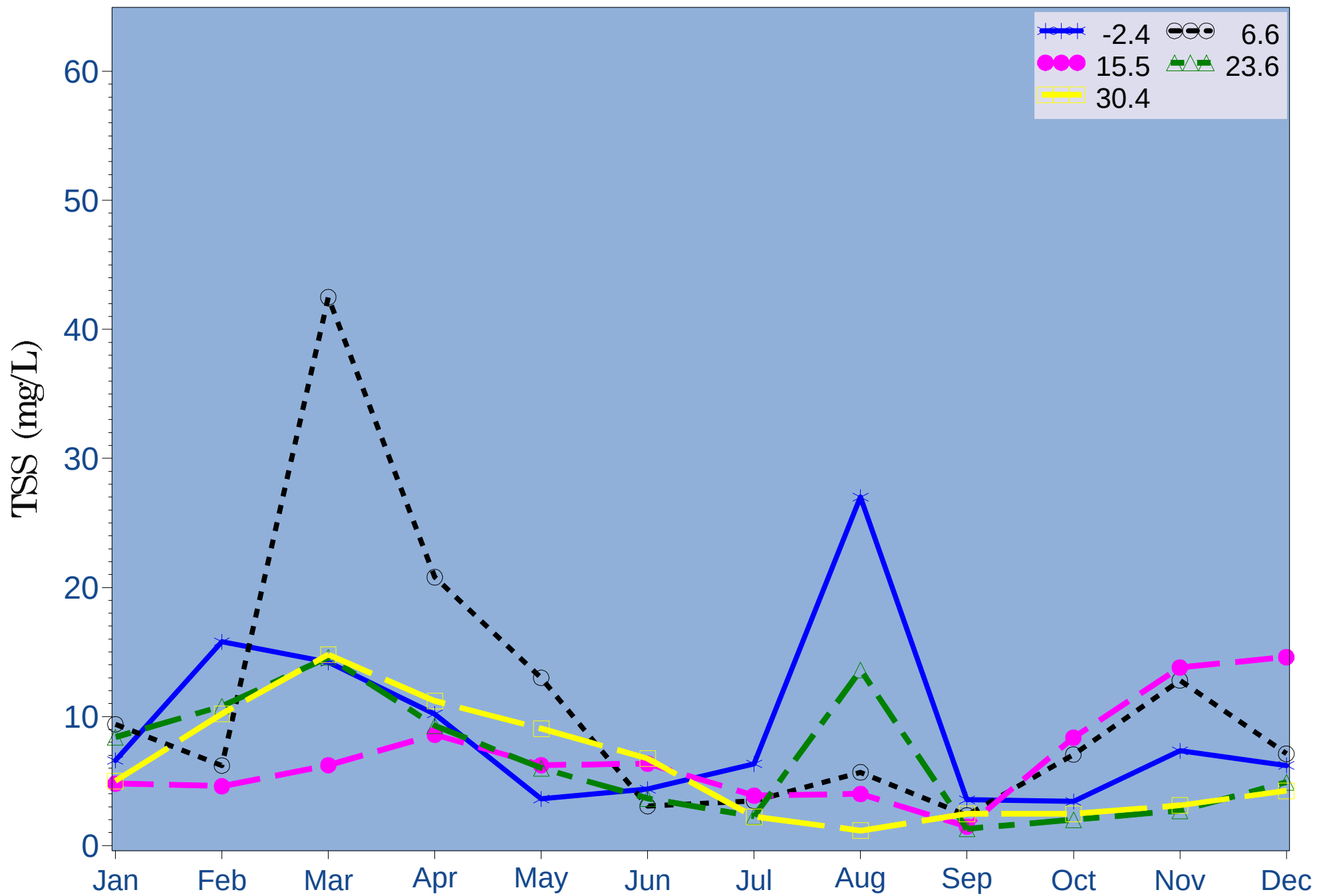


Figure 4.8a Surface total suspended solids at fixed sampling stations (2006)

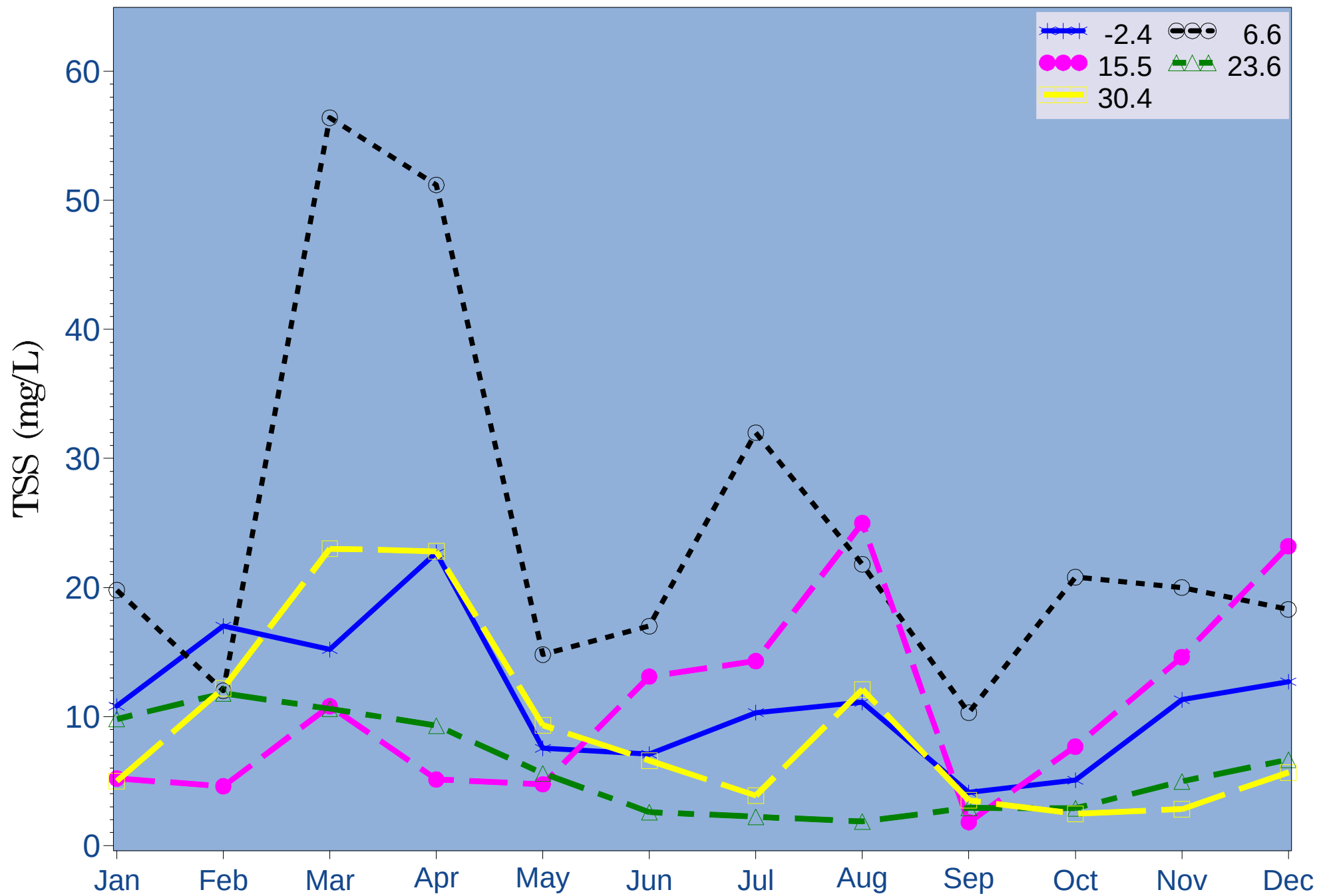


Figure 4.8b Monthly bottom total suspended solids at fixed sampling stations (2006)

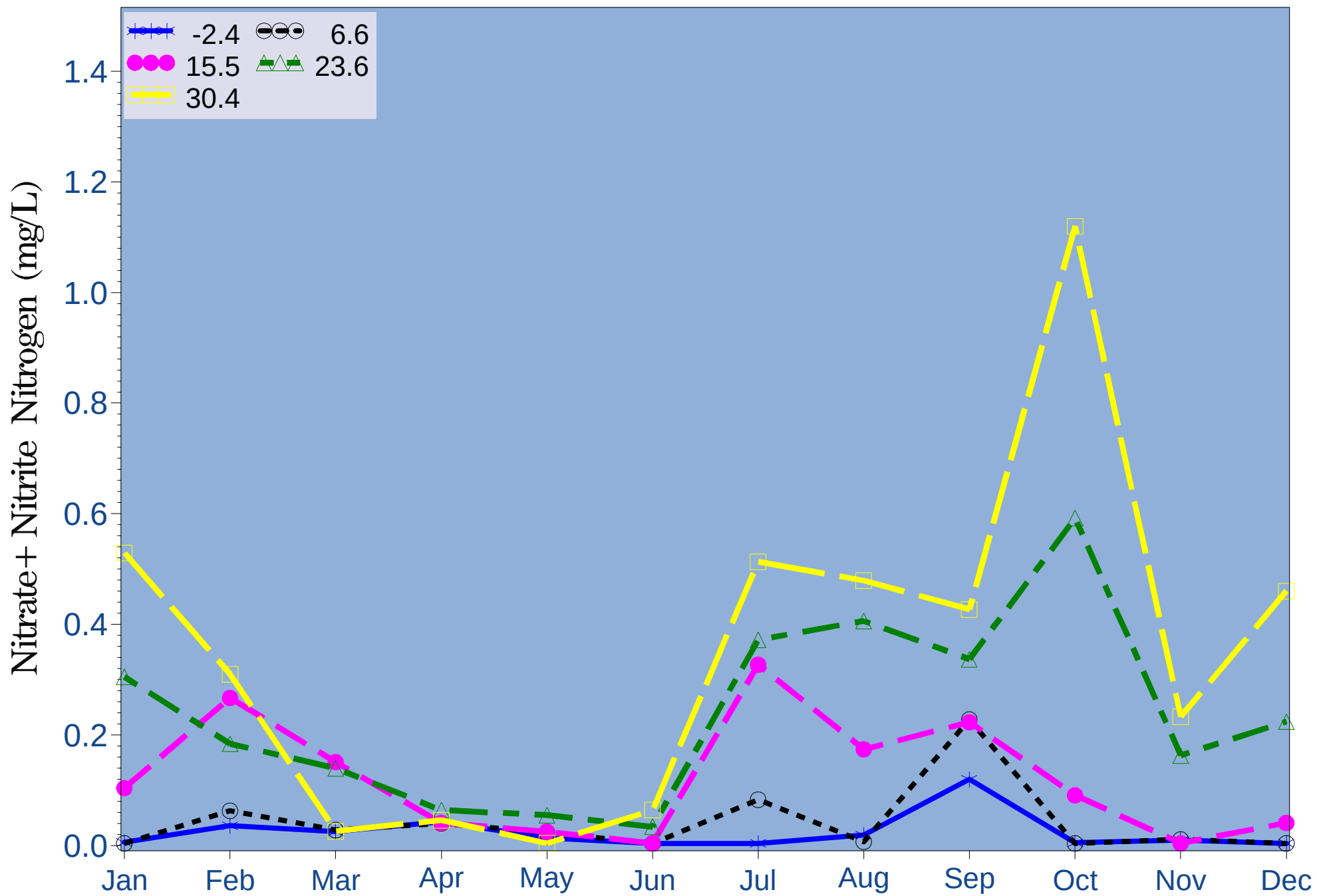


Figure 4.9a Monthly surface nitrate/nitrite nitrogen at fixed sampling stations (2006)

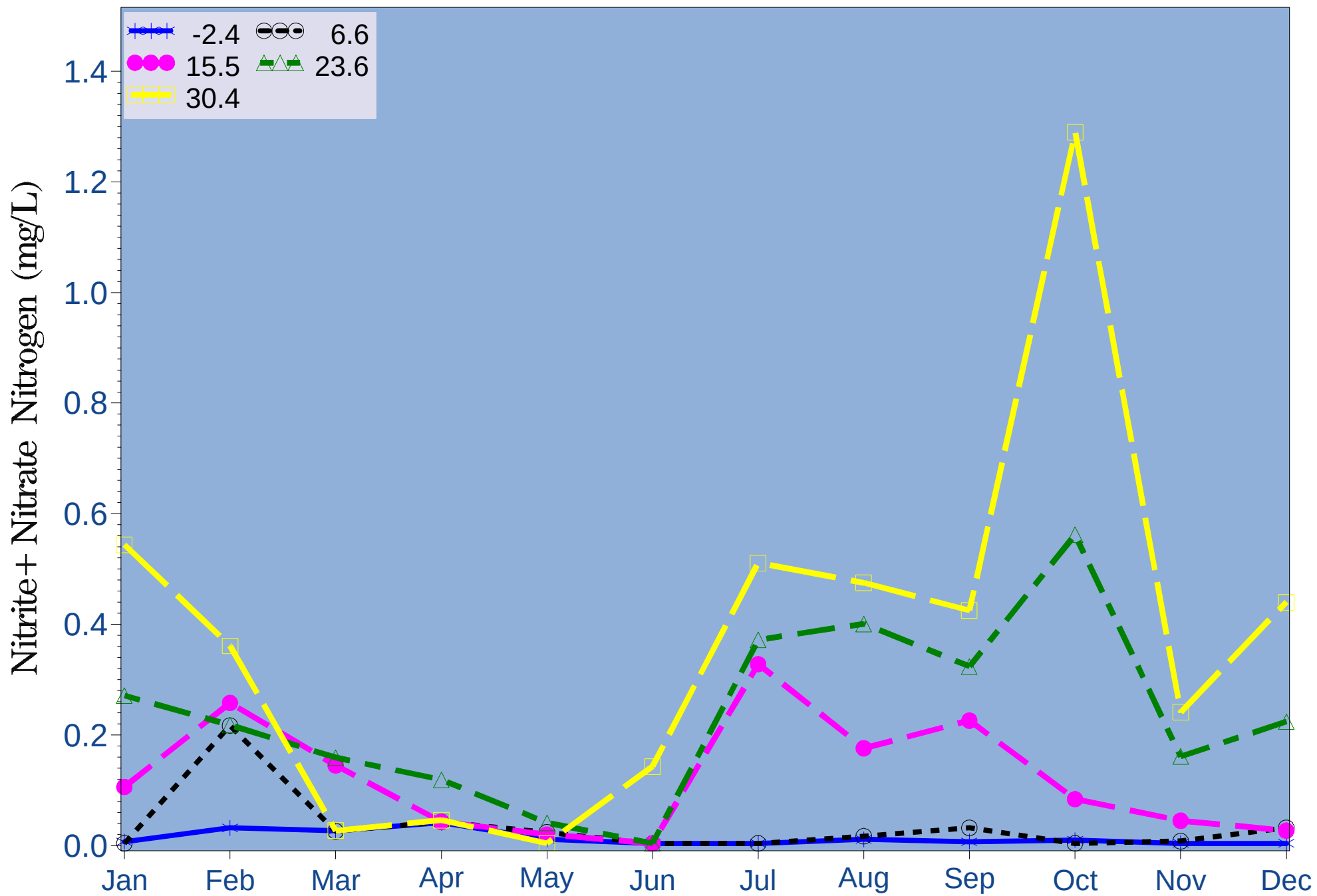


Figure 4.9b Monthly bottom nitrite/nitrate nitrogen at fixed sampling stations (2006)

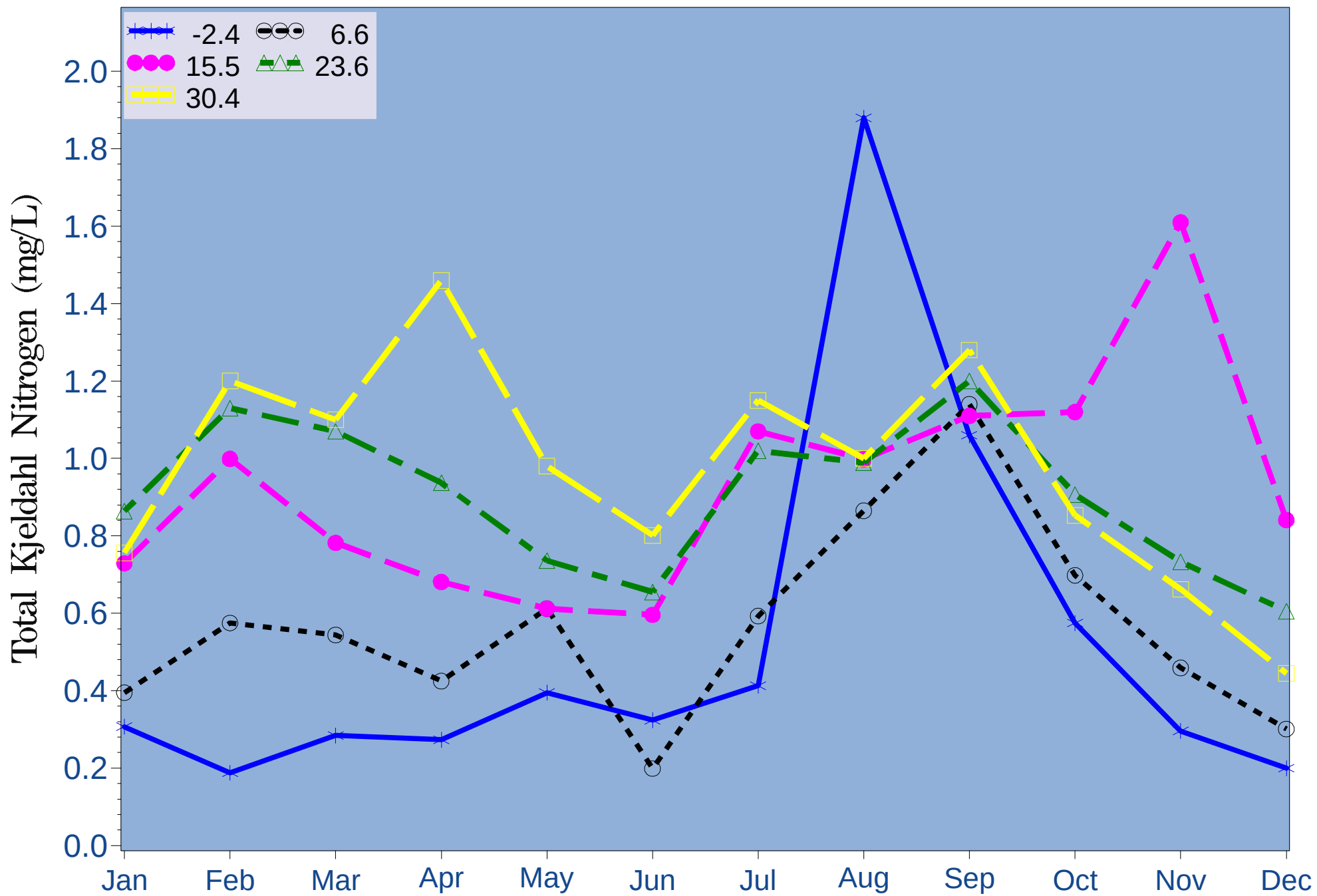


Figure 4.10a Monthly surface total Kjeldahl nitrogen at fixed sampling stations (2006)

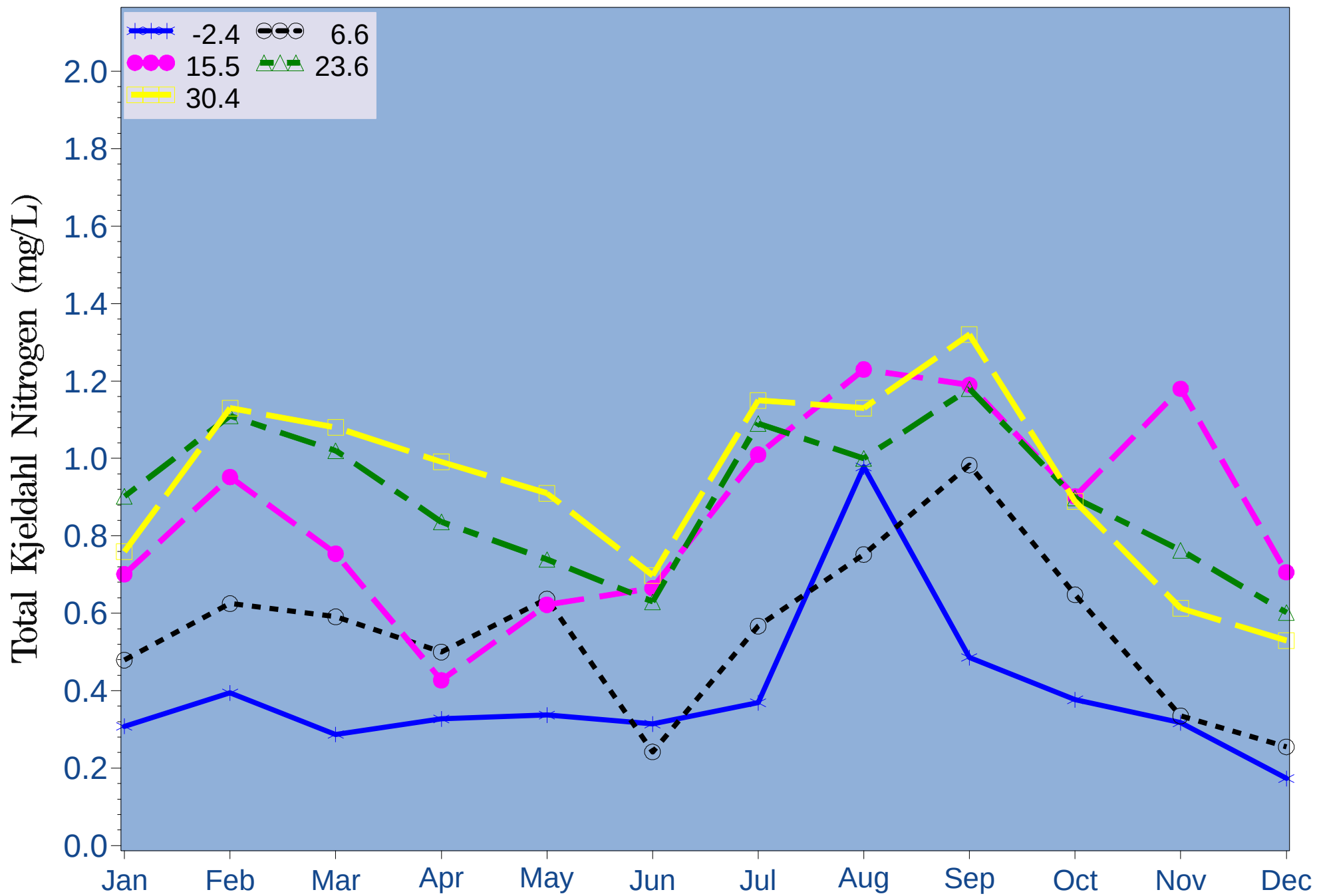


Figure 4.10b Monthly bottom total Kjeldahl nitrogen at fixed sampling stations (2006)

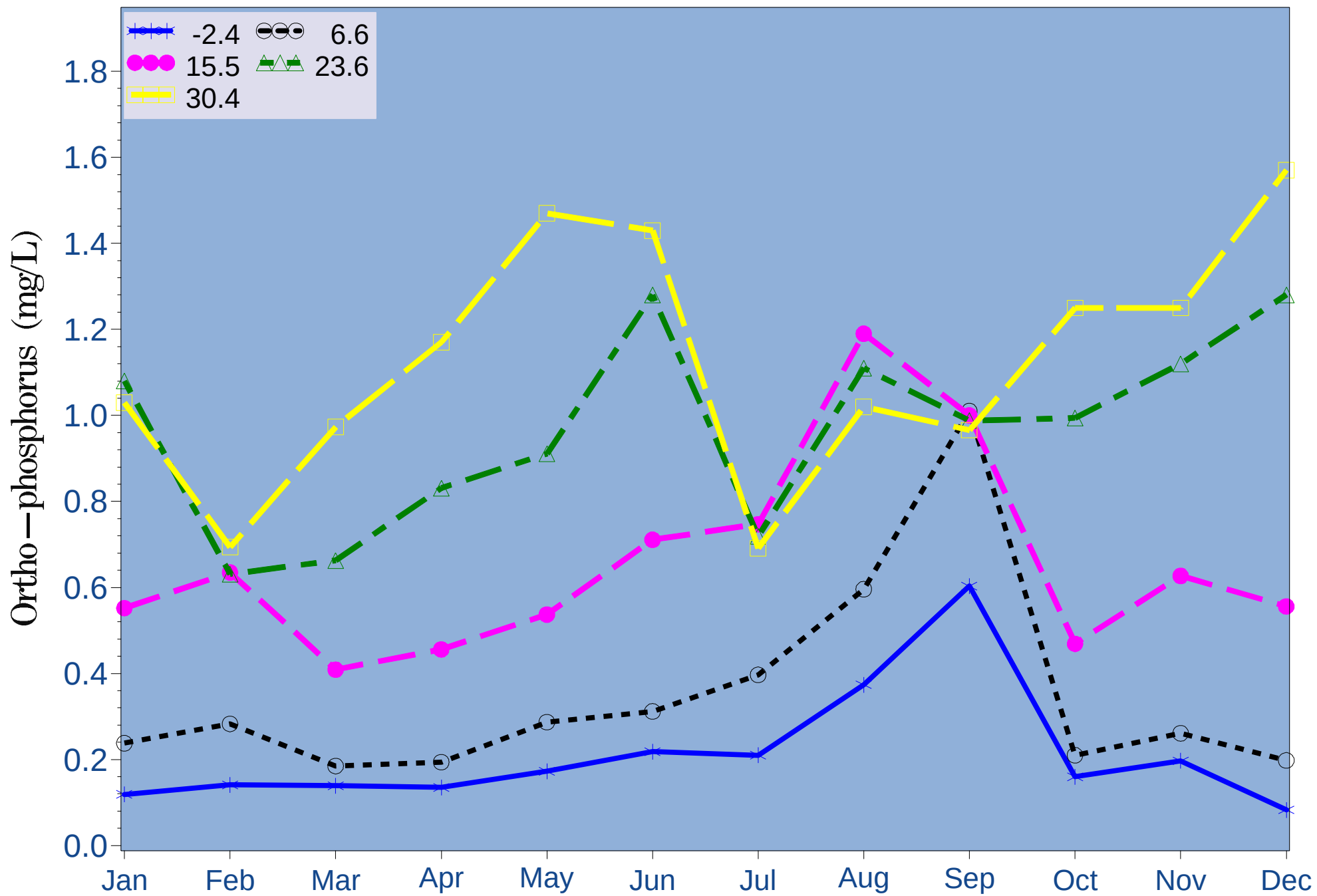


Figure 4.11a Monthly surface ortho-phosphorus at fixed sampling stations (2006)

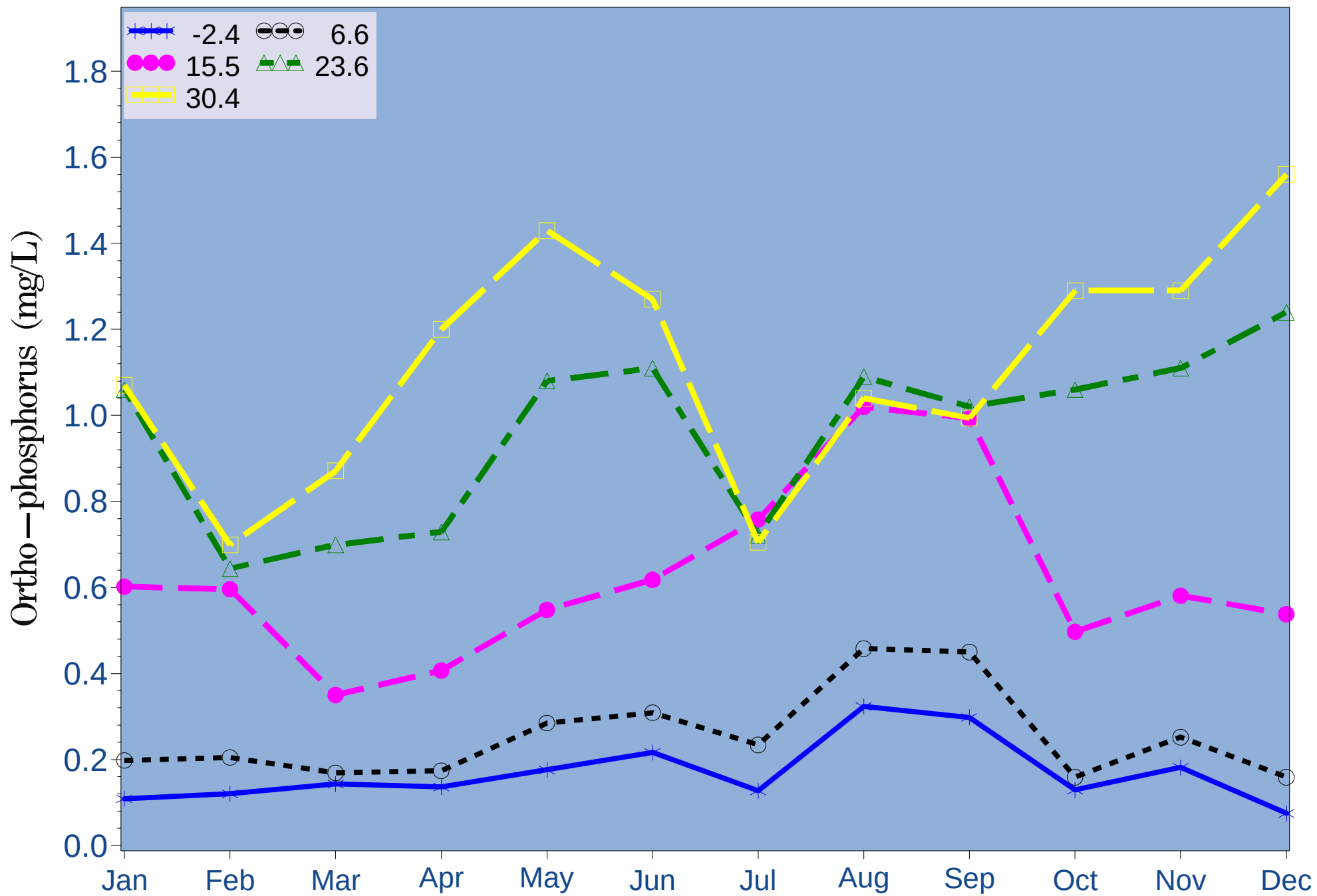


Figure 4.11b Monthly bottom ortho-phosphorus at fixed sampling stations (2006)

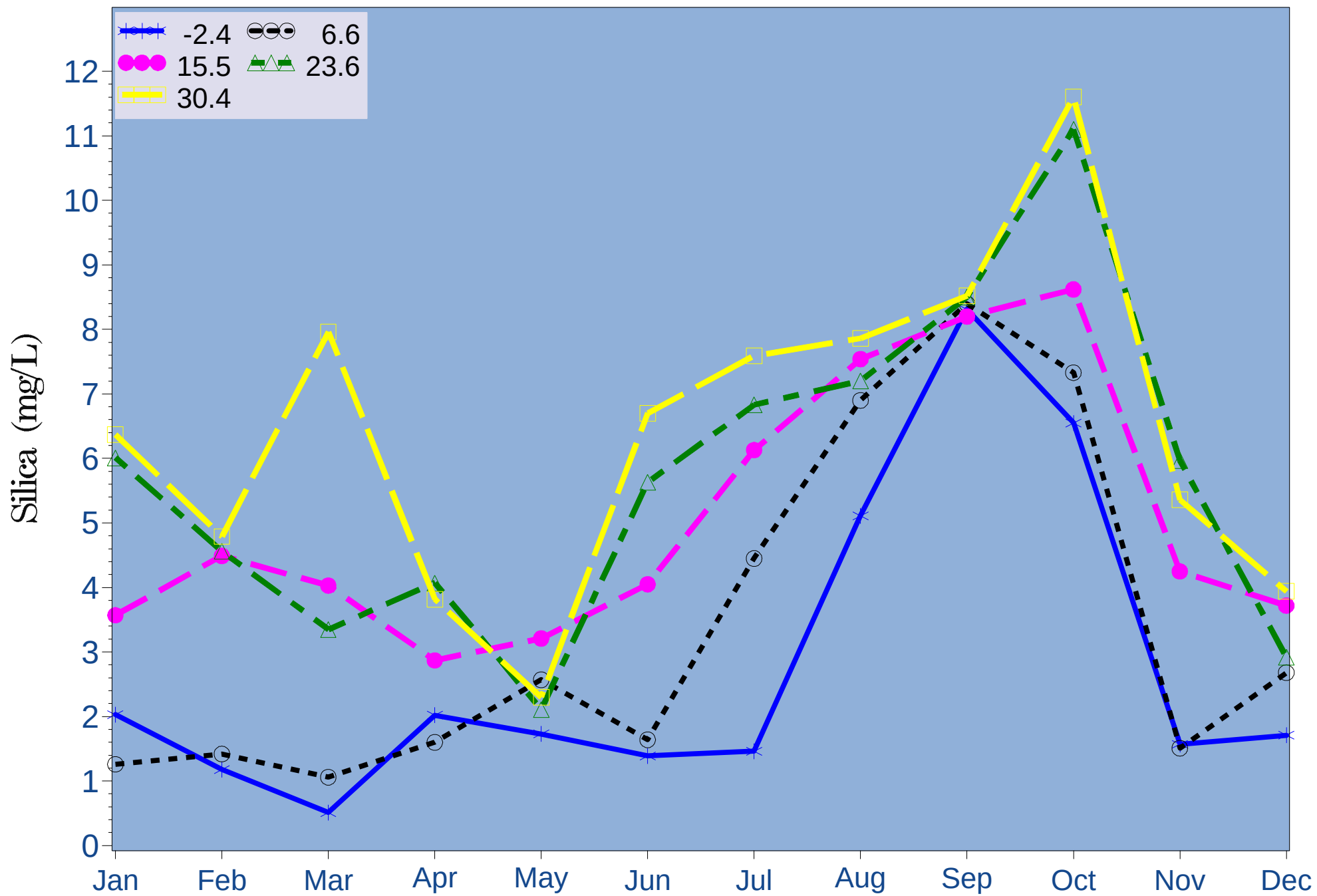


Figure 4.12a Monthly surface silica at fixed sampling stations (2006)

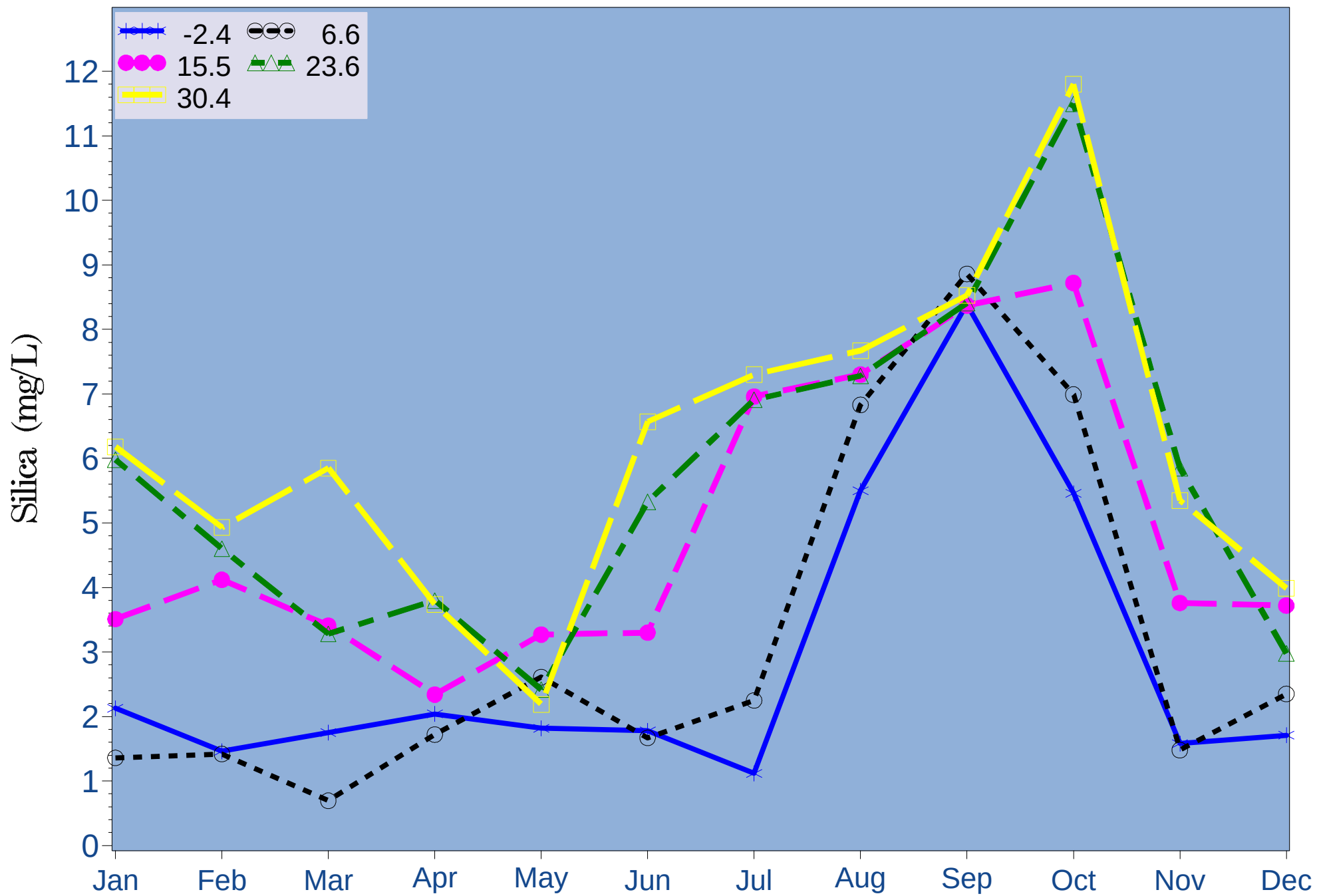


Figure 4.12b Monthly bottom silica at fixed sampling stations (2006)

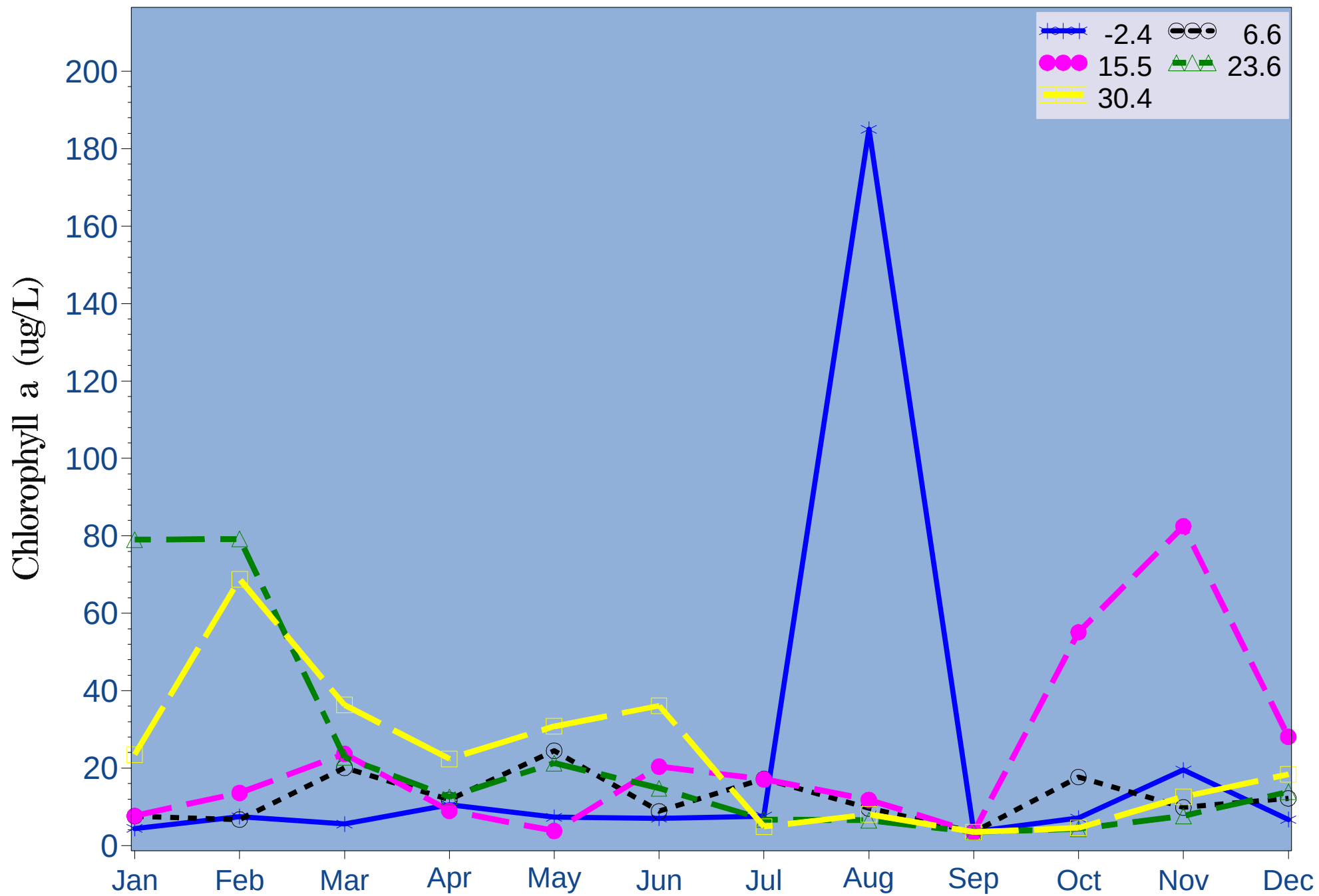


Figure 4.13a Monthly surface chlorophyll a (mg/m³) at fixed stations (2006)

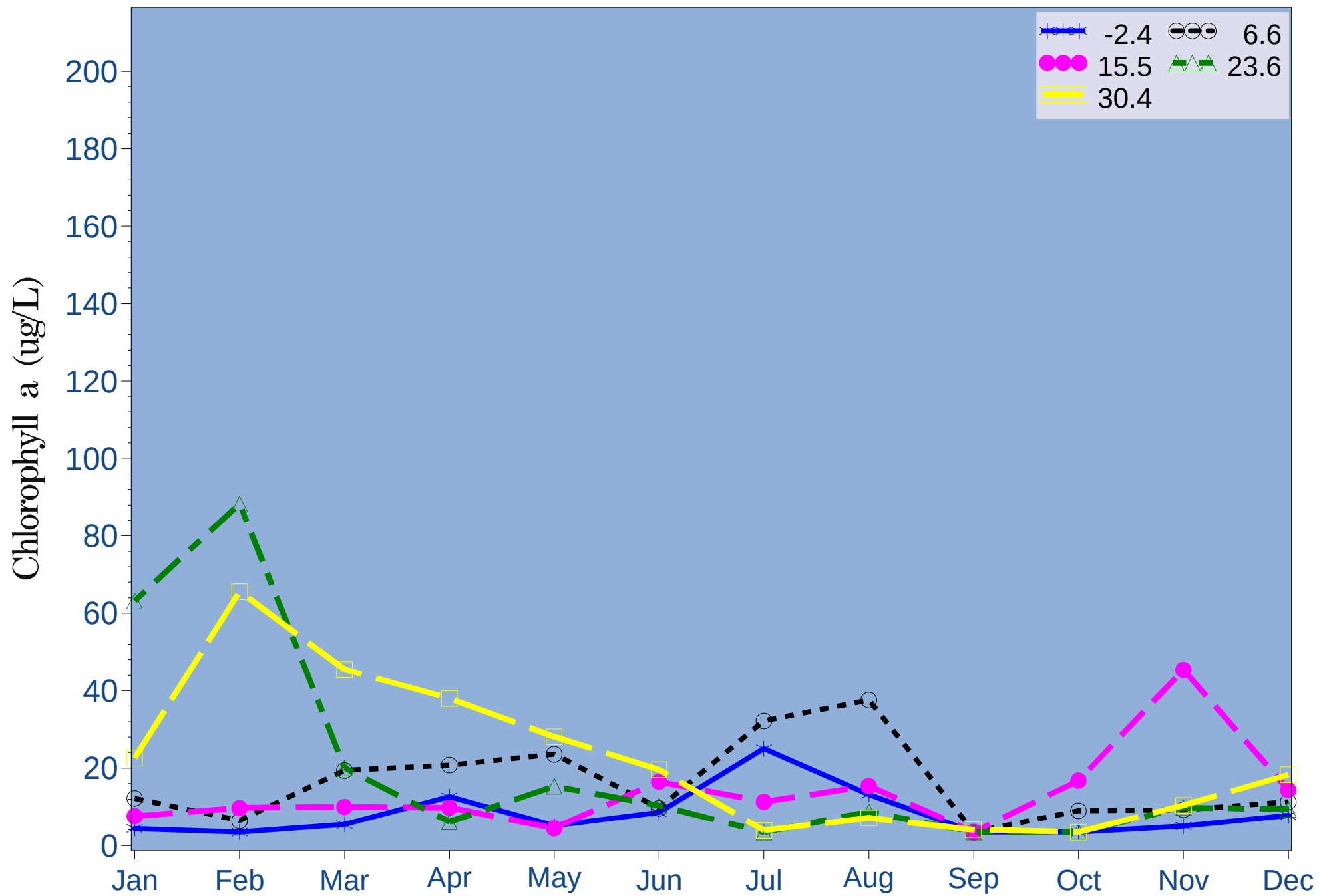


Figure 4.13b Monthly bottom chlorophyll a (mg/m³) at fixed stations (2006)

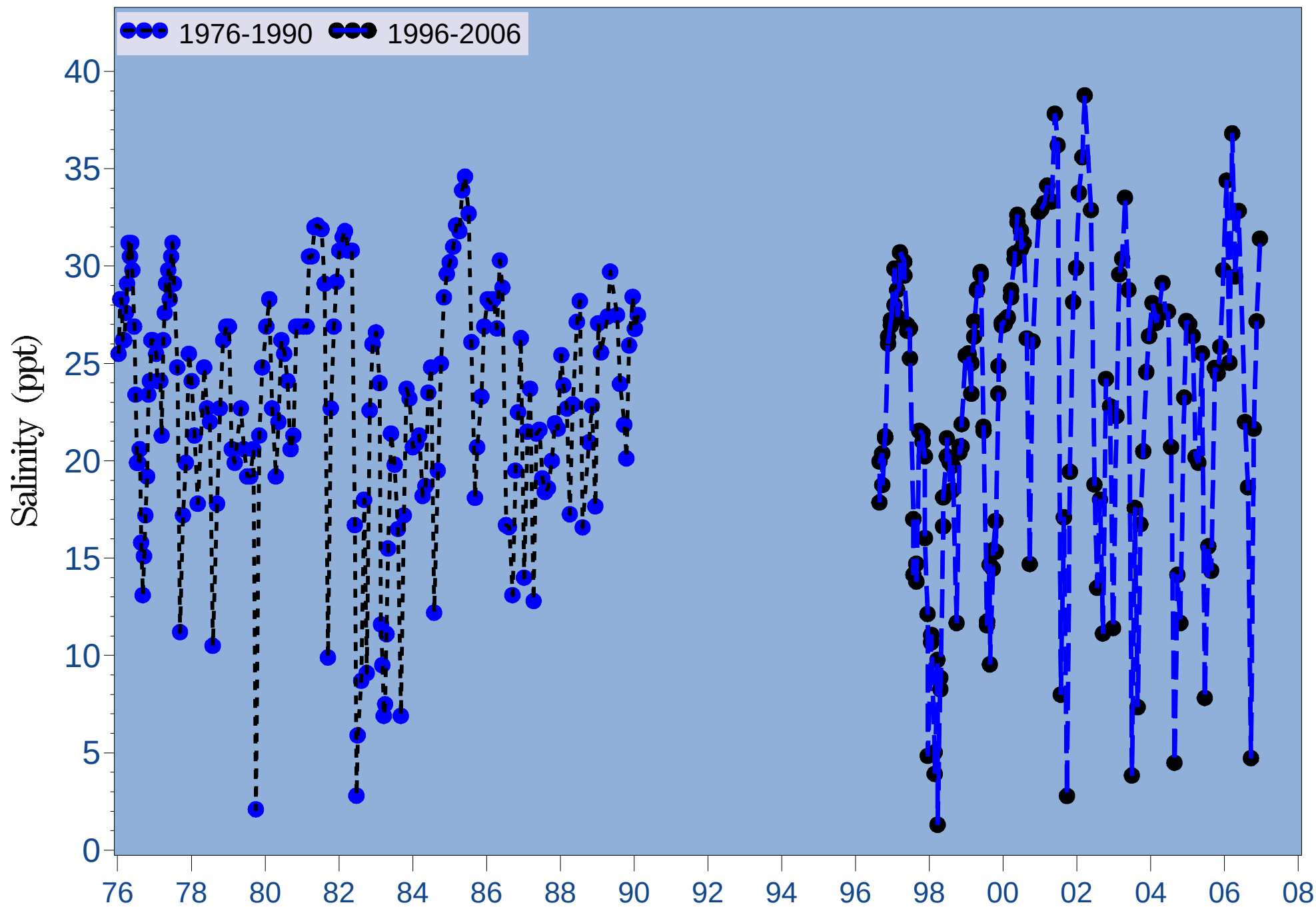


Figure 4.14a Monthly long-term surface salinity at river kilometer -2.4

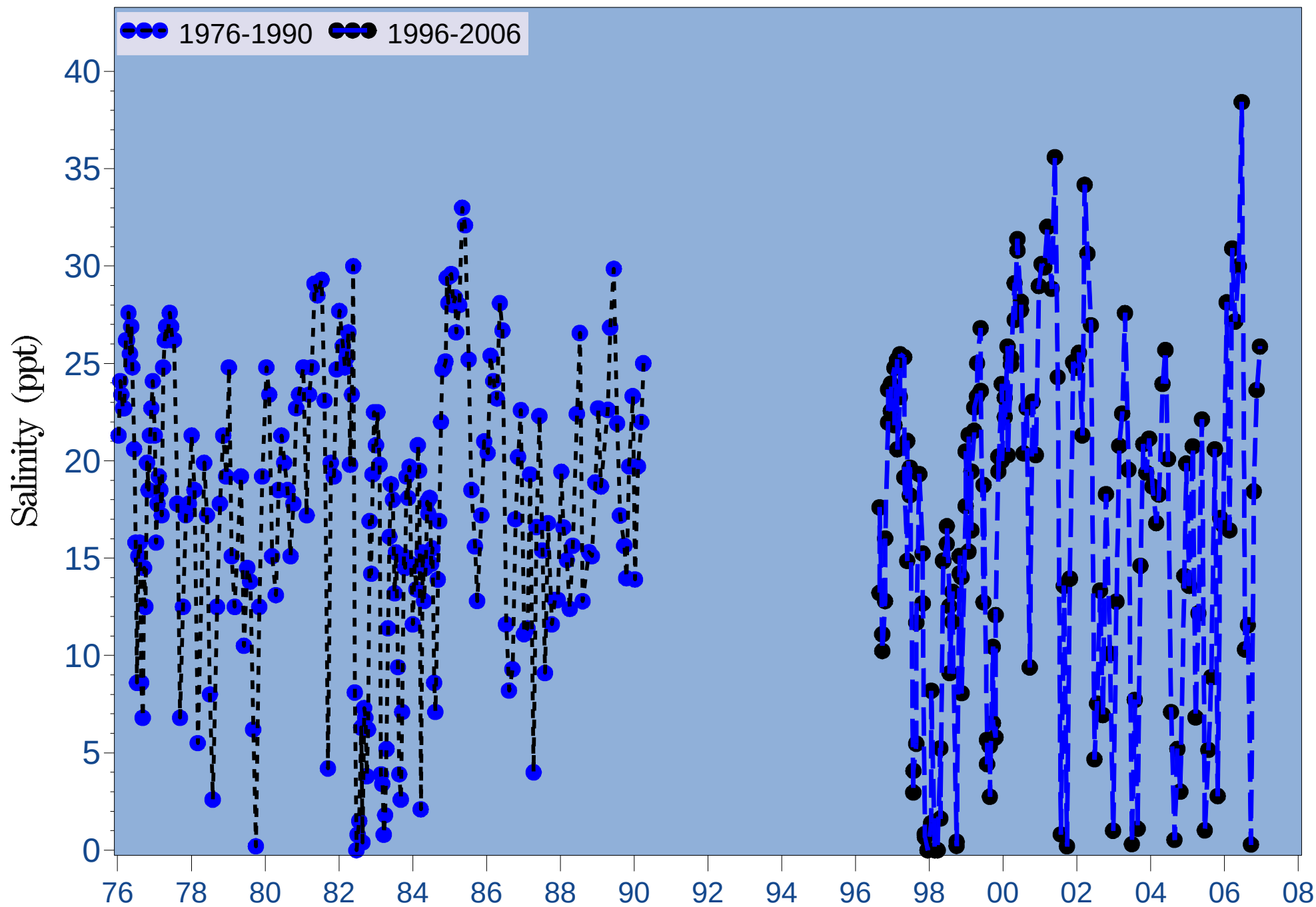


Figure 4.14b Monthly long-term surface salinity at river kilometer 6.6

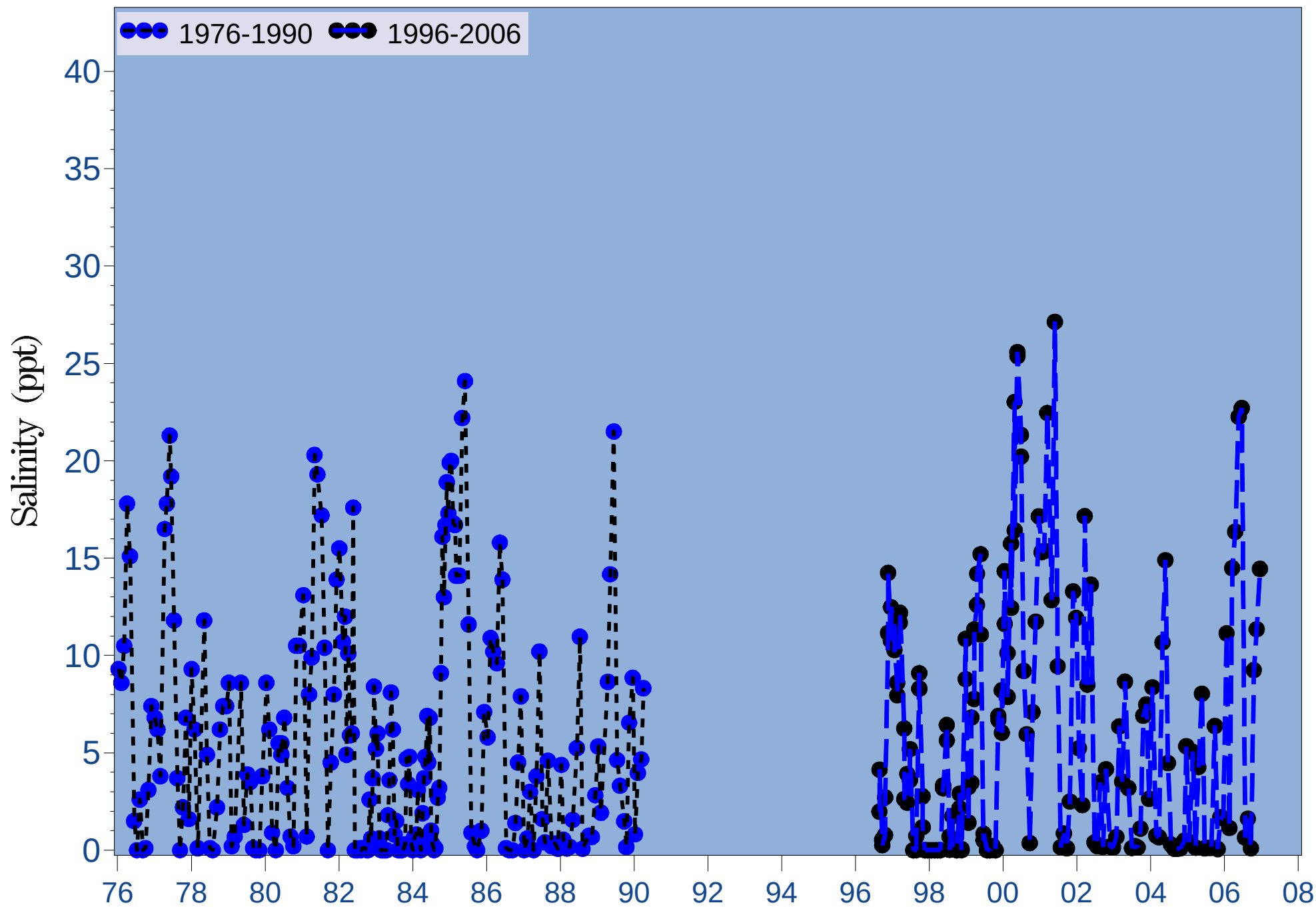


Figure 4.14c Monthly long-term surface salinity at river kilometer 15.5

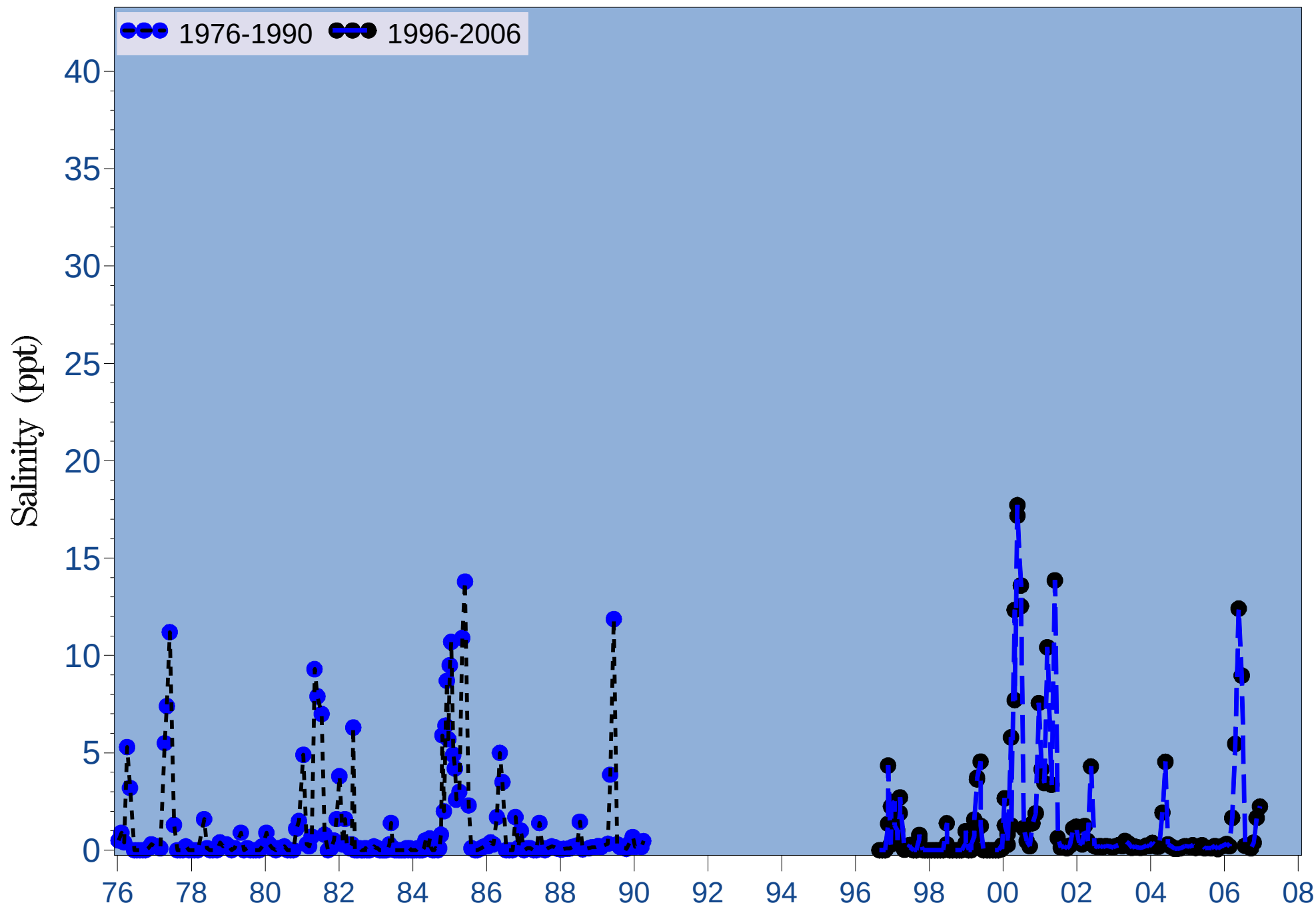


Figure 4.14d Monthly long-term surface salinity at river kilometer 23.6

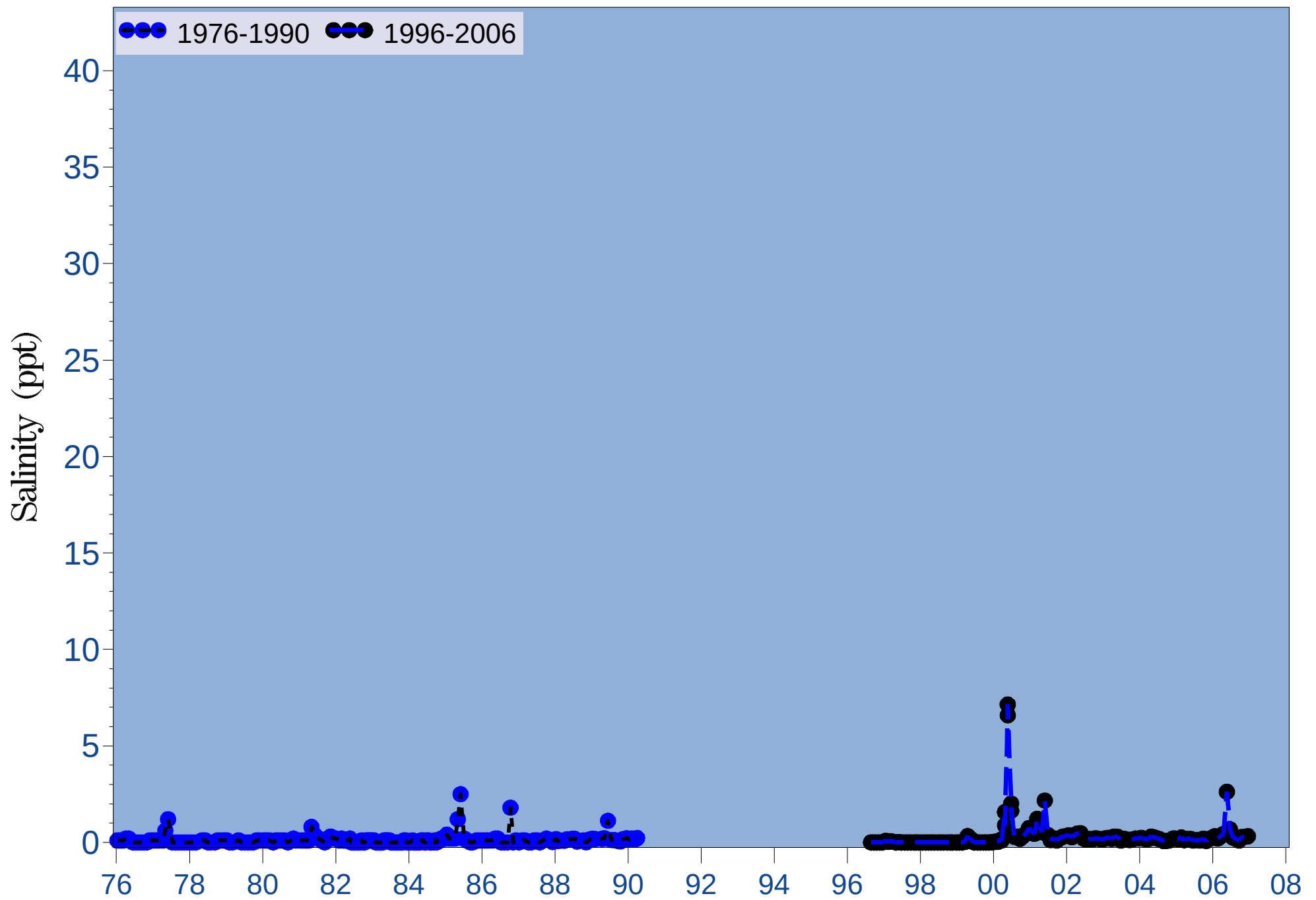


Figure 4.14e Monthly long-term surface salinity at river kilometer 30.4

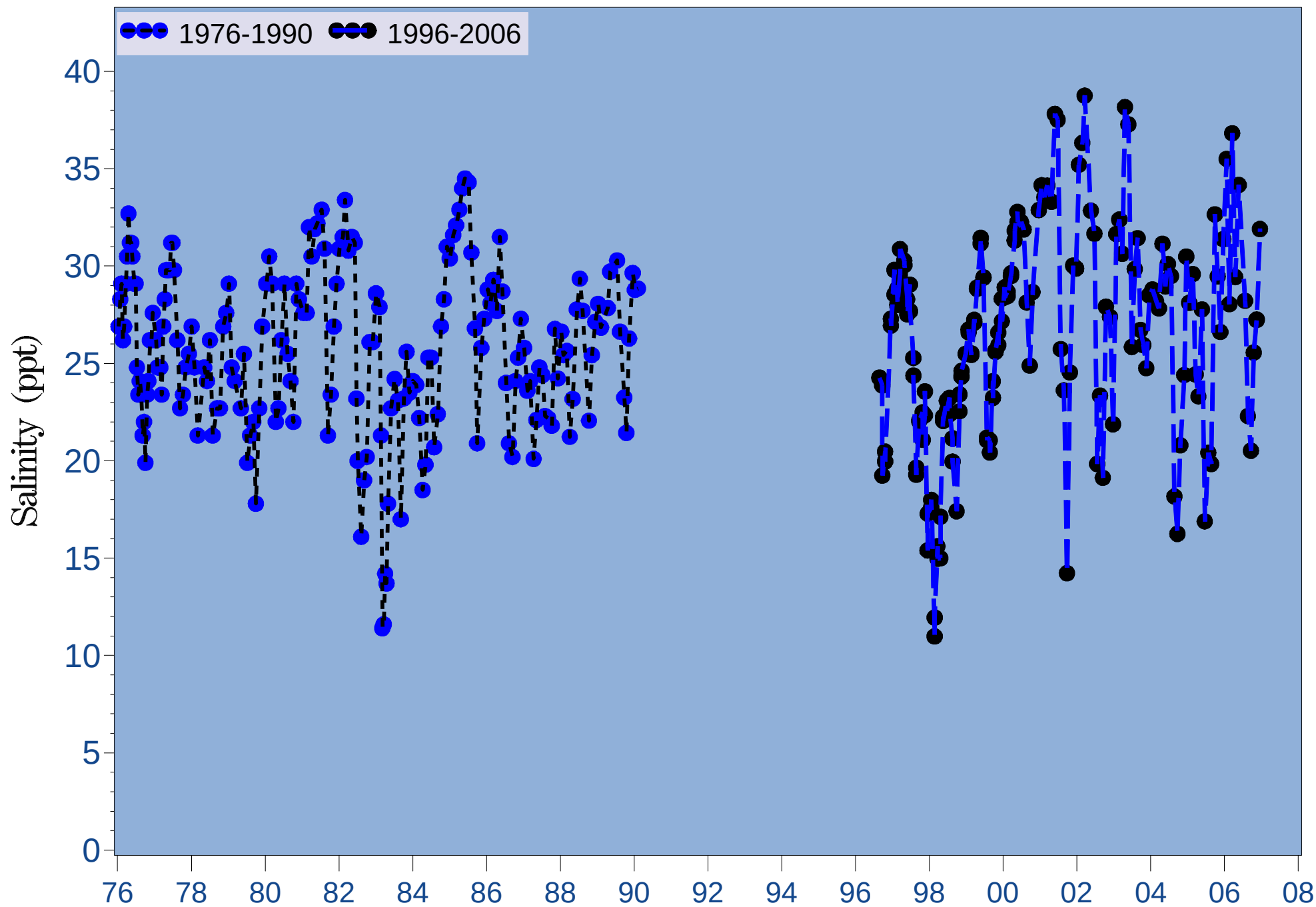


Figure 4.15a Monthly long-term bottom salinity at river kilometer -2.4

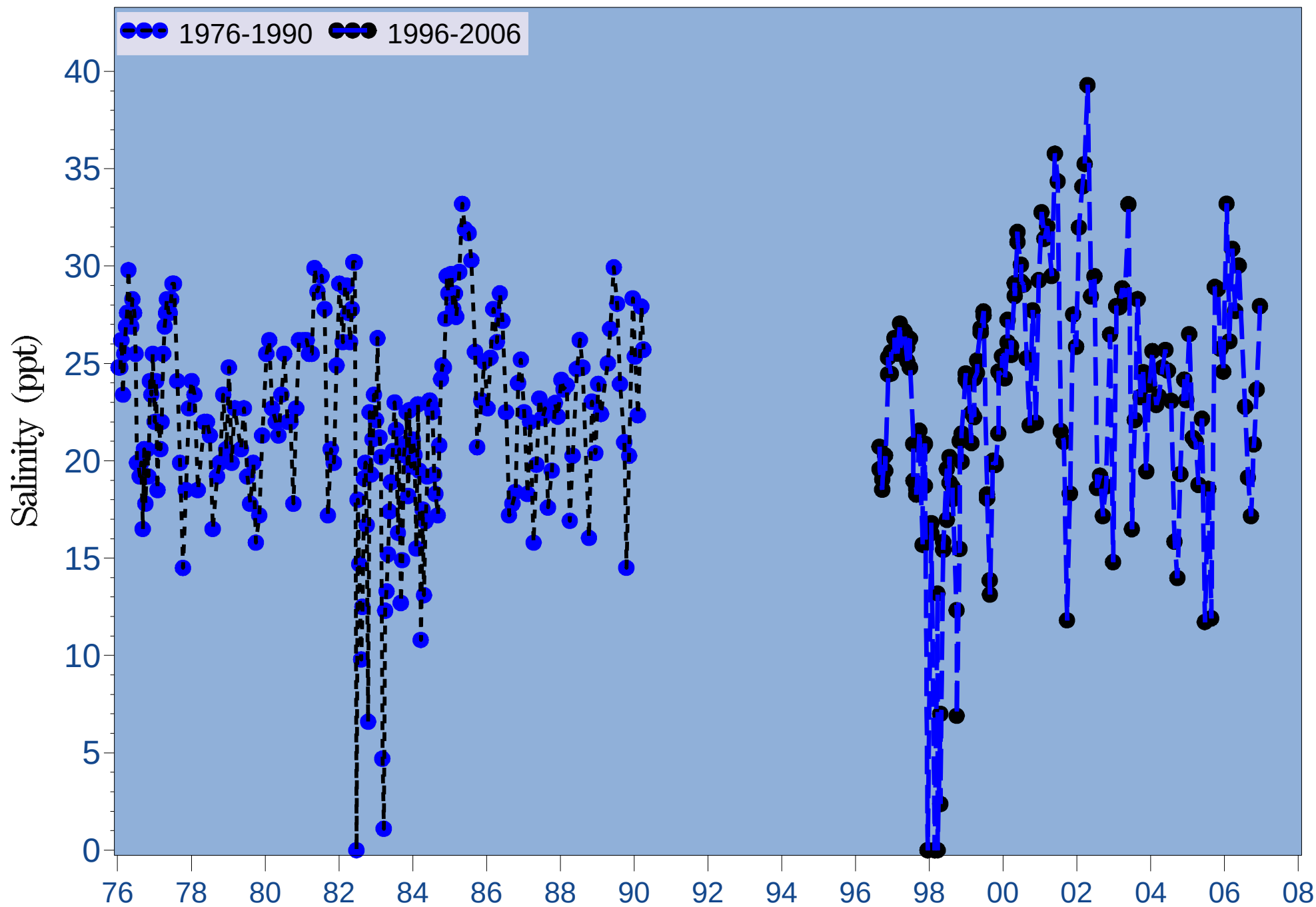


Figure 4.15b Monthly long-term bottom salinity at river kilometer 6.6

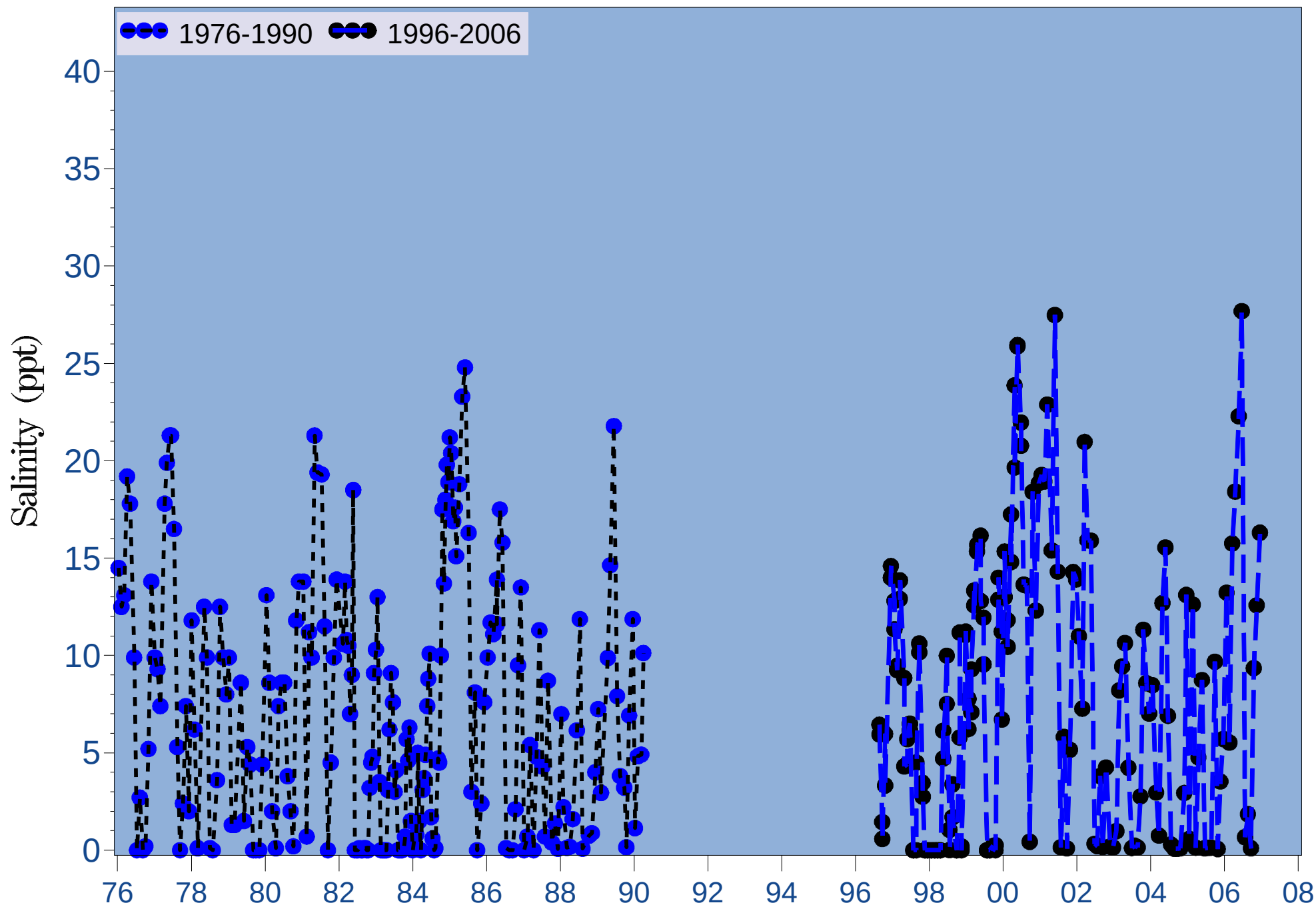


Figure 4.15c Monthly long-term bottom salinity at river kilometer 15.5

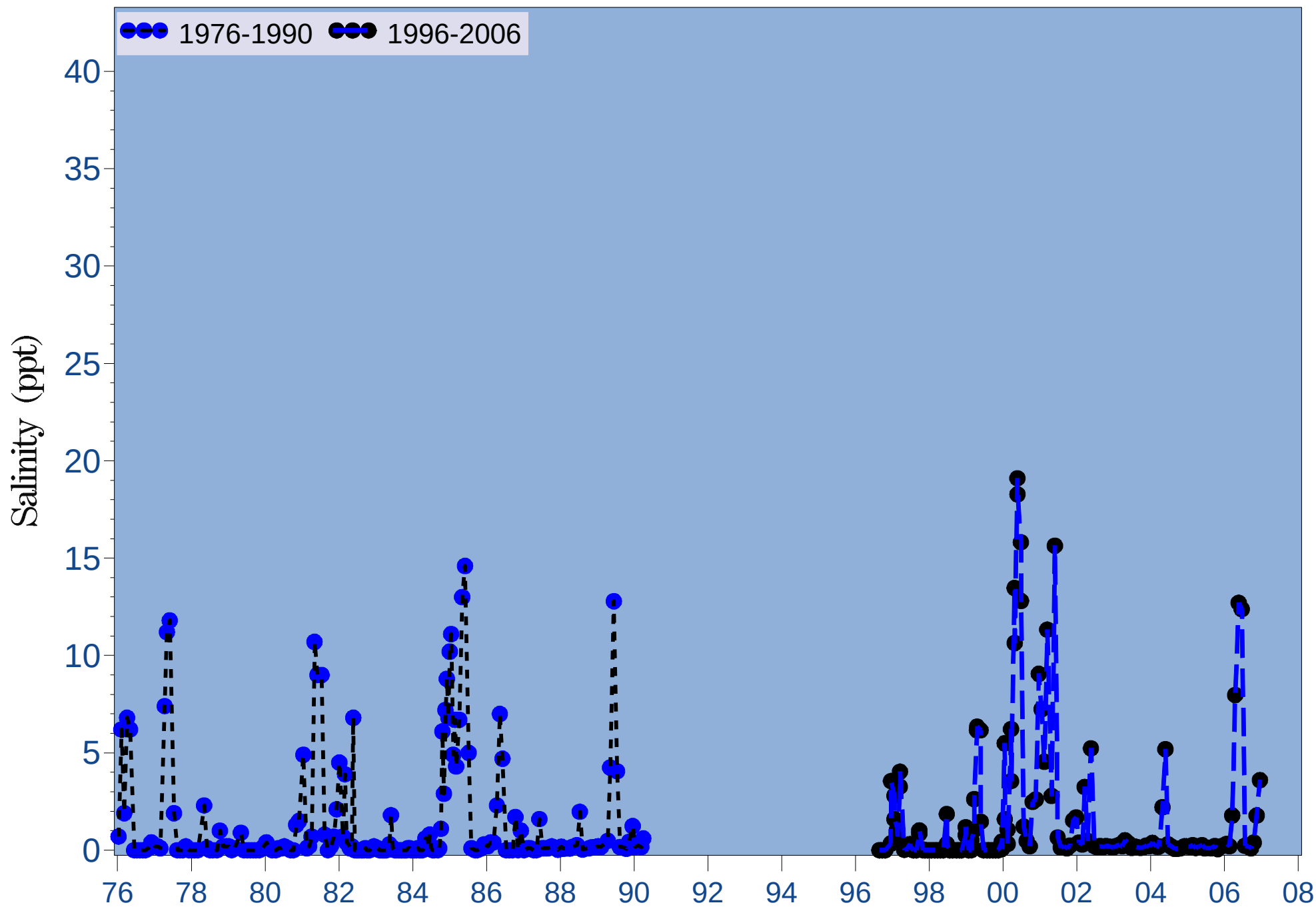


Figure 4.15d Monthly long-term bottom salinity at river kilometer 23.6

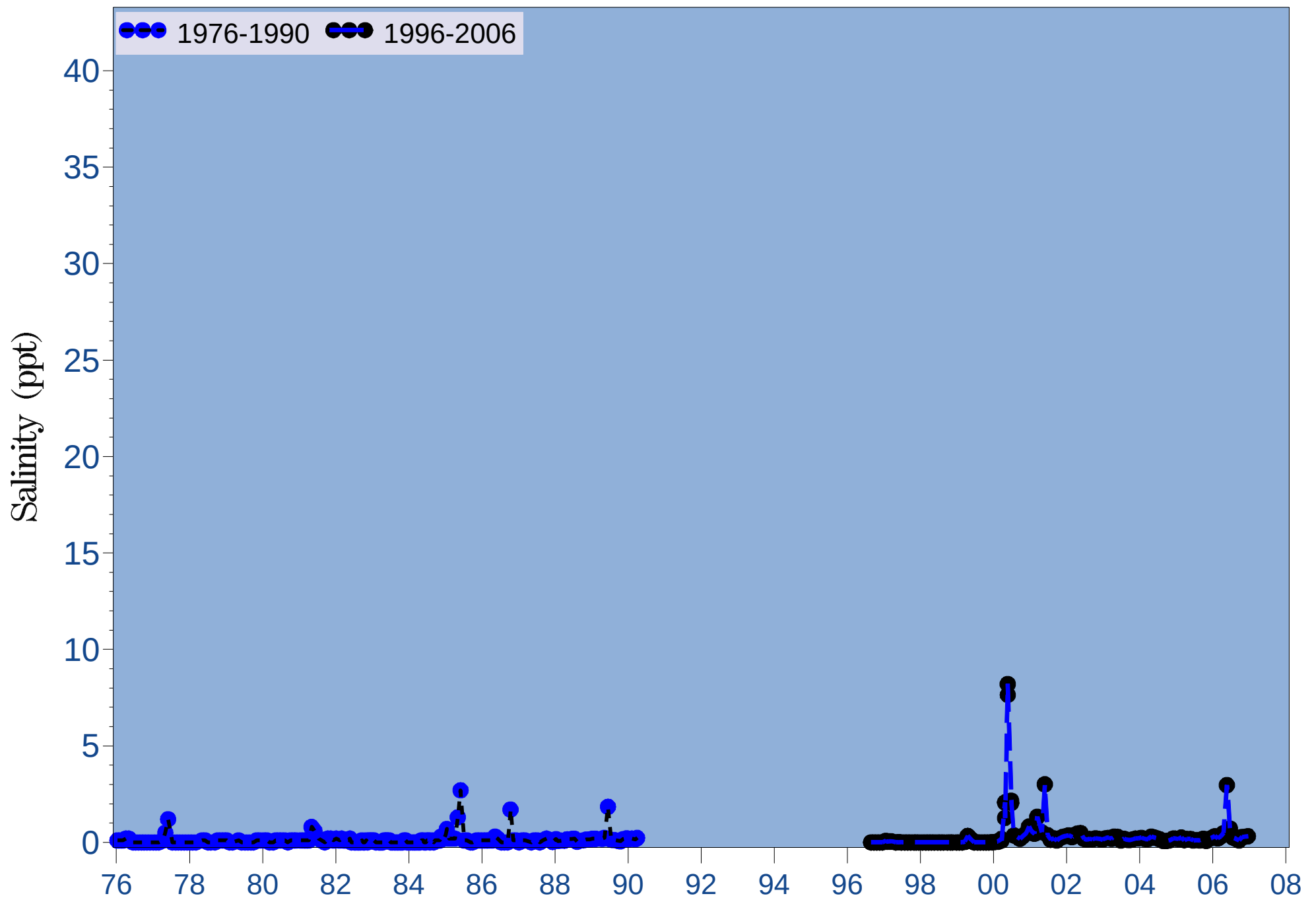


Figure 4.15e Monthly long-term bottom salinity at river kilometer 30.4

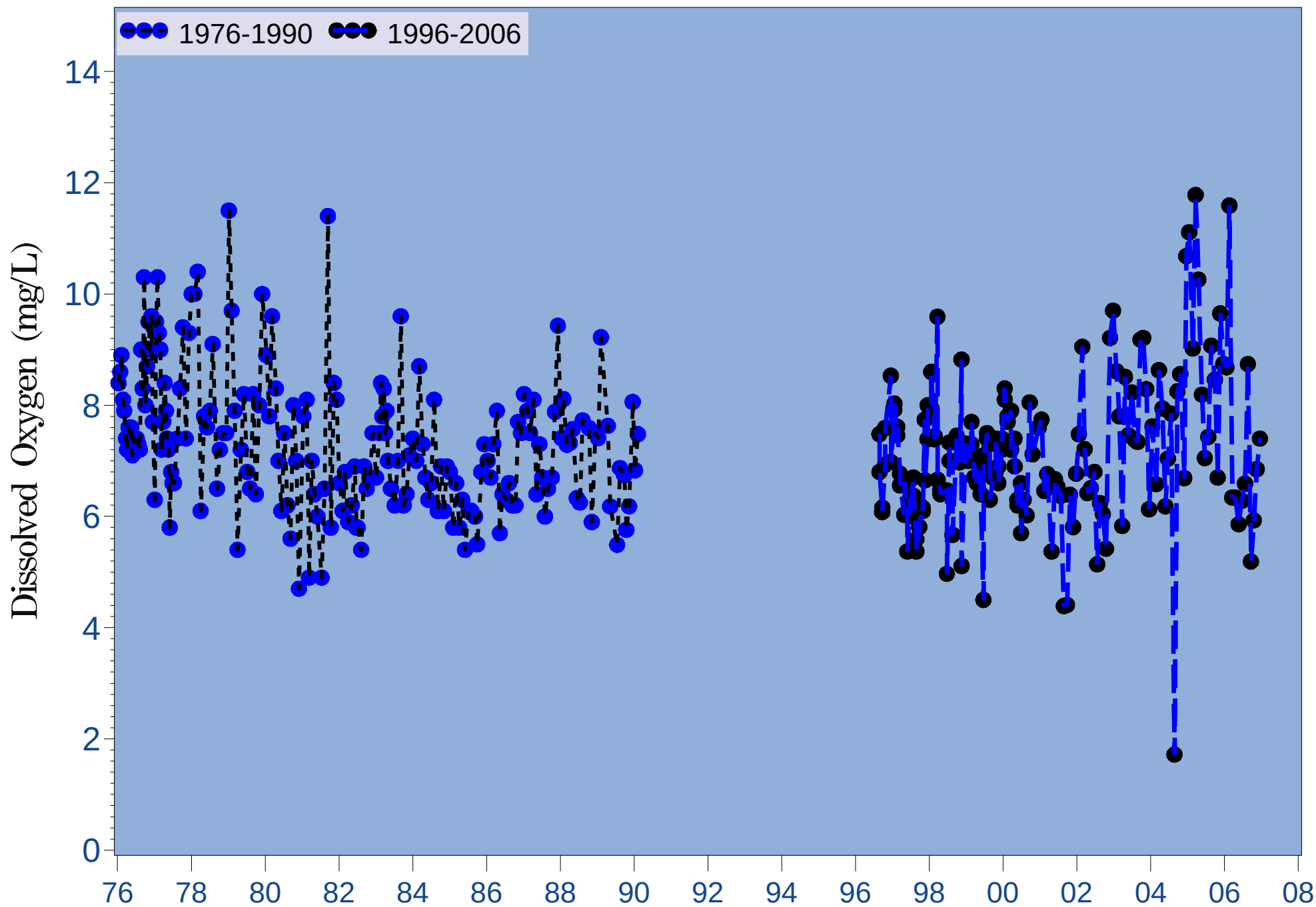


Figure 4.16a Monthly long-term surface dissolved oxygen at river kilometer -2.4

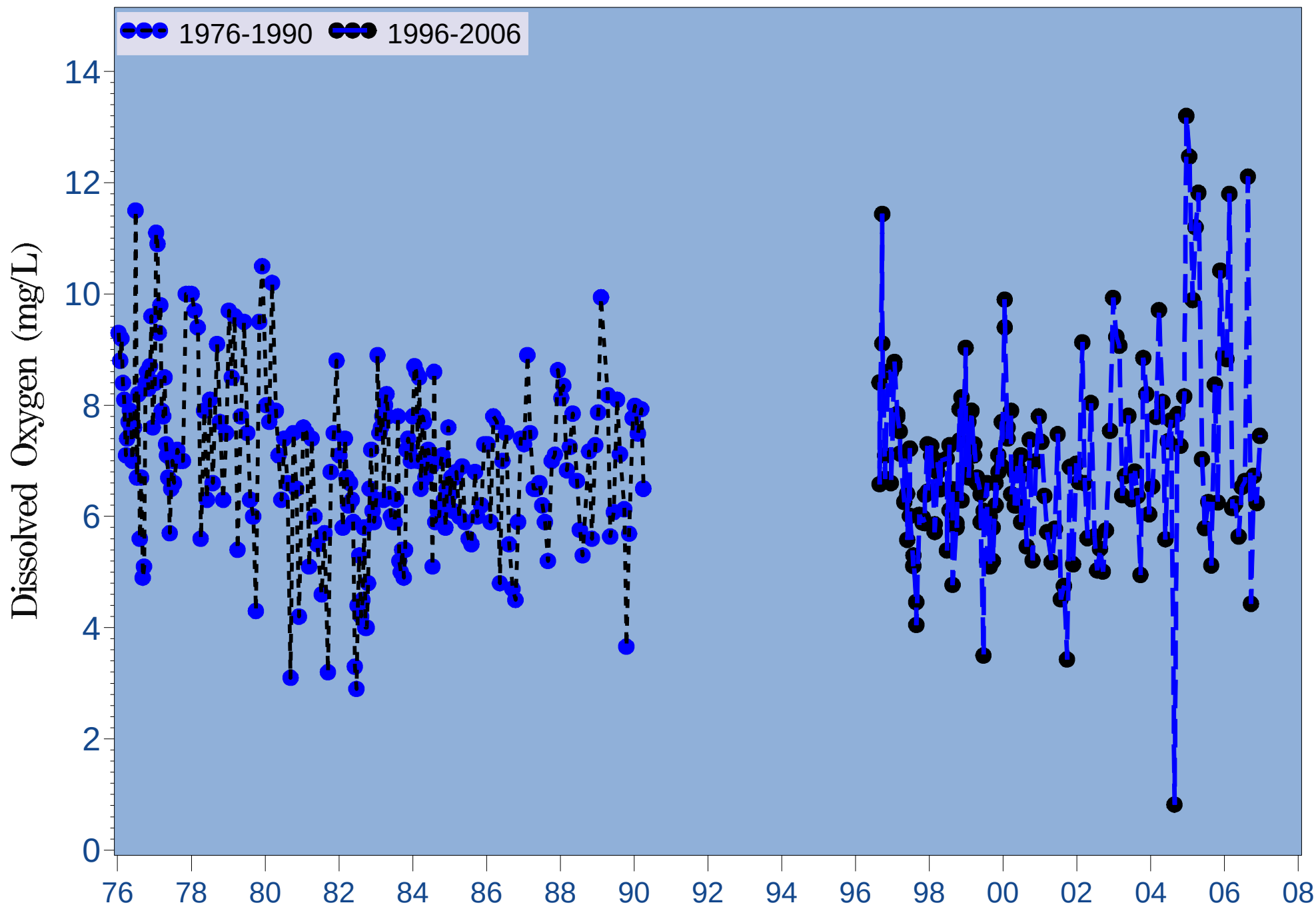


Figure 4.16b Monthly long-term surface dissolved oxygen at river kilometer 6.6

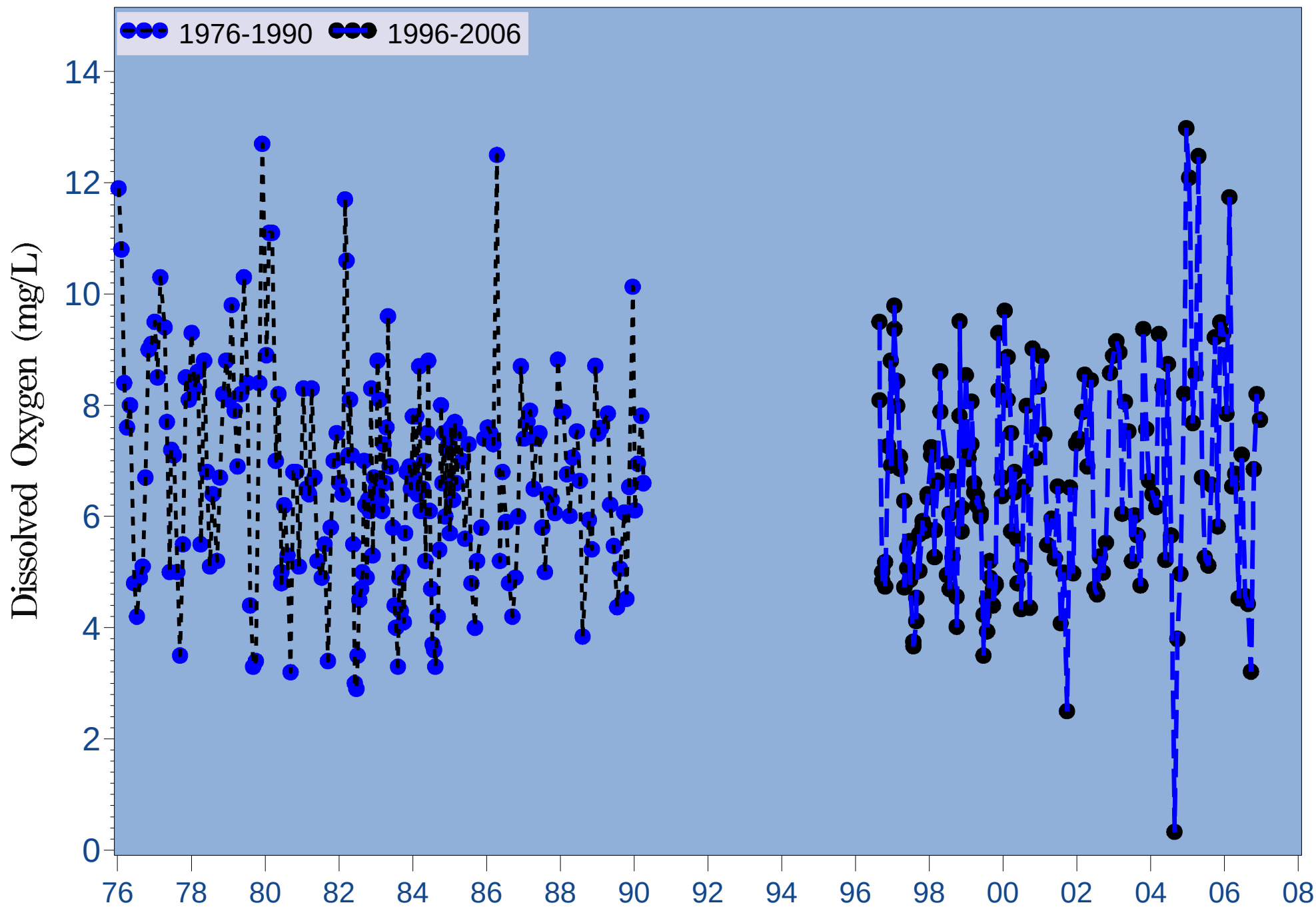


Figure 4.16c Monthly long-term surface dissolved oxygen at river kilometer 15.5

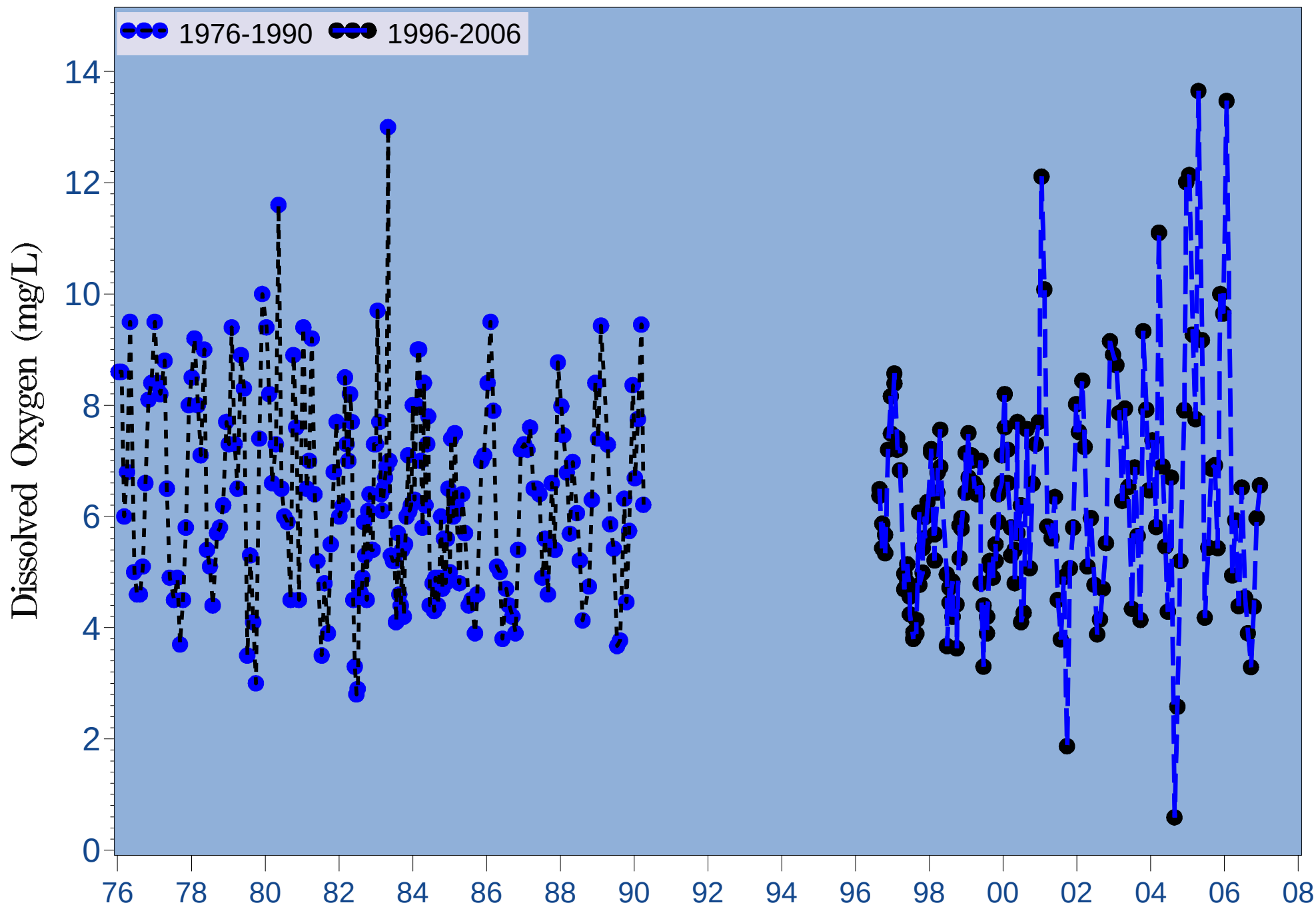


Figure 4.16d Monthly long-term surface dissolved oxygen at river kilometer 23.6

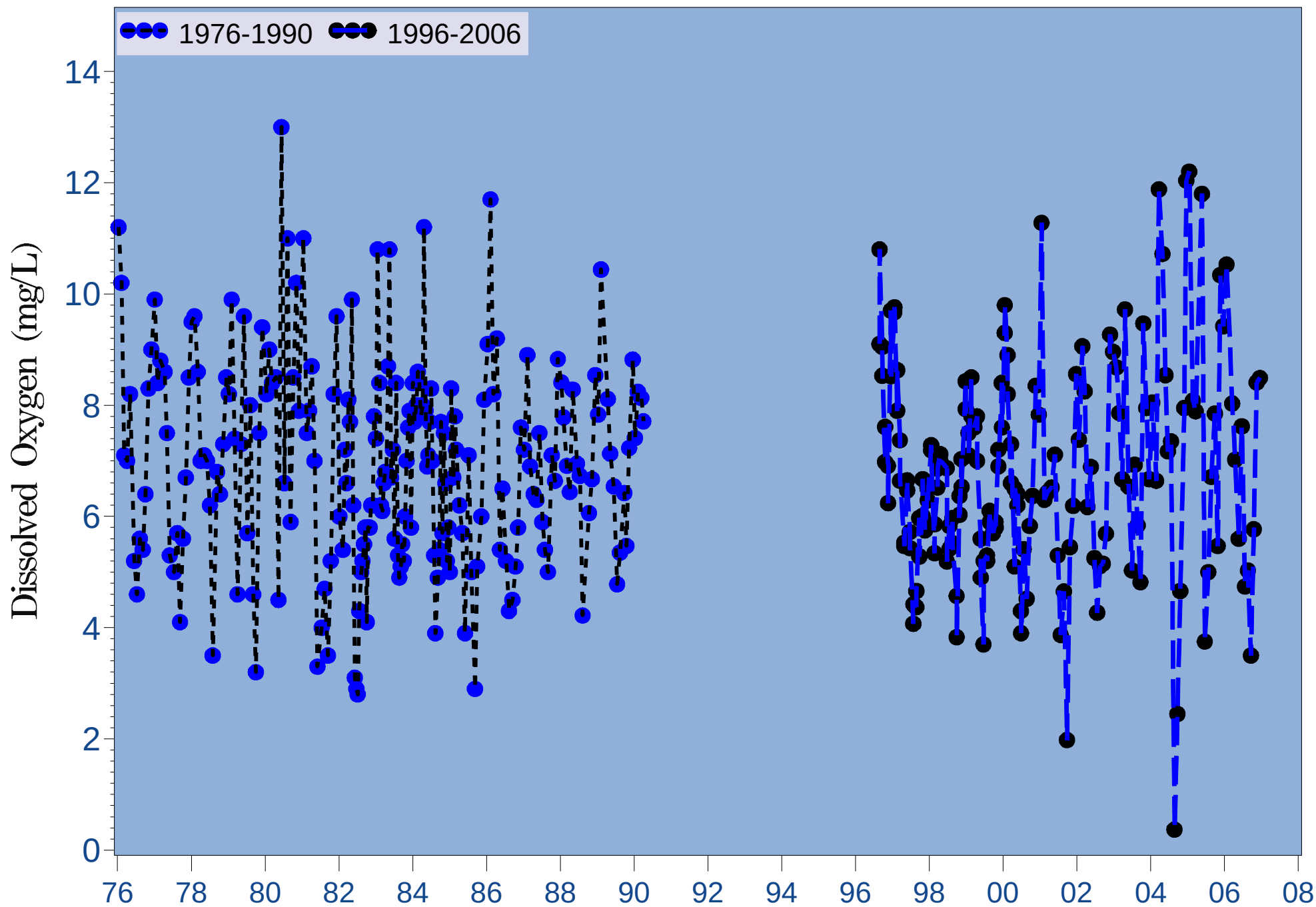


Figure 4.16e Monthly long-term surface dissolved oxygen at river kilometer 30.4

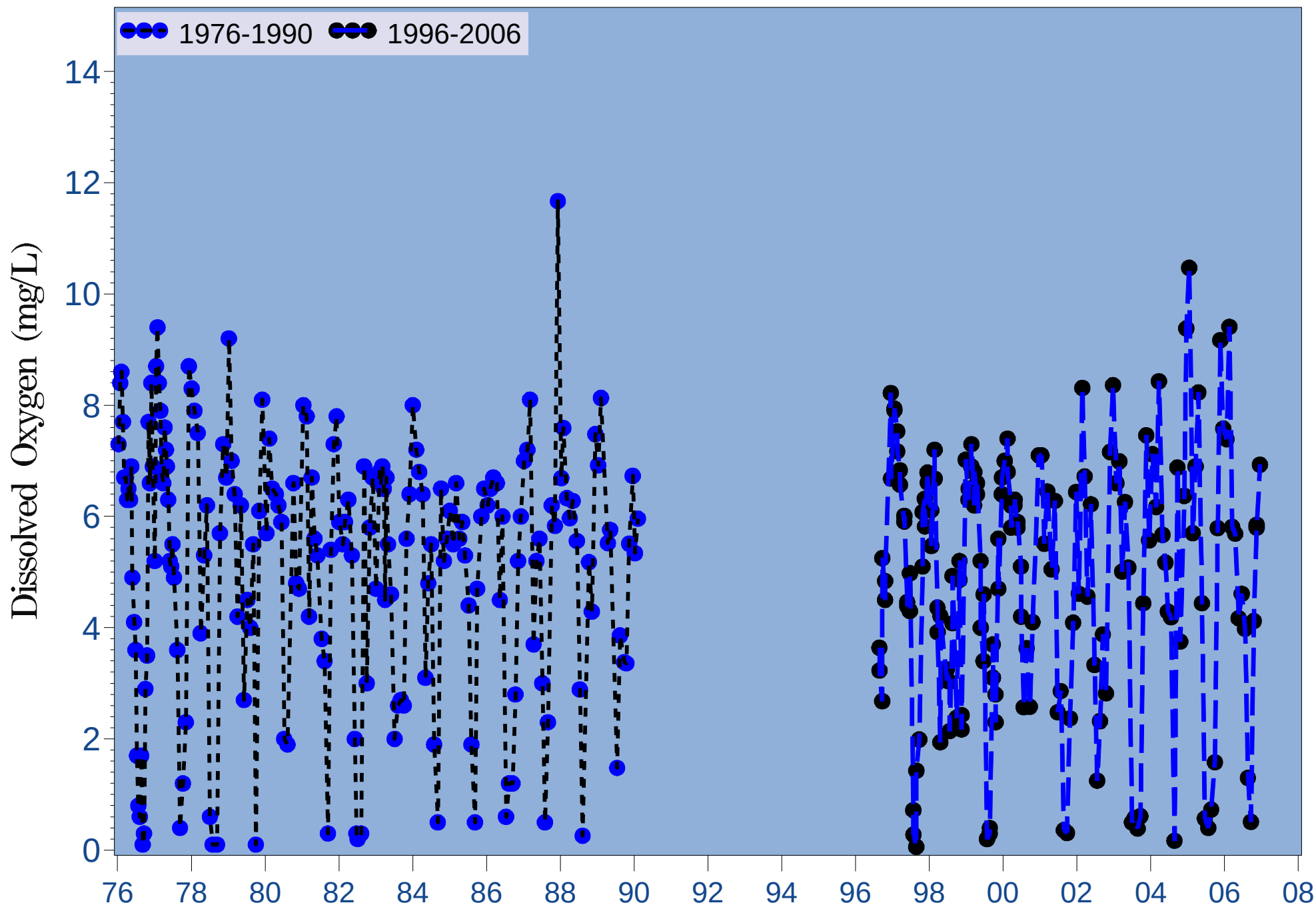


Figure 4.17a Monthly long-term bottom dissolved oxygen at river kilometer -2.4

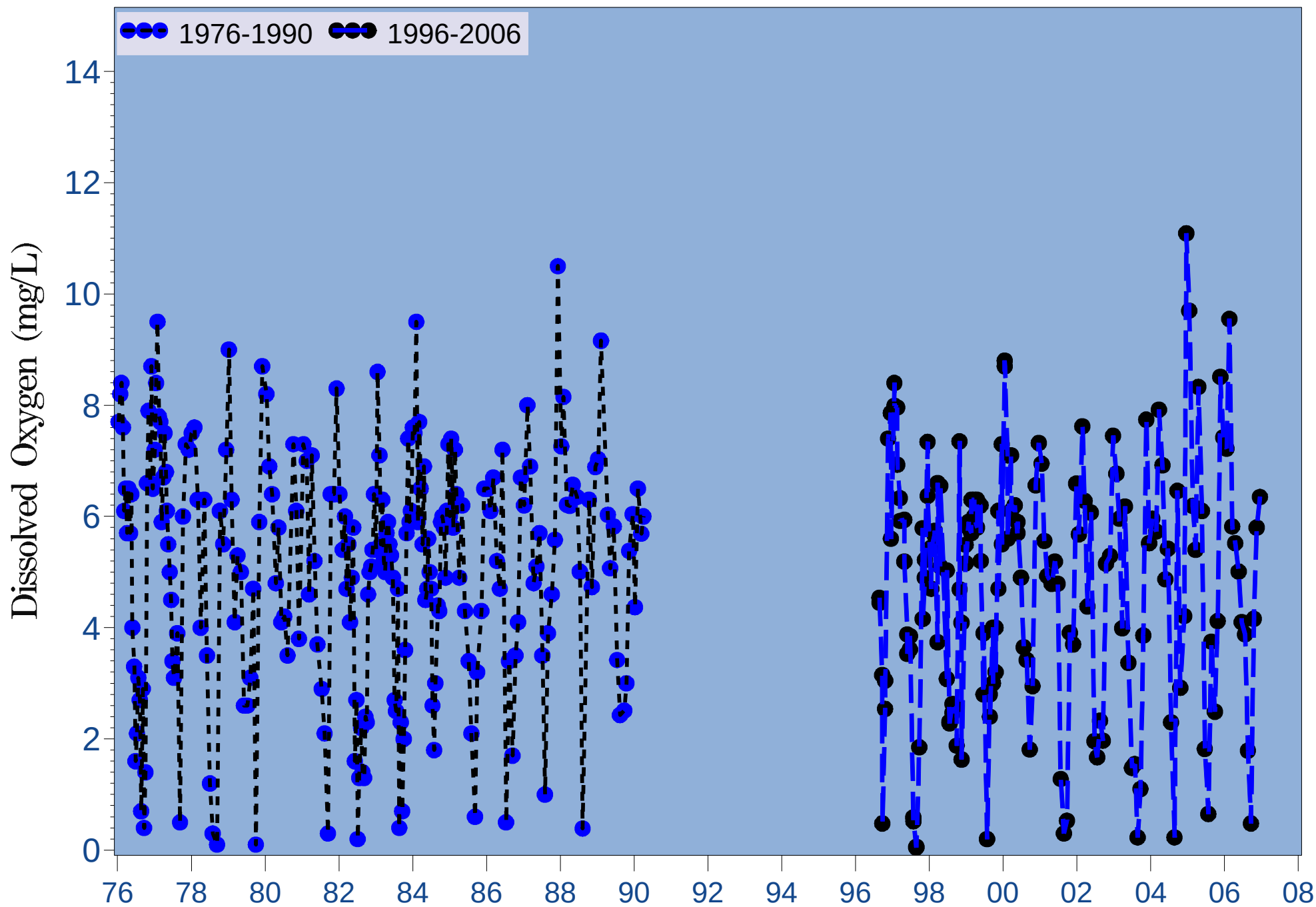


Figure 4.17b Monthly long-term bottom dissolved oxygen at river kilometer 6.6

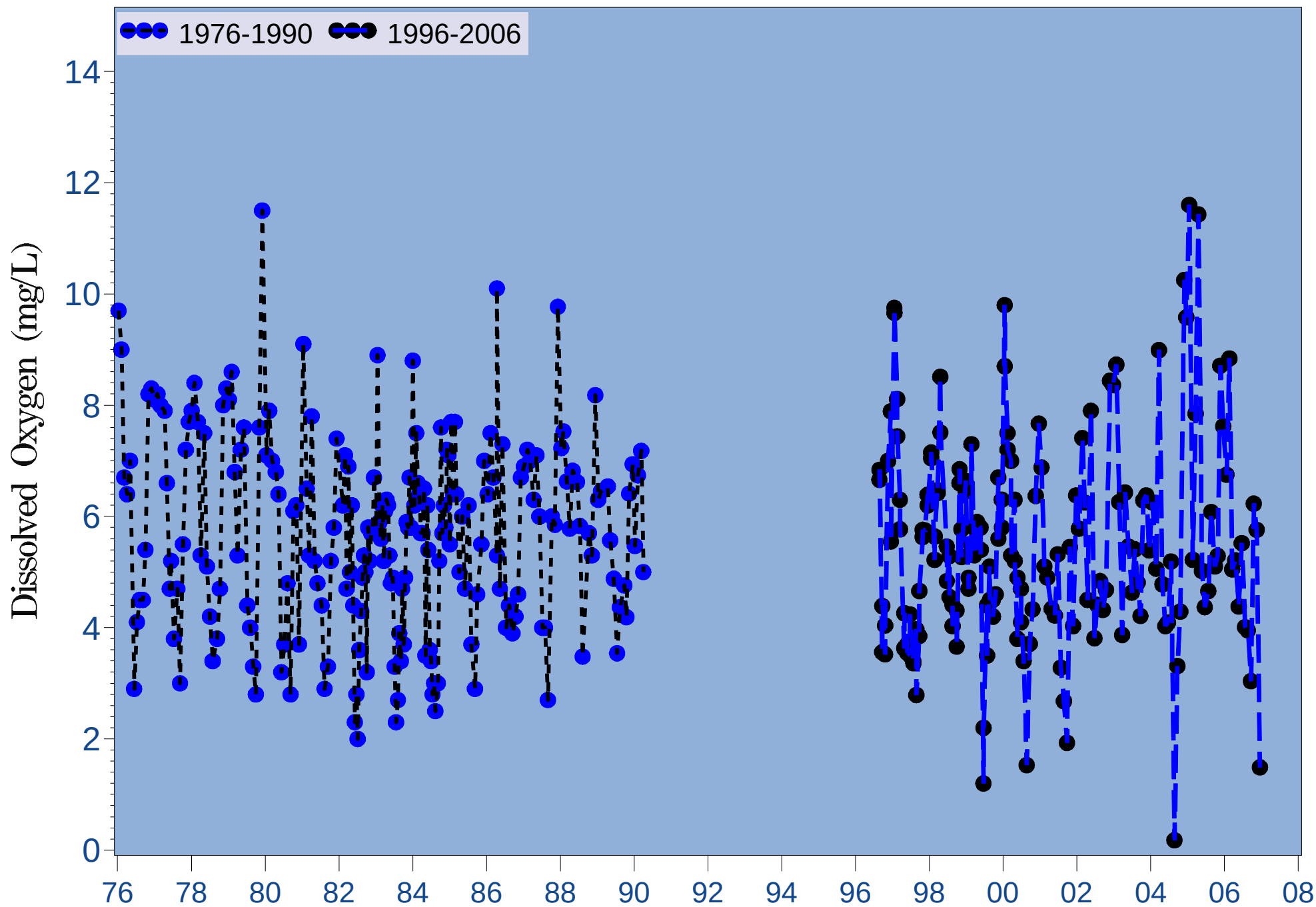


Figure 4.17c Monthly long-term bottom dissolved oxygen at river kilometer 15.5

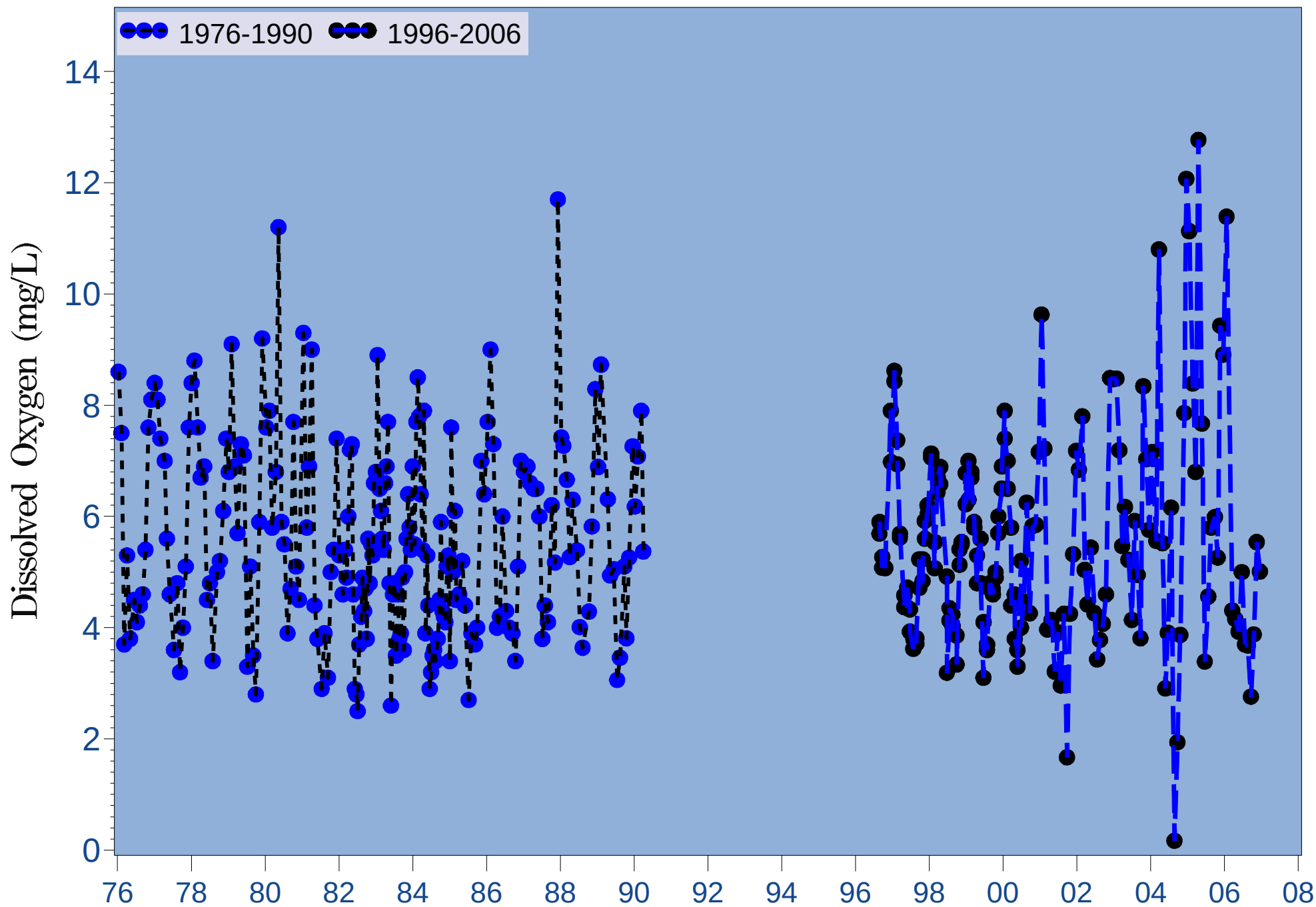


Figure 4.17d Monthly long-term bottom dissolved oxygen at river kilometer 23.6

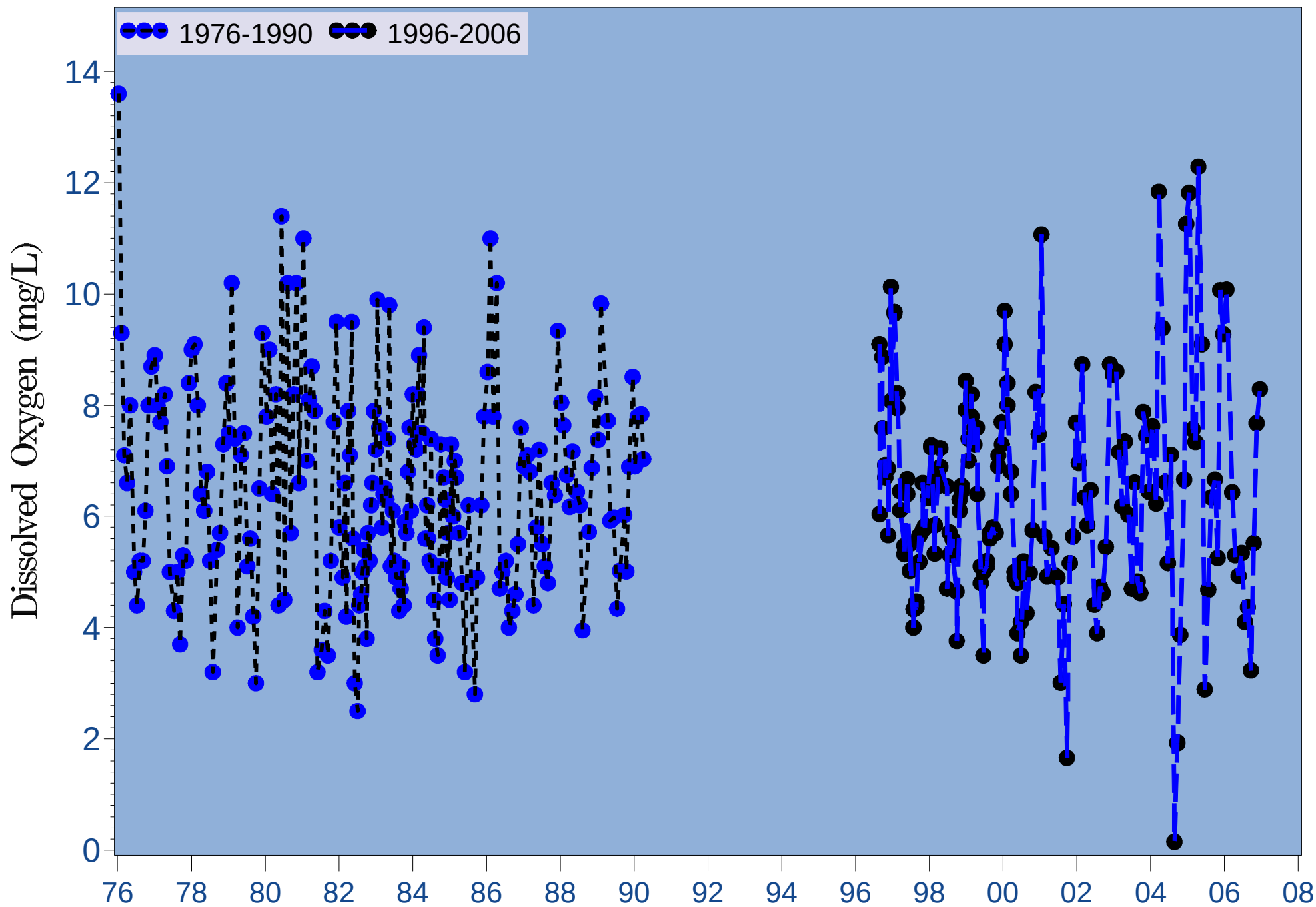


Figure 4.17e Monthly long-term bottom dissolved oxygen at river kilometer 30.4

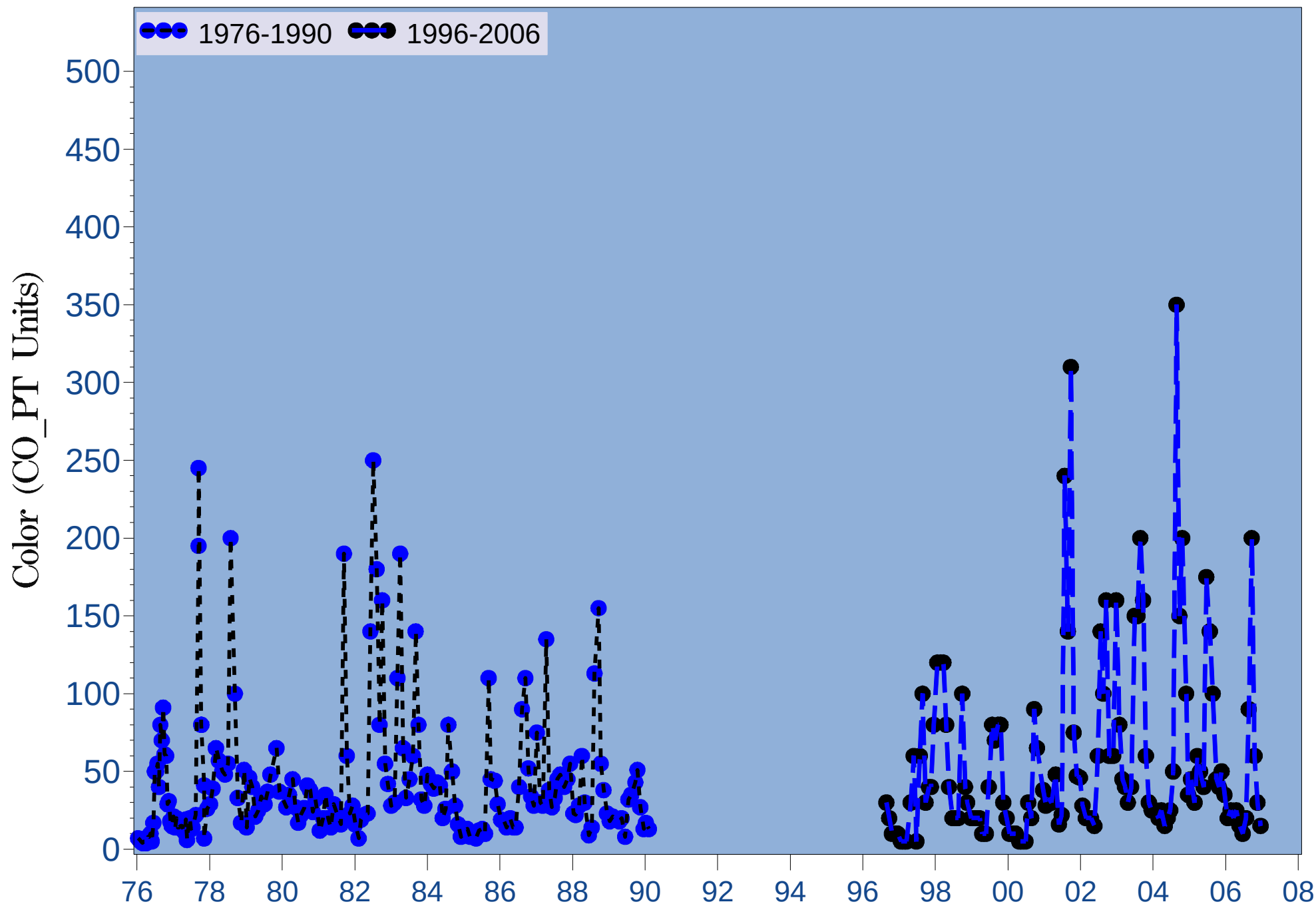


Figure 4.18a Monthly long-term surface color at river kilometer -2.4

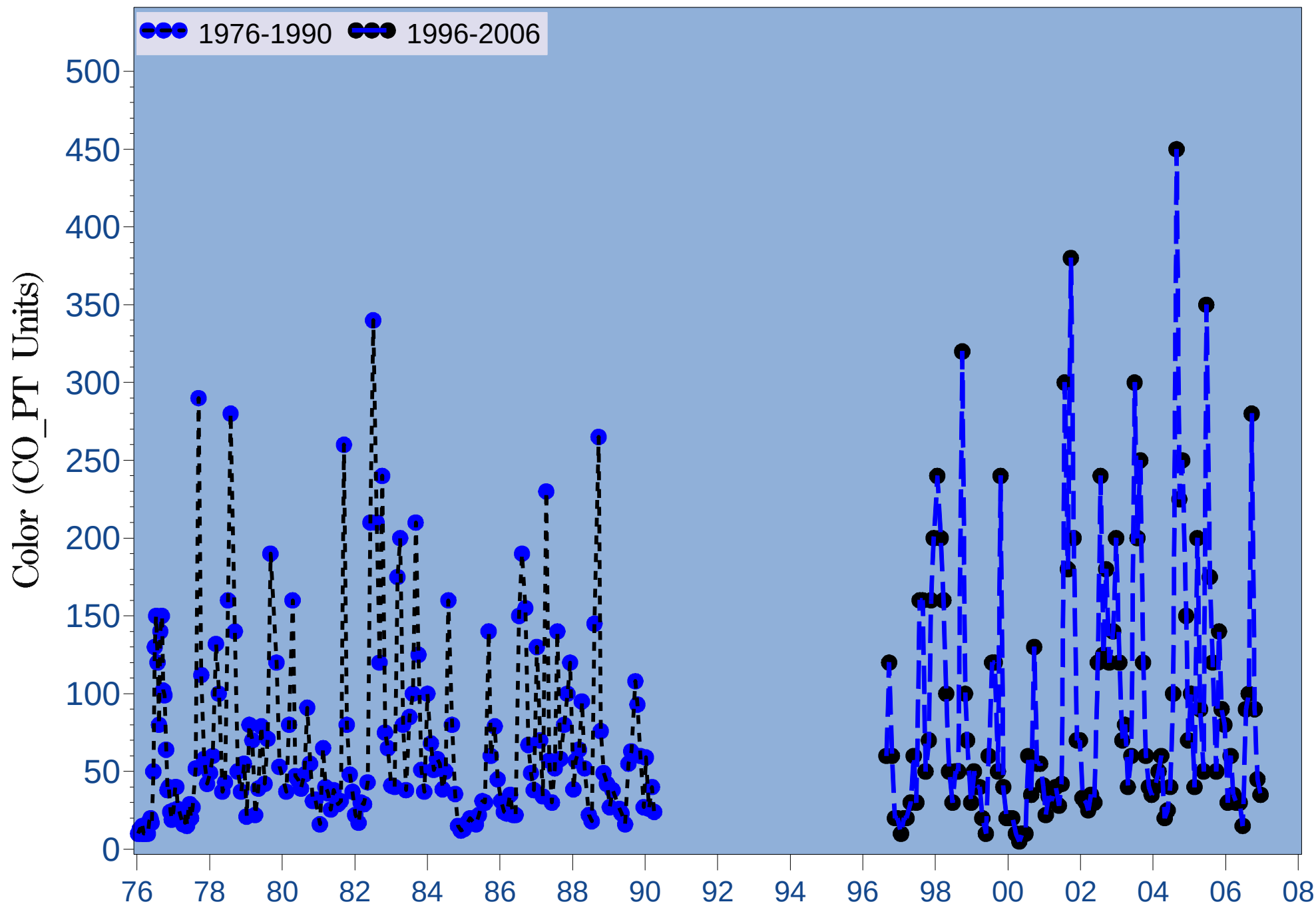


Figure 4.18b Monthly long-term surface color at river kilometer 6.6

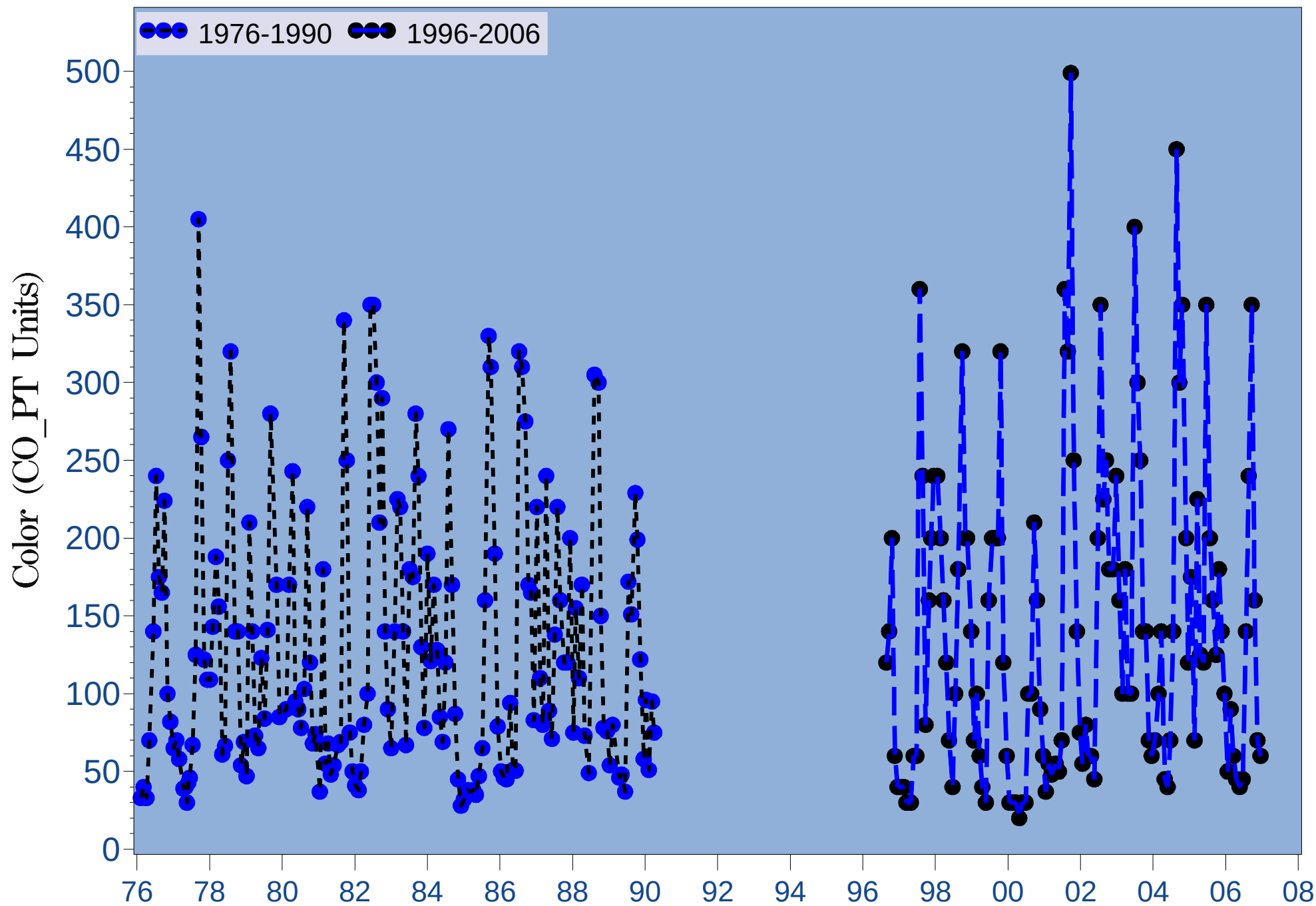


Figure 4.18c Monthly long-term surface color at river kilometer 15.5

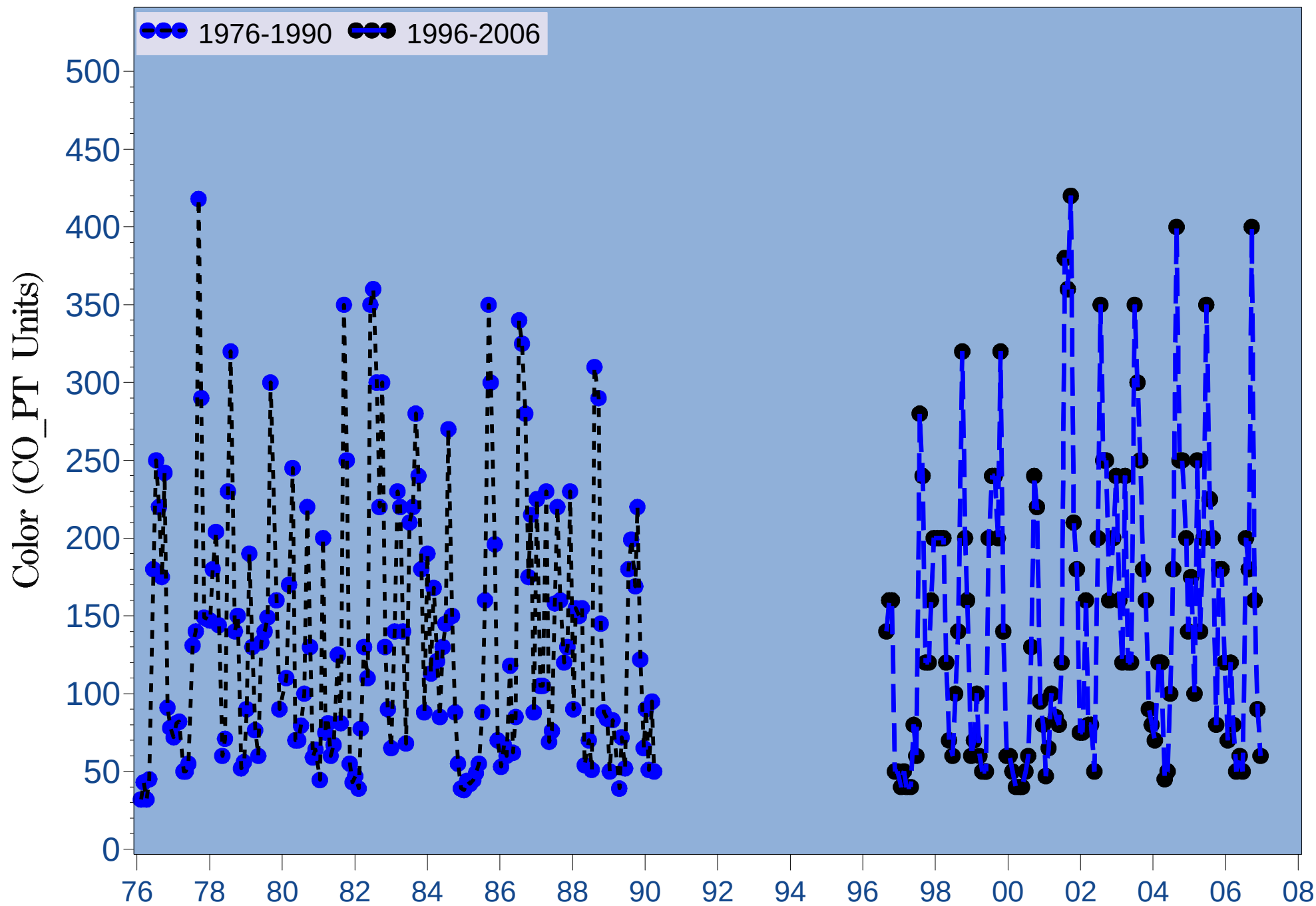


Figure 4.18d Monthly long-term surface color at river kilometer 23.6

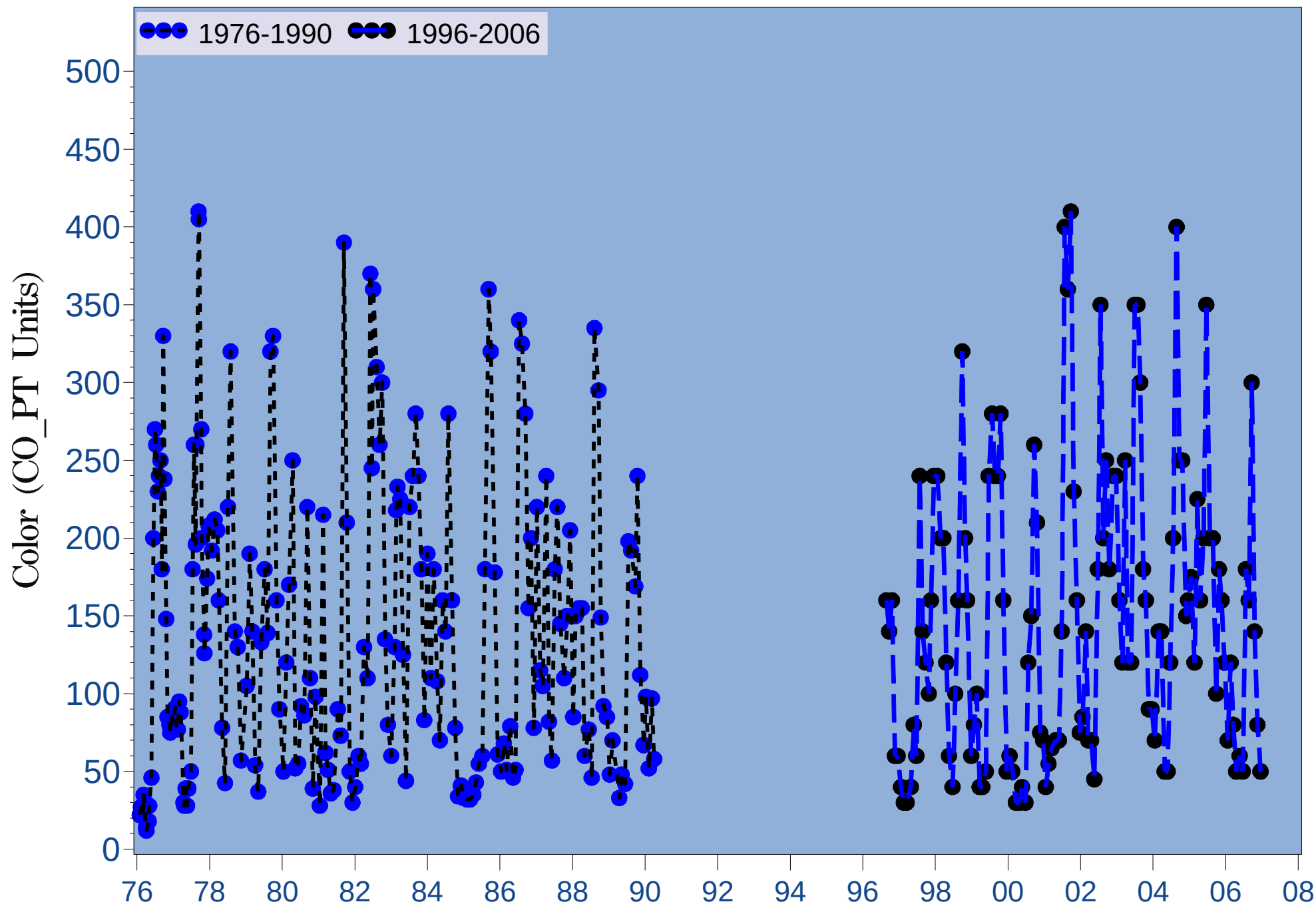


Figure 4.18e Monthly long-term surface color at river kilometer 30.4

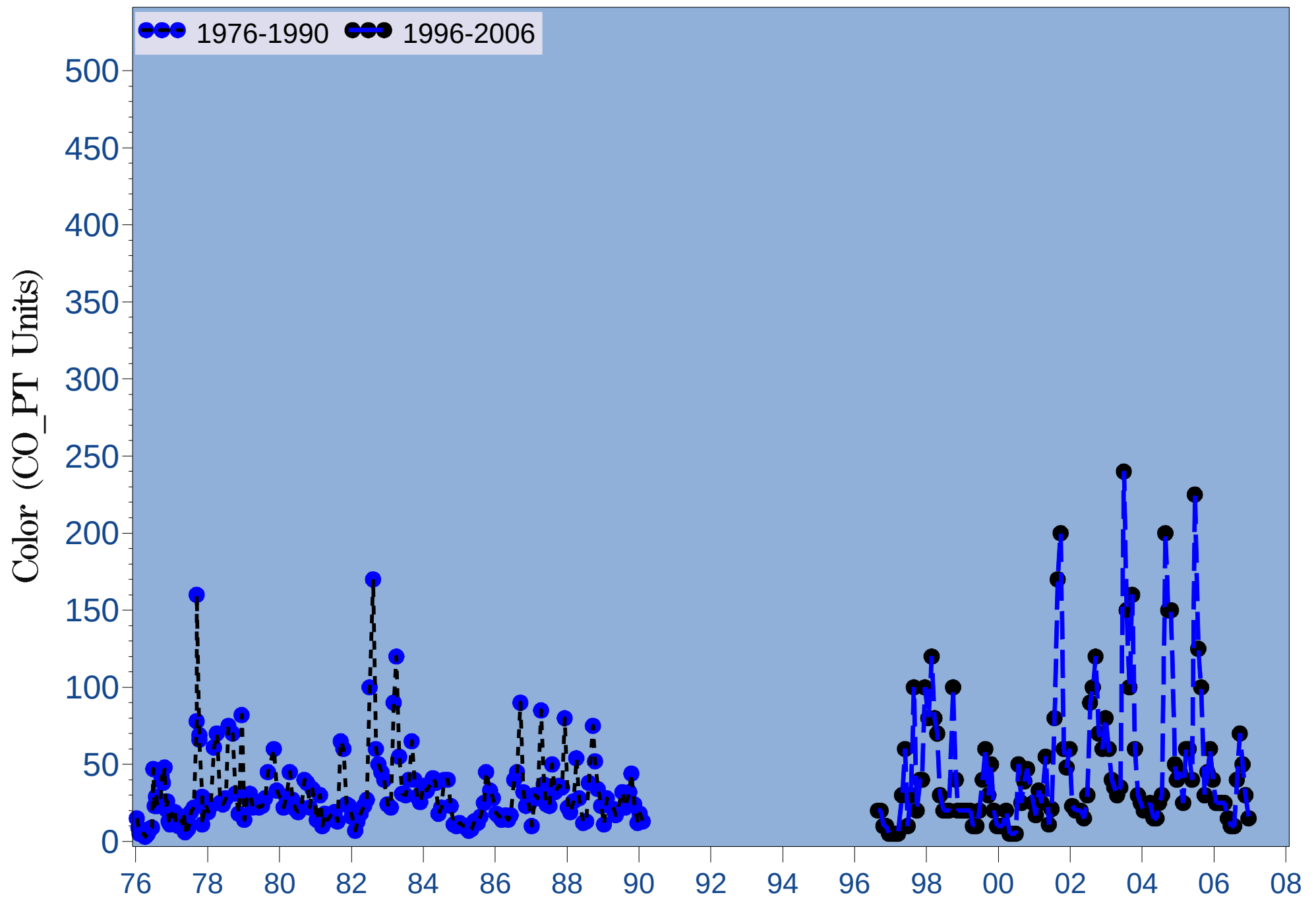


Figure 4.19a Monthly long-term bottom color at river kilometer -2.4

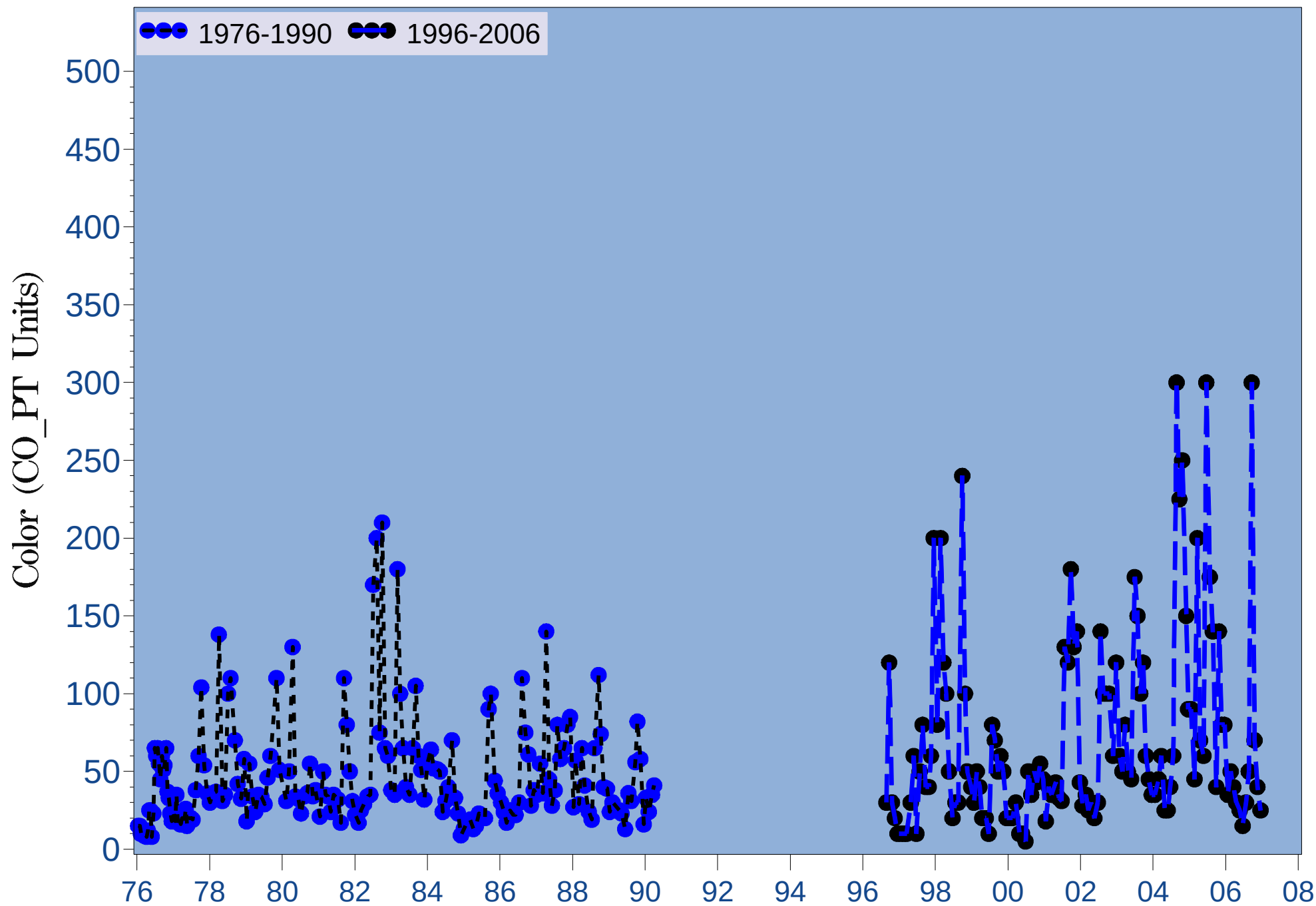


Figure 4.19b Monthly long-term bottom color at river kilometer 6.6

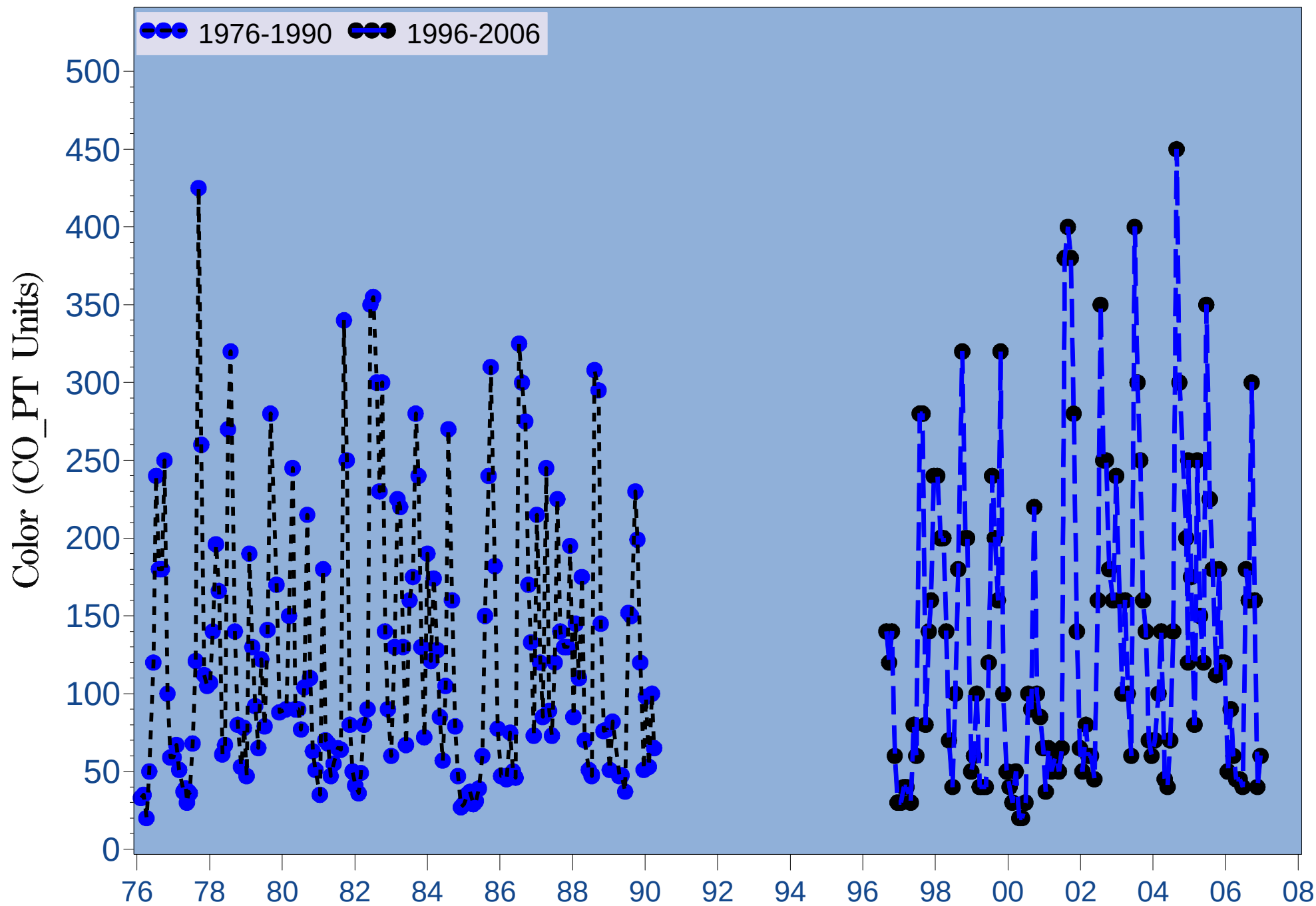


Figure 4.19c Monthly long-term bottom color at river kilometer 15.5

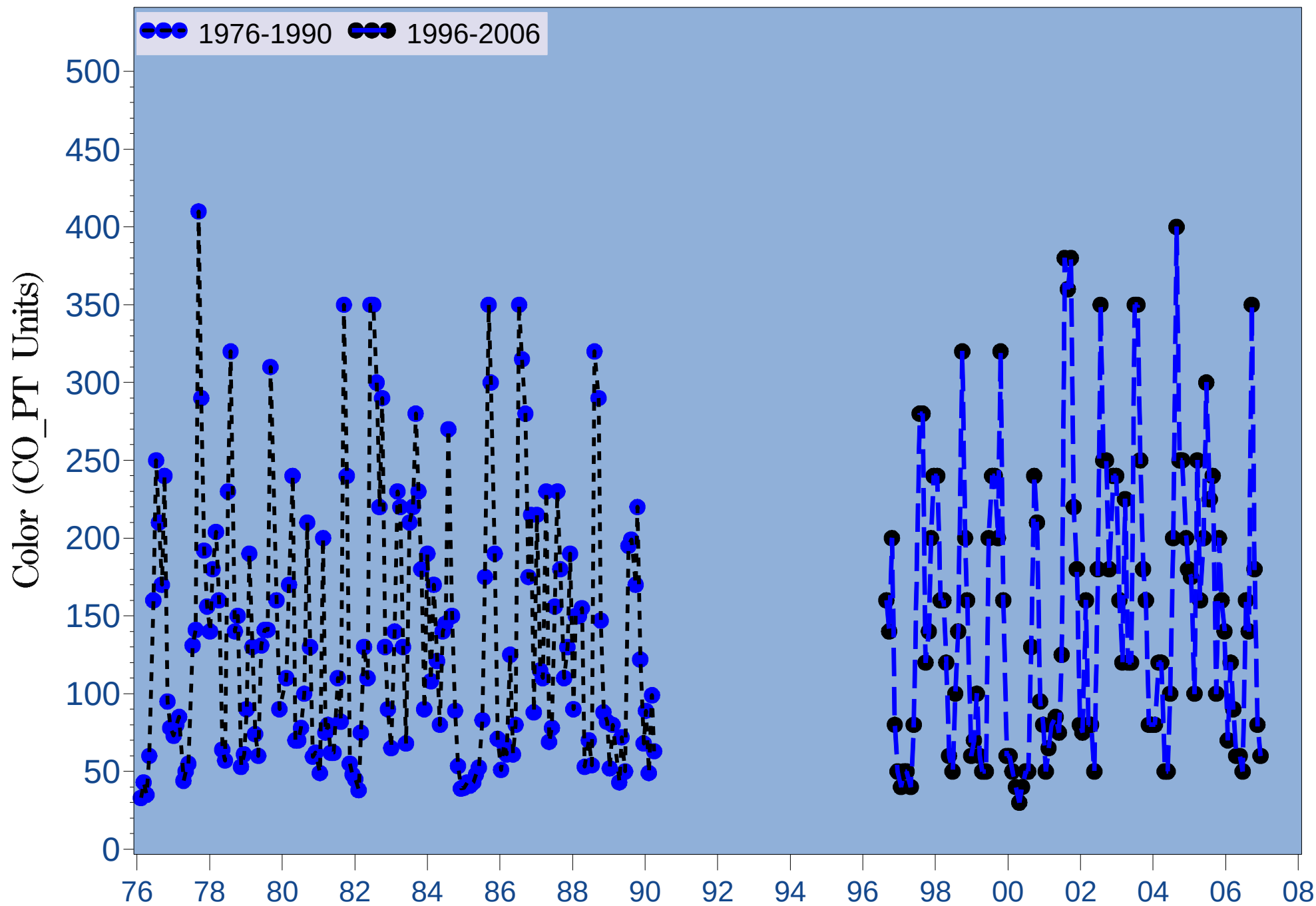


Figure 4.19d Monthly long-term bottom color at river kilometer 23.6

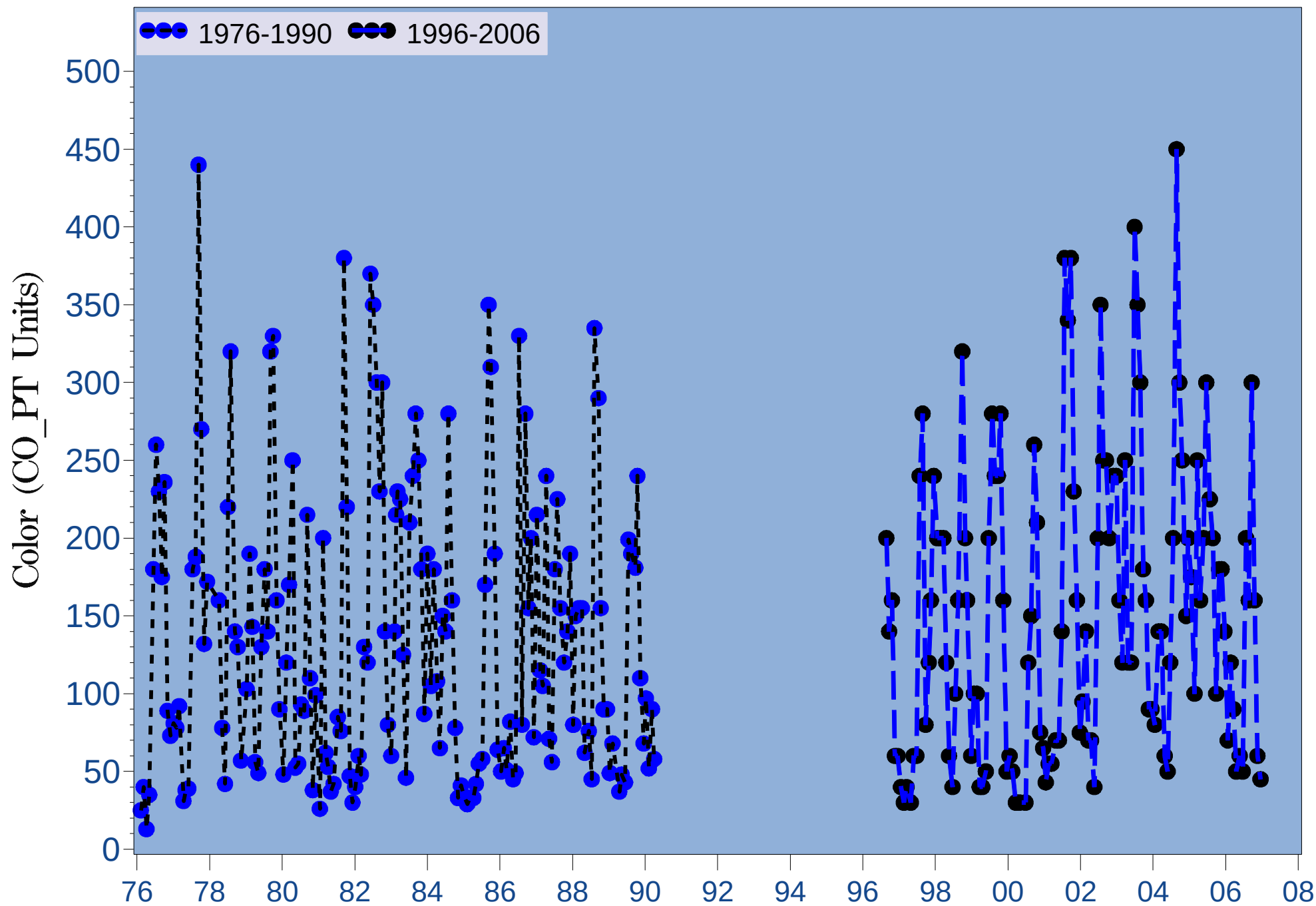


Figure 4.19e Monthly long-term bottom color at river kilometer 30.4

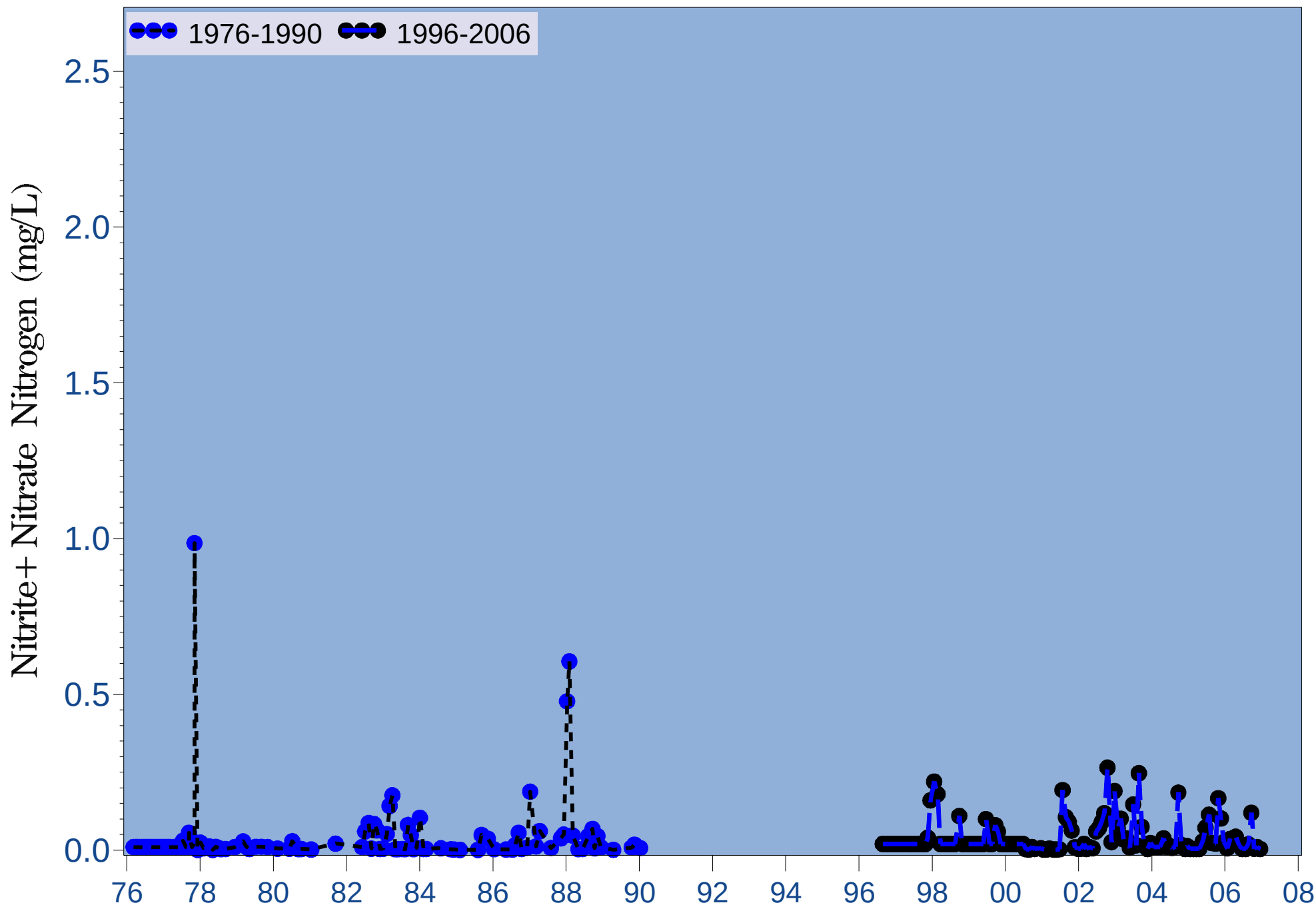


Figure 4.20a Monthly long-term surface nitrite/nitrate nitrogen at river kilometer -2.4

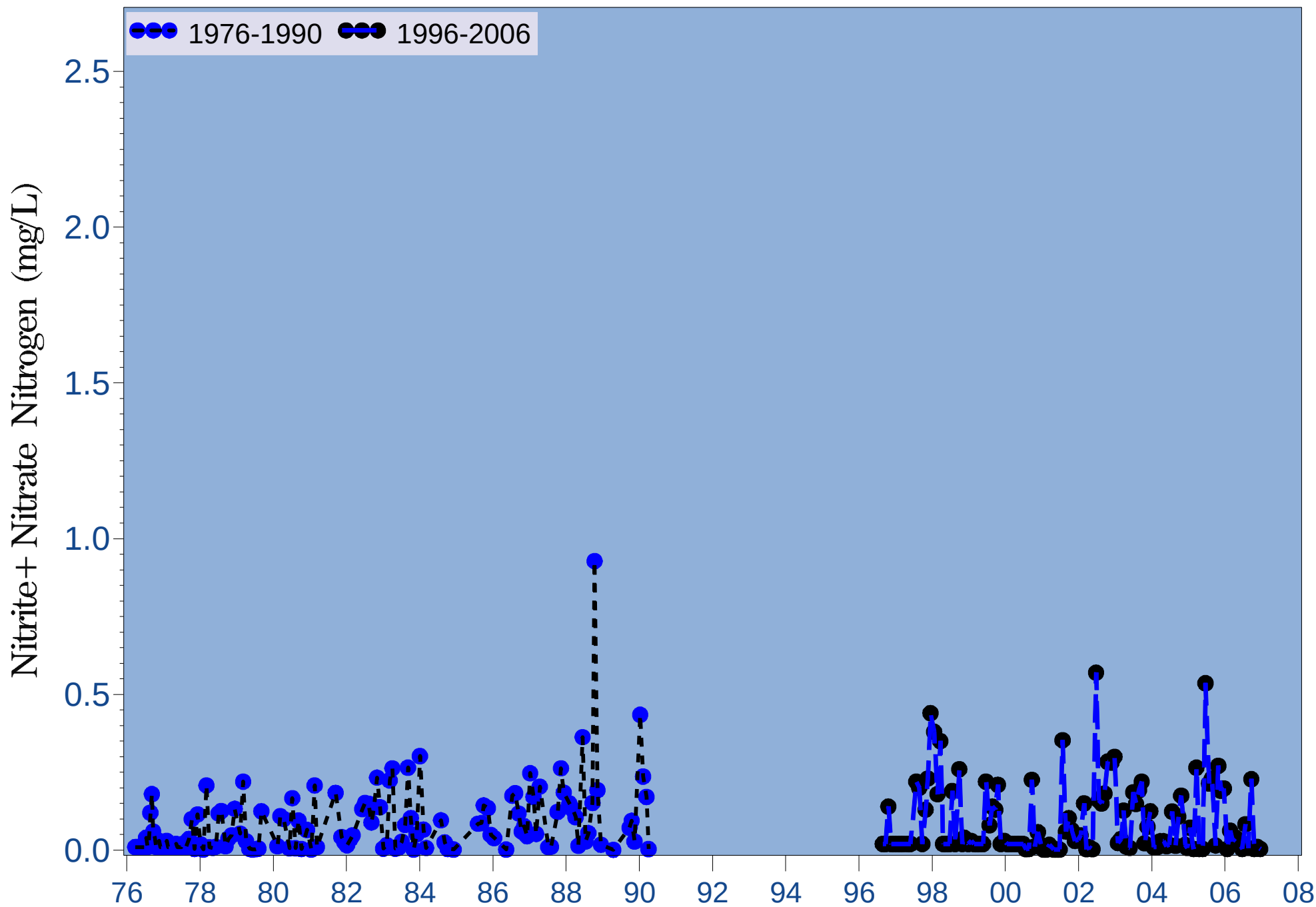


Figure 4.20b Monthly long-term surface nitrite/nitrate nitrogen at river kilometer 6.6

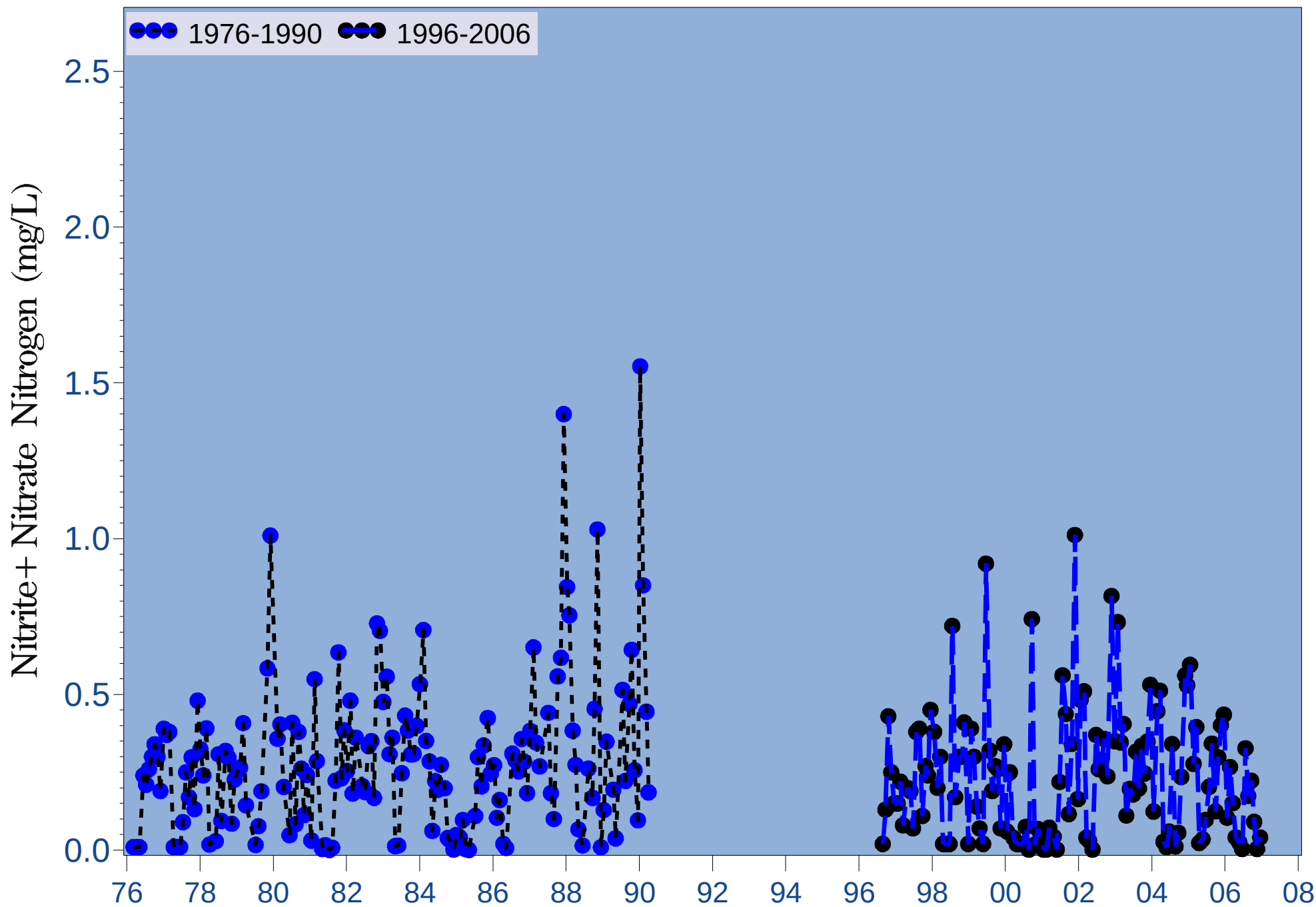


Figure 4.20c Monthly long-term surface nitrite/nitrate nitrogen at river kilometer 15.5

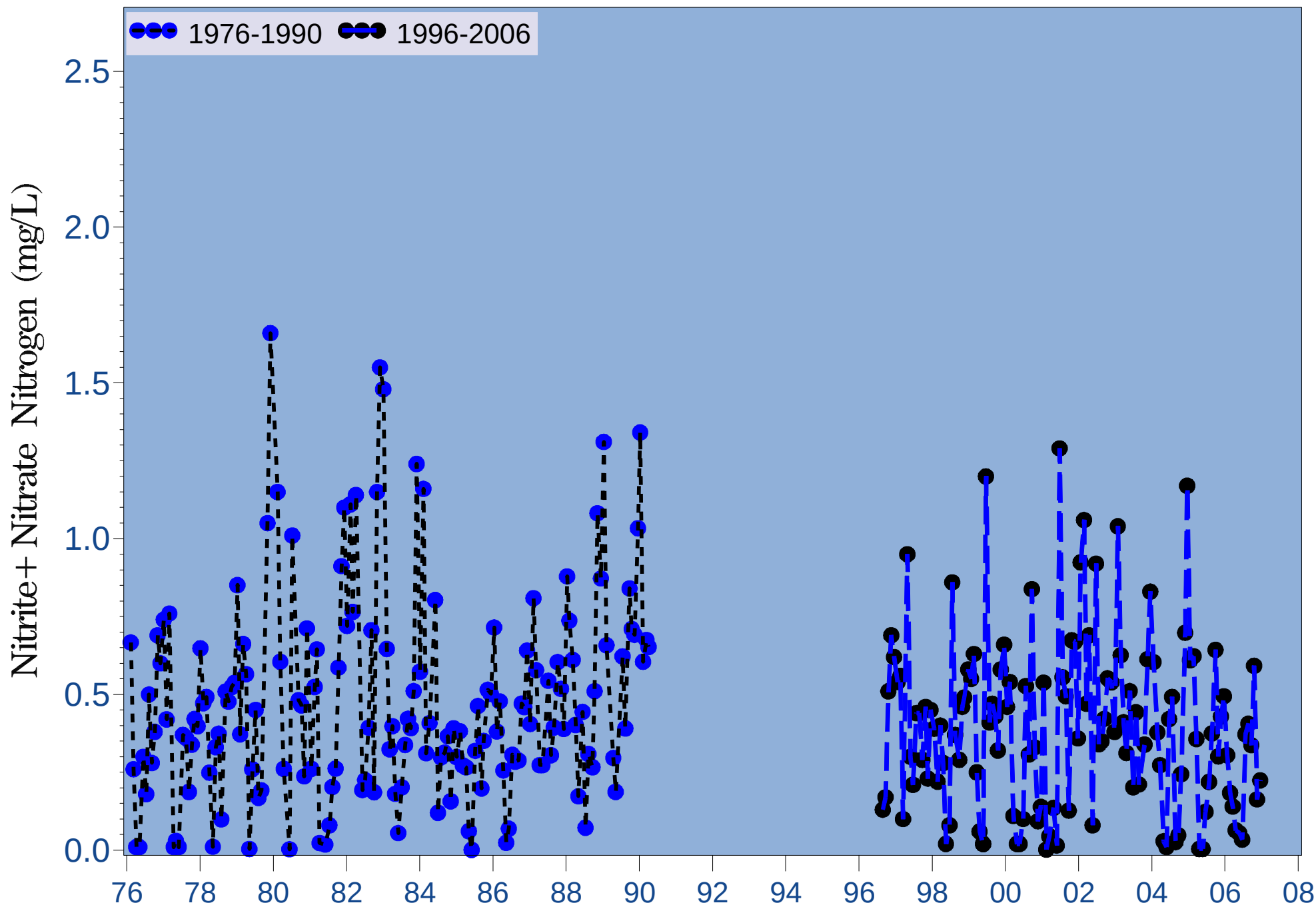


Figure 4.20d Monthly long-term surface nitrite/nitrate nitrogen at river kilometer 23.6

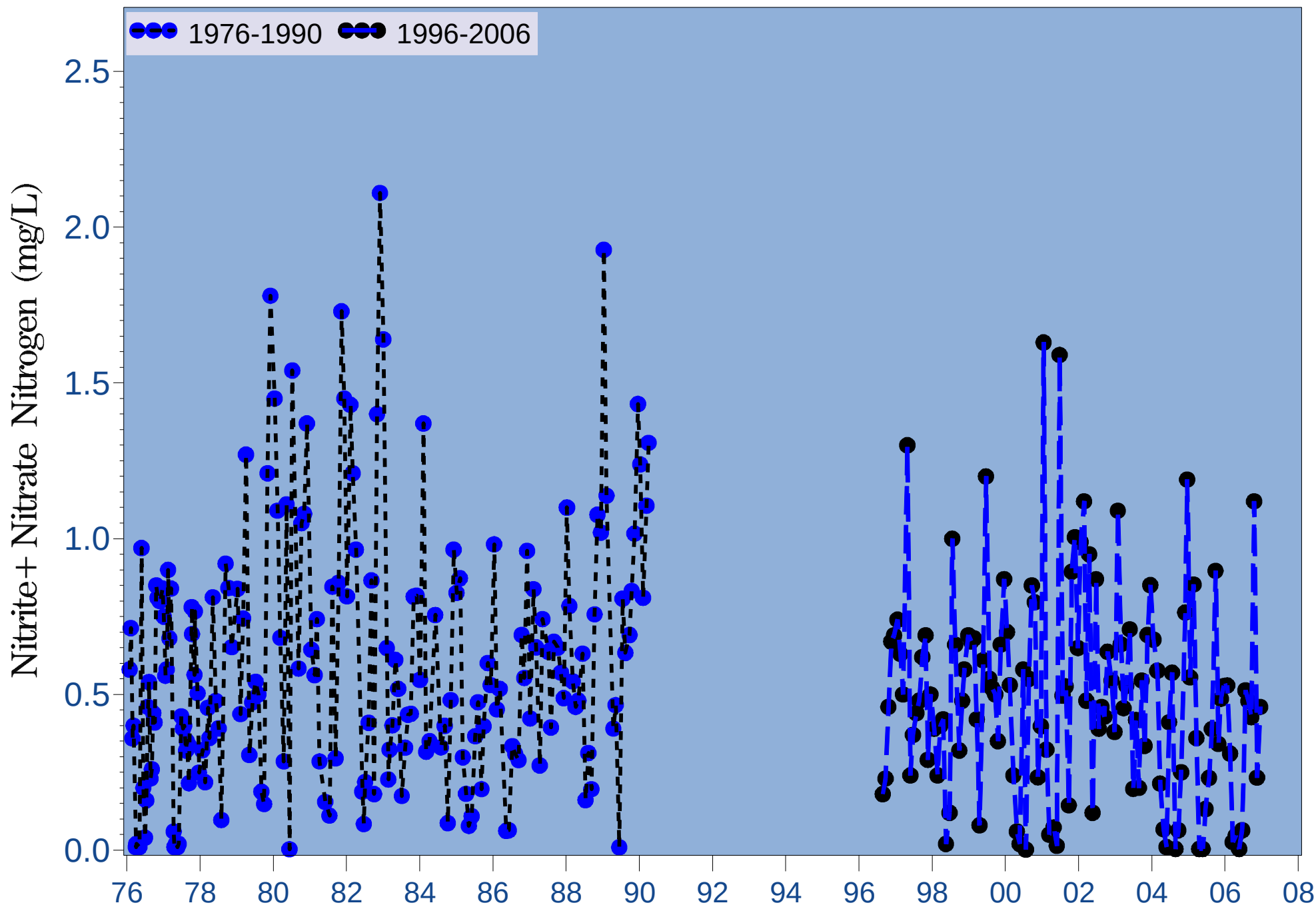


Figure 4.20e Monthly long-term surface nitrite/nitrate nitrogen at river kilometer 30.4

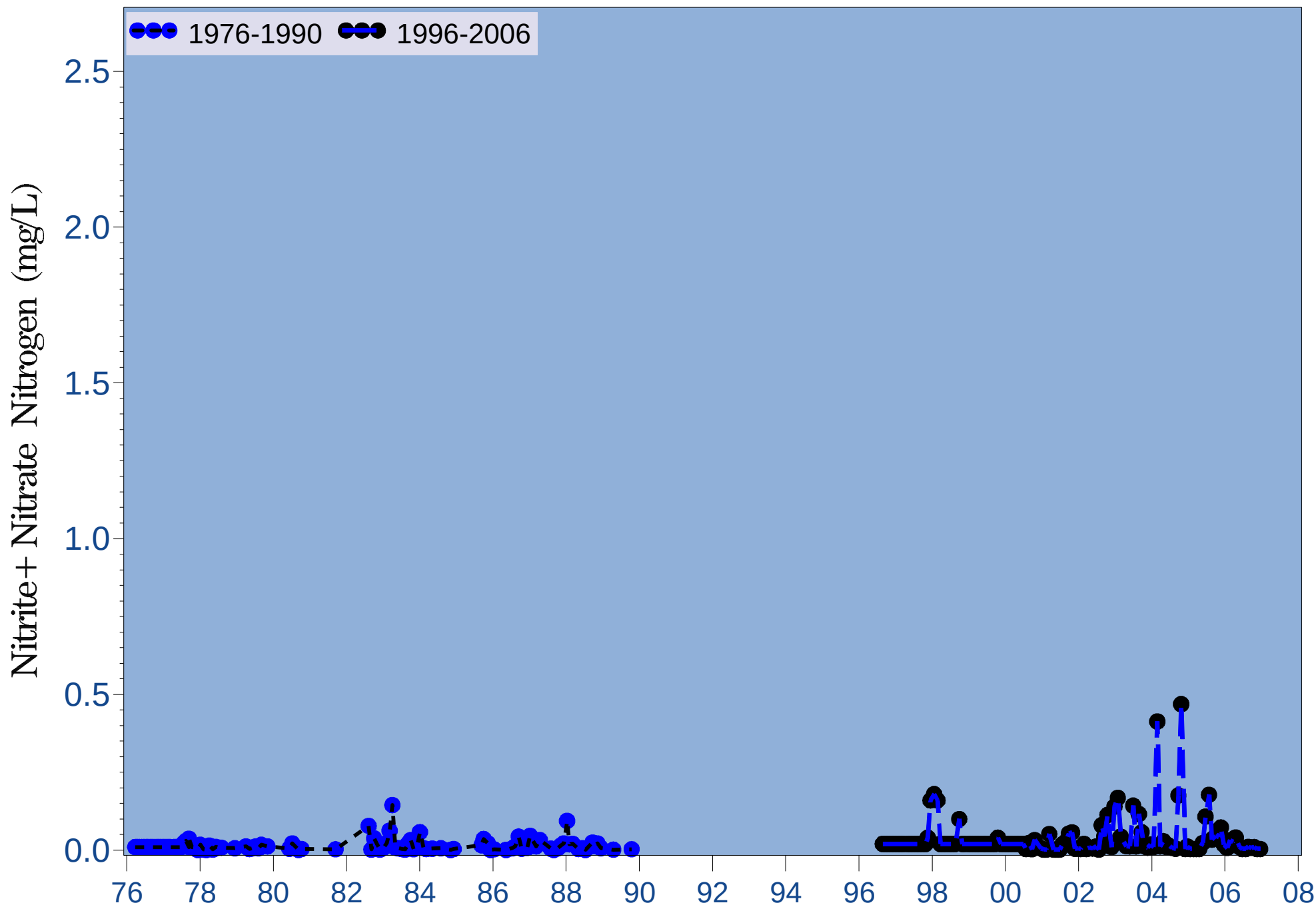


Figure 4.21a Monthly long-term bottom nitrate/nitrite nitrogen at river kilometer -2.4

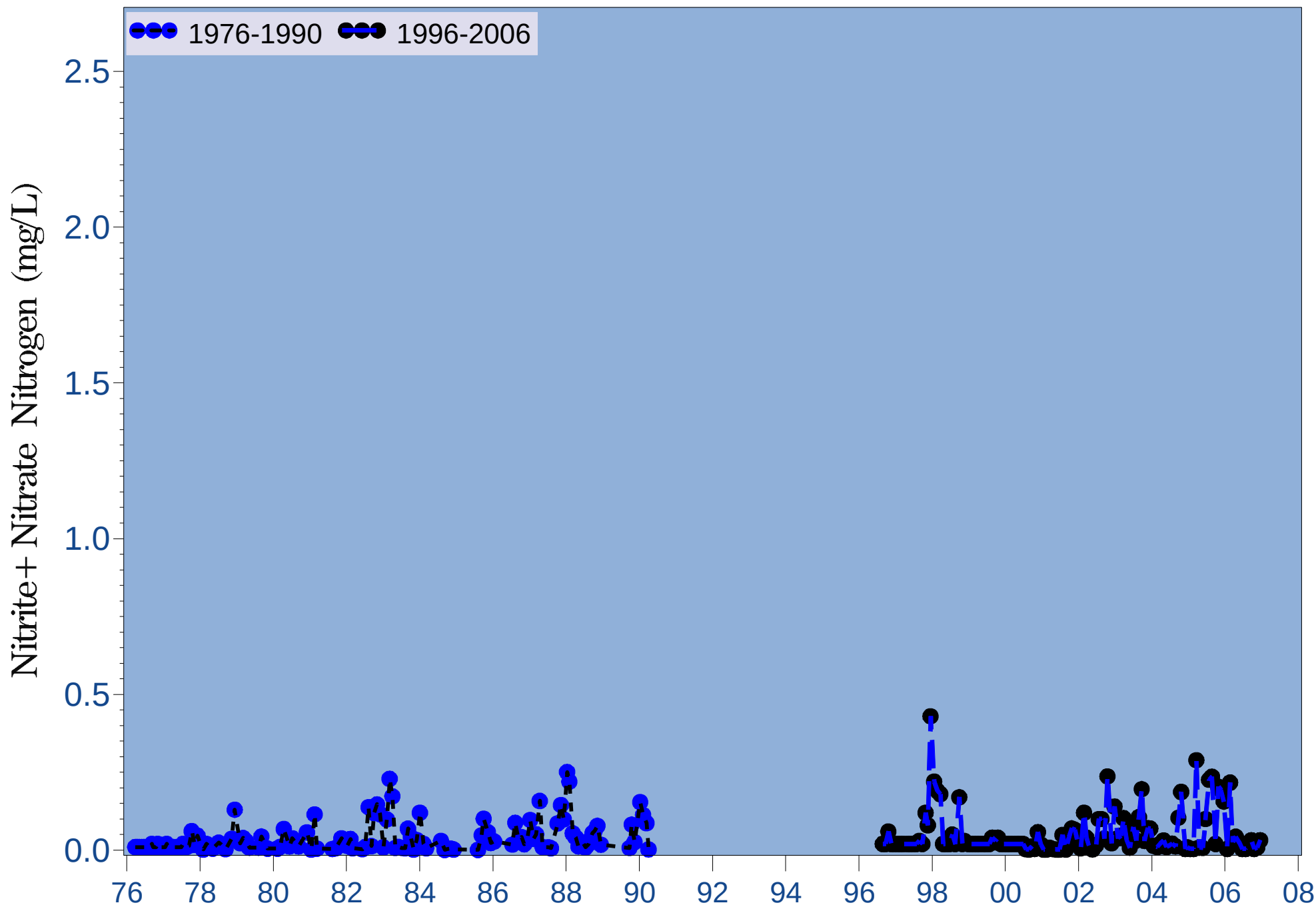


Figure 4.21b Monthly long-term bottom nitrate/nitrite nitrogen at river kilometer 6.6

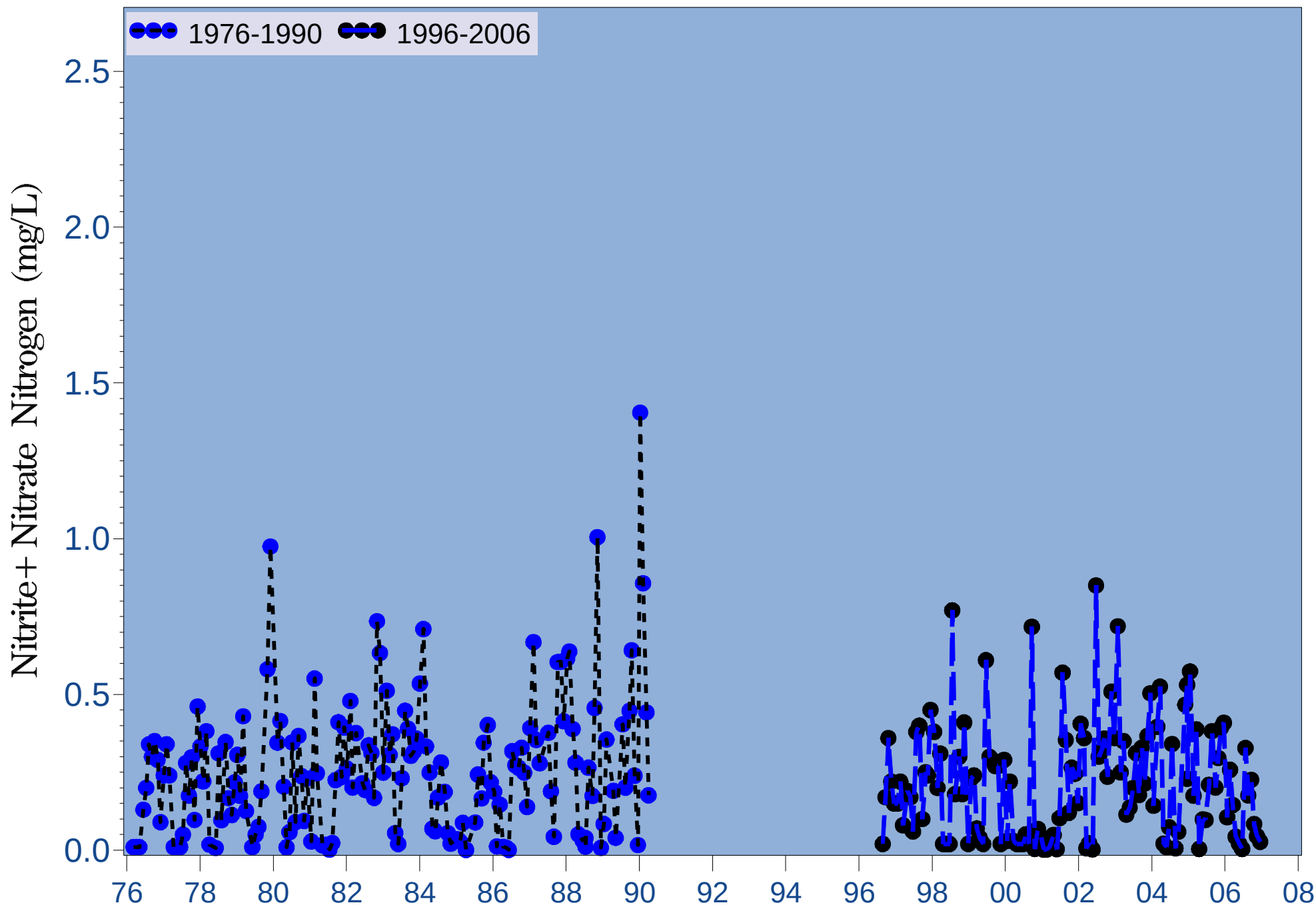


Figure 4.21c Monthly long-term bottom nitrate/nitrite nitrogen at river kilometer 15.5

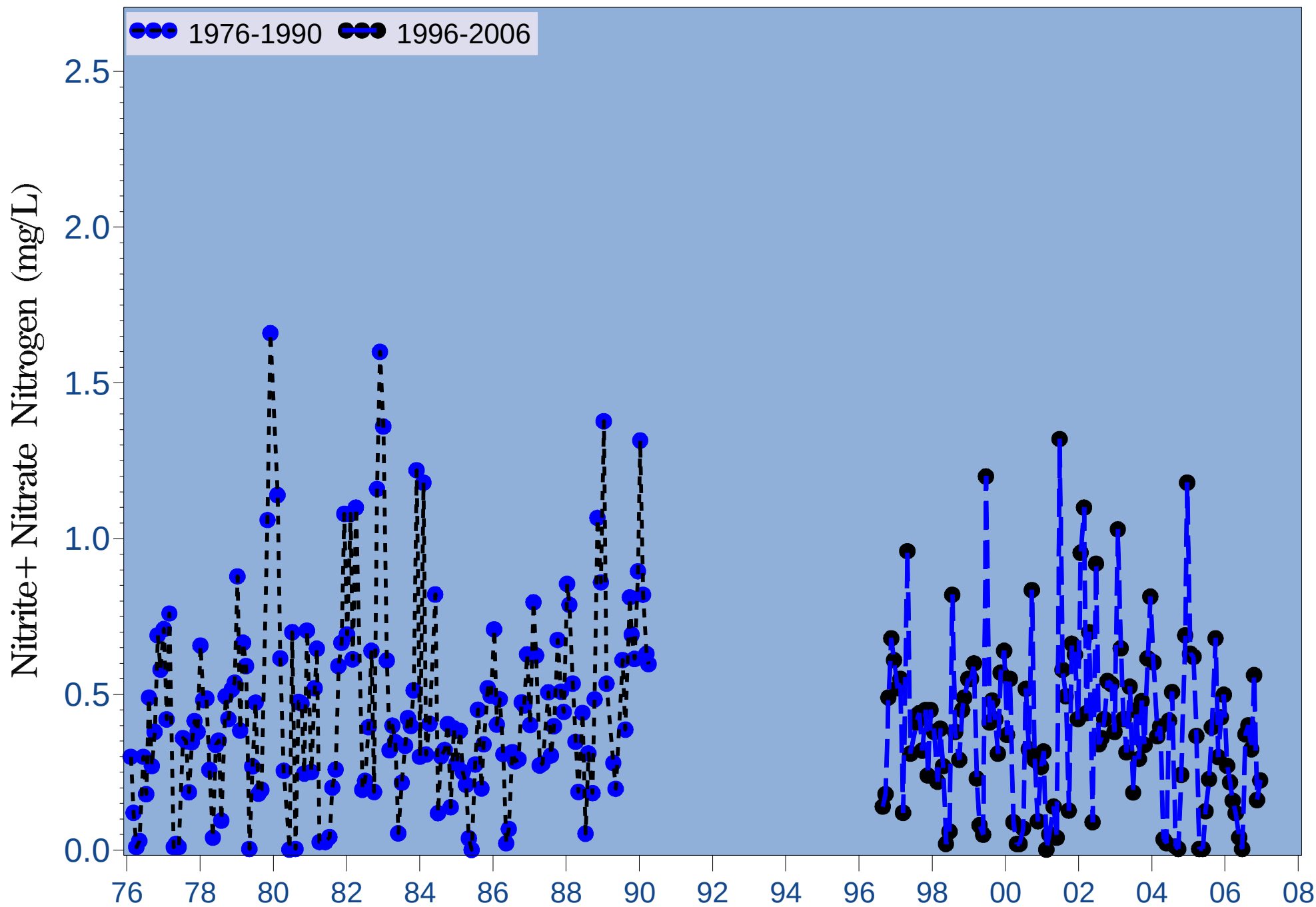


Figure 4.21d Monthly long-term bottom nitrate/nitrite nitrogen at river kilometer 23.6

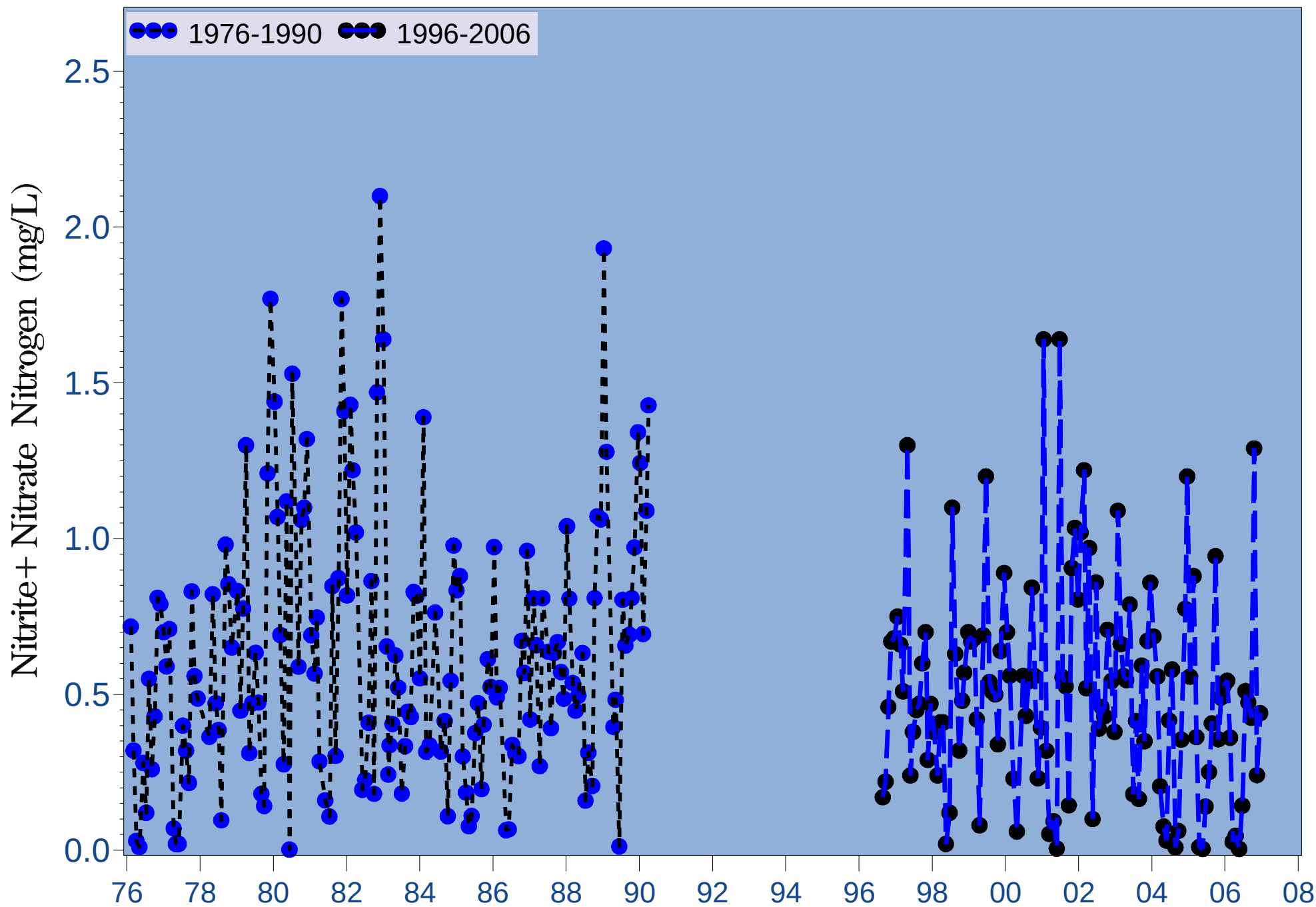


Figure 4.21e Monthly long-term bottom nitrate/nitrite nitrogen at river kilometer 30.4

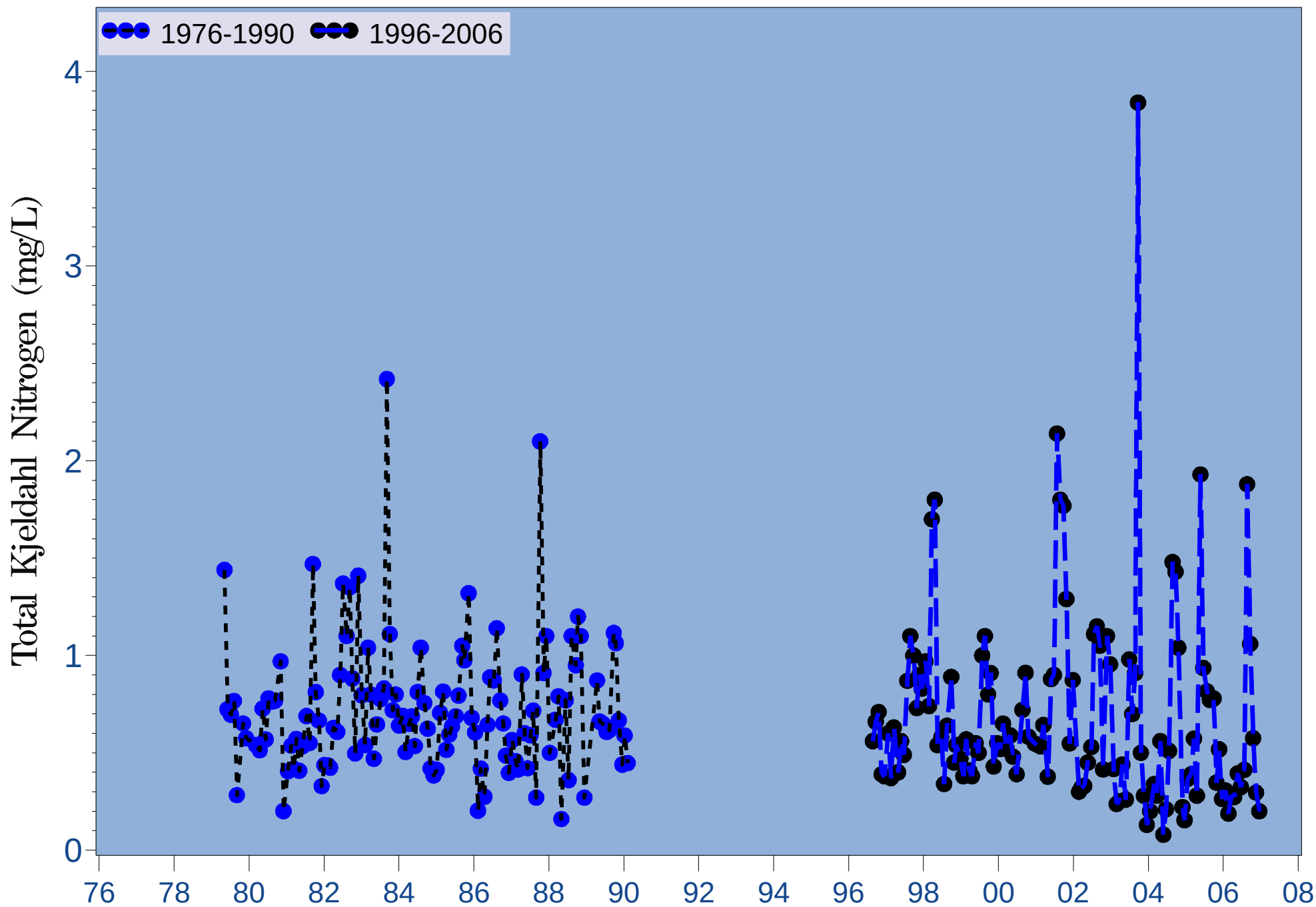


Figure 4.22a Monthly long-term surface total Kjeldahl nitrogen at river kilometer -2.4

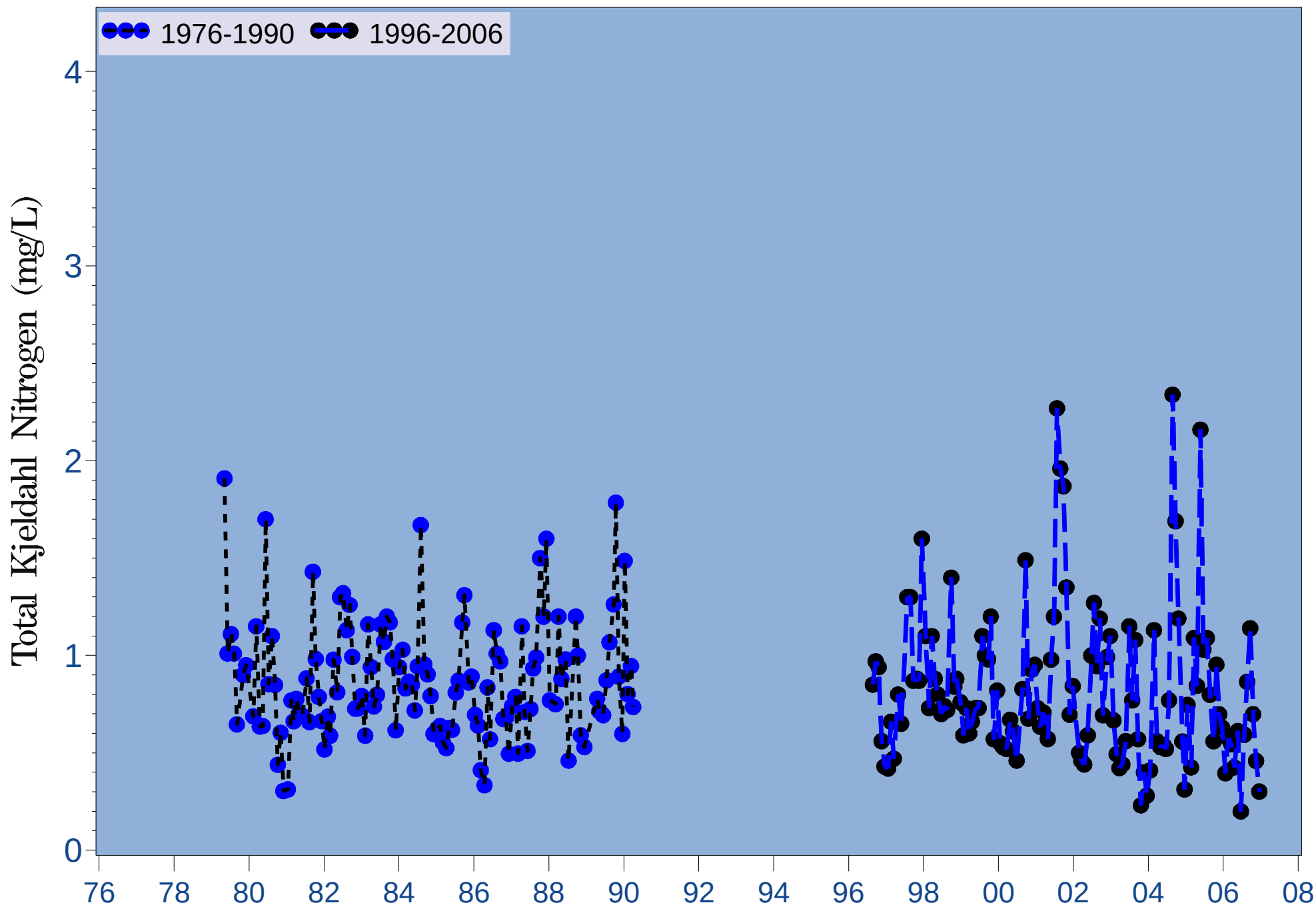


Figure 4.22b Monthly long-term surface total Kjeldahl nitrogen at river kilometer 6.6

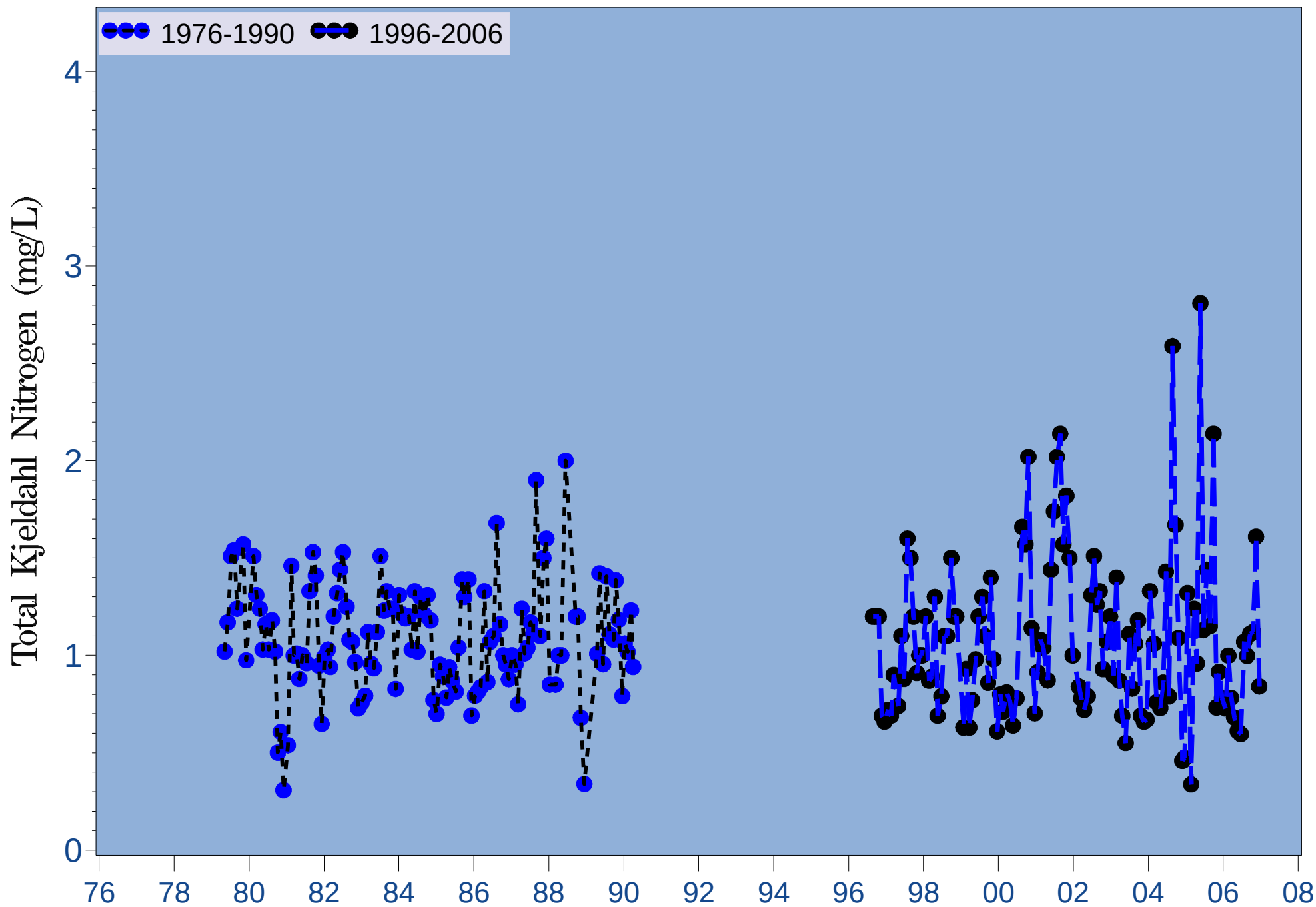


Figure 4.22c Monthly long-term surface total Kjeldahl nitrogen at river kilometer 15.5

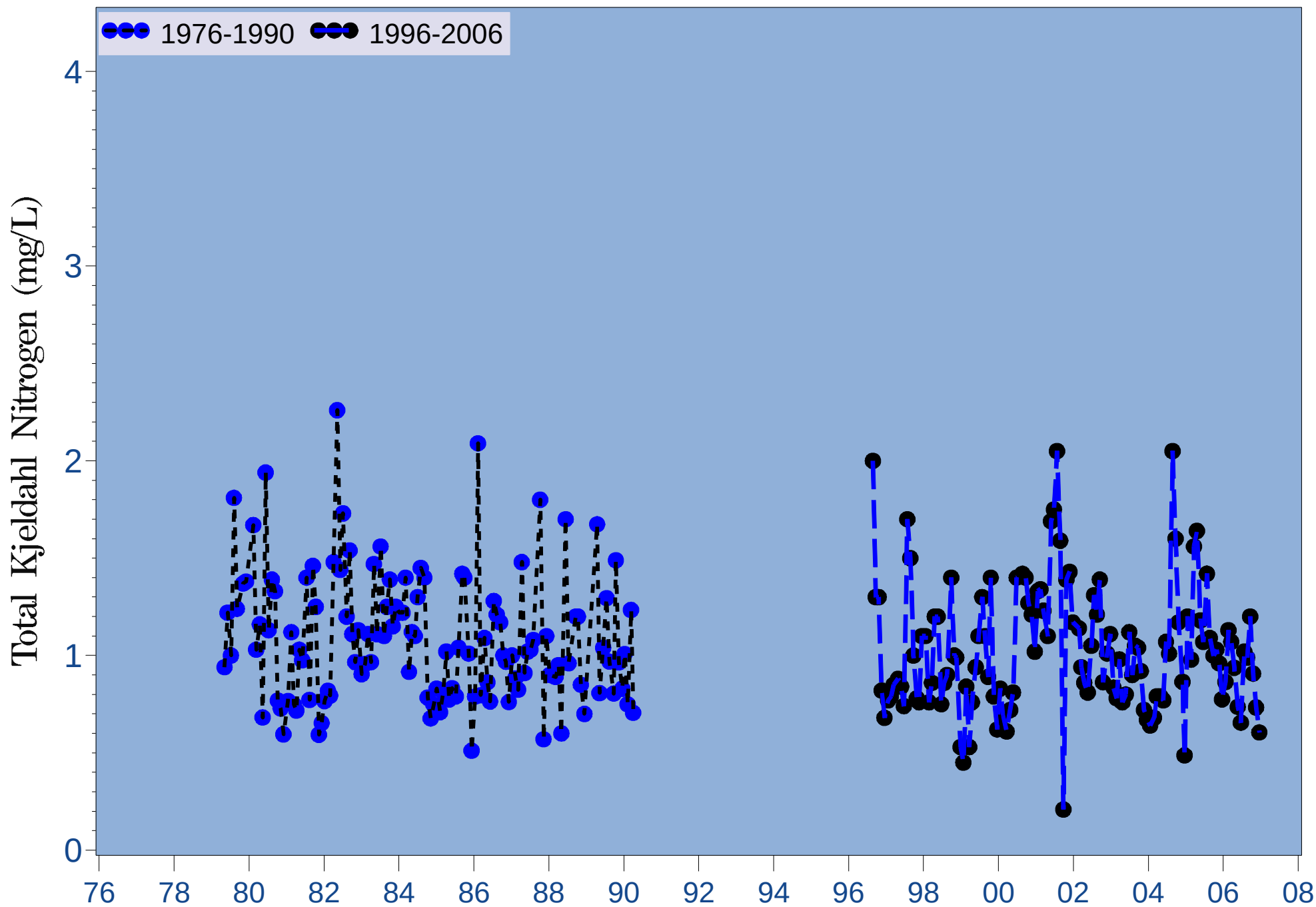


Figure 4.22d Monthly long-term surface total Kjeldahl nitrogen at river kilometer 23.6

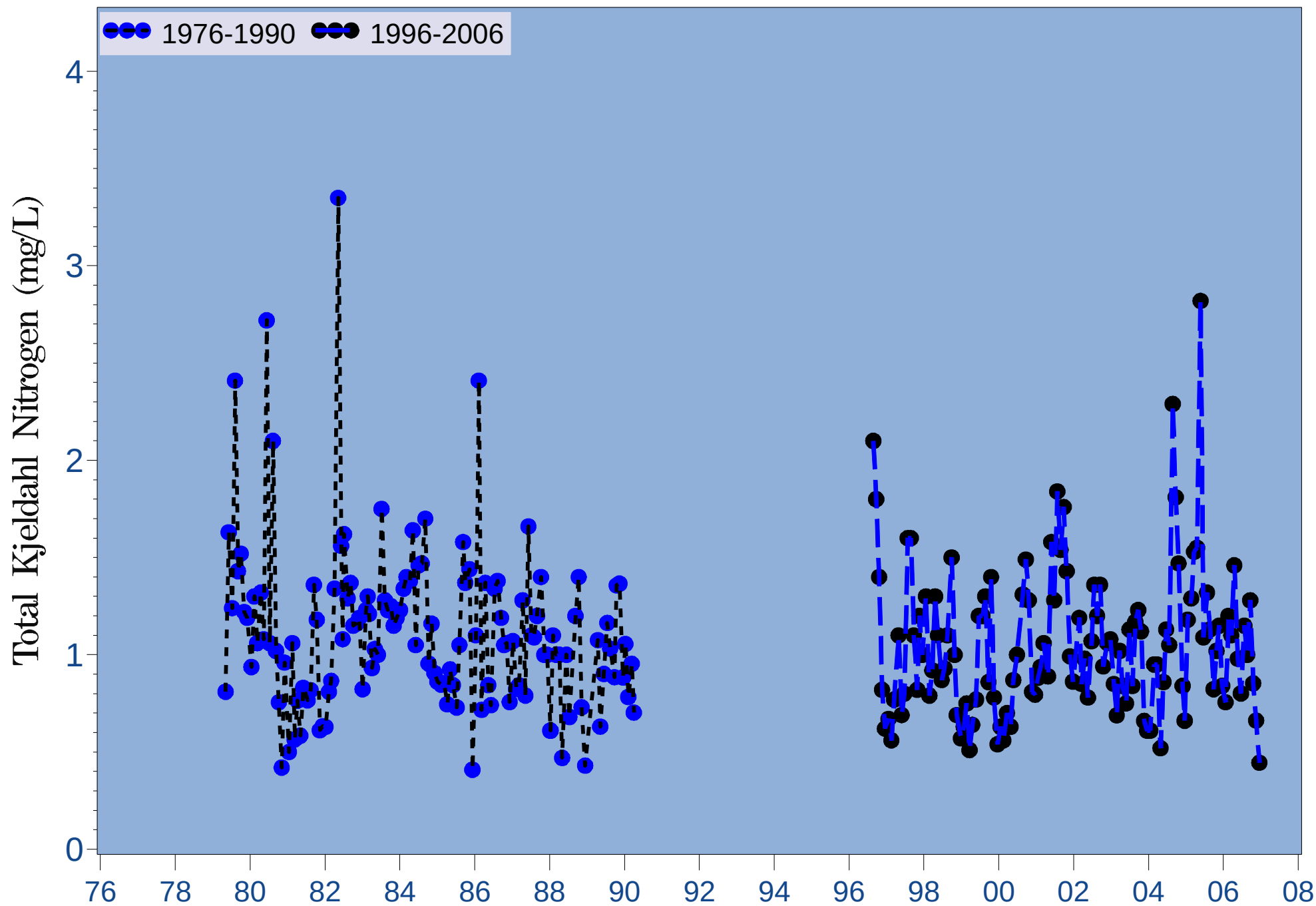


Figure 4.22e Monthly long-term surface total Kjeldahl nitrogen at river kilometer 30.4

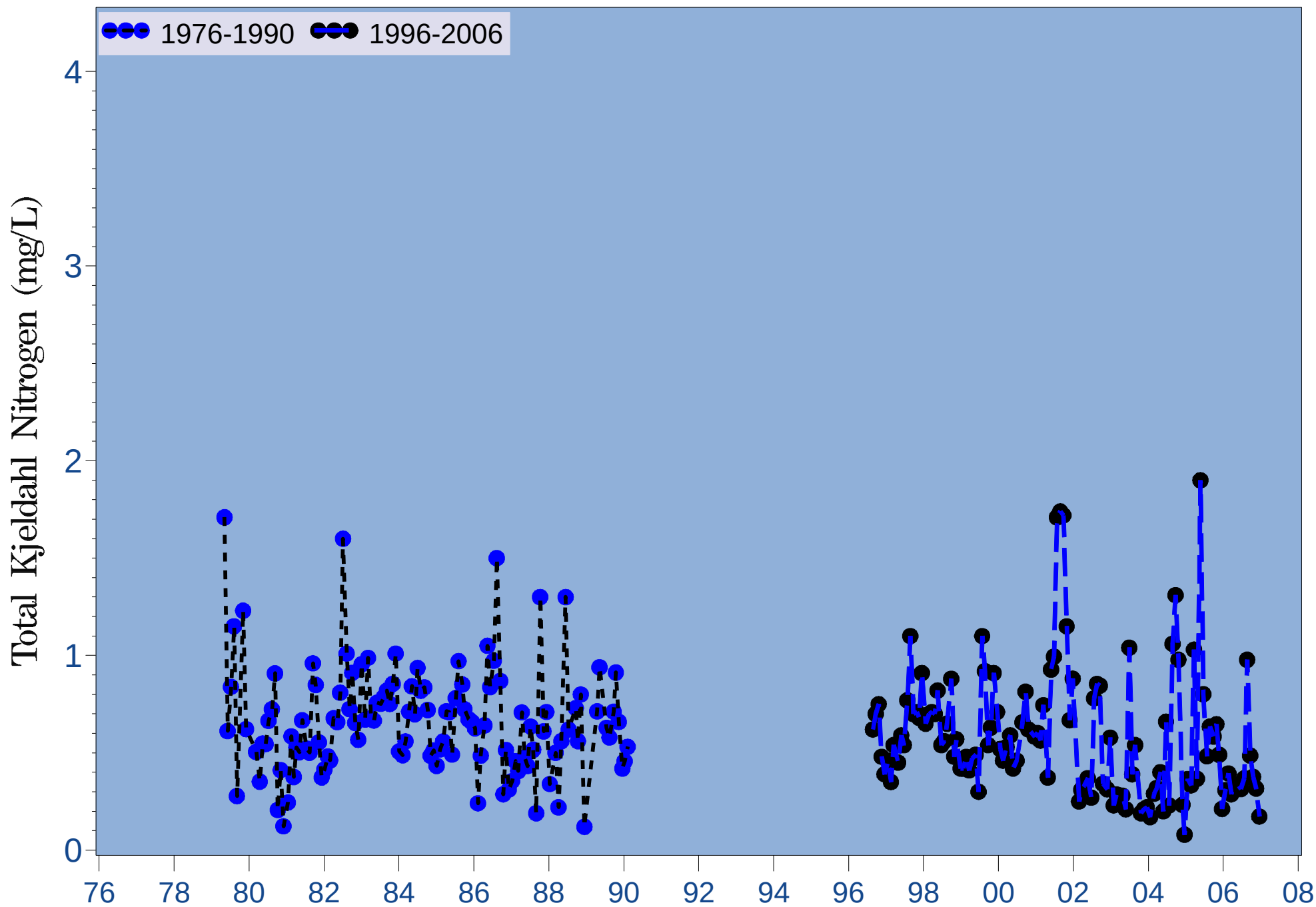


Figure 4.23a Monthly long-term bottom total Kjeldhal nitrogen at river kilometer -2.4

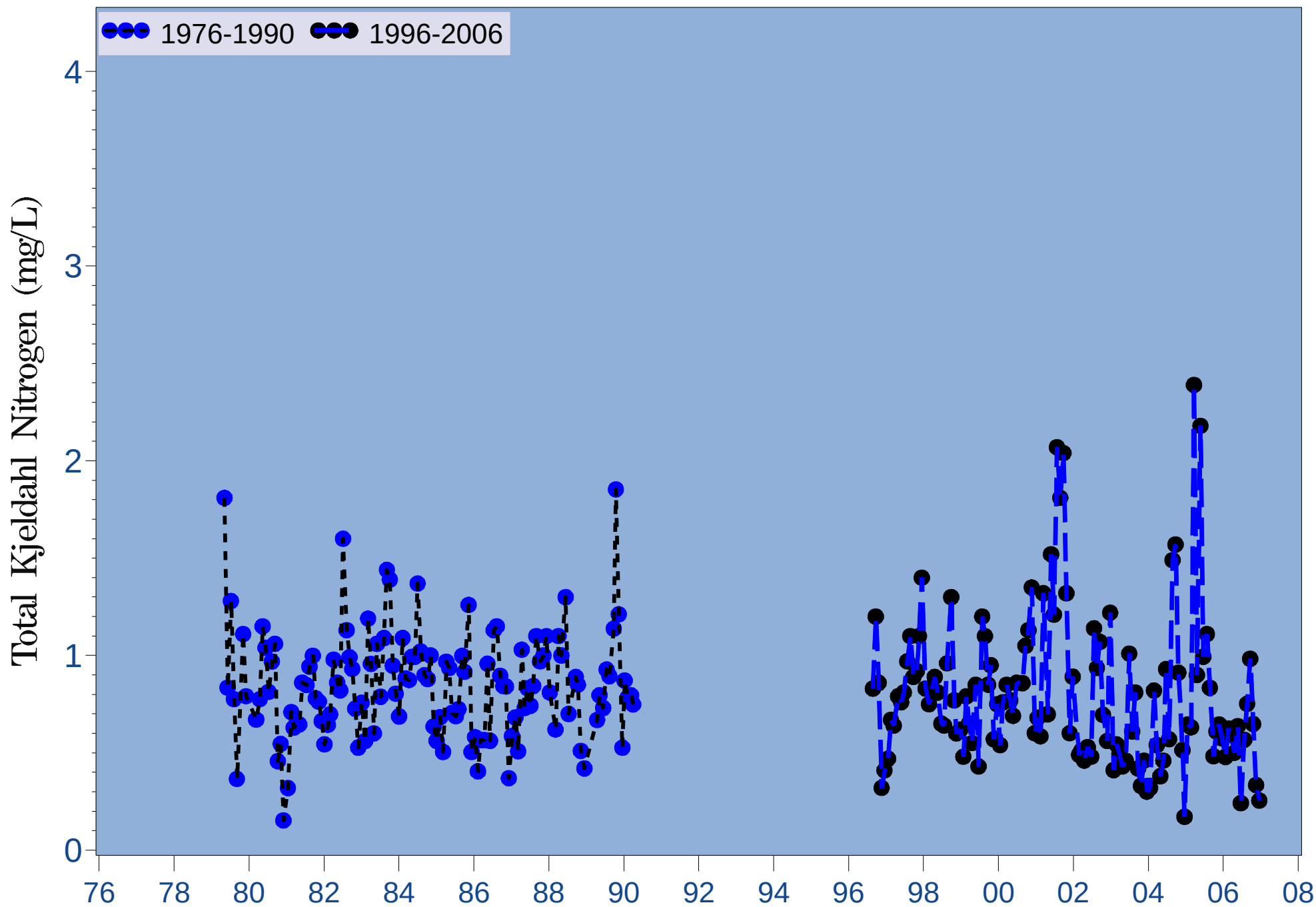


Figure 4.23b Monthly long-term bottom total Kjeldhal nitrogen at river kilometer 6.6

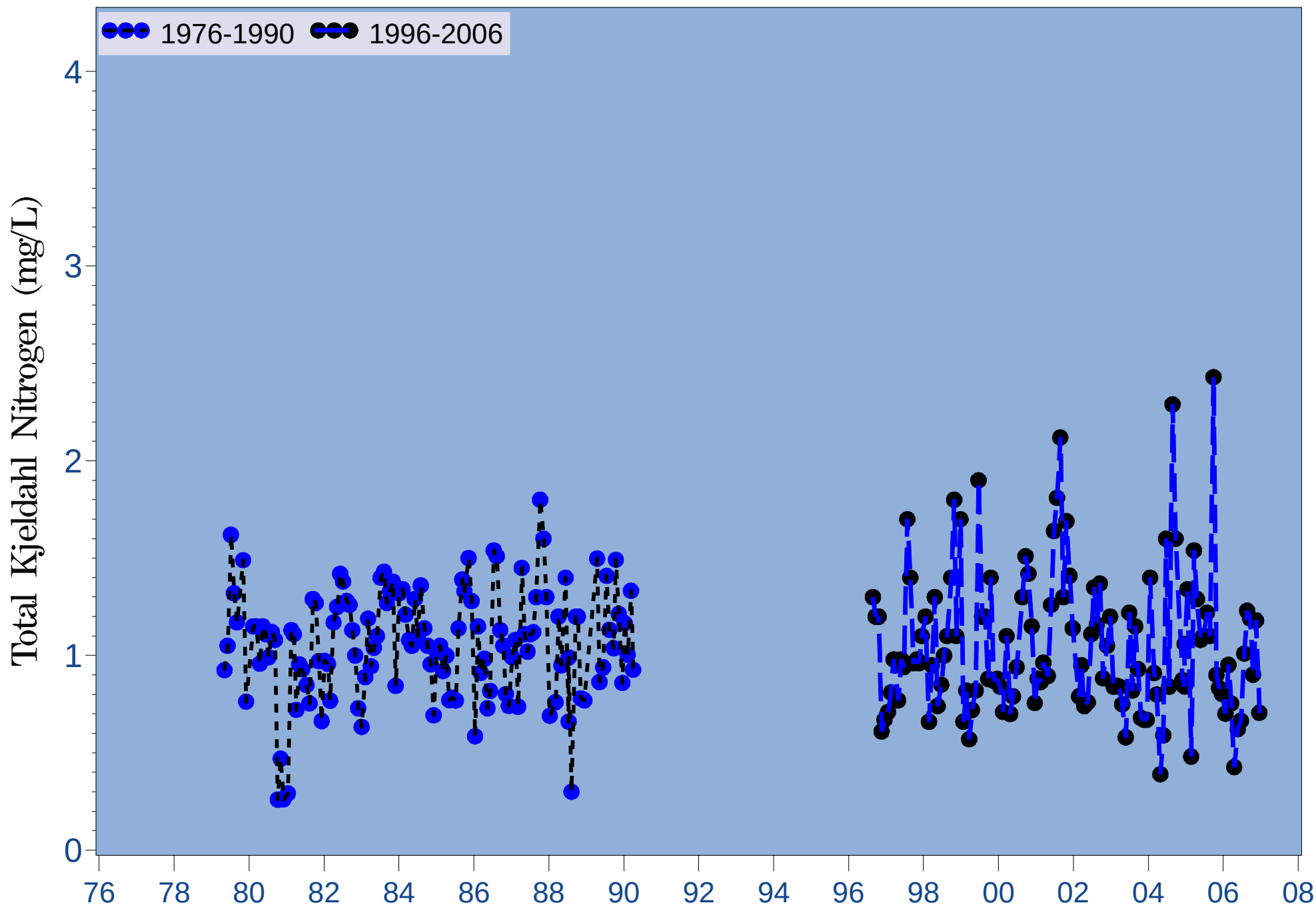


Figure 4.23c Monthly long-term bottom total Kjeldhal nitrogen at river kilometer 15.5

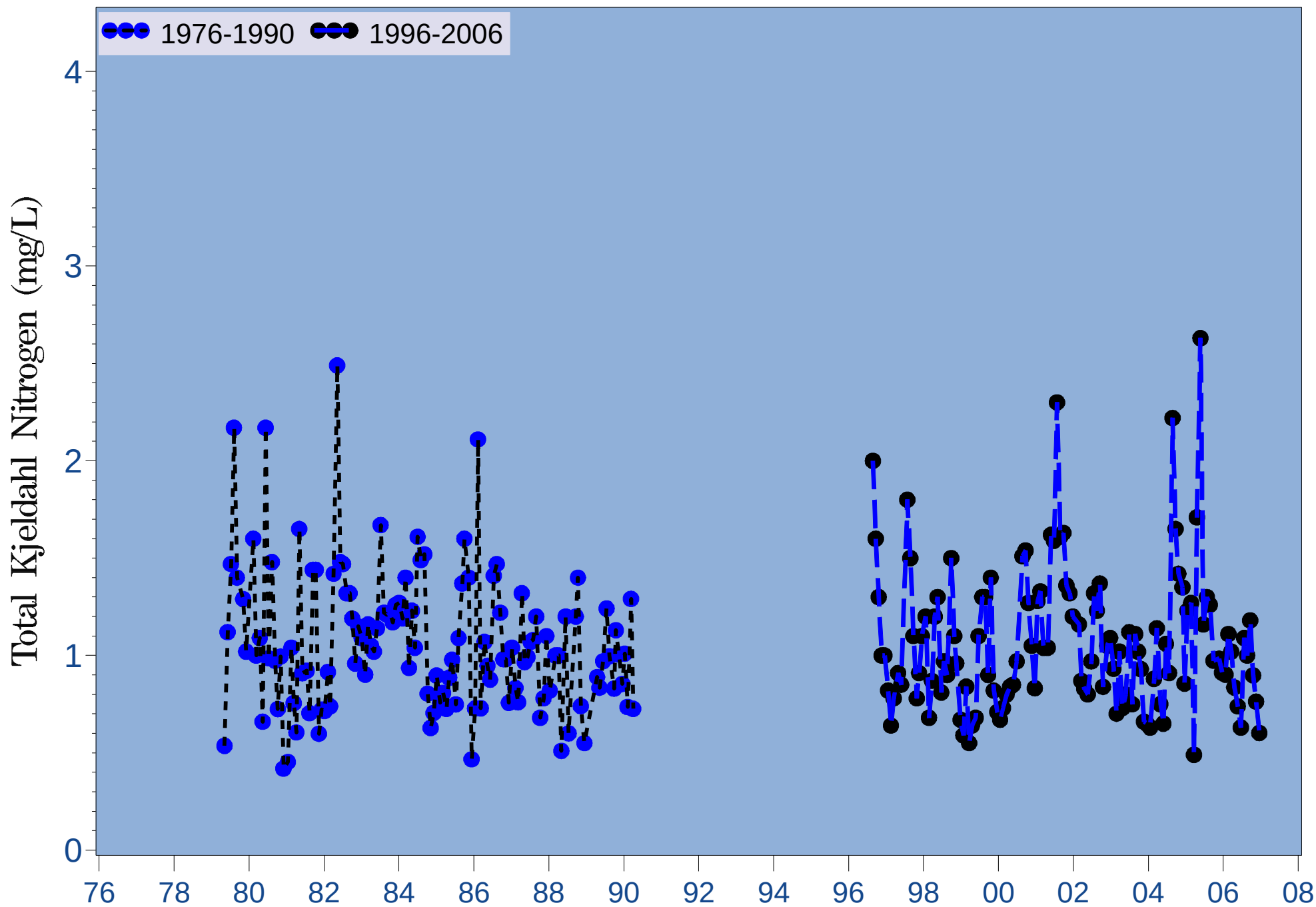


Figure 4.23d Monthly long-term bottom total Kjeldhal nitrogen at river kilometer 23.6

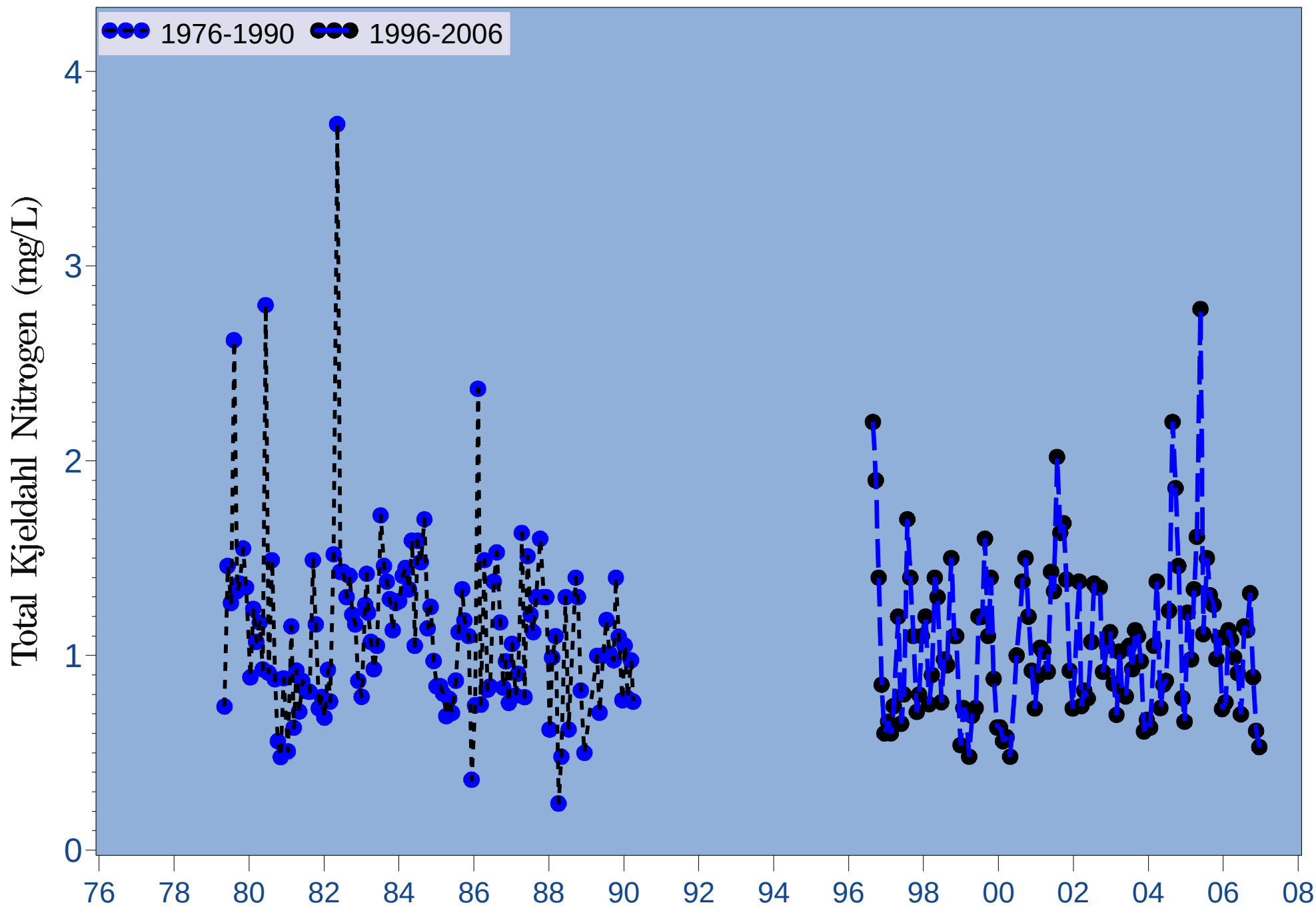


Figure 4.23e Monthly long-term bottom total Kjeldhal nitrogen at river kilometer 30.4

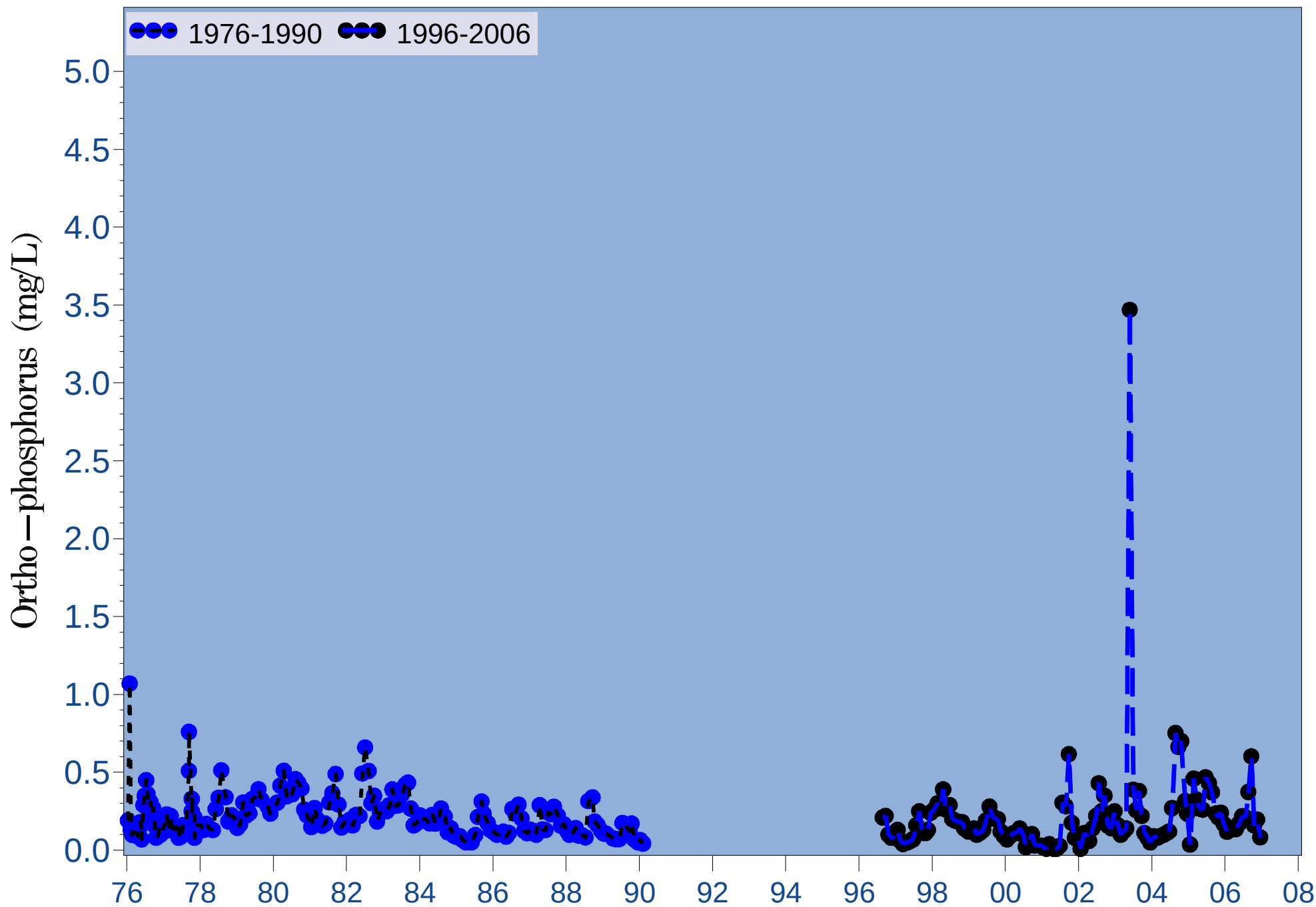


Figure 4.24a Monthly long-term surface ortho-phosphorus at river kilometer -2.4

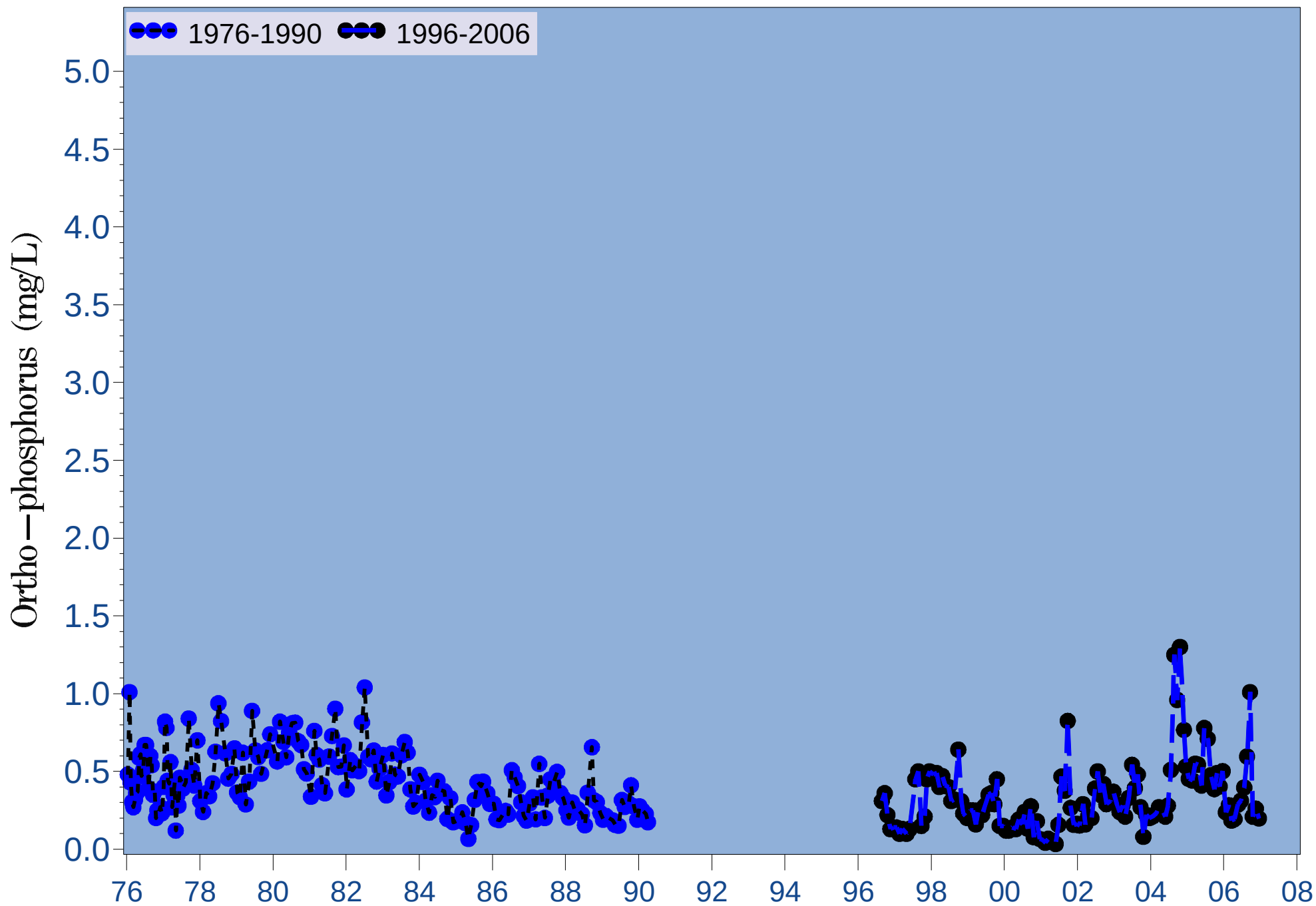


Figure 4.24b Monthly long-term surface ortho-phosphorus at river kilometer 6.6

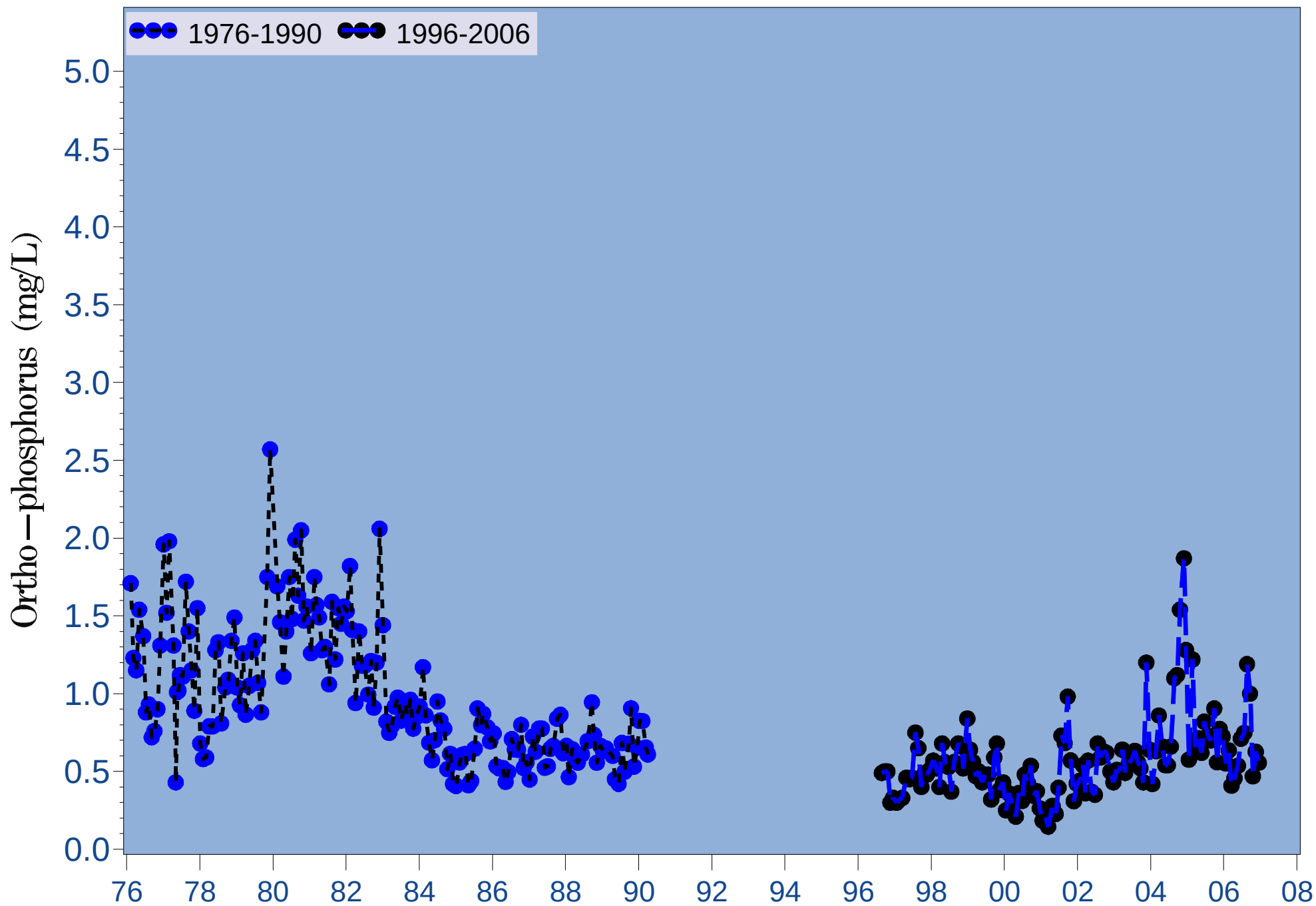


Figure 4.24c Monthly long-term surface ortho-phosphorus at river kilometer 15.5

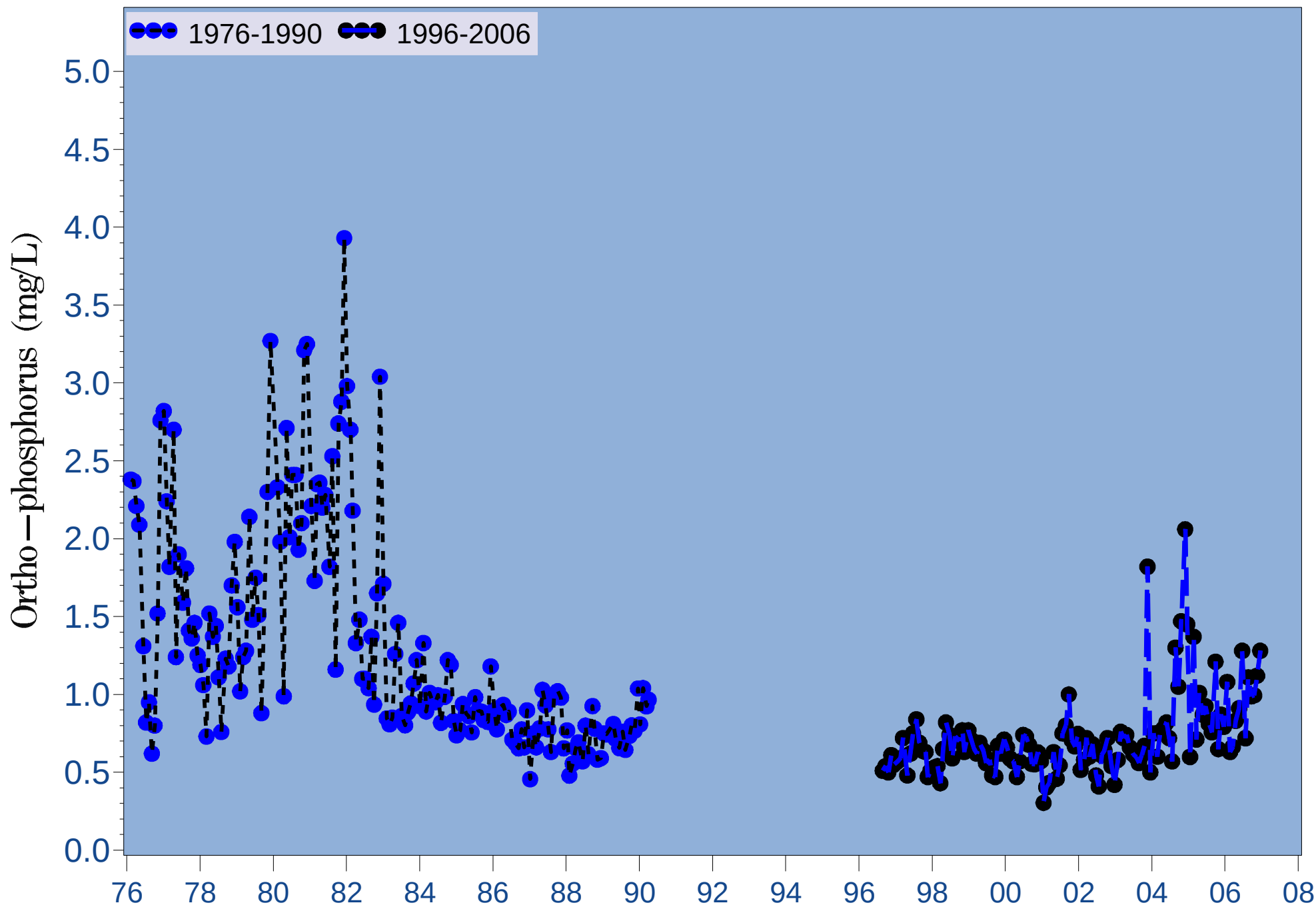


Figure 4.24d Monthly long-term surface ortho-phosphorus at river kilometer 23.6

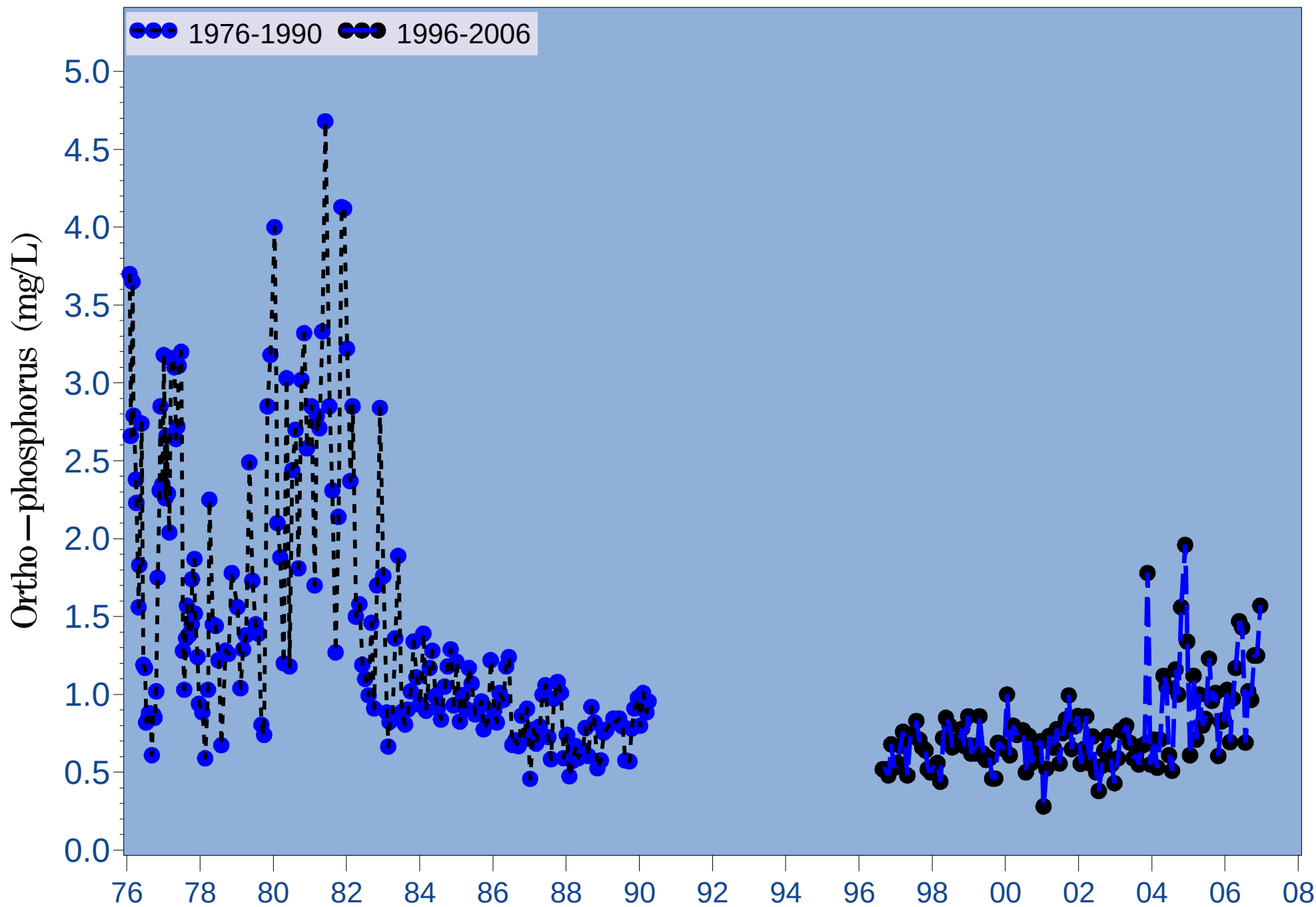


Figure 4.24e Monthly long-term surface ortho-phosphorus at river kilometer 30.4

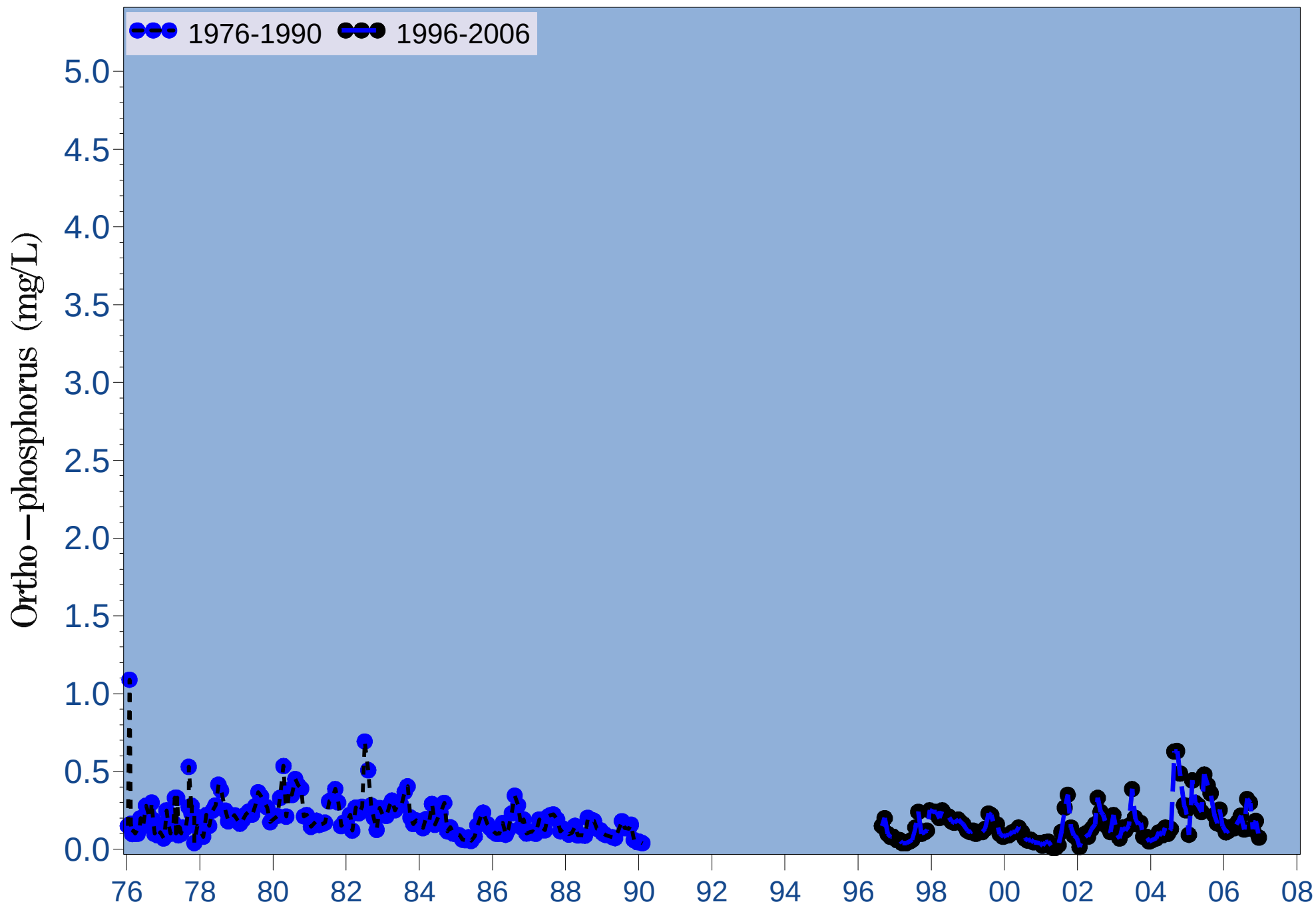


Figure 4.25a Monthly long-term bottom ortho-phosphorus at river kilometer -2.4

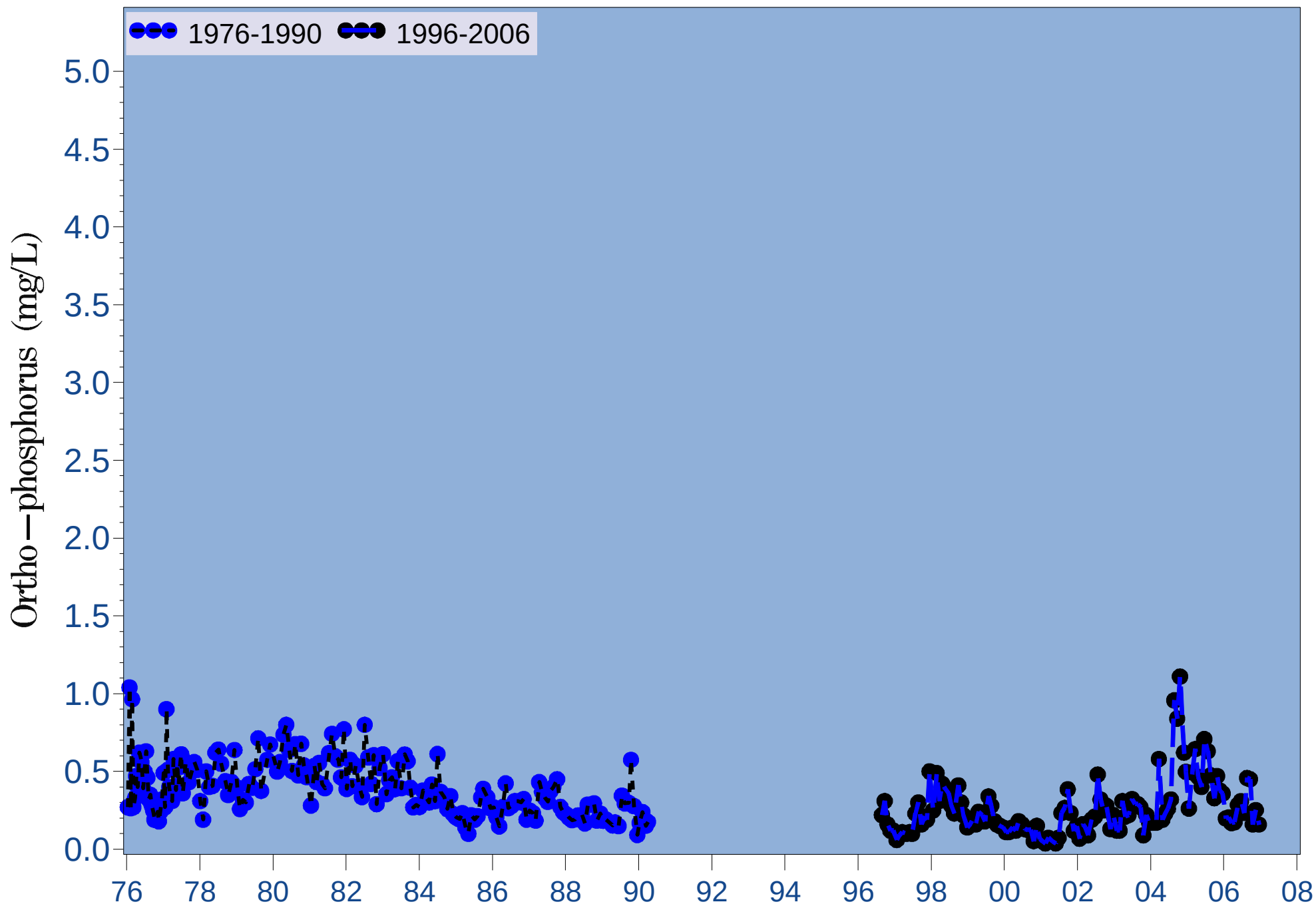


Figure 4.25b Monthly long-term bottom ortho-phosphorus at river kilometer 6.6

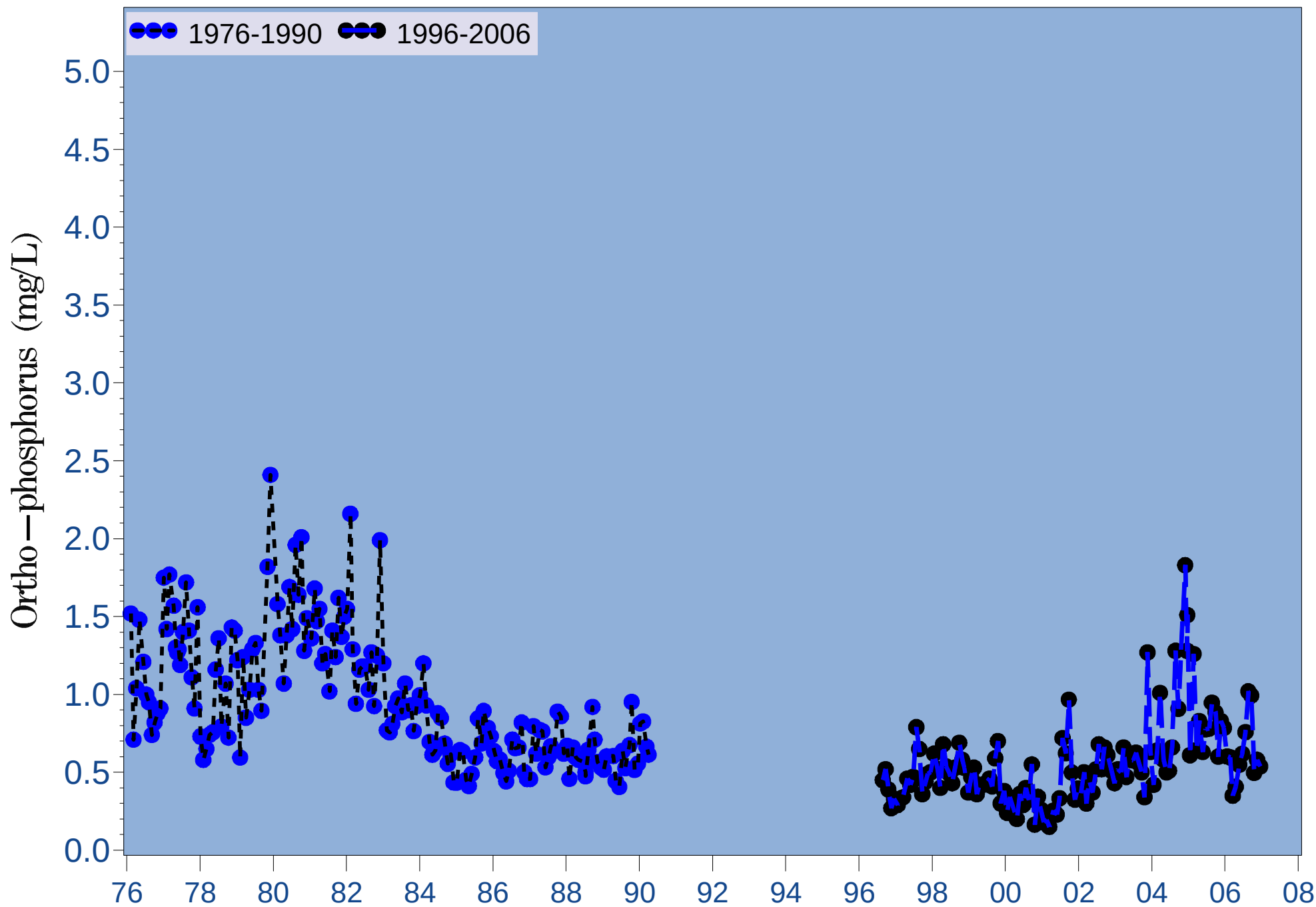


Figure 4.25c Monthly long-term bottom ortho-phosphorus at river kilometer 15.5

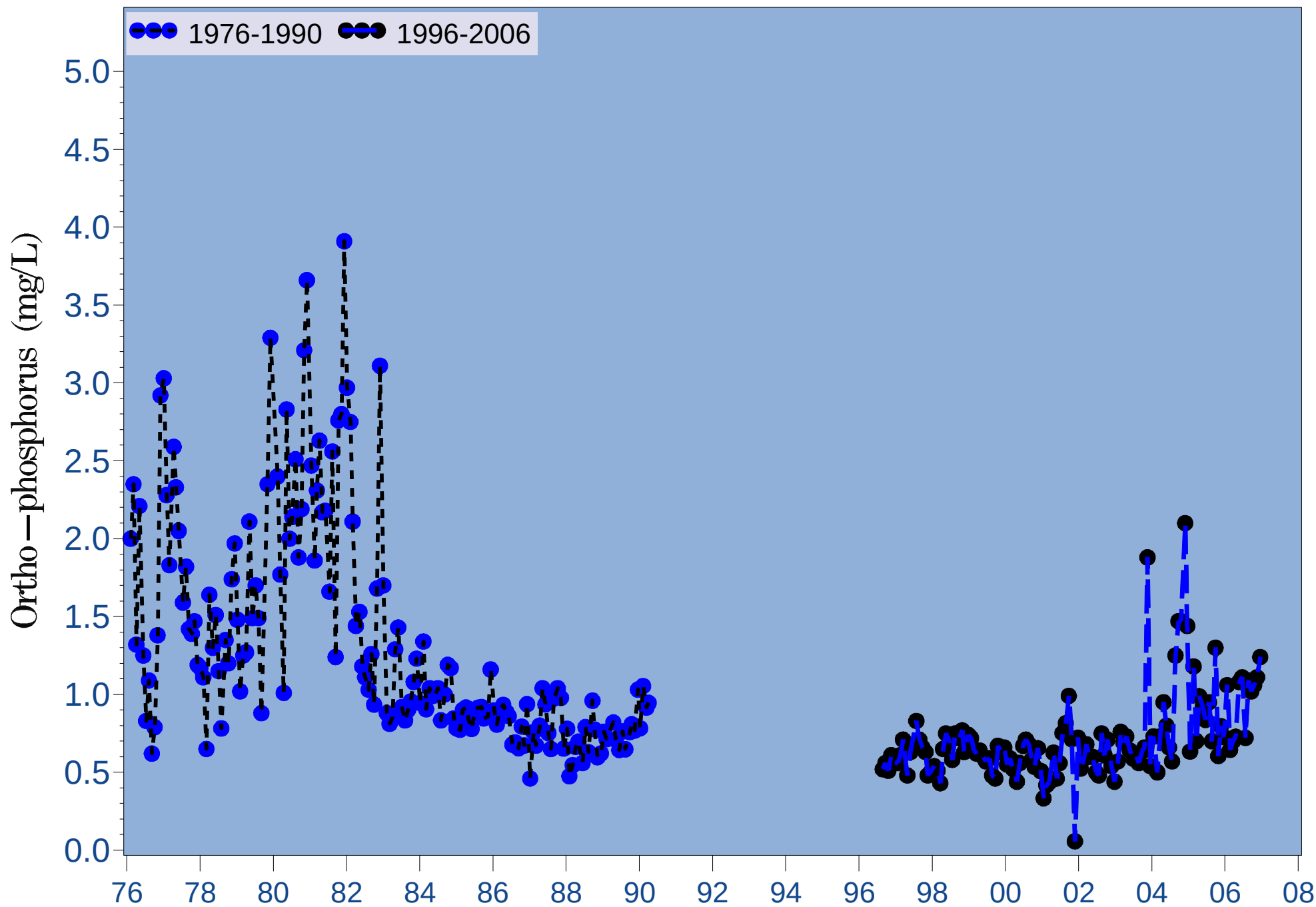


Figure 4.25d Monthly long-term bottom ortho-phosphorus at river kilometer 23.6

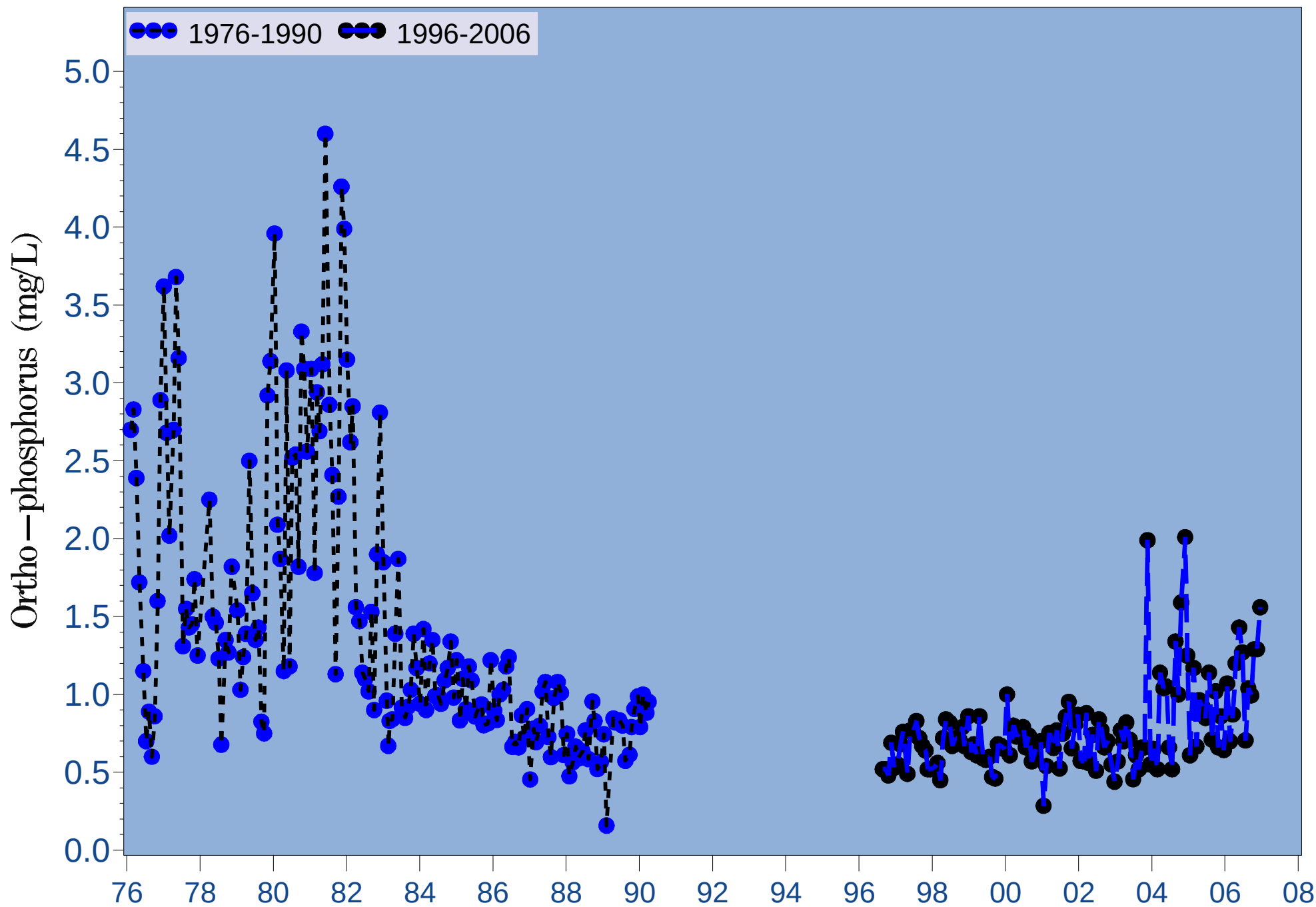


Figure 4.25e Monthly long-term bottom ortho-phosphorus at river kilometer 30.4

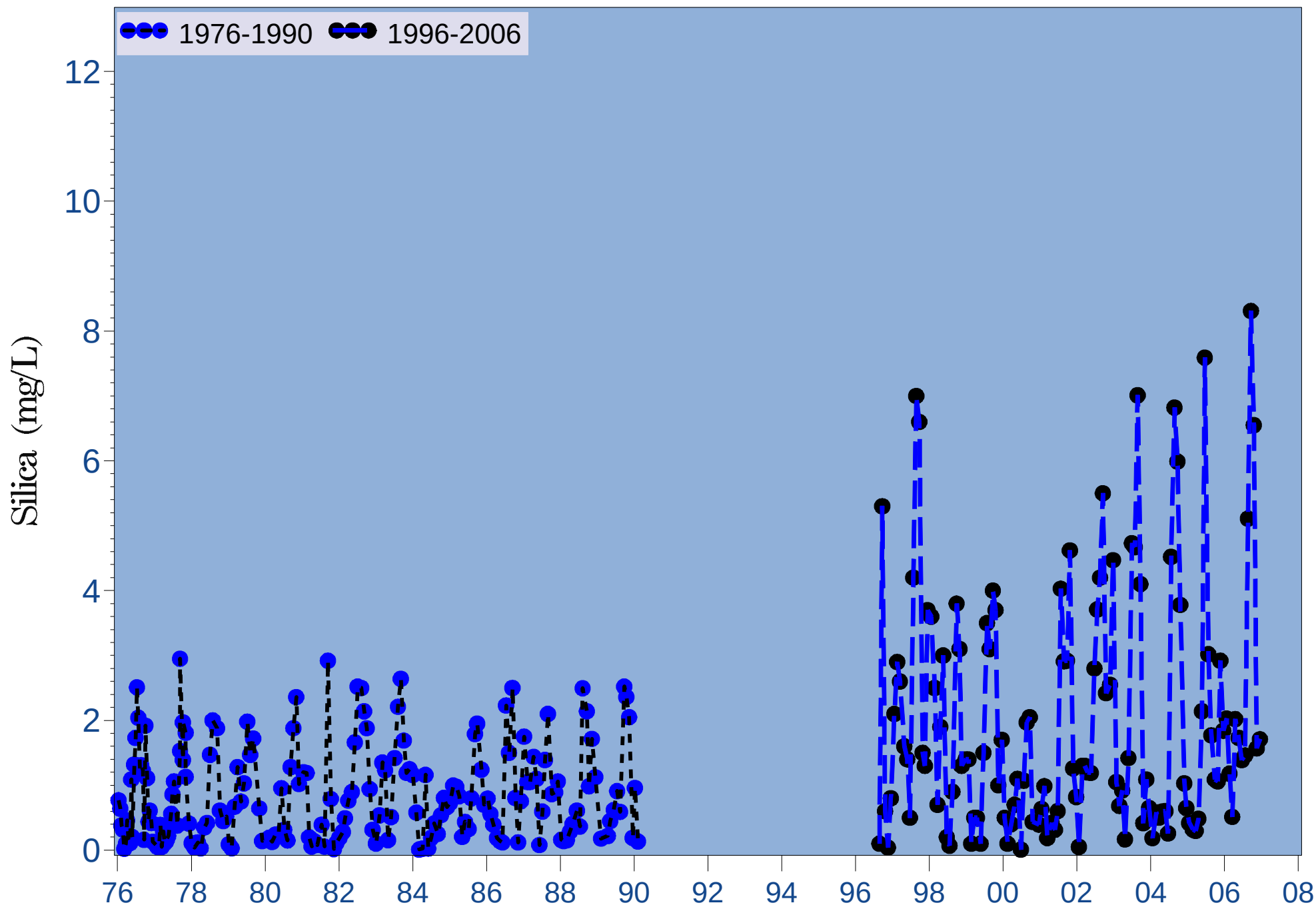


Figure 4.26a Monthly long-term surface silica at river kilometer -2.4

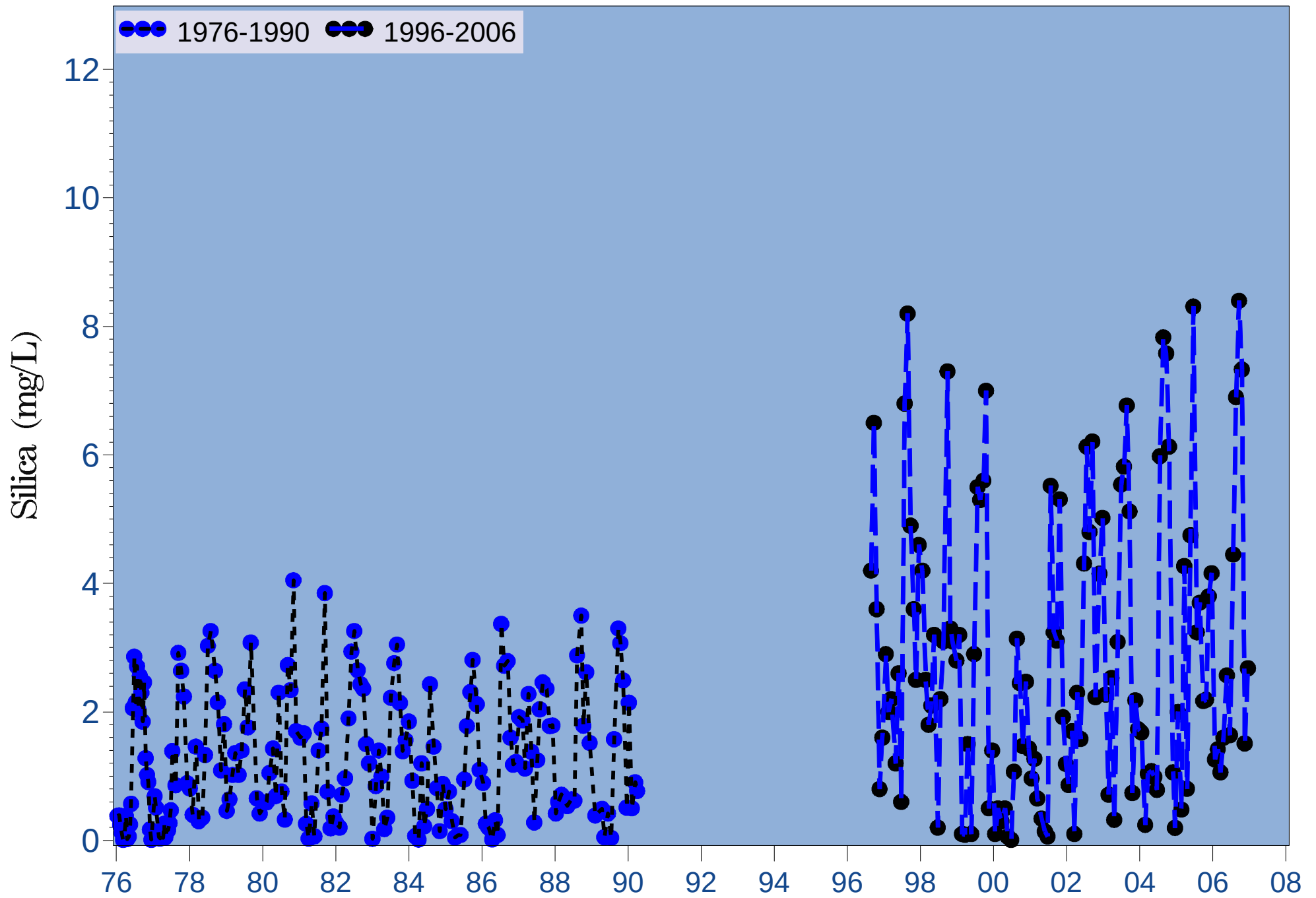


Figure 4.26b Monthly long-term surface silica at river kilometer 6.6

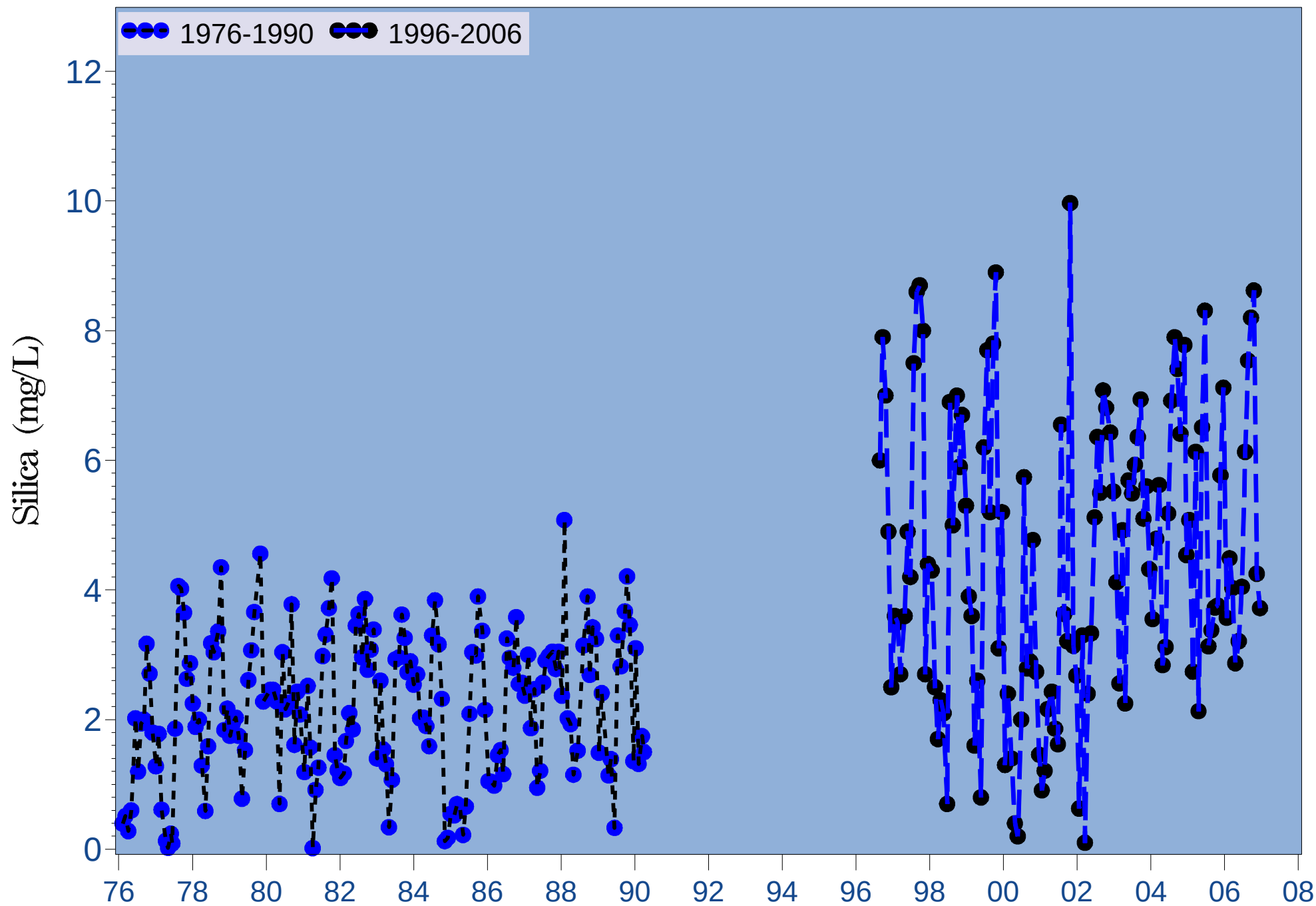


Figure 4.26c Monthly long-term surface silica at river kilometer 15.5

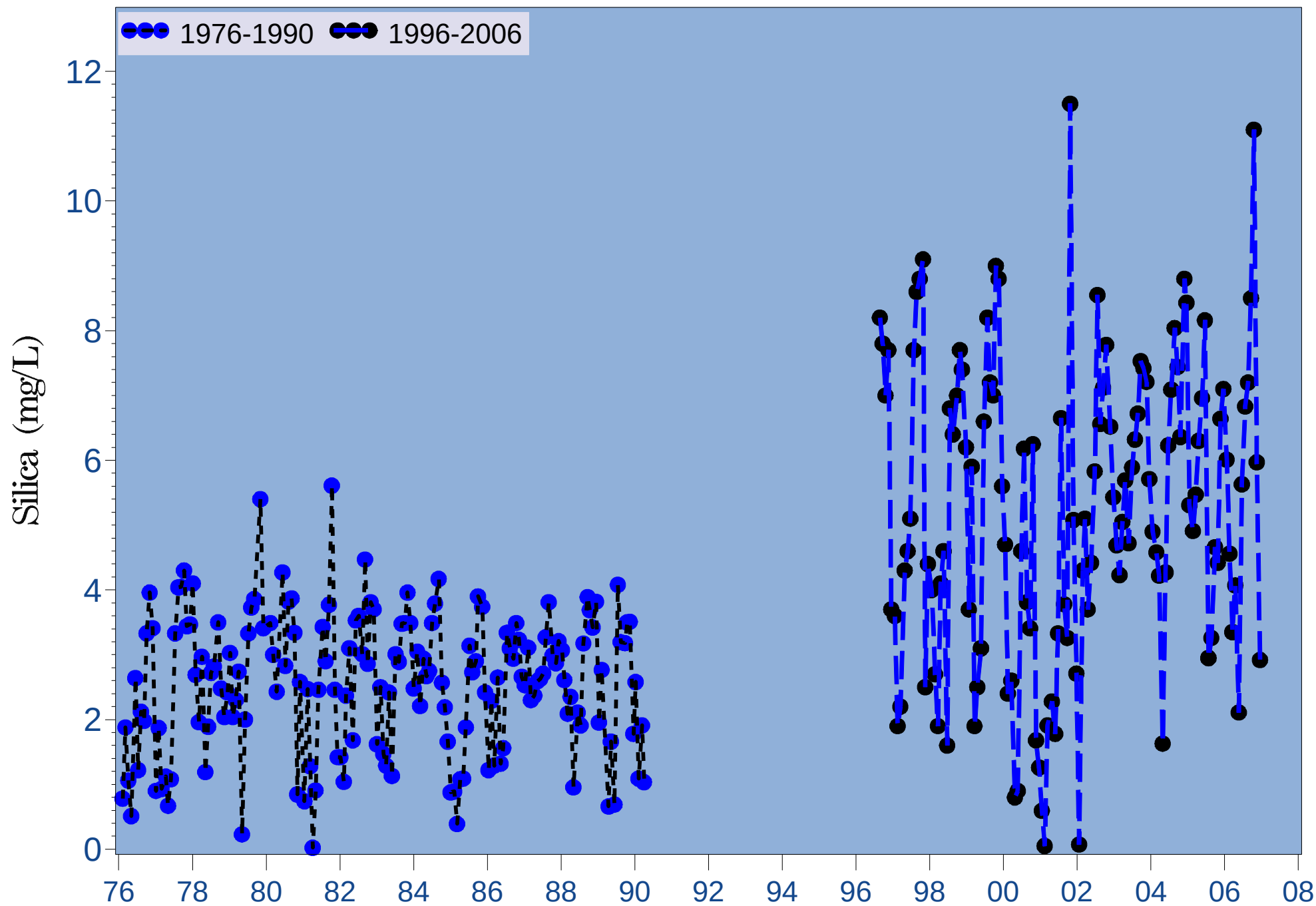


Figure 4.26d Monthly long-term surface silica at river kilometer 23.6

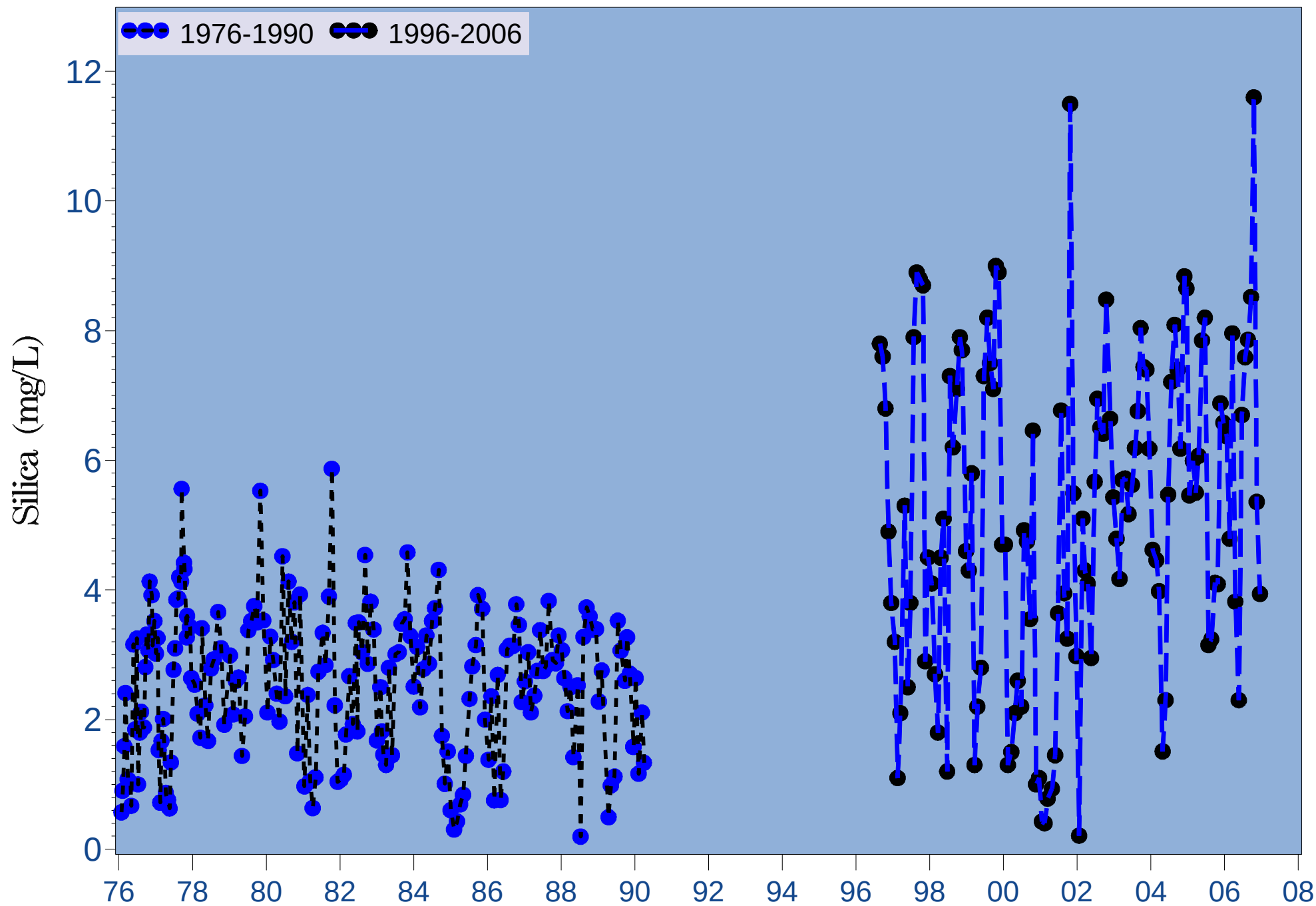


Figure 4.26e Monthly long-term surface silica at river kilometer 30.4

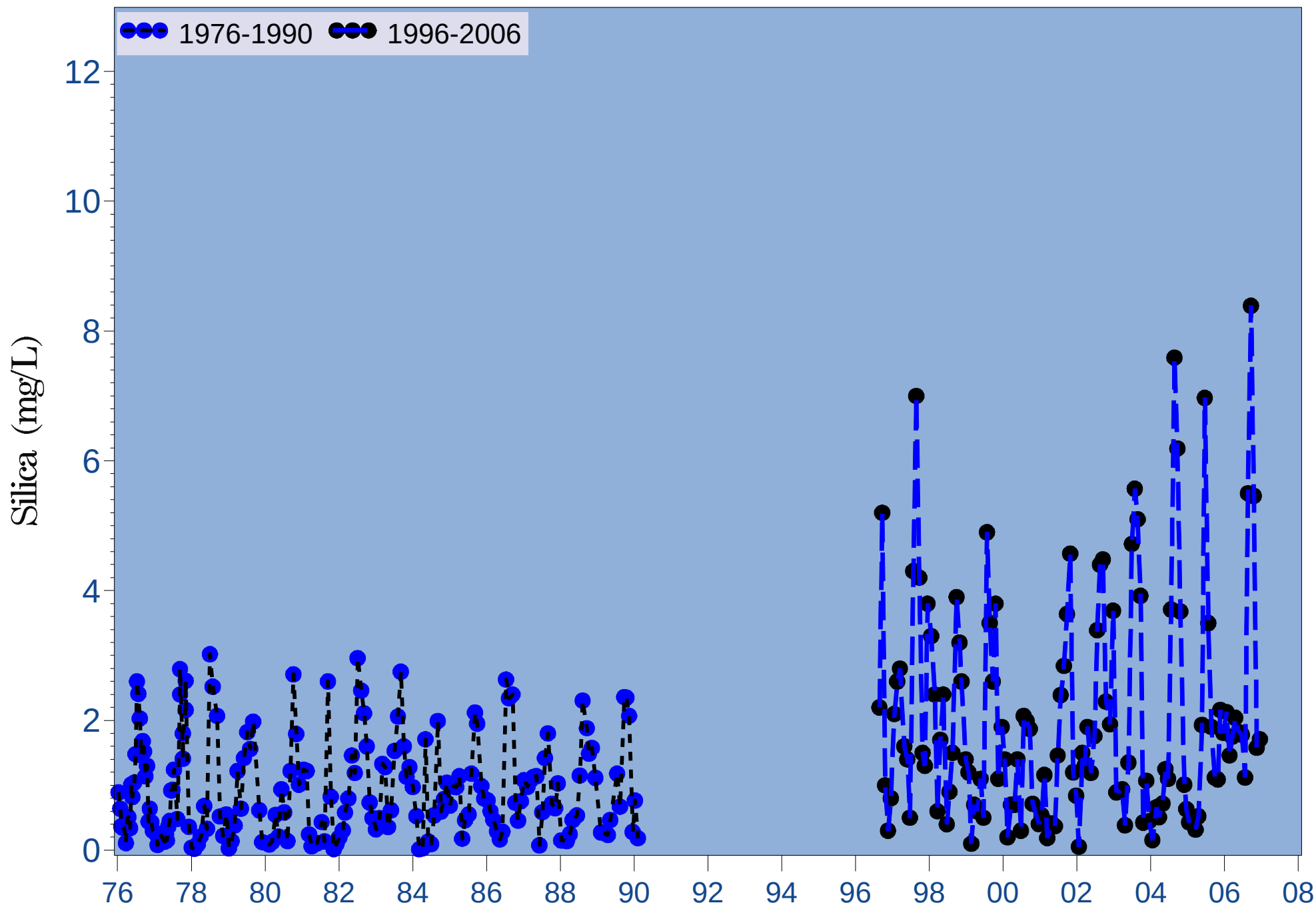


Figure 4.27a Monthly long-term bottom silica at river kilometer -2.4

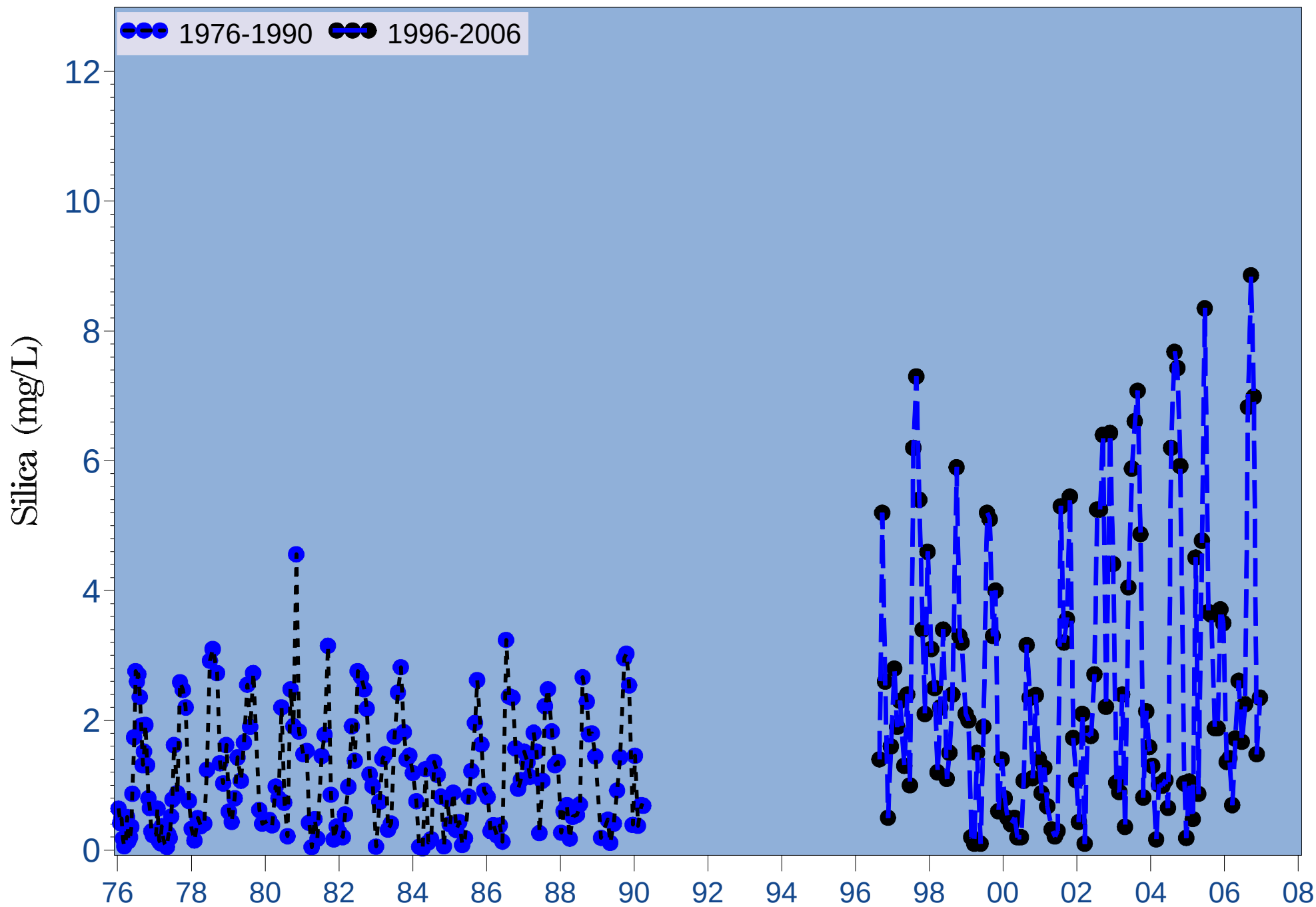


Figure 4.27b Monthly long-term bottom silica at river kilometer 6.6

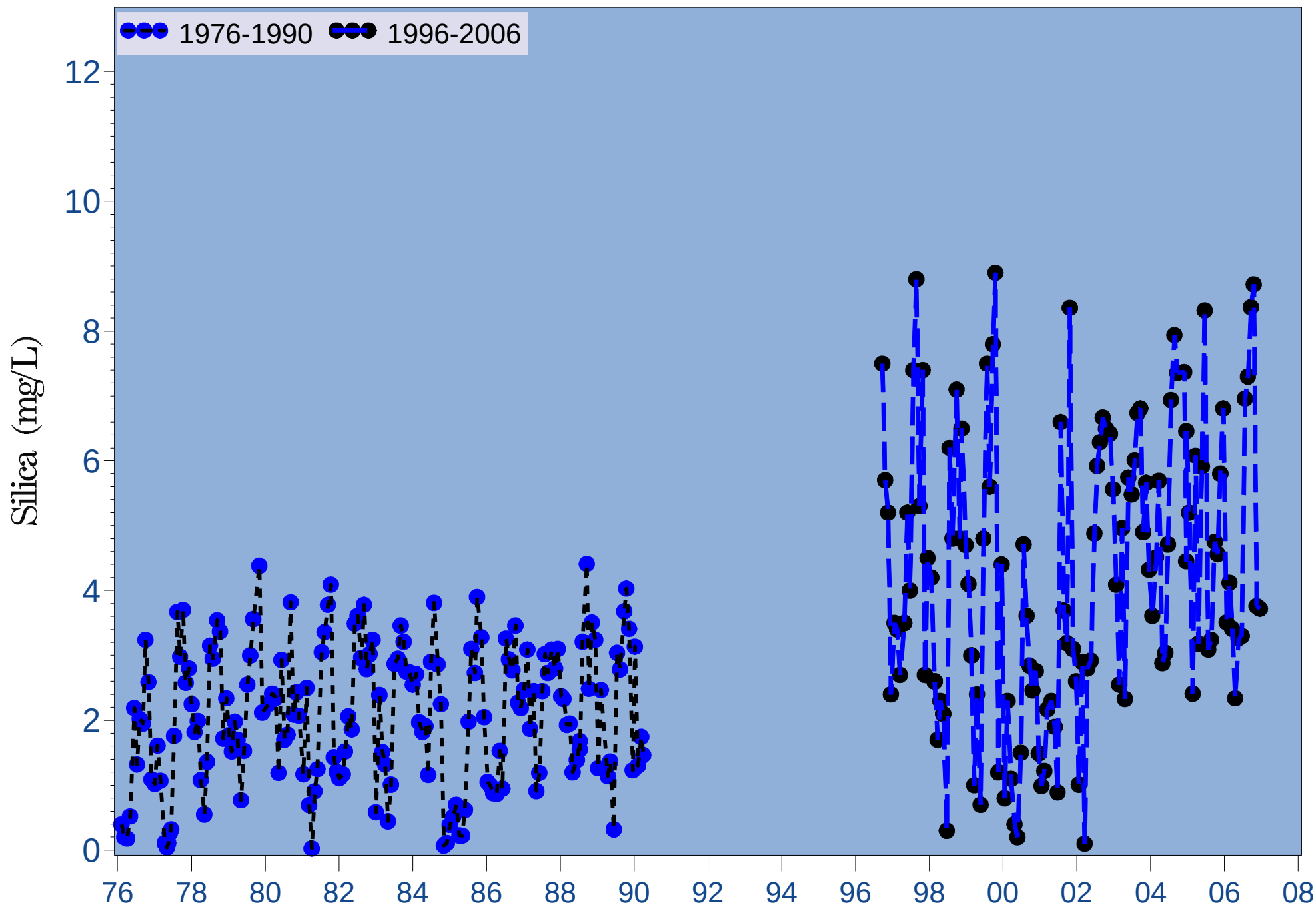


Figure 4.27c Monthly long-term bottom silica at river kilometer 15.5

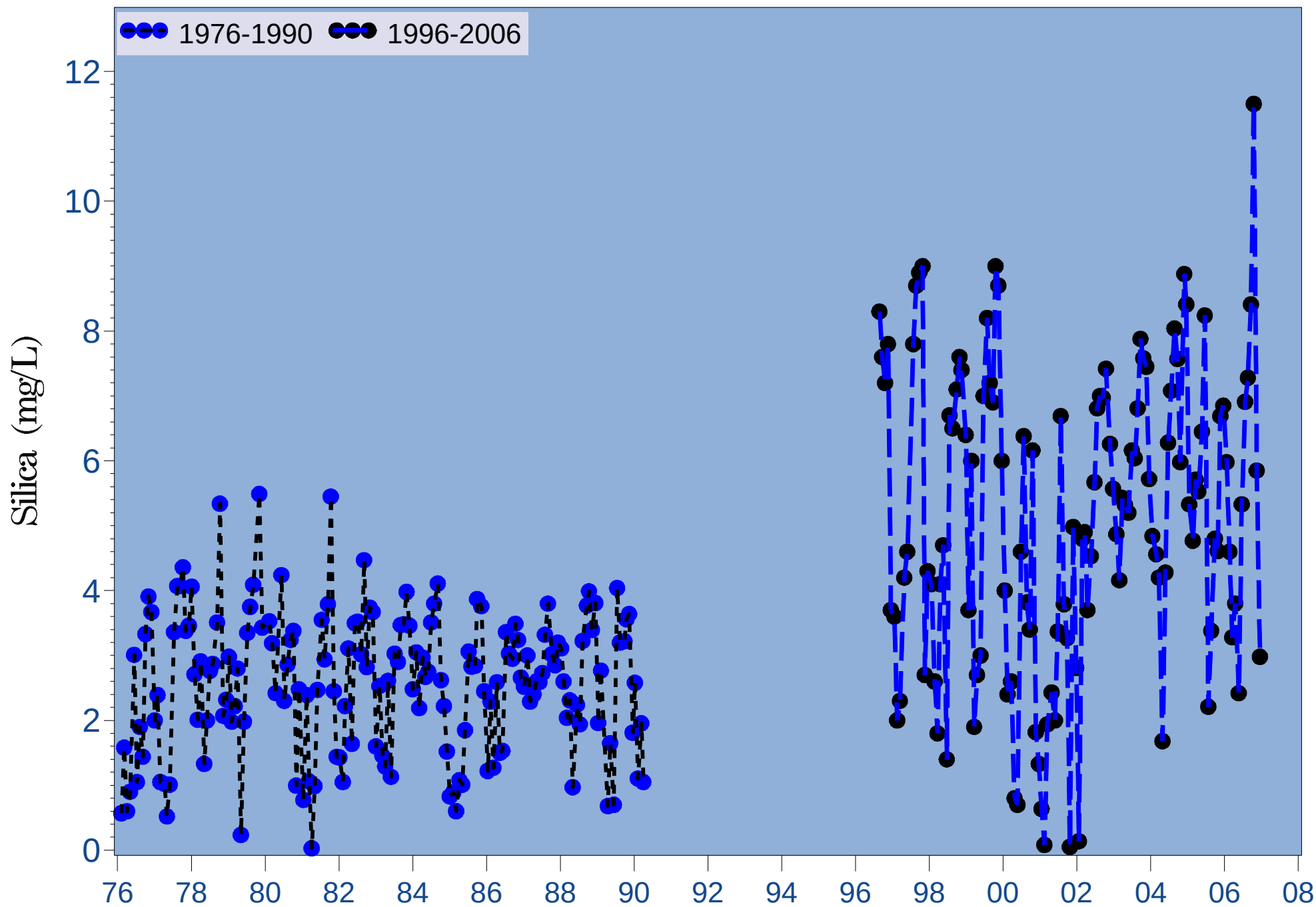


Figure 4.27d Monthly long-term bottom silica at river kilometer 23.6

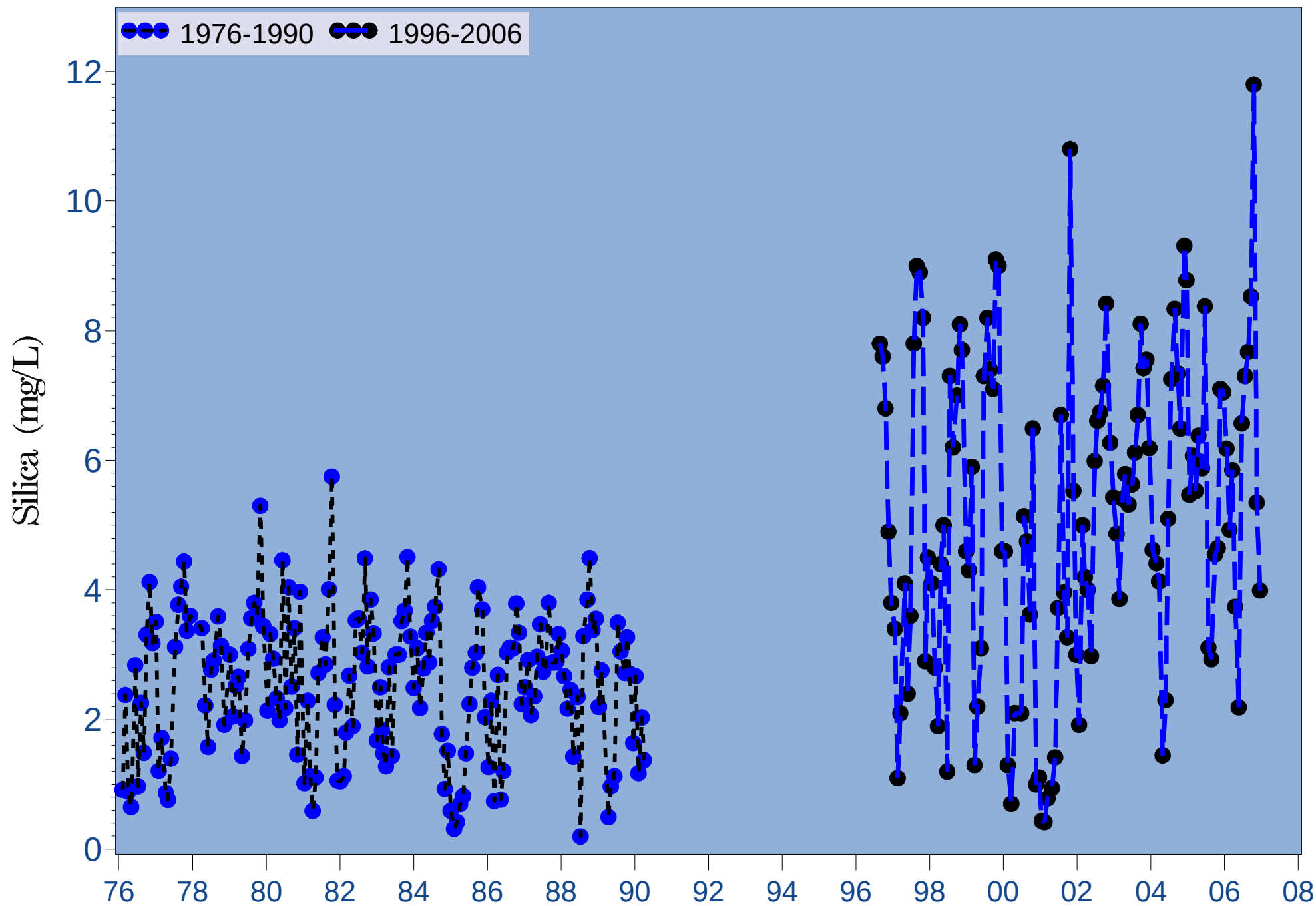


Figure 4.27e Monthly long-term bottom silica at river kilometer 30.4

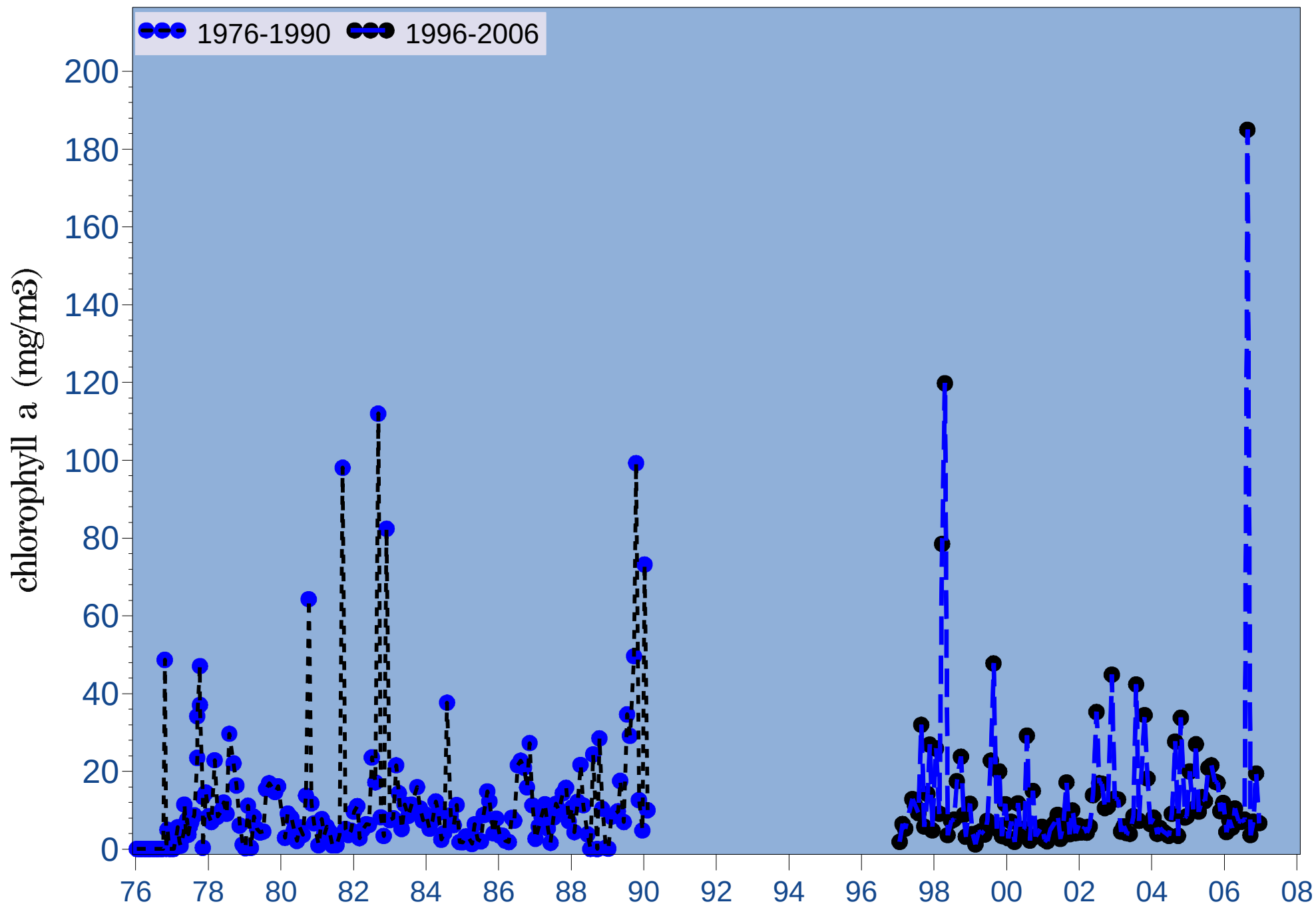


Figure 4.28a Monthly long-term surface chlorophyll a at river kilometer -2.4

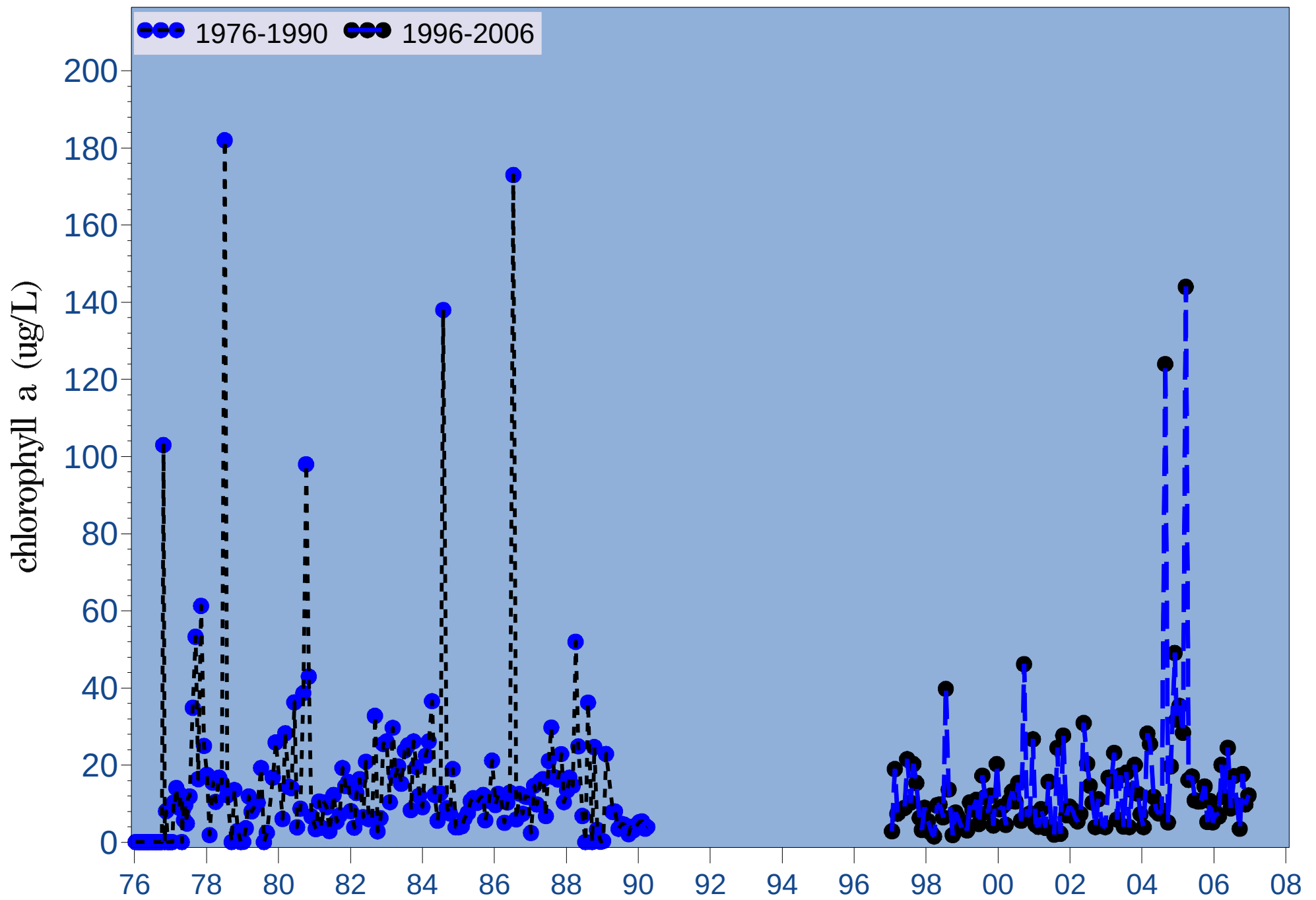


Figure 4.28b Monthly long-term surface chlorophyll a at river kilometer 6.6

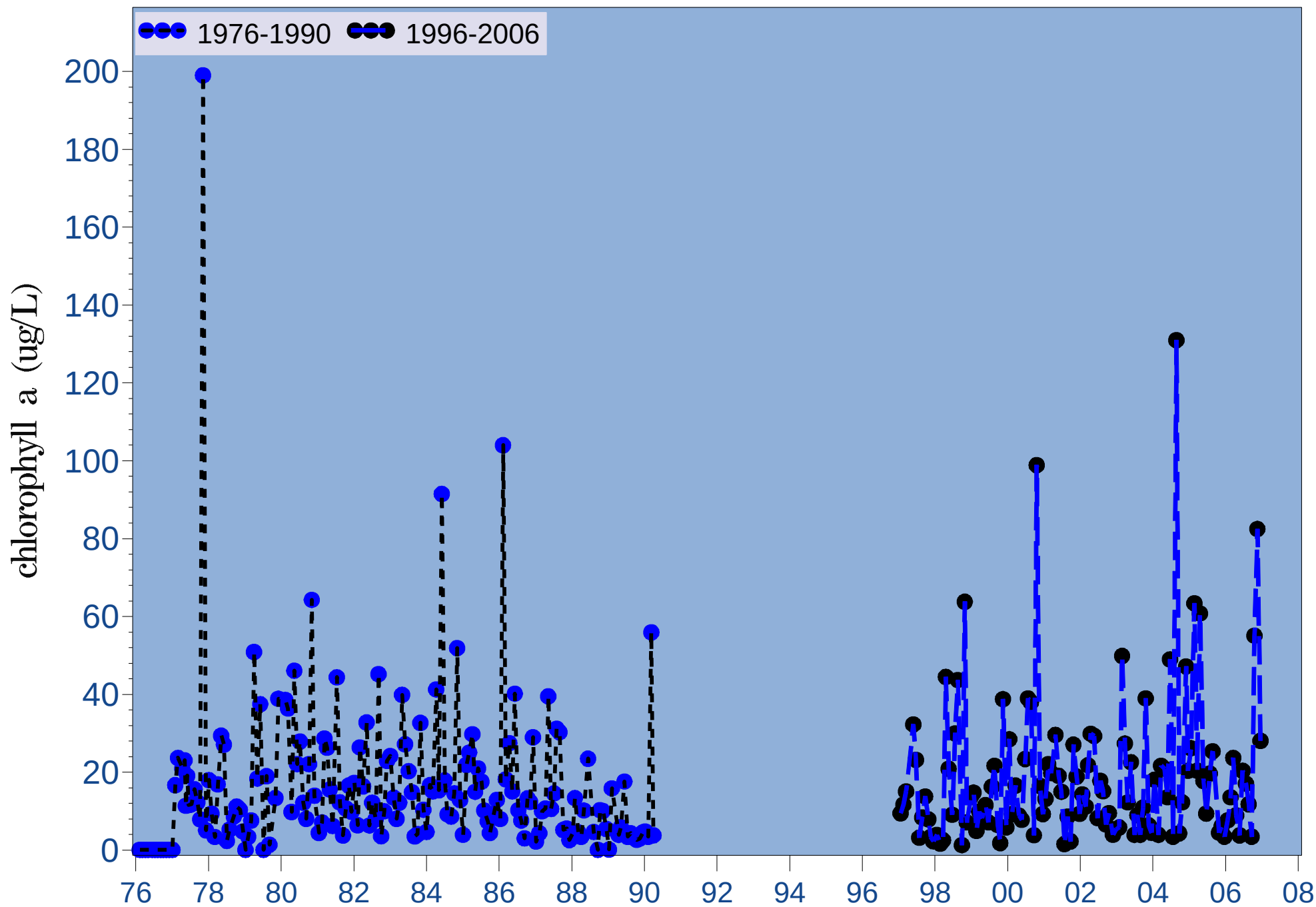


Figure 4.28c Monthly long-term surface chlorophyll a at river kilometer 15.5

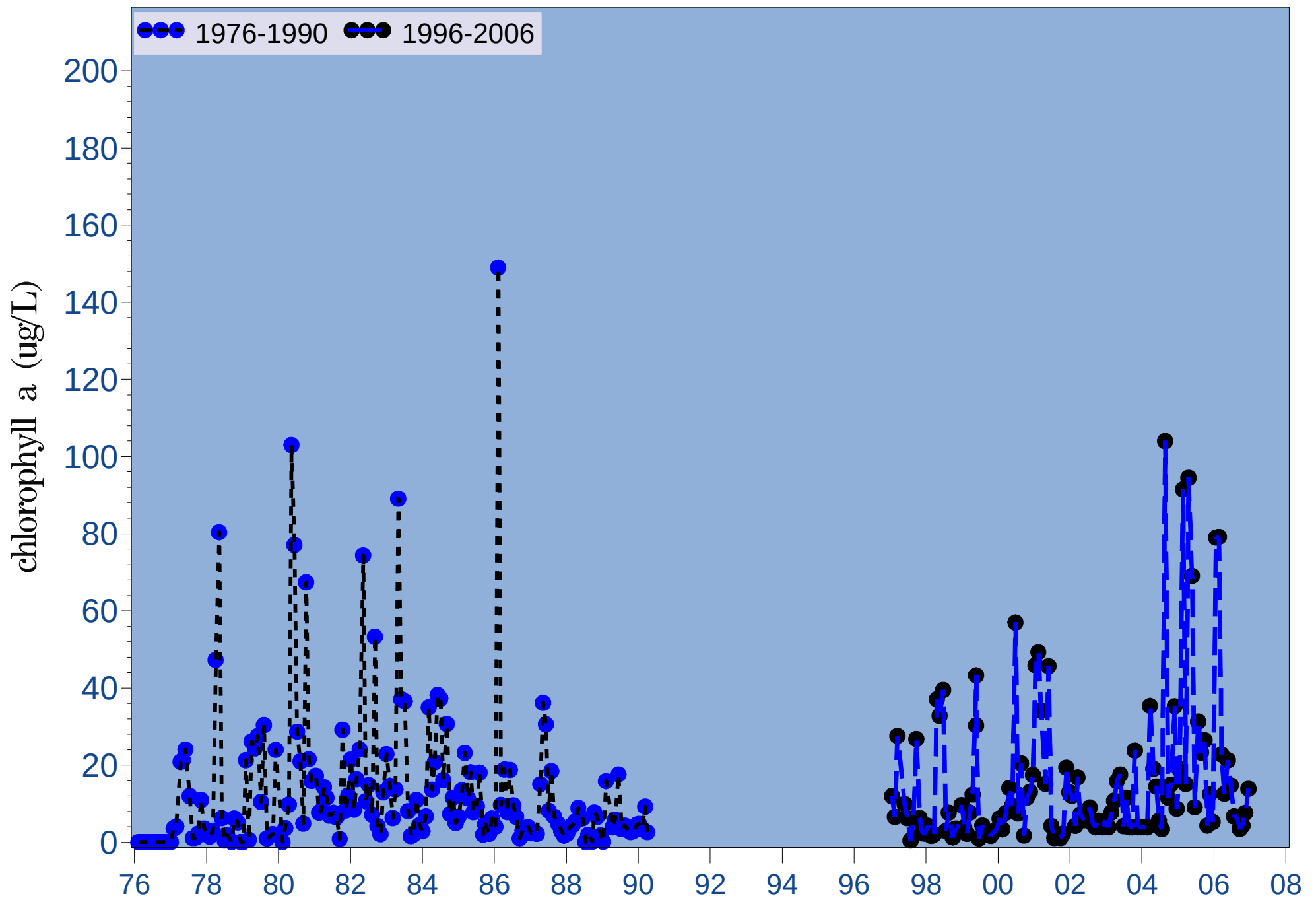


Figure 4.28d Monthly long-term surface chlorophyll a at river kilometer 23.6

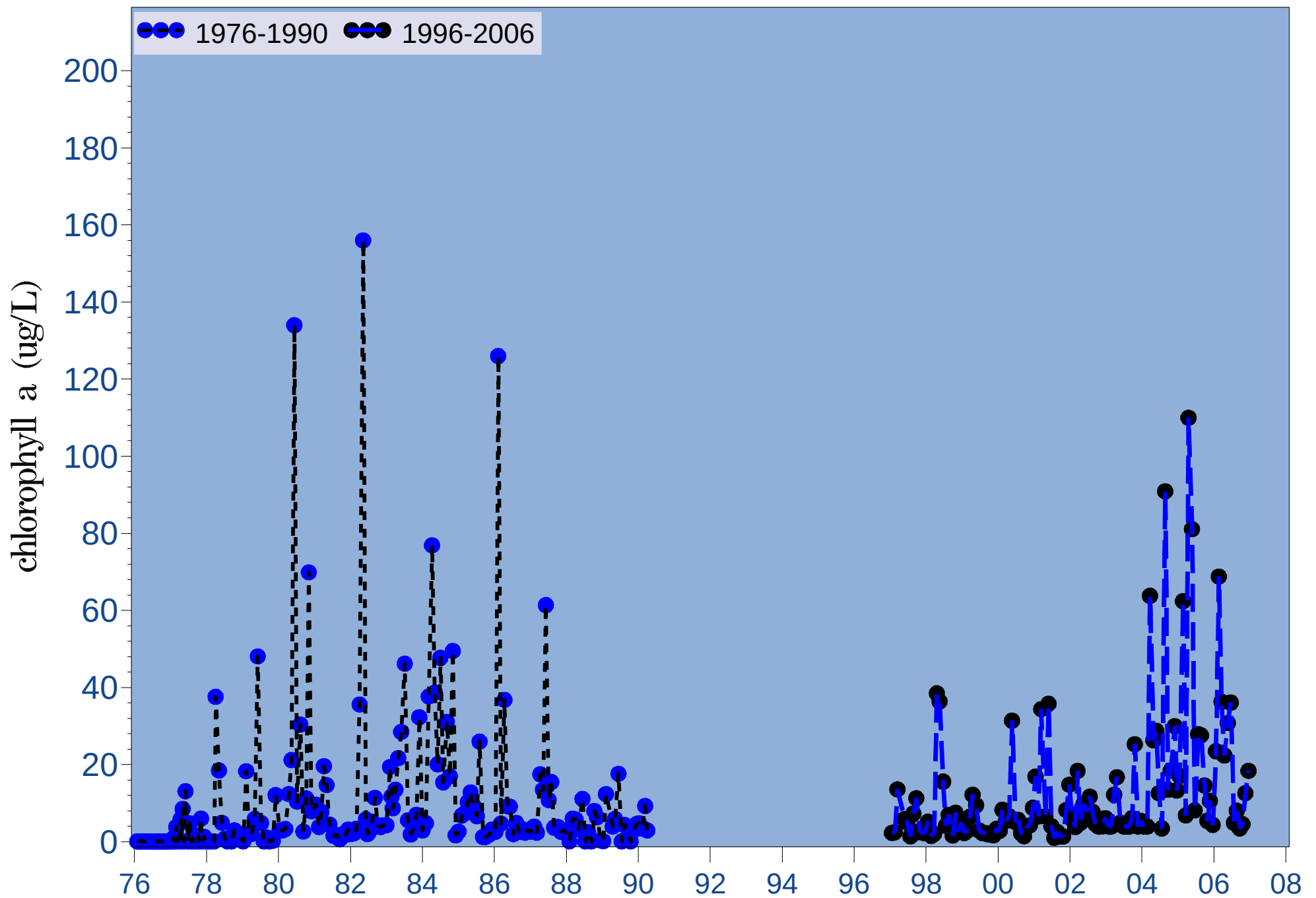


Figure 4.28e Monthly long-term surface chlorophyll a at river kilometer 30.4

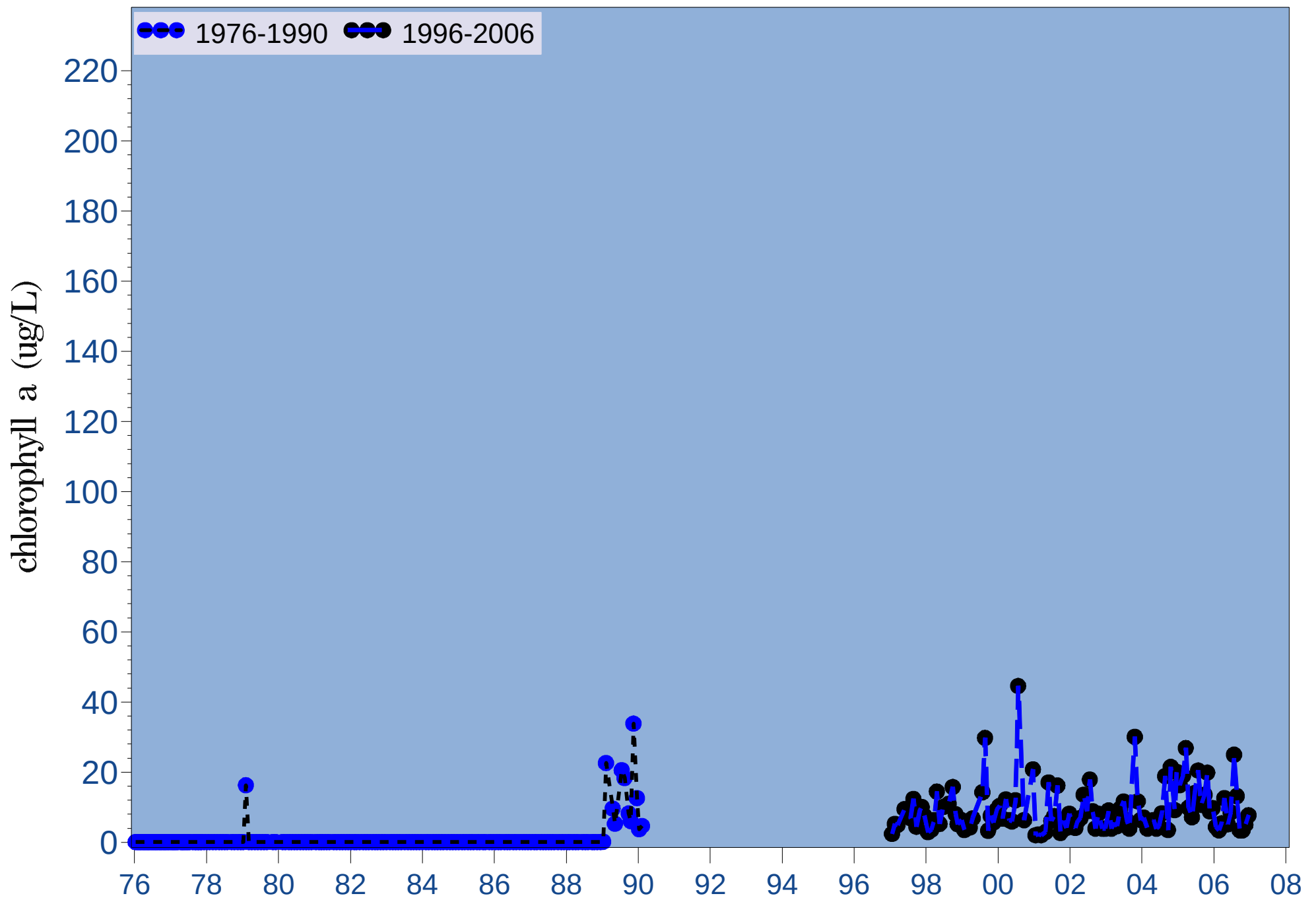


Figure 4.29a Monthly long-term bottom chlorophyll a at river kilometer -2.4

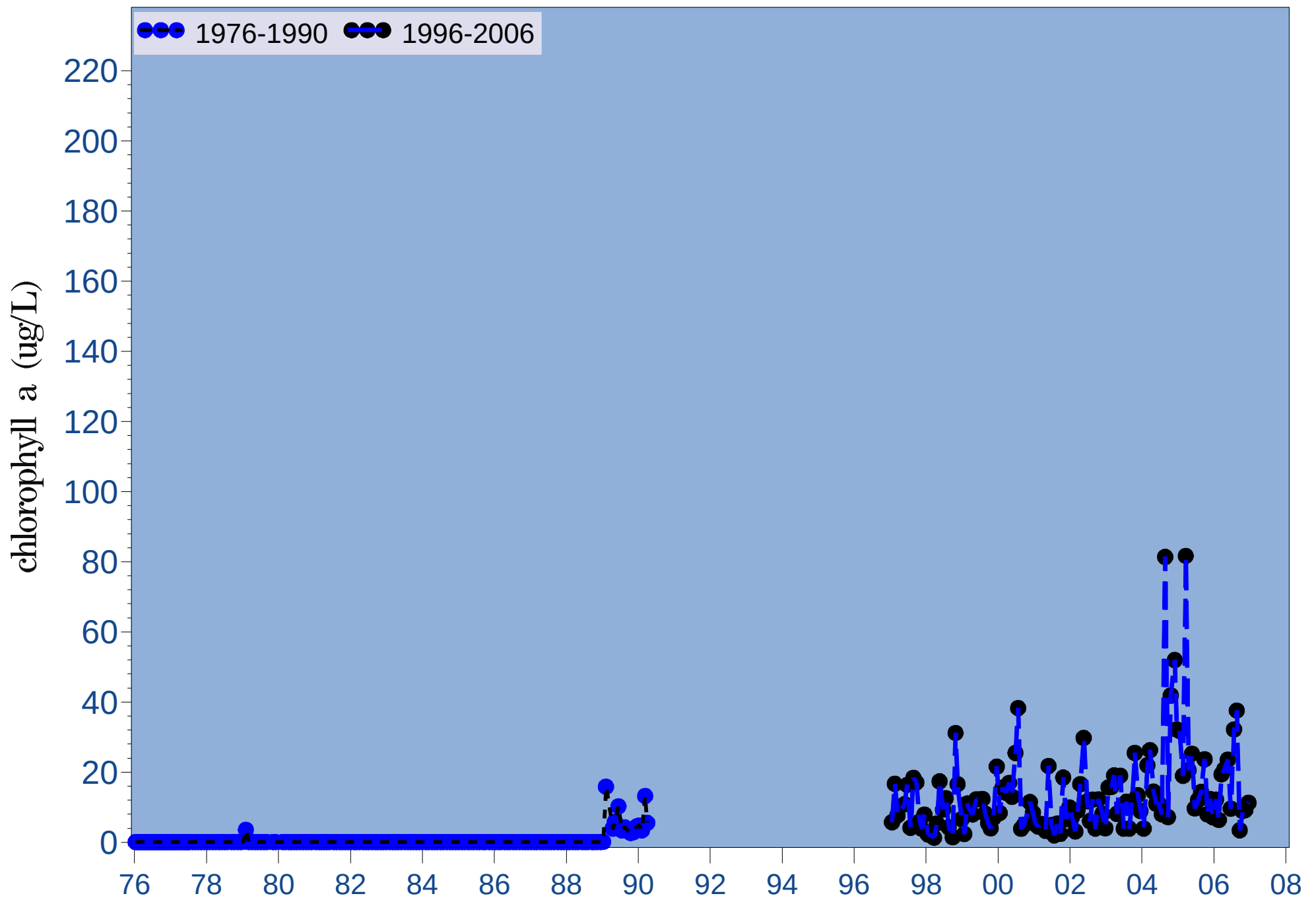


Figure 4.29b Monthly long-term bottom chlorophyll a at river kilometer 6.6

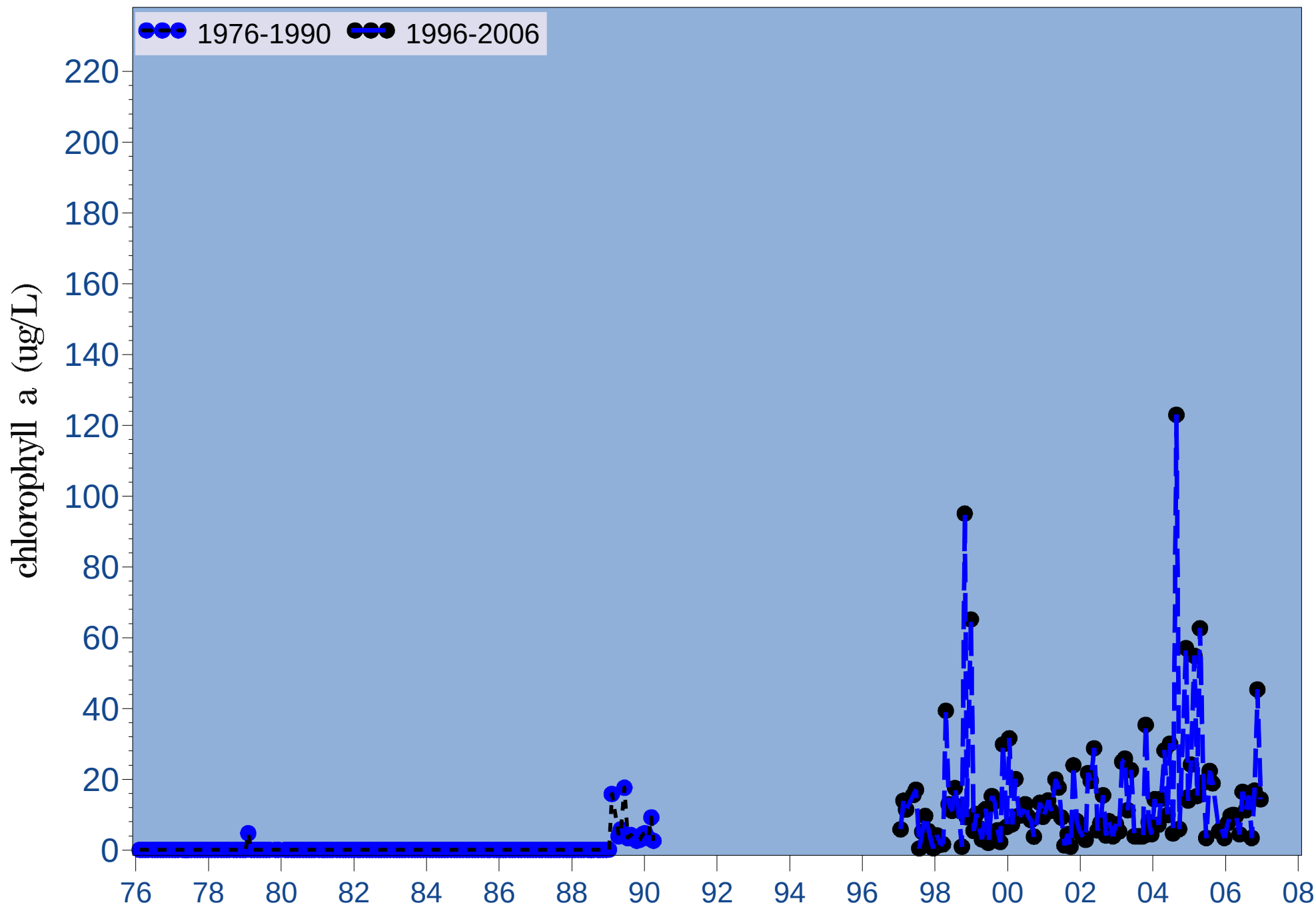


Figure 4.29c Monthly long-term bottom chlorophyll a at river kilometer 15.5

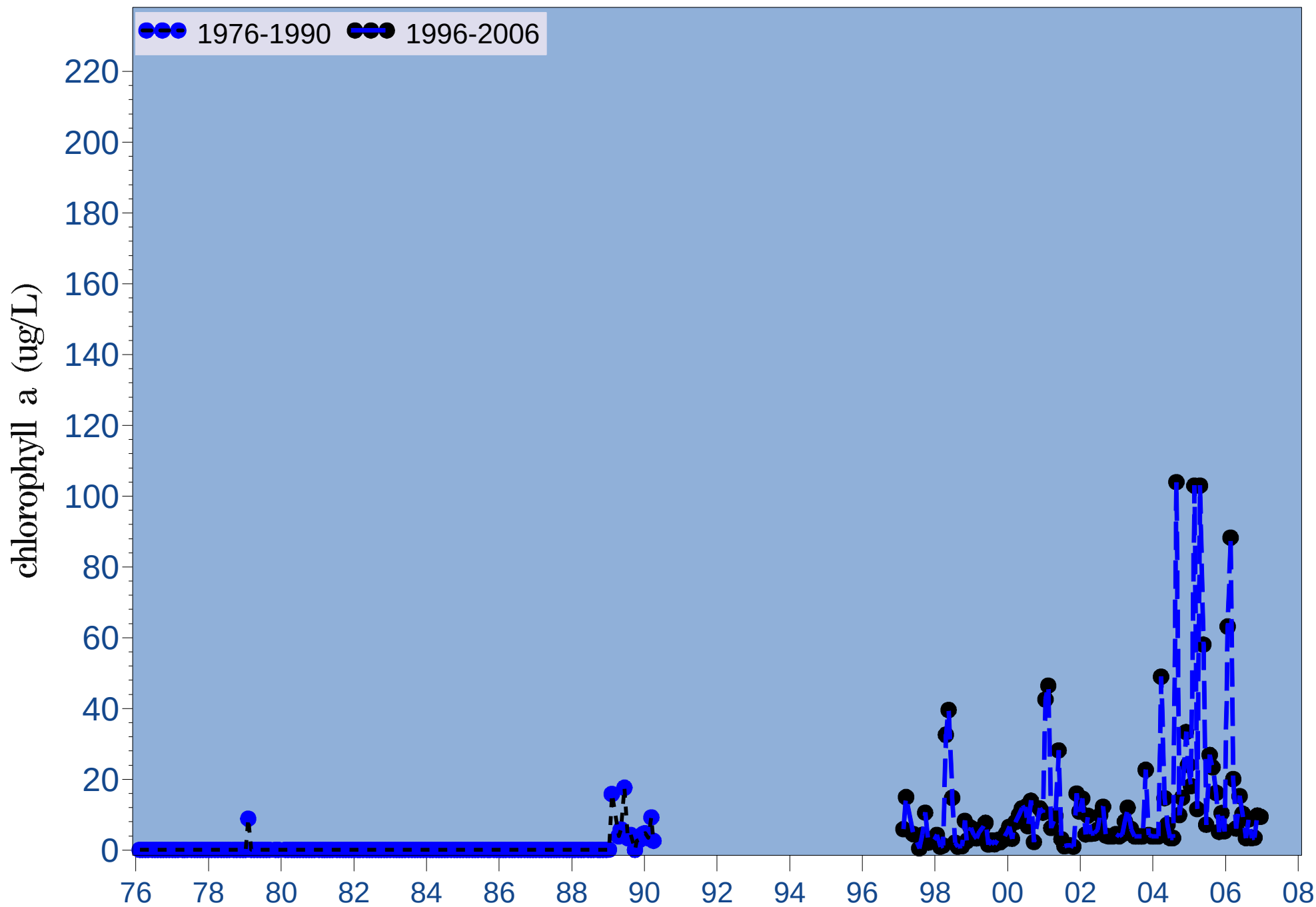


Figure 4.29d Monthly long-term bottom chlorophyll a at river kilometer 23.6

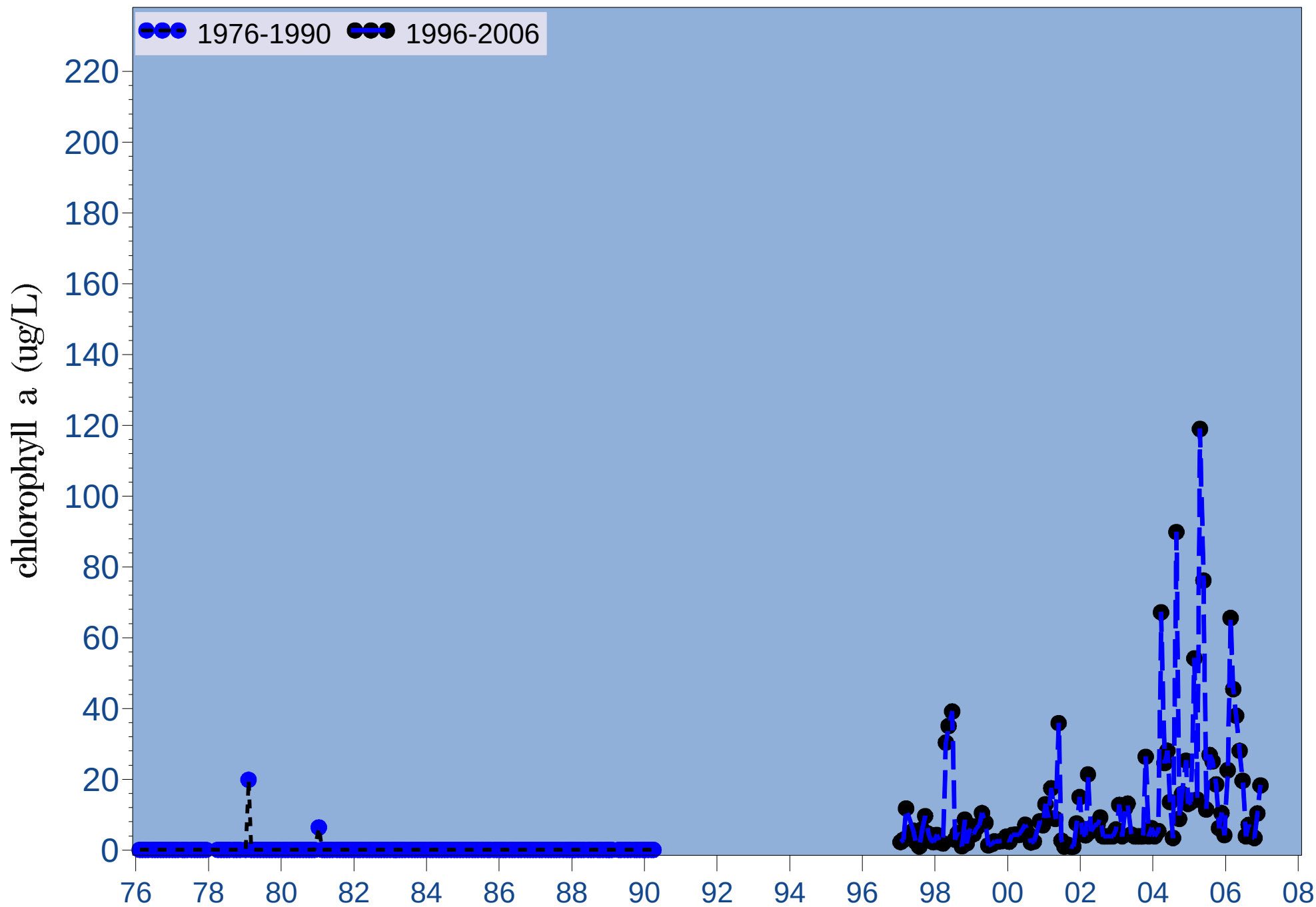
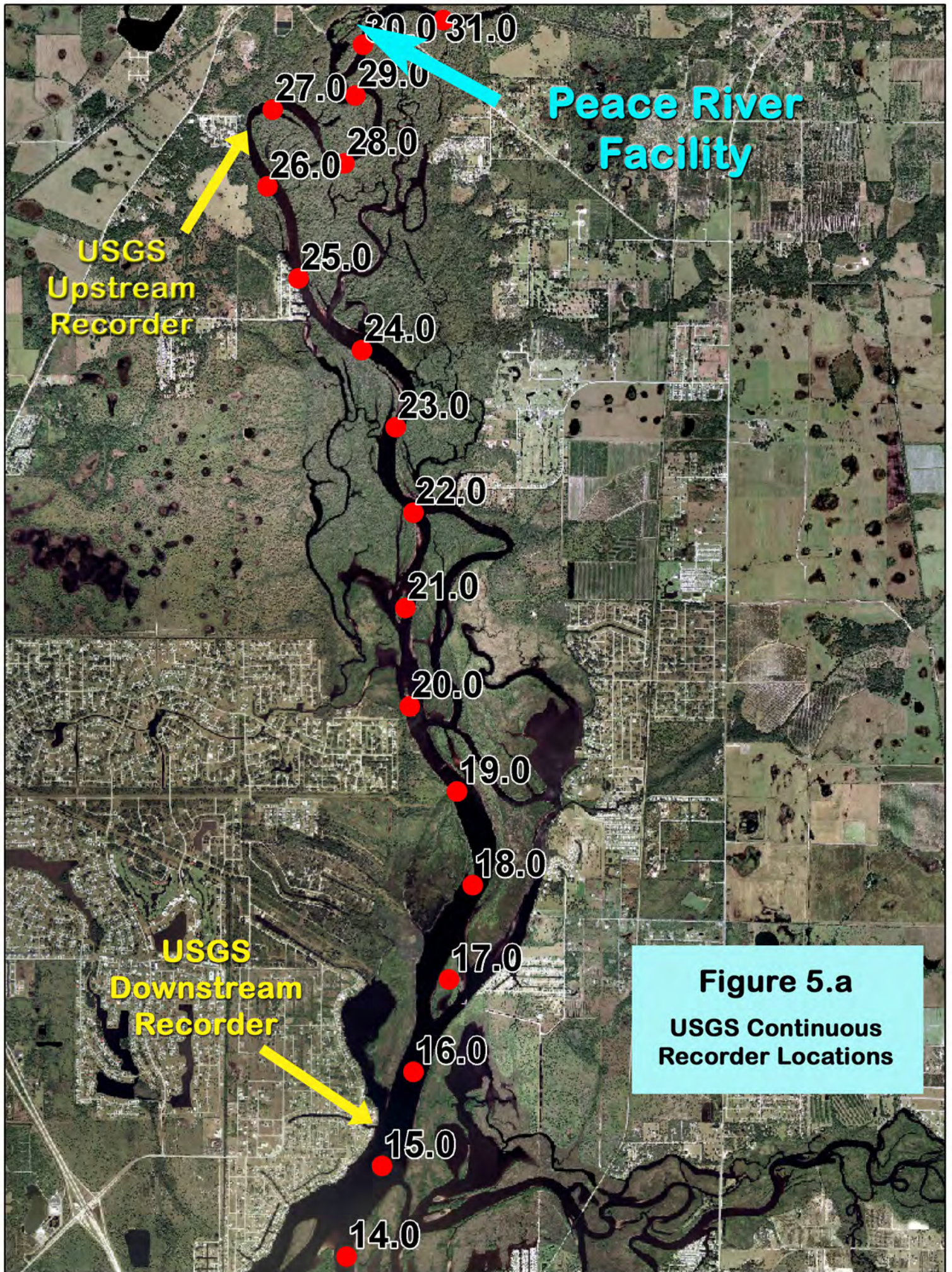


Figure 4.29e Monthly long-term bottom chlorophyll a at river kilometer 30.4



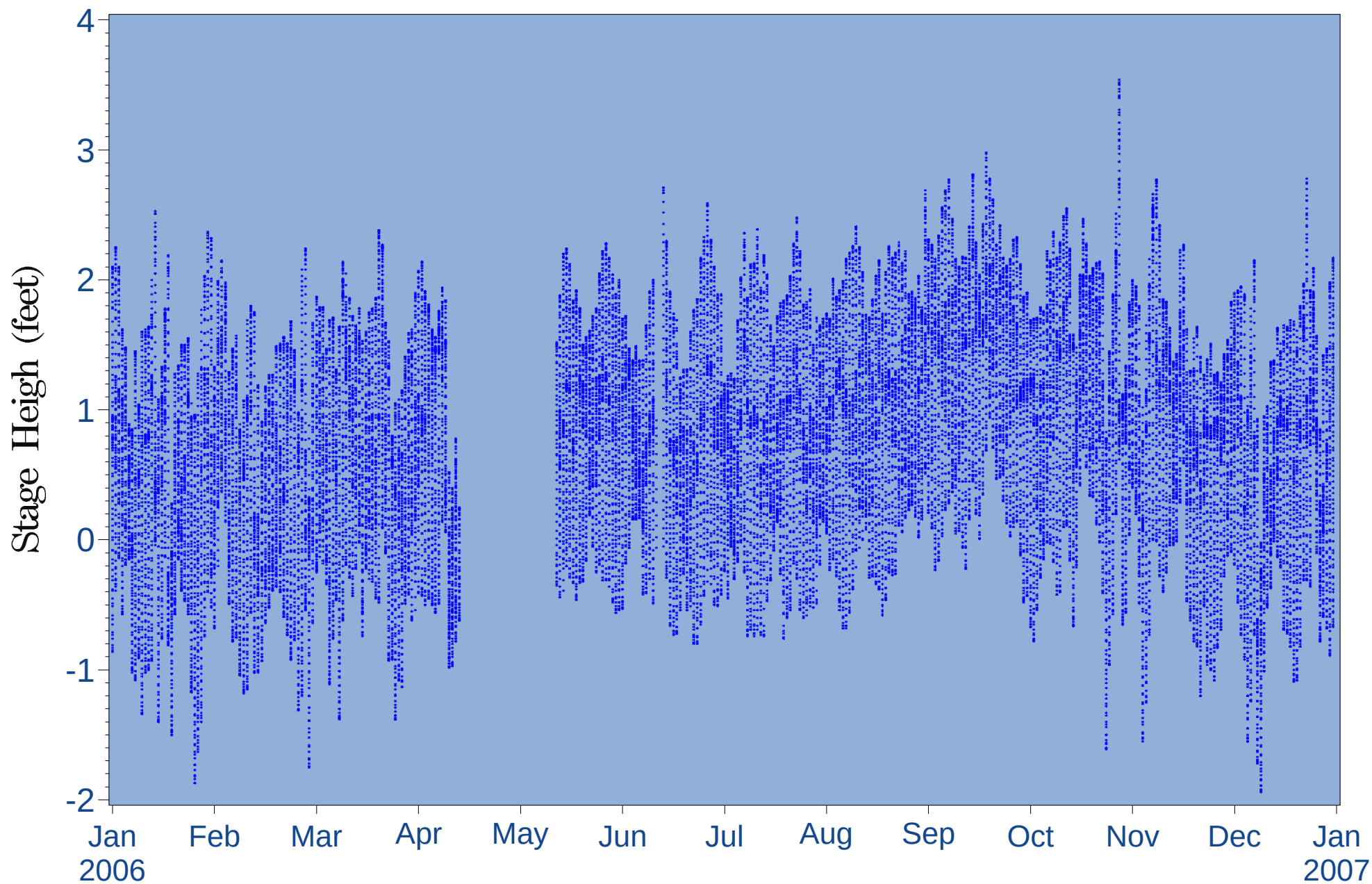


Figure 5.1 2006 Stage height (15-min intervals) for Peace River fixed station at Harbour Heights - USGS Gage 02297460 (River Kilometer=15.5)

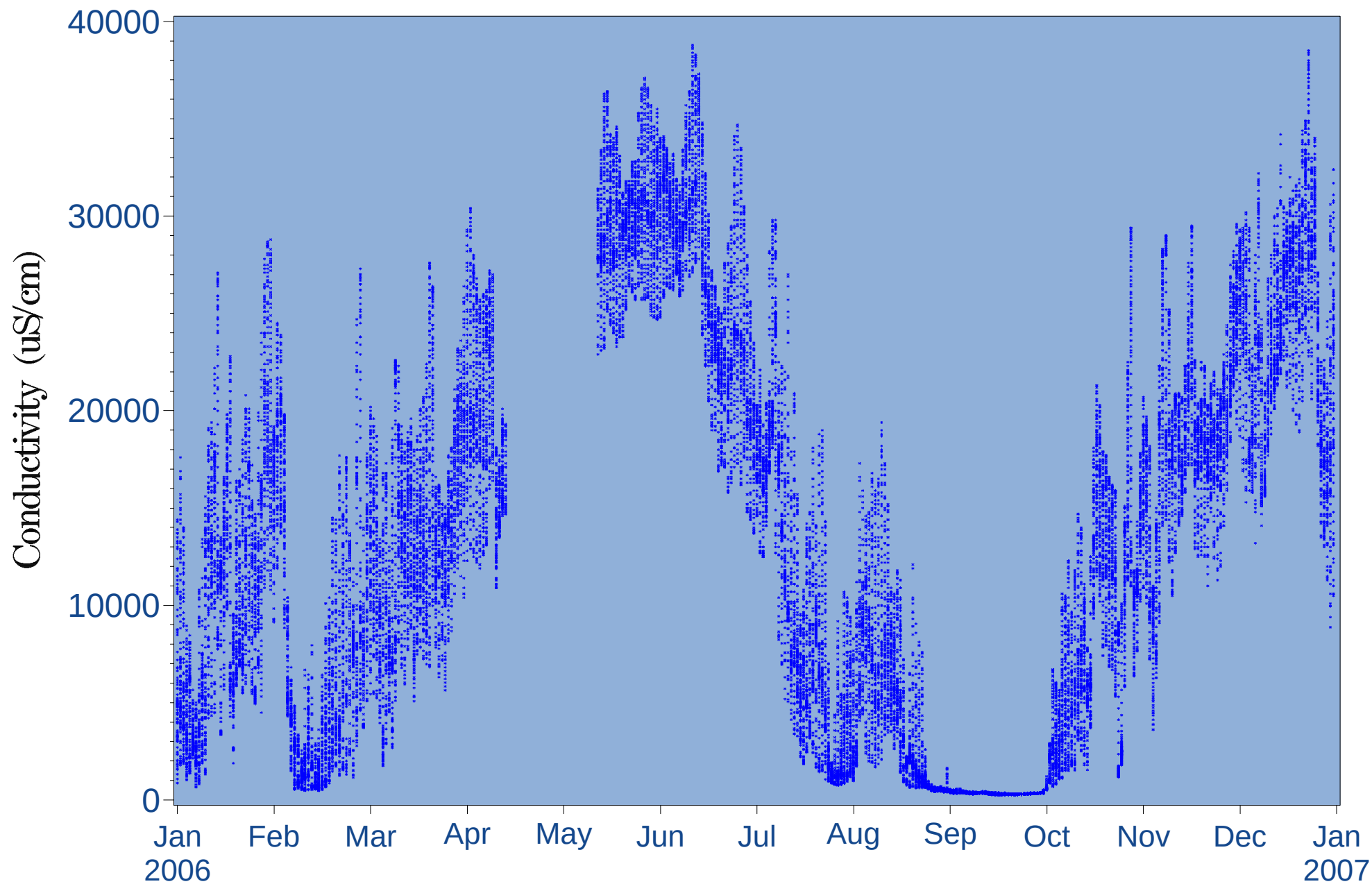


Figure 5.2 2006 Surface conductivity (15-min intervals) for Peace River fixed station at Harbour Heights - USGS Gage 02297460 (River Kilometer=15.5)

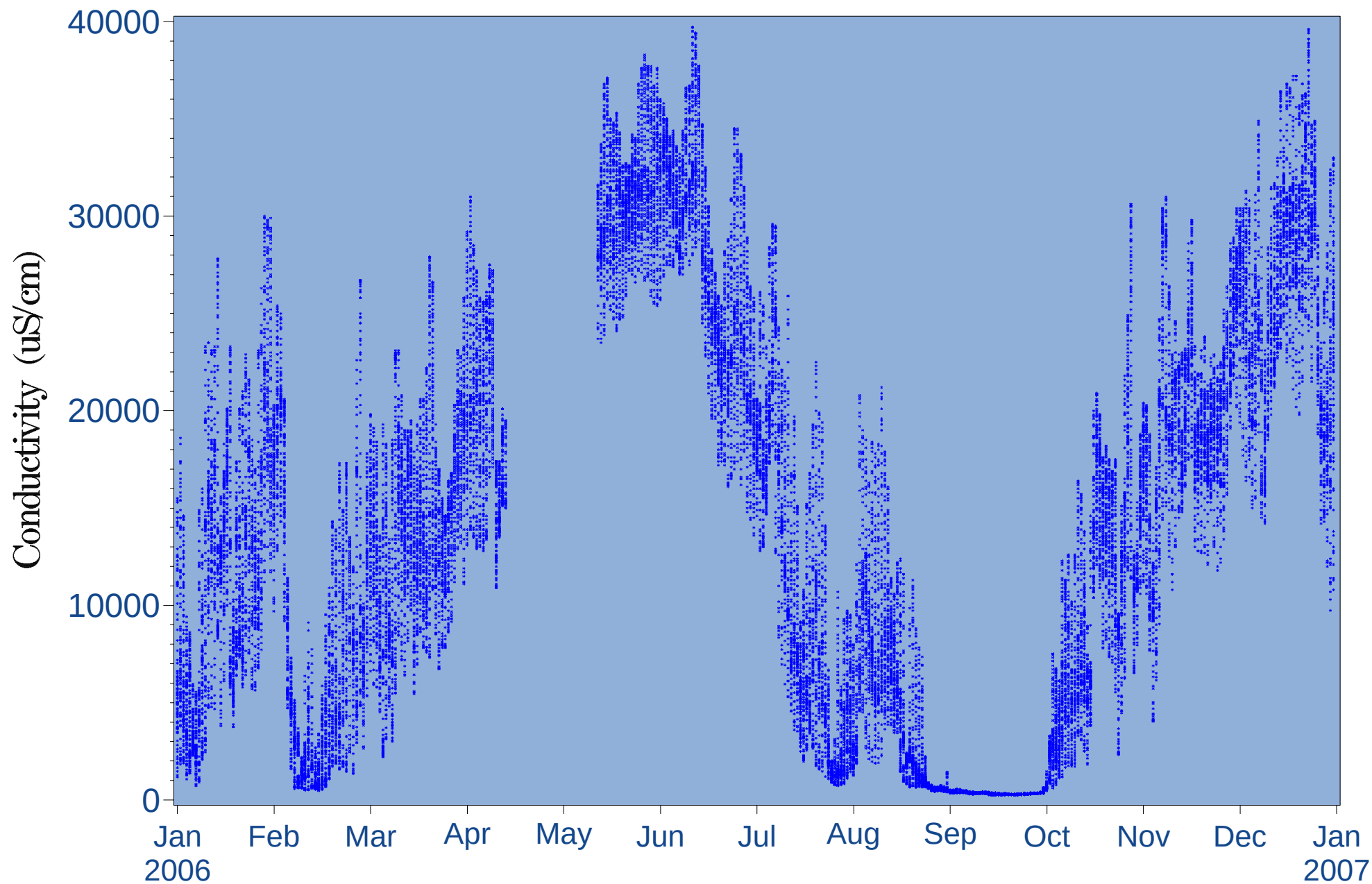


Figure 5.3 2006 Bottom conductivity (15-min intervals) for Peace River fixed station at Harbour Heights - USGS Gage 02297460 (River Kilometer=15.5)

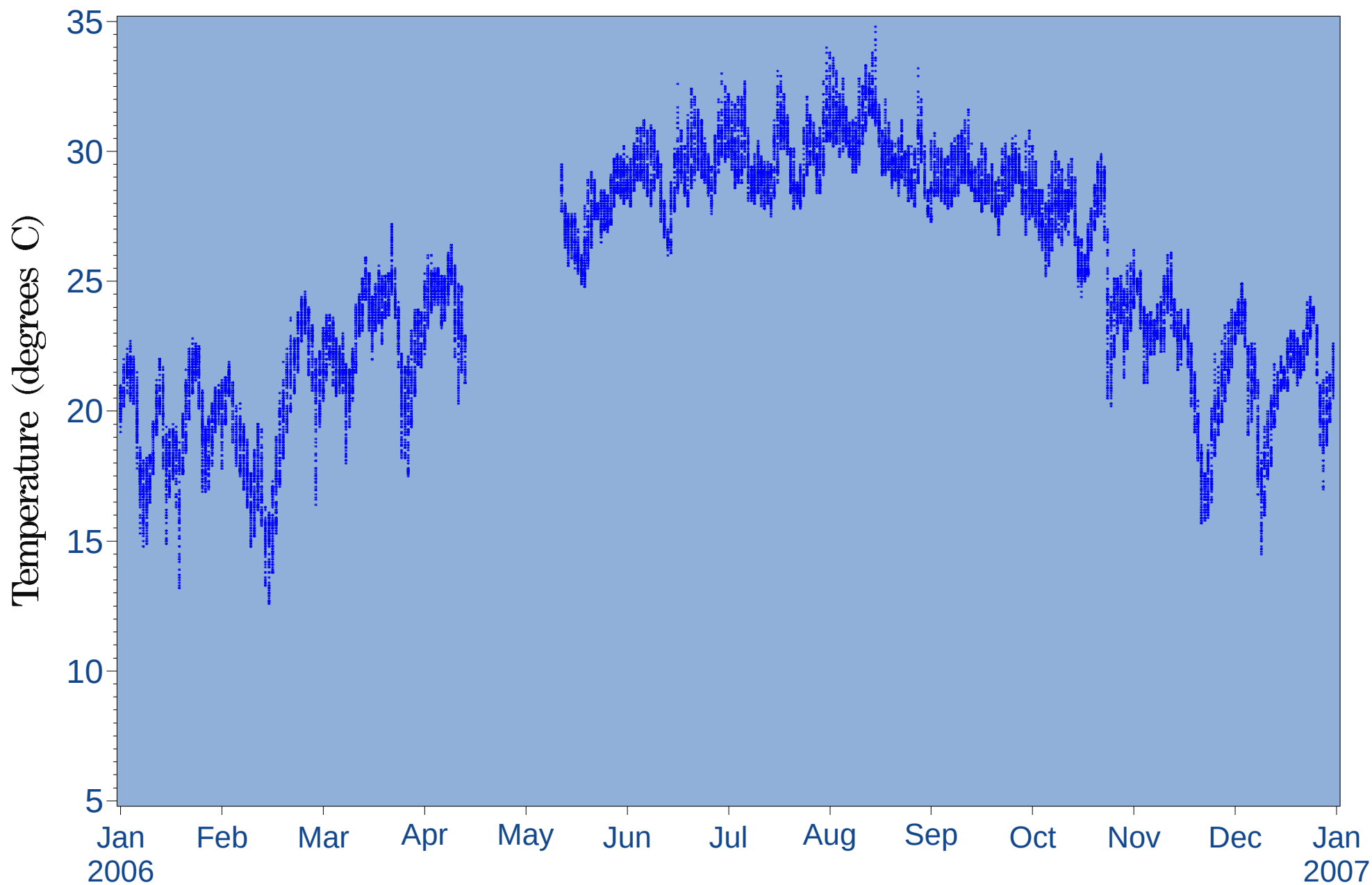


Figure 5.4 2006 Surface temperature (15-min intervals) for Peace River fixed station at Harbour Heights - USGS Gage 02297460 (River Kilometer=15.5)

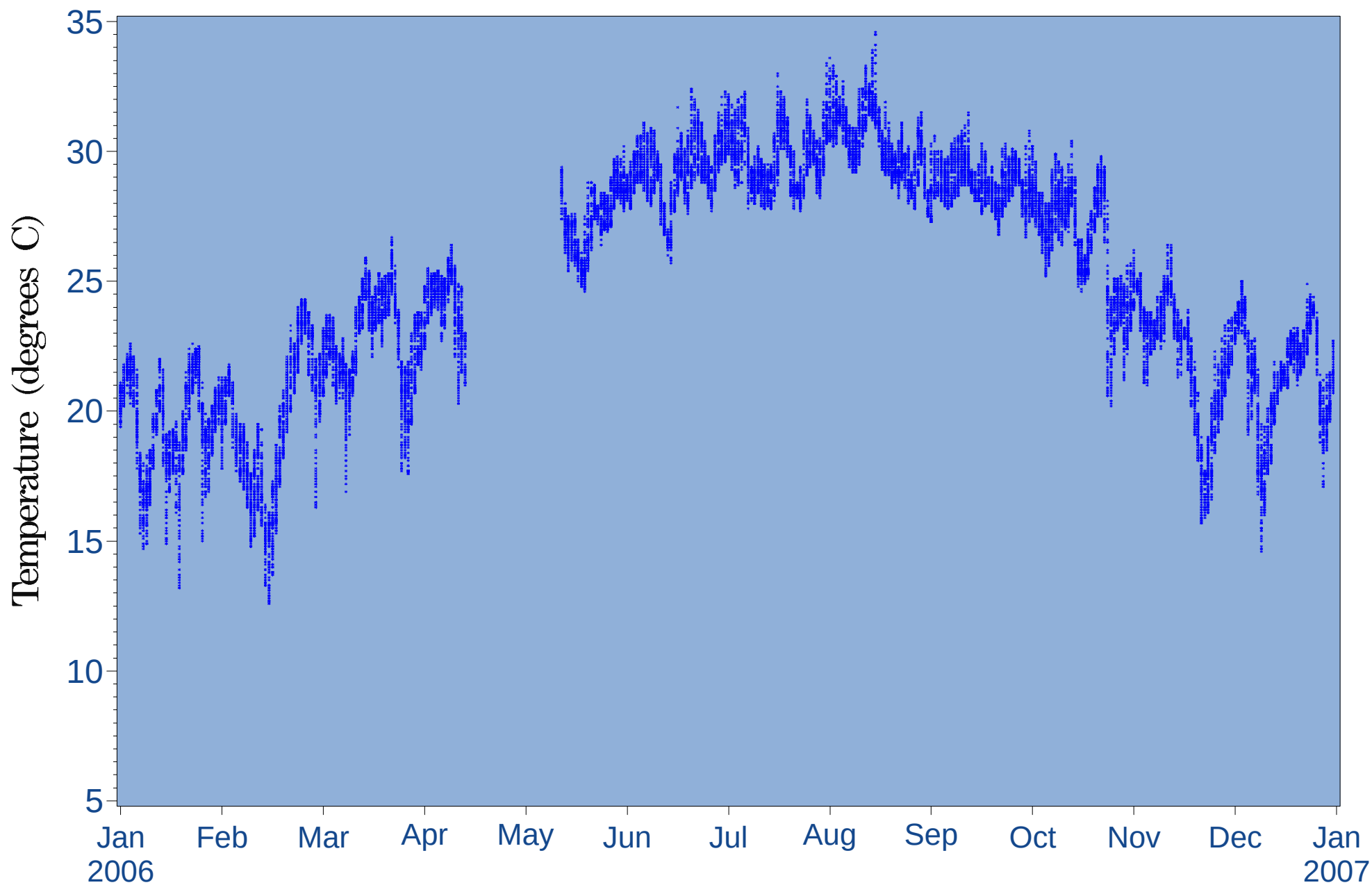


Figure 5.5 2006 Bottom temperature (15-min intervals) for Peace River fixed station at Harbour Heights - USGS Gage 02297460 (River Kilometer=15.5)

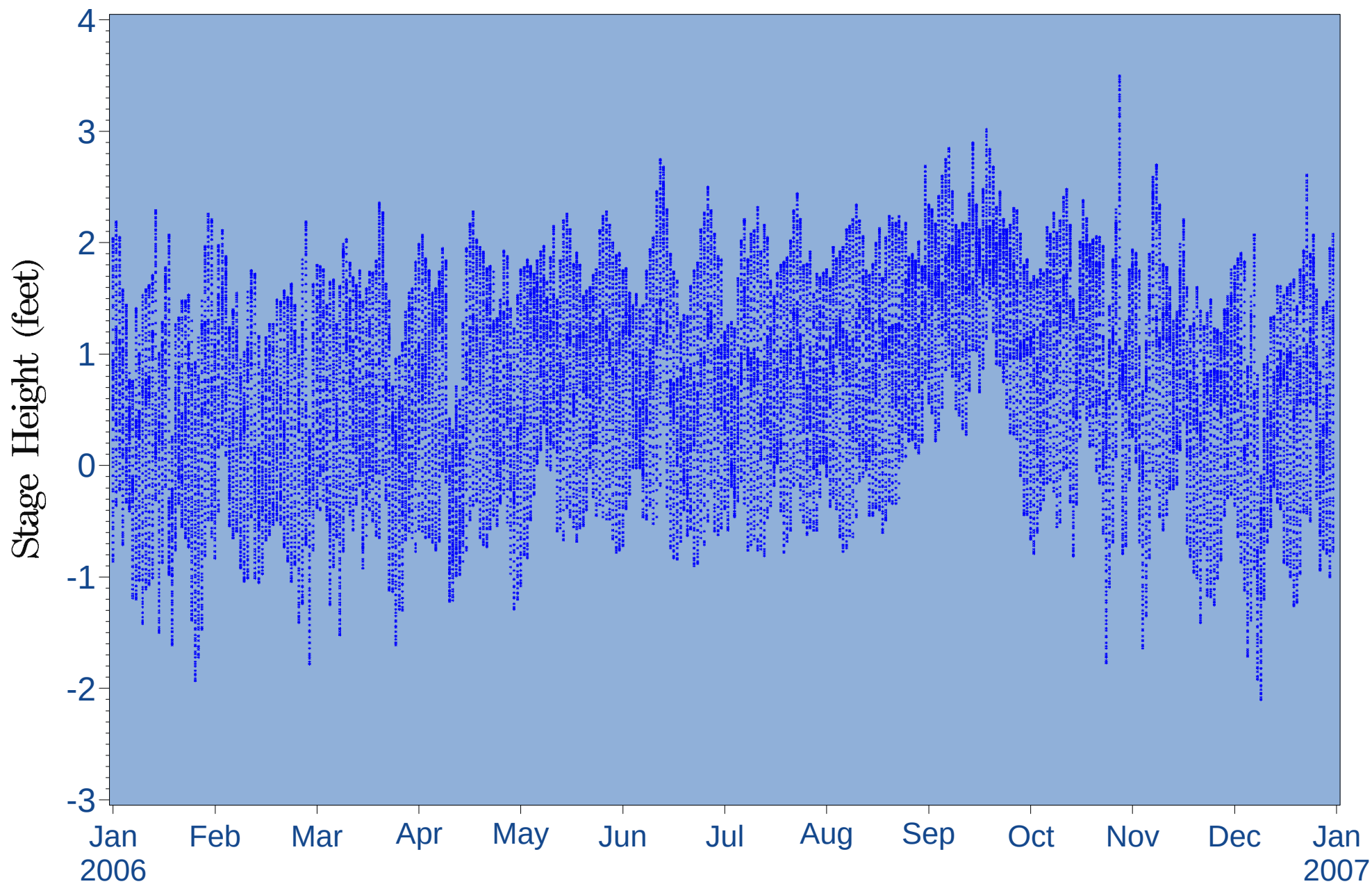


Figure 5.6 2006 Stage height (15-min intervals) for Peace River fixed station at Peace River Heights - USGS gage 02297350 (River Kilometer=26.7)

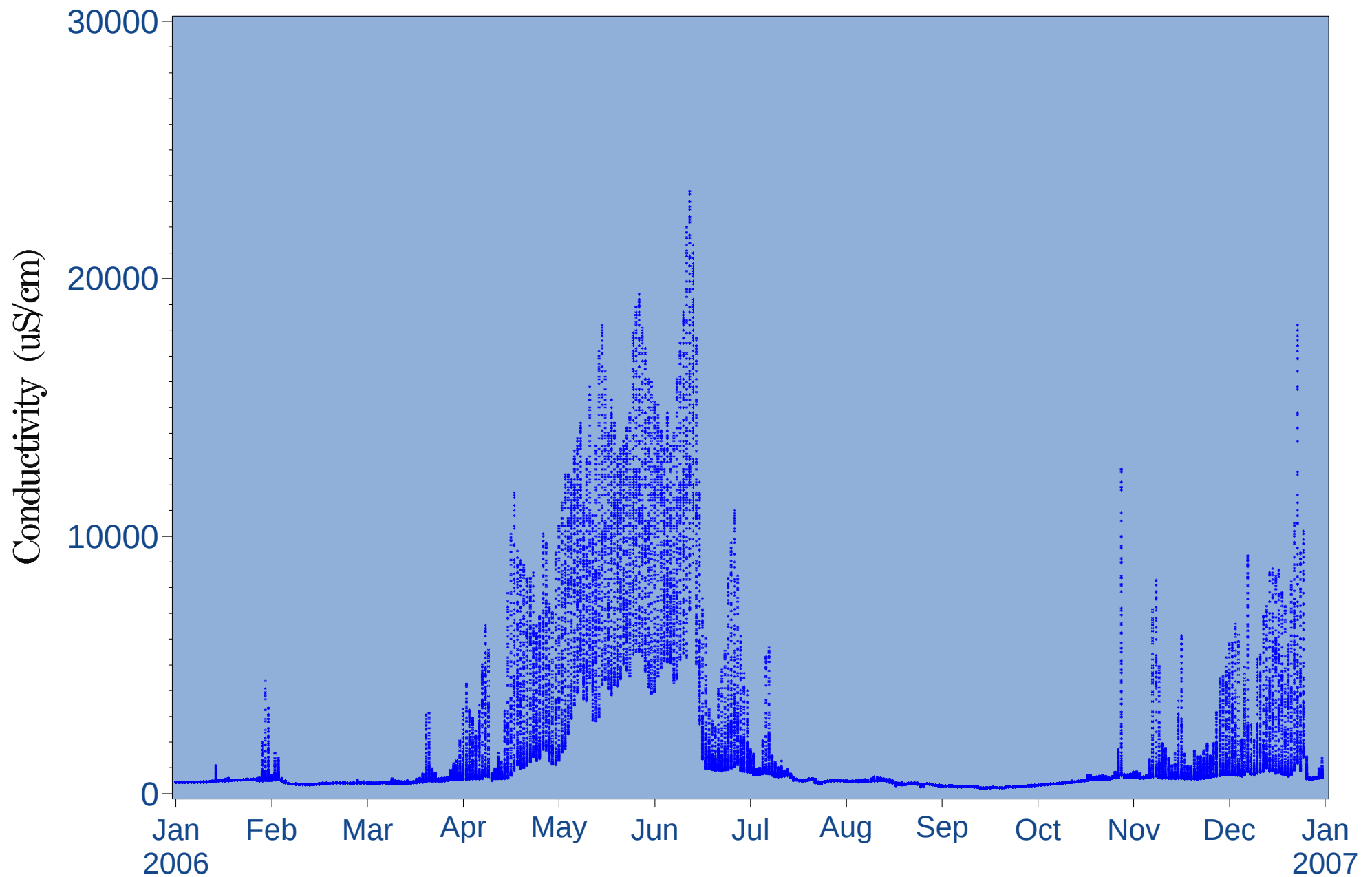


Figure 5.7 2006 Surface conductivity (15-min intervals) for Peace River fixed station at Peace River Heights - USGS gage 02297350 (River Kilometer=26.7)

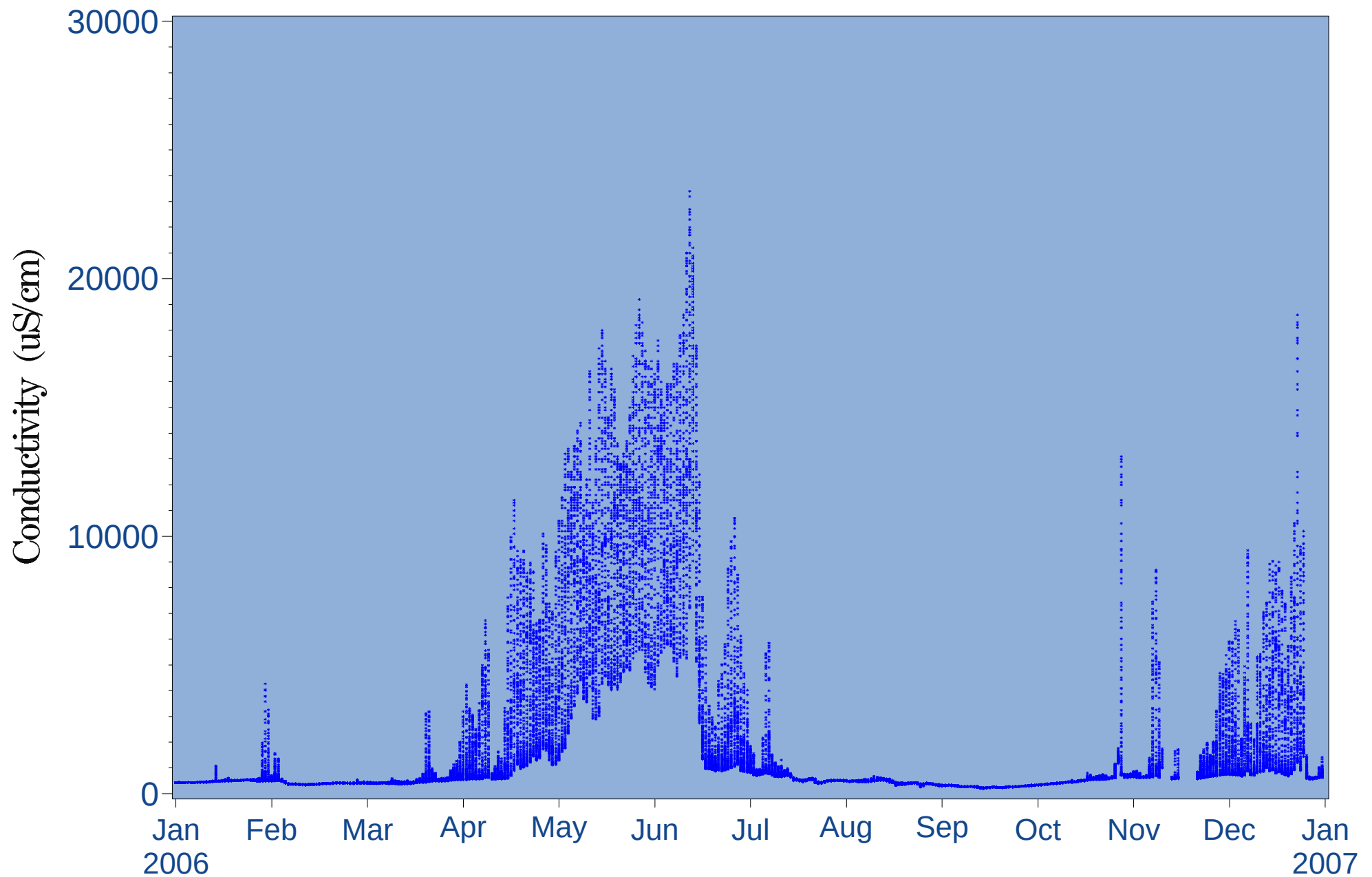


Figure 5.8 2006 Bottom conductivity (15-min intervals) for Peace River fixed station at Peace River Heights - USGS gage 02297350 (River Kilometer=26.7)

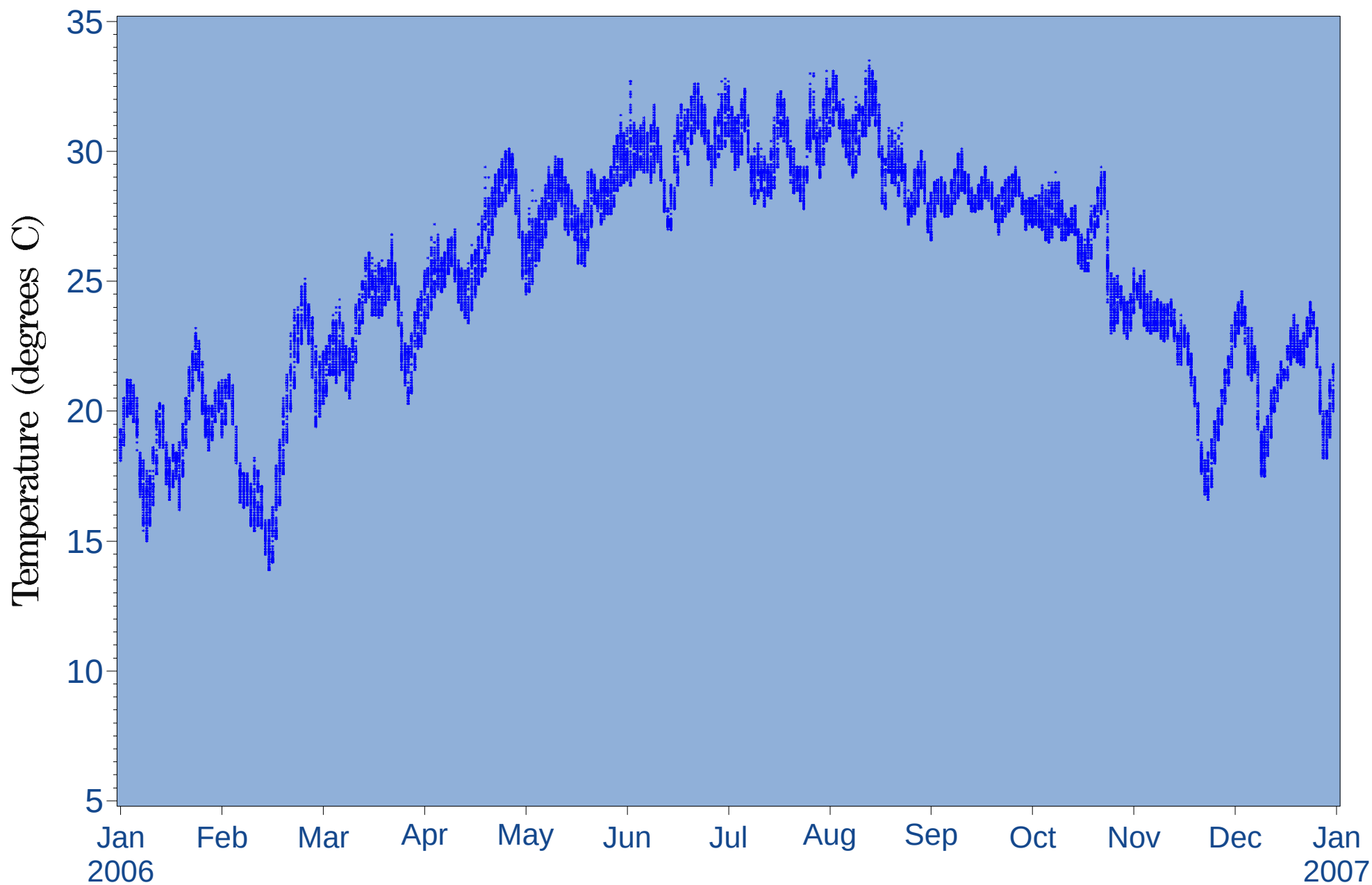


Figure 5.9 2006 Surface temperature (15-min intervals) for Peace River fixed station at Peace River Heights - USGS gage 02297350 (River Kilometer=26.7)

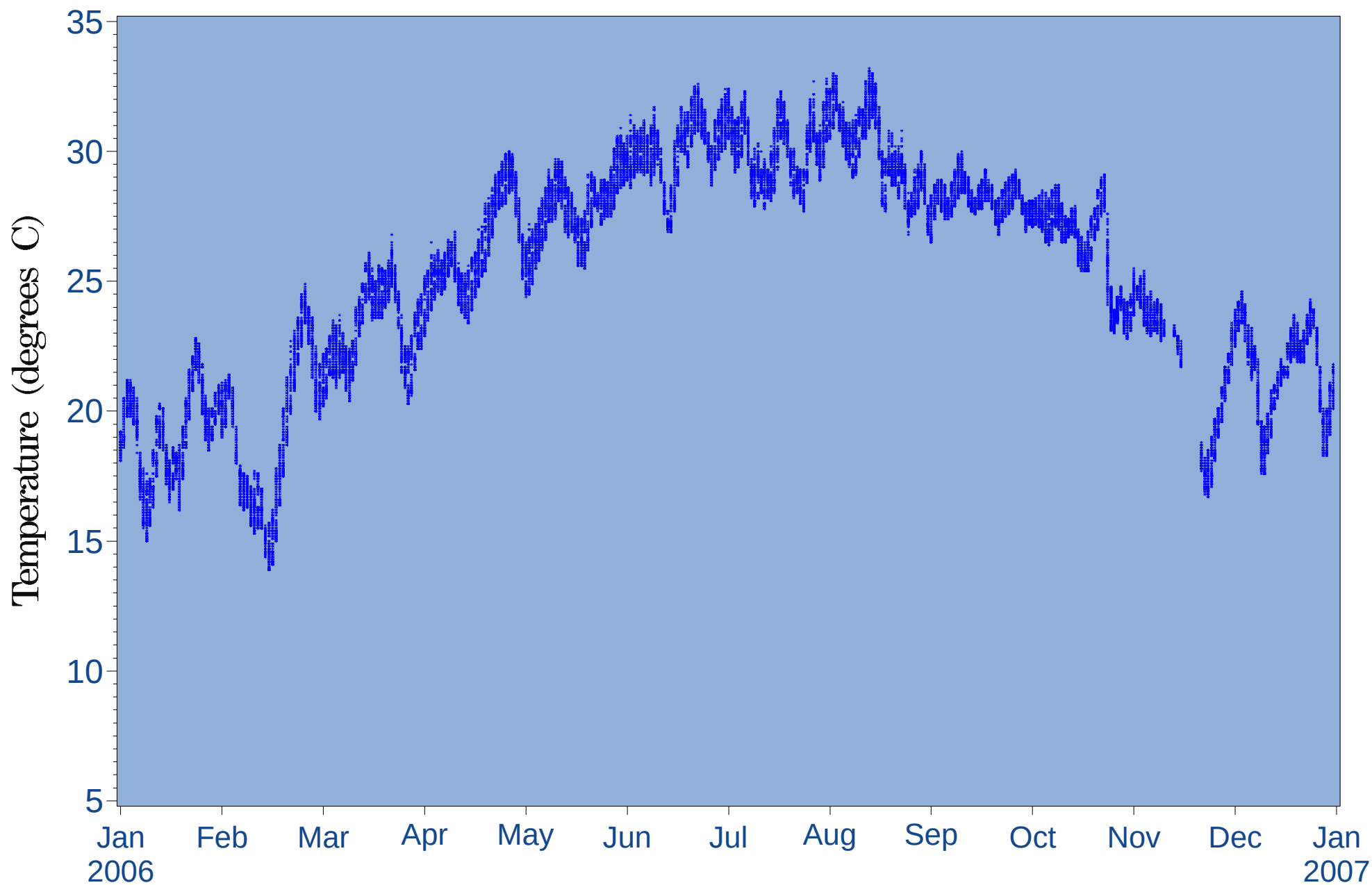


Figure 5.10 2006 Bottom temperature (15-min intervals) for Peace River fixed station at Peace River Heights - USGS gage 02297350 (River Kilometer=26.7)

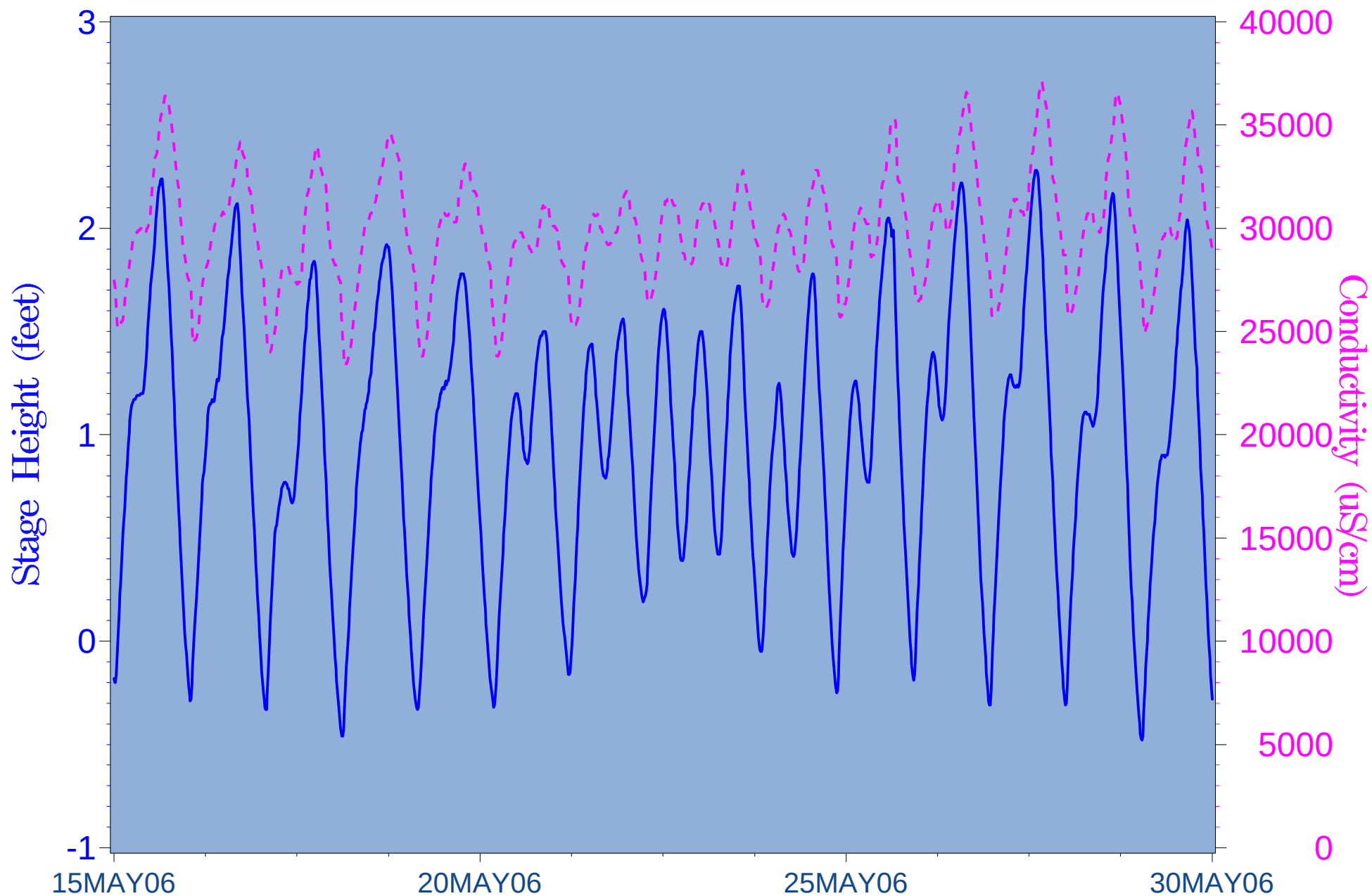


Figure 5.11 Surface conductivity and stage height in May at Harbour Heights
- USGS Gage 02297460 (River Kilometer 15.5)

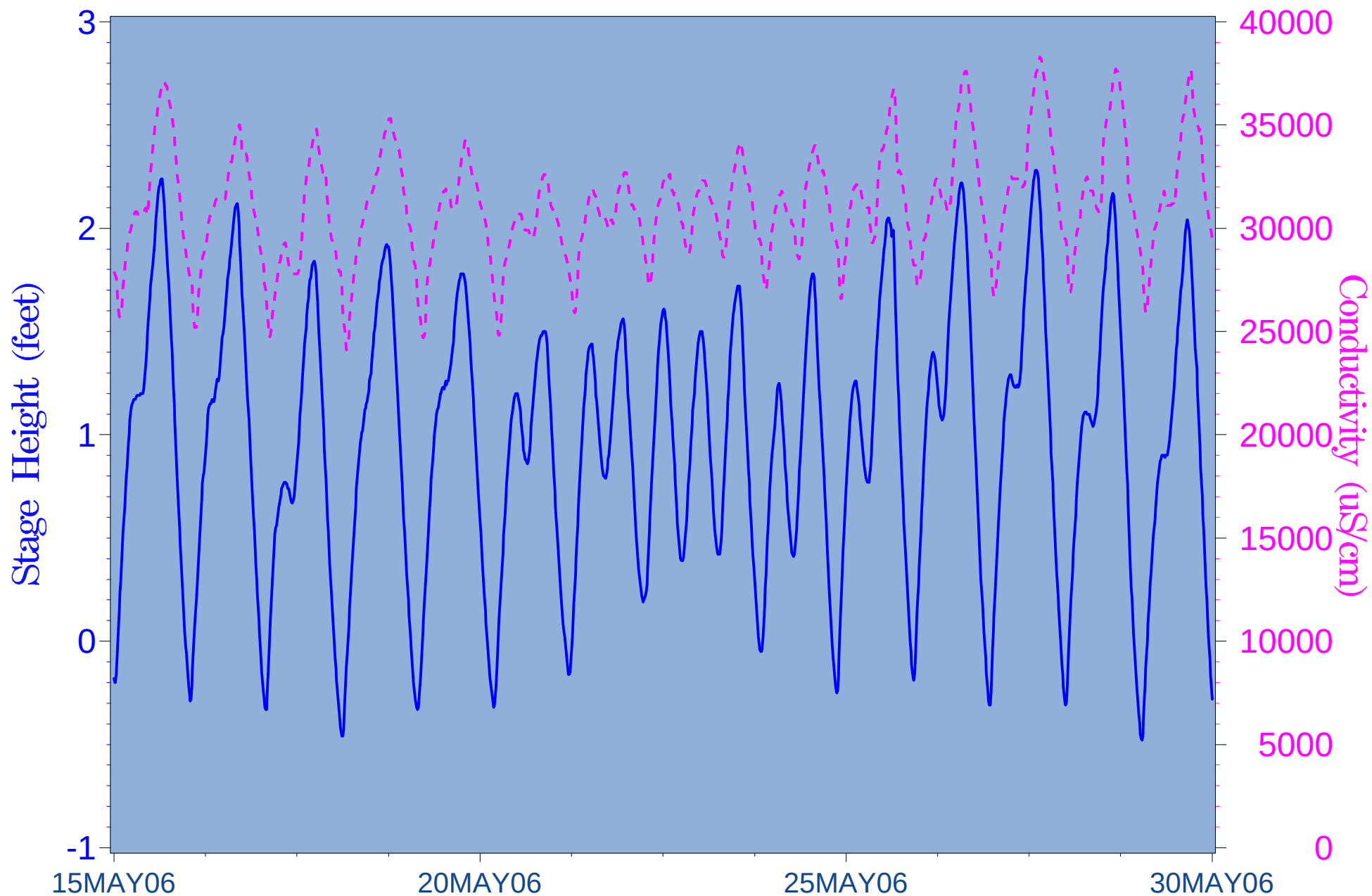


Figure 5.12 Bottom conductivity and stage height in May at Harbour Heights
- USGS Gage 02297460 (River Kilometer 15.5)

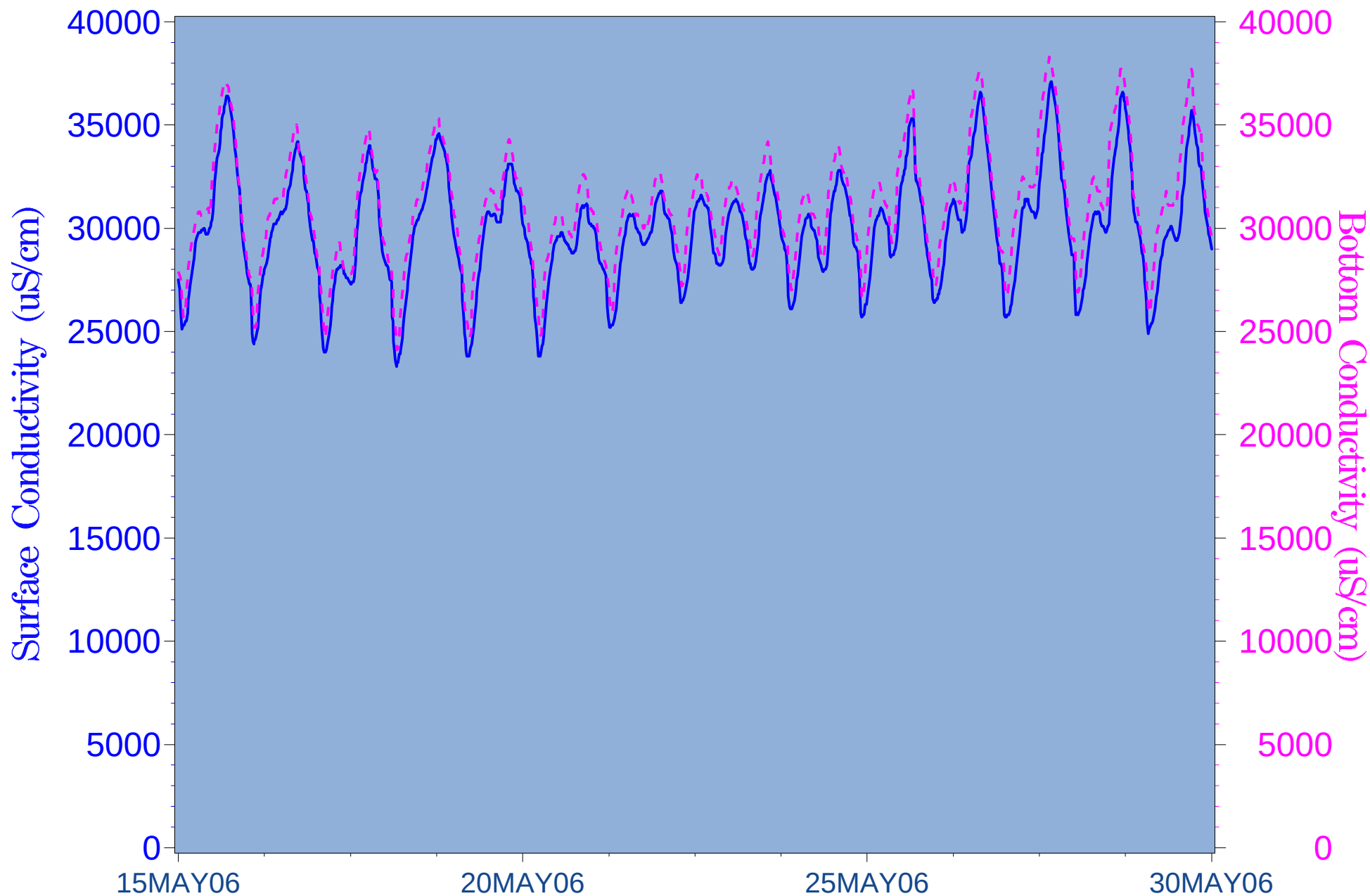


Figure 5.13 Surface & bottom conductivity in May at Harbour Heights
- USGS Gage 02297460 (River Kilometer 15.5)

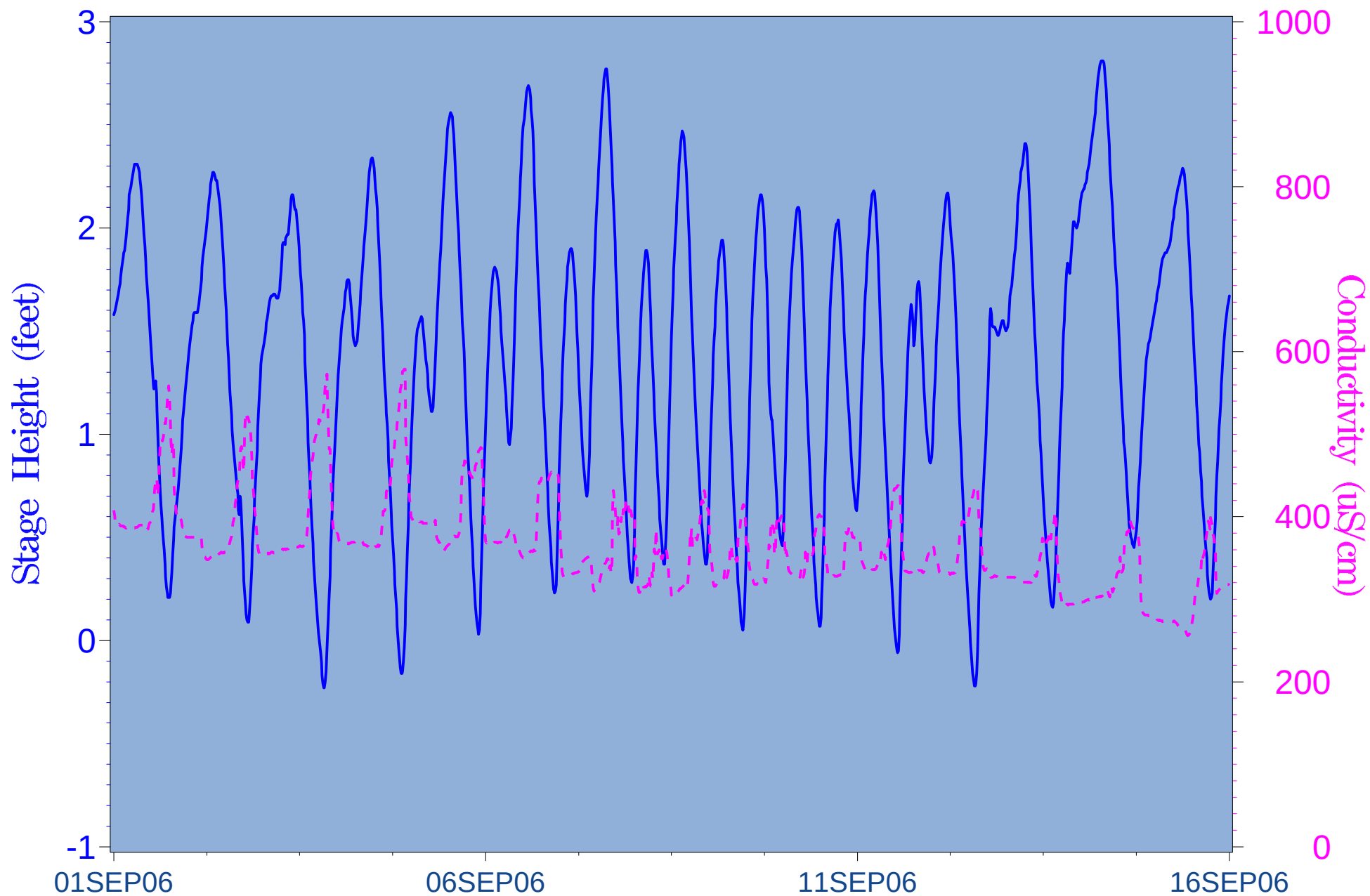


Figure 5.14 Surface conductivity and stage height in September at Harbour Heights
- USGS Gage 02297460 (River Kilometer 15.5)

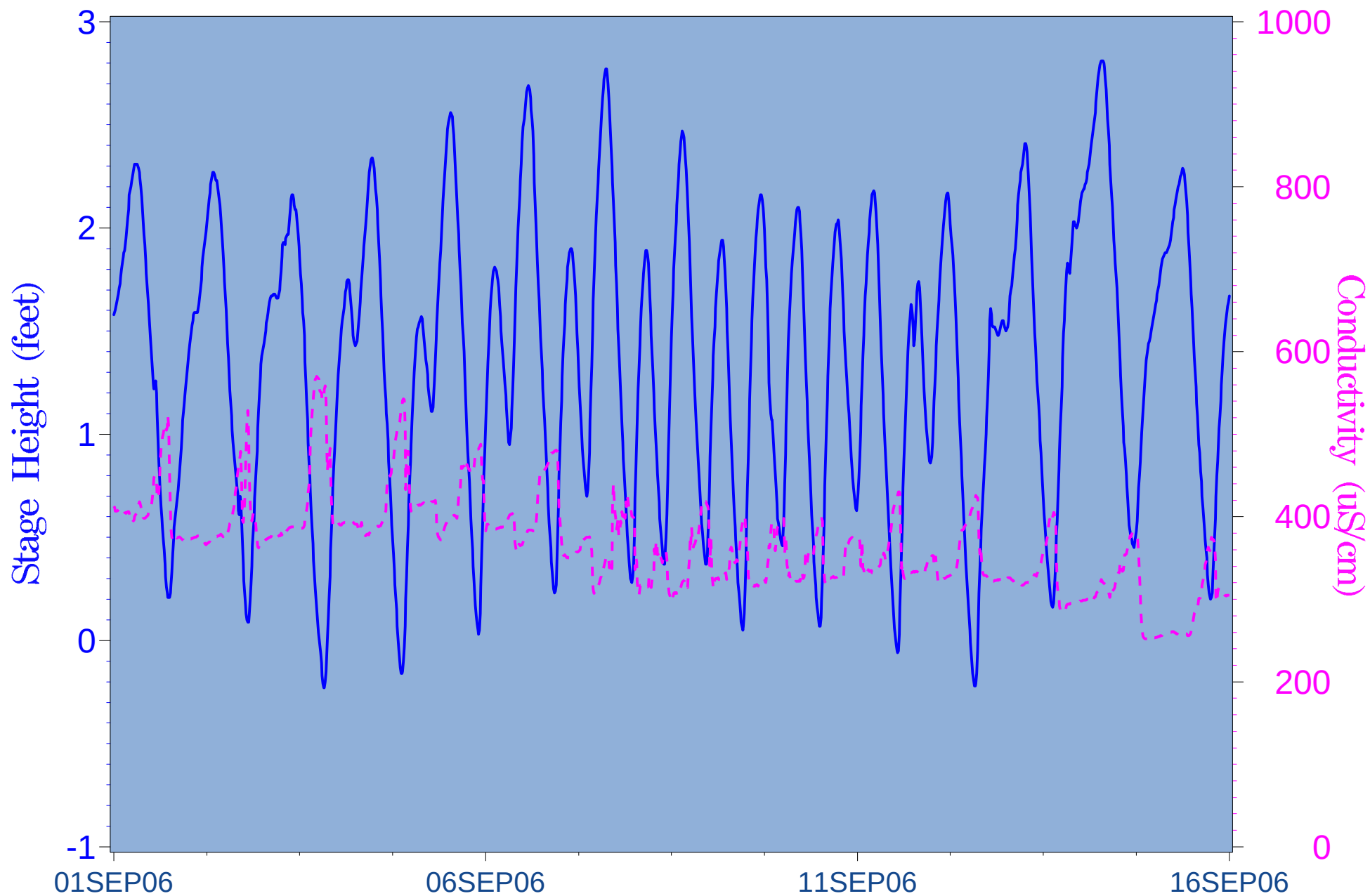


Figure 5.15 Bottom conductivity and stage height in September at Harbour Heights
- USGS Gage 02297460 (River Kilometer 15.5)

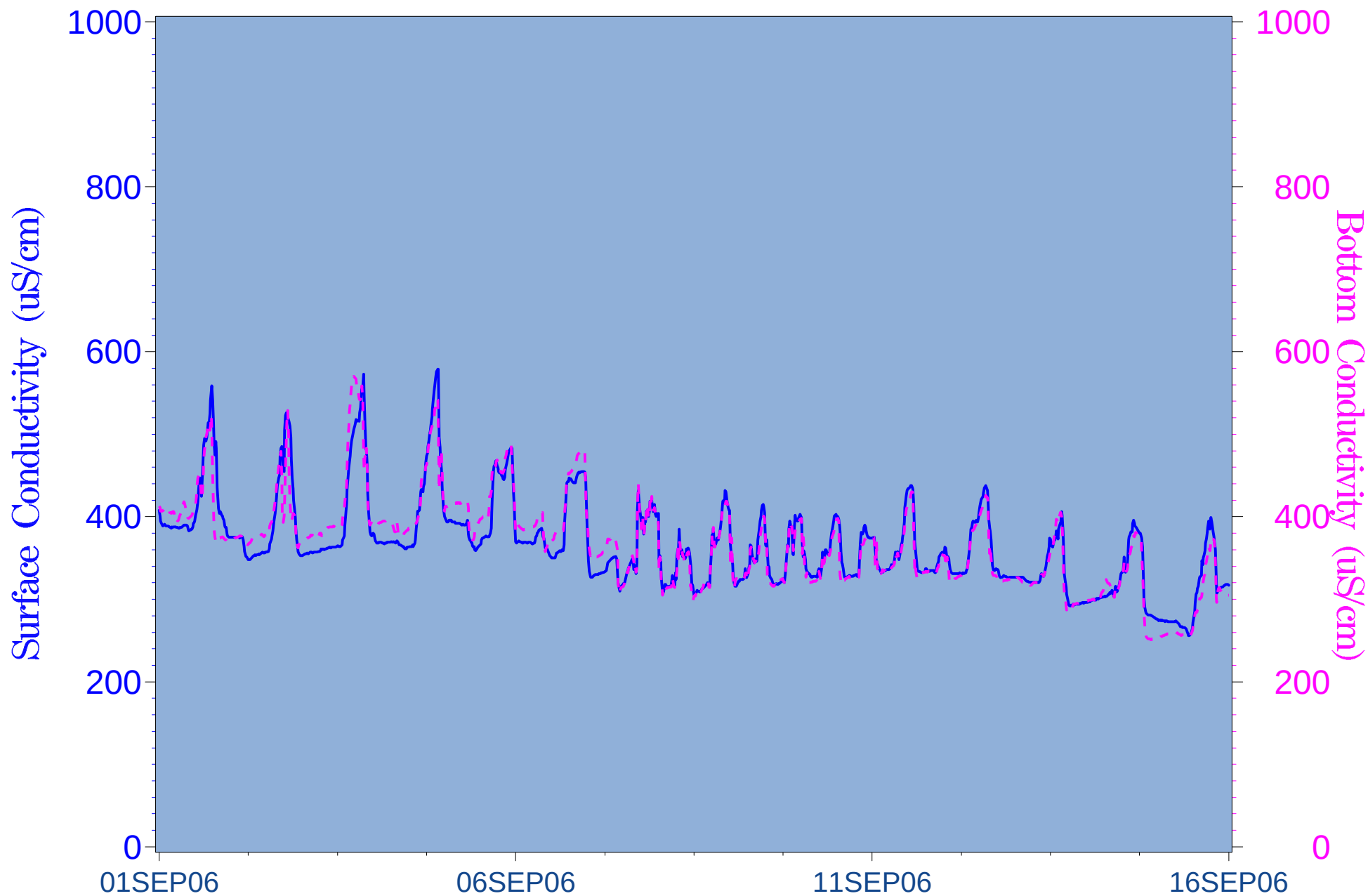


Figure 5.16 Surface and bottom conductivity in September at Harbour Heights
- USGS Gage 02297460 (River Kilometer 15.5)

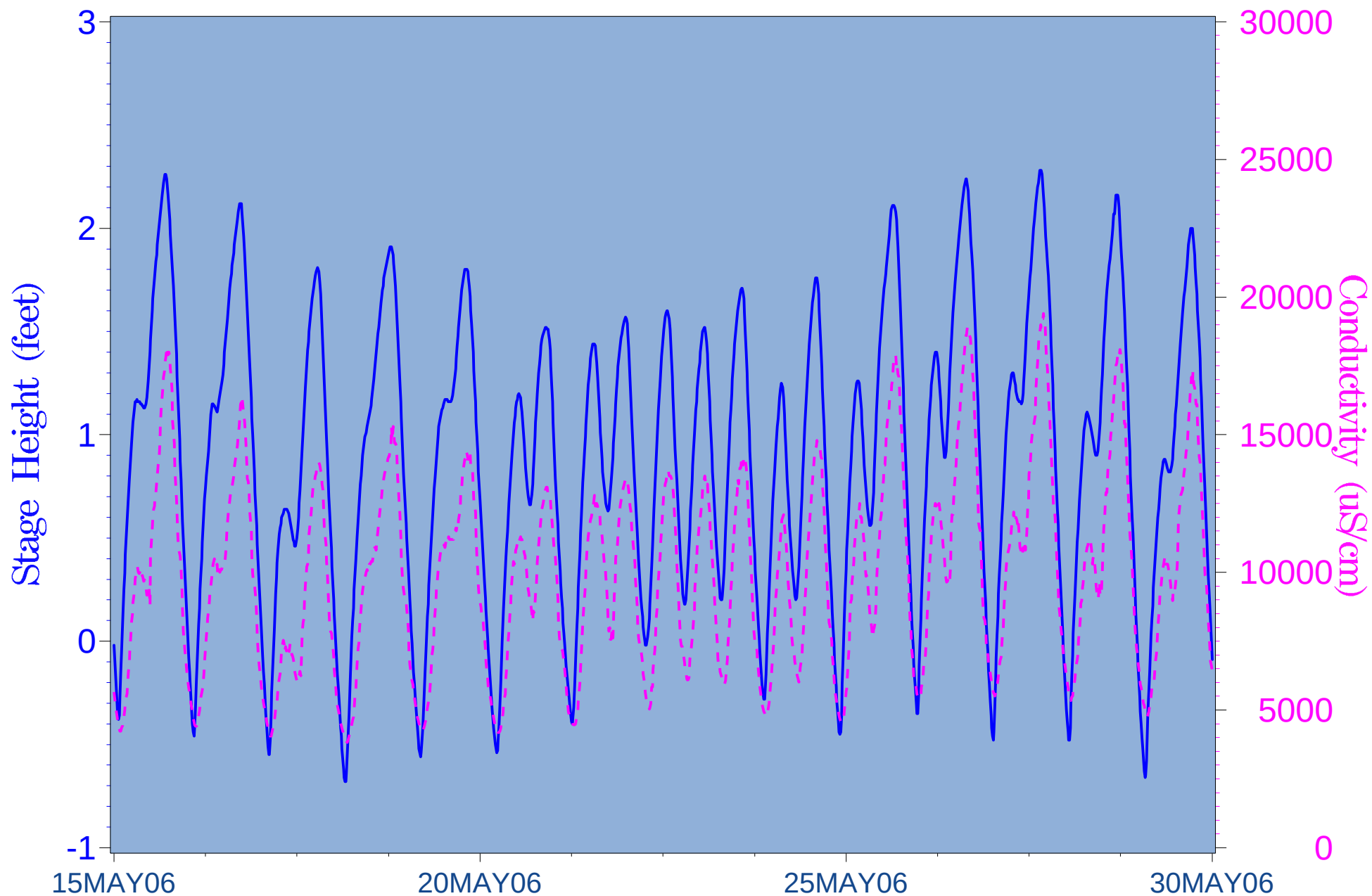


Figure 5.17 Surface conductivity and stage height in May
- USGS Gage 02297350 (River Kilometer 26.7)

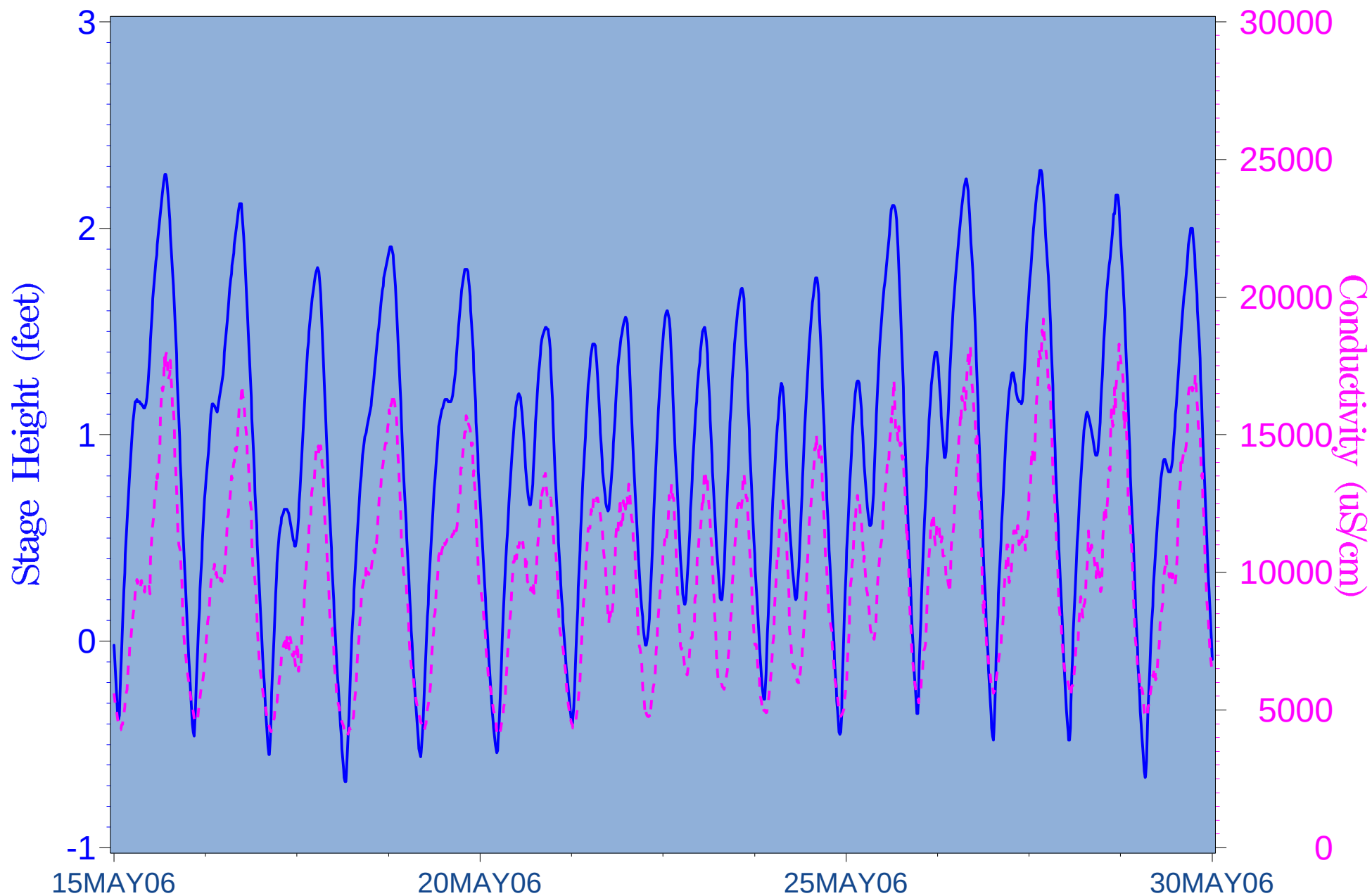


Figure 5.18 Bottom conductivity and stage height in May
- USGS Gage 02297350 (River Kilometer 26.7)

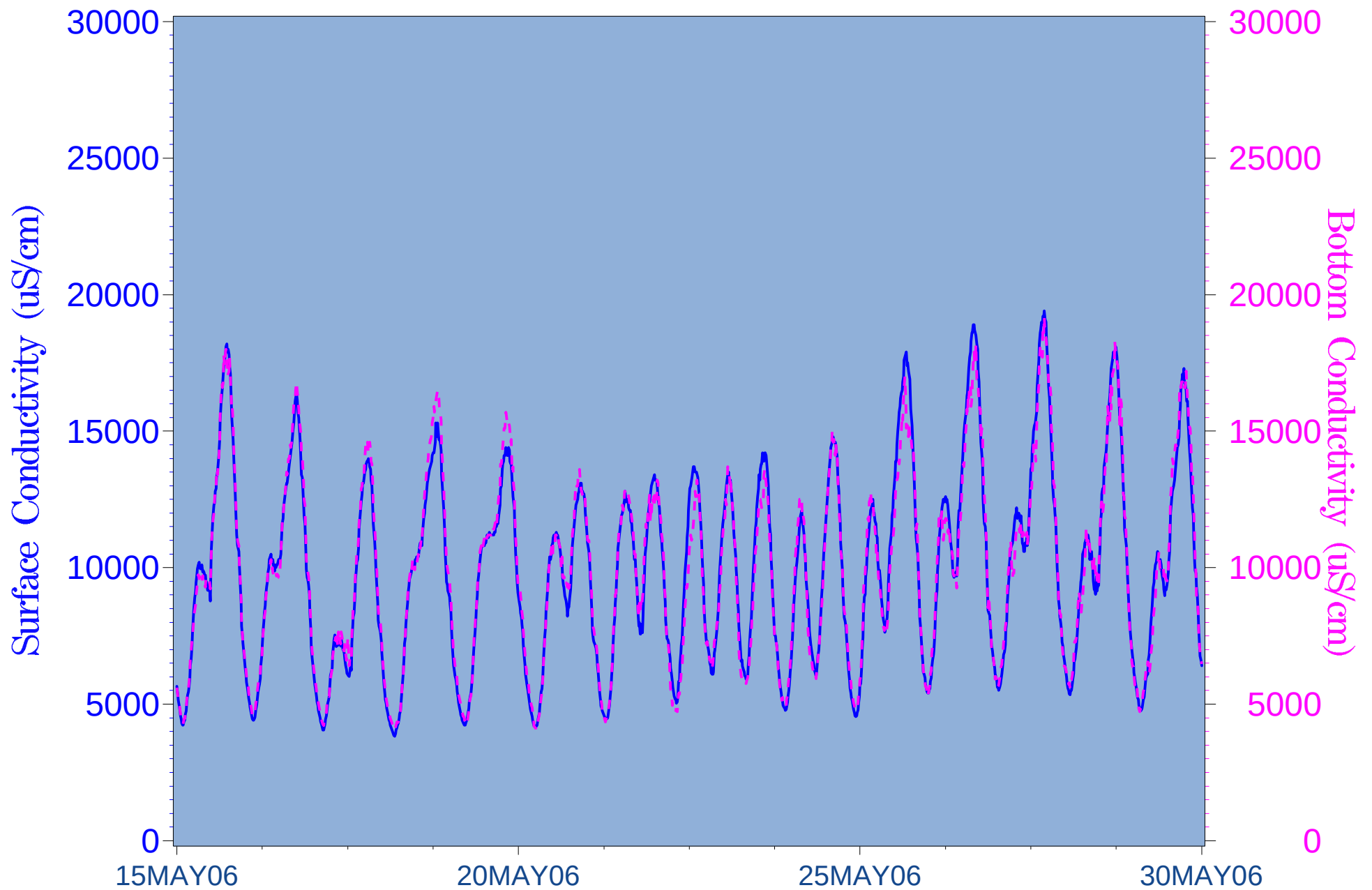


Figure 5.19 Surface and bottom conductivity in May
- USGS Gage 02297350 (River Kilometer 26.7)

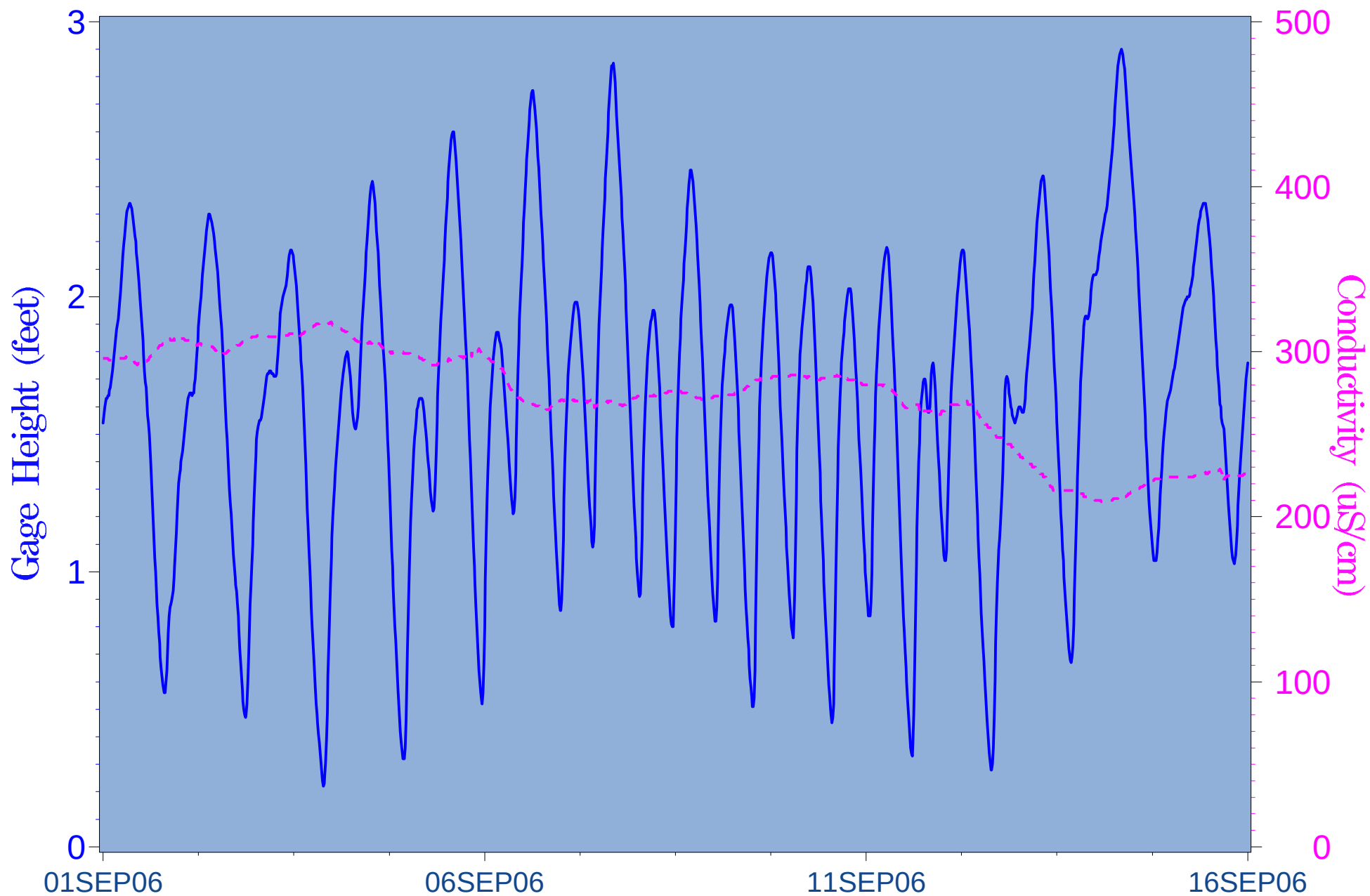


Figure 5.20 Surface conductivity and stage height in September
- USGS Gage 02297350 (River Kilometer 26.7)

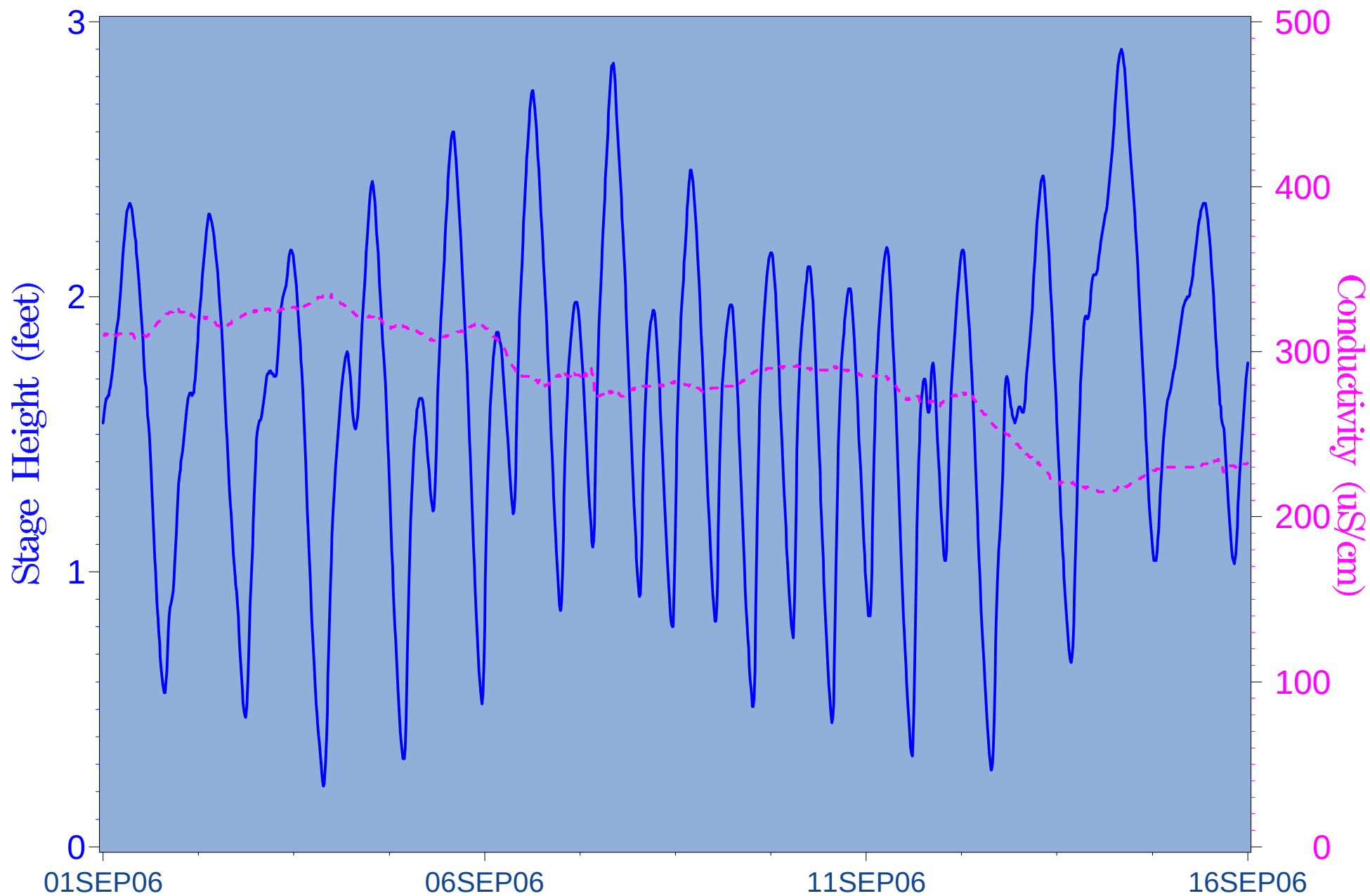


Figure 5.21 Bottom conductivity and stage height in September
- USGS Gage 02297350 (River Kilometer 26.7)

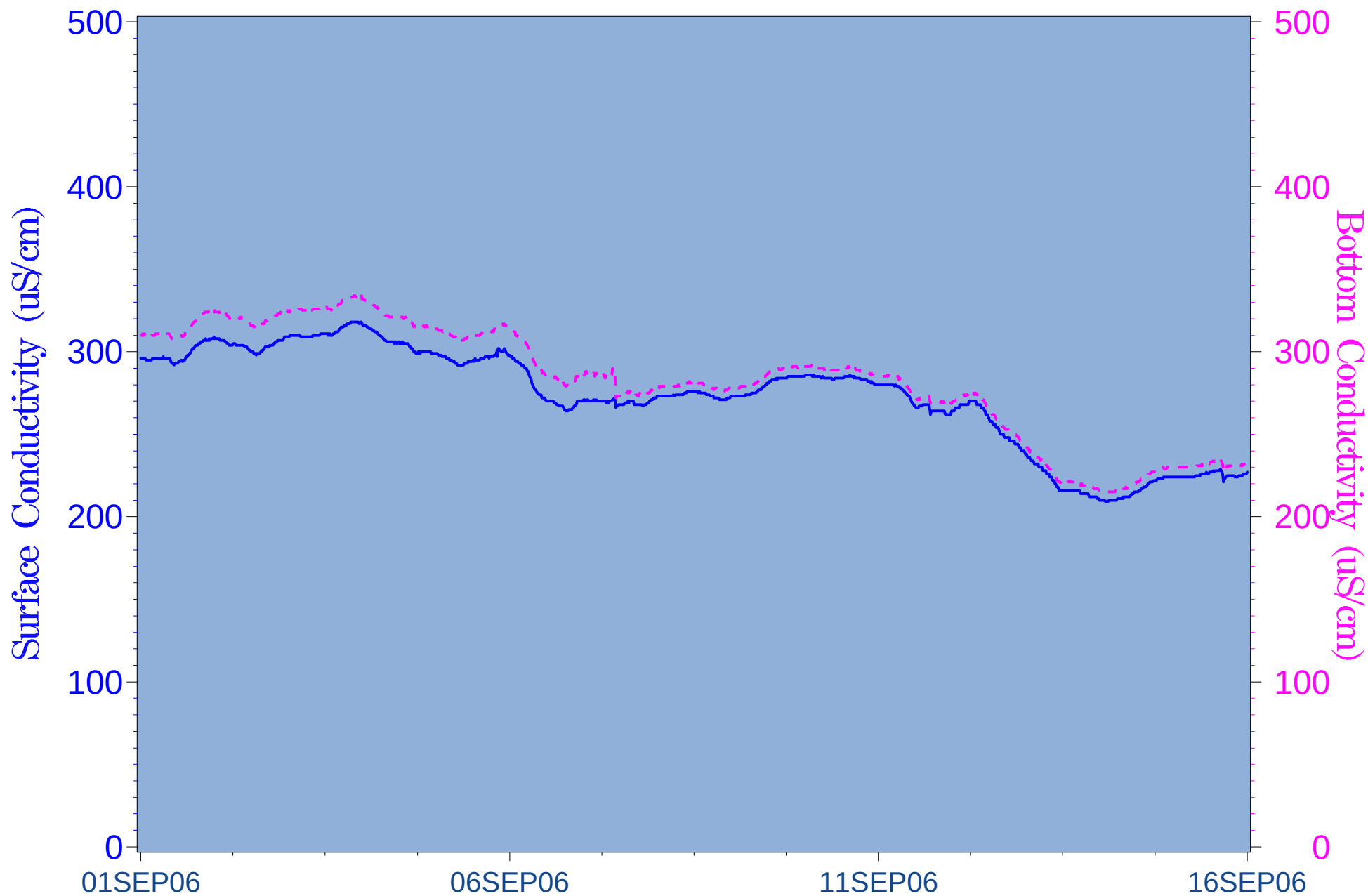
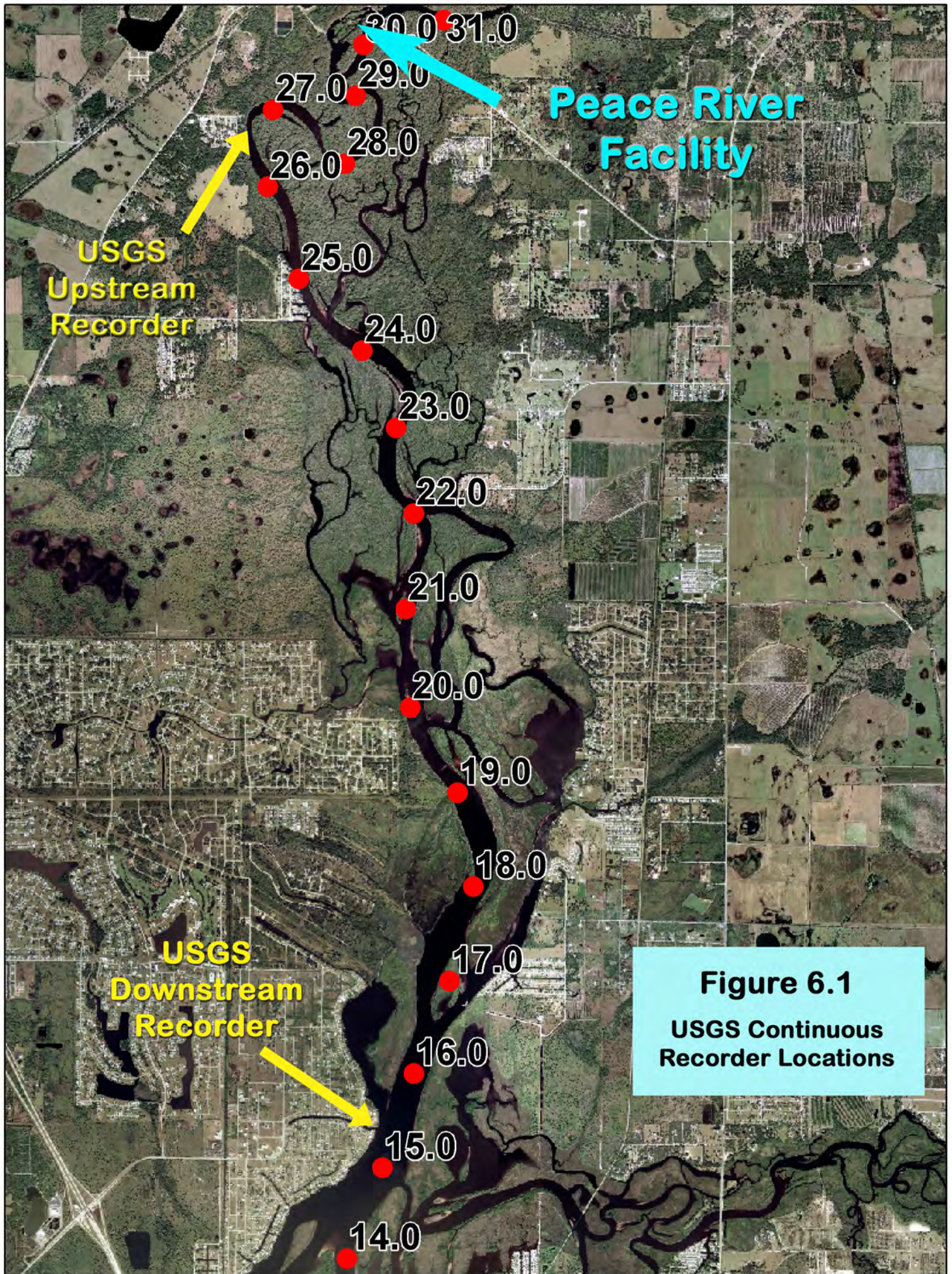


Figure 5.22 Surface and bottom conductivity in September
- USGS Gage 02297350 (River Kilometer 26.7)



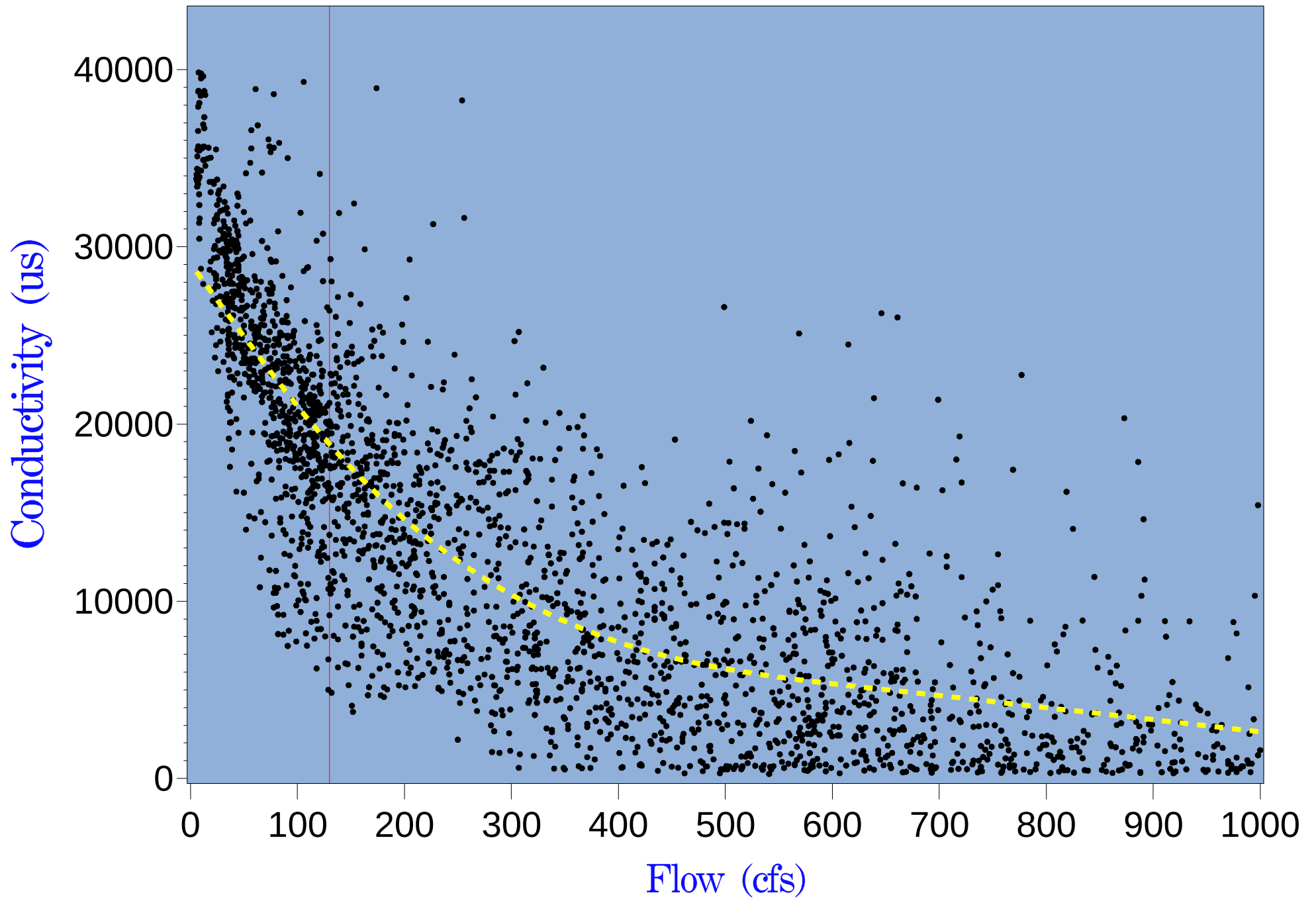


Figure 6.2 Recorder surface conductivity at river kilometer 15.5 versus flow

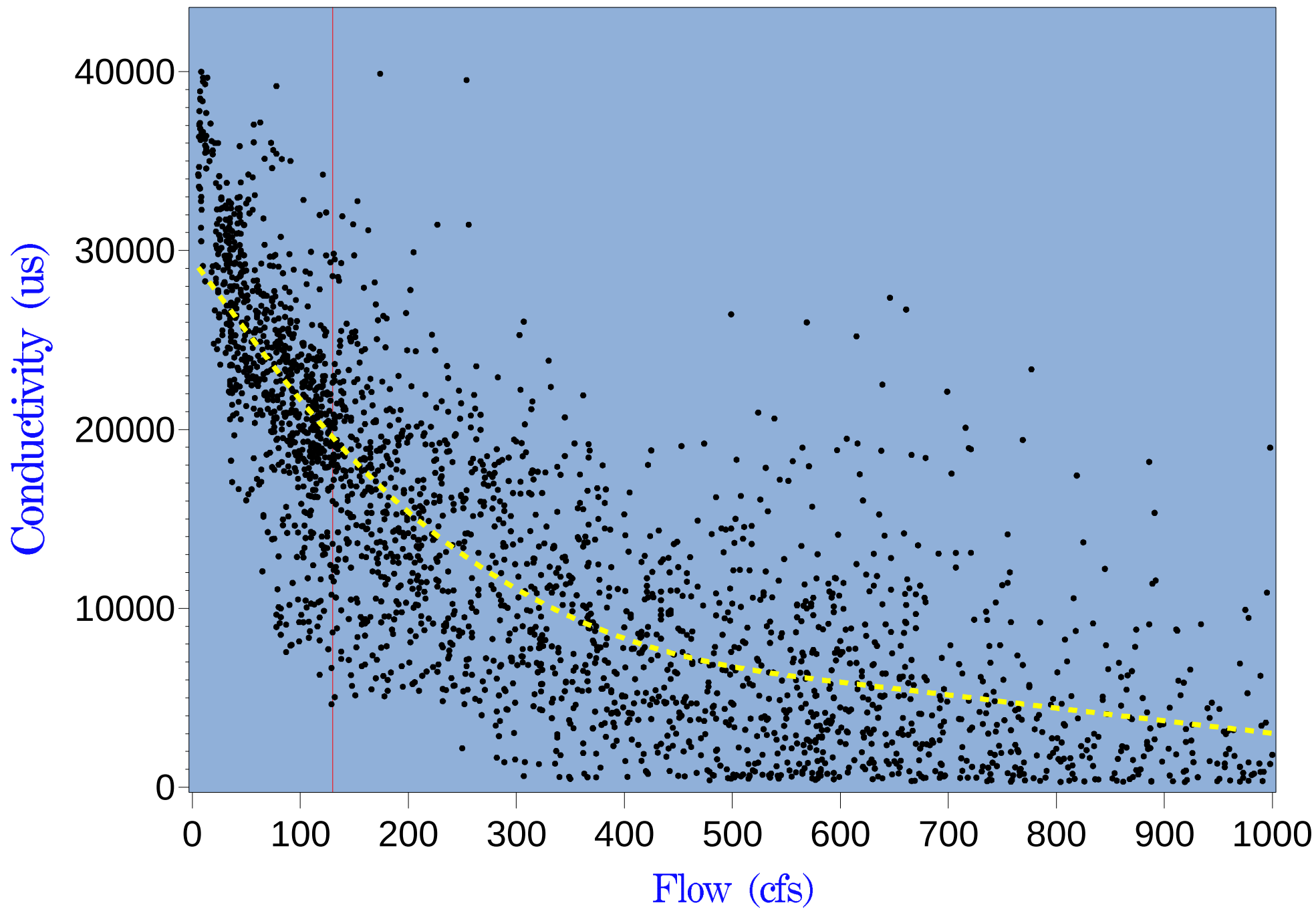


Figure 6.3 Recorder bottom conductivity at river kilometer 15.5 versus flow

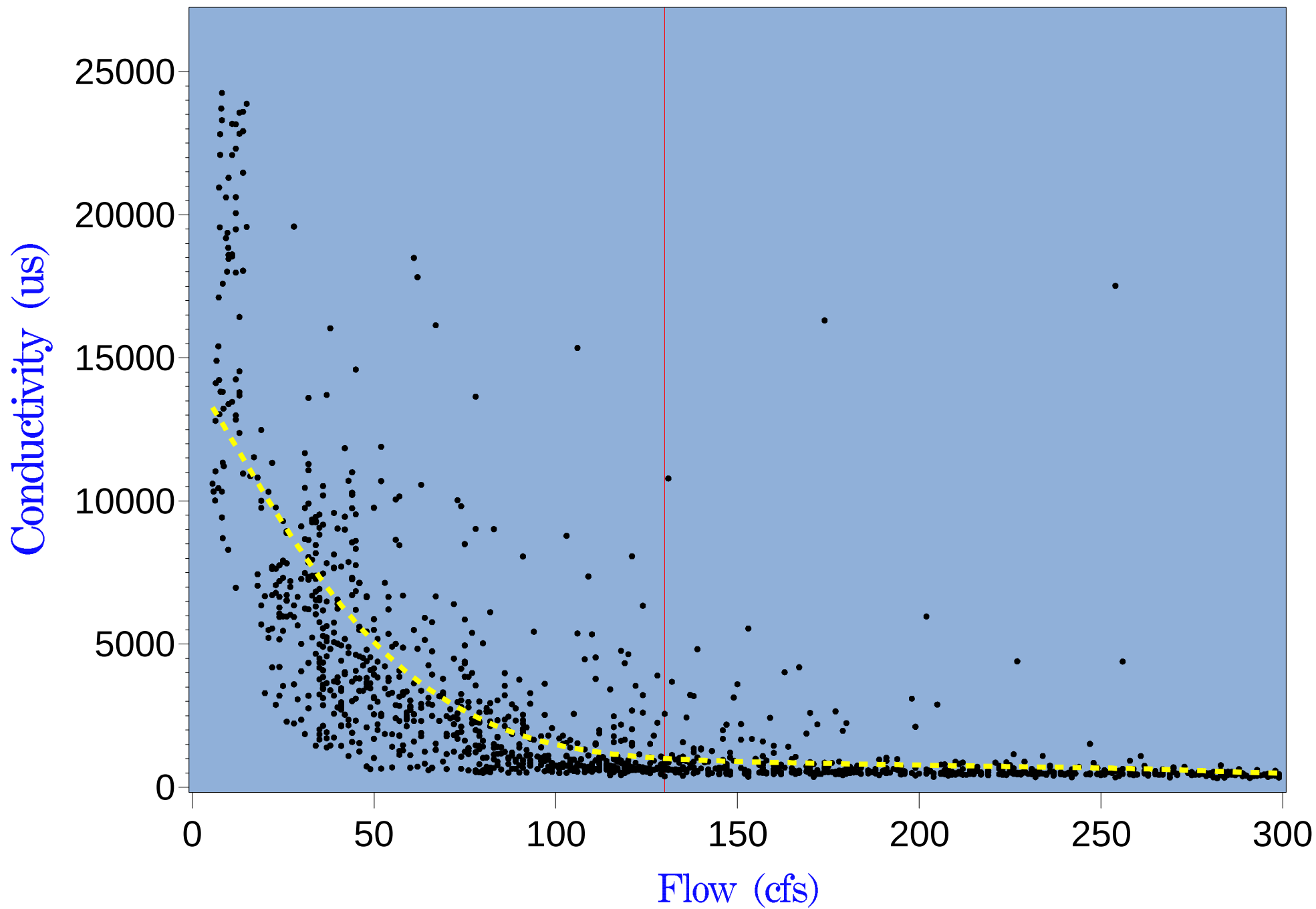


Figure 6.4 Recorder surface conductivity at river kilometer 26.7 versus flow

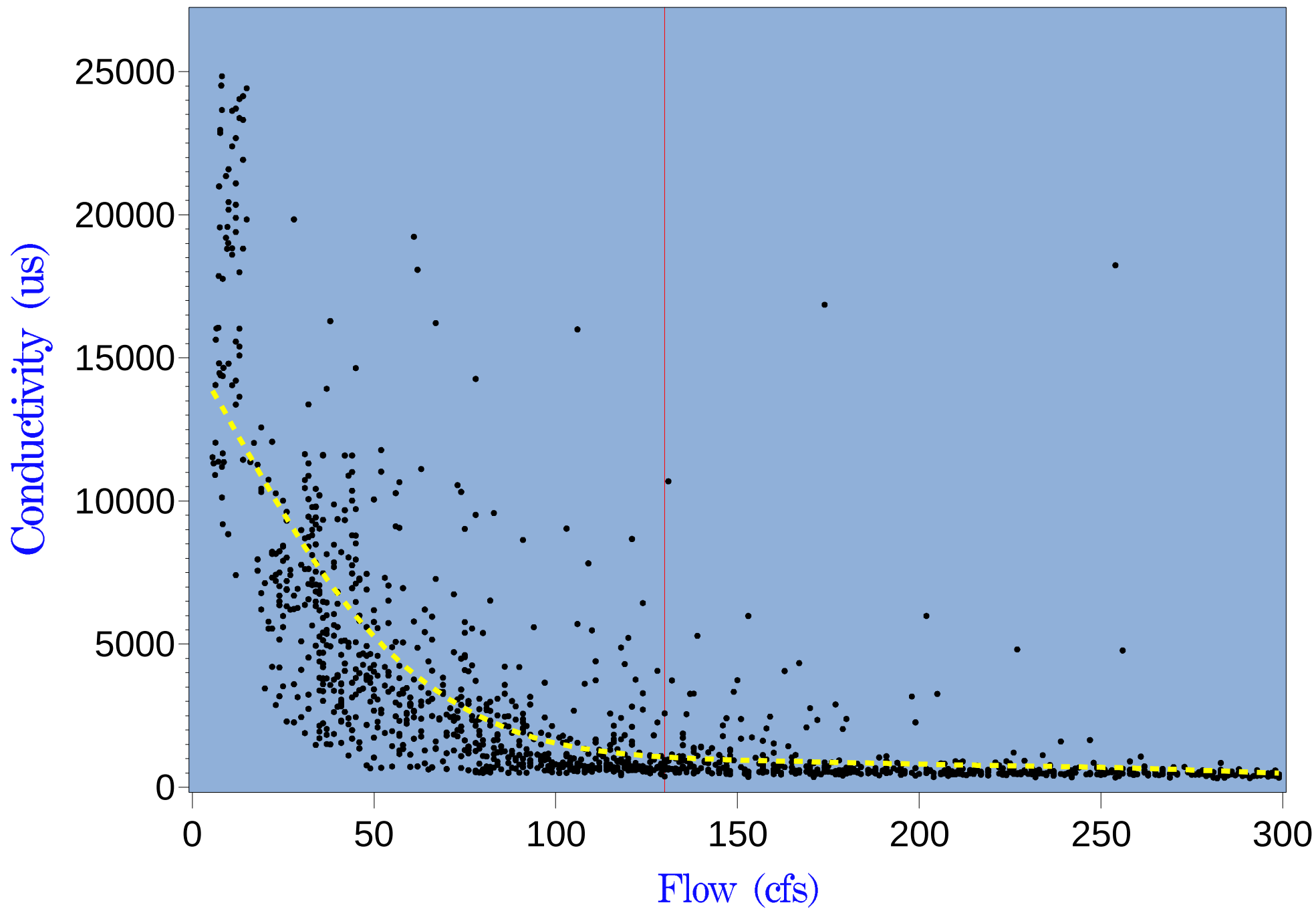
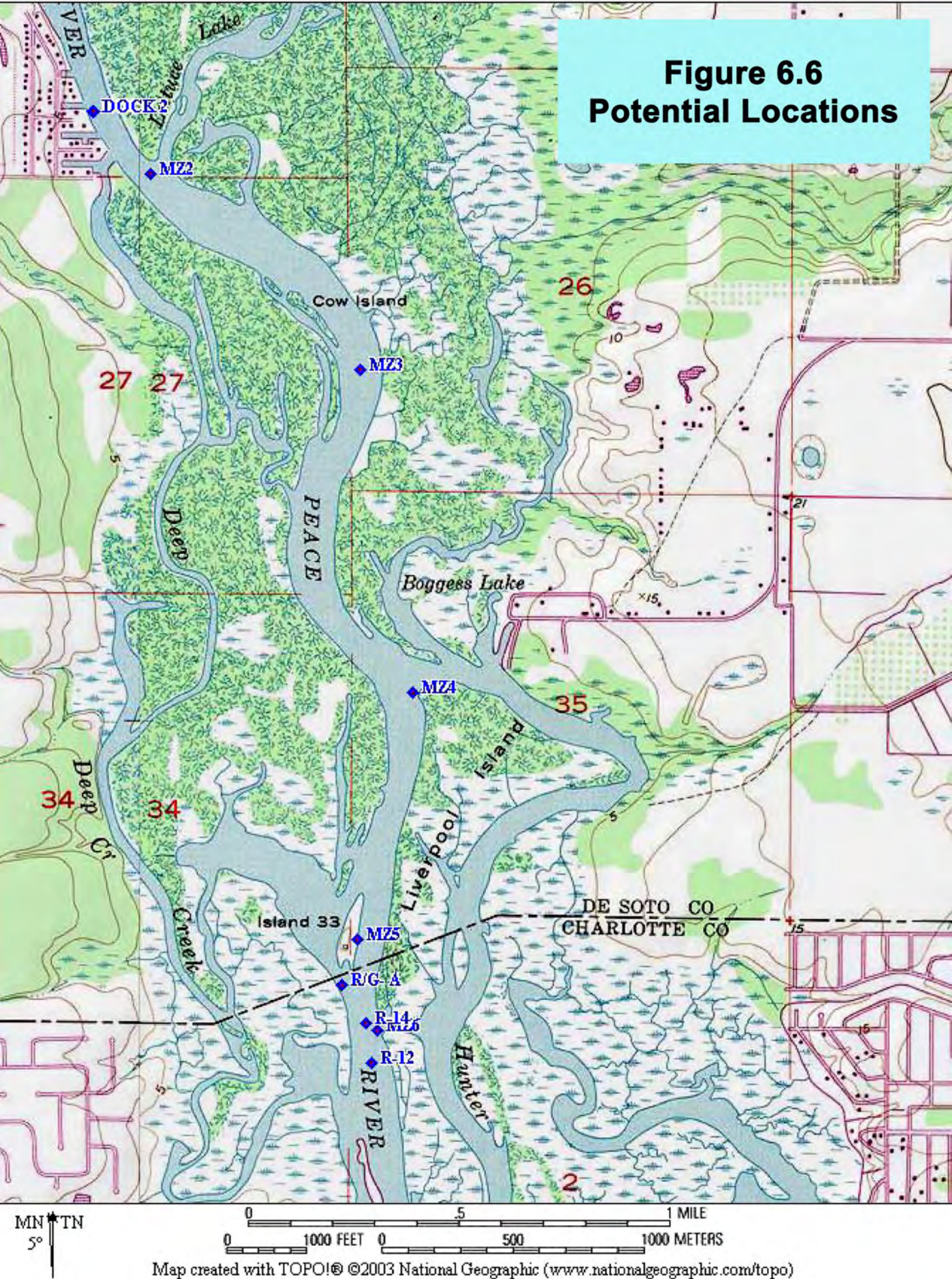


Figure 6.5 Recorder bottom conductivity at river kilometer 26.7 versus flow

Figure 6.6
Potential Locations



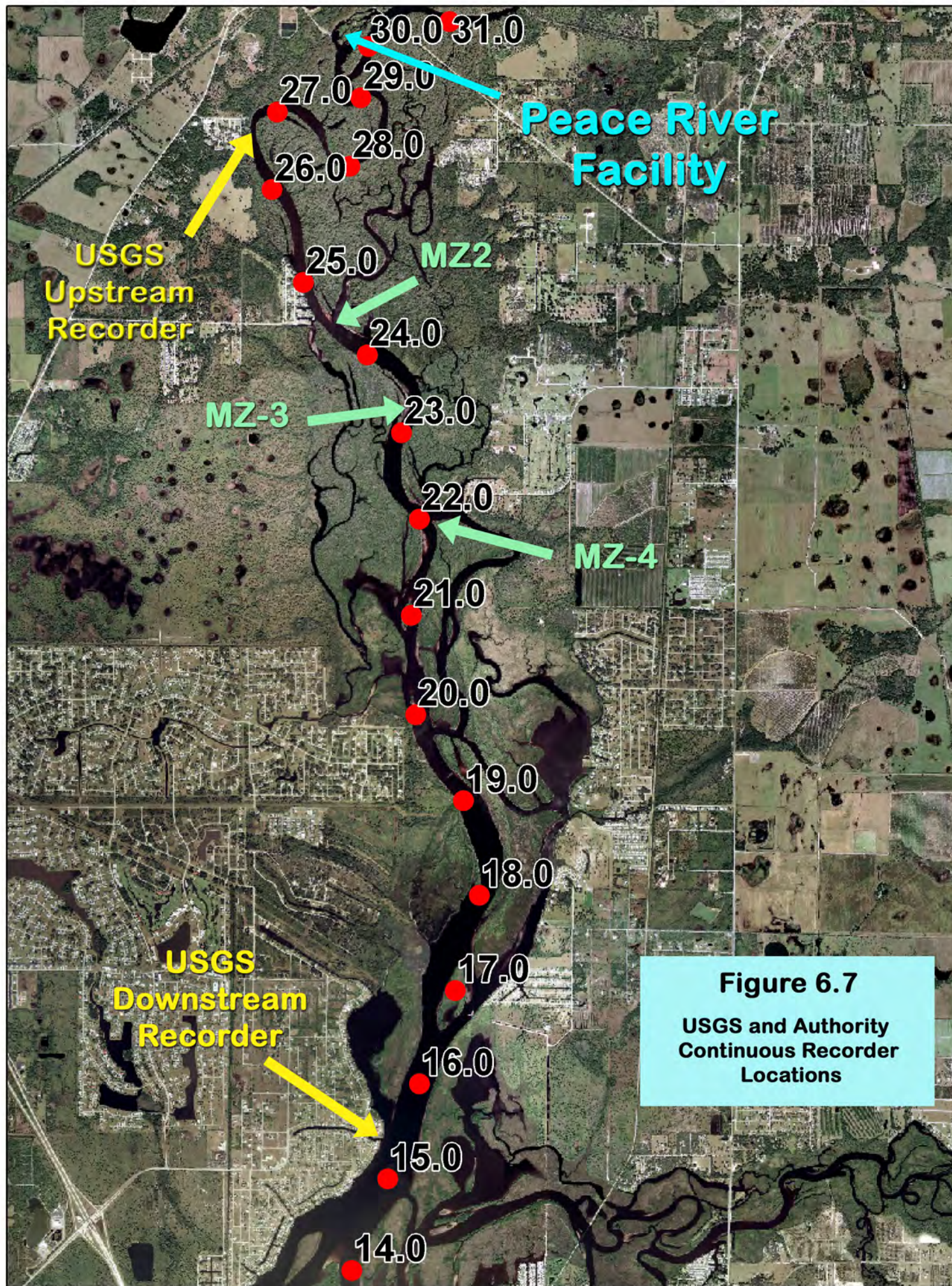
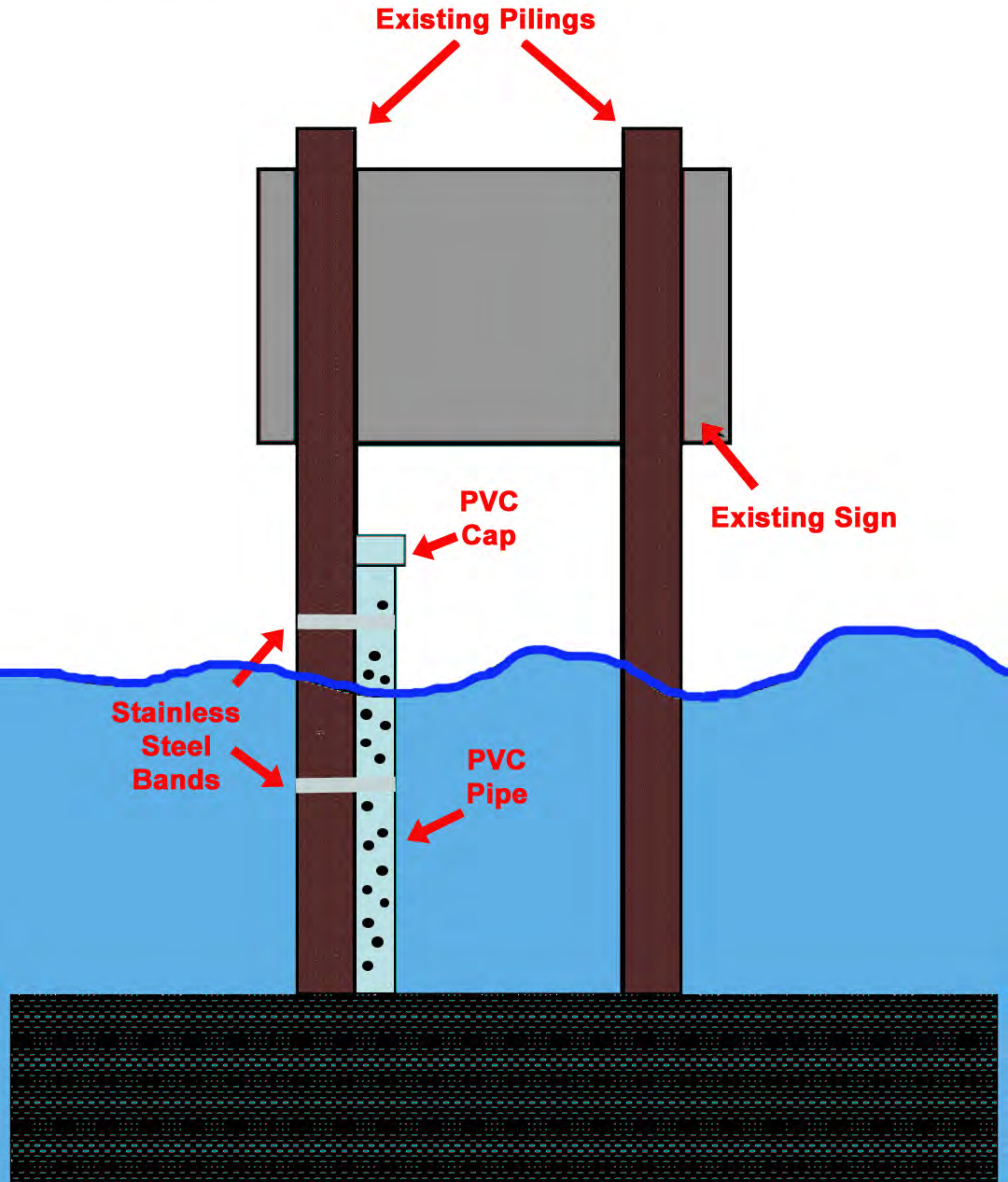


Figure 6.7
USGS and Authority
Continuous Recorder
Locations

Figure 6.8

Diagram of Attachement to Existing Manatee Speed Zone Sign



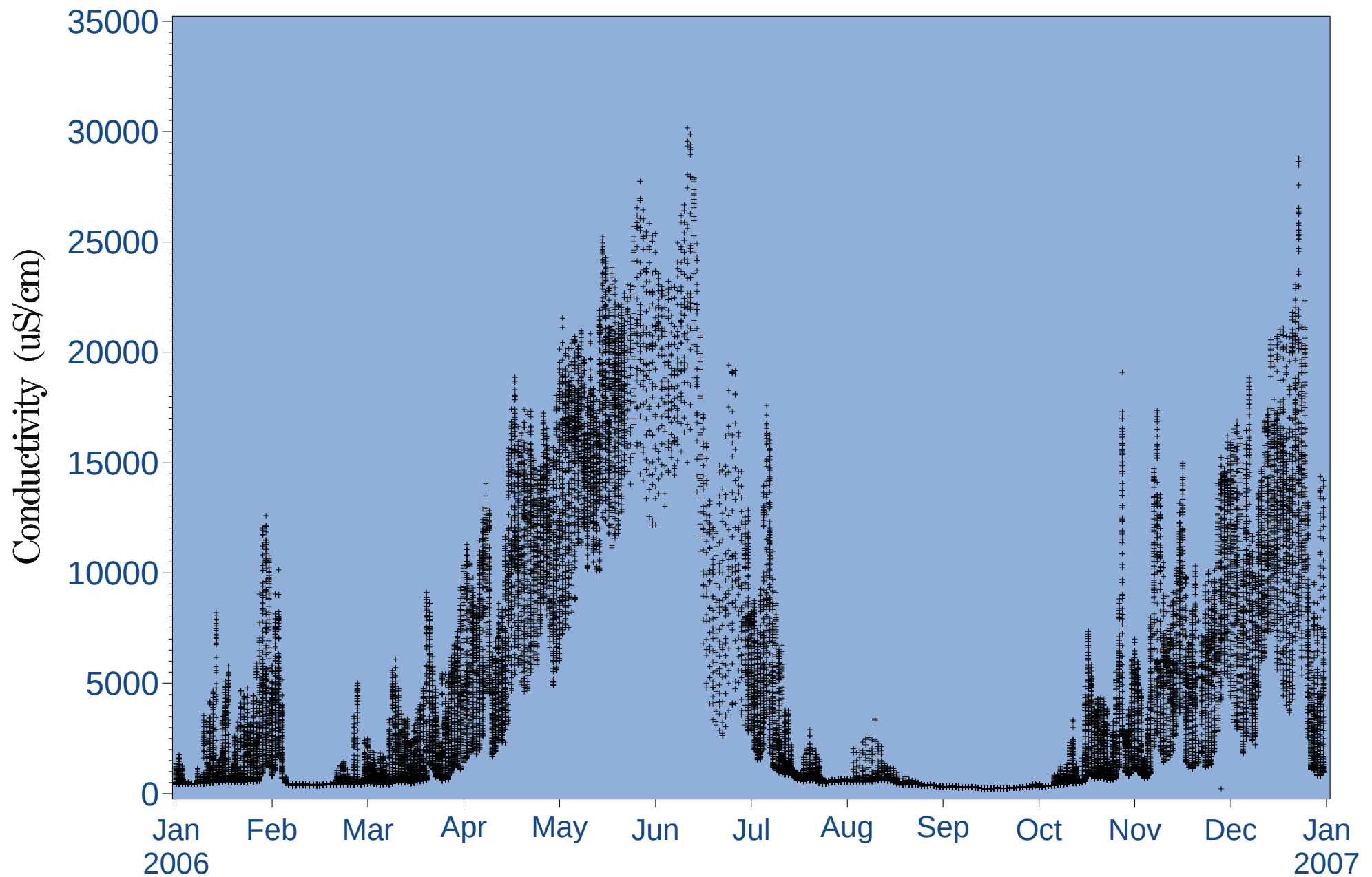


Figure 6.9 2006 Surface conductivity (15-min intervals) for Peace River fixed station
Manatee Marker - River Kilometer = 21.9

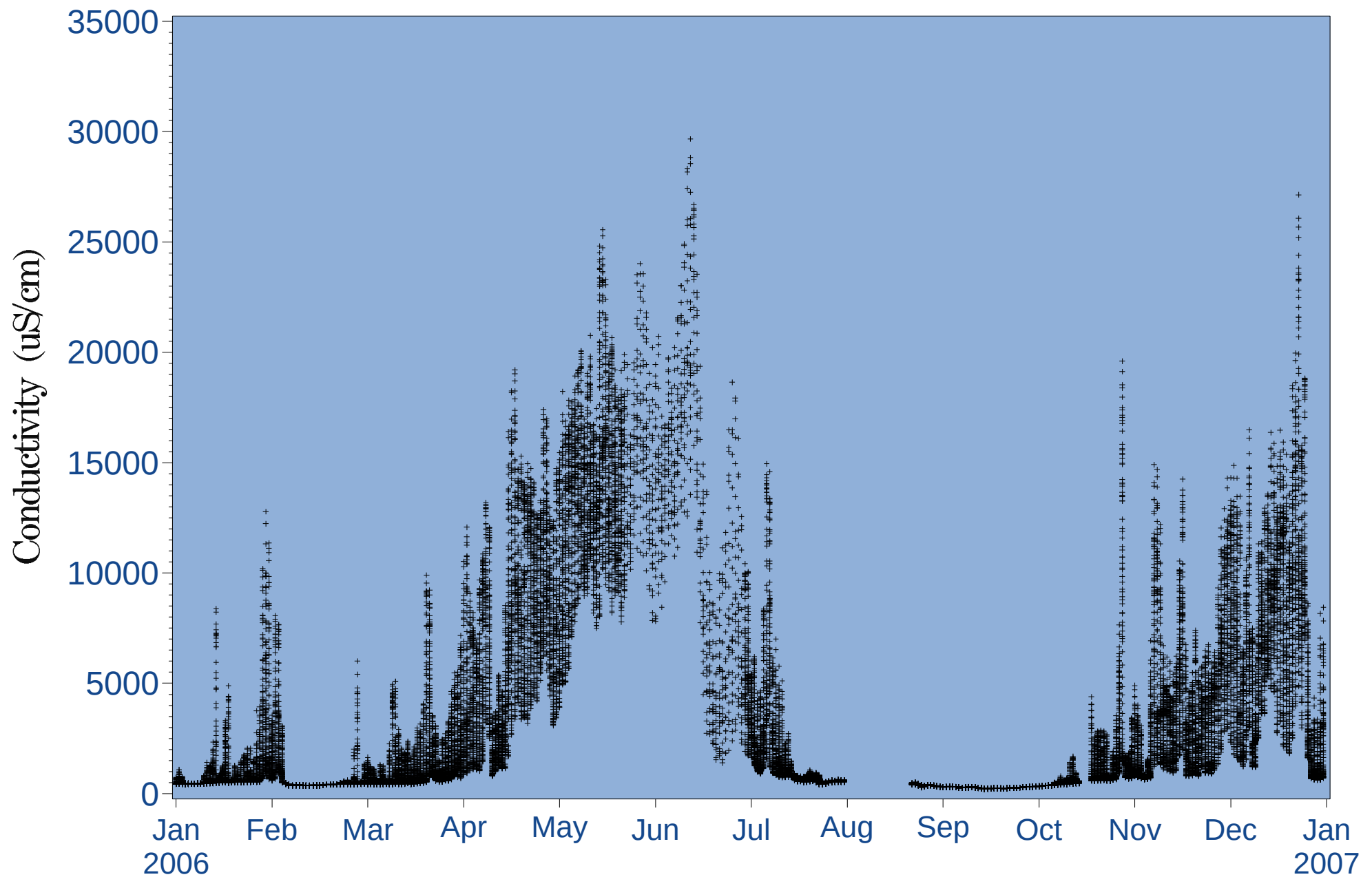


Figure 6.10 2006 Surface conductivity (15-min intervals) for Peace River fixed station
Manatee Marker - River Kilometer = 23.4

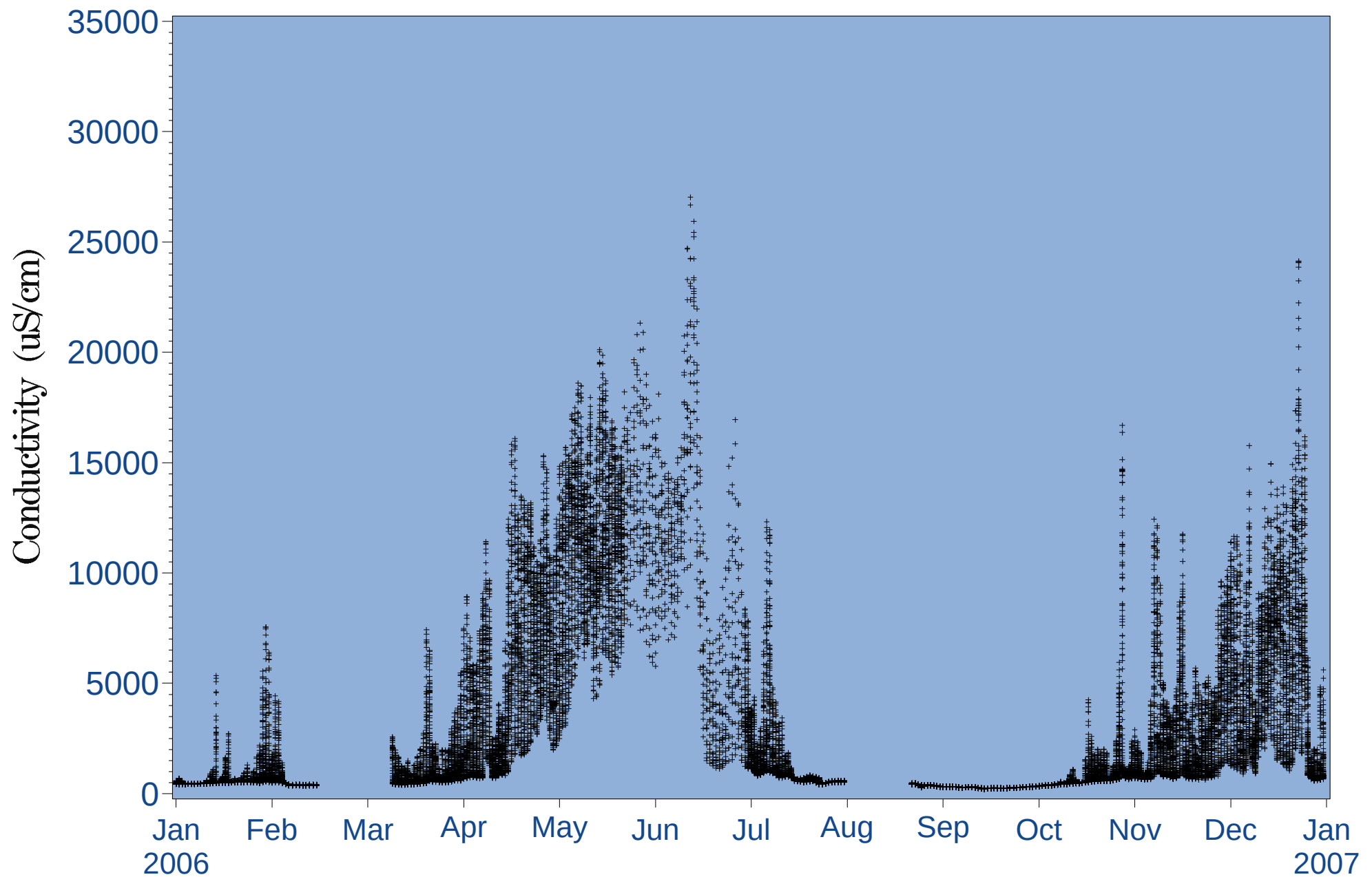


Figure 6.11 2006 Surface conductivity (15-min intervals) for Peace River fixed station
Manatee Marker - River Kilometer = 24.5

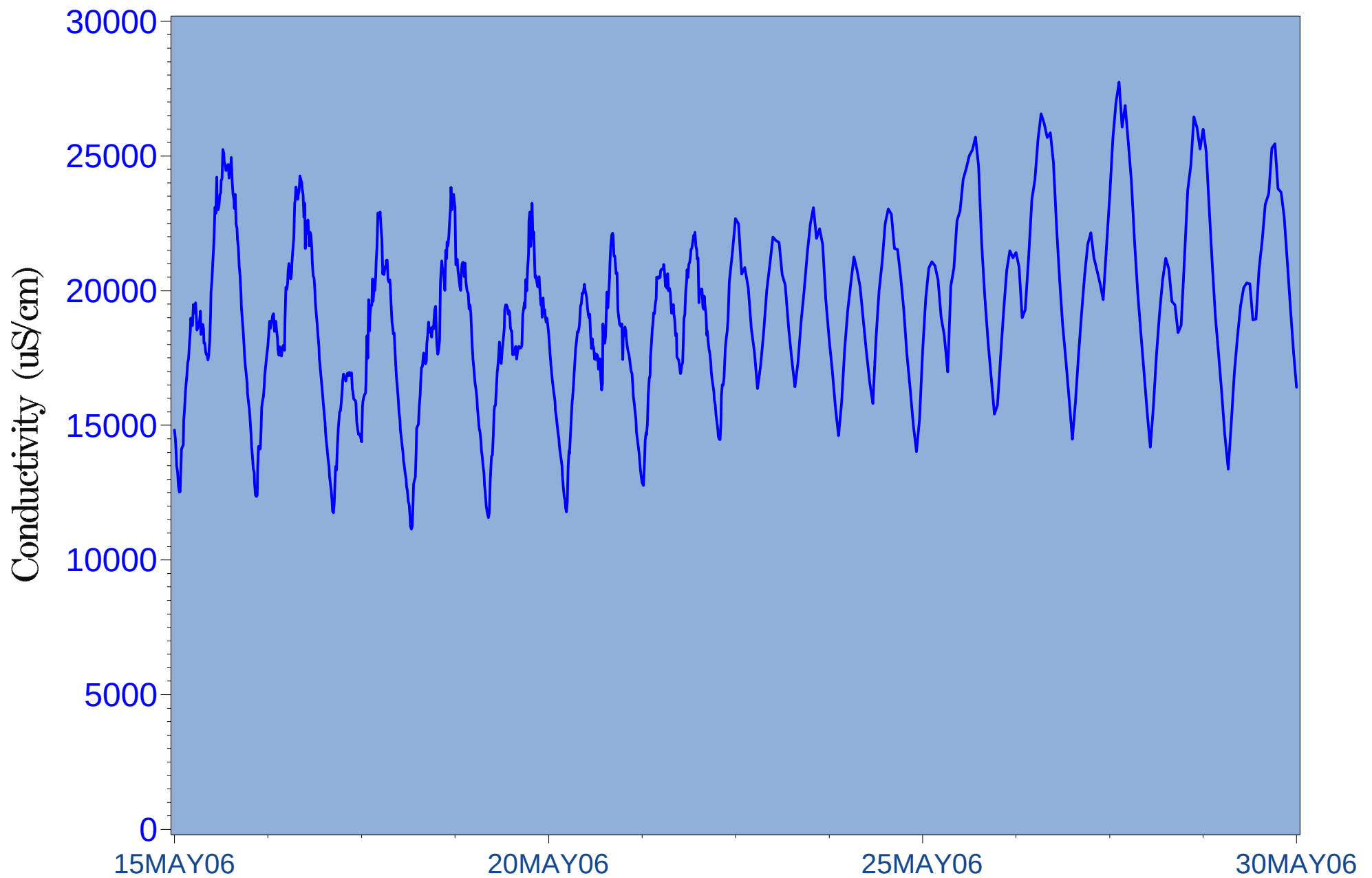


Figure 6.12 May 2006 Surface conductivity for Peace River fixed station
Manatee Marker - River Kilometer = 21.9

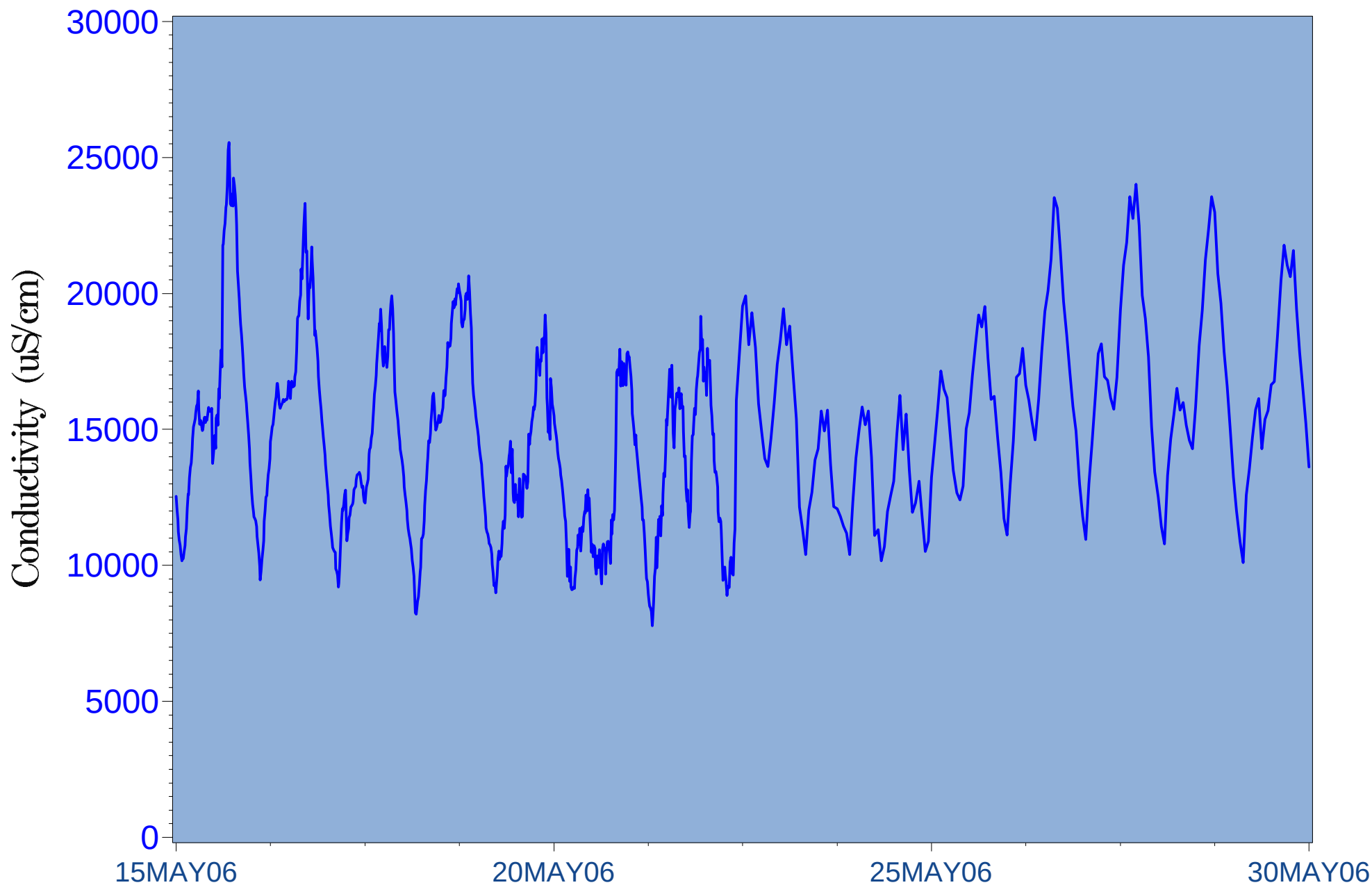


Figure 6.13 May 2006 Surface conductivity for Peace River fixed station
Manatee Marker - River Kilometer = 23.4

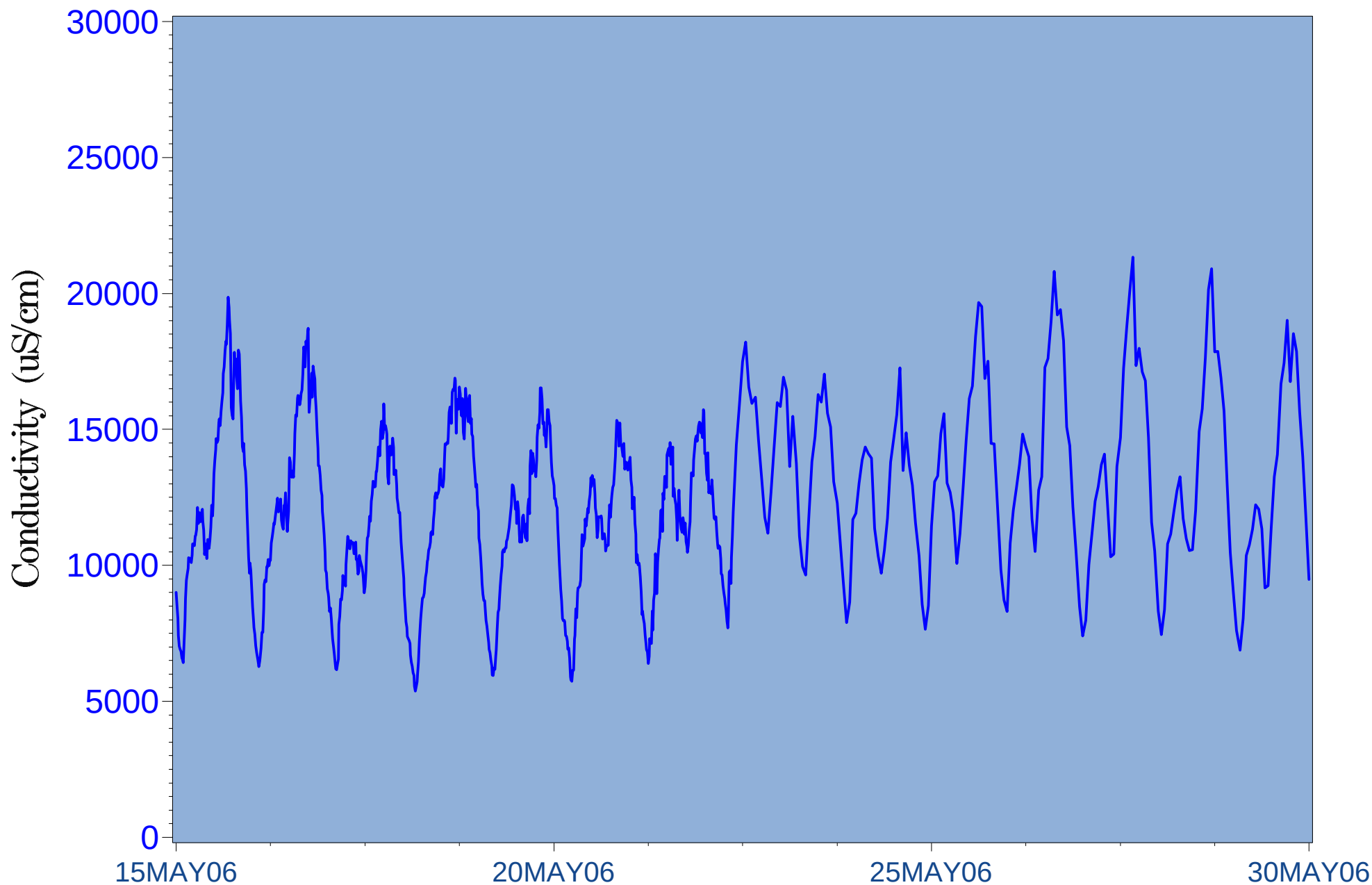


Figure 6.14 May 2006 Surface conductivity for Peace River fixed station
Manatee Marker - River Kilometer = 21.9

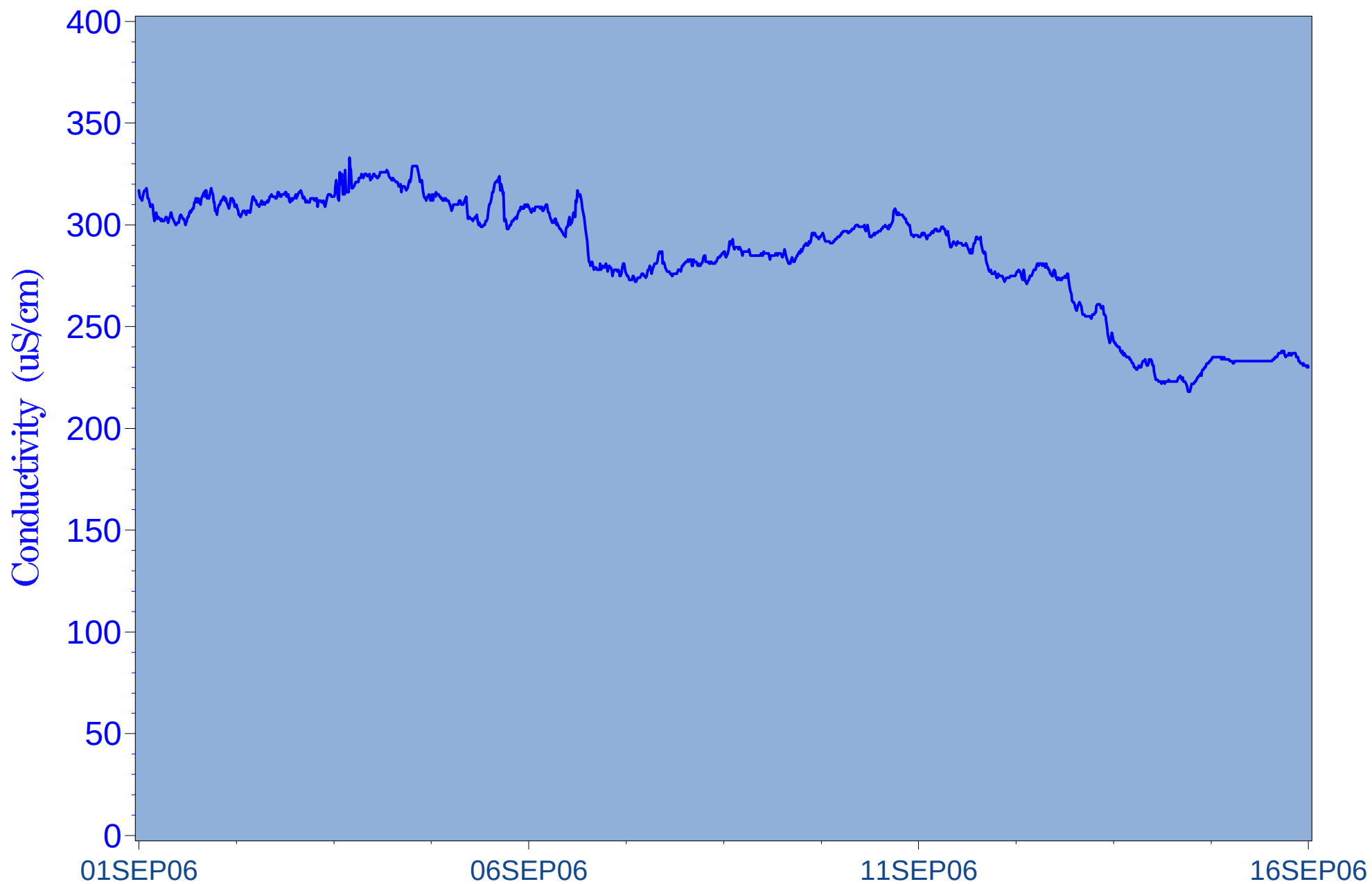


Figure 6.15 September 2006 Surface conductivity for Peace River fixed station
Manatee Marker - River Kilometer = 21.9

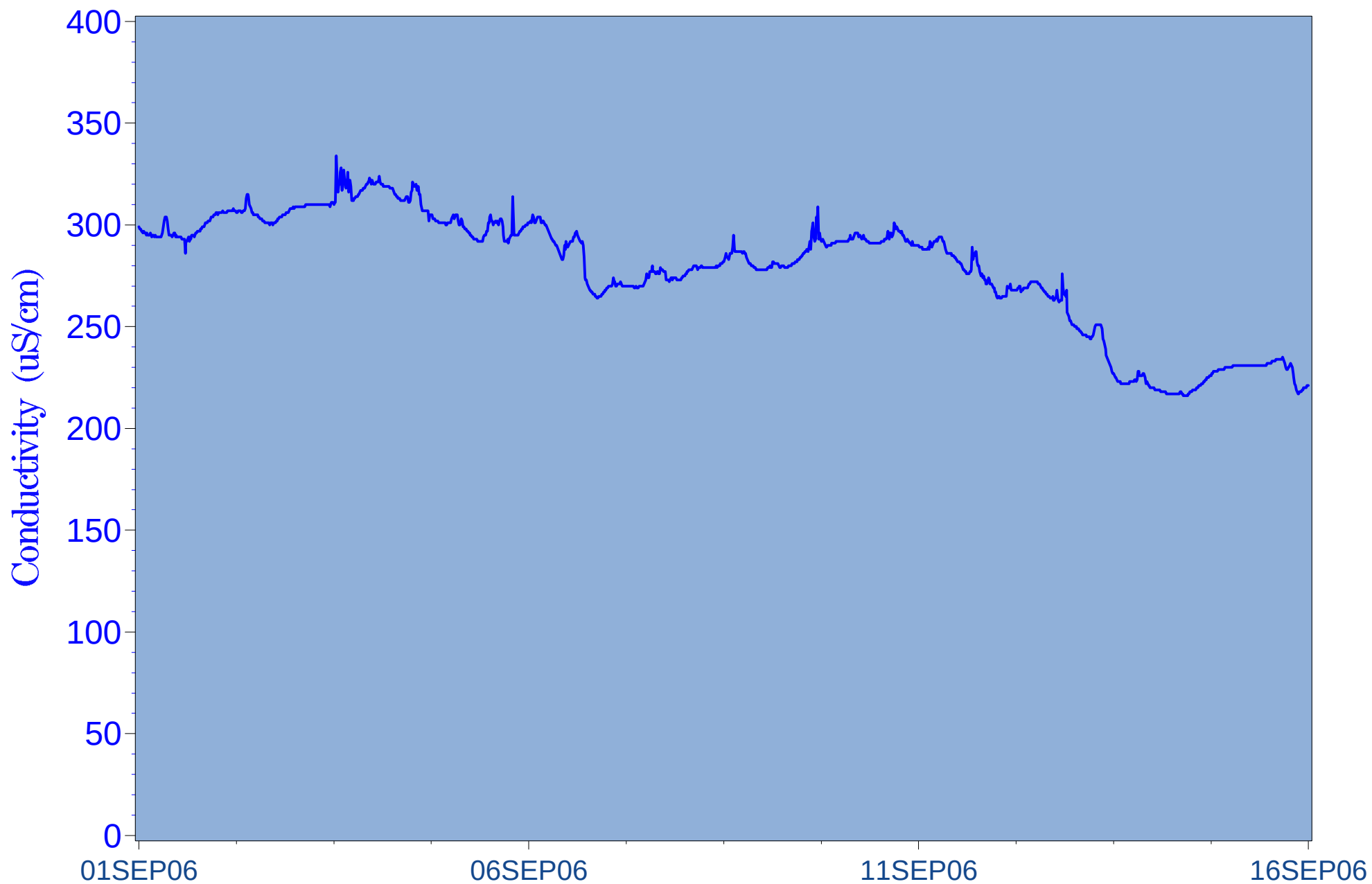


Figure 6.16 September 2006 Surface conductivity for Peace River fixed station
Manatee Marker - River Kilometer = 23.4

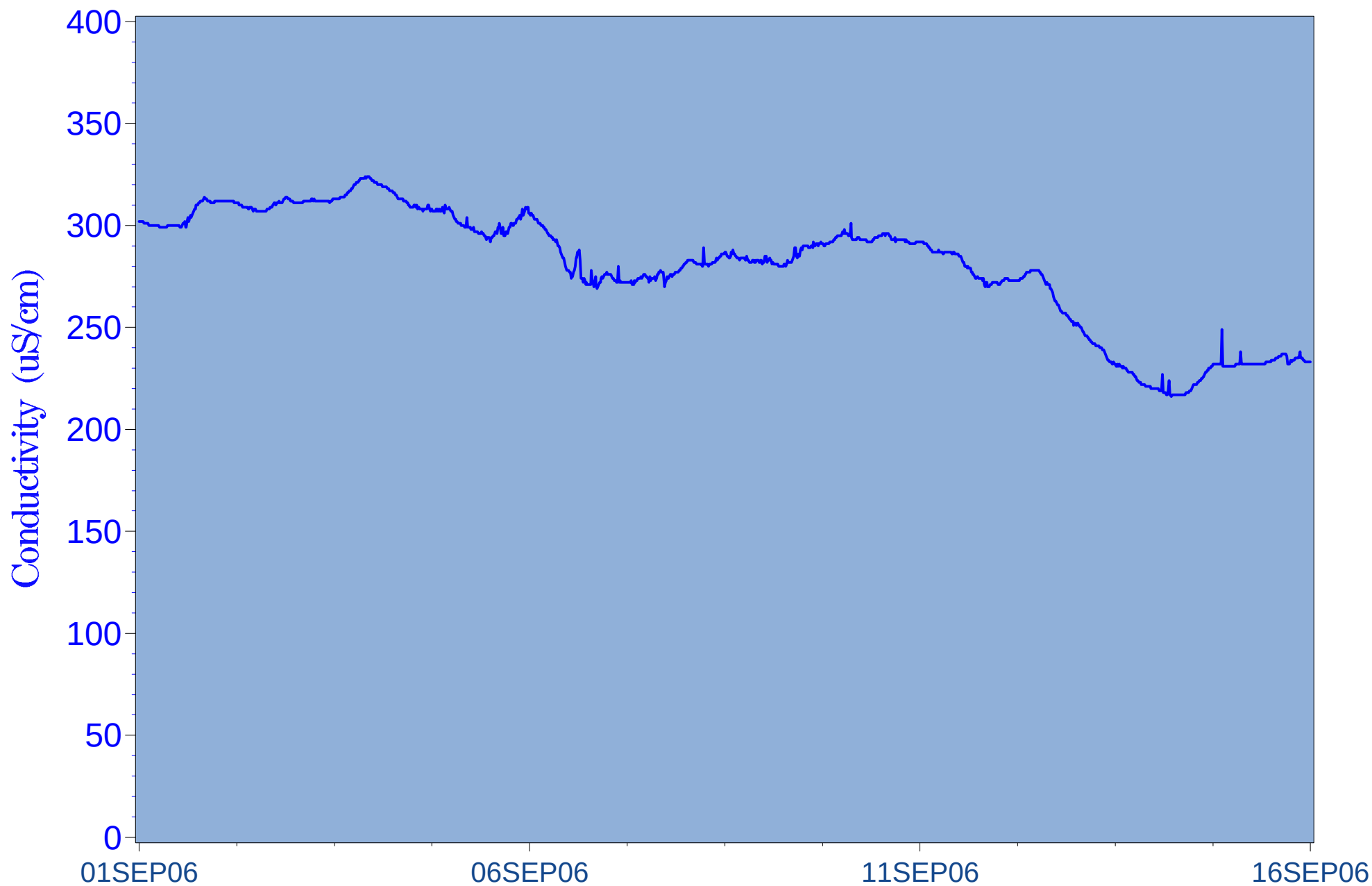


Figure 6.17 September 2006 Surface conductivity for Peace River fixed station
Manatee Marker - River Kilometer = 24.5

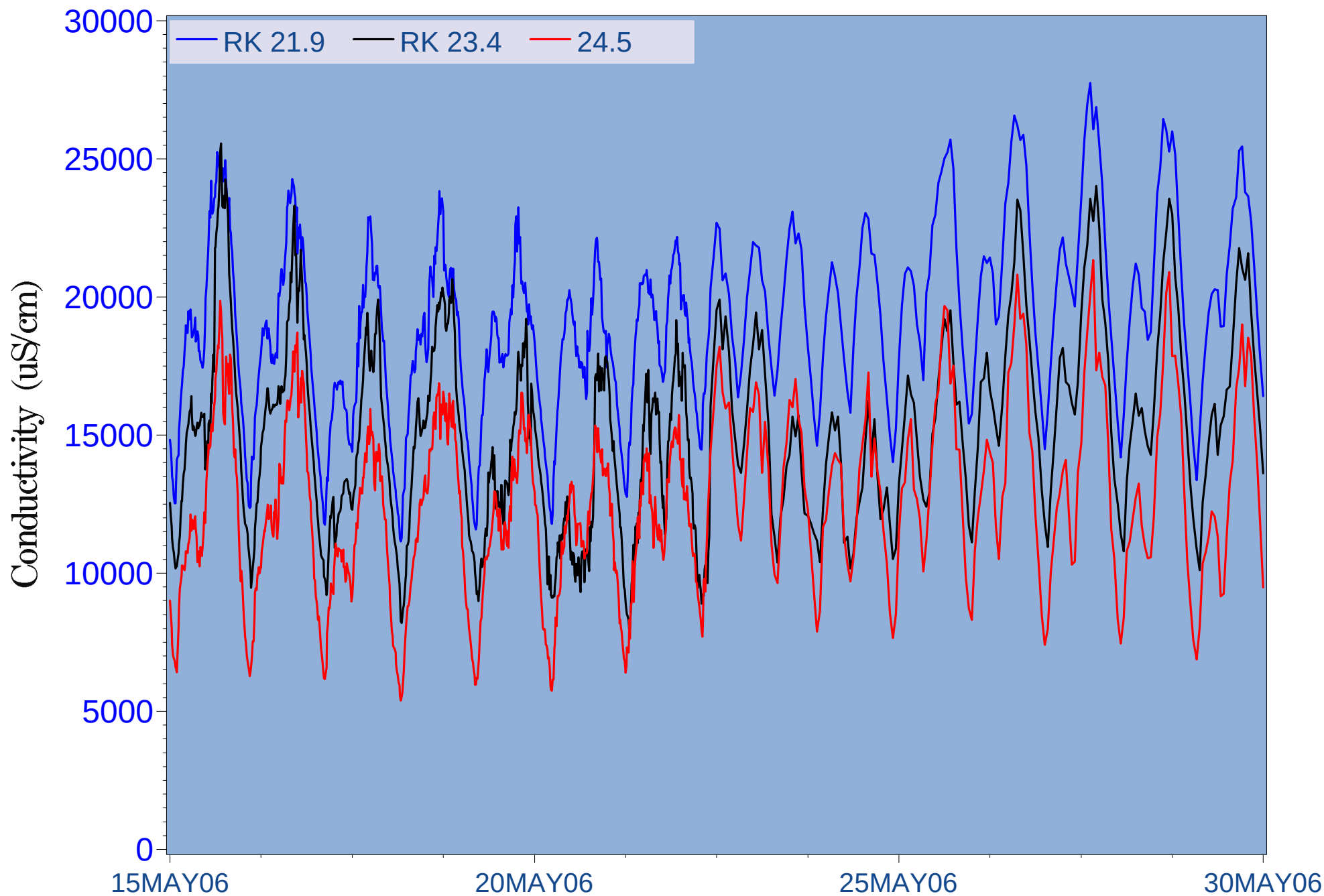


Figure 6.18 May 2006 surface conductivities for Peace River fixed stations

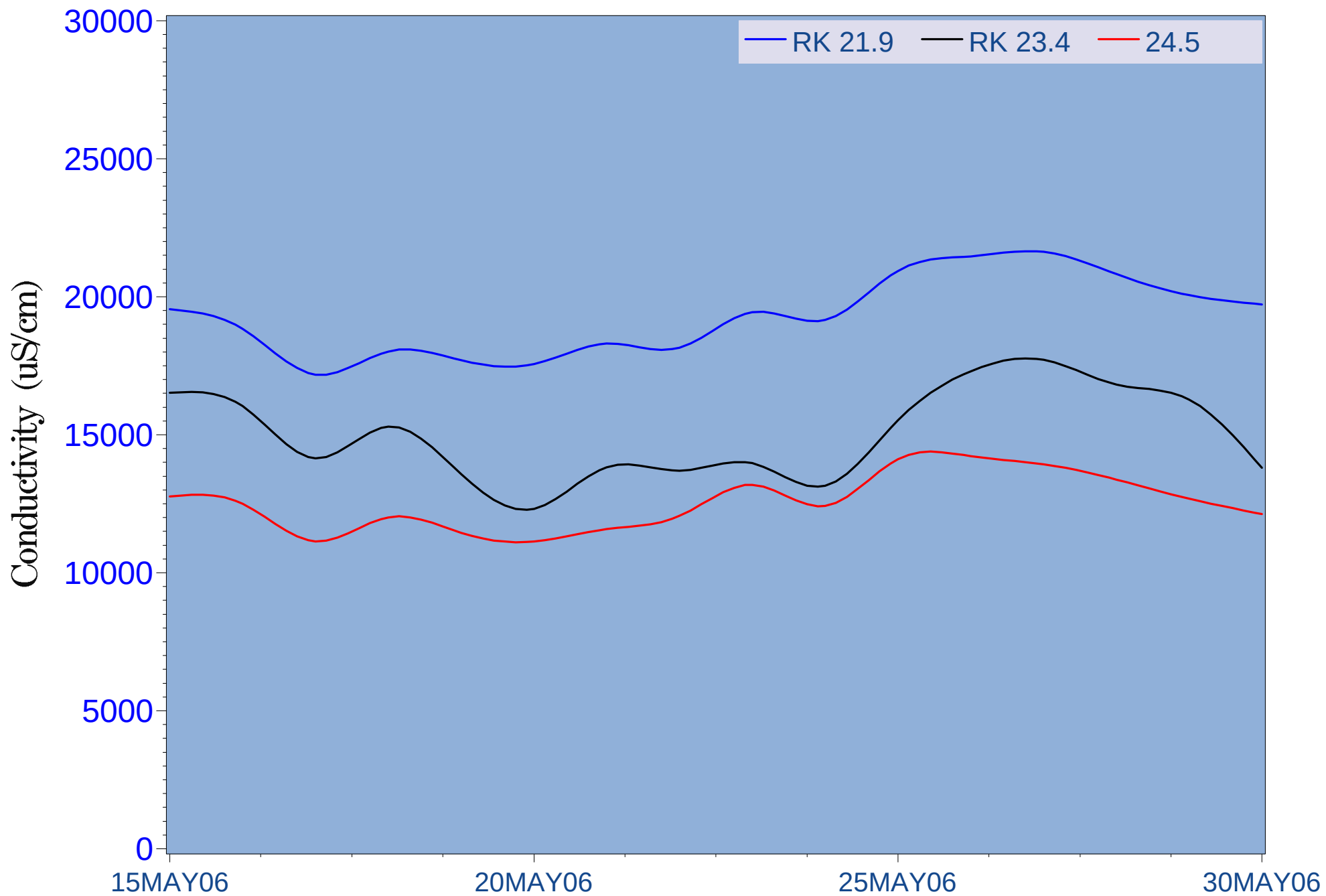


Figure 6.19 May 2006 mean daily surface conductivities for Peace River fixed stations

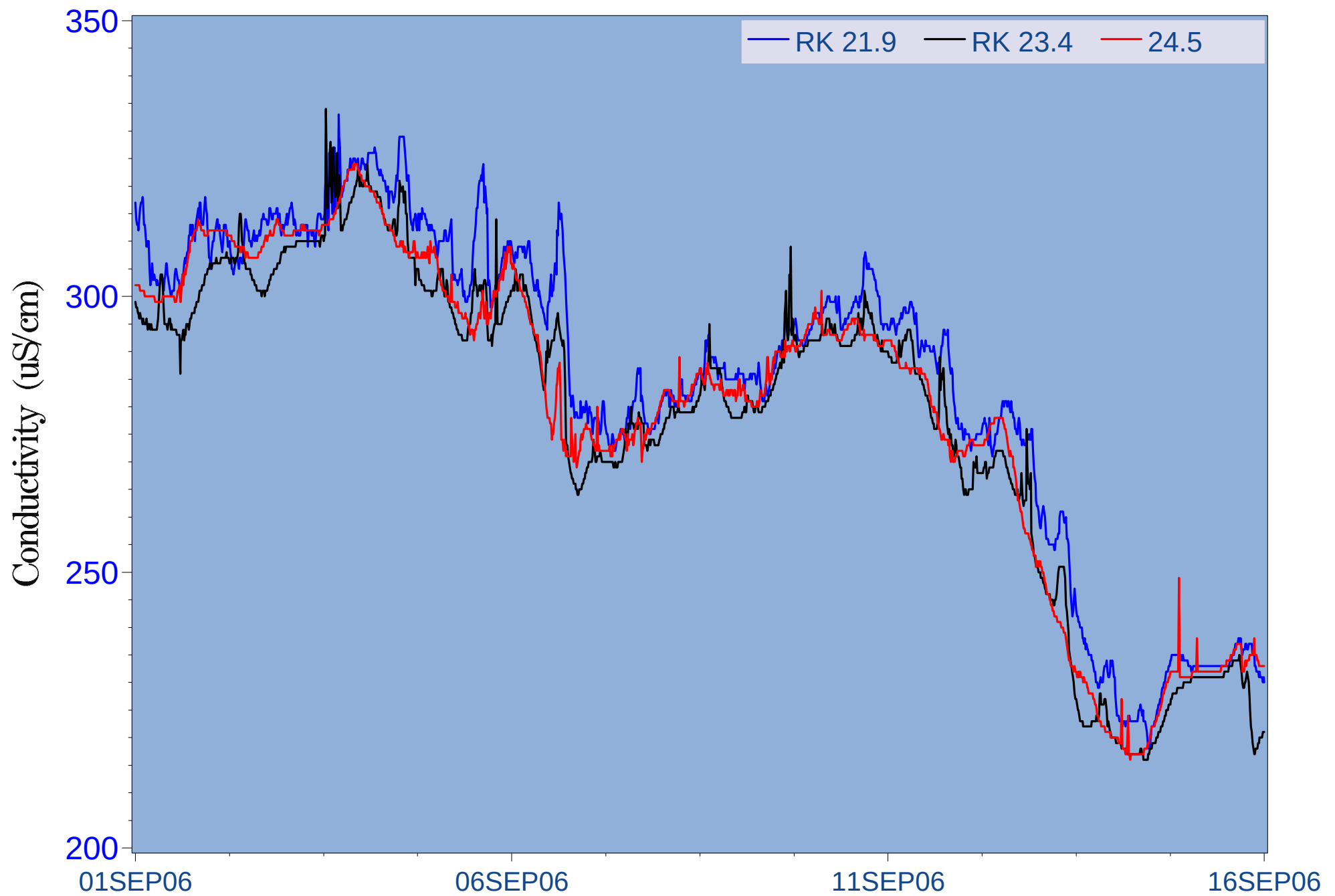


Figure 6.20 September 2006 Surface conductivities for Peace River fixed stations

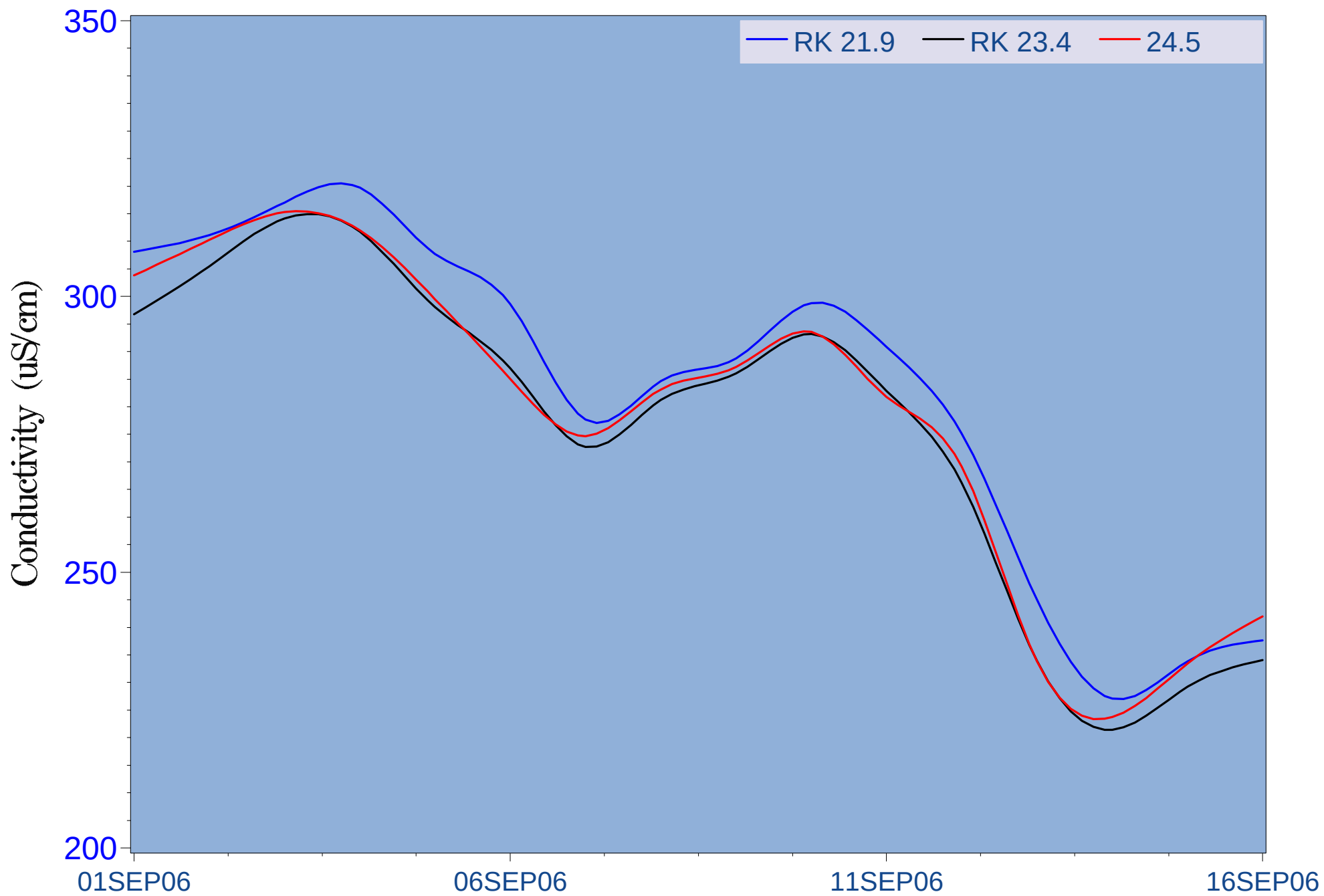


Figure 6.21 September 2006 mean daily surface conductivities for Peace River fixed stations

Figure 7.1

Conceptual Mode Of Impact Of Surface Water Withdrawals

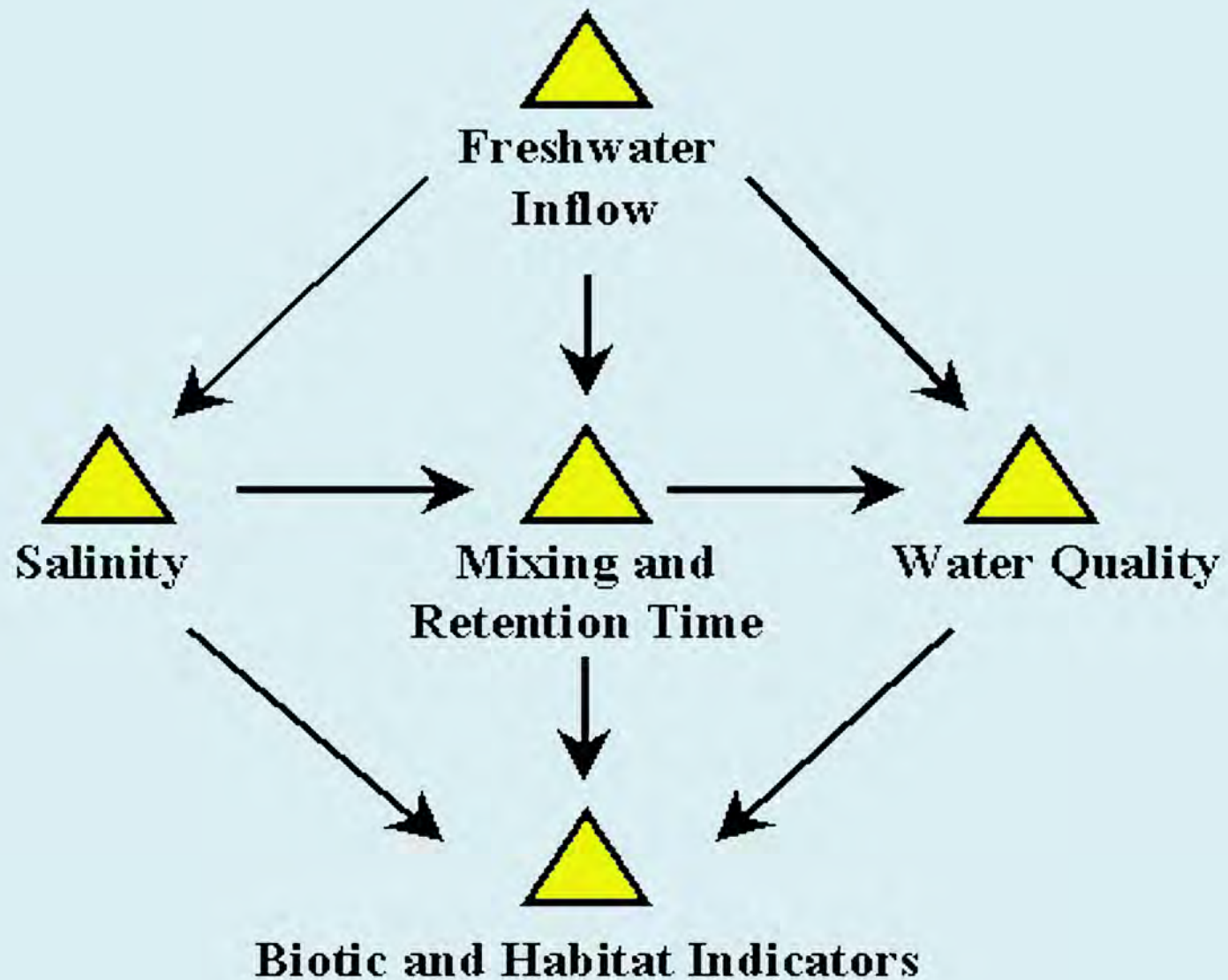
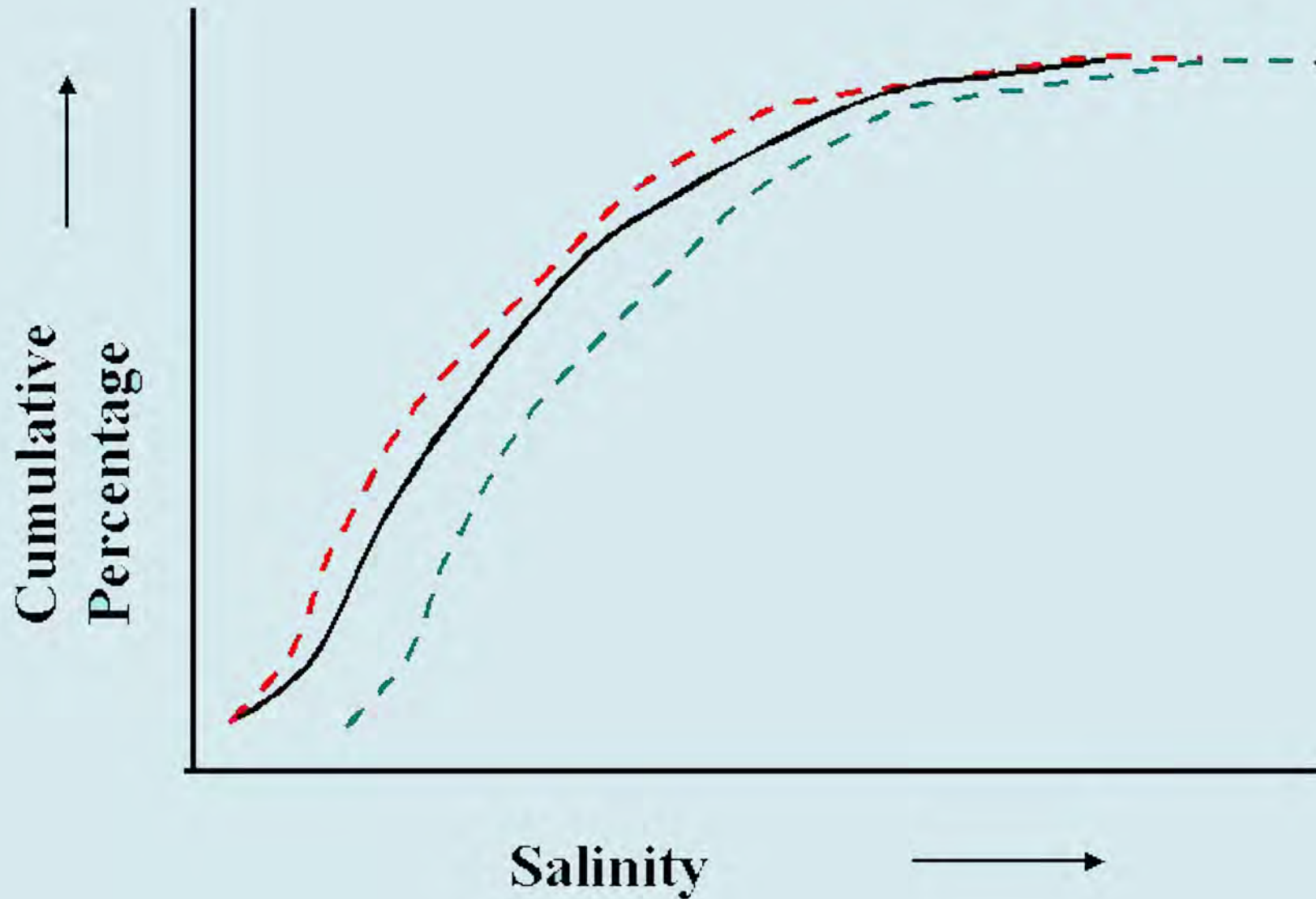


Figure 7.2

Conceptual Illustration Of A Salinity Target Range



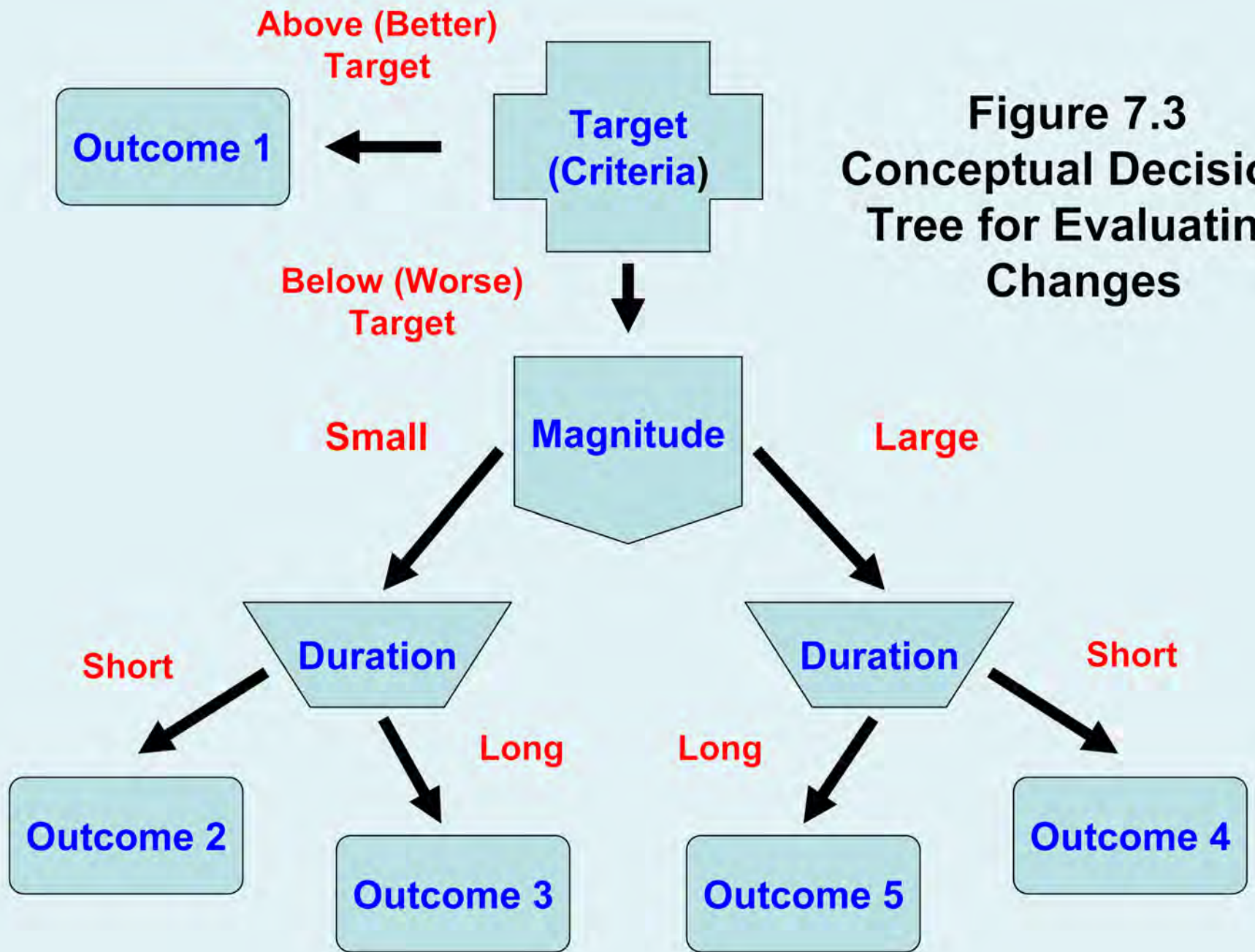
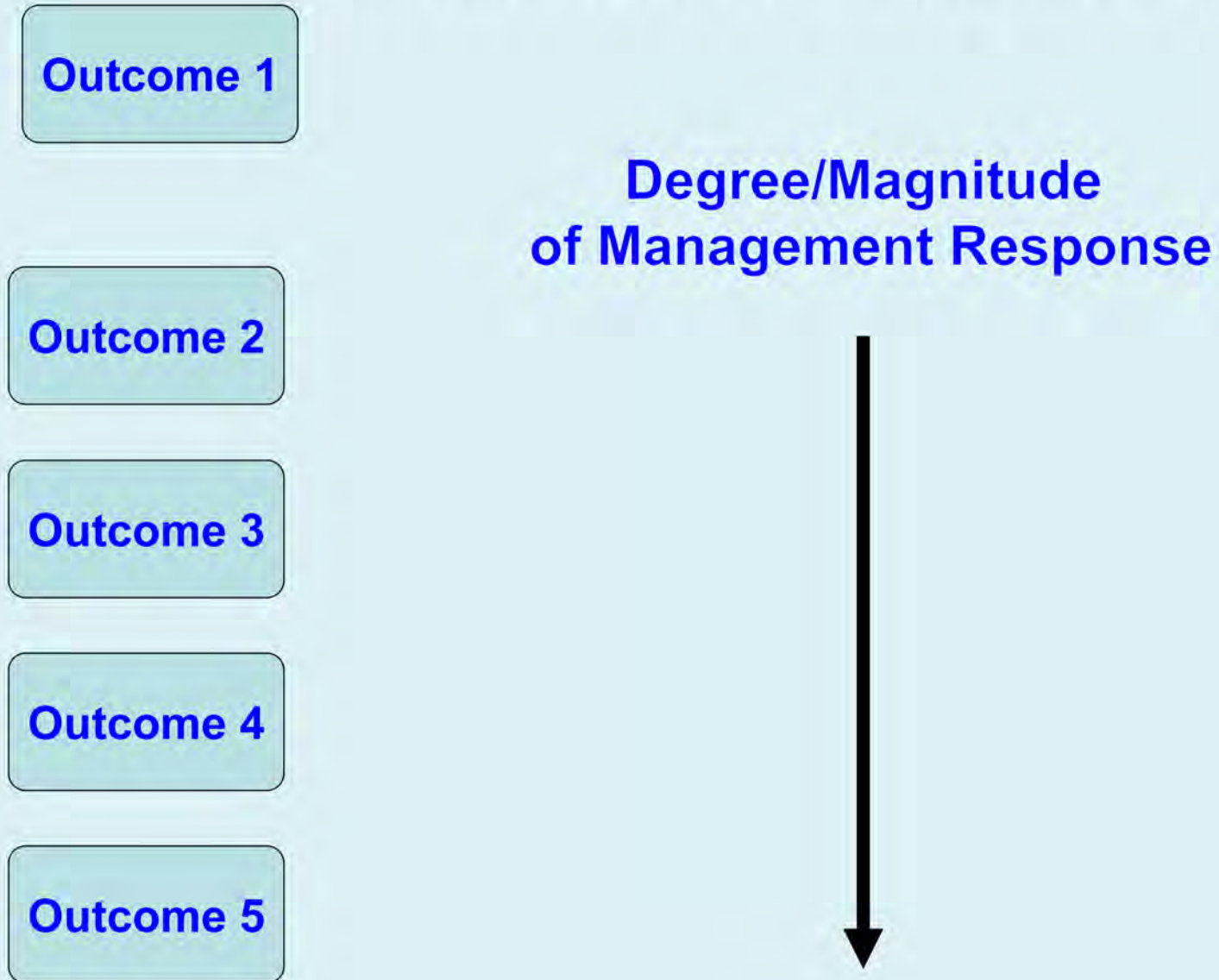


Figure 7.3
Conceptual Decision
Tree for Evaluating
Changes

Figure 7.4
Relationship of Change to Response



2006 Maps

- [Map 2.1](#) – Typical 2006 Summer Rainfall Pattern
- [Map 2.2](#) – Tropical Storms/Hurricanes 1995
- [Map 2.3](#) – Tropical Storms/Hurricanes 1996
- [Map 2.4](#) – Tropical Storms/Hurricanes 1997
- [Map 2.5](#) – Tropical Storms/Hurricanes 1998
- [Map 2.6](#) – Tropical Storms/Hurricanes 1999
- [Map 2.7](#) – Tropical Storms/Hurricanes 2000
- [Map 2.8](#) – Tropical Storms/Hurricanes 2001
- [Map 2.9](#) – Tropical Storms/Hurricanes 2002
- [Map 2.10](#) – Tropical Storms/Hurricanes 2003
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- [Map 2.12](#) – Tropical Storms/Hurricanes 2005
- [Map 2.13](#) – Tropical Storms/Hurricanes 2006

Map 2.1
Typical 2006 Afternoon
Thunderstorm Pattern



NATIONAL HURRICANE CENTER
ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

NUMBER	TYPE	1995 NAME	DATE
1	H	ALLISON	JUN 03 - 06
2	T	BARRY	JUL 06 - 10
3	T	CHANTAL	JUL 12 - 20
4	T	DEAN	JUL 28 - AUG 02
5	H	ERIN	JUL 31 - AUG 06
6	H	FELIX	AUG 08 - 22
7	T	GABRIELLE	AUG 09 - 12
8	H	HUMBERTO	AUG 22 - SEP 01
9	H	IRIS	AUG 22 - SEP 04

Map 2.2
1995

NUMBER	TYPE	1995 NAME	DATE
10	T	JERRY	AUG 22 - 28
11	T	KAREN	AUG 26 - SEP 03
12	H	LUIS	AUG 27 - SEP 11
13	H	MARILYN	SEP 12 - 22
14	H	NOEL	SEP 26 - OCT 07
15	H	OPAL	SEP 27 - OCT 05
16	T	PABLO	OCT 04 - 08
17	H	ROXANNE	OCT 07 - 21
18	T	SEBASTIEN	OCT 20 - 25
19	H	TANYA	OCT 27 - NOV 01

— Hurricane
— Tropical Storm
— Tropical Dep.
+++ Extratropical

• Position at 0000 UTC
○ Position/date at 1200 UTC
[3] Tropical Cyclone Number

Lambert Conformal Conic
true at 50° and 40° North

NATIONAL HURRICANE CENTER

ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

NUMBER	TYPE	1996 NAME	DATE
1	T	ARTHUR	17-21 June
2	H	BERTHA	05-14 July
3	H	CESAR	24-29 July
4	H	DOLLY	19-25 Aug.
5	H	EDOUARD	19 Aug-03 Sep.
6	H	FRAN	23 Aug-08 Sep.
7	T	GUSTAV	28 Aug-02 Sep.
8	H	HORTENSE	03-16 Sep.
9	H	ISIDORE	24 Sep-01 Oct.
10	T	JOSEPHINE	04-08 Oct.
11	T	KYLE	11-12 Oct.
12	H	LILI	14-27 Oct.
13	H	MARCO	16-26 Nov.

Map 2.3
1996

- Hurricane (H)
- Tropical Storm (T)
- Tropical Dep.
- Extratropical
- Position at 0000 UTC
- Position/date at 1200 UTC
- Tropical Cyclone Number

Lowest Central Core
line at 20° and 40° North

North
South

120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° West 0° East 5°

NATIONAL HURRICANE CENTER ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

NUMBER	TYPE	1997 NAME	DATE
1	ST	—	01-02 June
2	T	ANA	30 June-04 July
3	H	BILL	11-13 July
4	T	CLAUDETTE	13-16 July
5	H	DANNY	16-26 July
6	H	ERIKA	03-15 Sep.
7	T	FABIAN	04-08 Oct.
8	T	GRACE	16-17 Oct.

**Map 2.4
1997**

- Hurricane (H)
- Tropical Storm (T)
- Tropical Dep.
- Subtropical Storm (ST)
- Subtropical Dep.
- +++ Extratropical
- Position at 0000 UTC
- Position/date at 1200 UTC
- [3] Tropical Cyclone Number
- ← ppp Minimum Pressure (mb)

Lambert Conformal Conic
true at 20° and 40° North

120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° West 0° East 5°

NATIONAL HURRICANE CENTER ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

NUMBER	TYPE	1998 NAME	DATE
1	T	ALEX	27 July–02 Aug.
2	H	BONNIE	19–30 Aug.
3	T	CHARLEY	21–24 Aug.
4	H	DANIELLE	24 Aug.–03 Sep.
5	H	EARL	31 Aug.–03 Sep.
6	T	FRANCES	08–13 Sep.
7	H	GEORGES	15 Sep.–01 Oct.
8	T	HERMINE	17–20 Sep.
9	H	IVAN	19–27 Sep.
10	H	JEANNE	21 Sep.–01 Oct.
11	H	KARL	23–28 Sep.
12	H	LISA	05–09 Oct.
13	H	MITCH	22 Oct.–05 Nov.
14	H	NICOLE	24 Nov.–01 Dec.

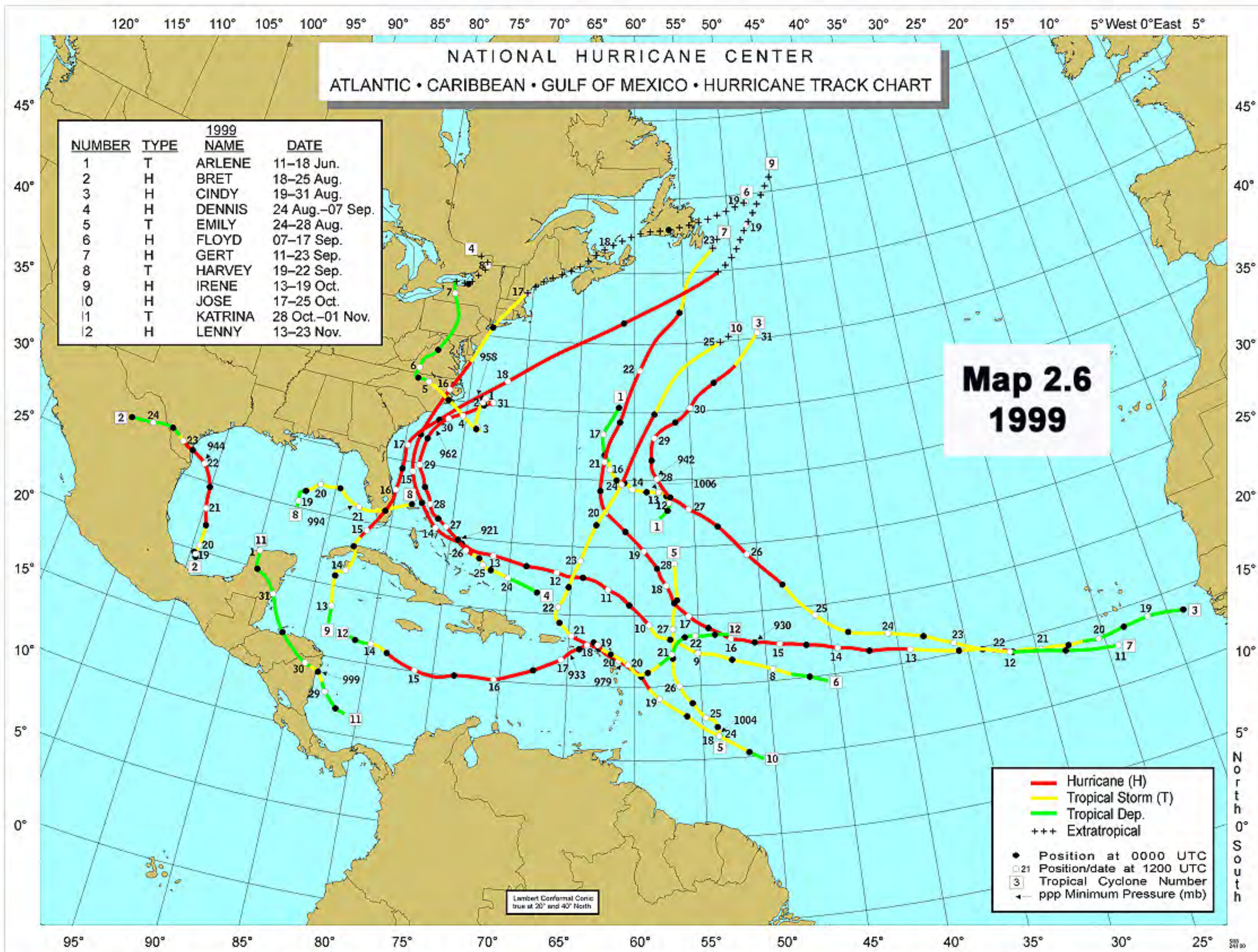
**Map 2.5
1998**

- Hurricane (H)
- Tropical Storm (T)
- Tropical Dep.
- Subtropical Storm (ST)
- Subtropical Dep.
- +++ Extratropical
- Low
- Position at 0000 UTC
- Position/date at 1200 UTC
- 3 Tropical Cyclone Number
- ← ppp Minimum Pressure (mb)

Lambert Conformal Conic
true at 20° and 40° North

North
South

95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25°



120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° West 0° East 5°

NATIONAL HURRICANE CENTER
ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

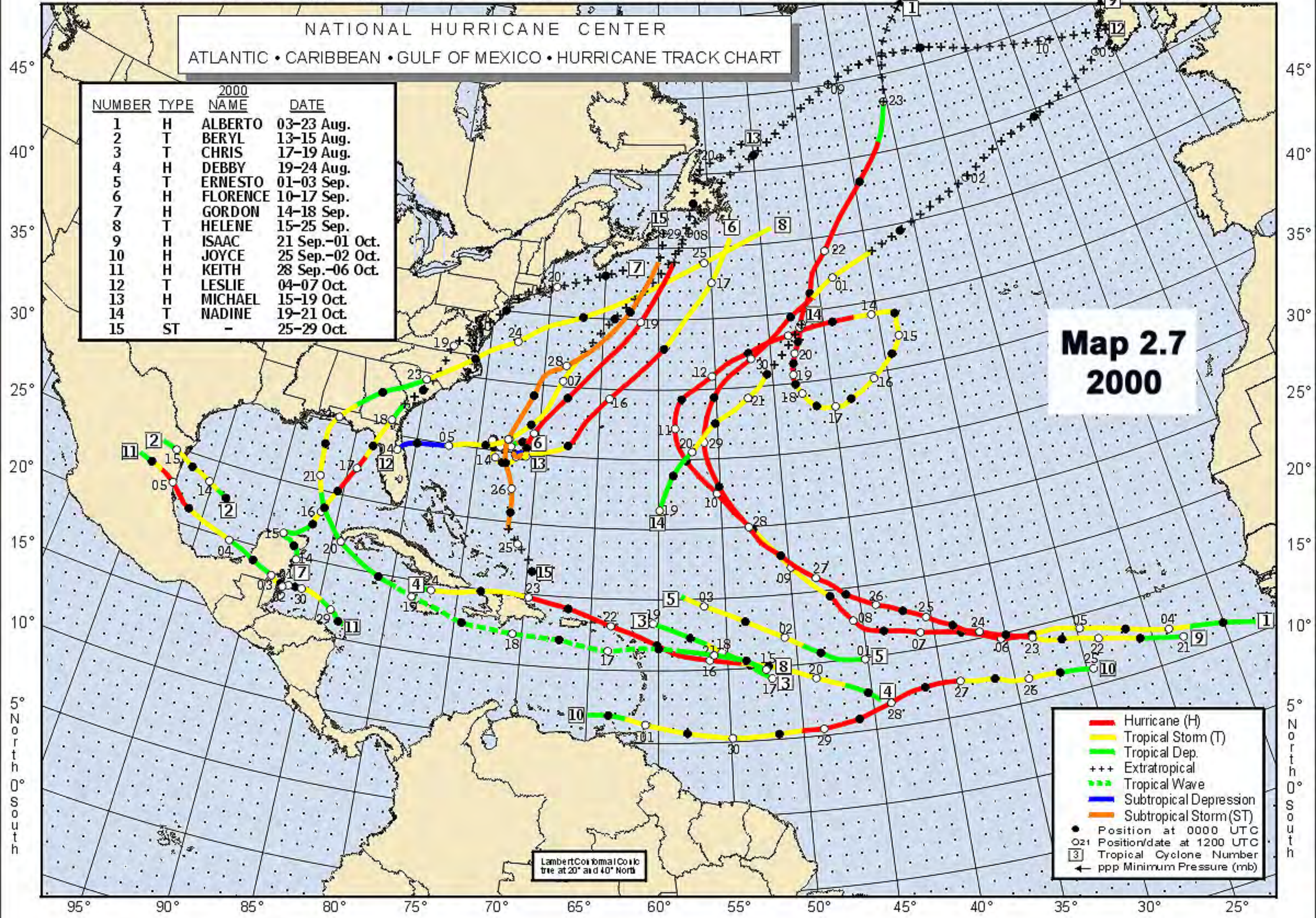
NUMBER	TYPE	2000 NAME	DATE
1	H	ALBERTO	03-23 Aug.
2	T	BERYL	13-15 Aug.
3	T	CHRIS	17-19 Aug.
4	H	DEBBY	19-24 Aug.
5	T	ERNESTO	01-03 Sep.
6	H	FLORENCE	10-17 Sep.
7	H	GORDON	14-18 Sep.
8	T	HELENE	15-25 Sep.
9	H	ISAAC	21 Sep.-01 Oct.
10	H	JOYCE	25 Sep.-02 Oct.
11	H	KEITH	28 Sep.-06 Oct.
12	T	LESLIE	04-07 Oct.
13	H	MICHAEL	15-19 Oct.
14	T	NADINE	19-21 Oct.
15	ST	-	25-29 Oct.

Map 2.7
2000

— Hurricane (H)
— Tropical Storm (T)
— Tropical Dep.
+++ Extratropical
- - - Tropical Wave
— Subtropical Depression
— Subtropical Storm (ST)

● Position at 0000 UTC
 ○ Position/date at 1200 UTC
 [3] Tropical Cyclone Number
 ← ppp Minimum Pressure (mb)

Lambert Conformal Conic
true at 20° and 40° North



120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° West 0° East 5°

NATIONAL HURRICANE CENTER ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

NUMBER	TYPE	2001 NAME	DATE
1	T	ALLISON	05-17 Jun.
2	T	BARRY	02-07 Aug.
3	T	CHANTAL	14-22 Aug.
4	T	DEAN	22-28 Aug.
5	H	ERIN	01-15 Sep.
6	H	FELIX	07-18 Sep.
7	H	GABRIELLE	11-19 Sep.
8	H	HUMBERTO	21-27 Sep.
9	H	IRIS	04-09 Oct.
10	T	JERRY	06-08 Oct.
11	H	KAREN	12-15 Oct.
12	T	LORENZO	27-31 Oct.
13	H	NICHILLE	29 Oct.-05 Nov.
14	H	NOEL	04-06 Nov.
15	H	OLGA	24 Nov.-04 Dec.

**Map 2.8
2001**



Lambert Conformal Conic
Projections at 20° and 40° North

North
South

North
South

95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25°

120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° West 0° East 5°

NATIONAL HURRICANE CENTER
ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

NUMBER	TYPE	2002 NAME	DATE
1	T	ARTHUR	14 - 16 Jul.
2	T	BERTHA	04 - 09 Aug.
3	T	CRISTOBAL	05 - 08 Aug.
4	T	DOLLY	29 Aug. - 04 Sep.
5	T	EDOUARD	01 - 06 Sep.
6	T	FAY	05 - 08 Sep.
7	H	GUSTAV	08 - 12 Sep.
8	T	HANNA	12 - 15 Sep.
9	H	ISIDORE	14 - 27 Sep.
10	T	JOSEPHINE	17 - 19 Sep.
11	H	KYLE	20 Sep. - 12 Oct.
12	H	LILI	21 Sep. - 04 Oct.

Map 2.9
2002

- Hurricane (H)
- Tropical Storm (T)
- Tropical Dep.
- +++ Extratropical
- - - Tropical Wave/Dissipating
- Subtropical Depression
- Subtropical Storm (ST)
- ~ Low
- Position at 0000 UTC
- Position/date at 1200 UTC
- [] Tropical Cyclone Number

Lambert Conformal Conic
True at 20° and 40° North

North
South

120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° West 0° East 5°

NATIONAL HURRICANE CENTER

ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

NUMBER	TYPE	2003 NAME	DATE
1	T	ANA	20 – 24 Apr.
2	T	BILL	29 Jun. – 02 Jul.
3	H	CLAUDETTE	08 – 17 Jul.
4	H	DANNY	16 – 21 Jul.
5	H	ERIKA	14 – 17 Aug.
6	H	FABIAN	27 Aug. – 08 Sep.
7	T	GRACE	30 Aug. – 02 Sep.
8	T	HENRI	03 – 08 Sep.
9	H	ISABEL	06 – 19 Sep.
10	H	JUAN	24 – 29 Sep.
11	H	KATE	26 Sep. – 07 Oct.
12	T	LARRY	01 – 06 Oct.
13	T	MINDY	10 – 14 Oct.
14	T	NICHOLAS	13 – 23 Oct.
15	T	ODETTE	04 – 07 Dec.
16	T	PETER	07 – 11 Dec.

Map 2.10
2003

- Hurricane (H)
- Tropical Storm (T)
- Tropical Dep.
- +++ Extratropical
- - - Tropical Wave/Dissipating
- Subtropical Depression
- Subtropical Storm (ST)
- ~ ~ ~ Low
- Position at 0000 UTC
- 21 Position/date at 1200 UTC
- 3 Tropical Cyclone Number

Lambert Conformal Conic
true at 20° and 40° North

120° 115° 110° 105° 100° 95° 90° 85° 80° 75° 70° 65° 60° 55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° West 0° East 5°

NATIONAL HURRICANE CENTER ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

NUMBER	TYPE	NAME	DATE
1	H	ALEX	31 Jul.-6 Aug.
2	T	BONNIE	3-13 Aug.
3	H	CHARLEY	9-14 Aug.
4	H	DANIELLE	13-21 Aug.
5	T	EARL	13-15 Aug.
6	H	FRANCES	25 Aug.-8 Sep.
7	H	GASTON	27 Aug.-1 Sep.
8	T	HERMINE	27-31 Aug.
9	H	IVAN	2-24 Sep.
10	H	JEANNE	13-28 Sep.
11	H	KARL	16-24 Sep.
12	H	LISA	19 Sep.-3 Oct.
13	T	MATTHEW	8-10 Oct.
14	ST	NICOLE	10-11 Oct.
15	T	OTTO	29 Nov.-3 Dec.

**Map 2.11
2004**

- Hurricane (H)
- Tropical Storm (T)
- Tropical Dep.
- Extratropical
- Wave/Low
- Subtropical Depression
- Subtropical Storm (ST)
- Position at 0000 UTC
- Position/date at 1200 UTC
- Tropical Cyclone Number

Lambert Conformal Conic
true at 20° and 49° North

NATIONAL HURRICANE CENTER ATLANTIC • CARIBBEAN • GULF OF MEXICO • HURRICANE TRACK CHART

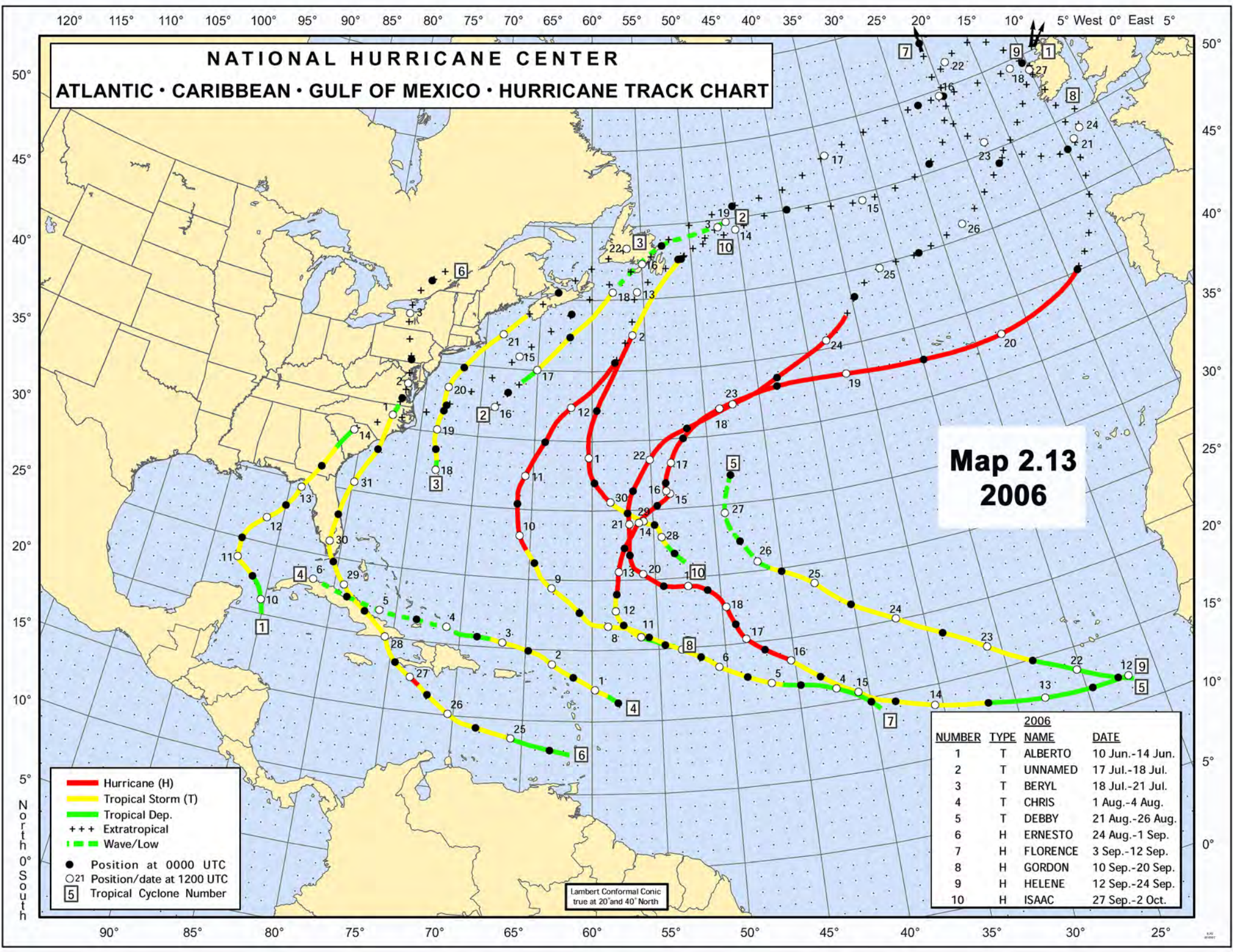
Map 2.12
2005

NUMBER	TYPE	NAME	DATE
1	T	ARLENE	8 Jun.-13 Jun.
2	T	BRET	28 Jun.-30 Jun.
3	H	CINDY	3 Jul.-7 Jul.
4	H	DENNIS	4 Jul.-13 Jul.
5	H	EMILY	11 Jul.-21 Jul.
6	T	FRANKLIN	21 Jul.-29 Jul.
7	T	GERT	23 Jul.-25 Jul.
8	T	HARVEY	2 Aug.-8 Aug.
9	H	IRENE	4 Aug.-18 Aug.
10	T	JOSE	22 Aug.-23 Aug.
11	H	KATRINA	23 Aug.-30 Aug.
12	T	LEE	28 Aug.-2 Sep.
13	H	MARIA	1 Sep.-10 Sep.

NUMBER	TYPE	NAME	DATE
14	H	NATE	5 Sep.-10 Sep.
15	H	OPHELIA	6 Sep.-17 Sep.
16	H	PHILIPPE	17 Sep.-23 Sep.
17	H	RITA	18 Sep.-26 Sep.
18	H	STAN	1 Oct.-5 Oct.
19	ST	UNNAMED	4 Oct.-5 Oct.
20	T	TAMMY	5 Oct.-6 Oct.
21	H	VINCE	8 Oct.-11 Oct.
22	H	WILMA	15 Oct.-25 Oct.
23	T	ALPHA	22 Oct.-24 Oct.
24	H	BETA	26 Oct.-31 Oct.
25	T	GAMMA	14 Nov.-21 Nov.
26	T	DELTA	22 Nov.-28 Nov.
27	H	EPSILON	29 Nov.-8 Dec.
28	T	ZETA	30 Dec.-6 Jan. 2006

- Hurricane (H)
- Tropical Storm (T)
- Tropical Dep.
- +++ Extratropical
- Wave/Low
- Subtropical Depression
- Subtropical Storm (ST)
- Position at 0000 UTC
- 21 Position/date at 1200 UTC
- 5 Tropical Cyclone Number

Lambert Conformal Conic
true at 20° and 40° North



2006 Photographs

- **Photo 6.1** –shows strapping the PVC stilling well to the inside of one of the Manatee Speed Zone signs.
- **Photo 6.2** – shows the method used to attach the YSI conductivity/temperature sonde to the bullet floats.
- **Photo 6.3** – the YSI conductivity/temperature sonde attached to two bullet floats is shown being readied for placement in the stilling well.
- **Photo 6.4** –shows the stilling well (with the locking cap) as seen from the river.

Photo 6.1



Photo 6.2



Photo 6.3



Photo 6.4



2006 Data Sets

Data Set Name	Time Period	Brief Description
HBMP SAS Data Sets		
Flwd06.sd2	1931-2006	Historic daily flow data for: Peace at Bartow, Fort Meade, Zolfo Springs and Arcadia. Daily tributary flows for: Horse Creek near Arcadia; Joshua Creek near Nocatee; Prairie Creek near Ft. Ogden; and Shell Creek near Punta Gorda. Daily flows for the Myakka River near Sarasota and Big Slough near North Port. Historic daily Peace River and Shell Creek Water Treatment Facility withdrawals. All values in cfs.
Cmov8306.sd2	1983-2006	Water quality, and phytoplankton biomass and carbon uptake measurements (1983-1999) from monthly surface samples collected at each of the four moving isohalines. Relative locations reflect distances from the river mouth in kilometers.
Hymov06.sd2	1983-2006	Monthly hydrolab <i>in situ</i> water quality measurements taken at 0.5 meter intervals at each of the four moving isohalines. Relative locations reflect distances from the river mouth in kilometers.
Hyfix06.sd2	1996-2006	Monthly <i>in situ</i> hydrolab water column profile data taken at 0.5 meter intervals from fixed sample locations from near the river's mouth to just upstream of the Treatment Facility.
Cfix9606.sd2	1996-2006	Monthly surface and bottom chemical water quality samples taken at five intervals from fixed sample locations from near the river's mouth to just upstream of the Treatment Facility.
Efix9606.sd2	1996-2006	Water column extinction coefficients collected at the fixed sampling locations.
Boca04.sd2	1996-2004	Water level at 15-minute intervals from the continuous recording gage near Boca Grande.
HH06.sd2	1996-2006	Water Level, and surface and bottom conductivity and temperature at 15-minute intervals from the continuous recording gage on the Peace River near Harbor Heights (River Kilometer 15.5).
PRH06.sd2	1997-2006	Water Level, and surface and bottom conductivity and temperature at 15-minute intervals from the continuous recording gage on the Peace River near Peace River Heights (River Kilometer 26.7).
MZ4_06.sd2	2006	Near surface conductivity and temperature at 15-minute intervals from the HBMP continuous recording gage attached to the Manatee Speed Zone Sign located on the Peace River near Liverpool side channel (River Kilometer 21.9).
MZ3_06.sd2	2006	Near surface conductivity and temperature at 15-minute intervals from the HBMP continuous recording gage attached to the Manatee Speed Zone Sign located on the Peace at River Kilometer 23.4.
MZ2_06.sd2	2006	Near surface conductivity and temperature at 15-minute intervals from the HBMP continuous recording gage attached to the Manatee Speed Zone Sign located on the Peace River just downstream of Navigator Marina (River Kilometer 24.5).
Environmental Quality Laboratory Background Data Sets		
SAS Version 6.0.8 Data Sets		
Chall_2.sd2	1976-1990	EQL fixed station Charlotte Harbor background water chemistry data.
Hydroall.sd2	1976-1990	EQL fixed station Charlotte Harbor hydrolab water column profile data.
SAS Version 6.1.3 Data Sets		
Chem_v12.sd2	1976-1990	EQL fixed station Charlotte Harbor background water chemistry data.
Hall_v12.sd2	1976-1990	EQL fixed station Charlotte Harbor hydrolab water column profile data.

Data Set Name WORK.FLWD06**Observations 27787****Member Type DATA****Variables 18****Engine V9****Indexes 0****Created Thursday, May 03,
2007 01:12:15 PM****Observation Length 144****Last Modified Thursday, May 03,
2007 01:12:15 PM****Deleted Observations 0****Protection****Compressed NO****Data Set Type****Sorted NO****Label****Data Representation WINDOWS_32****Encoding wlatin1 Western (Windows)****Alphabetic List of Variables and Attributes**

#	Variable	Type	Len	Format	Informat	Label
9	Arcadia	Num	8	8.1	F12.	Peace River at Arcadia (cfs)
17	BIGS	Num	8	8.1	F12.	Big Slough near North Port (cfs)
12	Bartow	Num	8	8.1	F12.	Peace at Bartow (cfs)
7	DATE	Num	8	DATE9.	DATE9.	DATE
5	DAY	Num	8	BEST12.	F12.	DAY
13	FTMeade	Num	8	8.1	F12.	Peace at Ft Meade (cfs)
18	F_RAINFALL	Num	8	BEST12.	F12.	F_Rainfall
8	Horse	Num	8	8.1	F12.	Horse Creek near Arcadia (cfs)
10	Joshua	Num	8	8.1	F12.	Joshua Creek at Nocatee (cfs)
4	MONTH	Num	8	BEST12.	F12.	MONTH
16	MYAKKA	Num	8	8.1	F12.	Myakka River near Sarasota (cfs)
2	PWITH	Num	8	8.2	F12.	Peace Facility Withdrawal (cfs)
14	Prairie	Num	8	8.1	F12.	Prairie Creek near Ft. Ogden (cfs)
1	SASDATE	Num	8	BEST12.	F12.	SAS Date
3	SWITH	Num	8	8.2	F12.	Shell Facility Withdrawal (cfs)
11	Shell	Num	8	8.1	F12.	Shell Creek near Punta Gorda (cfs)
6	YEAR	Num	8	BEST12.	F12.	YEAR
15	Zolfo	Num	8	8.1	F12.	Peace at Zolfo (cfs)

Data Set Name	WORK.CMOV8306	Observations	1216
Member Type	DATA	Variables	55
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:16 PM	Observation Length	440
Last Modified	Thursday, May 03, 2007 01:12:16 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
47	ALK	Num	8		Alkalinity (mg/l)
24	CF1	Num	8	8.1	Chlorophyll a >20 um Fraction (mg/m3)
25	CF2	Num	8	8.1	Chlorophyll a 20><5 um Fraction (mg/m3)
26	CF3	Num	8	8.1	Chlorophyll a 5> um Fraction (mg/m3)
27	CF4	Num	8	8.1	% Chlorophyll a >20 um Size Fraction
28	CF5	Num	8	8.1	% Chlorophyll a 20><5 um Size Fraction
29	CF6	Num	8	8.1	% Chlorophyll a 5> um Size Fraction
15	CHLA	Num	8	8.1	Chlorophyll-a (ug/l)
54	CHLB	Num	8		Chlorophyll b (mg/m3)
55	CHLC	Num	8		Chlorophyll c (mg/m3)
44	CL	Num	8	8.1	Chloride (mg/l)
7	COLOR	Num	8	8.	Color (CPU)
45	DATE	Num	8	DATE8.	Date
5	DAY	Num	8	8.	Day
4	DIS	Num	8	8.1	Distance (km)
42	DOC	Num	8	8.2	Dissolved Organic Carbon (mg/l)
50	DOP	Num	8		Dissolved Orthophosphate (mg/L)
14	EXC	Num	8	8.2	Light Extinction Coefficient
18	F1	Num	8	8.2	Uptake >20 um Fraction (mg Carbon/m3/E)
19	F2	Num	8	8.2	Uptake 20><5 um Fract. (mg Carbon/m3/E)
20	F3	Num	8	8.2	Uptake 5> um Fraction (mg Carbon/m3/E)
21	F4	Num	8	8.1	% Carbon Uptake >20 um Size Fraction
22	F5	Num	8	8.1	% Carbon Uptake 20><5 um Size Fraction
23	F6	Num	8	8.1	% Carbon Uptake 5> um Size Fraction
32	IOC	Num	8	8.2	Inorganic Carbon (mg/l)
43	IRON	Num	8	8.2	Iron (mg/l)
6	LIGHT	Num	8	8.1	Light Same Day (Einsteins)
2	MONTH	Num	8	8.	Month
9	N23	Num	8	8.3	Nitrite/Nitrate (mg/l)
8	NH34	Num	8	8.3	Ammonia/Ammonium (mg/l)
11	NP	Num	8	8.1	Available N/P Ratio
33	NPA	Num	8	8.1	Available N/P Atomic Ratio
35	ONIT	Num	8	8.2	TKN - NH4 (mg/l)
10	OP	Num	8	8.3	Orthophosphorus (mg/l)
37	OPD01	Num	8	8.2	Depth 1% of Surface Light Remains (m)
38	OPD10	Num	8	8.2	Depth 10% of Surface Light Remains (m)
39	OPD50	Num	8	8.2	Depth 50% of Surface Light Remains (m)
17	P2	Num	8	8.2	Carbon Uptake (mg Carbon/m3/hr)

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
16	P3	Num	8	8.2	Carbon Uptake (mg Carbon/m3/E)
46	SASDATE	Num	8		SAS Date
13	SI	Num	8	8.2	Silica (mg/l)
51	SOURCE	Char	3		
3	STATION	Num	8	8.	Sample Location
30	TKN	Num	8	8.2	Total Kjeldahl Nitrogen (mg/l)
36	TN	Num	8	8.2	TKN + N23 (mg/l)
12	TNTP	Num	8	8.1	Total N/P Ratio
34	TNTPA	Num	8	8.1	Total N/P Atomic Ratio
41	TOC	Num	8	8.2	Total Organic Carbon (mg/l)
31	TP	Num	8	8.3	Total Phosphorus (mg/l)
48	TSS	Num	8		Total Suspended Solids (mg/l)
40	TURB	Num	8	8.2	Turbidity
52	TYPE	Char	6		
49	VSS	Num	8		Volatile Suspended Solids (mg/L)
1	YEAR	Num	8	8.	Year
53	time	Num	8	TIME5.	

Data Set Name	WORK.HYMOV06	Observations	7437
Member Type	DATA	Variables	17
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:16 PM	Observation Length	136
Last Modified	Thursday, May 03, 2007 01:12:16 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
7	COND	Num	8	8.1	Conductivity
12	DATE	Num	8	DATE7.	DayMonthYear
3	DAY	Num	8	4.	Day
4	DEPTH	Num	8	4.1	Sample Depth (m)
13	DIS	Num	8	8.1	Distance (km)
6	DO	Num	8	8.1	Dissolved Oxygen (mg/l)
2	MONTH	Num	8	8.	Month
9	ORP	Num	8	5.	Oxidation Reduction Potential
8	PH	Num	8	8.1	pH
10	SAL	Num	8	8.1	Salinity (ppt)
11	SASDATE	Num	8	6.	SAS Date
14	SOURCE	Char	4		Data Source
16	STATION	Num	8	6.	
5	TEMP	Num	8	8.1	Temperature (C)
15	TYPE	Char	6		Moving or Fixed
1	YEAR	Num	8	8.	Year
17	time	Num	8	TIME5.	

Data Set Name	WORK.HYFIX06	Observations	14973
Member Type	DATA	Variables	16
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:16 PM	Observation Length	128
Last Modified	Thursday, May 03, 2007 01:12:16 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
12	COND	Num	8	8.	Specific Conductance (us/cm)
6	DATE	Num	8	DATE7.	Date
10	DAY	Num	8		Day
5	DEPTH	Num	8	8.1	Sampling Depth (m)
4	DIS	Num	8		River Kilometer of Site Location
13	DO	Num	8	8.2	Dissolved Oxygen (mg/L)
9	MONTH	Num	8	8.	Month
14	PH	Num	8	8.2	pH Water Whole Field (std.units)
16	SAL	Num	8	8.1	Salinity (ppt)
3	SASDATE	Num	8		SAS Date
1	SOURCE	Char	4		Collected By
15	STATION	Num	8	6.	
11	TEMP	Num	8	8.1	Temperature (C)
7	TIME	Num	8	TIME5.	Time
2	TYPE	Char	5		Moving or Fixed
8	YEAR	Num	8	8.	Year

Data Set Name	WORK.CFIX9606	Observations	1249
Member Type	DATA	Variables	40
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:16 PM	Observation Length	312
Last Modified	Thursday, May 03, 2007 01:12:16 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

Variable Type Len Format Label

23	ALK	Num	8		Alkalinity Lab (mg/L as CAC03)
33	CF1	Num	8		> 20 um Size Fraction
34	CF2	Num	8		20> <5 um Size Fraction
35	CF3	Num	8		> 5 um Size Fraction
32	CHLA	Num	8	8.2	Chlorophyll a (ug/L)
39	CHLB	Num	8	8.2	Chlorophyll b (mg/m3)
40	CHLC	Num	8	8.2	Chlorophyll c (mg/m3)
19	CL	Num	8		Chloride Dissolved (mg/l as Cl)
11	COLOR	Num	8		Color (Platinum-cobalt units)
1	DATE	Num	8	DATE7.	Date
4	DAY	Num	8		Day
9	DEP	Char	3	\$3.	Surface or Bottom Sample
6	DIS	Num	8		Distance from Mouth of River
17	DOC	Num	8		Carbon, Organic dissolved (mg/l as C)
25	DOP	Num	8		Dissolved Orthophosphate (mg/L)
18	IOC	Num	8		Carbon, Inorganic Total (mg/l as C)
36	IRON	Num	8		Iron (mg/L)
3	MONTH	Num	8		Month
15	N23	Num	8		Nitrogen, NO2+NO3 Total (mg/l as N)
37	NH34	Num	8		Ammonia/Ammonium (mg/l)
26	NP	Num	8	8.1	Ration of Availiabile Nitrogen to Phosphorus
28	NPA	Num	8	8.1	Atomic Ration of Availiabile Nitrogen to Phosphorus
30	ONIT	Num	8		Organic Nitrogen (mg/L)
22	OP	Num	8		Phosphorus Ortho Total (mg/l as P)
5	SASDATE	Num	8		SAS Date
20	SI	Num	8		Silica, Dissolved (mg/l as SI02)
7	SOURCE	Char	4		Collected By
24	STATION	Num	8		Station Number
14	TKN	Num	8		Nitrogen, Total Kjeldahl (mg/l as N)
31	TN	Num	8		Total Nitrogen (mg/L)
27	TNTP	Num	8	8.1	Ration of Total Nitrogen to Phosphorus
29	TNTPA	Num	8	8.1	Atomic Ration of Total Nitrogen to Phosphorus
16	TOC	Num	8		Carbon, Organic Total (mg/l as C)
21	TP	Num	8		Phosphorus, Phosphorus Total (mg/l as P)
13	TSS	Num	8		Residue Volatile, suspended (mg/l)
10	TURB	Num	8		Turbidity (NTU)
8	TYPE	Char	5		Moving or Fixed
12	VSS	Num	8		Residue Total at 105 degC susp (mg/l)
2	YEAR	Num	8		Year
38	time	Num	8	TIME5.	

Data Set Name	WORK.EFIX9606	Observations	1425
Member Type	DATA	Variables	13
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:16 PM	Observation Length	96
Last Modified	Thursday, May 03, 2007 01:12:16 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
9	DATE	Num	8	DATE8.	Sampling Date
2	DAY	Num	8		Day
12	DIS	Num	8		River Kilometer
5	EXC	Num	8		Extinction Coefficient
1	MONTH	Num	8		Month
6	OPD01	Num	8		1% Light Depth
7	OPD10	Num	8		10% Light Depth
8	OPD50	Num	8		50% Light Depth
10	SASDATE	Num	8		
13	SOURCE	Char	3		
4	STATION	Num	8		EQL Station #
11	TYPE	Char	5		
3	YEAR	Num	8		Year

Data Set Name	WORK.HH06	Observations	342043
Member Type	DATA	Variables	15
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:16 PM	Observation Length	112
Last Modified	Thursday, May 03, 2007 01:12:16 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
6	CONDBOT	Num	8		Bottom Conductance (uS/cm @25C)
5	CONDSURF	Num	8		Surface Conductance (uS/cm @25C)
2	DATE	Num	8	DATE7.	Date
11	DAY	Num	8		Day
15	DIS	Num	8		Distance from Mouth of River
1	GAGE	Char	8		USGS Gage Number
4	GHEIGHT	Num	8		Gage Height (feet)
10	MONTH	Num	8		Month
12	SASDATE	Num	8		SAS Date
13	SOURCE	Char	4		Collected By
8	TEMPBOT	Num	8		Bottom Temperature (degrees C)
7	TEMPSURF	Num	8		Surface Temperature (degrees C)
3	TIME	Num	8	TIME5.	Time
14	TYPE	Char	4		Moving, Fixed or Gage
9	YEAR	Num	8		Year

Data Set Name	WORK.PRH06	Observations	307654
Member Type	DATA	Variables	15
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:18 PM	Observation Length	112
Last Modified	Thursday, May 03, 2007 01:12:18 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
6	CONDBOT	Num	8		Bottom Conductance (uS/cm @25C)
5	CONDSURF	Num	8		Surface Conductance (uS/cm @25C)
2	DATE	Num	8	DATE7.	Date
11	DAY	Num	8		Day
15	DIS	Num	8		Distance from Mouth of River
1	GAGE	Char	8		USGS Gage Number
4	GHEIGHT	Num	8		Gage Height (feet)
10	MONTH	Num	8		Month
12	SASDATE	Num	8		SAS Date
13	SOURCE	Char	4		Collected By
8	TEMPBOT	Num	8		Bottom Temperature (degrees C)
7	TEMPSURF	Num	8		Surface Temperature (degrees C)
3	TIME	Num	8	TIME5.	Time
14	TYPE	Char	4		Moving, Fixed or Gage
9	YEAR	Num	8		Year

Data Set Name	WORK.MZ4_06	Observations	30575
Member Type	DATA	Variables	13
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:21 PM	Observation Length	96
Last Modified	Thursday, May 03, 2007 01:12:21 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
9	COND	Num	8			Specific Conductance (uS/cm @ 25C)
6	DAY	Num	8			
13	DIS	Num	8			Distance from River Mouth (kilometers)
1	Date	Num	8	DATE9.	DATE9.	Date
10	GAGE	Char	3			Gage Location ID
5	MONTH	Num	8			
8	SASDATE	Num	8			SAS Date
11	SOURCE	Char	5			Collected By
4	Salinity	Num	8			Salinity
12	TYPE	Char	4			Fixed Location
3	Temp	Num	8			Temperature (degree C)
2	Time	Num	8	TIME8.	TIME8.	Time
7	YEAR	Num	8			

Data Set Name	WORK.MZ3_06	Observations	29816
Member Type	DATA	Variables	13
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:21 PM	Observation Length	96
Last Modified	Thursday, May 03, 2007 01:12:21 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

Variable Type Len Format Informat Label

9	COND	Num	8		Specific Conductance (uS/cm @ 25C)
6	DAY	Num	8		
13	DIS	Num	8		Distance from River Mouth (kilometers)
1	Date	Num	8	DATE9. DATE9.	Date
10	GAGE	Char	3		Gage Location ID
5	MONTH	Num	8		
8	SASDATE	Num	8		SAS Date
11	SOURCE	Char	5		Collected By
4	Salinity	Num	8		Salinity
12	TYPE	Char	4		Fixed Location
3	Temp	Num	8		Temperature (degree C)
2	Time	Num	8	TIME8. TIME8.	Time
7	YEAR	Num	8		

Data Set Name	WORK.MZ2_06	Observations	27938
Member Type	DATA	Variables	13
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:21 PM	Observation Length	96
Last Modified	Thursday, May 03, 2007 01:12:21 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
9	COND	Num	8			Specific Conductance (uS/cm @ 25C)
6	DAY	Num	8			
13	DIS	Num	8			Distance from River Mouth (kilometers)
1	Date	Num	8	DATE9.	DATE9.	Date
10	GAGE	Char	3			Gage Location ID
5	MONTH	Num	8			
8	SASDATE	Num	8			SAS Date
11	SOURCE	Char	5			Collected By
4	Salinity	Num	8			Salinity
12	TYPE	Char	4			Fixed Location
3	Temp	Num	8			Temperature (degree C)
2	Time	Num	8	TIME8.	TIME8.	Time
7	YEAR	Num	8			

Data Set Name	WORK.BOCA04	Observations	280688
Member Type	DATA	Variables	10
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:21 PM	Observation Length	80
Last Modified	Thursday, May 03, 2007 01:12:21 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
2	DATE	Num	8	DATE7.	Date
7	DAY	Num	8		Day
1	GAGE	Char	15		USGS Gage Number
4	GHEIGHT	Num	8		Gage Height (feet)
6	MONTH	Num	8		Month
8	SASDATE	Num	8		SAS Date
10	SOURCE	Char	4		
3	TIME	Num	8	TIME5.	Time
9	TYPE	Char	4		
5	YEAR	Num	8		Year

Data Set Name	WORK.CHALL_2	Observations	3546
Member Type	DATA	Variables	37
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:23 PM	Observation Length	296
Last Modified	Thursday, May 03, 2007 01:12:23 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Label
24	ALK	Num	8	6.1	Alkalinity-CaCO3 (mg/l)
26	CA	Num	8	6.1	Calcium Hardness (mg/l)
13	CHLA	Num	8	7.1	Chlorophyll a (ug/l)
14	CL	Num	8	7.1	Chloride (mg/l)
17	COLOR	Num	8	5.	Color (CPU)
3	D	Num	8		Day
23	DAY	Num	8		Day
18	DEPTH	Num	8		
37	DO	Num	8		Dissolved Oxygen (mg/l)
19	DOC	Num	8		Dissolved Organic Carbon (mg/l)
31	F	Num	8	6.2	Fluoride (mg/l)
32	FC	Num	8	5.	Fecal Coliform Bacteria (c/100 ml)
20	FE	Num	8		Iron (mg/l)
33	FS	Num	8	5.	Fecal Strep. Bacteria (c/100 ml)
25	HARD	Num	8	5.	Hardness-CaCO3 (mg/l)
11	IOC	Num	8	7.1	Inorganic Carbon (mg/l)
2	M	Num	8		Month
27	MG	Num	8	6.1	Magnesium Hardness (mg/l)
22	MONTH	Num	8		Month
4	N23	Num	8	6.3	Nitrite/Nitrate (mg/l)
5	NH3	Num	8	6.3	Ammonia/Ammonium (mg/l)
8	OP	Num	8	6.3	Orthophosphorus (mg/l)
30	PH	Num	8		
15	SASDATE	Num	8		SAS Date
9	SI	Num	8	6.2	Silica (mg/l)
28	SO4	Num	8	6.1	Sulfate (mg/l)
16	STATION	Num	8		Station Number
34	TC	Num	8	5.	Total Coliform Bacteria (c/100 ml)
36	TCOL	Num	8		Total Coliform Bacteria (c/100 ml)
29	TDS	Num	8	5.	Total Dissolved Solids (mg/l)
35	TEMP	Num	8		
6	TKN	Num	8	6.2	Total Kjeldahl Nitrogen (mg/l)
10	TOC	Num	8	7.1	Total Organic Carbon (mg/l)
7	TP	Num	8	6.2	Total Phosphorus (mg/l)
12	TURB	Num	8	4.1	turbidity (NTU)
1	Y	Num	8		Year
21	YEAR	Num	8		Year

Data Set Name	WORK.HYDROALL	Observations	22515
Member Type	DATA	Variables	13
Engine	V9	Indexes	0
Created	Thursday, May 03, 2007 01:12:23 PM	Observation Length	104
Last Modified	Thursday, May 03, 2007 01:12:23 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Label
7	COND	Num	8	Conductivity (mmho)
3	DAY	Num	8	Day
5	DEPTH	Num	8	Depth (meters)
6	DO	Num	8	Dissolved Oxygen (mg/l)
2	MONTH	Num	8	Month
9	ORP	Num	8	Oxidation Reduction Potential
8	PH	Num	8	pH
10	SAL	Num	8	Salinity o/oo
12	SASDATE	Num	8	SAS Date
11	SAT	Num	8	Percent Oxygen Saturation
4	STATION	Num	8	Station Number
13	TEMP	Num	8	Temperature (C)
1	YEAR	Num	8	Year