



Deer River Watershed (0415030603)

Water Index Number

SL(C)-32- 6
 SL(C)-32- 6
 SL(C)-32- 6- 1
 SL(C)-32- 6- 3
 SL(C)-32- 6- 3- 2
 SL(C)-32- 6-P73
 SL(C)-32- 6-P73-
 SL(C)-32- 6-P73-26-P78,P83
 SL(C)-32- 6-P73-26-P79
 SL(C)-32- 6-P73-26-P80,P82
 SL(C)-32- 6-P73..30- 1-P85
 SL(C)-32- 6-P73..30- 1-P85a
 SL(C)-32- 6-P73..31-P86,P87
 SL(C)-32- 6-P73..P89

Waterbody

Deer River, Lower, and minor tribs (0902-0097)
 Deer River, Upper, and tribs (0902-0098)
 Lawrence Brook and tribs (0902-0099)
 Trout Brook and minor tribs (0902-0100)
 Allen Brook and tribs (0902-0101)
 Deer River Flow (0902-0102)
 Tribs to Deer River Flow (0902-0103)
 Horseshoe Pond, Eagle Pond (0902-0104)
 Diamond Lake (0902-0011)
 Lake Duane, Lake Frances (0902-0105)
 Buck Lake (0902-0106)
 Clear Lake (0902-0107)
 Mountain Ponds (0902-0108)
 Lake Florence (0902-0109)

Category

NoKnownImpct
 UnAssessed
 NoKnownImpct
 NoKnownImpct
 UnAssessed
 NoKnownImpct
 UnAssessed
 NoKnownImpct
 NoKnownImpct
 NoKnownImpct
 NoKnownImpct
 UnAssessed
 Need Verific
 NoKnownImpct

Deer River, Lower, and minor tribs (0902-0097)

NoKnownImpct

Waterbody Location Information

Revised: 02/13/2009

Water Index No: SL(C)-32- 6
Hydro Unit Code: 04150306/040 **Str Class:** B
Waterbody Type: River
Waterbody Size: 70.6 Miles
Seg Description: stream and select tribs, from mouth to North Lawrence

Drain Basin: Saint Lawrence River
Saint Regis River
Reg/County: 6/St.Lawrence Co. (45)
Quad Map: HOGANSBURG (B-22-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability: 8 (No Known Use Impairment)
Verification Status: (Not Applicable for Selected RESOLVABILITY)
Lead Agency/Office: n/a
TMDL/303d Status: n/a

Resolution Potential: n/a

Further Details

Water Quality Sampling

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Deer River in Helena, Saint Lawrence County, (at Depot Road) was conducted in 2005. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions and very good water quality. The community was composed of many mayflies and caddisflies. The Nutrient Biotic Index indicated oligotrophic conditions for both phosphorus and nitrogen. Water column sampling revealed no parameters of concern. Macroinvertebrates collected at this site and chemically analyzed for selected metals, PAHs, PCBs, and organochlorine pesticides found elevated levels of chromium to be present. The source of chromium is likely to be anthropogenic, but it has not been identified. Sediment screening for acute toxicity indicated moderate toxicity could be present, but sediments were not found to contain any contaminants at levels of concern and, based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. Chronic toxicity testing using water from this location showed no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site is found to fully support aquatic life and recreation uses. (DEC/DOW, BWAM/RIBS, December 2008).

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from the mouth to County Route 52 in North Lawrence. The waters of this portion of the stream are Class B. Tribs to this reach/segment, including Redwater Brook (-2), are Class B and C,C(T). Lawrence Brook (-1), Trout Brook (-3) and Upper Deer River are listed separately.

Lawrence Brook and tribs (0902-0099)

NoKnownImpct

Waterbody Location Information

Revised: 02/13/2009

Water Index No:	SL(C)-32- 6- 1	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150306/040	Str Class:	C
Waterbody Type:	River	Reg/County:	6/St.Lawrence Co. (45)
Waterbody Size:	78.2 Miles	Quad Map:	NORTH LAWRENCE (B-22-4)
Seg Description:	entire stream and tribs		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	8 (No Known Use Impairment)	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	n/a	Resolution Potential: n/a
TMDL/303d Status:	n/a	

Further Details

Water Quality Sampling

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Lawrence Brook in Moira, Franklin County, (at Wangum Road) was conducted in 2005. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. The Nutrient Biotic Index indicated mesotrophic conditions for phosphorus and Impact Source Determination identified non-point source nutrient enrichment as a possible stressor. Water column sampling revealed no parameters of concern. Macroinvertebrates collected at this site and chemically analyzed for selected PAHs, PCBs, and organochlorine pesticides found elevated levels of chromium. The source of chromium is likely to be anthropogenic, but it has not been identified. Sediment screening for acute toxicity indicated some toxicity may be present, however, sediments were not found to contain any contaminants at levels of concern and, based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. Chronic toxicity testing using water from this location showed no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site indicates that in spite of some concerns that should continue to be monitored (chromium), aquatic life and recreational uses are fully supported in the stream. (DEC/DOW, BWAM/RIBS, January 2009) A biological (macroinvertebrate) assessment of Lawrence Brook at Moira (at Wangum Road) was conducted in 2004 during the RIBS Biological Screening effort in the basin. Sampling results indicated slightly impacted water quality conditions. In the field

a diversity of mayflies, caddisflies, and stoneflies was noted. Habitat at the sampling location was adequate however the substrate did consist of a high percentage of sand which can inhibit the colonization of certain macroinvertebrates such as stoneflies. Impacts source determination identified a natural community with some non-point source nutrient enrichment, likely the result of the sandy substrate. In spite of these minor and habitat impacts, aquatic life is considered to be fully supporting in the stream. (DEC/DOW, BWAM/SBU, November 2008)

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(T). Tribs to this reach/segment, including Jay Brook (-4) and Alburg Brook, are also Class C,C(T).

Trout Brook and minor tribs (0902-0100)

NoKnownImpct

Waterbody Location Information

Revised: 12/12/2008

Water Index No:	SL(C)-32- 6- 3	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150306/040	Str Class:	C
Waterbody Type:	River		Saint Regis River
Waterbody Size:	80.3 Miles	Reg/County:	6/St.Lawrence Co. (45)
Seg Description:	entire stream and select tribs	Quad Map:	NORTH LAWRENCE (B-22-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	8 (No Known Use Impairment)	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	n/a	Resolution Potential: n/a
TMDL/303d Status:	n/a	

Further Details

Water Quality Sampling

A biological (macroinvertebrate) assessment of Trout Brook at Brasher Falls (at Murray Road) was conducted in 2004 during the RIBS Biological Screening effort in the basin. Sampling results indicated non-impacted water quality conditions. The macroinvertebrate fauna was dominated by the facultative non-biting midge larvae *Rheotanytarsus exiguus*. and *Polypedilum flavum*. The nutrient biotic index did indicate eutrophic conditions however, impact source determination results were inconclusive. (DEC/DOW, BWAM/SBU, November 2008)

Segment Description

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C. Tribs to this reach/segment are also Class C. Allen Brook (-2) is listed separately.

Deer River Flow (0902-0102)

NoKnownImpct

Waterbody Location Information

Revised: 01/23/2009

Water Index No:	SL(C)-32- 6-P73	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150306/040	Str Class:	C(T)
Waterbody Type:	Lake	Reg/County:	5/Franklin Co. (17)
Waterbody Size:	364.8 Acres	Quad Map:	LAKE TITUS (C-23-2)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability: 8 (No Known Use Impairment)
Verification Status: (Not Applicable for Selected RESOLVABILITY)
Lead Agency/Office: n/a
TMDL/303d Status: n/a

Resolution Potential: n/a

Further Details

Water Quality Sampling

Monitoring of Deer River Flow was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Horseshoe Pond, Eagle Pond (0902-0104)

NoKnownImpct

Waterbody Location Information

Revised: 11/13/2008

Water Index No: SL(C)-32- 6-P73-26-P78,P83
Hydro Unit Code: 04150306/040 **Str Class:** C
Waterbody Type: Lake
Waterbody Size: 66.9 Acres
Seg Description: total area of both lake

Drain Basin: Saint Lawrence River
Saint Regis River
Reg/County: 5/Franklin Co. (17)
Quad Map: LAKE TITUS (C-23-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability: 8 (No Known Use Impairment)
Verification Status: (Not Applicable for Selected RESOLVABILITY)
Lead Agency/Office: n/a **Resolution Potential:** n/a
TMDL/303d Status: n/a

Further Details

Water Quality Sampling

Horseshoe Pond has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 2000 and continuing through 2006. An Interpretive Summary report of the findings of this sampling was published in 2007. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive, although productivity evaluations are confounded by the high (probably natural) color readings in the lake (and resulting low water transparency). Phosphorus levels in the lake occasionally exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements at times fail to meet what is the recommended minimum for swimming beaches, although the latter is probably more a function of higher (natural) color than excessive algae growth. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is highly colored, and natural color does limit water transparency. (DEC/DOW, BWAM/CSLAP, October 2007)

Monitoring of Horseshoe Pond was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational at the time. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be generally favorable since the lake was first evaluated and continuing through the most recent assessment. The recreational suitability of the lake is described most frequently as "could not be nicer" and "excellent." The lake itself is most often described as "crystal clear," an assessment that is more favorable than indicated by measured water quality characteristics, but consistent with highly colored waters. Assessments have noted that aquatic plants grow to the lake surface and are occasionally cited as having an impact on recreational use. Aquatic plants include Eurasian milfoil. (DEC/DOW, BWAM/CSLAP, October 2007)

Lake Uses

This lake waterbody is designated class C, suitable for general recreation use and aquatic life support, but not for a water supply or public bathing beach. Water quality monitoring by NYSDEC focuses primarily on support of general recreation and aquatic life. Samples to evaluate the bacteriological condition and bathing use of the lake or to evaluate contamination from organic compounds, metals or other inorganic pollutants have not been collected as part of the CSLAP monitoring program. Monitoring to assess potable water supply and public bathing use is generally the responsibility of state and/or local health departments.

Diamond Lake (0902-0011)

Impaired Seg

Waterbody Location Information

Revised: 09/05/2008

Water Index No:	SL(C)-32- 6-P73-26-P79	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150306/040	Str Class:	D
Waterbody Type:	Lake	Reg/County:	5/Franklin Co. (17)
Waterbody Size:	11.4 Acres	Quad Map:	LAKE TITUS (C-23-2)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
AQUATIC LIFE	Precluded	Known

Type of Pollutant(s)

Known: ACID/BASE (PH)
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ATMOSPHERIC DEPOSITION
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	()	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	ext/EPA	Resolution Potential: n/a
TMDL/303d Status:	2a (Multiple Segment/Categorical Water, Atmosph Dep)	

Further Details

Overview

Aquatic life support in Diamond Lake is known to be impaired by low pH, a result of atmospheric deposition (acid rain).

Water Quality Sampling

Historical surveys of these waters indicate that low pH due to acid deposition is limiting the fishery. Monitoring by ALSC (1985) revealed a pH <5.0 and no presence of fish. Aquatic life in this segment is considered to be impaired. (DEC/DOW, BWAM, 2008)

Water Quality Management

Efforts are underway on a national level to address problems caused by acid rain by reducing pollutant emissions, as required by the Clean Air Act. New York State (and other northeastern states) have taken legal action against USEPA to accelerate implementation of controls. Monitoring of these waters will continue, in order to assess changes in water quality resulting from implementation of the Clean Air Act. However, these changes are expected to occur only slowly over time.

Section 303(d) Listing

The waters of this segment are included on the NYS 2008 Section 303(d) List of Impaired Waters. Diamond Lake is included on Part 2a of the List as an Atmospheric Deposition (Acid Rain) Water. (DEC/DOW, BWAM, 2008)

Segment Description

This segment also includes the smaller Ikeis Pond (P438) and unnamed ponds (P439, P440).

Lake Duane, Lake Frances (0902-0105)

NoKnownImpct

Waterbody Location Information

Revised: 01/23/2009

Water Index No:	SL(C)-32- 6-P73-26-P80,P82	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150306/040	Str Class:	C
Waterbody Type:	Lake	Reg/County:	5/Franklin Co. (17)
Waterbody Size:	60.3 Acres	Quad Map:	LAKE TITUS (C-23-2)
Seg Description:	total area of both lakes		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability: 8 (No Known Use Impairment)
Verification Status: (Not Applicable for Selected RESOLVABILITY)
Lead Agency/Office: n/a
TMDL/303d Status: n/a

Resolution Potential: n/a

Further Details

Water Quality Sampling

Monitoring of Lake Duane was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Buck Lake (0902-0106)

NoKnownImpct

Waterbody Location Information

Revised: 01/23/2009

Water Index No:	SL(C)-32- 6-P73..30- 1-P85	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150306/040	Str Class:	C
Waterbody Type:	Lake	Reg/County:	5/Franklin Co. (17)
Waterbody Size:	8.9 Acres	Quad Map:	MEACHAM LAKE (C-23-3)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	8 (No Known Use Impairment)	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	n/a	Resolution Potential: n/a
TMDL/303d Status:	n/a	

Further Details

Water Quality Sampling

Monitoring of Buck Lake was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Mountain Ponds (0902-0108)

Need Verific

Waterbody Location Information

Revised: 09/05/2008

Water Index No:	SL(C)-32- 6-P73..31-P86,P87	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150306/040	Str Class:	C
Waterbody Type:	Lake	Reg/County:	5/Franklin Co. (17)
Waterbody Size:	14.9 Acres	Quad Map:	MEACHAM LAKE (C-23-3)
Seg Description:	total area of both lakes		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Aquatic Life	Stressed	Possible

Type of Pollutant(s)

Known: ---
Suspected: ACID/BASE (PH)
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ATMOSPH. DEPOSITION
Possible: ---

Resolution/Management Information

Issue Resolvability:	1 (Needs Verification/Study (see STATUS))	
Verification Status:	1 (Waterbody Nominated, Problem Not Verified)	
Lead Agency/Office:	DEC/BWAM	Resolution Potential: Medium
TMDL/303d Status:	n/a	

Further Details

Overview

Aquatic life support in this segment may be limited due to low pH, a result of atmospheric deposition (acid rain). These two ponds are thought to correspond to the Mountain Lake previously included on the Section 303(d) List in Appendix A - Small Lakes Impaired by Acid Rain. However this lake was added to the Section 303(d) List with little documentation so it is not certain that this impairment corresponds to these lakes. Additional monitoring is necessary to determine if there is an impairment due to acid rain. Until data on this waterbody is available, this impacts will be considered to needing verification.

Water Quality Sampling

Historical surveys of Mountain Pond included in this segment indicate that low pH due to acid deposition is limiting the fishery. Monitoring by ALSC (1986) revealed a pH <5.0 and no fish. (DEC/DOW, BWAM, 2008)

Water Quality Management

Efforts are underway on a national level to address problems caused by acid rain by reducing pollutant emissions, as required by the Clean Air Act. New York State (and other northeastern states) have taken legal action against USEPA to accelerate implementation of controls. Monitoring of these waters will continue, in order to assess changes in water quality resulting from implementation of the Clean Air Act. However, these changes are expected to occur only slowly over time.

Section 303(d) Listing

Mountain Pond is included on the NYS 2008 Section 303(d) List of Impaired Waters in Appendix A as a Smaller Lake Impaired by Acid Rain. (DEC/DOW, BWAM, 2008)

Segment Description

This segment includes the total area of both Mountain Ponds (P86, P87).

Lake Florence (0902-0109)

NoKnownImpct

Waterbody Location Information

Revised: 01/23/2009

Water Index No:	SL(C)-32- 6-P73..P89	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150306/040	Str Class:	B
Waterbody Type:	Lake	Reg/County:	5/Franklin Co. (17)
Waterbody Size:	19.2 Acres	Quad Map:	MEACHAM LAKE (C-23-3)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	8 (No Known Use Impairment)	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	n/a	Resolution Potential: n/a
TMDL/303d Status:	n/a	

Further Details

Water Quality Sampling

Monitoring of Lake Florence was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)