Comments?

Whitefield

→ BCW

→ ~~Chad~~

→ ~~Norman~~ N.

→ Normand K.

PROPOSAL

WATER QUALITY BRANCH

LONG TERM PUBLICATION PLAN

PACIFIC AND YUKON REGION

PROPOSAL

WATER QUALITY BRANCH

LONG TERM PUBLICATION PLAN

PACIFIC AND YUKON REGION

WATER QUALITY BRANCH
LONG TERM PUBLICATON PLAN

	Title	YR1	YR2	YR3	YR4	YR5	Resources P/M
A.	REGIONAL REPORTS						
1.0	Data reports						
1.01	Flathead River I - Surveys	X					10.0
1.02	Akamina-Kishinena	X					10.0
1.03	Peace River	X					10.0
1.04	Stikine River	X					6.0
1.05	Routine Monitoring 1979-81	X					12.0
1.06	Columbia River I - Toxic Inorganic Compounds at International Boundary	X					12.0
1.07	Similkameen River I	X					12.0
1.08	Columbia River II - Bioassays		X				12.0
1.09	Routine Monitoring 1982-83		X				6.0
1.10	Okanagan River I - Mainstem		X				8.0
1.11	Flathead River II - Application to WQOs			X			8.0
1.12	Fording - Flathead Rivers Comparative Study			X			6.0
1.13	Routine Monitoring 1984-85			X			6.0
1.14	Similkameen River II - Application to WQOs			X			8.0
1.15	Toxic Inorganics Speciation I - Similkameen River			X			6.0
1.16	Columbia River III - Temporal and Spatial Variability at Waneta			X			10.0
1.17	Columbia River IV - Effects of Remedial Actions at Cominco			X			7.0

WATER QUALITY BRANCH
LONG TERM PUBLICATON PLAN
(Continued)

Title	YR1	YR2	YR3	YR4	YR5	Resources P/M
1.18 Columbia River V - Metals in Fish Tissues			X			4.0
1.19 Okanagan River II - Mainstem and Tributaries			X			8.0
1.20 Columbia River VI - Application to WQOs				X		8.0
1.21 Fraser River Estuary I - Surveys				X		6.0
1.22 Columbia River VII - Waste Spills and Discharges				X		4.0
1.23 Fraser River Estuary III - Application to WQO's				X		12.0
1.24 Fraser River Estuary II - Routine Monitoring				X		6.0
1.25 Federal/Provincial Monitoring 1984-85				X		6.0
1.26 Toxic Inorganics Speciation II - Columbia River					X	6.0
1.27 Routine Monitoring 1986-87					X	6.0
1.28 Federal/Procincial Monitoring 1986-87					X	6.0
2.0 Interpretive Reports						
2.01 Akamina-Kishinena	X					12.0
2.02 Comparison of Dissolved Oxygen Under Ice in Two Southern Yukon Rivers	X					10.0
2.03 Kootenay River Nutrient Loading	X					6.0
2.04 St. Mary's River Water Quality	X					6.0
2.05 Stikine River		X				9.0

WATER QUALITY BRANCH
LONG TERM PUBLICATON PLAN
(Continued)

	Title	YR1	YR2	YR3	YR4	YR5	Resources P/M
2.06	Peace River		X				18.0
2.07	Columbia River II - Bioassays		X				15.0
2.08	Flathead River III - WQOs for Fish			X			12.0
2.09	Flathead River II - Application to WQOs				X		6.0
2.10	Fording - Flathead Rivers Comparative Study				X		6.0
2.11	Columbia River IV - Effects of Remedial Actions at Cominco				X		12.0
2.12	Columbia River V - Metals in Fish Tissues				X		4.0
2.13	Similkameen River II - Application to WQOs				X		12.0
2.14	Toxic Inorganics Speciation I - Similkameen River				X		6.0
2.15	Columbia River VI - Application to WQOs					X	6.0
2.16	Fraser River Estuary I - Surveys					X	9.0
2.17	Fraser River Estuary II - Routine Monitoring					X	8.0
2.18	Routine Monitoring - Baseline Determination for Trend Assessment					X	6.0
2.19	Fraser River Estuary III - Application to WQOs					X	12.0
2.20	Columbia River VII - Waste Spills and Discharges					X	4.0
2.21	Federal/Provincial Monitoring - Baseline Determination for Trend Assessment					X	6.0

WATER QUALITY BRANCH
LONG TERM PUBLICATON PLAN
(Continued)

Title	YR1	YR2	YR3	YR4	YR5	Resources P/M
3.0 Station Evaluation Reports						
3.1 Kettle River at Midway	X					6.0
3.2 Kootenay River at Fenwick Station		X				6.0
3.3 Columbia River at Donald			X			6.0
3.4 Similkameen River at Border				X		6.0
3.5 Kootenay River at Nick's Island					X	6.0
4.0 Methods Reports						
4.01 Flathead and Akamina-Kishinena Periphyton Sampling Methods	X					4.0
4.02 Intervention Analysis of Kootenai River Water Quality Records	X					1.0
4.03 Non-Filterable Residue Technique		X				2.0
4.04 Computerized Information System for WQOs		X				6.0
4.05 Toxic Inorganics Speciation Technique Feasibility Assessment		X				3.0
4.06 Toxic Inorganics Speciation Method Selection		X				4.0
4.07 Fraser River Estuary Surveys Proposal		X				1.0
4.08 Application of Time Series Method to Water Quality Analysis I - Application of Box-Jenkins Transfer Functions to Conductivity-Dissolved Solids Relationships		X				2.0

WATER QUALITY BRANCH
LONG TERM PUBLICATON PLAN
(Continued)

Title	YR1	YR2	YR3	YR4	YR5	Resources P/M
4.09 Application of Time Series Method to Water Quality Analysis II - Application of Box-Jenkins Transfer Functions in Forecasting Sediment Concentrations		X				2.0
4.10 Similkameen River Methodology for Development of WQOs		X				4.0
4.11 Design and Evaluation of Water Quality Monitoring Frequencies			X			12.0
4.12 Use of *in situ* Periphyton Bioassay for Eutrophication Evaluation in a B.C. River			X			12.0
4.13 Empirical Development of Site-Specific WQOs			X			6.0
4.14 Satellite Data Acquisition			X			6.0
4.15 Oracle Documentation			X			3.0
4.16 Optimal Sampling Frequency			X			4.0
4.17 Considerations for WQOs on the Columbia River			X			4.0
4.18 Approaches to Monitoring for Compliance with Water Quality Objectives				X		6.0
4.19 Monitoring for Compliance with WQOs in Fraser River Estuary					X	6.0
4.20 Monitoring for Compliance with WQOs in Similkameen River					X	6.0

WATER QUALITY BRANCH
LONG TERM PUBLICATON PLAN
(Continued)

Title	YR1	YR2	YR3	YR4	YR5	Resources P/M
5.0 Other Publications						
5.01 Dissolved Oxygen Processes Under Ice	X					3.0
5.02 WQB - P&YR - 1983 Annual Report	X					4.0
5.03 Estimation of Nutrient Flux in an Open Channel	X					2.0
5.04 Stikine River Microbial Water Quality		X				4.0
5.05 Provincial Activities in Setting WQOs		X				4.0
5.06 Stikine River Water Quality		X				2.0
5.07 WQB - P&YR - 1984		X				4.0
5.08 Analysis of Grans Plot Data			X			2.0
5.09 Short-Term Temporal Variability of Water Quality			X			3.0
5.10 WQB - P&YR - 1985 Annual Report			X			4.0
5.11 Considerations for Site Selection for Setting WQOs			X			3.0
5.12 WQB - P&YR - 1986 Annual Report				X		4.0
5.13 Little Sheep Creek Assessment Report					X	4.0
5.14 WQB - P&YR - 1987 Annual Report					X	4.0

WATER QUALITY BRANCH LONG TERM PUBLICATON PLAN
RESOURCE UTILIZATION SUMMARY

	Regional Reports	Resources (Person Months) YR1	YR2	YR3	YR4	YR5	TOTAL
1.	Data Reports	72.0	26.0	63.0	42.0	18.0	221.0
2.	Interpretive Reports	34.0	42.0	12.0	46.0	51.0	185.0
3.	Station Evaluation Reports	6.0	6.0	6.0	6.0	6.0	30.0
4.	Methods Reports	5.0	24.0	47.0	6.0	12.0	94.0
5.	Other Publications	9.0	14.0	12.0	4.0	8.0	47.0
	TOTAL	126.0	112.0	140.0	104.0	95.0	577.0

REPORT IDENTIFICATION 1984-85

A. REGIONAL REPORTS

1.0 Data Reports

1.01 Flathead River I - Surveys

The report will contain detailed water chemistry, algal and invertebrate data collected before operation of Sage Creek Coal Mine (1975-76, 1982).

1.02 Akamina-Kishinena

The report will contain detailed water chemistry and algal data collected from 1978-82.

1.03 Peace River

The report will contain water chemistry data collected in 1975-76 plus additional data collected by lay sampler subsequently.

1.04 Stikine River

The report will contain detailed chemical and biological data collected between 1981-83. In particular it includes measurements of major ions and physical parameters, metals, nutrients, abundance and biomass of bacterioplankton and phytoplankton, and mineralogy of sediments.

1.05 **Routine Monitoring 1979-81**

The report will contain station listing and water chemistry data collected between 1979-81 at the active routine monitoring stations.

1.06 **Columbia I - Toxic Inorganic Compounds at the International Border**

The report will contain detailed water chemistry information, particularly on metals levels, for the Columbia River at the Border site.

1.07 **Similkameen River I**

The report will contain detailed water chemistry data from previous studies on water quality conditions in the river basin. This report will also outline detailed steps in program establishment for setting water quality objectives for transboundary reach of Similkameen River.

2.0 Intrerpretive Reports

2.01 **Akamina-Kishinena**

The report will interpret water chemistry and algal data in light of logging operations conducted between 1978 and 1982.

2.02 Comparison of Dissovled Oxygen Under Ice in Two Southern Yukon Rivers

The report will describe processes affecting dissolved oxygen concentrations under winter ice cover. Dissolved oxygen data is related to biological and physical processes.

2.03 Kootenay River Nutrient Loadings

Nutrient and discharge data collected in the Kootenay River between 1980-82 will be reported and interpreted.

2.04 St. Mary's River Water Quality

Detailed water chemistry data from the St. Mary's River will be reported and interpreted in light of industrial discharges to the system (1975-80).

3.0 Station Evaluation Reports

3.01 Kettle River at Midway

This report will contain detailed water chemistry data collected to determine temporal and spatial (cross-sectional and longitudinal) variability at the Kettle River water quality monitoring station.

4.0 Methods Reports

4.01 Flathead and Akamina-Kishinena Periphyton Sampling

The report will detail sampling methodology used to establish diversity, distribution and abundance of periphyton in the Flathead and Akamina Kishinena drainages.

4.02 Intervention Analysis of Kootenai River Water Quality Records

The report will contain analysis of detailed water chemistry data collected above and below Libby Dam to determine the effect of that structure on water quality downstream and to develop a predictive model of water quality conditions in the system.

5.0 Other Publications

5.01 Dissolved Oxygen Processes Under Ice

The report will contain a summary of the information contained in Report #9, and will be submitted to a refereed journal.

5.02 Water Quality Branch - Pacific and Yukon Region - 1983 Annual Report

The report will contain information on Water Quality Branch, Pacific and Yukon Region activities during 1983.

5.03 Estimation of Nutrient Flux in an Open Channel

The report will contain estimates of phosphorus transport in the flow-regulated channel of the Okanagan River.

REPORT IDENTIFICATION 1985-86

A. REGIONAL REPORTS

1.0 Data Reports

1.08 Columbia River II - Bioassays

Detailed biological data and associated chemical data collected for bioassays conducted on the Columbia River system (1979-84) will be reported.

1.09 Routine Monitoring 1982-83

The report will contain a station listing and water chemistry data collected between 1982-83 at the active federal routine monitoring stations.

1.10 Okanagan River I - Mainstem

Detailed inorganic water chemistry data (1976-80) collected on various reaches of the Okanagan River mainstem will be reported.

2.0 Interpretive Reports

2.05 Stikine River

The detailed data presented in the Stikine River Data Report will be interpreted in light of the potential effects of the proposed hydroelectric developments on the quality of water flowing across the International Boundary.

2.06 **Peace River**

Water chemistry data collected during 1975-76 from sampling stations located in the Peace River watershed, and additional information generated by a lay sampler subsequently will be interpreted.

2.07 **Columbia River II - Bioassays**

The report will interpret detailed biological and associated water chemistry data collected for bioassays conducted on the Columbia River system (1979-84) in light of Cominco's (Trail, B.C.) operations.

3.0 Station Evaluation Reports

3.02 **Kootenay River at Fenwick Station**

Detailed water chemistry data collected to determine temporal and spatial (cross-sectional and longitudinal) variability in the Kootenay River at Fenwick Station will be reported and assessed.

4.0 Methods Reports

4.03 **Non-Filterable Residue Technique**

The report will examine the reliability of the non-filterable residue technique for waters containing a high concentration of suspended sediments.

4.04 Computerize Information System for Water Quality Objectives

The information needs for formulating water quality objectives, and details on the availability and use of on-line computer facilities to access those types of information will be described.

4.05 Toxic Inorganics Speciation Technique Feasibility Assessment

The report will contain a detailed description of the ion-exchange chromatography speciation technique adapted in 1984-85 for use in the mobile laboratory.

4.06 Toxic Inorganics Speciation Method Selection

The report will review literature on various heavy metal speciation methods, and outlines the reasons of selecting ion-exchange chromatography using a chelating resin.

4.07 Fraser River Estuary Surveys Proposal

The proposed surveys on the Fraser River Estuary, based on current Surveys approaches and influenced by recommendations of the Aquatic Environmental Monitoring Committee will be described. The design will complement the ongoing monitoring program and development of water quality objectives.

4.08 **Application of Time Series Method to Water Quality Analysis I. Application of Box-Jenkins Transfer Functions to Conductivity-Dissolved Solids Relationships**

The report analyses the relationship between conductivity and total dissolved solids in the Kootenai River before and after the building of the Libby Dam.

4.09 **Application of Time Series Method to Water Quality Analysis II. Application of Box-Jenkins Transfer Functions in Forecasting Sediment Concentrations**

The report describes the rigorous analysis of sediment discharge data from the Fraser River at Hope, contrasting regression analysis and Box-Jenkins transfer functions analysis.

4.10 **Similkameen River Methodology for Development of Water Quality Objectives**

The materials and methods employed for collection of samples for analysis of toxic substances in water, sediment and biota from the Similkameen River will be reported.

5.0 Other Publications

5.04 **Stikine River Microbial Water Quality**

A paper will be prepared on spatial and temporal variaiblity of microbial water quality in the Stikine River basin.

5.05 **Provincial Activities in Setting Water Quality Objectives**

B.C. programs for water quality objectives and their relationship to federal programs, and to other provincial water quality work will be reported.

5.06 **Stikine River Water Quality**

A paper will be prepared on the relationship between water quality variables and the distinctive geology and hydrology of the river basin.

5.07 **Water Quality Branch - Pacific and Yukon Region - Annual Report 1984**

The report will contain information on Water Quality Branch, Pacific and Yukon Region activities during 1984.

REPORT IDENTIFICATION 1986-87

A. REGIONAL REPORTS

1.0 Data Reports

1.11 **Flathead River II - Application to Water Quality Objectives**

Information on selected water quality variables of high priority for formulating site-specific water quality objectives (1983-85) will be reported.

1.12 **Fording - Flathead Rivers Comparative Study**

The report will contain water chemistry data collected in 1985-86 in Fording and Flathead River Systems.

1.13 **Routine Monitoring 1984-85**

A station listing and water chemistry data collected between 1984-85 at the active federal routine monitoring stations will be presented.

1.14 **Similkameen River II - Application to Water Quality Objectives**

Information on inorganic water chemistry, and organics in sediment and biota collected in 1984-85 for formulation of site specific water quality objectives for the border reach of the Similkameen River will be reported.

1.15 **Toxic Inorganics Speciation I - Similkameen River**

Detailed water chemistry data collected on site from a river of significant federal interest (probably Similkameen) during 1985-86 will be reported in terms of various heavy metal species.

1.16 **Columbia River III - Temporal and Spatial Variability at Waneta**

The report will contain detailed water chemistry data collected to determine temporal and spatial variability at the Waneta Sampling station (1979-84).

1.17 **Columbia River IV - Effects of Remedial Actions at Cominco**

Data collected to determine the effects of remedial actions taken at Cominco (Trail, B.C.) on the quality of Columbia River water (1981, 1983-84) will be reported.

1.18 **Columbia River V - Metals in Fish Tissues**

Metal levels in fish tissues collected from the Columbia River (1980 and 1983) will be presented.

1.19 **Okanagan River II - Mainstem and Tributaries**

The report will contain data on inorganic water chemistry in the Okanagan River and its tributaries (1976-80).

2.0 Interpretive Reports

2.08 Flathead River III - Water Quality Objectives for Fish

Detailed biological data on Bull Trout (Salvelinus confluentus) and water quality requirements, generated with in situ long and short term bioassays, will be interpreted. Water quality objectives for fish species in the Flathead system will be proposed, and those site specific water quality objectives will be compared to water quality criteria developed from literature.

3.0 Station Evaluation Reports

3.03 Columbia River at Donald

The report will contain detailed water chemistry data collected to determine temporal and spatial (cross-sectional and longitudinal) variability in the Columbia River at Donald.

4.0 Methods Reports

4.11 Design and Evaluation of Water Quality Monitoring Frequencies

The various approaches to establishing a sampling frequency for a particular site in terms of cost and statistical considerations will be examined.

4.12 Use of in situ Periphyton Bioassay for Eutrophication Evaluation in a B.C. River

A report on nutrient evaluation methodology for B.C. rivers, and a data basis for formulating site-specific nutrient criteria for the Flathead River will be prepared.

4.13 **Empirical Development of Site Specific Water Quality Objectives**

The methods for developing site-specific water quality objectives and criteria based on selected site-specific investigations will be reported.

4.14 **Satellite Data Acquisition**

The accomplishments and potential of the satellite data acquisition program for water quality monitoring will be examined.

4.15 **Oracle Documentation**

A document on the use of the Oracle database management system for archiving and manipulating regional water quality data will be prepared.

4.16 **Optimal Sampling Frequency**

A report will be prepared, that details the optimal sampling frequency for water quality monitoring so that high benefit/cost ratios are realized for sampling activities.

4.17 **Considerations for Water Quality Objectives on the Columbia River**

The report will contain detailed hydrological, water quality and water and land use information considered to be important in establishing an approach to and formulating water quality objectives.

5.0 Other Publications

5.08 Analysis of Grans Plot Data

A paper will be prepared on the analysis of Grans Plot Data using computer techniques.

5.09 Short Term Temporal Variability of Water Quality

A paper will be prepared on the short-term temporal variability of water quality in a coastal stream in response to rain events (1984-85).

5.10 Water Quality Branch - Pacific and Yukon Region - Annual Report 1985

The report will contain information on Water Quality Branch activities in Pacific and Yukon Region during 1985.

5.11 Considerations for Site Selection for Setting Water Quality Objectives

The considerations for the selection of transboundary reaches for setting water quality objectives in the Pacific and Yukon Region will be examined in this report.

REPORT IDENTIFICATION 1987-88

A. REGIONAL REPORTS

1.0 Data Reports

1.20 Columbia River VI - Application to Water Quality Objectives

Detailed water chemistry data collected on priority water quality variabiles in the Columbia River (1985-87) will be reported. This information will be used for formulating site-specific water quality objectives.

1.21 Fraser River Estuary I - Surveys

The field methods, analytical methods and a verified list of data collected during surveys in the Fraser River Estuary (1985-87) will be presented.

1.22 Columbia River VII - Waste Spills and Discharges

A report on the water chemistry data collected during a number of spills and discharge activities from Cominco (Trail, B.C.) (1978-84) will be prepared.

1.23 Fraser River Estuary III - Application to Water Quality Objectives

The report will contain detailed water chemistry data collected for priority water quality variables in the Fraser River Estuary (1985-87). This information will be used for formulating site-specific water quality objectives.

1.24 **Fraser River Estuary II - Routine Monitoring**

A station listing and detailed water chemistry data collected during 1985-87 at monitoring stations in the Fraser River Estuary will be contained in this report.

1.24 **Federal/Provincial Monitoring 1984-85**

The report will contain a station listing and water chemistry data collected during 1984-85 at active Federal-Provincial Monitoring Stations.

2.0 Interpretive Reports

2.09 **Flathead River II - Application to Water Quality Objectives**

Information on selected water quality variables of high priority in relation to water uses in the Flathead system will be interpreted, thus leading to site-specific water quality objectives (1983-85).

2.10 **Fording-Flathead Rivers Comparative Study**

Water chemistry data collected in 1985-86 in the Fording and Flathead River Systems will be interpreted in relation to coal development activities anticipated in the Flathead Valley.

2.11 **Columbia River IV - Effects of Remedial Actions at Cominco**

A joint federal-provincial report on the assessment of the remedial actions taken at Cominco (Trail, B.C.) on the water quality of the Canada-U.S. border (1981, 1983, and 1984) will be prepared.

2.12 **Columbia River V - Metals in Fish Tissues**

Metal levels in fish tissues data will be interpreted in light of the effects of Cominco's (Trail, B.C.) operation on Columbia River water quality.

2.13 **Similkameen River II - Application to Water Quality Objectives**

Inorganic water chemistry, and organics in sediment and biota data (1984-85) will be interpreted in light of water uses in the Similkameen River basin. This information will be used for formulating site-specific water quality objectives of the border reach of the Similkameen River.

2.14 **Toxic Inorganics Speciation I - Similkameen River**

The report will interpret water chemistry data collected on site from a river of significant federal interest (probably Similkameen) (1985-86) in terms of heavy metal speciation and the relative toxicities of the various chemical species.

3.0 Station Evaluation Reports

3.04 Similkameen River at Border

The report will contain detailed water chemistry data collected to determine temporal and spatial (cross-sectional and longitudinal) variability in the Similkameen River at Border.

4.0 Methods Report

4.18 Approaches to Monitoring for Compliance with Water Quality Objectives

The report details a rational approach to designing a monitoring program to determine compliance with formulated water quality objectives.

5.0 Other Publications

5.11 Water Quality Branch - Pacific and Yukon Region - Annual Report 1986

Information on Water Quality Branch activities in Pacific and Yukon Region during 1986 will be presented.

REPORT IDENTIFICATION 1988-89

A. REGIONAL REPORTS

1.0 Data Reports

1.26 **Toxic Inorganics Speciation II - Columbia River**

A report containing detailed speciation data for heavy metals in a second river of significant federal interest will be prepared.

1.27 **Routine Monitoring 1986-87**

A station listing and water chemistry data collected between 1986 and 1987 at the active federal routine monitoring stations will be presented.

1.28 **Federal/Provincial Monitoring 1986-87**

The report will contain station listing and water chemistry data collected during 1986 and 1987 at the active Federal/Provincial monitoring stations.

2.0 Interpretive Reports

2.15 **Columbia River VI - Application to Water Quality Objectives**

Detailed water chemistry data collected on priority water quality variables in the Columbia River (1985-87) will be interpreted.

2.16 **Fraser River Estuary I - Surveys**

The report will present statistical analysis and interpretation of data collected in Fraser River Estuary (1985-87) in terms of study objectives.

2.17 **Fraser River Estuary II - Routine Monitoring**

An interpretation of detailed water chemistry data collected during 1985-87 at the monitoring stations in the Fraser River Estuary will be prepared.

2.18 **Routine Monitoring - Baseline Determination for Trend Assessment**

Routine monitoring data collected to 1987 will be interpreted in order to establish baseline (with statistical confidence limits) in order to assess changes in water quality conditions (trends).

2.19 **Fraser River Estuary III - Application to Water Quality Objectives**

Detailed water chemistry data collected on priority water quality variables in the Fraser River (1985-87) will be interpreted in light of water use information, thereby, leading to the formulation of water quality objectives.

2.20 **Columbia River VII - Waste Spills and Discharges**

The report will interpret water chemistry data collected during a number of spills and discharge activities from Cominco (Trail, B.C.) in light of the effects on Columbia River water qualtiy (1978-84).

2.21 **Federal/Provincial Monitoring - Baseline Determination for Trend Assessment**

Routine Federal/Provincial monitoring data collected from 1984 to 1987 will be interpreted in order to establish a baseline in order to assess trends in water quality conditions.

3.0 Station Evaluation Reports

3.05 **Kootenay River at Nicks Island**

The report will contain detailed water chemistry data collected to determine temporal and spatial (cross-sectional and longitudinal) variability in the Kootenay River at Nicks Island.

4.0 Method Reports

4.19 **Monitoring for Compliance with Water Quality Objectives in the Fraser River Estuary**

The report details the design of the monitoring program intended to assess compliance with the water quality objectives set for the Fraser River Estuary.

4.20 **Monitoring for Compliance with Water Quality Objectives in the Similkameen River**

The report details the water use requirements, water quality criteria, steps in setting water quality objectives, and recommendations for a monitoring program to assess compliance with water quality objectives.

5.0 Other Publications

5.13 **Little Sheep Creek Assessment**

Detailed water chemistry data collected as part of an assessment done on the proposed gold-molybdenum development in the headwaters of Little Sheep Creek will be reported and interpreted.

5.14 **Water Quality Branch - Pacific and Yukon Region - Annual Report 1987**

The report will contain information on Water Quality Branch activities in Pacific and Yukon Region during 1987.