

R E P O R T

SHUSWAP BAND

Assessment Studies Water Systems and Associated Water Management Practices at Selected First Nation Communities

Environmental Health Services
 First Nations and Inuit Health
 # 313 - 471 Queensway Ave.
 Kelowna, BC V1Y 6S6

July 31, 2000

Shuswap Indian Band
 P.O. Box # 790
 Invermere, B.C.
 V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water sample(s) collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
s.19(1)	July 12/00	3	L 1	Marginal **
	July 12/00	3	L 1	Marginal **
	July 12/00	OG	L 1	Resample**
	July 12/00	L 1	L 1	Satisfactory
	July 12/00	L 1	L 1	Satisfactory
	July 12/00	L 1	L 1	Satisfactory
	July 12/00	L 1	L 1	Satisfactory
	July 12/00	L 1	L 1	Satisfactory

L = less than EST = estimated count

OG = overgrowth (other non-coliform bacteria interfere with accurate measurements and resampling is normally requested)

Recommendations: Please resample for Stoddart Creek and from I [REDACTED]

Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
 Environmental Health Officer

Environmental Health Services
 First Nations and Inuit Health
 # 313 - 471 Queensway Ave.
 Kelowna, BC V1Y 6S6

July 5, 2000

Shuswap Indian Band
 P.O. Box # 790
 Invermere, B.C.
 V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water sample(s) collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
Band Office, Well	Jun 28/00	L 1	L 1	Satisfactory
s.19(1)	Jun 28/00	L 1	L 1	Satisfactory
	Jun 28/00	L 1	L 1	Satisfactory
	Jun 28/00	19	5	Unsatisfactory * Resample
	Jun 28/00	L1 - 6	L 1	**preliminary information

L = less than EST = estimated count

OG = overgrowth (other non-coliform bacteria interfere with accurate measurements and resampling is normally requested)

***Dan's water sample results are preliminary - I phoned the lab and received a verbal report.*

Recommendations: Please resample water from the Stoddart Creek community water system.

Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
 Environmental Health Officer

Environmental Health Services
First Nations and Inuit Health
313 - 471 Queensway Ave.
Kelowna, BC V1Y 6S6

August 29, 2000

Shuswap Indian Band
P.O. Box # 790
Invermere, B.C.
VOA 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water sample(s) collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
s.19(1)	Aug 23/00	2	L 1	Marginal*

L = less than EST = estimated count

OG = overgrowth (other non-coliform bacteria interfere with accurate measurements and resampling is normally requested)

Recommendations: Please resample from [redacted] home and contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
Environmental Health Officer

cc: CHR & File

Environmental Health Services
 First Nations and Inuit Health
 # 313 - 471 Queensway Ave.
 Kelowna, BC V1Y 6S6

August 28, 2000

Shuswap Indian Band
 P.O. Box # 790
 Invermere, B.C.
 V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water sample(s) collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

s.19(1)

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
[Redacted]	Aug23/00	EST 24-70	6	*Resample
	Aug23/00	L 1	L 1	Satisfactory
	Aug23/00	11-26	1	*Resample
	Aug23/00	L 1	L 1	Satisfactory
	Aug23/00	L 1	L 1	Satisfactory
	Aug23/00	L 1	L 1	Satisfactory
	Aug23/00	EST 22-44	4	*Resample

L = less than EST = estimated count

OG = overgrowth (other non-coliform bacteria interfere with accurate measurements and resampling is normally requested)

Recommendations: Please resample from the following sites: [Redacted] Shuswap Creek, [Redacted] - Stoddart Creek as their preliminary* results were unsatisfactory. Please advise people who use these water sources that they should boil their water before drinking or eating.

Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
 Environmental Health Officer

Environmental Health Services
First Nations and Inuit Health
313 - 471 Queensway Ave.
Kelowna, BC V1Y 6S6

September 11, 2000

Shuswap Indian Band
P.O. Box # 790
Invermere, B.C.
V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water sample(s) collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
	Aug 30/00	EST 30	L 1	Marginal*
	Aug 30/00	1	L 1	Marginal*

s.19(1)

L = less than EST = estimated count

OG = overgrowth (other non-coliform bacteria interfere with accurate measurements and resampling is normally requested)

Recommendations: Please advise people using the Stoddart Creek water supply that they should boil their water prior to consumption. Several samples of this water system have given positive total coliform counts which is unsatisfactory for drinking water. I recommend reviewing the disinfection process for this system.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
Environmental Health Officer

cc: CHR & File

Environmental Health Services
First Nations and Inuit Health
313 - 471 Queensway Ave.
Kelowna, BC V1Y 6S6

October 2, 2000

Shuswap Indian Band
P.O. Box # 790
Invermere, B.C.
V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water samples collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
s.19(1)	Sept27/00	L 1	L 1	Satisfactory
	Sept27/00	L 1	L 1	Satisfactory
	Sept27/00	L 1	L 1	Satisfactory
	Sept27/00	L 1	L 1	Satisfactory

L = less than EST = estimated count

OG = overgrowth (other non-coliform bacteria interfere with accurate measurements and resampling is normally requested)

Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
Environmental Health Officer

cc: CHR & File

Environmental Health Services
First Nations and Inuit Health
313 - 471 Queensway Ave.
Kelowna, BC V1Y 6S6

October 12, 2000

Shuswap Indian Band
P.O. Box # 790
Invermere, B.C.
V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water sample(s) collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
	Sep25/00	5	L 1	* Resample

s.19(1)

L = less than EST = estimated count

OG = overgrowth (other non-coliform bacteria interfere with accurate measurements and resampling is normally requested)

Recommendation: Please resample form [redacted] and contact me at:
(250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
Environmental Health Officer

cc: CHR & File

Environmental Health Services
 First Nations and Inuit Health
 # 313 - 471 Queensway Ave.
 Kelowna, BC V1Y 6S6

October 30, 2000

Shuswap Indian Band
 P.O. Box # 790
 Invermere, B.C.
 V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water sample(s) collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
Shuswap Band Office, well	Oct 17/00	L 1	L 1	Satisfactory
s.19(1)	Oct 17/00	L 1	L 1	Satisfactory
	Oct 17/00	L 1	L 1	Satisfactory
	Oct 17/00	10	L 1	*Marginal Resample
	Oct 17/00	9	L 1	*Marginal Resample

L = less than EST = estimated count

Recommendations: As discussed at the September 18th meeting with Stoddart Creek water users some sample results have shown the presence of total coliform bacteria. Stoddart Creek is an unprotected surface water supply without disinfection and should be considered marginal for safety. It is especially important that persons most at risk: the very young, very old and immunocompromised, be aware of the uncertainty of this water supply and be advised to take steps to disinfect their water before use.

Dan and Sam's water sampling provides valuable information about drinking water safety. Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
 Environmental Health Officer
 cc: CHR & File

Environmental Health Services
First Nations and Inuit Health
313 - 471 Queensway Ave.
Kelowna, BC V1Y 6S6

November 16, 2000

Shuswap Indian Band
P.O. Box # 790
Invermere, B.C.
VOA 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water sample(s) collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
s.19(1)	Nov 8/00	13	L 1	Marginal*
	Nov 8/00	26	L 1	Marginal*

L = less than EST = estimated count

OG = overgrowth (other non-coliform bacteria interfere with accurate measurements and resampling is normally requested)

Recommendations: As mentioned in previous reports the safety of the Stoddart Creek CWS is marginal. On-going monitoring is important.

Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
Environmental Health Officer

cc: CHR & File

Environmental Health Services
First Nations and Inuit Health
313 - 471 Queensway Ave.
Kelowna, BC V1Y 6S6

February 13, 2001

Shuswap Indian Band
P.O. Box # 790
Invermere, B.C.
V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water samples collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
Kimb. Stead Kin	01/02/07	L 1	L 1	Satisfactory
	01/02/07	L 1	L 1	Satisfactory
	s.19(1) 01/02/07	L 1	L 1	Satisfactory
	01/02/07	L 1	L 1	Satisfactory
	01/02/06	L 1	L 1	Satisfactory

L = less than EST = estimated count

OG = overgrowth

Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
Environmental Health Officer

cc: CHR & File

Environmental Health Services
First Nations and Inuit Health
313 - 471 Queensway Ave.
Kelowna, BC V1Y 6S6

March 19, 2001

Shuswap Indian Band
P.O. Box # 790
Invermere, B.C.
V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water samples collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
s.19(1)	Mar 13/01	L 1	L 1	Satisfactory
	Mar 13/01	L 1	L 1	Satisfactory
	Mar 13/01	L 1	L 1	Satisfactory
	Mar 13/01	L 1	L 1	Satisfactory

L = less than EST = estimated count

OG = overgrowth

Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
Environmental Health Officer

cc: CHR & File

Environmental Health Services
 First Nations and Inuit Health
 # 313 - 471 Queensway Ave.
 Kelowna, BC V1Y 6S6

June 26, 2001

Shuswap Indian Band
 P.O. Box # 790
 Invermere, B.C. V0A 1K0

151-5-7-IR-71

WATER SAMPLE REPORT

This report summarizes the bacteriological data pertinent to water samples collected for the dates shown. Recommendations have been made where appropriate. Complete laboratory reports are on file and are available upon request.

Sample Location	Date	Total Coliform	Fecal Coliform	Remarks
Kinbasket Community Water System				
Mother's Club	Jun13/01	L 1	L 1	Satisfactory
[Redacted]	Jun13/01	L 1	L 1	Satisfactory
Stoddart Creek Community Water System				
[Redacted]	Jun13/01	13	L 1	*Marginal
Shuswap Creek				
[Redacted]	Jun 13/01	20	9	*Unsatisfactory

s.19(1)

L = less than EST = estimated count OG = overgrowth

Recommendations: Shuswap Creek's water results continue to be unsatisfactory. **Please advise all users of Shuswap Creek that they should boil their water before use.**
Stoddart Creek's water results were marginal. Please advise all users that Stoddart Creek is an untreated surface water supply and its safety is marginal. I recommend a boil advisory for people most at risk: infants, elderly and immunocompromised individuals.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
 Environmental Health Officer

cc: CHR & File



Health
Canada

Santé
Canada

Environmental Health Services
First Nations and Inuit Health
313 - 471 Queensway Ave.
Kelowna, BC V1Y 6S6

October 15, 2001

Your file Votre référence

151-5-7-IR-71
Our file Notre référence

*Waiting for
final lab
report*

DRAFT

s.19(1)

Shuswap Indian Band
P.O. Box # 790
Invermere, B.C.
VOA 1K0

CHEMICAL WATER QUALITY for the Community Water Systems

I have attached a copy of the chemical analysis for water samples taken in September 27 2001 from the Kinbasket and Stoddart Creek Community Water Systems. The Kinbasket CWS was sampled from [redacted] home and the Stoddart Creek CWS was sampled from [redacted] home.

Water samples from both community water systems met the 'Guidelines for Canadian Drinking Water' for all parameters tested.

Hardness in water is not a health concern and epidemiological evidence suggests that hardness may be inversely related to cardiovascular health [ie: hard water may be beneficial for a health heart]. The chemical analysis showed hardness levels for: Kinbasket CWS = 244 mg/L and Stoddart Creek CWS = 292 mg/L and the Langlier's index for both was above zero. Therefore, these water supplies will likely precipitate calcium carbonate and form scales. Acceptance of harder water varies with local conditions - most water supplies are considered unacceptable if hardness exceeds 500 mg/L. Hard water may contribute to incrustation, excessive soap consumption or scale deposits and individuals may choose to use water softeners in their homes. Water softeners may add high levels of sodium to the water and it would be important that an unsoftened water supply be available for cooking and cooking.

Please contact me at: (250) 470-5144 if you have any questions.

Yours truly,

Grace Maciver, B.Sc., C.P.H.I.(C)
Environmental Health Officer

cc: CHR & File