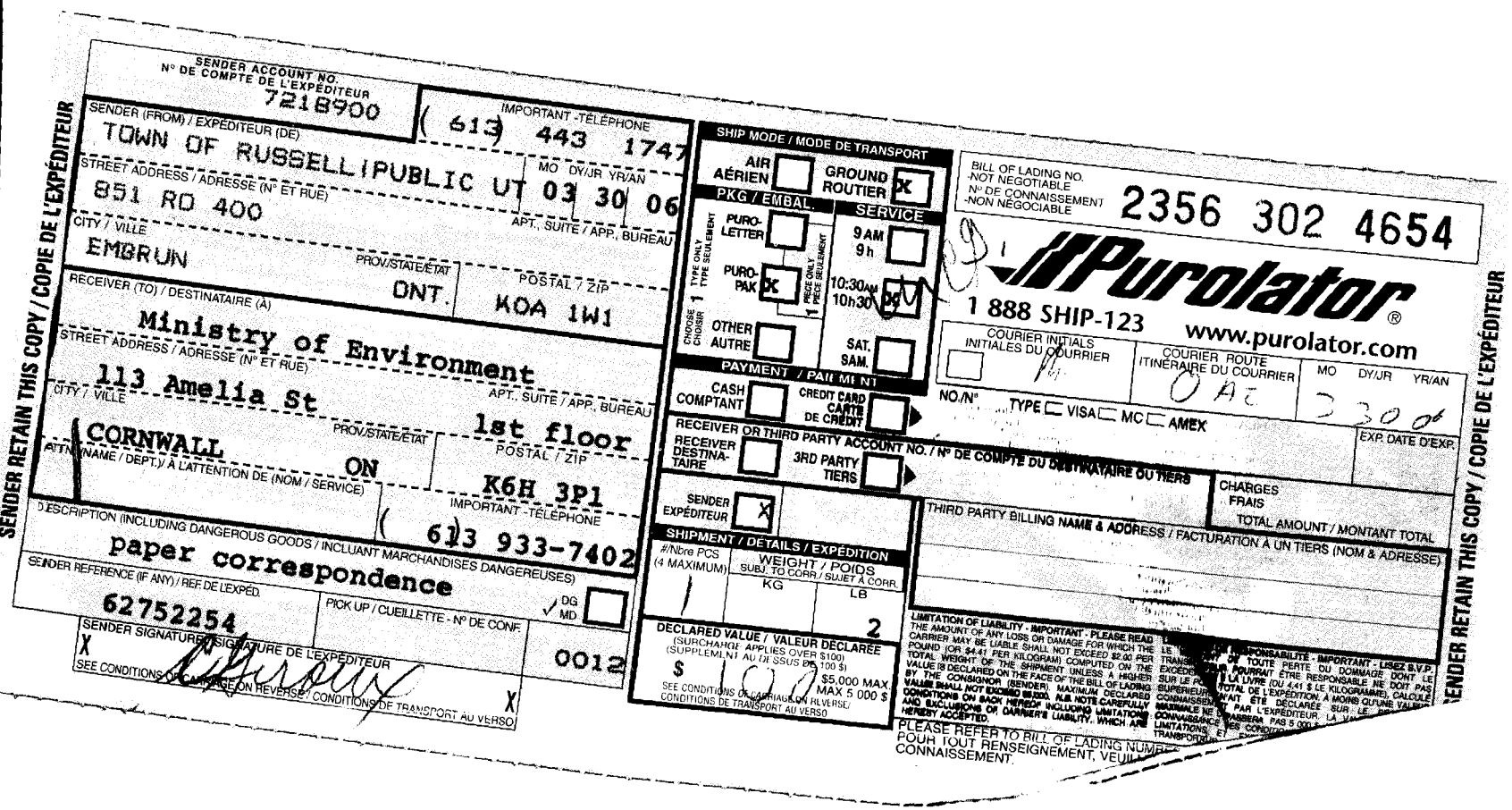
Cathy

TOWNSHIP OF RUSSELL
PUBLIC UTILITIES

2005

WATER & SANITARY SYSTEMS
ANNUAL OPERATIONS REPORT



SENDER RETAIN THIS COPY / COPIE DE L'EXPÉDITEUR

SENDER ACCOUNT NO. / N° DE COMPTE DE L'EXPÉDITEUR: 7218900

IMPORTANT - TÉLÉPHONE: (613) 443 1747

SENDER (FROM) / EXPÉDITEUR (DE): TOWN OF RUSSELL PUBLIC UT

STREET ADDRESS / ADRESSE (N° ET RUE): 851 RD 400

MO DY/JR YR/AN: 03 30 06

APT., SUITE / APP., BUREAU:

CITY / VILLE: EMBRUN

PROV./STATE/ÉTAT: ONT.

POSTAL / ZIP: K0A 1W1

RECEIVER (TO) / DESTINATAIRE (À): Ministry of Environment

STREET ADDRESS / ADRESSE (N° ET RUE): 113 Amelia St

APT., SUITE / APP., BUREAU: 1st floor

CITY / VILLE: CORNWALL

PROV./STATE/ÉTAT: ON

POSTAL / ZIP: K6H 3P1

ATTN / NAME / DEPT. / À L'ATTENTION DE (NOM / SERVICE):

IMPORTANT - TÉLÉPHONE: (613) 933-7402

DESCRIPTION (INCLUDING DANGEROUS GOODS / INCLUANT MARCHANDISES DANGEREUSES): paper correspondence

SENDER REFERENCE (IF ANY) / REF. DE L'EXPÉD.: 62752254

PICK UP / CUEILLETTE - N° DE CONF.:

DG ✓ MD

SENDER SIGNATURE / SIGNATURE DE L'EXPÉDITEUR: X

SEE CONDITIONS OF CARRIAGE ON REVERSE / CONDITIONS DE TRANSPORT AU VERSO

0012

SHIP MODE / MODE DE TRANSPORT

AIR / AÉRIEN ☐ GROUND / ROUTIER ☒

PKG / EMBAL. — SERVICE

PUROLETTER ☐ — 9 AM 9 h ☐

PUROPAK ☒ — 10:30 AM 10h30 ☐

OTHER / AUTRE ☐ — SAT. / SAM. ☐

(TYPE ONLY / TYPE SEULEMENT; PIÈCE ONLY / PIÈCE SEULEMENT; CHOOSE 1 / CHOISIR 1)

PAYMENT / PAIEMENT

CASH / COMPTANT ☐ CREDIT CARD / CARTE DE CRÉDIT ☐

RECEIVER OR THIRD PARTY ACCOUNT NO. / N° DE COMPTE DU DESTINATAIRE OU TIERS

RECEIVER / DESTINATAIRE ☐ 3RD PARTY / TIERS ☐

SENDER / EXPÉDITEUR ☒

SHIPMENT / DETAILS / EXPÉDITION

#/Nbre PCS (4 MAXIMUM)	WEIGHT / POIDS SUBJ. TO CORR. / SUJET À CORR. KG	LB
1		2

DECLARED VALUE / VALEUR DÉCLARÉE (SURCHARGE APPLIES OVER $100 / SUPPLÉMENT AU DI SSUS DE 100 $)

$ 0.00 $5,000 MAX MAX 5 000 $

SEE CONDITIONS OF CARRIAGE ON REVERSE / CONDITIONS DE TRANSPORT AU VERSO

BILL OF LADING NO. -NOT NEGOTIABLE / N° DE CONNAISSEMENT -NON NÉGOCIABLE: 2356 302 4654

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COURIER ROUTE / ITINÉRAIRE DU COURRIER: OAC

MO DY/JR YR/AN: 3 30 06

NO./N°: TYPE ☐ VISA ☐ MC ☐ AMEX

EXP. DATE D'EXP.:

CHARGES / FRAIS

TOTAL AMOUNT / MONTANT TOTAL

THIRD PARTY BILLING NAME & ADDRESS / FACTURATION À UN TIERS (NOM & ADRESSE)

LIMITATION OF LIABILITY - IMPORTANT - PLEASE READ ... RESPONSABILITÉ - IMPORTANT - LISEZ S.V.P. ...

PLEASE REFER TO BILL OF LADING NUMBER FOR ALL ENQUIRIES.
POUR TOUT RENSEIGNEMENT, VEUILLEZ ... CONNAISSEMENT.

SENDER RETAIN THIS COPY / COPIE DE L'EXPÉDITEUR

Report to:
Russell Township Council

Date: March 31, 2006

Submitted by: Craig Cullen, Superintendent Public Utilities Department

Utilities Report # 03-31-2006

SUBJECT: Annual Operations Compliance Report (2005)

BACKGROUND/DISCUSSION: It is the requirement of the owner to ensure that a written report detailing compliance with all terms and conditions of the Drinking Water Regulation 170/03 is completed for the MOE and is available to the public.

It is also the requirement of the owner to ensure that a written report detailing compliance our wastewater COA be issued to the MOE.

It is the responsibility of the Public Utilities department to:

- Ensure that these reports are prepared.
- Declare that our operations are in compliance as stated.
- Present these report to Council.
- Recommend to Council to confirm by resolution that the Compliance Report has been presented by the Public Utilities Department and that a motion be forwarded to the MOE within three months of completion.

The Public Utilities Department has fulfilled these obligations.

REPORT RECOMMENDATION:

That Council pass the attached resolution on April 18th.

ATTACHMENTS:

1 copy of report for circulation amongst members of council.
1 copy of report for Corporate Services to keep on file.
Resolution
Intera wellhead monitoring report

MUNICIPALITÉ DE
TOWNSHIP OF **RUSSELL**

Moved by:
Proposé par: _____

Seconded by:
Proposé par: _____

Session _____ 20 ____

Resolution No. _____

That / Que: WHEREAS in accordance the Drinking-Water Systems Regulation 170/03, the owner shall ensure that a written report detailing compliance with all terms and conditions is completed annually;

AND WHEREAS the compliance report was completed by the Public Utilities Department and presented to Council on March 31 2006;

AND WHEREAS within three months of the completion of the Compliance Report, the Owner shall confirm by resolution of Council that the Compliance Report has been presented and approved;

BE IT RESOLVED that a copy of this resolution be forwarded to the MOE.

For / En faveur	**Against / Contre**

Carried by
Approuvé

Defeated
Défait

Amended by
Amendé par

Declaration Conflict of Interest
Déclaration de conflit d'intérêt

Signature Presiding Officer
Signature du Président

Clerk / Secrétaire

MUNICIPALITÉ DE
TOWNSHIP OF **RUSSELL**

March 31, 2006

Don Munro
Ministry of Environment
113 Amelia Street, 2nd floor
Cornwall, Ontario
K6H 3P1

Re : Russell-Embrun-Marionville Water System
Annual Operations Report – 2005

Enclosed is a copy of our 2005 Operations Compliance Report.

The facilities have met all the terms and conditions of the Drinking Water Systems Regulation 180/03.

1) There were no upsets or failure in the operation procedures.
2) There was 1 unsafe sample (HPC>500) detected in the Russell distribution system. Regulation procedures were followed and re-sampling results were clear.
3) Raw water quality is addressed in the well monitoring program report provided by Intera Engineering.
4) The municipality has upgraded the SCADA system for the R-E-M water treatment plant.
5) Re-classification of the water treatment plant is in progress.
6) As requested by MOE we are applying for one (1) waterworks number.

Should you have any questions, please do not hesitate to contact our office at (613) 443-1747.

Sincerely,

Craig Cullen, Superintendent
Public Utilities

CC/cg
Encl.
cc : Lanie Hurdle, Corporate Services
Members of Council

717 Notre-Dame, Embrun, ON K0A 1W1
Tel.: (613) 443-3066 FAX: (613) 443-1042
www.russell.twp.on.ca www.canton.russell.on.ca

EMBRUN/MARIONVILLE/RUSSELL HYDRAULIC RESERVE
ACTUAL CAPACITY WATER
As of December 31, 2005

2005 = 2993 m^3/D SERVICED POPULATION = 9846 FLOW = .304 m^3/D/C

Population - Embrun 5861, Russell 3636, Marionville 349, Total Population = 9846

AVERAGE = .304 m^3/D/C
AS OF DECEMBER 31, 2005
AT .304 m^3/D/C FLOW x 9846 = 2993 m^3/D

EMBRUN DESIGN FLOW = 65.2 L/s
RUSSELL DESIGN FLOW = 13.67 L/s
TOTAL DESIGN FLOW = 78.87 L/s
= 6814 m^3/d
÷ pk factor 2 = 3407 m^3/d

CR = 3407 m^3/DAY - 2993 m^3/DAY = 414 m^3/DAY

P = EXISTING RES. POPULATION CONNECTED = 9846 AS OF DECEMBER 31, 2005

H = NO. OF CONNECTED RESIDENTIAL UNITS = 2719

A = NO. OF RESIDENTIAL APARTMENTS = 403 A. POP. = 806

F = EXISTING PER CAPITA FLOW = .304 m^3/DAY

D = DENSITY = 3.0

O = COM/RES, COMMERCIAL, SENIORS, SCHOOLS, OTHER = O .POP. = 883

L = # OF UNCOMMITTED APPROVED LOTS = (E) 101 LOTS Embrun L. POP = 303

(R) 46 LOTS Russell L. POP = 138

441

SUMMARY = CU = CR - (L x F) x 3.0

= 414 - (147 x .304) x 3.0

= 414 - 134

= 280 m^3/DAY UNCOMMITED RESERVE

HYDRAULIC CAPACITY FOR AVERAGE DAILY FLOW

UNCOMMITED NO. OF LOTS (LU)

LU = CU / D x F WHERE D = P / H

= 280 / 3.0 x .304

= 307

ANNUAL SUMMARY - TREATED WATER FLOWS AND WATER TRANSFER

WATER WORKS NAME: EMBRUN/MARIONVILLE WTP - RUSSELL WTP
YEAR: 2005

MONTH	*EMBRUN TREATED WATER FLOW*			*MARIONVILLE TREATED WATER FLOW*			*RUSSELL TREATED WATER TRANSFER*			*TOTAL TREATED WATER FLOW*		
	AVERAGE DAY ($1000\ m^3$)	MAXIMUM DAY ($1000\ m^3$)	MONTHLY TOTAL ($1000\ m^3$)	AVERAGE DAY ($1000\ m^3$)	MAXIMUM DAY ($1000\ m^3$)	MONTHLY TOTAL ($1000\ m^3$)	AVERAGE DAY ($1000\ m^3$)	MAXIMUM DAY ($1000\ m^3$)	MONTHLY TOTAL ($1000\ m^3$)	AVERAGE DAY ($1000\ m^3$)	MAXIMUM DAY ($1000\ m^3$)	MONTHLY TOTAL ($1000\ m^3$)
JAN	1.56	2.81	48.48	0.10	0.12	2.93	1.07	1.38	33.30	2.73	4.31	84.71
FEB	1.57	1.99	43.90	0.07	0.08	1.91	1.04	1.27	29.07	2.68	3.34	74.88
MAR	1.52	1.95	47.14	0.07	0.10	2.21	1.02	1.18	31.64	2.61	3.23	80.99
APR	1.51	1.96	45.38	0.07	0.08	2.07	1.05	1.58	31.53	2.63	3.62	78.98
MAY	1.74	2.21	53.86	0.12	0.15	3.63	1.18	1.47	36.51	3.04	3.83	94.00
JUN	2.05	2.64	61.51	0.12	0.21	3.67	1.36	2.13	40.92	3.53	4.98	106.10
JUL	1.73	2.35	53.52	0.10	0.12	2.94	1.13	1.47	34.90	2.96	3.94	91.36
AUG	2.00	2.65	62.04	0.11	0.11	3.44	1.29	1.82	39.95	3.40	4.58	105.43
SEP	1.62	2.23	48.74	0.08	0.12	2.47	1.07	1.55	31.97	2.77	3.90	83.18
OCT	1.61	2.14	49.89	0.10	0.11	3.18	1.01	1.33	31.46	2.72	3.58	84.53
NOV	1.53	1.81	45.93	0.07	0.09	2.17	1.35	1.00	30.08	2.95	2.90	78.18
DEC	1.51	1.88	46.86	0.08	0.10	2.40	1.04	1.23	32.23	2.63	3.21	81.49
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AVERAGE	1.66			0.09			1.13			2.89		86.99
MAXIMUM		2.81			0.21			2.13			4.98	106.10

CHEMICAL PROCUREMENT
2005

DATE	PRODUCT	QTY DRUMS	KG	TOTAL KG	COST/D RUM	TOTAL COST
12-Jan-05	SODIUM HYPOCHLORITE	12	239	2,868	88.97	$1,067.64
2-Feb-05	"	15	239	3,585	88.97	1,334.55
25-Feb-05		15	239	3,585	88.97	1,334.55
8-Mar-05		15	239	3,585	88.97	1,334.55
23-Mar-05		15	239	3,585	88.97	1,334.55
22-Apr-05		15	239	3,585	88.97	1,334.55
18-May-05		15	239	3,585	88.97	1,334.55
8-Jun-05		15	239	3,585	88.97	1,334.55
27-Jun-05		15	239	3,585	88.97	1,334.55
15-Jul-05		15	239	3,585	88.97	1,334.55
27-Jul-05		15	239	3,585	88.97	1,334.55
12-Aug-05		15	239	3,585	88.97	1,334.55
9-Sep-05		15	239	3,585	88.97	1,334.55
23-Sep-05		15	239	3,585	88.97	1,334.55
11-Nov-05		15	239	3,585	88.97	1,334.55
30-Nov-05		15	239	3,585	88.97	1,334.55
21-Dec-05		15	239	3,585	88.97	1,334.55
TOTAL		**252**		**60,228**		**$22,420.44**

DATE	PRODUCT	QTY DRUMS	KG	TOTAL	COST/D RUM	TOTAL COST
01-May-18	POTASSIUM PERMANGANATE	5	25	125	99.75	$498.75
TOTAL		**5**		**125**		**$498.75**

WATER QUALITY CONSUMER COMPLAINTS RECORD - 2005

Date D/M/Y	Address	Complaint	Problem Determined	Action Taken	Opera Signat
03/01/05	George Street	Brown Water	Fire – Hydrant Used	Flushed / Clear	AC
05/01/05	3 Warner Street	Coloured Water	Fire – Hydrant Used	Flushed / Clear	AC
25/01/05	83 Castlebeau Street	Coloured Water	Robert Excavation Opened WaterMain	Flushed / Clear	AC
11/02/05	654 Notre-Dame Street	Health Concerns – Brown Water	WaterMain Break	Repaired / Flushed	CC
11/02/05	59 Albert Street	Brown Water	WaterMain Break	Repaired / Flushed	AC
11/02/05	61 Albert Street	Brown Water	WaterMain Break	Repaired / Flushed	AC
12/02/05	Lamadeleine	Brown Water	WaterMain Break	Repaired / Flushed	AC
25/05/05	83 Frontenac Street	Brown Water	Fire Route 500 – Hydrant Used	Toilets Flushed / Clear	CM
26/05/05	79 Frontenac Street	Yellow Water	Fire Route 500 – Hydrant Used	Flushed / Clear	AC
01/06/05	4535 Grégoire Street	Brown Water	Inside Problem or Service Line	Flushed / Clear	JG
16/06/05	7 Isabelle	Foul smell	Hot water tank	Operator explained maintenance required	JG
19/7/05	500 Church Street	Coloured water	undetermined	Operator on-site	JG
19/7/05	120 Mill Street	Coloured water	undetermined	Flush hydrants	JG
28/7/05	23A Forget	Rust stains	hardness	Suggested water softner	JG
04/08/05	50 Castlebeau	Coloured water	Inside piping	Flush hydrant	AC

Prepared by: Public Utilities Department

WATER QUALITY CONSUMER COMPLAINTS RECORD - 2005

Date D/M/Y	Address	Complaint	Problem Determined	Action Taken	Opera Signat
09/08/05	201 MacDougall	Coloured water last night	Undetermined	Clear when reported	CM
02/09/05	1045 Notre-Dame (École St-Jean)	Yellow water	Inside piping	Flush line Test CL^2 F.40	AC JG
16/09/05	635 DuParc	Swampy odour in water	Undetermined	Test CL^2 F.25	JG
27/09/95	Russell Fire Hall	Coloured water	Undertermined	Test CL2 F.41- clear	Chris
14/10/05	216 Stiver	Low Pressure			
16/10/05	1159 Castor	Brown water		Flush hydrant - clear	Chris
11/12/05	44 Castlebeau	Cl2 odour	Explained regulation demands	CL .52 F	Jac

Prepared by: Public Utilities Department

EMBRUN
WATER CAPACITY REPORT
DECEMBER 31, 2005

WATER CAPACITY				
Residential Units	1560	x 3.0	=	4680
Apartment Units	300	x 2	=	600
Commercial Units	175	x 1	=	175
Residential Units/Commercial	31	x 1	=	31
Senior Citizen Apartments	45	x 1	=	45
St-Jacques Nursing Home	99	x 1	=	99
Le Pavillon	60	x 1	=	60
Schools			=	171
TOTAL POPULATION SERVICED				5861

APPROVED LOTS	PLAN #	LOTS
Infilling – vacant lots during original construction		1
Melanie - Quartier Frontenac – Phase 4	50M-252	5
Lapointe - Maplevale	50M-239	23
Lemieux - Camelot – Phase 2	50M-246	2
Lamadeleine - Valecraft – Phase 3	50M-261	26
Lemieux – Camelot – Phase 3	50M-262	6
Hockey Academy	Not registered	28
S. Joly	Not registered	7
Lemieux – Camelot – Phase 4	50M-263	3
TOTAL		101

TOTAL POPULATION SERVICEABLE 101 x 3.0 = 303 PERSONS

DESIGN CAPACITY = 6000 PERSONS

NOTE: AVERAGE PERSONS PER HOUSEHOLD = 3.0 (STATISTICS CANANA 1996)
SCHOOLS POPULATION BASIS: @ 40% RURAL) 3 (8 HR SCHOOL DAY)
@ 60% URBAN) 3 (8 HR SCHOOL DAY)

EMBRUN

WATER FLOWS AND CONSUMPTION

2005

DATE 2005	FLOW (m^3)	DAILY AVERAGE (m^3)	POPULATION	DAYS	AVERAGE PERSON/DAY (m^3)
JAN	48,478	1564	5497	31	0.284
FEB	43,896	1568	5497	28	0.285
MAR	47,136	1521	5497	31	0.277
APR	45,380	1513	5497	30	0.275
MAY	53,865	1738	5497	31	0.316
JUNE	61,510	2050	5497	30	0.373
JULY	53,523	1727	5497	31	0.314
AUG	62,039	2001	5497	31	0.364
SEP	48,743	1625	5497	30	0.296
OCT	49,887	1609	5497	31	0.293
NOV	45,926	1531	5497	30	0.278
DEC	46,865	1512	5497	31	0.275
TOTAL	607,248	1,663	5497		0.303
2004	589,062	1610	5145		0.313
2003	543,615	1488	4611		0.323
2002	486,891	1,333	4262		0.313
2001	487,185	1,333	4085		0.326
2000	448,390	1,225	4040		0.303
1999	479,888	1,314	3920		0.335

ANNUAL SUMMARY - TREATED WATER AND WASTEWATER FLOWS, TURBIDITY AND DISINFECTANT RESIDUAL

WATERWORKS NAME: EMBRUN/MARIONVILLE WTP
WATERWORKS NUMBER: 220004297
WELL NO.: 2
YEAR: 2005
SERVICED POPULATION: 5497
DESIGN CAPACITY: 6000

	TREATED WATER FLOW			PROCESS	TREATED WATER TURBIDITY				TREATED DISINFECTANT				DISTRIBUTION DISINFECTANT	
MONTH	AVERAGE DAY ($1000 m^3$)	MAX DAY ($1000 m^3$)	MONTHLY TOTAL ($1000 m^3$)	WASTEWATER MONTHLY ($1000 m^3$)	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES > 1 NTU	Min. Turb.	Max. Turb.	# OF TREATED SAMPLES COLLECTED	AVERAGE RESIDUAL TOTAL (mg/L)	min. RESIDUAL FREE (mg/L)	max. RESIDUAL FREE (mg/L)	# SAMPLES COLLECTED DISTRIB.	NO. OF SAMPLES min. 0.2 mg/L DETECT. RES.
JAN	1.56	2.81	48.48	2.61	31	0	0.02	0.16	31	0.65	0.32	0.74	31	31
FEB	1.57	1.99	43.90	2.41	28	0	0.04	0.12	28	0.69	0.36	0.66	28	28
MAR	1.52	1.95	47.14	2.52	31	0	0.04	0.16	31	0.68	0.32	0.61	31	31
APR	1.51	1.96	45.38	2.51	30	0	0.06	0.22	30	0.68	0.34	0.80	30	30
MAY	1.74	2.21	53.86	2.52	31	0	0.08	0.34	31	0.68	0.32	0.61	31	31
JUN	2.05	2.64	61.51	3.08	30	0	0.09	0.25	30	0.71	0.29	0.68	30	30
JUL	1.73	2.35	53.52	2.82	31	0	0.08	0.20	31	0.67	0.31	0.65	31	31
AUG	2.00	2.65	62.04	2.89	31	0	0.06	0.21	31	0.72	0.24	1.10	31	31
SEP	1.62	2.23	48.74	2.42	30	0	0.07	0.17	30	0.76	0.41	0.80	30	30
OCT	1.61	2.14	49.89	2.69	31	0	0.04	0.19	31	0.70	0.40	0.67	31	31
NOV	1.53	1.81	45.93	2.58	30	0	0.04	0.14	30	0.68	0.34	0.61	30	30
DEC	1.51	1.88	46.86	2.66	31	0	0.05	0.17	31	0.73	0.37	0.70	31	31
TOTAL			607.25	31.71	365				365				365	365
AVG	1.66			2.64			0.24			0.70	0.24			
MAX		2.81		3.08				0.34				1.10		

DISINFECTANT COMPOUND USED: NaOCl

FORM OF RESIDUAL DISPLAYED ON ABOVE TABLE: TOTAL AND FREE

QUANTITY OF DISINFECTANT USED DURING YEAR: 5,649

DISTRIBUTION SYSTEM TARGET RESIDUAL (mg/L): Total 0.80 Free 0.2

ANNUAL SUMMARY - RAW WATER FLOWS

WATER WORKS NAME: EMBRUN WTP
YEAR: 2005
SERVICED POPULATION: 5497
DESIGN CAPACITY: 6000

MONTH	WELL #2		
	AVERAGE DAY ($1000\ m^3$)	MAXIMUM DAY ($1000\ m^3$)	MONTHLY TOTAL ($1000\ m^3$)
JAN	2.57	3.38	79.81
FEB	2.61	3.15	73.13
MAR	2.56	2.95	79.32
APR	2.56	3.15	76.90
MAY	2.94	3.69	91.09
JUN	3.43	4.51	102.88
JUL	2.84	3.46	88.04
AUG	3.30	4.35	102.37
SEP	2.69	3.66	80.67
OCT	2.64	3.65	81.88
NOV	2.53	2.83	76.00
DEC	2.54	3.00	78.83
TOTAL			1010.93
AVERAGE	2.77		84.24
MAXIMUM		4.51	102.88

WELL #1 NOT IN OPERATION

ANNUAL SUMMARY - RAW WATER BACTERIOLOGICAL DATA

WATER WORKS NAME: EMBRUN
YEAR: 2005
SERVICED POPULATION:
LABORATORIES WHICH PERFORMED ANALYSES: ACCUTEST LABORATORIES

MONTH	TOTAL COLIFORM				FECAL COLIFORM/ESCHERICHIA COLI		
	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES 1-100 ORG./100ml	NO. OF SAMPLES 101-5000 ORG./100ml	NO. OF SAMPLES > 5000 ORG./100 ml	NO. OF SAMPLES 1-10 ORG./100ml	NO. OF SAMPLES 11-500 ORG./100ml	NO. OF SAMPLES >500 ORG./100 ml
JAN	5	0	0	0	0	0	0
FEB	4	0	0	0	0	0	0
MAR	4	0	0	0	0	0	0
APR	4	0	0	0	0	0	0
MAY	5	0	0	0	0	0	0
JUN	4	1	0	0	0	0	0
JUL	4	0	0	0	0	0	0
AUG	5	0	0	0	0	0	0
SEP	4	0	0	0	0	0	0
OCT	5	0	0	0	0	0	0
NOV	4	0	0	0	0	0	0
DEC	4	0	0	0	0	0	0
TOTAL	52	1	0	0	0	0	0

ANNUAL SUMMARY - TREATED SYSTEM BACTERIOLOGICAL DATA

WATER WORKS NAME: EMBRUN
YEAR: 2004
SERVICED POPULATION: 5145
LABORATORIES WHICH PERFORMED ANALYSES: ACCUTEST LABORATORIES

MONTH	TOTAL COLIFORM				FECAL COLIFORM/E.COLI			HPC		
	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES DETERIORATING	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES DETERIORATING
JAN	5	4	0	0	4	4	0	4	4	0
FEB	4	4	0	0	4	4	0	4	4	0
MAR	4	5	0	0	5	5	0	5	5	0
APR	4	4	0	0	4	4	0	4	4	0
MAY	5	5	0	0	5	5	0	5	5	0
JUN	4	4	0	0	4	4	0	4	4	0
JUL	4	4	0	0	4	4	0	4	4	0
AUG	5	5	0	0	5	5	0	5	5	0
SEP	4	4	0	0	4	4	0	4	4	0
OCT	5	4	0	0	4	4	0	4	4	0
NOV	4	5	0	0	5	5	0	5	5	0
DEC	4	4	0	0	4	4	0	4	4	0
TOTAL	52	52	0	0	52	52	0	52	52	0

ANNUAL SUMMARY - DISTRIBUTION SYSTEM BACTERIOLOGICAL DATA

WATER WORKS NAME: EMBRUN
YEAR: 2005
SERVICED POPULATION:
LABORATORIES WHICH PERFORMED ANALYSES: ACCUTEST LABORATORIES

MONTH	TOTAL COLIFORM				FECAL COLIFORM/ESCHERICHIA			HPC		
	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES DETERIORATING	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES DETERIORATING
JAN	15	15	0	0	15	15	0	15	15	0
FEB	12	12	0	0	12	12	0	12	12	0
MAR	12	12	0	0	12	12	0	12	12	0
APR	12	12	0	0	12	12	0	12	12	0
MAY	15	15	0	0	15	15	0	15	15	0
JUN	12	12	0	0	12	12	0	12	12	0
JUL	12	12	0	0	12	12	0	12	12	0
AUG	15	15	0	0	15	15	0	15	15	0
SEP	12	12	0	0	12	12	0	12	12	0
OCT	15	15	0	0	15	15	0	15	15	0
NOV	12	12	0	0	12	12	0	12	12	0
DEC	12	12	0	0	12	12	0	12	12	0
TOTAL	156	156	0	0	156	156	0	156	156	0

EMBRUN/MARIONVILLE WTP DAILY IN-HOUSE TESTING - 2005

RAW WATER		COLOUR	PH	TEMP	FE	MN	TUR
JAN		3	7.2	9	2.70	0.386	0.26
FEB		3	7.2	9	2.81	0.393	0.26
MAR		2	7.1	9	2.80	0.384	0.17
APR		2	7.1	9	2.88	0.389	0.12
MAY		3	7.1	9	2.83	0.375	0.22
JUN		2	7.1	10	2.77	0.378	0.22
JUL		2	7.1	11	2.71	0.372	0.22
AUG		2	7.1	11	2.67	0.371	0.19
SEP		2	7.1	10	2.70	0.369	0.21
OCT		2	7.1	10	2.62	0.365	0.18
NOV		2	7.1	10	2.61	0.366	0.23
DEC		2	7.1	10	2.71	0.371	0.13
AVG		2	7.1	10	2.73	0.377	0.20

CLEAR WELL		COLOUR	PH	TEMP	FE	MN	TUR MIN	TUR MAX	CL^2 TOTAL	CL^2 FREE MIN	CL^2 FREE MAX	PWW
JAN		0	7.2	9	0.04	0.017	0.02	0.16	0.65	0.32	0.74	2607
FEB		0	7.2	9	0.05	0.020	0.04	0.12	0.69	0.36	0.66	2415
MAR		0	7.1	9	0.05	0.020	0.04	0.16	0.68	0.32	0.61	2524
APR		0	7.1	9	0.08	0.023	0.06	0.22	0.68	0.34	0.80	2511
MAY		1	7.1	9	0.11	0.025	0.08	0.34	0.68	0.32	0.61	2524
JUN		1	7.1	10	0.11	0.027	0.09	0.25	0.71	0.29	0.66	3083
JUL		0	7.1	10	0.09	0.023	0.08	0.20	0.67	0.31	0.65	2819
AUG		0	7.1	11	0.07	0.019	0.06	0.21	0.72	0.24	1.10	2889
SEP		1	7.1	11	0.06	0.015	0.07	0.17	0.76	0.41	0.80	2417
OCT		0	7.1	11	0.05	0.016	0.04	0.19	0.70	0.40	0.67	2686
NOV		0	7.1	10	0.04	0.016	0.04	0.14	0.68	0.34	0.61	2578
DEC		0	7.1	10	0.05	0.018	0.05	0.17	0.73	0.37	0.70	2659
AVG		0	7.1	10	0.07	0.020	0.02	0.34	0.70	0.24	1.10	31,712

EMBRUN/MARIONVILLE WTP DAILY IN-HOUSE TESTING - 2005

EMBRUN DISTRIBUTION		COLOUR	PH	TEMP	FE	MN	TUR MIN	TUR MAX	CL^2 TOTAL	CL^2 FREE MIN	CL^2 FREE MAX
JAN		0	7.2	8			0.06	0.06	0.74	0.39	0.92
FEB		0	7.2	8			0.04	0.57	0.73	0.38	0.69
MAR		0	7.1	8			0.04	0.15	0.77	0.40	0.78
APR		0	7.1	9			0.09	0.20	0.75	0.40	0.70
MAY		1	7.1	10			0.09	0.56	0.75	0.36	0.88
JUN		1	7.1	13			0.09	0.22	0.78	0.39	0.82
JUL		0	7.1	14			0.07	0.20	0.73	0.32	0.78
AUG		1	7.1	15			0.07	0.17	0.71	0.29	0.74
SEP		1	7.1	15			0.08	0.18	0.72	0.30	0.72
OCT		0	7.1	12			0.05	0.17	0.70	0.38	0.69
NOV		0	7.1	11			0.05	0.13	0.72	0.41	0.69
DEC		0	7.1	9			0.06	0.19	0.75	0.42	0.73
AVG		0	7.1	11			0.04	0.57	0.74	0.29	0.92

MARIONVILLE DISTRIBUTION		COLOUR	PH	TEMP	FE	MN	TUR MIN	TUR MAX	CL^2 TOTAL	CL^2 FREE MIN	CL^2 FREE MAX
JAN		0	7.2	7			0.05	0.12	0.80	0.43	0.75
FEB		0	7.2	7			0.04	0.04	0.80	0.45	0.76
MAR		1	7.1	7			0.09	0.14	0.81	0.54	0.77
APR		0	7.1	9			0.10	0.19	0.82	0.50	0.93
MAY		1	7.1	10			0.11	0.19	0.77	0.48	0.72
JUN		1	7.1	13			0.10	0.20	0.73	0.40	0.79
JUL		0	7.1	14			0.08	0.15	0.69	0.38	0.73
AUG		0	7.1	15			0.09	0.09	0.70	0.30	0.77
SEP		0	7.1	15			0.08	0.19	0.72	0.38	0.65
OCT		0	7.1	12			0.06	0.15	0.77	0.50	0.71
NOV		0	7.1	11			0.05	0.16	0.78	0.47	0.75
DEC		0	7.1	9			0.05	0.14	0.77	0.45	0.70
AVG		0	7.1	11			0.04	0.20	0.76	0.30	0.93

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JAN	3	8186	320.00	44.54	8.19	5.44	101.00	2.02	8.19	0.25	4671	14.10	1.96	4.67	0.42	5497	0.85	0.28
JAN	5	4837	187.40	26.09	4.84	5.39	62.40	1.25	4.84	0.26	2981	9.91	1.38	2.98	0.46	5497	0.54	0.27
JAN	6	2449	101.90	14.18	2.45	5.79	29.50	0.59	2.45	0.24	1437	4.72	0.66	1.44	0.46	5497	0.26	0.26
JAN	7	2540	97.50	13.57	2.54	5.34	32.80	0.66	2.54	0.26	1447	5.60	0.78	1.45	0.54	5497	0.26	0.26
JAN	10	7616	322.00	44.82	7.62	5.89	88.60	1.77	7.62	0.23	4511	13.60	1.89	4.51	0.42	5497	0.82	0.27
JAN	11	1956	82.90	11.54	1.96	5.90	22.90	0.46	1.96	0.23	1038	3.30	0.46	1.04	0.44	5497	0.19	0.19
JAN	12	2497	107.60	14.98	2.50	6.00	28.25	0.57	2.50	0.23	1559	4.72	0.66	1.56	0.42	5497	0.28	0.28
JAN	13	3182	140.50	19.56	3.18	6.15	39.42	0.79	3.18	0.25	1850	5.66	0.79	1.85	0.43	5497	0.34	0.34
JAN	14	1677	71.50	9.95	1.68	5.93	18.30	0.37	1.68	0.22	2815	7.08	0.99	2.82	0.35	5497	0.51	0.51
JAN	17	7850	348.80	48.55	7.85	6.19	96.50	1.93	7.85	0.25	4754	13.60	1.89	4.75	0.40	5497	0.86	0.29
JAN	18	2627	104.40	14.53	2.63	5.53	32.10	0.64	2.63	0.24	1520	4.72	0.66	1.52	0.43	5497	0.28	0.28
JAN	19	2424	105.10	14.63	2.42	6.04	30.20	0.60	2.42	0.25	1354	4.24	0.59	1.35	0.44	5497	0.25	0.25
JAN	20	2378	98.70	13.74	2.38	5.78	28.20	0.56	2.38	0.24	1364	4.24	0.59	1.36	0.43	5497	0.25	0.25
JAN	21	2139	93.00	12.95	2.14	6.05	26.20	0.52	2.14	0.24	1199	3.77	0.52	1.20	0.44	5497	0.22	0.22
JAN	24	8019	354.50	49.35	8.02	6.15	104.46	2.09	8.02	0.26	4537	13.22	1.84	4.54	0.41	5497	0.83	0.28
JAN	25	3385	151.90	21.14	3.39	6.25	52.00	1.04	3.39	0.31	1942	7.00	0.97	1.94	0.50	5497	0.35	0.35
JAN	26	1841	79.70	11.09	1.84	6.03	22.90	0.46	1.84	0.25	1113	2.83	0.39	1.11	0.35	5497	0.20	0.20
JAN	27	2516	102.50	14.27	2.52	5.67	32.10	0.64	2.52	0.26	1428	3.77	0.52	1.43	0.37	5497	0.26	0.26
JAN	28	3207	129.80	18.07	3.21	5.63	34.80	0.70	3.21	0.22	2012	7.50	1.04	2.01	0.52	5497	0.37	0.37
JAN	31	8483	361.50	50.32	8.48	5.93	103.80	2.08	8.48	0.24	4946	16.05	2.23	4.95	0.45	5497	0.90	0.30
JAN		79809	3361.20	467.88	79.81	5.85	986.43	19.73	79.81	0.25	48478	149.63	20.83	48.48	0.43	5497	0.44	0.29
DAILY AVG		2574									1564							
MAX		3385									2815							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
FEB	1	1714	63.90	8.89	1.71	5.19	24.30	0.49	1.71	0.28	935	2.36	0.33	0.94	0.35	5497	0.17	0.17
FEB	2	3146	132.90	18.50	3.15	5.88	40.00	0.80	3.15	0.25	1987	5.66	0.79	1.99	0.40	5497	0.36	0.36
FEB	3	2183	93.00	12.95	2.18	5.93	26.20	0.52	2.18	0.24	1267	4.70	0.65	1.27	0.52	5497	0.23	0.23
FEB	4	2564	111.40	15.51	2.56	6.05	34.10	0.68	2.56	0.27	1517	4.72	0.66	1.52	0.43	5497	0.28	0.28
FEB	7	8168	350.70	48.82	8.17	5.98	98.50	1.97	8.17	0.24	4940	17.40	2.42	4.94	0.49	5497	0.90	0.30
FEB	8	2488	96.20	13.39	2.49	5.38	29.50	0.59	2.49	0.24	1413	4.24	0.59	1.41	0.42	5497	0.26	0.26
FEB	9	2527	108.20	15.06	2.53	5.96	28.90	0.58	2.53	0.23	1535	5.19	0.72	1.54	0.47	5497	0.28	0.28
FEB	10	2850	109.00	15.17	2.85	5.32	36.10	0.72	2.85	0.25	1786	5.66	0.79	1.79	0.44	5497	0.32	0.32
FEB	11	2268	87.30	12.15	2.27	5.36	27.50	0.55	2.27	0.24	1318	4.24	0.59	1.32	0.45	5497	0.24	0.24
FEB	14	9066	345.00	48.02	9.07	5.30	109.00	2.18	9.07	0.24	5797	18.80	2.62	5.80	0.45	5497	1.05	0.35
FEB	15	2290	81.00	11.28	2.29	4.92	24.90	0.50	2.29	0.22	1274	4.24	0.59	1.27	0.46	5497	0.23	0.23
FEB	16	2848	110.80	15.42	2.85	5.42	32.80	0.66	2.85	0.23	1798	5.19	0.72	1.80	0.40	5497	0.33	0.33
FEB	17	2127	79.10	11.01	2.13	5.18	26.20	0.52	2.13	0.25	1168	3.77	0.52	1.17	0.45	5497	0.21	0.21
FEB	18	2705	95.60	13.31	2.71	4.92	32.80	0.66	2.71	0.24	1678	5.19	0.72	1.68	0.43	5497	0.31	0.31
FEB	21	7974	290.00	40.37	7.97	5.06	99.80	2.00	7.97	0.25	4688	15.10	2.10	4.69	0.45	5497	0.85	0.28
FEB	22	2001	74.00	10.30	2.00	5.15	22.90	0.46	2.00	0.23	1089	3.77	0.52	1.09	0.48	5497	0.20	0.20
FEB	23	2566	94.90	13.21	2.57	5.15	29.50	0.59	2.57	0.23	1505	6.10	0.85	1.51	0.56	5497	0.27	0.27
FEB	24	2589	92.40	12.86	2.59	4.97	34.80	0.70	2.59	0.27	1532	5.60	0.78	1.53	0.51	5497	0.28	0.28
FEB	25	2691	98.14	13.66	2.69	5.08	29.56	0.59	2.69	0.22	1587	6.10	0.85	1.59	0.54	5497	0.29	0.29
FEB	28	8365	314.70	43.81	8.37	5.24	99.86	2.00	8.37	0.24	5082	18.88	2.63	5.08	0.52	5497	0.92	0.31
FEB		73130	2828.24	393.69	73.13	5.37	887.22	17.74	73.13	0.24	43896	146.91	20.45	43.90	0.46	5497	0.40	0.27
DAILY AVG		2612									1568							
MAX		3146									1987							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
MAR	1	2586	98.00	13.64	2.59	5.28	34.80	0.70	2.59	0.27	1496	4.24	0.59	1.50	0.39	5497	0.27	0.27
MAR	2	2160	81.60	11.36	2.16	5.26	25.60	0.51	2.16	0.24	1246	2.80	0.39	1.25	0.31	5497	0.23	0.23
MAR	3	2613	94.90	13.21	2.61	5.06	29.50	0.59	2.61	0.23	1557	4.24	0.59	1.56	0.38	5497	0.28	0.28
MAR	4	2801	100.00	13.92	2.80	4.97	36.70	0.73	2.80	0.26	1678	5.19	0.72	1.68	0.43	5497	0.31	0.31
MAR	7	8088	285.00	39.67	8.09	4.91	101.80	2.04	8.09	0.25	4905	13.60	1.89	4.91	0.39	5497	0.89	0.30
MAR	8	2285	77.20	10.75	2.29	4.70	29.50	0.59	2.29	0.26	1225	4.70	0.65	1.23	0.53	5497	0.22	0.22
MAR	9	2550	91.18	12.69	2.55	4.98	30.87	0.62	2.55	0.24	1516	5.66	0.79	1.52	0.52	5497	0.28	0.28
MAR	10	2516	82.90	11.54	2.52	4.59	32.10	0.64	2.52	0.26	1490	4.72	0.66	1.49	0.44	5497	0.27	0.27
MAR	11	2841	94.30	13.13	2.84	4.62	32.80	0.66	2.84	0.23	1713	5.66	0.79	1.71	0.46	5497	0.31	0.31
MAR	14	7628	262.10	36.48	7.63	4.78	95.90	1.92	7.63	0.25	4584	13.60	1.89	4.58	0.41	5497	0.83	0.28
MAR	15	2397	81.60	11.36	2.40	4.74	28.90	0.58	2.40	0.24	1306	4.24	0.59	1.31	0.45	5497	0.24	0.24
MAR	16	2953	102.50	14.27	2.95	4.83	39.40	0.79	2.95	0.27	1816	8.00	1.11	1.82	0.61	5497	0.33	0.33
MAR	17	2310	82.90	11.54	2.31	5.00	29.59	0.59	2.31	0.26	1363	4.24	0.59	1.36	0.43	5497	0.25	0.25
MAR	18	2208	78.50	10.93	2.21	4.95	25.60	0.51	2.21	0.23	1289	3.70	0.52	1.29	0.40	5497	0.23	0.23
MAR	21	8062	279.20	38.86	8.06	4.82	99.80	2.00	8.06	0.25	4941	12.70	1.77	4.94	0.36	5497	0.90	0.30
MAR	22	2153	76.60	10.66	2.15	4.95	24.30	0.49	2.15	0.23	1165	3.77	0.52	1.17	0.45	5497	0.21	0.21
MAR	23	2506	88.60	12.33	2.51	4.92	30.80	0.62	2.51	0.25	1503	4.70	0.65	1.50	0.44	5497	0.27	0.27
MAR	24	2904	101.30	14.10	2.90	4.86	35.40	0.71	2.90	0.24	1756	6.60	0.92	1.76	0.52	5497	0.32	0.32
MAR	25	1791	56.90	7.92	1.79	4.42	24.30	0.49	1.79	0.27	962	2.83	0.39	0.96	0.41	5497	0.18	0.18
MAR	28	8272	281.00	39.12	8.27	4.73	100.50	2.01	8.27	0.24	4953	18.40	2.56	4.95	0.52	5497	0.90	0.30
MAR	29	2943	102.00	14.20	2.94	4.82	36.10	0.72	2.94	0.25	1953	7.00	0.97	1.95	0.50	5497	0.36	0.36
MAR	30	2213	73.40	10.22	2.21	4.62	28.20	0.56	2.21	0.25	1201	3.77	0.52	1.20	0.44	5497	0.22	0.22
MAR	31	2538	89.90	12.51	2.54	4.93	32.10	0.64	2.54	0.25	1518	4.24	0.59	1.52	0.39	5497	0.28	0.28
MAR		79318	2761.58	384.41	79.32	4.86	984.56	19.69	79.32	0.25	47136	148.60	20.69	47.14	0.44	5497	0.37	0.27
DAILY AVG		2559									1521							
MAX		2953									1953							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
APR	1	2807	92.40	12.86	2.81	4.58	34.80	0.70	2.81	0.25	1775	6.60	0.92	1.78	0.52	5497	0.32	0.32
APR	4	8507	295.00	41.06	8.51	4.83	107.00	2.14	8.51	0.25	4947	15.10	2.10	4.95	0.42	5497	0.90	0.30
APR	5	1737	56.90	7.92	1.74	4.56	22.90	0.46	1.74	0.26	1030	2.83	0.39	1.03	0.38	5497	0.19	0.19
APR	6	2959	91.80	12.78	2.96	4.32	36.10	0.72	2.96	0.24	1873	6.13	0.85	1.87	0.46	5497	0.34	0.34
APR	7	1981	66.48	9.25	1.98	4.67	25.62	0.51	1.98	0.26	1172	4.24	0.59	1.17	0.50	5497	0.21	0.21
APR	8	2542	82.30	11.46	2.54	4.51	31.50	0.63	2.54	0.25	1486	4.72	0.66	1.49	0.44	5497	0.27	0.27
APR	11	8240	273.50	38.07	8.24	4.62	102.49	2.05	8.24	0.25	5053	18.41	2.56	5.05	0.51	5497	0.92	0.31
APR	12	2826	93.00	12.95	2.83	4.58	36.70	0.73	2.83	0.26	1642	4.24	0.59	1.64	0.36	5497	0.30	0.30
APR	13	2197	76.60	10.66	2.20	4.85	28.20	0.56	2.20	0.26	1243	3.70	0.52	1.24	0.41	5497	0.23	0.23
APR	14	2454	82.30	11.46	2.45	4.67	28.90	0.58	2.45	0.24	1501	4.70	0.65	1.50	0.44	5497	0.27	0.27
APR	15	2883	104.00	14.48	2.88	5.02	35.00	0.70	2.88	0.24	1793	5.60	0.78	1.79	0.43	5497	0.33	0.33
APR	18	8172	272.30	37.90	8.17	4.64	103.14	2.06	8.17	0.25	4966	14.16	1.97	4.97	0.40	5497	0.90	0.30
APR	19	2442	82.30	11.46	2.44	4.69	28.90	0.58	2.44	0.24	1318	4.24	0.59	1.32	0.45	5497	0.24	0.24
APR	20	2584	88.60	12.33	2.58	4.77	36.10	0.72	2.58	0.28	1561	5.19	0.72	1.56	0.46	5497	0.28	0.28
APR	21	3152	108.00	15.03	3.15	4.77	37.40	0.75	3.15	0.24	1962	7.50	1.04	1.96	0.53	5497	0.36	0.36
APR	22	2123	71.50	9.95	2.12	4.69	28.90	0.58	2.12	0.27	1267	3.77	0.52	1.27	0.41	5497	0.23	0.23
APR	25	7998	277.90	38.68	8.00	4.84	110.30	2.21	8.00	0.28	4845	14.10	1.96	4.85	0.41	5497	0.88	0.29
APR	26	3094	107.00	14.89	3.09	4.81	30.80	0.62	3.09	0.20	1493	5.66	0.79	1.49	0.53	5497	0.27	0.27
APR	27	2806	109.50	15.24	2.81	5.43	32.85	0.66	2.81	0.23	1516	4.72	0.66	1.52	0.43	5497	0.28	0.28
APR	28	2990	110.10	15.33	2.99	5.13	42.70	0.85	2.99	0.29	1433	3.77	0.52	1.43	0.37	5497	0.26	0.26
APR	29	2406	91.80	12.78	2.41	5.31	34.10	0.68	2.41	0.28	1504	3.30	0.46	1.50	0.31	5497	0.27	0.27
APR		76900	2633.28	366.55	76.90	4.78	974.40	19.49	76.90	0.25	45380	142.68	19.86	45.38	0.44	5497	0.39	0.28
DAILY AVG		2563									1513							
MAX		3152									1962							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
MAY	2	7842	286.00	39.81	7.84	5.08	109.70	2.19	7.84	0.28	4683	16.50	2.30	4.68	0.49	5497	0.85	0.28
MAY	3	2982	114.60	15.95	2.98	5.35	40.00	0.80	2.98	0.27	1740	5.19	0.72	1.74	0.42	5497	0.32	0.32
MAY	4	2497	93.00	12.95	2.50	5.18	36.00	0.72	2.50	0.29	1490	5.10	0.71	1.49	0.48	5497	0.27	0.27
MAY	5	2843	104.40	14.53	2.84	5.11	46.60	0.93	2.84	0.33	1914	4.72	0.66	1.91	0.34	5497	0.35	0.35
MAY	6	2845	105.74	14.72	2.85	5.17	37.44	0.75	2.85	0.26	1740	5.66	0.79	1.74	0.45	5497	0.32	0.32
MAY	9	8355	318.49	44.33	8.36	5.31	120.23	2.40	8.36	0.29	4865	15.58	2.17	4.87	0.45	5497	0.89	0.30
MAY	10	3061	112.70	15.69	3.06	5.13	45.90	0.92	3.06	0.30	1718	5.19	0.72	1.72	0.42	5497	0.31	0.31
MAY	11	3307	127.90	17.80	3.31	5.38	45.30	0.91	3.31	0.27	1984	5.19	0.72	1.98	0.36	5497	0.36	0.36
MAY	12	2248	82.90	11.54	2.25	5.13	38.10	0.76	2.25	0.34	1302	3.77	0.52	1.30	0.40	5497	0.24	0.24
MAY	13	2521	96.87	13.48	2.52	5.35	35.47	0.71	2.52	0.28	1547	5.19	0.72	1.55	0.47	5497	0.28	0.28
MAY	16	8601	330.50	46.01	8.80	5.23	130.00	2.60	8.80	0.30	5379	15.10	2.10	5.38	0.39	5497	0.98	0.33
MAY	17	3350	124.10	17.27	3.35	5.16	45.90	0.92	3.35	0.27	1779	5.66	0.79	1.78	0.44	5497	0.32	0.32
MAY	18	1773	67.70	9.42	1.77	5.32	26.90	0.54	1.77	0.30	1116	3.77	0.52	1.12	0.47	5497	0.20	0.20
MAY	19	2764	104.30	14.52	2.76	5.25	38.70	0.77	2.76	0.28	1623	5.19	0.72	1.62	0.45	5497	0.30	0.30
MAY	20	2680	100.00	13.92	2.68	5.19	42.00	0.84	2.68	0.31	1748	7.00	0.97	1.75	0.56	5497	0.32	0.32
MAY	23	8178	305.20	42.48	8.18	5.19	117.60	2.35	8.18	0.29	4616	15.10	2.10	4.62	0.46	5497	0.84	0.28
MAY	24	3686	137.40	19.13	3.69	5.19	54.50	1.09	3.69	0.30	2210	6.61	0.92	2.21	0.42	5497	0.40	0.40
MAY	25	2881	106.00	14.76	2.88	5.12	38.70	0.77	2.88	0.27	1669	5.20	0.72	1.67	0.43	5497	0.30	0.30
MAY	26	2801	105.70	14.71	2.80	5.25	42.00	0.84	2.80	0.30	1616	5.66	0.79	1.62	0.49	5497	0.29	0.29
MAY	27	3000	110.10	15.33	3.00	5.11	43.30	0.87	3.00	0.29	1772	5.19	0.72	1.77	0.41	5497	0.32	0.32
MAY	30	9278	337.40	46.97	9.28	5.06	134.60	2.69	9.28	0.29	5288	17.40	2.42	5.29	0.46	5497	0.96	0.32
MAY	31	3397	117.10	16.30	3.40	4.80	49.90	1.00	3.40	0.29	2066	6.13	0.85	2.07	0.41	5497	0.38	0.38
MAY		91090	3388.10	471.62	91.09	5.18	1318.84	26.38	91.09	0.29	53865	170.10	23.68	53.87	0.44	5497	0.45	0.31
DAILY AVG		2938	109								1738							
MAX		3686	137								2210							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JUNE	1	2884	101.31	14.10	2.88	4.89	38.76	0.78	2.88	0.27	1602	4.72	0.66	1.60	0.41	5497	0.29	0.29
JUNE	2	3322	119.60	16.65	3.32	5.01	51.20	1.02	3.32	0.31	2068	6.61	0.92	2.07	0.44	5497	0.38	0.38
JUNE	3	3566	127.20	17.71	3.57	4.97	50.50	1.01	3.57	0.28	2001	6.61	0.92	2.00	0.46	5497	0.36	0.36
JUNE	6	12039	441.30	61.43	12.04	5.10	172.10	3.44	12.04	0.29	6941	22.60	3.15	6.94	0.45	5497	1.26	0.42
JUNE	7	4040	156.40	21.77	4.04	5.39	51.90	1.04	4.04	0.26	2282	7.08	0.99	2.28	0.43	5497	0.42	0.42
JUNE	8	4511	164.60	22.91	4.51	5.08	58.40	1.17	4.51	0.26	2503	7.55	1.05	2.50	0.42	5497	0.46	0.46
JUNE	9	3121	117.10	16.30	3.12	5.22	40.00	0.80	3.12	0.26	1955	5.19	0.72	1.96	0.37	5497	0.36	0.36
JUNE	10	4486	160.10	22.29	4.49	4.97	59.70	1.19	4.49	0.27	2645	8.02	1.12	2.65	0.42	5497	0.48	0.48
JUNE	13	11979	442.00	61.53	11.98	5.14	153.00	3.06	11.98	0.26	7162	23.60	3.29	7.16	0.46	5497	1.30	0.43
JUNE	14	3812	138.60	19.29	3.81	5.06	51.20	1.02	3.81	0.27	2134	5.19	0.72	2.13	0.34	5497	0.39	0.39
JUNE	15	2750	107.64	14.98	2.75	5.45	38.76	0.78	2.75	0.28	1727	5.66	0.79	1.73	0.46	5497	0.31	0.31
JUNE	16	2974	126.60	17.62	2.97	5.93	36.10	0.72	2.97	0.24	1832	6.13	0.85	1.83	0.47	5497	0.33	0.33
JUNE	17	2511	103.20	14.37	2.51	5.72	30.80	0.62	2.51	0.25	1490	4.72	0.66	1.49	0.44	5497	0.27	0.27
JUNE	20	8594	362.80	50.50	8.59	5.88	121.50	2.43	8.59	0.28	5173	14.60	2.03	5.17	0.39	5497	0.94	0.31
JUNE	21	2899	120.94	16.83	2.90	5.81	37.44	0.75	2.90	0.26	1632	4.24	0.59	1.63	0.36	5497	0.30	0.30
JUNE	22	2798	120.94	16.83	2.80	6.02	34.16	0.68	2.80	0.24	1784	4.72	0.66	1.78	0.37	5497	0.32	0.32
JUNE	23	3118	128.50	17.89	3.12	5.74	40.70	0.81	3.12	0.26	1970	6.61	0.92	1.97	0.47	5497	0.36	0.36
JUNE	24	3550	152.60	21.24	3.55	5.98	46.60	0.93	3.55	0.26	2389	7.08	0.99	2.39	0.41	5497	0.43	0.43
JUNE	27	9851	409.68	57.03	9.85	5.79	128.77	2.58	9.85	0.26	5905	20.30	2.83	5.91	0.48	5497	1.07	0.36
JUNE	28	3178	131.00	18.24	3.18	5.74	42.00	0.84	3.18	0.26	1872	5.66	0.79	1.87	0.42	5497	0.34	0.34
JUNE	29	3486	143.70	20.00	3.49	5.74	45.30	0.91	3.49	0.26	2209	6.61	0.92	2.21	0.42	5497	0.40	0.40
JUNE	30	3415	144.00	20.04	3.42	5.87	40.00	0.80	3.42	0.23	2234	5.60	0.78	2.23	0.35	5497	0.41	0.41
JUN		102884	4019.81	559.56	102.88	5.48	1368.89	27.38	102.88	0.26	61510	189.10	26.32	61.51	0.42	5497	0.51	0.37
DAILY AVG		3429	134								2050							
MAX		4511	165								2645							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JULY	1	3305	135.00	18.79	3.31	5.69	45.30	0.91	3.31	0.27	1748	6.10	0.85	1.75	0.49	5497	0.32	0.32
JULY	4	9278	413.40	57.55	9.28	6.20	124.00	2.48	9.28	0.27	5814	16.50	2.30	5.81	0.40	5497	1.06	0.35
JULY	5	3242	151.90	21.14	3.24	6.52	44.00	0.88	3.24	0.27	2029	5.66	0.79	2.03	0.39	5497	0.37	0.37
JULY	6	2823	129.80	18.07	2.82	6.40	35.40	0.71	2.82	0.25	1490	3.77	0.52	1.49	0.35	5497	0.27	0.27
JULY	7	3458	160.80	22.38	3.46	6.47	45.90	0.92	3.46	0.27	2352	7.00	0.97	2.35	0.41	5497	0.43	0.43
JULY	8	2725	122.80	17.09	2.73	6.27	36.10	0.72	2.73	0.26	1484	4.72	0.66	1.48	0.44	5497	0.27	0.27
JULY	11	9340	443.20	61.69	9.34	6.61	121.50	2.43	9.34	0.26	5764	16.00	2.23	5.76	0.39	5497	1.05	0.35
JULY	12	3004	141.80	19.74	3.00	6.57	41.30	0.83	3.00	0.27	1900	5.66	0.79	1.90	0.41	5497	0.35	0.35
JULY	13	3327	155.10	21.59	3.33	6.49	42.00	0.84	3.33	0.25	1902	5.19	0.72	1.90	0.38	5497	0.35	0.35
JULY	14	2713	131.00	18.24	2.71	6.72	34.10	0.68	2.71	0.25	1823	5.19	0.72	1.82	0.40	5497	0.33	0.33
JULY	15	2507	113.90	15.85	2.51	6.32	34.80	0.70	2.51	0.28	1325	3.77	0.52	1.33	0.40	5497	0.24	0.24
JULY	18	9445	422.90	58.87	9.45	6.23	122.80	2.46	9.45	0.26	5861	21.72	3.02	5.86	0.52	5497	1.07	0.36
JULY	19	3008	136.00	18.93	3.01	6.29	36.10	0.72	3.01	0.24	1937	7.50	1.04	1.94	0.54	5497	0.35	0.35
JULY	20	2522	117.70	16.38	2.52	6.50	35.40	0.71	2.52	0.28	1639	4.72	0.66	1.64	0.40	5497	0.30	0.30
JULY	21	3358	150.70	20.98	3.36	6.25	40.73	0.81	3.36	0.24	1839	6.13	0.85	1.84	0.46	5497	0.33	0.33
JULY	22	3292	138.00	19.21	3.29	5.84	40.70	0.81	3.29	0.25	1916	7.55	1.05	1.92	0.55	5497	0.35	0.35
JULY	25	9060	427.00	59.44	9.06	6.56	117.60	2.35	9.06	0.26	5496	19.80	2.76	5.50	0.50	5497	1.00	0.33
JULY	26	3030	133.00	18.51	3.03	6.11	41.30	0.83	3.03	0.27	1795	7.00	0.97	1.80	0.54	5497	0.33	0.33
JULY	27	3026	141.80	19.74	3.03	6.52	38.70	0.77	3.03	0.26	1871	6.10	0.85	1.87	0.45	5497	0.34	0.34
JULY	28	2908	135.50	18.86	2.91	6.49	36.70	0.73	2.91	0.25	1784	6.13	0.85	1.78	0.48	5497	0.32	0.32
JULY	29	2673	118.40	16.48	2.67	6.17	34.80	0.70	2.67	0.26	1754	6.13	0.85	1.75	0.49	5497	0.32	0.32
JUL		88044	4019.70	559.54	88.04	6.34	1149.23	22.98	88.04	0.26	53523	172.34	23.99	53.52	0.45	5497	0.46	0.33
DAILY AVG		2840	130								1727							
MAX		3458	161								2352							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
AUG	1	8584	391.90	54.55	8.58	6.36	109.70	2.19	8.58	0.26	4884	14.60	2.03	4.88	0.42	5497	0.89	0.30
AUG	2	4233	193.00	26.87	4.23	6.35	53.20	1.06	4.23	0.25	2651	9.40	1.31	2.65	0.49	5497	0.48	0.48
AUG	3	2830	129.80	18.07	2.83	6.38	38.10	0.76	2.83	0.27	1850	5.19	0.72	1.85	0.39	5497	0.34	0.34
AUG	4	4290	201.90	28.10	4.29	6.55	53.80	1.08	4.29	0.25	2567	7.08	0.99	2.57	0.38	5497	0.47	0.47
AUG	5	2680	117.70	16.38	2.68	6.11	38.70	0.77	2.68	0.29	1742	5.66	0.79	1.74	0.45	5497	0.32	0.32
AUG	8	10886	475.50	66.19	10.89	6.08	140.50	2.81	10.89	0.26	6540	17.40	2.42	6.54	0.37	5497	1.19	0.40
AUG	9	4355	194.39	27.06	4.36	6.21	57.15	1.14	4.36	0.26	2466	8.49	1.18	2.47	0.48	5497	0.45	0.45
AUG	10	3850	174.10	24.23	3.85	6.29	50.50	1.01	3.85	0.26	2374	7.08	0.99	2.37	0.42	5497	0.43	0.43
AUG	11	2623	110.81	15.42	2.62	5.88	34.16	0.68	2.62	0.26	1580	5.19	0.72	1.58	0.46	5497	0.29	0.29
AUG	12	2573	117.10	16.30	2.57	6.34	36.10	0.72	2.57	0.28	1508	6.60	0.92	1.51	0.61	5497	0.27	0.27
AUG	15	8523	409.60	57.02	8.52	6.69	107.70	2.15	8.52	0.25	5318	19.30	2.69	5.32	0.51	5497	0.97	0.32
AUG	16	2977	147.53	20.54	2.98	6.90	40.07	0.80	2.98	0.27	1712	5.66	0.79	1.71	0.46	5497	0.31	0.31
AUG	17	3478	166.50	23.18	3.48	6.66	42.00	0.84	3.48	0.24	2114	8.00	1.11	2.11	0.53	5497	0.38	0.38
AUG	18	3037	141.20	19.66	3.04	6.47	44.00	0.88	3.04	0.29	1949	7.08	0.99	1.95	0.51	5497	0.35	0.35
AUG	19	2831	139.00	19.35	2.83	6.83	35.40	0.71	2.83	0.25	1732	6.13	0.85	1.73	0.49	5497	0.32	0.32
AUG	22	8054	393.80	54.82	8.05	6.81	99.80	2.00	8.05	0.25	4894	17.90	2.49	4.89	0.51	5497	0.89	0.30
AUG	23	2642	126.64	17.63	2.64	6.67	36.79	0.74	2.64	0.28	1622	6.13	0.85	1.62	0.53	5497	0.30	0.30
AUG	24	2802	133.00	18.51	2.80	6.61	40.70	0.81	2.80	0.29	1695	5.19	0.72	1.70	0.43	5497	0.31	0.31
AUG	25	3029	145.60	20.27	3.03	6.69	39.40	0.79	3.03	0.26	1797	7.08	0.99	1.80	0.55	5497	0.33	0.33
AUG	26	2776	132.97	18.51	2.78	6.67	34.82	0.70	2.78	0.25	1757	7.08	0.99	1.76	0.56	5497	0.32	0.32
AUG	29	9065	433.70	60.37	9.07	6.66	116.20	2.32	9.07	0.26	5503	23.10	3.22	5.50	0.58	5497	1.00	0.33
AUG	30	3408	155.70	21.67	3.41	6.36	42.70	0.85	3.41	0.25	2094	6.13	0.85	2.09	0.41	5497	0.38	0.38
AUG	31	2846	131.00	18.24	2.85	6.41	36.70	0.73	2.85	0.26	1690	4.72	0.66	1.69	0.39	5497	0.31	0.31
AUG		102372	4762.44	662.93	102.37	6.48	1328.19	26.56	102.37	0.26	62039	210.19	29.26	62.04	0.47	5497	0.49	0.35
DAILY AVG		3302	154								2001							
MAX		4355	202								2651							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
SEP	1	2359	111.40	15.51	2.36	6.57	31.50	0.63	2.36	0.27	1355	4.70	0.65	1.36	0.48	5497	0.25	0.25
SEP	2	2947	136.77	19.04	2.95	6.46	36.79	0.74	2.95	0.25	1907	7.50	1.04	1.91	0.55	5497	0.35	0.35
SEP	5	6942	327.30	45.56	6.94	6.56	88.60	1.77	6.94	0.26	3987	12.70	1.77	3.99	0.44	5497	0.73	0.24
SEP	6	3170	146.90	20.45	3.17	6.45	42.70	0.85	3.17	0.27	2226	8.49	1.18	2.23	0.53	5497	0.40	0.40
SEP	7	3019	143.00	19.91	3.02	6.59	36.10	0.72	3.02	0.24	1736	7.00	0.97	1.74	0.56	5497	0.32	0.32
SEP	8	2901	135.00	18.79	2.90	6.48	39.40	0.79	2.90	0.27	1737	7.00	0.97	1.74	0.56	5497	0.32	0.32
SEP	9	2614	120.30	16.75	2.61	6.41	34.10	0.68	2.61	0.26	1652	6.61	0.92	1.65	0.56	5497	0.30	0.30
SEP	12	7814	322.20	44.85	7.81	5.74	96.50	1.93	7.81	0.25	4809	16.90	2.35	4.81	0.49	5497	0.87	0.29
SEP	13	3658	153.00	21.30	3.66	5.82	45.90	0.92	3.66	0.25	2127	5.60	0.78	2.13	0.37	5497	0.39	0.39
SEP	14	2667	105.70	14.71	2.67	5.52	33.50	0.67	2.67	0.25	1586	7.00	0.97	1.59	0.61	5497	0.29	0.29
SEP	15	2675	113.90	15.85	2.68	5.93	34.10	0.68	2.68	0.25	1577	4.70	0.65	1.58	0.41	5497	0.29	0.29
SEP	16	2592	107.01	14.90	2.59	5.75	30.87	0.62	2.59	0.24	1593	6.61	0.92	1.59	0.58	5497	0.29	0.29
SEP	19	8089	333.60	46.44	8.09	5.74	99.86	2.00	8.09	0.25	4901	18.41	2.56	4.90	0.52	5497	0.89	0.30
SEP	20	2554	109.50	15.24	2.55	5.97	32.10	0.64	2.55	0.25	1588	4.72	0.66	1.59	0.41	5497	0.29	0.29
SEP	21	2553	110.80	15.42	2.55	6.04	29.50	0.59	2.55	0.23	1542	5.66	0.79	1.54	0.51	5497	0.28	0.28
SEP	22	2552	96.20	13.39	2.55	5.25	29.50	0.59	2.55	0.23	1506	4.72	0.66	1.51	0.44	5497	0.27	0.27
SEP	23	2519	107.01	14.90	2.52	5.91	30.87	0.62	2.52	0.25	1531	6.13	0.85	1.53	0.56	5497	0.28	0.28
SEP	26	8188	344.40	47.94	8.19	5.85	101.80	2.04	8.19	0.25	4968	16.50	2.30	4.97	0.46	5497	0.90	0.30
SEP	27	3087	131.70	18.33	3.09	5.94	37.40	0.75	3.09	0.24	1755	6.13	0.85	1.76	0.49	5497	0.32	0.32
SEP	28	2643	117.77	16.39	2.64	6.20	34.16	0.68	2.64	0.26	1572	6.13	0.85	1.57	0.54	5497	0.29	0.29
SEP	29	2563	106.30	14.80	2.56	5.77	30.80	0.61	2.56	0.24	1500	5.66	0.79	1.50	0.53	5497	0.27	0.27
SEP	30	2565	108.90	15.16	2.57	5.91	30.80	0.62	2.57	0.24	1588	6.13	0.85	1.59	0.54	5497	0.29	0.29
SEP		80671	3488.66	485.62	80.67	6.04	1006.85	20.13	80.67	0.25	48743	175.00	24.36	48.74	0.51	5497	0.40	0.30
DAILY AVG		2689	116								1625							
MAX		3658	153								2226							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
OCT	3	8143	339.39	47.24	8.14	5.80	103.14	2.06	8.14	0.25	4992	20.30	2.83	4.99	0.57	5497	0.91	0.30
OCT	4	2285	89.20	12.42	2.29	5.43	26.90	0.54	2.29	0.24	1447	4.24	0.59	1.45	0.41	5497	0.26	0.26
OCT	5	3651	145.00	20.18	3.65	5.53	47.96	0.96	3.65	0.26	2137	8.97	1.25	2.14	0.58	5497	0.39	0.39
OCT	6	2359	91.80	12.78	2.36	5.42	28.90	0.58	2.36	0.25	1377	4.24	0.59	1.38	0.43	5497	0.25	0.25
OCT	7	2655	103.20	14.37	2.66	5.41	32.80	0.66	2.66	0.25	1612	6.10	0.85	1.61	0.53	5497	0.29	0.29
OCT	10	7221	272.20	37.89	7.22	5.25	87.30	1.75	7.22	0.24	4392	14.10	1.96	4.39	0.45	5497	0.80	0.27
OCT	11	3027	111.40	15.51	3.03	5.12	37.40	0.75	3.03	0.25	1906	6.61	0.92	1.91	0.48	5497	0.35	0.35
OCT	12	2717	104.40	14.53	2.72	5.35	34.80	0.70	2.72	0.26	1608	5.66	0.79	1.61	0.49	5497	0.29	0.29
OCT	13	2573	98.70	13.74	2.57	5.34	32.10	0.64	2.57	0.25	1573	5.66	0.79	1.57	0.50	5497	0.29	0.29
OCT	14	2630	101.31	14.10	2.63	5.36	34.16	0.68	2.63	0.26	1549	6.61	0.92	1.55	0.59	5497	0.28	0.28
OCT	17	8284	302.00	42.04	8.28	5.07	107.00	2.14	8.28	0.26	5168	20.30	2.83	5.17	0.55	5497	0.94	0.31
OCT	18	2316	82.90	11.54	2.32	4.98	24.30	0.49	2.32	0.21	1392	4.24	0.59	1.39	0.42	5497	0.25	0.25
OCT	19	2480	93.00	12.95	2.48	5.22	30.80	0.62	2.48	0.25	1502	4.72	0.66	1.50	0.44	5497	0.27	0.27
OCT	20	2809	107.60	14.98	2.81	5.33	37.40	0.75	2.81	0.27	1749	5.19	0.72	1.75	0.41	5497	0.32	0.32
OCT	21	2218	83.50	11.62	2.22	5.24	27.50	0.55	2.22	0.25	1345	3.77	0.52	1.35	0.39	5497	0.24	0.24
OCT	24	8333	315.30	43.89	8.33	5.27	104.40	2.09	8.33	0.25	5056	18.80	2.62	5.06	0.52	5497	0.92	0.31
OCT	25	2710	113.90	15.85	2.71	5.85	32.10	0.64	2.71	0.24	1670	4.72	0.66	1.67	0.39	5497	0.30	0.30
OCT	26	2102	79.70	11.09	2.10	5.28	28.90	0.58	2.10	0.27	1189	4.72	0.66	1.19	0.55	5497	0.22	0.22
OCT	27	2445	96.20	13.39	2.45	5.48	26.90	0.54	2.45	0.22	1518	5.19	0.72	1.52	0.48	5497	0.28	0.28
OCT	28	2257	89.90	12.51	2.26	5.54	28.90	0.58	2.26	0.26	1326	4.24	0.59	1.33	0.45	5497	0.24	0.24
OCT	31	8665	338.10	47.06	8.67	5.43	109.70	2.19	8.67	0.25	5379	20.30	2.83	5.38	0.53	5497	0.98	0.33
OCT		81880	3158.70	439.69	81.88	5.37	1023.36	20.47	81.88	0.25	49887	178.68	24.87	49.89	0.48	5497	0.43	0.29
DAILY AVG		2641	102								1609							
MAX		3651	145								2137							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
NOV	1	2385	91.80	12.78	2.39	5.36	31.50	0.63	2.39	0.26	1436	4.72	0.66	1.44	0.46	5497	0.26	0.26
NOV	2	2496	101.30	14.10	2.50	5.65	31.50	0.63	2.50	0.25	1520	5.19	0.72	1.52	0.48	5497	0.28	0.28
NOV	3	2500	100.04	13.93	2.50	5.57	28.25	0.57	2.50	0.23	1511	6.13	0.85	1.51	0.56	5497	0.27	0.27
NOV	4	2480	100.60	14.00	2.48	5.65	34.80	0.70	2.48	0.28	1488	5.66	0.79	1.49	0.53	5497	0.27	0.27
NOV	7	8335	340.60	47.41	8.34	5.69	101.80	2.04	8.34	0.24	5122	20.70	2.88	5.12	0.56	5497	0.93	0.31
NOV	8	2044	96.20	13.39	2.04	6.55	27.50	0.55	2.04	0.27	1190	3.30	0.46	1.19	0.39	5497	0.22	0.22
NOV	9	2489	97.50	13.57	2.49	5.45	32.80	0.66	2.49	0.26	1565	7.00	0.97	1.57	0.62	5497	0.28	0.28
NOV	10	2413	93.70	13.04	2.41	5.41	28.90	0.58	2.41	0.24	1419	4.24	0.59	1.42	0.42	5497	0.26	0.26
NOV	11	2385	93.70	13.04	2.39	5.47	34.10	0.68	2.39	0.29	1441	4.72	0.66	1.44	0.46	5497	0.26	0.26
NOV	14	8039	331.79	46.19	8.04	5.75	100.52	2.01	8.04	0.25	4848	17.90	2.49	4.85	0.51	5497	0.88	0.29
NOV	15	2395	96.70	13.46	2.40	5.62	30.80	0.62	2.40	0.26	1401	4.72	0.66	1.40	0.47	5497	0.25	0.25
NOV	16	2433	107.60	14.98	2.43	6.16	31.50	0.63	2.43	0.26	1438	5.19	0.72	1.44	0.50	5497	0.26	0.26
NOV	17	2414	103.80	14.45	2.41	5.99	30.20	0.60	2.41	0.25	1567	5.66	0.79	1.57	0.50	5497	0.29	0.29
NOV	18	2453	106.30	14.80	2.45	6.03	32.10	0.64	2.45	0.26	1501	5.66	0.79	1.50	0.52	5497	0.27	0.27
NOV	21	7909	353.95	49.27	7.91	6.23	102.49	2.05	7.91	0.26	4766	20.77	2.89	4.77	0.61	5497	0.87	0.29
NOV	22	2829	124.74	17.38	2.83	6.14	35.47	0.71	2.83	0.25	1807	6.13	0.85	1.81	0.47	5497	0.33	0.33
NOV	23	2049	93.08	12.96	2.05	6.32	24.30	0.49	2.05	0.24	1095	4.24	0.59	1.10	0.54	5497	0.20	0.20
NOV	24	2736	123.00	17.12	2.74	6.26	36.70	0.73	2.74	0.27	1740	6.13	0.85	1.74	0.49	5497	0.32	0.32
NOV	25	2073	93.71	13.04	2.07	6.29	25.62	0.51	2.07	0.25	1183	4.24	0.59	1.18	0.50	5497	0.22	0.22
NOV	28	8426	384.90	53.58	8.43	6.36	110.37	2.21	8.43	0.26	5080	19.36	2.69	5.08	0.53	5497	0.92	0.31
NOV	29	2345	111.44	15.51	2.35	6.62	31.53	0.63	2.35	0.27	1398	5.66	0.79	1.40	0.56	5497	0.25	0.25
NOV	30	2375	111.40	15.51	2.38	6.53	24.90	0.50	2.38	0.21	1410	4.24	0.59	1.41	0.42	5497	0.26	0.26
NOV		76003	3257.85	453.49	76.00	5.96	967.65	19.35	76.00	0.25	45926	171.56	23.88	45.93	0.50	5497	0.38	0.27
DAILY AVG		2533	109								1531							
MAX		2829	125								1807							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
DEC	1	2562	120.30	16.75	2.56	6.54	36.13	0.72	2.56	0.28	1535	5.19	0.72	1.54	0.47	5497	0.28	0.28
DEC	2	2436	114.60	15.95	2.44	6.55	32.10	0.64	2.44	0.26	1495	4.72	0.66	1.50	0.44	5497	0.27	0.27
DEC	5	8568	396.30	55.16	8.57	6.44	114.90	2.30	8.57	0.27	5172	18.80	2.62	5.17	0.51	5497	0.94	0.31
DEC	6	2122	85.40	11.89	2.12	5.60	29.50	0.59	2.12	0.28	1213	4.24	0.59	1.21	0.49	5497	0.22	0.22
DEC	7	2725	103.80	14.45	2.73	5.30	36.70	0.73	2.73	0.27	1663	3.77	0.52	1.66	0.32	5497	0.30	0.30
DEC	8	2274	85.40	11.89	2.27	5.23	30.80	0.62	2.27	0.27	1222	3.77	0.52	1.22	0.43	5497	0.22	0.22
DEC	9	3001	115.80	16.12	3.00	5.37	42.70	0.85	3.00	0.28	1876	5.66	0.79	1.88	0.42	5497	0.34	0.34
DEC	12	7808	284.94	39.66	7.81	5.08	108.40	2.17	7.81	0.28	4633	13.22	1.84	4.63	0.40	5497	0.84	0.28
DEC	13	2841	98.70	13.74	2.84	4.84	42.70	0.85	2.84	0.30	1733	4.24	0.59	1.73	0.34	5497	0.32	0.32
DEC	14	2449	83.35	11.60	2.45	4.74	32.80	0.66	2.45	0.27	1529	5.60	0.78	1.53	0.51	5497	0.28	0.28
DEC	15	2188	75.33	10.49	2.19	4.79	28.20	0.56	2.19	0.26	1232	3.77	0.52	1.23	0.43	5497	0.22	0.22
DEC	16	2453	84.20	11.72	2.45	4.78	33.50	0.67	2.45	0.27	1496	5.60	0.78	1.50	0.52	5497	0.27	0.27
DEC	19	8120	279.00	38.84	8.12	4.78	110.00	2.20	8.12	0.27	4831	21.24	2.96	4.83	0.61	5497	0.88	0.29
DEC	20	2651	89.20	12.42	2.65	4.68	36.70	0.73	2.65	0.28	1515	4.72	0.66	1.52	0.43	5497	0.28	0.28
DEC	21	2606	88.00	12.25	2.61	4.70	36.10	0.72	2.61	0.28	1594	6.13	0.85	1.59	0.54	5497	0.29	0.29
DEC	22	2489	81.00	11.28	2.49	4.53	34.10	0.68	2.49	0.27	1468	4.70	0.65	1.47	0.45	5497	0.27	0.27
DEC	23	2624	89.91	12.52	2.62	4.77	33.50	0.67	2.62	0.26	1510	4.72	0.66	1.51	0.44	5497	0.27	0.27
DEC	26	8190	270.00	37.58	8.19	4.59	114.30	2.29	8.19	0.28	4945	13.60	1.89	4.95	0.38	5497	0.90	0.30
DEC	28	5490	182.30	25.38	5.49	4.62	70.90	1.42	5.49	0.26	3065	8.97	1.25	3.07	0.41	5497	0.56	0.28
DEC	29	2733	93.00	12.95	2.73	4.74	36.70	0.73	2.73	0.27	1737	4.24	0.59	1.74	0.34	5497	0.32	0.32
DEC	30	2503	82.30	11.46	2.50	4.58	35.40	0.71	2.50	0.28	1401	3.70	0.52	1.40	0.37	5497	0.25	0.25
DEC		78833	2902.83	404.07	78.83	5.11	1076.13	21.52	78.83	0.27	46865	150.60	20.96	46.87	0.44	5497	0.41	0.28
DAILY AVG		2543	97								1512							
MAX		3001	120								1876							

TOWNSHIP OF RUSSELL
EMBRUN WATER PUMPAGE CHARTS
2005

		PRE HYPOCHLORITE					PRE KMNO4				POST HYPOCHLORITE							
Mth	DAY	TOTAL PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	# OF LTS	# OF KGS	M3 /1000	MG/L	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JAN		79809	3361.20	467.88	79.81	5.85	986.43	19.73	79.81	0.25	48478	149.63	20.83	48.48	0.43	5497	0.44	0.29
FEB		73130	2828.24	393.69	73.13	5.37	887.22	17.74	73.13	0.24	43896	146.91	20.45	43.90	0.46	5497	0.40	0.27
MAR		79318	2761.58	384.41	79.32	4.86	984.56	19.69	79.32	0.25	47136	148.60	20.69	47.14	0.44	5497	0.37	0.27
APR		76900	2633.28	366.55	76.90	4.78	974.40	19.49	76.90	0.25	45380	142.68	19.86	45.38	0.44	5497	0.39	0.28
MAY		91090	3388.10	471.62	91.09	5.18	1318.84	26.38	91.09	0.29	53865	170.10	23.68	53.87	0.44	5497	0.45	0.31
JUNE		102884	4019.81	559.56	102.88	5.48	1368.89	27.38	102.88	0.26	61510	189.10	26.32	61.51	0.42	5497	0.51	0.37
JULY		88044	4019.70	559.54	88.04	6.34	1149.23	22.98	88.04	0.26	53523	172.34	23.99	53.52	0.45	5497	0.46	0.33
AUG		102372	4762.44	662.93	102.37	6.48	1328.19	26.56	102.37	0.26	62039	210.19	29.26	62.04	0.47	5497	0.49	0.35
SEP		80671	3488.66	485.62	80.67	6.04	1006.85	20.13	80.67	0.25	48743	175.00	24.36	48.74	0.51	5497	0.40	0.30
OCT		81880	3158.70	439.69	81.88	5.37	1023.36	20.47	81.88	0.25	49887	178.68	24.87	49.89	0.48	5497	0.43	0.29
NOV		76003	3257.85	453.49	76.00	5.96	967.65	19.35	76.00	0.25	45926	171.56	23.88	45.93	0.50	5497	0.00	0.27
DEC		78833	2902.83	404.07	78.83	5.11	1076.13	21.52	78.83	0.27	46865	150.60	20.96	46.87	0.44	5497	0.41	0.28
TOTAL		1,010,934	40,582.39	5,649.07	1,010.93	5.57	13,071.75	261.43	1,010.93	0.26	607,248	2,005.39	279.15	607.25	0.46	5497	0.40	0.30

Ontario

Ministry of the Environment / Ministère de l'Environnement

Drinking-Water Systems Regulation O. Reg. 170/03

Part III Form 2
Section 11. ANNUAL REPORT.

Drinking-Water System Number:	**W220004297**
Drinking-Water System Name:	Embrun/Marionville Well Supply including distribution
Drinking-Water System Owner:	Township of Russell
Drinking-Water System Category:	Large residential
Period being reported:	January 1 to December 31, 2005

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [✓]

Is your annual report available to the public at no charge on a web site on the Internet?
Yes [✓] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Township of Russell
Public Utilities
851 Route 400 and 717 Notre-Dame St.
Embrun ON
K0A 1W1

Complete for all other Categories.
N/A

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [ ]

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?
Yes [ ] No [ ]

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
n/a	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?
Yes [✓] No [ ]

Indicate how you notified system users that your annual report is available, and is free of charge.

[✓] Public access/notice via the web
[ ] Public access/notice via Government Office
[ ] Public access/notice via a newspaper
[ ] Public access/notice via Public Request
[ ] Public access/notice via a Public Library
[ ] Public access/notice via other method _____

Describe your Drinking-Water System

The Embrun/Marionville water treatment plant consists of pre-chlorination, detention, iron and manganese removal using greensand and potassium permanganate filtering to remove iron and manganese, clarification of the iron laden water and secondary filtration, storage and post chlorination. The water plant has three chlorine analyzers which measure the chlorine residual every two minutes, 24 hours per day. The plant pumps water to the Embrun water tower as well as the Marionville tower and also supplies the town of Russell. The Embrun tower, which holds approximately 2270 m^3, provides pressure when the pumps are off as well as supply during peak hours of usage and fire protection. The Embrun system has generators in all buildings in case of power failures.

Marionville system

The Marionville distribution was constructed in 1995. The Marionville tower which holds approximately 1363 m^3 provides pressure when the pumps are off as well as supply during peak hours of usage and fire protection.

Embrun-Russell-Marionville systems

The Embrun-Russell-Marionville water system has a very sophisticated alarm system which constantly monitors the system so that when malfunctions or alarms are detected the operators are alerted immediately and respond promptly.

List all water treatment chemicals used over this reporting period

Sodium hypochlorite
Potassium permanganate

Were any significant expenses incurred to?

[✓] Install required equipment
[ ] Repair required equipment
[✓] Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

Installation of Chlorine analyzers in Embrun and Marionville towers - $10,000
Replacement of SCADA system E-M-R water system - $95,000

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a			mg/L		

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	52	0-0	0-1	52	0-6
Treated	52	0-0	0-0	52	0-5
Distribution	156 (E)	0-0	0-0	158	0-42
	106 (M)	0-0	0-0	106	0-16

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	365	0.06-0.19
Chlorine	365	0.34-0.72
Fluoride (If the DWS provides fluoridation)	n/a	

NOTE: For continuous monitors use 8760 as the number of samples.

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
n/a				

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	July 7/03	<0.001	mg/L	no
Arsenic	July 7/03	<0.001	mg/L	no
Barium	July 7/03	<0.08	mg/L	no
Boron	July 7/03	<0.05	mg/L	no
Cadmium	July 7/03	<0.0001	mg/L	no
Chromium	July 7/03	<0.003	mg/L	no
Lead	July 18/05	<0.001 (E & M)	mg/L	no
Mercury	July 7/03	<0.0001	mg/L	no
Selenium	July 7/03	<0.001	mg/L	no
Sodium	July 7/03	<0.001	mg/L	no
Uranium	July 7/03	<0.001	mg/L	no
Fluoride	July 7/03	<0.16	mg/L	no
Nitrite	Oct 3/05	<0.10	mg/L	no
Nitrate	Oct 3/05	<0.10	mg/L	no

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	July 7/03	<0.05	ug/L	no
Aldicarb	July 7/03	<0.9	ug/L	no
Aldrin + Dieldrin	July 7/03	<0.012	ug/L	no
Atrazine + N-dealkylated metobolites	July 7/03	<1.0	ug/L	no
Azinphos-methyl	July 7/03	<2	ug/L	no
Bendiocarb	July 7/03	<2	ug/L	no
Benzene	July 7/03	<0.5	ug/L	no
Benzo(a)pyrene	July 7/03	<0.01	ug/L	no
Bromoxynil	July 7/03	<0.5	ug/L	no
Carbaryl	July 7/03	<5	ug/L	no
Carbofuran	July 7/03	<5	ug/L	no
Carbon Tetrachloride	July 7/03	<0.9	ug/L	no
Chlordane (Total)	July 7/03	<0.015	ug/L	no
Chlorpyrifos	July 7/03	<1	ug/L	no
Cyanazine	July 7/03	<1	ug/L	no
Diazinon	July 7/03	<1	ug/L	no
Dicamba	July 7/03	<1	ug/L	no
1,2-Dichlorobenzene	July 7/03	<0.4	ug/L	no

1,4-Dichlorobenzene	July 7/03	<0.04	ug/L	no
Dichlorodiphenyltrichloroethane (DDT) + metabolites	July 7/03	<0.024	ug/L	no
1,2-Dichloroethane	July 7/03	<0.7	ug/L	no
1,1-Dichloroethylene (vinylidene chloride)	July 7/03	<0.5	ug/L	no
Dichloromethane	July 7/03	<4.0	ug/L	no
2-4 Dichlorophenol	July 7/03	<0.5	ug/L	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	July 7/03	<1	ug/L	no
Diclofop-methyl	July 7/03	<0.9	ug/L	no
Dimethoate	July 7/03	<2.5	ug/L	no
Dinoseb	July 7/03	<1	ug/L	no
Diquat	July 7/03	<7	ug/L	no
Diuron	July 7/03	<10	ug/L	no
Glyphosate	July 7/03	<10	ug/L	no
Heptachlor + Heptachlor Epoxide	July 7/03	<0.012	ug/L	no
Lindane (Total)	July 7/03	<0.006	ug/L	no
Malathion	July 7/03	<5	ug/L	no
Methoxychlor	July 7/03	<0.024	ug/L	no
Metolachlor	July 7/03	<0.5	ug/L	no
Metribuzin	July 7/03	<5	ug/L	no
Monochlorobenzene	July 7/03	<0.2	ug/L	no
Paraquat	July 7/03	<1	ug/L	no
Parathion	July 7/03	<1	ug/L	no
Pentachlorophenol	July 7/03	<0.5	ug/L	no
Phorate	July 7/03	<0.5	ug/L	no
Picloram	July 7/03	<5	ug/L	no
Polychlorinated Biphenyls(PCB)	July 7/03	<0.1	ug/L	no
Prometryne	July 7/03	<0.25	ug/L	no
Simazine	July 7/03	<1	ug/L	no
THM (NOTE: show latest annual average)	Oct 3/05	20.7 (E) 25.3 (M)	ug/L	no
Temephos	July 7/03	<10	ug/L	no
Terbufos	July 7/03	<0.7	ug/L	no
Tetrachloroethylene	July 7/03	<0.3	ug/L	no
2,3,4,6-Tetrachlorophenol	July 7/03	<0.5	ug/L	no
Triallate	July 7/03	<1	ug/L	no
Trichloroethylene	July 7/03	<0.3	ug/L	no
2,4,6-Trichlorophenol	July 7/03	<0.5	ug/L	no
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	July 7/03	<1	ug/L	no
Trifluralin	July 7/03	<1	ug/L	no
Vinyl Chloride	July 7/03	<0.5	ug/L	no

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
n/a			

TOWNSHIP OF RUSSELL
EMBRUN CL2 Pre-chlorination (Primary disinfection)
2005

Mth	DAY	mgCl/L	Mth	DAY	mgCl/L	Mth	DAY	mgCl/L
JAN	1	0.81	FEB	1	1.18	MAR	1	1.21
JAN	2	0.58	FEB	2	1.43	MAR	2	1.16
JAN	3	0.63	FEB	3	1.23	MAR	3	1.13
JAN	4	0.56	FEB	4	1.16	MAR	4	1.17
JAN	5	0.85	FEB	5	0.86	MAR	5	1.22
JAN	6	0.62	FEB	6	0.60	MAR	6	1.26
JAN	7	0.69	FEB	7	1.24	MAR	7	1.10
JAN	8	0.75	FEB	8	1.44	MAR	8	1.28
JAN	9	0.85	FEB	9	1.21	MAR	9	1.04
JAN	10	0.80	FEB	10	1.01	MAR	10	0.91
JAN	11	0.91	FEB	11	0.90	MAR	11	0.83
JAN	12	0.76	FEB	12	0.58	MAR	12	0.74
JAN	13	0.66	FEB	13	0.87	MAR	13	0.64
JAN	14	1.13	FEB	14	1.03	MAR	14	1.17
JAN	15	0.64	FEB	15	1.01	MAR	15	1.29
JAN	16	0.46	FEB	16	1.10	MAR	16	0.94
JAN	17	0.98	FEB	17	1.09	MAR	17	0.98
JAN	18	0.84	FEB	18	1.13	MAR	18	1.31
JAN	19	1.10	FEB	19	0.73	MAR	19	1.02
JAN	20	0.98	FEB	20	1.03	MAR	20	0.70
JAN	21	1.15	FEB	21	1.04	MAR	21	1.20
JAN	22	1.35	FEB	22	1.43	MAR	22	1.22
JAN	23	1.20	FEB	23	0.94	MAR	23	1.35
JAN	24	1.26	FEB	24	1.08	MAR	24	1.00
JAN	25	1.09	FEB	25	1.19	MAR	25	0.69
JAN	26	1.14	FEB	26	1.01	MAR	26	1.12
JAN	27	0.88	FEB	27	0.81	MAR	27	0.45
JAN	28	0.95	FEB	28	1.10	MAR	28	1.10
JAN	29	1.34				MAR	29	1.02
JAN	30	1.12				MAR	30	1.21
JAN	31	0.73				MAR	31	1.22
JAN	AVG	0.90	FEB	AVG	1.05	MAR	AVG	1.05
	MIN	0.46		MIN	0.58		MIN	0.45

TOWNSHIP OF RUSSELL
EMBRUN CL2 Pre-chlorination (Primary disinfection)
2005

Mth	DAY	mgCl/L
APR	1	0.95
APR	2	1.12
APR	3	1.16
APR	4	0.96
APR	5	0.91
APR	6	0.71
APR	7	1.02
APR	8	0.81
APR	9	1.12
APR	10	0.78
APR	11	1.00
APR	12	1.12
APR	13	1.10
APR	14	0.95
APR	15	0.78
APR	16	0.89
APR	17	0.52
APR	18	0.87
APR	19	0.99
APR	20	1.15
APR	21	0.79
APR	22	1.14
APR	23	0.94
APR	24	1.30
APR	25	0.80
APR	26	0.94
APR	27	0.97
APR	28	0.81
APR	29	0.91
APR	30	0.89
APR	AVG	0.95
	MIN	0.52

Mth	DAY	mgCl/L
MAY	1	0.59
MAY	2	1.21
MAY	3	1.20
MAY	4	0.69
MAY	5	0.60
MAY	6	1.01
MAY	7	0.92
MAY	8	0.93
MAY	9	1.13
MAY	10	1.14
MAY	11	1.11
MAY	12	1.03
MAY	13	1.08
MAY	14	0.88
MAY	15	0.70
MAY	16	1.12
MAY	17	0.90
MAY	18	1.11
MAY	19	0.98
MAY	20	1.15
MAY	21	1.31
MAY	22	0.53
MAY	23	0.55
MAY	24	1.12
MAY	25	1.21
MAY	26	1.28
MAY	27	1.24
MAY	28	1.10
MAY	29	1.07
MAY	30	1.32
MAY	31	0.76
MAY	AVG	1.00
	MIN	0.53

Mth	DAY	mgCl/L
JUNE	1	0.79
JUNE	2	1.05
JUNE	3	1.16
JUNE	4	1.18
JUNE	5	0.92
JUNE	6	0.87
JUNE	7	1.07
JUNE	8	1.02
JUNE	9	0.94
JUNE	10	0.85
JUNE	11	0.58
JUNE	12	1.12
JUNE	13	0.85
JUNE	14	0.77
JUNE	15	1.09
JUNE	16	0.86
JUNE	17	0.86
JUNE	18	0.79
JUNE	19	0.74
JUNE	20	0.99
JUNE	21	0.82
JUNE	22	0.76
JUNE	23	0.77
JUNE	24	1.17
JUNE	25	1.07
JUNE	26	0.99
JUNE	27	0.66
JUNE	28	0.98
JUNE	29	1.13
JUNE	30	0.79
JUN	AVG	0.92
	MIN	0.58

TOWNSHIP OF RUSSELL
EMBRUN CL2 Pre-chlorination (Primary disinfection)
2005

Mth	DAY	mgCl/L	Mth	DAY	mgCl/L	Mth	DAY	mgCl/L
JULY	1	0.79	AUG	1	0.52	SEP	1	0.95
JULY	2	1.00	AUG	2	0.85	SEP	2	0.90
JULY	3	0.99	AUG	3	0.94	SEP	3	0.84
JULY	4	0.79	AUG	4	0.84	SEP	4	0.84
JULY	5	1.19	AUG	5	0.93	SEP	5	0.85
JULY	6	0.88	AUG	6	0.69	SEP	6	1.01
JULY	7	0.69	AUG	7	0.70	SEP	7	0.52
JULY	8	0.92	AUG	8	0.71	SEP	8	0.96
JULY	9	0.82	AUG	9	0.95	SEP	9	0.63
JULY	10	0.90	AUG	10	1.03	SEP	10	0.84
JULY	11	0.98	AUG	11	0.69	SEP	11	0.86
JULY	12	0.85	AUG	12	1.01	SEP	12	0.88
JULY	13	0.78	AUG	13	1.06	SEP	13	0.88
JULY	14	0.80	AUG	14	0.98	SEP	14	0.83
JULY	15	0.97	AUG	15	0.69	SEP	15	0.79
JULY	16	0.89	AUG	16	1.08	SEP	16	0.83
JULY	17	0.35	AUG	17	0.86	SEP	17	0.92
JULY	18	0.75	AUG	18	1.14	SEP	18	0.90
JULY	19	1.26	AUG	19	1.02	SEP	19	1.25
JULY	20	0.85	AUG	20	0.86	SEP	20	1.07
JULY	21	0.87	AUG	21	0.86	SEP	21	1.02
JULY	22	0.97	AUG	22	1.20	SEP	22	1.00
JULY	23	0.71	AUG	23	0.99	SEP	23	1.31
JULY	24	0.66	AUG	24	0.91	SEP	24	0.90
JULY	25	0.59	AUG	25	1.18	SEP	25	0.90
JULY	26	1.02	AUG	26	1.28	SEP	26	1.15
JULY	27	0.86	AUG	27	0.97	SEP	27	0.95
JULY	28	0.78	AUG	28	0.95	SEP	28	1.02
JULY	29	0.80	AUG	29	1.12	SEP	29	1.10
JULY	30	0.82	AUG	30	1.02	SEP	30	0.98
JULY	31	0.50	AUG	31	0.85			
JUL	AVG	0.84	AUG	AVG	0.93	SEP	AVG	0.93
	MIN	0.35		MIN	0.52		MIN	0.52

TOWNSHIP OF RUSSELL
EMBRUN CL2 Pre-chlorination (Primary disinfection)
2005

Mth	DAY	mgCl/L	Mth	DAY	mgCl/L	Mth	DAY	mgCl/L
OCT	1	1.02	NOV	1	0.89	DEC	1	1.02
OCT	2	0.76	NOV	2	0.98	DEC	2	0.78
OCT	3	0.87	NOV	3	0.92	DEC	3	0.70
OCT	4	0.95	NOV	4	0.91	DEC	4	0.50
OCT	5	0.88	NOV	5	1.00	DEC	5	1.03
OCT	6	1.00	NOV	6	0.97	DEC	6	1.05
OCT	7	0.82	NOV	7	0.86	DEC	7	1.00
OCT	8	1.06	NOV	8	1.24	DEC	8	0.79
OCT	9	1.06	NOV	9	0.93	DEC	9	0.90
OCT	10	0.47	NOV	10	0.90	DEC	10	1.30
OCT	11	0.95	NOV	11	0.77	DEC	11	0.58
OCT	12	1.33	NOV	12	0.56	DEC	12	0.60
OCT	13	1.20	NOV	13	0.46	DEC	13	0.63
OCT	14	1.11	NOV	14	0.74	DEC	14	1.00
OCT	15	1.03	NOV	15	0.60	DEC	15	0.58
OCT	16	0.52	NOV	16	1.01	DEC	16	1.06
OCT	17	0.86	NOV	17	1.05	DEC	17	0.91
OCT	18	0.89	NOV	18	1.11	DEC	18	0.93
OCT	19	0.96	NOV	19	0.88	DEC	19	0.67
OCT	20	0.92	NOV	20	0.90	DEC	20	1.02
OCT	21	1.16	NOV	21	0.88	DEC	21	0.95
OCT	22	1.05	NOV	22	0.93	DEC	22	0.78
OCT	23	0.79	NOV	23	1.06	DEC	23	0.68
OCT	24	0.79	NOV	24	0.99	DEC	24	0.90
OCT	25	0.63	NOV	25	0.72	DEC	25	0.56
OCT	26	0.86	NOV	26	0.39	DEC	26	0.71
OCT	27	1.08	NOV	27	0.97	DEC	27	0.65
OCT	28	0.79	NOV	28	0.79	DEC	28	0.86
OCT	29	1.01	NOV	29	1.10	DEC	29	0.96
OCT	30	0.87	NOV	30	0.82	DEC	30	1.00
OCT	31	0.89				DEC	31	0.69
OCT	AVG	0.92	NOV	AVG	0.88	DEC	AVG	0.83
	MIN	0.47		MIN	0.39		MIN	0.50

Minimum pre-chlorination residual after contact tank: 0.45 mgCl/L

RUSSELL

WATER CAPACITY REPORT

DECEMBER 31, 2005

WATER CAPACITY		
Residential Units	1058 x 3.0 =	3174
Apartment Units	98 x 2 =	196
Commercial Units	60 x 1 =	60
Residential/Commercial	4 x 1 =	4
Senior Citizen Apartments	30 x 1 =	30
Schools	=	172
TOTAL POPULATION SERVICED		3636

APPROVED SUBDIVISION LOTS	PLAN FILE #	NUMBER OF LOTS
Vacant Lots Infilling		4
Corvinelli – Lot 12 Conc. 3		42

TOTAL LOTS = 46

TOTAL POPULATION SERVICEABLE 46 x 3.0 = 138 PERSONS

DESIGN CAPACITY = 3500 PERSONS

NOTE: AVERAGE PERSONS PER HOUSEHOLD = 3.0 (STATISTICS CANANA 1996)
SCHOOLS POPULATION BASIS: @ 40% RURAL) 3 (8 HR SCHOOL DAY)
@ 60% URBAN) 3 (8 HR SCHOOL DAY)

RUSSELL
WATER FLOWS AND CONSUMPTION
2005

DATE 2005	FLOW (m^3)	DAILY AVERAGE (m^3)	POPULATION	DAYS	AVERAGE PERSON/DAY (m^3)
JAN	33,300	1074	3621	31	0.297
FEB	29,075	1038	3621	28	0.287
MAR	31,642	1021	3621	31	0.282
APR	31,530	1051	3621	30	0.290
MAY	36,513	1178	3621	31	0.325
JUNE	40,919	1364	3621	30	0.377
JULY	34,905	1126	3621	31	0.311
AUG	39,955	1289	3621	31	0.356
SEP	31,967	1066	3621	30	0.294
OCT	31,462	1015	3621	31	0.280
NOV	30,084	1003	3621	30	0.277
DEC	32,231	1040	3621	31	0.287
TOTAL	403,583	1,105			0.305
2004	381,076	1041	3579		0.291
2003	377,666	1035	3561		0.291
2002	389,161	1,065	3537		0.301
2001	361,530	989	3450		0.287
2000	337,332	921	3177		0.290
1999	345,580	943	3099		0.304

ANNUAL SUMMARY - RAW WATER FLOWS

WATER WORKS NAME: RUSSELL WTP
YEAR:
SERVICED POPULATION: 3621
DESIGN CAPACITY: 3500

MONTH	WELL #1		
	AVERAGE DAY ($1000\ m^3$)	MAXIMUM DAY ($1000\ m^3$)	MONTHLY TOTAL ($1000\ m^3$)
JAN	0.35	0.47	10.97
FEB	0.33	0.39	9.37
MAR	0.33	0.38	10.16
APR	0.35	0.52	10.39
MAY	0.39	0.49	12.23
JUN	0.47	0.74	14.21
JUL	0.40	0.51	12.27
AUG	0.45	0.63	13.89
SEP	0.36	0.52	10.73
OCT	0.33	0.43	10.25
NOV	0.33	0.45	9.99
DEC	0.35	0.40	10.75
TOTAL			
AVERAGE	0.37		
MAXIMUM		0.74	14.21

ANNUAL SUMMARY - RAW WATER BACTERIOLOGICAL DATA

WATER WORKS NAME: RUSSELL
YEAR: 2005
SERVICED POPULATION:
LABORATORIES WHICH PERFORMED ANALYSES: ACCUTEST LABORATORIES

MONTH	TOTAL COLIFORM				FECAL COLIFORM/ESCHERICHIA COLI		
	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES 1-100 ORG./100ml	NO. OF SAMPLES 101-5000 ORG./100ml	NO. OF SAMPLES > 5000 ORG./100 ml	NO. OF SAMPLES 1-10 ORG./100ml	NO. OF SAMPLES 11-500 ORG./100ml	NO. OF SAMPLES >500 ORG./100 ml
JAN	5	1	0	0	0	0	0
FEB	4	4	0	0	0	0	0
MAR	4	2	0	0	0	0	0
APR	4	3	0	0	0	0	0
MAY	5	0	0	0	0	0	0
JUN	4	2	0	0	0	0	0
JUL	4	2	0	0	0	0	0
AUG	5	0	0	0	0	0	0
SEP	4	0	0	0	0	0	0
OCT	5	0	0	0	0	0	0
NOV	4	0	0	0	0	0	0
DEC	4	0	0	0	0	0	0
TOTAL	52	14	0	0	0	0	0

ANNUAL SUMMARY - TREATED SYSTEM BACTERIOLOGICAL DATA

WATER WORKS NAME: RUSSELL
YEAR: 2004
SERVICED POPULATION: 3579
LABORATORIES WHICH PERFORMED ANALYSES: ACCUTEST LABORATORIES

	TOTAL COLIFORM				FECAL COLIFORM/E.COLI			HPC		
MONTH	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES DETERIORATING	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES DETERIORATING
JAN	5	5	0	0	5	5	0	5	5	0
FEB	4	4	0	0	4	4	0	4	4	0
MAR	4	4	0	0	4	4	0	4	4	0
APR	4	4	0	0	4	4	0	4	4	0
MAY	5	5	0	0	5	5	0	5	5	0
JUN	4	4	0	0	4	4	0	4	4	0
JUL	4	4	0	0	4	4	0	4	4	0
AUG	5	5	0	0	5	5	0	5	5	0
SEP	4	4	0	0	4	4	0	4	4	0
OCT	5	5	0	0	5	5	0	5	5	0
NOV	4	4	0	0	4	4	0	4	4	0
DEC	4	4	0	0	4	4	0	4	4	0
TOTAL	52	52	0	0	52	52	0	52	52	0

ANNUAL SUMMARY - DISTRIBUTION SYSTEM BACTERIOLOGICAL DATA

WATER WORKS NAME: RUSSELL
YEAR: 2005
SERVICED POPULATION:
LABORATORIES WHICH PERFORMED ANALYSES: ACCUTEST LABORATORIES

MONTH	TOTAL COLIFORM				FECAL COLIFORM/ESCHERICHIA			HPC		
	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES DETERIORATING	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES DETERIORATING
JAN	15	15	0	0	15	15	0	15	15	0
FEB	12	12	0	0	12	12	0	12	12	0
MAR	12	12	0	0	12	12	0	12	12	0
APR	12	12	0	0	12	12	0	12	12	0
MAY	15	15	0	0	15	15	0	15	15	0
JUN	12	12	0	0	12	12	0	12	12	0
JUL	12	12	0	0	12	12	0	12	12	0
AUG	15	15	0	0	15	15	0	15	15	0
SEP	14	14	0	0	14	14	0	14	13	1
OCT	15	15	0	0	15	15	0	15	15	0
NOV	12	12	0	0	12	12	0	12	12	0
DEC	12	12	0	0	12	12	0	12	12	0
TOTAL	158	158	0	0	158	158	0	158	157	1

Sep-22 HPC >500
Resolved Sept 27th - two re-test samples clear

ANNUAL SUMMARY - TREATED WATER AND WASTEWATER FLOWS, TURBIDITY AND DISINFECTANT RESIDUAL

WATERWORKS NAME: RUSSELL
WATERWORKS NUMBER: 220008060
WELL NO.: 1
YEAR: 2005
SERVICED POPULATION: 3621
DESIGN CAPACITY: 3500

	TREATED WATER FLOW			TREATED WATER TURBIDITY				TREATED DISINFECTANT				DISTRIBUTION DISINFECTANT	
MONTH	AVERAGE DAY ($1000\ m^3$)	MAX DAY ($1000\ m^3$)	MONTHLY TOTAL ($1000\ m^3$)	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES > 1 NTU	Min. Turb.	Max. Turb.	# OF TREATED SAMPLES COLLECTED	AVERAGE RESIDUAL TOTAL (mg/L)	min. RESIDUAL FREE (mg/L)	max. RESIDUAL FREE (mg/L)	# SAMPLES COLLECTED DISTRIB.	# OF SAMPLES min. 0.2 mg/L DETECT. RES.
JAN	1.07	1.38	33.30	31	0	0.13	0.31	31	1.01	0.67	0.99	31	31
FEB	1.04	1.27	29.07	28	0	0.09	0.28	28	1.01	0.52	0.99	28	28
MAR	1.02	1.18	31.64	31	0	0.18	0.38	31	0.99	0.65	0.92	31	31
APR	1.05	1.58	31.53	30	0	0.16	0.34	30	0.99	0.62	0.90	30	30
MAY	1.18	1.47	36.51	31	0	0.16	0.32	31	0.99	0.62	0.97	31	31
JUN	1.36	2.13	40.92	30	0	0.18	0.39	30	1.03	0.37	1.10	30	30
JUL	1.13	1.47	34.90	31	0	0.16	0.38	31	1.02	0.65	1.01	31	31
AUG	1.29	1.82	39.95	31	0	0.19	0.39	31	1.04	0.59	1.04	31	31
SEP	1.07	1.55	31.97	30	0	0.19	0.39	30	1.07	0.66	0.99	30	30
OCT	1.01	1.33	31.46	31	0	0.15	0.38	31	1.04	0.45	0.99	31	31
NOV	1.35	1.00	30.08	30	0	0.14	0.36	30	1.05	0.73	1.15	30	30
DEC	1.04	1.23	32.23	31	0	0.14	0.30	31	0.96	0.62	1.00	31	31
TOTAL			403.56	365				365				365	365
AVG	1.13		33.63			0.09			1.02	0.37	1.15		
MAX		2.13					0.39						

DISINFECTANT COMPOUND USED: NaOCl

QTY OF DISINFECTANT USED DURING YEAR: 621 KG

FORM OF RESIDUAL DISPLAYED ON ABO\ TOTAL AND FREE

DISTRIBUTION SYSTEM TARGET RESIDUA Total 0.80 Free 0.2

RUSSELL WTP DAILY IN-HOUSE TESTING
2005

CLEAR WELL		COLOUR	PH	TEMP	FE	MN	FL	TUR MIN	TUR MAX	CL^2 TOTAL	CL^2 FREE MIN	CL^2 FREE MAX
JAN		2	7.5	9	0.00	0.043	0.46	0.13	0.31	1.01	0.67	0.99
FEB		3	7.5	7	0.18	0.029	0.33	0.09	0.28	1.01	0.52	0.99
MAR		3	7.5	7	0.00	0.000	0.00	0.18	0.38	0.99	0.65	0.92
APR		4	7.5	8	0.13	0.039		0.16	0.34	0.99	0.62	0.90
MAY		3	7.5	8	0.09	0.043		0.16	0.32	0.99	0.62	0.97
JUN		3	7.5	9	0.11	0.031		0.18	0.39	1.03	0.37	1.10
JUL		3	7.5	12				0.16	0.38	1.02	0.65	1.01
AUG		3	7.5	10	0.07		0.18	0.19	0.39	1.04	0.59	1.04
SEP		2	7.4	9				0.19	0.39	1.07	0.66	0.99
OCT		2	7.4	9	0.10	0.029		0.15	0.38	1.04	0.45	0.99
NOV		1	7.4	10				0.14	0.36	1.05	0.73	1.15
DEC		2	7.4	9				0.14	0.30	0.96	0.62	1.00
AVG		3	7.5	9	0.09	0.031	0.24	0.09	0.39	1.02	0.37	1.15

DISTRIBUTION		COLOUR	PH	TEMP	FE	MN	FL	TUR MIN	TUR MAX	CL^2 TOTAL	CL^2 FREE MIN	CL^2 FREE MAX
JAN		3	7.5	7				0.17	0.31	0.78	0.43	0.73
FEB		4	7.5	6				0.15	0.38	0.75	0.46	0.66
MAR		3	7.5	5				0.24	0.35	0.75	0.37	0.73
APR		4	7.5	7				0.22	0.33	0.74	0.39	0.74
MAY		4	7.5	9				0.19	0.34	0.70	0.39	0.68
JUN		3	7.5	10				0.21	0.39	0.77	0.37	0.80
JUL		3	7.5	14				0.21	0.38	0.71	0.38	0.79
AUG		3	7.5	14				0.21	0.40	0.45	0.36	0.77
SEP		3	7.4	13				0.22	0.47	0.72	0.37	0.76
OCT		2	7.5	13				0.18	0.35	0.76	0.33	0.85
NOV		2	7.5	10				0.18	0.37	0.83	0.47	0.89
DEC		3	7.4	8				0.18	0.35	0.78	0.46	0.82
AVG		3	7.5	10				0.15	0.47	0.73	0.33	0.89

WELL 1		COLOUR	PH	TEMP	FE	MN	FL	TUR
JAN		1	7.5	9	0.23	0.088	0.51	0.04
FEB		3	7.5	7	0.22	0.091	0.39	0.05
MAR		1	7.5	7	0.21	0.081	0.49	0.05
APR		2	7.5	7	0.09	0.079		0.05
MAY		2	7.5	7	0.20	0.083		0.09
JUN		3	7.5	7	0.23	0.086		0.11
JUL								
AUG		1	7.5	7	0.23	0.087		0.18
SEP								
OCT								
NOV								
DEC								
AVG		2	7.5	7	0.20	0.085	0.46	0.08

Part III Form 2
Section 11. ANNUAL REPORT.

Drinking-Water System Number:	**220008060**
Drinking-Water System Name:	Russell Well Supply including Distribution
Drinking-Water System Owner:	Township of Russell
Drinking-Water System Category:	Large - Municipal
Period being reported:	January 1 – December 31, 2005

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [✓]

Is your annual report available to the public at no charge on a web site on the Internet?
Yes [✓] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Township of Russell
Public Utilities
851 Route 400 and 717 Notre-Dame St.
Embrun ON
K0A IWl

Complete for all other Categories.

n/a

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [ ]

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?
Yes [ ] No [ ]

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?
Yes [✓] No [ ]

Indicate how you notified system users that your annual report is available, and is free of charge.

[✓] Public access/notice via the web
[ ] Public access/notice via Government Office
[ ] Public access/notice via a newspaper
[ ] Public access/notice via Public Request
[ ] Public access/notice via a Public Library
[ ] Public access/notice via other method _____

Describe your Drinking-Water System

Since November 1999 well #2 was shut down due to quality and quantity problems. Having only 40% of the required supply, the Township decided to resolve this problem by constructing a forcemain from the forcemain servicing the Hamlet of Marionville, which receives it's supply from the Embrun/Marionville water treatment plant, to the Russell water plant.

The Russell water treatment plant consists of pre-chlorination, aeration and post chlorination. The Russell water system has two chlorine analysers which measure the chlorine residual at the plant and the water tower every 2 minutes 24 hours per day. The plant pumps water to the Russell tower which holds approximately 2159 m^3 when full. This supply is used to provide pressure in the system when the pumps are off and provides the supply during peak hours of usage and fire protection. The Russell system has generators in all buildings in case of power failures.

List all water treatment chemicals used over this reporting period

Sodium hypochlorite
Potassium permanganate

Were any significant expenses incurred to?

[✓] Install required equipment
[ ] Repair required equipment
[ ] Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

Chlorine analyzer Russell tower - $5,000.

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Sept 27/05	HPC	>500	mg/L	Re-test, flush, increase chlorine	Sept 27/05

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	52	0-0	0-55	52	0->500
Treated	52	0-0	0-0	52	0-24
Distribution	158	0-0	0-0	158	0->500

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	365	0.09-0.39
Chlorine	365	0.37-1.15
Fluoride (If the DWS provides fluoridation)	n/a	

NOTE: For continuous monitors use 8760 as the number of samples.

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
n/a				

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	July 7/03	<0.001	mg/L	no
Arsenic	July 7/03	<0.001	mg/L	no
Barium	July 7/03	<0.12	mg/L	no
Boron	July 7/03	<0.05	mg/L	no
Cadmium	July 7/03	<0.0001	mg/L	no
Chromium	July 7/03	<0.004	mg/L	no
Lead	July 4/05	<0.001	mg/L	no
Mercury	July 7/03	<0.0001	mg/L	no
Selenium	July 7/03	<0.001	mg/L	no
Sodium	July 7/03	15	mg/L	no
Uranium	July 7/03	<0.003	mg/L	no
Fluoride	July 7/03	<0.23	mg/L	no
Nitrite	Oct 3/05	<0.10	mg/L	no
Nitrate	Oct 3/05	<0.10	mg/L	no

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	July 7/03	<0.5	ug/L	no
Aldicarb	July 7/03	<9	ug/L	no
Aldrin + Dieldrin	July 7/03	<0.012	ug/L	no
Atrazine + N-dealkylated metobolites	July 7/03	<1.0	ug/L	no
Azinphos-methyl	July 7/03	<2	ug/L	no
Bendiocarb	July 7/03	<2	ug/L	no
Benzene	July 7/03	<0.5	ug/L	no
Benzo(a)pyrene	July 7/03	<0.01	ug/L	no
Bromoxynil	July 7/03	<0.05	ug/L	no
Carbaryl	July 7/03	<5	ug/L	no
Carbofuran	July 7/03	<5	ug/L	no
Carbon Tetrachloride	July 7/03	<0.09	ug/L	no
Chlordane (Total)	July 7/03	<0.015	ug/L	no
Chlorpyrifos	July 7/03	<1	ug/L	no
Cyanazine	July 7/03	<1	ug/L	no
Diazinon	July 7/03	<1	ug/L	no
Dicamba	July 7/03	<1	ug/L	no
1,2-Dichlorobenzene	July 7/03	<0.04	ug/L	no
1,4-Dichlorobenzene	July 7/03	<0.04	ug/L	no
Dichlorodiphenyltrichloroethane (DDT) + metabolites	July 7/03	<0.024	ug/L	no
1,2-Dichloroethane	July 7/03	<0.07	ug/L	no
1,1-Dichloroethylene (vinylidene chloride)	July 7/03	<0.05	ug/L	no
Dichloromethane	July 7/03	<4.0	ug/L	no
2-4 Dichlorophenol	July 7/03	<0.05	ug/L	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	July 7/03	<1	ug/L	no
Diclofop-methyl	July 7/03	<0.09	ug/L	no
Dimethoate	July 7/03	<2.5	ug/L	no

Dinoseb	July 7/03	<1	ug/L	no
Diquat	July 7/03	<7	ug/L	no
Diuron	July 7/03	<10	ug/L	no
Glyphosate	July 7/03	<10	ug/L	no
Heptachlor + Heptachlor Epoxide	July 7/03	<0.012	ug/L	no
Lindane (Total)	July 7/03	<0.006	ug/L	no
Malathion	July 7/03	<5	ug/L	no
Methoxychlor	July 7/03	<0.024	ug/L	no
Metolachlor	July 7/03	<0.05	ug/L	no
Metribuzin	July 7/03	<5	ug/L	no
Monochlorobenzene	July 7/03	<0.02	ug/L	no
Paraquat	July 7/03	<1	ug/L	no
Parathion	July 7/03	<1	ug/L	no
Pentachlorophenol	July 7/03	<0.05	ug/L	no
Phorate	July 7/03	<0.05	ug/L	no
Picloram	July 7/03	<5	ug/L	no
Polychlorinated Biphenyls(PCB)	July 7/03	<0.01	ug/L	no
Prometryne	July 7/03	<0.25	ug/L	no
Simazine	July 7/03	<1	ug/L	no
THM (NOTE: show latest annual average)	Oct 3/05	17.1	ug/L	no
Temephos	July 7/03	<0.10	ug/L	no
Terbufos	July 7/03	<0.07	ug/L	no
Tetrachloroethylene	July 7/03	<0.3	ug/L	no
2,3,4,6-Tetrachlorophenol	July 7/03	<0.5	ug/L	no
Triallate	July 7/03	<1	ug/L	no
Trichloroethylene	July 7/03	<0.3	ug/L	no
2,4,6-Trichlorophenol	July 7/03	<0.5	ug/L	no
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	July 7/03	<1	ug/L	no
Trifluralin	July 7/03	<1	ug/L	no
Vinyl Chloride	July 7/03	<0.5	ug/L	no

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
n/a			

(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, non municipal year round residential, large non municipal non residential)

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JAN	3	1074	36.09	5.02	1.07	4.68	2153	4904	18.00	2.51	4.90	0.51	3227	3235		0.00	3.24	0.00	3621	0.89	0.30
JAN	5	739	27.80	3.87	0.74	5.24	1460				1.46		2199	2145		0.00	2.15	0.00	3621	0.59	0.30
JAN	6	341	8.23	1.15	0.34	3.36	702				0.70		1043	1039		0.00	1.04	0.00	3621	0.29	0.29
JAN	7	340	11.30	1.57	0.34	4.63	719				0.72		1059	1049		0.00	1.05	0.00	3621	0.29	0.29
JAN	10	1032	36.72	5.11	1.03	4.95	2157	5038	18.60	2.59	5.04	0.51	3189	3198		0.00	3.20	0.00	3621	0.88	0.29
JAN	11	306	10.10	1.41	0.31	4.59	648				0.65		954	937		0.00	0.94	0.00	3621	0.26	0.26
JAN	12	294	10.76	1.50	0.29	5.09	632				0.63		926	926		0.00	0.93	0.00	3621	0.26	0.26
JAN	13	339	11.33	1.58	0.34	4.65	723				0.72		1062	1034		0.00	1.03	0.00	3621	0.29	0.29
JAN	14	330	12.03	1.67	0.33	5.07	683				0.68		1013	998		0.00	1.00	0.00	3621	0.28	0.28
JAN	17	1085	36.72	5.11	1.09	4.71	2192	4878	16.30	2.27	4.88	0.47	3277	3243		0.00	3.24	0.00	3621	0.90	0.30
JAN	18	351	10.70	1.49	0.35	4.24	655				0.66		1006	1023		0.00	1.02	0.00	3621	0.28	0.28
JAN	19	349	13.20	1.84	0.35	5.26	689				0.69		1038	1028		0.00	1.03	0.00	3621	0.28	0.28
JAN	20	327	12.03	1.67	0.33	5.12	677				0.68		1004	990		0.00	0.99	0.00	3621	0.27	0.27
JAN	21	352	12.00	1.67	0.35	4.75	752				0.75		1104	1123		0.00	1.12	0.00	3621	0.31	0.31
JAN	24	1172	39.20	5.46	1.17	4.66	2481	5254	16.75	2.33	5.25	0.44	3653	3582		0.00	3.58	0.00	3621	0.99	0.33
JAN	25	360	12.00	1.67	0.36	4.64	756				0.76		1116	1140		0.00	1.14	0.00	3621	0.31	0.31
JAN	26	321	9.49	1.32	0.32	4.12	680				0.68		1001	1018		0.00	1.02	0.00	3621	0.28	0.28
JAN	27	471	16.46	2.29	0.47	4.86	868				0.87		1339	1384		0.00	1.38	0.00	3621	0.38	0.38
JAN	28	305	10.10	1.41	0.31	4.61	638				0.64		943	896		0.00	0.90	0.00	3621	0.25	0.25
JAN	31	1078	34.82	4.85	1.08	4.50	2300	5242	15.30	2.13	5.24	0.41	3378	3312		0.00	3.31	0.00	3621	0.91	0.30
JAN		10966	371.08	51.65	10.97	4.69	22565	25316	84.95	11.83	36.60	0.47	33531	33300	0.00	0.00	33.30	0.00	3621	0.46	0.29
DAILY AVG		354					728						1082	1074							
MAX		471					868						1339	1384							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
FEB	1	384	12.03	1.67	0.38	4.36	810				0.81		1194	1213		0.00	1.21	0.00	3621	0.33	0.33
FEB	2	294	10.10	1.41	0.29	4.78	579				0.58		873	830		0.00	0.83	0.00	3621	0.23	0.23
FEB	3	336	10.76	1.50	0.34	4.46	679				0.68		1015	1011		0.00	1.01	0.00	3621	0.28	0.28
FEB	4	328	10.10	1.41	0.33	4.29	686				0.69		1014	1135		0.00	1.14	0.00	3621	0.31	0.31
FEB	7	1061	29.70	4.13	1.06	3.90	2232	4986	15.30	2.13	4.99	0.43	3293	3199		0.00	3.20	0.00	3621	0.88	0.29
FEB	8	312	10.10	1.41	0.31	4.51	669				0.67		981	950		0.00	0.95	0.00	3621	0.26	0.26
FEB	9	285	9.49	1.32	0.29	4.64	634				0.63		919	952		0.00	0.95	0.00	3621	0.26	0.26
FEB	10	341	11.39	1.59	0.34	4.65	722				0.72		1063	1030		0.00	1.03	0.00	3621	0.28	0.28
FEB	11	362	12.03	1.67	0.36	4.63	802				0.80		1164	1185		0.00	1.19	0.00	3621	0.33	0.33
FEB	14	978	33.50	4.66	0.98	4.77	2049	4876	15.70	2.19	4.88	0.45	3027	2959		0.00	2.96	0.00	3621	0.82	0.27
FEB	15	302	10.70	1.49	0.30	4.93	640				0.64		942	953		0.00	0.95	0.00	3621	0.26	0.26
FEB	16	323	10.10	1.41	0.32	4.35	666				0.67		989	971		0.00	0.97	0.00	3621	0.27	0.27
FEB	17	356	11.30	1.57	0.36	4.42	730				0.73		1086	1018		0.00	1.02	0.00	3621	0.28	0.28
FEB	18	331	12.00	1.67	0.33	5.05	702				0.70		1033	1083		0.00	1.08	0.00	3621	0.30	0.30
FEB	21	1050	36.00	5.01	1.05	4.77	2201	4939	15.20	2.12	4.94	0.43	3251	3239		0.00	3.24	0.00	3621	0.89	0.30
FEB	22	309	10.13	1.41	0.31	4.56	688				0.69		997	971		0.00	0.97	0.00	3621	0.27	0.27
FEB	23	320	11.30	1.57	0.32	4.92	696				0.70		1016	1001		0.00	1.00	0.00	3621	0.28	0.28
FEB	24	324	10.70	1.49	0.32	4.60	692				0.69		1016	1009		0.00	1.01	0.00	3621	0.28	0.28
FEB	25	389	12.00	1.67	0.39	4.29	824				0.82		1213	1267		0.00	1.27	0.00	3621	0.35	0.35
FEB	28	987	32.90	4.58	0.99	4.64	2197	5097	17.61	2.45	5.10	0.48	3184	3099		0.00	3.10	0.00	3621	0.86	0.29
FEB		9372	306.33	42.64	9.37	4.58	19898	19898	63.81	8.88	31.12	0.45	29270	29075			29.08	0.00	3621	0.40	0.29
DAILY AVG		335					711						1045	1038							
MAX		389					824						1213	1267							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
MAR	1	330	11.30	1.57	0.33	4.77	673				0.67		1003	993		0.00	0.99	0.00	3621	0.27	0.27
MAR	2	317	9.49	1.32	0.32	4.17	675				0.68		992	993		0.00	0.99	0.00	3621	0.27	0.27
MAR	3	334	9.49	1.32	0.33	3.96	687				0.69		1021	1009		0.00	1.01	0.00	3621	0.28	0.28
MAR	4	373	11.30	1.57	0.37	4.22	777				0.78		1150	1178		0.00	1.18	0.00	3621	0.33	0.33
MAR	7	1002	27.20	3.79	1.00	3.78	2212	5024	15.00	2.09	5.02	0.42	3214	3163		0.00	3.16	0.00	3621	0.87	0.29
MAR	8	323	13.29	1.85	0.32	5.73	728				0.73		1051	1035		0.00	1.04	0.00	3621	0.29	0.29
MAR	9	334	8.86	1.23	0.33	3.69	738				0.74		1072	1061		0.00	1.06	0.00	3621	0.29	0.29
MAR	10	309	8.86	1.23	0.31	3.99	685				0.69		994	994		0.00	0.99	0.00	3621	0.27	0.27
MAR	11	299	8.23	1.15	0.30	3.83	671				0.67		970	927		0.00	0.93	0.00	3621	0.26	0.26
MAR	14	1006	29.12	4.05	1.01	4.03	2196	5018	15.20	2.12	5.02	0.42	3202	3201		0.00	3.20	0.00	3621	0.88	0.29
MAR	15	301	8.23	1.15	0.30	3.81	673				0.67		974	967		0.00	0.97	0.00	3621	0.27	0.27
MAR	16	278	7.39	1.03	0.28	3.70	631				0.63		909	875		0.00	0.88	0.00	3621	0.24	0.24
MAR	17	334	9.49	1.32	0.33	3.96	694				0.69		1028	1022		0.00	1.02	0.00	3621	0.28	0.28
MAR	18	298	8.86	1.23	0.30	4.14	632				0.63		930	916		0.00	0.92	0.00	3621	0.25	0.25
MAR	21	1071	30.30	4.22	1.07	3.94	2198	4828	16.57	2.31	4.83	0.48	3269	3249		0.00	3.25	0.00	3621	0.90	0.30
MAR	22	312	7.59	1.06	0.31	3.39	651				0.65		963	964		0.00	0.96	0.00	3621	0.27	0.27
MAR	23	302	8.86	1.23	0.30	4.08	638				0.64		940	940		0.00	0.94	0.00	3621	0.26	0.26
MAR	24	330	10.13	1.41	0.33	4.27	709				0.71		1039	1015		0.00	1.02	0.00	3621	0.28	0.28
MAR	25	270	6.96	0.97	0.27	3.59	587				0.59		857	852		0.00	0.85	0.00	3621	0.24	0.24
MAR	28	1041	29.76	4.14	1.04	3.98	2237	4822	16.60	2.31	4.82	0.48	3278	3252		0.00	3.25	0.00	3621	0.90	0.30
MAR	29	376	10.76	1.50	0.38	3.98	758				0.76		1134	1107		0.00	1.11	0.00	3621	0.31	0.31
MAR	30	320	8.23	1.15	0.32	3.58	676				0.68		996	983		0.00	0.98	0.00	3621	0.27	0.27
MAR	31	296	8.23	1.15	0.30	3.87	660				0.66		956	946		0.00	0.95	0.00	3621	0.26	0.26
MAR		10156	291.93	40.64	10.16	4.02	21786	19692	63.37	8.82	32.64	0.45	31942	31642	0.00	0.00	31.64	0.00	3621	0.38	0.28
DAILY AVG		328					703						1030	1021							
MAX		376					777						1150	1178							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
APR	1	339	9.49	1.32	0.34	3.90	659				0.66		998	1028		0.00	1.03	0.00	3621	0.28	0.28
APR	4	1070	27.80	3.87	1.07	3.62	2240	4993	15.20	2.12	4.99	0.42	3310	3239		0.00	3.24	0.00	3621	0.89	0.30
APR	5	270	6.33	0.88	0.27	3.26	579				0.58		849	863		0.00	0.86	0.00	3621	0.24	0.24
APR	6	345	9.49	1.32	0.35	3.83	717				0.72		1062	1037		0.00	1.04	0.00	3621	0.29	0.29
APR	7	343	9.49	1.32	0.34	3.85	731				0.73		1074	1087		0.00	1.09	0.00	3621	0.30	0.30
APR	8	306	6.96	0.97	0.31	3.17	677				0.68		983	924		0.00	0.92	0.00	3621	0.26	0.26
APR	11	1125	28.40	3.95	1.13	3.51	2211	4915	14.33	1.99	4.92	0.41	3336	3345		0.00	3.35	0.00	3621	0.92	0.31
APR	12	285	8.23	1.15	0.29	4.02	578				0.58		863	840		0.00	0.84	0.00	3621	0.23	0.23
APR	13	329	9.49	1.32	0.33	4.02	657				0.66		986	977		0.00	0.98	0.00	3621	0.27	0.27
APR	14	348	8.86	1.23	0.35	3.54	731				0.73		1079	1120		0.00	1.12	0.00	3621	0.31	0.31
APR	15	260	6.96	0.97	0.26	3.73	553				0.55		813	804		0.00	0.80	0.00	3621	0.22	0.22
APR	18	1070	26.50	3.69	1.07	3.45	2291	4810	13.17	1.83	4.81	0.38	3361	3296		0.00	3.30	0.00	3621	0.91	0.30
APR	19	349	10.70	1.49	0.35	4.27	730				0.73		1079	1054		0.00	1.05	0.00	3621	0.29	0.29
APR	20	289	7.59	1.06	0.29	3.66	634				0.63		923	954		0.00	0.95	0.00	3621	0.26	0.26
APR	21	357	8.86	1.23	0.36	3.45	660				0.66		1017	990		0.00	0.99	0.00	3621	0.27	0.27
APR	22	382	10.10	1.14	0.38	2.98	745				0.75		1127	1163		0.00	1.16	0.00	3621	0.32	0.32
APR	25	1025	27.20	3.79	1.03	3.69	2102	4871	14.00	1.95	4.87	0.40	3127	3073		0.00	3.07	0.00	3621	0.85	0.28
APR	26	459	12.03	1.67	0.46	3.65	965				0.97		1424	1411		0.00	1.41	0.00	3621	0.39	0.39
APR	27	509	13.29	1.85	0.51	3.63	1089				1.09		1598	1584		0.00	1.58	0.00	3621	0.44	0.44
APR	28	522	11.39	2.32	0.52	4.44	1028				1.03		1550	1532		0.00	1.53	0.00	3621	0.42	0.42
APR	29	396	7.59	1.06	0.40	2.67	830				0.83		1226	1209		0.00	1.21	0.00	3621	0.33	0.33
APR		10378	266.75	37.60	10.38	3.64	21407	19589	56.70	7.89	32.15	0.40	31785	31530	0.00	0.00	31.53	0.00	3621	0.41	0.30
DAILY AVG		346					714						1060	1051							
MAX		522					1089						1598	1584							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
MAY	2	962	24.06	3.35	0.96	3.48	2082	5994	18.00	2.51	5.99	0.42	3044	3019		0.00	3.02	0.00	3621	0.83	0.28
MAY	3	320	10.13	1.41	0.32	4.41	655				0.66		975	965		0.00	0.97	0.00	3621	0.27	0.27
MAY	4	335	6.96	0.97	0.34	2.89	671				0.67		1006	1006		0.00	1.01	0.00	3621	0.28	0.28
MAY	5	342	9.49	1.32	0.34	3.86	692				0.69		1034	1040		0.00	1.04	0.00	3621	0.29	0.29
MAY	6	360	6.33	0.88	0.36	2.45	746				0.75		1106	1077		0.00	1.08	0.00	3621	0.30	0.30
MAY	9	1167	30.30	4.22	1.17	3.61	2327	5091	14.71	2.05	5.09	0.40	3494	3502		0.00	3.50	0.00	3621	0.97	0.32
MAY	10	431	9.49	1.32	0.43	3.06	811				0.81		1242	1202		0.00	1.20	0.00	3621	0.33	0.33
MAY	11	410	9.49	1.32	0.41	3.22	770				0.77		1180	1171		0.00	1.17	0.00	3621	0.32	0.32
MAY	12	373	7.59	1.06	0.37	2.83	724				0.72		1097	1082		0.00	1.08	0.00	3621	0.30	0.30
MAY	13	370	8.23	1.15	0.37	3.10	726				0.73		1096	1107		0.00	1.11	0.00	3621	0.31	0.31
MAY	16	1172	31.66	4.41	1.17	3.76	2334	5365	14.50	2.02	5.37	0.38	3506	3459		0.00	3.46	0.00	3621	0.96	0.32
MAY	17	495	12.66	1.76	0.50	3.56	965				0.97		1460	1466		0.00	1.47	0.00	3621	0.40	0.40
MAY	18	240	5.69	0.79	0.24	3.30	462				0.46		702	701		0.00	0.70	0.00	3621	0.19	0.19
MAY	19	337	8.23	1.15	0.34	3.40	691				0.69		1028	996		0.00	1.00	0.00	3621	0.28	0.28
MAY	20	426	10.70	1.49	0.43	3.50	891				0.89		1317	1341		0.00	1.34	0.00	3621	0.37	0.37
MAY	23	1078	27.80	3.87	1.08	3.59	2209	5218	15.20	2.12	5.22	0.41	3287	3226		0.00	3.23	0.00	3621	0.89	0.30
MAY	24	489	13.93	1.94	0.49	3.97	991				0.99		1480	1472		0.00	1.47	0.00	3621	0.41	0.41
MAY	25	366	9.49	1.32	0.37	3.61	749				0.75		1115	1094		0.00	1.09	0.00	3621	0.30	0.30
MAY	26	416	11.30	1.57	0.42	3.78	808				0.81		1224	1226		0.00	1.23	0.00	3621	0.34	0.34
MAY	27	381	10.10	1.41	0.38	3.69	783				0.78		1164	1194		0.00	1.19	0.00	3621	0.33	0.33
MAY	30	1318	34.80	4.84	1.32	3.68	2575	5906	18.40	2.56	5.91	0.43	3893	3852		0.00	3.85	0.00	3621	1.06	0.35
MAY	31	445	14.56	2.03	0.45	4.55	882				0.88		1327	1315		0.00	1.32	0.00	3621	0.36	0.36
MAY		12233	312.99	43.57	12.23	3.51	24544	27574	80.81	11.25	40.59	0.41	36777	36513	0.00	0.00	36.51	0.00	3621	0.46	0.32
DAILY AVG		395					792						1186	1178							
MAX		495					991						1480	1472							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JUNE	1	341	8.23	1.15	0.34	3.36	670				0.67		1011	999		0.00	1.00	0.00	3621	0.28	0.28
JUNE	2	549	15.83	2.20	0.55	4.01	1051				1.05		1600	1596		0.00	1.60	0.00	3621	0.44	0.44
JUNE	3	452	12.00	1.67	0.45	3.70	879				0.88		1331	1365		0.00	1.37	0.00	3621	0.38	0.38
JUNE	6	1760	48.10	6.70	1.76	3.80	3482	6964	19.80	2.76	6.96	0.40	5242	5126		0.00	5.13	0.00	3621	1.42	0.47
JUNE	7	442	13.29	1.85	0.44	4.19	924				0.92		1366	1396		0.00	1.40	0.00	3621	0.39	0.39
JUNE	8	738	20.26	2.82	0.74	3.82	1420				1.42		2158	2130		0.00	2.13	0.00	3621	0.59	0.59
JUNE	9	342	8.80	1.22	0.34	3.58	691				0.69		1033	985		0.00	0.99	0.00	3621	0.27	0.27
JUNE	10	629	17.70	2.46	0.63	3.92	1250				1.25		1879	1969		0.00	1.97	0.00	3621	0.54	0.54
JUNE	13	1584	44.95	6.26	1.58	3.95	3206	7491	18.60	2.59	7.49	0.35	4790	4679		0.00	4.68	0.00	3621	1.29	0.43
JUNE	14	546	16.46	2.29	0.55	4.20	1106				1.11		1652	1653		0.00	1.65	0.00	3621	0.46	0.46
JUNE	15	286	8.86	1.23	0.29	4.31	583				0.58		869	872		0.00	0.87	0.00	3621	0.24	0.24
JUNE	16	394	13.29	1.85	0.39	4.70	789				0.79		1183	1157		0.00	1.16	0.00	3621	0.32	0.32
JUNE	17	519	17.09	2.38	0.52	4.58	973				0.97		1492	1485		0.00	1.49	0.00	3621	0.41	0.41
JUNE	20	1166	38.62	5.38	1.17	4.61	2099	5550	13.70	1.91	5.55	0.34	3265	3232		0.00	3.23	0.00	3621	0.89	0.30
JUNE	21	430	14.50	2.02	0.43	4.69	798				0.80		1228	1027		0.00	1.03	0.00	3621	0.28	0.28
JUNE	22	351	12.00	1.67	0.35	4.76	651				0.65		1002	1005		0.00	1.01	0.00	3621	0.28	0.28
JUNE	23	374	13.20	1.84	0.37	4.91	768				0.77		1142	1166		0.00	1.17	0.00	3621	0.32	0.32
JUNE	24	459	13.90	1.93	0.46	4.22	737				0.74		1196	1182		0.00	1.18	0.00	3621	0.33	0.33
JUNE	27	1410	44.90	6.25	1.41	4.43	2550	5504	17.60	2.45	5.50	0.45	3960	3896		0.00	3.90	0.00	3621	1.08	0.36
JUNE	28	526	15.83	2.20	0.53	4.19	938				0.94		1464	1472		0.00	1.47	0.00	3621	0.41	0.41
JUNE	29	470	14.50	2.02	0.47	4.29	828				0.83		1298	1268		0.00	1.27	0.00	3621	0.35	0.35
JUNE	30	442	14.50	2.02	0.44	4.57	798				0.80		1240	1259		0.00	1.26	0.00	3621	0.35	0.35
JUN		14210	426.81	59.41	14.21	4.22	27191	25509	69.70	9.70	41.36	0.38	41401	40919	0.00	0.00	40.92	0.00	3621	0.51	0.37
DAILY AVG		474					906						1380	1364							
MAX		738					1420						2158	2130							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JULY	1	442	13.20	1.84	0.44	4.16	843				0.84		1285	1251		0.00	1.25	0.00	3621	0.35	0.35
JULY	4	1252	41.40	5.76	1.25	4.60	2319	5726	19.10	2.66	5.73	0.46	3571	3597		0.00	3.60	0.00	3621	0.99	0.33
JULY	5	474	14.50	2.02	0.47	4.26	922				0.92		1396	1295		0.00	1.30	0.00	3621	0.36	0.36
JULY	6	367	12.60	1.75	0.37	4.78	698				0.70		1065	1091		0.00	1.09	0.00	3621	0.30	0.30
JULY	7	399	12.60	1.75	0.40	4.40	753				0.75		1152	1145		0.00	1.15	0.00	3621	0.32	0.32
JULY	8	436	14.50	2.02	0.44	4.63	841				0.84		1277	1276		0.00	1.28	0.00	3621	0.35	0.35
JULY	11	1224	41.15	5.73	1.22	4.68	2247	5461	19.50	2.71	5.46	0.50	3471	3448		0.00	3.45	0.00	3621	0.95	0.32
JULY	12	466	16.46	2.29	0.47	4.92	881				0.88		1347	1301		0.00	1.30	0.00	3621	0.36	0.36
JULY	13	440	16.46	2.29	0.44	5.21	810				0.81		1250	1238		0.00	1.24	0.00	3621	0.34	0.34
JULY	14	369	13.29	1.85	0.37	5.01	731				0.73		1100	1115		0.00	1.12	0.00	3621	0.31	0.31
JULY	15	393	15.19	2.11	0.39	5.38	708				0.71		1101	1091		0.00	1.09	0.00	3621	0.30	0.30
JULY	18	1283	50.60	7.04	1.28	5.49	2434	5564	19.50	2.71	5.56	0.49	3717	3686		0.00	3.69	0.00	3621	1.02	0.34
JULY	19	312	12.00	1.67	0.31	5.35	546				0.55		858	874		0.00	0.87	0.00	3621	0.24	0.24
JULY	20	458	19.60	2.73	0.46	5.96	852				0.85		1310	1279		0.00	1.28	0.00	3621	0.35	0.35
JULY	21	409	15.10	2.10	0.41	5.14	741				0.74		1150	1118		0.00	1.12	0.00	3621	0.31	0.31
JULY	22	431	19.60	2.73	0.43	6.33	812				0.81		1243	1259		0.00	1.26	0.00	3621	0.35	0.35
JULY	25	1386	55.70	7.75	1.39	5.59	2530	5481	21.20	2.95	5.48	0.54	3916	3896		0.00	3.90	0.00	3621	1.08	0.36
JULY	26	471	19.60	2.73	0.47	5.79	878				0.88		1349	1311		0.00	1.31	0.00	3621	0.36	0.36
JULY	27	431	18.36	2.56	0.43	5.93	812				0.81		1243	1238		0.00	1.24	0.00	3621	0.34	0.34
JULY	28	321	12.00	1.67	0.32	5.20	609				0.61		930	926		0.00	0.93	0.00	3621	0.26	0.26
JULY	29	510	21.50	2.99	0.51	5.87	931				0.93		1441	1470		0.00	1.47	0.00	3621	0.41	0.41
JUL		12274	455.41	63.39	12.27	5.18	22898	22232	79.30	11.04	35.60	0.50	35172	34905	0.00	0.00	34.91	0.00	3621	0.46	0.33
DAILY AVG		396					739						1135	1126							
MAX		510					931						1441	1470							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
AUG	1	1247	51.20	7.13	1.25	5.72	2300	5530	21.80	3.03	5.53	0.55	3547	3515		0.00	3.52	0.00	3621	0.97	0.32
AUG	2	518	19.62	2.73	0.52	5.27	1018				1.02		1536	1484		0.00	1.48	0.00	3621	0.41	0.41
AUG	3	425	16.40	2.28	0.43	5.37	822				0.82		1247	1250		0.00	1.25	0.00	3621	0.35	0.35
AUG	4	451	18.90	2.63	0.45	5.83	847				0.85		1298	1284		0.00	1.28	0.00	3621	0.35	0.35
AUG	5	517	19.60	2.73	0.52	5.28	937				0.94		1454	1487		0.00	1.49	0.00	3621	0.41	0.41
AUG	8	1464	61.42	8.55	1.46	5.84	2742	6366	22.20	3.09	6.37	0.49	4206	4125		0.00	4.13	0.00	3621	1.14	0.38
AUG	9	626	25.96	3.61	0.63	5.77	1188				1.19		1814	1823		0.00	1.82	0.00	3621	0.50	0.50
AUG	10	565	24.06	3.35	0.57	5.93	982				0.98		1547	1518		0.00	1.52	0.00	3621	0.42	0.42
AUG	11	285	12.00	1.67	0.29	5.86	558				0.56		843	810		0.00	0.81	0.00	3621	0.22	0.22
AUG	12	379	15.10	2.10	0.38	5.55	727				0.73		1106	1125		0.00	1.13	0.00	3621	0.31	0.31
AUG	15	1195	52.55	7.31	1.20	6.12	2230	5685	19.70	2.74	5.69	0.48	3425	3399		0.00	3.40	0.00	3621	0.94	0.31
AUG	16	429	18.30	2.55	0.43	5.94	749				0.75		1178	1204		0.00	1.20	0.00	3621	0.33	0.33
AUG	17	428	18.30	2.55	0.43	5.95	804				0.80		1232	1240		0.00	1.24	0.00	3621	0.34	0.34
AUG	18	458	19.62	2.73	0.46	5.96	875				0.88		1333	1331		0.00	1.33	0.00	3621	0.37	0.37
AUG	19	344	15.10	2.10	0.34	6.11	639				0.64		983	971		0.00	0.97	0.00	3621	0.27	0.27
AUG	22	1083	46.85	6.52	1.08	6.02	2063	5130	18.00	2.51	5.13	0.49	3146	3164		0.00	3.16	0.00	3621	0.87	0.29
AUG	23	476	18.90	2.63	0.48	5.53	873				0.87		1349	1303		0.00	1.30	0.00	3621	0.36	0.36
AUG	24	305	13.20	1.84	0.31	6.02	610				0.61		915	925		0.00	0.93	0.00	3621	0.26	0.26
AUG	25	367	15.80	2.20	0.37	5.99	715				0.72		1082	1085		0.00	1.09	0.00	3621	0.30	0.30
AUG	26	439	20.80	2.90	0.44	6.60	917				0.92		1356	1349		0.00	1.35	0.00	3621	0.37	0.37
AUG	29	1169	48.12	6.70	1.17	5.73	2323	5438	21.20	2.95	5.44	0.54	3492	3468		0.00	3.47	0.00	3621	0.96	0.32
AUG	30	352	16.46	2.29	0.35	6.51	643				0.64		995	983		0.00	0.98	0.00	3621	0.27	0.27
AUG	31	371	16.40	2.28	0.37	6.15	737				0.74		1108	1112		0.00	1.11	0.00	3621	0.31	0.31
AUG		13893	584.66	81.38	13.89	5.87	26299	28149	102.90	14.32	42.79	0.51	40192	39955	0.00	0.00	39.96	0.00	3621	0.48	0.34
DAILY AVG		448					848						1297	1289							
MAX		626					1188						1814	1823							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
SEP	1	338	13.20	1.84	0.34	5.44	656				0.66		994	965		0.00	0.97	0.00	3621	0.27	0.27
SEP	2	370	15.80	2.20	0.37	5.94	689				0.69		1059	1059		0.00	1.06	0.00	3621	0.29	0.29
SEP	5	1003	43.00	5.99	1.00	5.97	1003	4627	14.60	2.03	4.63	0.44	2006	2892		0.00	2.89	0.00	3621	0.80	0.27
SEP	6	522	21.50	2.99	0.52	5.73	522				0.52		1044	1554		0.00	1.55	0.00	3621	0.43	0.43
SEP	7	311	14.50	2.02	0.31	6.49	311				0.31		622	931		0.00	0.93	0.00	3621	0.26	0.26
SEP	8	329	13.93	1.94	0.33	5.89	329				0.33		658	992		0.00	0.99	0.00	3621	0.27	0.27
SEP	9	342	15.83	2.20	0.34	6.44	342				0.34		684	993		0.00	0.99	0.00	3621	0.27	0.27
SEP	12	1123	47.49	6.61	1.12	5.89	1123	5193	17.80	2.48	5.19	0.48	2246	3334		0.00	3.33	0.00	3621	0.92	0.31
SEP	13	381	17.09	2.38	0.38	6.24	381				0.38		762	1121		0.00	1.12	0.00	3621	0.31	0.31
SEP	14	390	15.80	2.20	0.39	5.64	390				0.39		780	1180		0.00	1.18	0.00	3621	0.33	0.33
SEP	15	368	15.80	2.20	0.37	5.98	368				0.37		736	1087		0.00	1.09	0.00	3621	0.30	0.30
SEP	16	448	18.30	2.55	0.45	5.69	448				0.45		896	1215		0.00	1.22	0.00	3621	0.34	0.34
SEP	19	1081	46.20	6.43	1.08	5.95	1081	5146	17.45	2.43	5.15	0.47	2162	3154		0.00	3.15	0.00	3621	0.87	0.29
SEP	20	336	14.56	2.03	0.34	6.03	336				0.34		672	965		0.00	0.97	0.00	3621	0.27	0.27
SEP	21	349	13.33	1.86	0.35	5.32	349				0.35		698	1088		0.00	1.09	0.00	3621	0.30	0.30
SEP	22	314	13.20	1.84	0.31	5.85	314				0.31		628	969		0.00	0.97	0.00	3621	0.27	0.27
SEP	23	383	17.70	2.46	0.38	6.43	383				0.38		766	1196		0.00	1.20	0.00	3621	0.33	0.33
SEP	26	1053	45.50	6.33	1.05	6.01	1053	5090	17.60	2.45	5.09	0.48	2106	3289		0.00	3.29	0.00	3621	0.91	0.30
SEP	27	339	16.46	2.29	0.34	6.76	339				0.34		678	1048		0.00	1.05	0.00	3621	0.29	0.29
SEP	28	322	12.60	1.75	0.32	5.45	322				0.32		644	985		0.00	0.99	0.00	3621	0.27	0.27
SEP	29	325	13.90	1.93	0.33	5.95	325				0.33		650	1009		0.00	1.01	0.00	3621	0.28	0.28
SEP	30	304	12.66	1.76	0.30	5.80	304				0.30		608	941		0.00	0.94	0.00	3621	0.26	0.26
SEP		10731	458.35	63.80	10.73	5.95	11368	20056	67.45	9.39	27.16	0.47	22099	31967	0.00	0.00	31.97	0.00	3621	0.40	0.30
DAILY AVG		358					379						737	1066							
MAX		522					689						1059	1554							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
OCT	3	1097	44.90	6.25	1.10	5.70	2270	5013	20.17	2.81	5.01	0.56	3367	3363		0.00	3.36	0.00	3621	0.93	0.31
OCT	4	313	13.29	1.85	0.31	5.91	695				0.70		1008	1002		0.00	1.00	0.00	3621	0.28	0.28
OCT	5	305	13.29	1.85	0.31	6.07	684				0.68		989	986		0.00	0.99	0.00	3621	0.27	0.27
OCT	6	301	12.60	1.75	0.30	5.83	659				0.66		960	969		0.00	0.97	0.00	3621	0.27	0.27
OCT	7	335	15.19	2.11	0.34	6.31	679				0.68		1014	1042		0.00	1.04	0.00	3621	0.29	0.29
OCT	10	904	39.89	5.55	0.90	6.14	1931	4648	14.40	2.00	4.65	0.43	2835	2766		0.00	2.77	0.00	3621	0.76	0.25
OCT	11	426	20.26	2.82	0.43	6.62	892				0.89		1318	1328		0.00	1.33	0.00	3621	0.37	0.37
OCT	12	317	10.70	1.49	0.32	4.70	677				0.68		994	986		0.00	0.99	0.00	3621	0.27	0.27
OCT	13	320	14.56	2.03	0.32	6.33	662				0.66		982	954		0.00	0.95	0.00	3621	0.26	0.26
OCT	14	369	13.90	1.93	0.37	5.24	748				0.75		1115	1170		0.00	1.17	0.00	3621	0.32	0.32
OCT	17	984	41.15	5.73	0.98	5.82	2028	5005	16.90	2.35	5.01	0.47	3012	2934		0.00	2.93	0.00	3621	0.81	0.27
OCT	18	308	12.66	1.76	0.31	5.72	654				0.65		962	967		0.00	0.97	0.00	3621	0.27	0.27
OCT	19	297	11.39	1.59	0.30	5.34	638				0.64		935	931		0.00	0.93	0.00	3621	0.26	0.26
OCT	20	307	12.66	1.76	0.31	5.74	635				0.64		942	946		0.00	0.95	0.00	3621	0.26	0.26
OCT	21	323	13.29	1.85	0.32	5.73	681				0.68		1004	1001		0.00	1.00	0.00	3621	0.28	0.28
OCT	24	1000	41.79	5.82	1.00	5.82	2137	4745	9.97	1.39	4.75	0.29	3137	3095		0.00	3.10	0.00	3621	0.85	0.28
OCT	25	300	13.29	1.85	0.30	6.17	629				0.63		929	933		0.00	0.93	0.00	3621	0.26	0.26
OCT	26	311	14.50	2.02	0.31	6.49	680				0.68		991	979		0.00	0.98	0.00	3621	0.27	0.27
OCT	27	305	10.76	1.50	0.31	4.91	651				0.65		956	989		0.00	0.99	0.00	3621	0.27	0.27
OCT	28	388	13.20	1.84	0.39	4.74	768				0.77		1156	1138		0.00	1.14	0.00	3621	0.31	0.31
OCT	31	1044	46.20	6.43	1.04	6.16	2008	4736	17.40	2.42	4.74	0.51	3052	2983		0.00	2.98	0.00	3621	0.82	0.27
OCT		10254	429.47	59.78	10.25	5.78	21404	24147	78.84	10.97	35.18	0.45	31658	31462	0.00	0.00	31.46	0.00	3621	0.40	0.28
DAILY AVG		331					690						1021	1015							
MAX		426					892						1318	1328							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
NOV	1	324	12.66	1.76	0.32	5.44	665				0.67		989	995	0.00	0.00	1.00	0.00	3621	0.27	0.27
NOV	2	292	12.66	1.76	0.29	6.04	615				0.62		907	892	0.00	0.00	0.89	0.00	3621	0.25	0.25
NOV	3	331	16.40	2.28	0.33	6.90	685				0.69		1016	1006	0.00	0.00	1.01	0.00	3621	0.28	0.28
NOV	4	339	10.70	1.49	0.34	4.39	635				0.64		974	1011	0.00	0.00	1.01	0.00	3621	0.28	0.28
NOV	7	1017	41.10	5.72	1.02	5.63	2136	4736	18.60	2.59	4.74	0.55	3153	3097	0.00	0.00	3.10	0.00	3621	0.86	0.29
NOV	8	280	10.70	1.49	0.28	5.32	589				0.59		869	880	0.00	0.00	0.88	0.00	3621	0.24	0.24
NOV	9	342	12.00	1.67	0.34	4.88	726				0.73		1068	1056	0.00	0.00	1.06	0.00	3621	0.29	0.29
NOV	10	294	13.20	1.84	0.29	6.25	601				0.60		895	881	0.00	0.00	0.88	0.00	3621	0.24	0.24
NOV	11	320	12.03	1.67	0.32	5.23	635				0.64		955	948	0.00	0.00	0.95	0.00	3621	0.26	0.26
NOV	14	1146	45.50	6.33	1.15	5.53	2211	4762	16.81	2.34	4.76	0.49	3357	3353	0.00	0.00	3.35	0.00	3621	0.93	0.31
NOV	15	291	12.03	1.67	0.29	5.75	571				0.57		862	840	0.00	0.00	0.84	0.00	3621	0.23	0.23
NOV	16	329	12.60	1.75	0.33	5.33	626				0.63		955	939	0.00	0.00	0.94	0.00	3621	0.26	0.26
NOV	17	307	12.66	1.76	0.31	5.74	595				0.60		902	927	0.00	0.00	0.93	0.00	3621	0.26	0.26
NOV	18	353	13.93	1.94	0.35	5.49	734				0.73		1087	1067	0.00	0.00	1.07	0.00	3621	0.29	0.29
NOV	21	1074	41.70	5.80	1.07	5.40	2119	4645	15.96	2.22	4.65	0.48	3193	3160	0.00	0.00	3.16	0.00	3621	0.87	0.29
NOV	22	308	11.39	1.59	0.31	5.15	611				0.61		919	913	0.00	0.00	0.91	0.00	3621	0.25	0.25
NOV	23	448	16.46	2.29	0.45	5.11	900				0.90		1348	1346	0.00	0.00	1.35	0.00	3621	0.37	0.37
NOV	24	218	7.59	1.06	0.22	4.85	429				0.43		647	636	0.00	0.00	0.64	0.00	3621	0.18	0.18
NOV	25	325	12.60	1.75	0.33	5.40	710				0.71		1035	985	0.00	0.00	0.99	0.00	3621	0.27	0.27
NOV	28	1012	41.10	5.72	1.01	5.65	2151	4801	17.61	2.45	4.80	0.51	3163	3158	0.00	0.00	3.16	0.00	3621	0.87	0.29
NOV	29	310	10.76	1.50	0.31	4.83	676				0.68		986	988	0.00	0.00	0.99	0.00	3621	0.27	0.27
NOV	30	327	11.39	1.59	0.33	4.85	680				0.68		1007	1006	0.00	0.00	1.01	0.00	3621	0.28	0.28
NOV		9987	391.16	54.45	9.99	5.42	20300	18944	68.98	9.60	30.63	0.51	30287	30084	0.00	0.00	30.08	0.00	3621	0.38	0.27
DAILY AVG		333					677						1010	1003							
MAX		448					900						1348	1346							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
DEC	1	388	13.90	1.93	0.39	4.99	687				0.69		1075	1063		0.00	1.06	0.00	3621	0.29	0.29
DEC	2	404	13.20	1.84	0.40	4.55	751				0.75		1155	1144		0.00	1.14	0.00	3621	0.32	0.32
DEC	5	1079	40.52	5.64	1.08	5.23	2142	4936	18.20	2.53	4.94	0.51	3221	3229		0.00	3.23	0.00	3621	0.89	0.30
DEC	6	327	11.39	1.59	0.33	4.85	672				0.67		999	981		0.00	0.98	0.00	3621	0.27	0.27
DEC	7	351	12.03	1.67	0.35	4.77	698				0.70		1049	1041		0.00	1.04	0.00	3621	0.29	0.29
DEC	8	353	9.49	1.32	0.35	3.74	678				0.68		1031	1020		0.00	1.02	0.00	3621	0.28	0.28
DEC	9	386	10.70	1.49	0.39	3.86	733				0.73		1119	1101		0.00	1.10	0.00	3621	0.30	0.30
DEC	12	1094	31.66	4.41	1.09	4.03	2243	5024	16.57	2.31	5.02	0.46	3337	3336		0.00	3.34	0.00	3621	0.92	0.31
DEC	13	340	10.13	1.41	0.34	4.15	679				0.68		1019	1014		0.00	1.01	0.00	3621	0.28	0.28
DEC	14	356	9.49	1.32	0.36	3.71	711				0.71		1067	1039		0.00	1.04	0.00	3621	0.29	0.29
DEC	15	333	10.10	1.41	0.33	4.22	656				0.66		989	985		0.00	0.99	0.00	3621	0.27	0.27
DEC	16	330	7.59	1.06	0.33	3.20	676				0.68		1006	996		0.00	1.00	0.00	3621	0.28	0.28
DEC	19	1156	29.70	4.13	1.16	3.58	2195	4917	13.90	1.93	4.92	0.39	3351	3353		0.00	3.35	0.00	3621	0.93	0.31
DEC	20	321	7.59	1.06	0.32	3.29	661				0.66		982	1000		0.00	1.00	0.00	3621	0.28	0.28
DEC	21	342	8.23	1.15	0.34	3.35	729				0.73		1071	1040		0.00	1.04	0.00	3621	0.29	0.29
DEC	22	337	9.49	1.32	0.34	3.92	710				0.71		1047	1039		0.00	1.04	0.00	3621	0.29	0.29
DEC	23	344	8.23	1.15	0.34	3.33	735				0.74		1079	1104		0.00	1.10	0.00	3621	0.30	0.30
DEC	26	1093	31.60	4.40	1.09	4.02	2295	5130	11.20	1.56	5.13	0.30	3388	3317		0.00	3.32	0.00	3621	0.92	0.31
DEC	28	696	19.62	2.73	0.70	3.92	1600				1.60		2296	2186		0.00	2.19	0.00	3621	0.60	0.30
DEC	29	402	11.39	1.59	0.40	3.94	808				0.81		1210	1235		0.00	1.24	0.00	3621	0.34	0.34
DEC	30	321	8.86	1.23	0.32	3.84	701				0.70		1022	1008		0.00	1.01	0.00	3621	0.28	0.28
DEC		10753	314.91	43.84	10.75	4.02	21760	20007	59.87	8.33	32.89	0.42	32513	32231	0.00	0.00	32.23	0.00	3621	0.42	0.29
DAILY AVG		347					702						1049	1040							
MAX		404					808						1210	1235							

TOWNSHIP OF RUSSELL
RUSSELL WATER PUMPAGE CHARTS
2005

		WELL #1 PRE HYPOCHLORITE					TRANSFER							POST HYPOCHLORITE							
Mth	DAY	WELL 1 PRE M3	# OF LTS	# OF KGS	M3 /1000	MG/L	Mar TW T M3	M TW T M3/W	# OF LTS/W	# OF KGS/W	M3 /1000	MG/L	TOTAL	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JAN		10966	371.08	51.65	10.97	4.69	22565	25316	84.95	11.83	36.60	0.47	33531	33300	0.00	0.00	33.30	0.00	3579	0.46	0.29
FEB		9372	306.33	42.64	9.37	4.58	19898	19898	63.81	8.88	31.12	0.45	29270	29075	0.00	0.00	29.08	0.00	3579	0.40	0.29
MAR		10156	291.93	40.64	10.16	4.02	21786	19692	63.37	8.82	32.64	0.45	31942	31642	0.00	0.00	31.64	0.00	3579	0.38	0.28
APR		10378	266.75	37.60	10.38	3.64	21407	19589	56.70	7.89	32.15	0.40	31785	31530	0.00	0.00	31.53	0.00	3579	0.41	0.30
MAY		12233	312.99	43.57	12.23	3.51	24544	27574	80.81	11.25	40.59	0.41	36777	36513	0.00	0.00	36.51	0.00	3579	0.46	0.32
JUNE		14210	426.81	59.41	14.21	4.22	27191	25509	69.70	9.70	41.36	0.38	41401	40919	0.00	0.00	40.92	0.00	3579	0.51	0.37
JULY		12274	455.41	63.39	12.27	5.18	22898	22232	79.30	11.04	35.60	0.50	35172	34905	0.00	0.00	34.91	0.00	3579	0.46	0.33
AUG		13893	584.66	81.38	13.89	5.87	26299	28149	102.90	14.32	42.79	0.51	40192	39955	0.00	0.00	39.96	0.00	3579	0.48	0.34
SEP		10731	458.35	63.80	10.73	5.95	11368	20056	67.45	9.39	27.16	0.47	22099	31967	0.00	0.00	31.97	0.00	3579	0.40	0.30
OCT		10254	429.47	59.78	10.25	5.78	21404	24147	78.84	10.97	35.18	0.45	31658	31462	0.00	0.00	31.46	0.00	3579	0.40	0.28
NOV		9987	391.16	54.45	9.99	5.42	20300	18944	68.98	9.60	30.63	0.51	30287	30084	0.00	0.00	30.08	0.00	3579	0.38	0.27
DEC		10753	314.91	43.84	10.75	4.02	21760	20007	59.87	8.33	32.89	0.42	32513	32231	0.00	0.00	32.23	0.00	3579	0.42	0.29
TOTAL		135,207	4609.85	642.16	135.21	4.74	261,420	271,113	876.68	122.03	418.71	0.45	396,627	403,583	0.00	0.00	403.58	0.00	3579	0.43	0.30

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
JAN	3	2601	9.90	1.38	2.60	0.46
JAN	5	1551	5.66	0.79	1.55	0.39
JAN	6	756	2.36	0.33	0.76	0.43
JAN	7	773	2.30	0.32	0.77	0.41
JAN	10	2380	9.90	1.38	2.38	0.58
JAN	11	765	2.83	0.39	0.77	0.51
JAN	12	748	2.36	0.33	0.75	0.44
JAN	13	929	2.83	0.39	0.93	0.42
JAN	14	542	1.88	0.26	0.54	0.48
JAN	17	2362	8.02	1.12	2.36	0.47
JAN	18	779	2.36	0.33	0.78	0.42
JAN	19	774	2.36	0.33	0.77	0.42
JAN	20	767	2.36	0.33	0.77	0.43
JAN	21	784	2.36	0.33	0.78	0.42
JAN	24	2658	8.49	1.18	2.66	0.44
JAN	25	1037	2.30	0.32	1.04	0.31
JAN	26	625	1.41	0.20	0.63	0.31
JAN	27	806	1.88	0.26	0.81	0.32
JAN	28	783	2.30	0.32	0.78	0.41
JAN	31	2685	9.44	1.31	2.69	0.49
JAN		25105	83.30	11.60	25.11	0.43
DAILY AVG		810				
MAX		1037				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
FEB	1	685	1.88	0.26	0.69	0.38
FEB	2	734	1.88	0.26	0.73	0.36
FEB	3	766	2.30	0.32	0.77	0.42
FEB	4	773	2.36	0.33	0.77	0.42
FEB	7	2388	8.02	1.12	2.39	0.47
FEB	8	836	2.36	0.33	0.84	0.39
FEB	9	733	2.36	0.33	0.73	0.45
FEB	10	744	2.36	0.33	0.74	0.44
FEB	11	743	2.36	0.33	0.74	0.44
FEB	14	2357	8.00	1.11	2.36	0.47
FEB	15	788	2.36	0.33	0.79	0.42
FEB	16	717	2.36	0.33	0.72	0.46
FEB	17	703	2.36	0.33	0.70	0.47
FEB	18	769	2.36	0.33	0.77	0.43
FEB	21	2496	7.55	1.05	2.50	0.42
FEB	22	800	2.36	0.33	0.80	0.41
FEB	23	761	2.30	0.32	0.76	0.42
FEB	24	781	2.80	0.39	0.78	0.50
FEB	25	787	2.80	0.39	0.79	0.50
FEB	28	2450	8.97	1.25	2.45	0.51
FEB		21811	70.10	9.76	21.81	0.44
DAILY AVG		779				
MAX		836				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
MAR	1	818	1.88	0.26	0.82	0.32
MAR	2	756	2.30	0.32	0.76	0.42
MAR	3	740	2.36	0.33	0.74	0.44
MAR	4	775	2.36	0.33	0.78	0.42
MAR	7	2445	7.50	1.04	2.45	0.43
MAR	8	845	2.30	0.32	0.85	0.38
MAR	9	774	2.83	0.39	0.77	0.51
MAR	10	773	2.36	0.33	0.77	0.42
MAR	11	776	1.88	0.26	0.78	0.34
MAR	14	2355	7.55	1.05	2.36	0.45
MAR	15	790	2.89	0.40	0.79	0.51
MAR	16	784	2.36	0.33	0.78	0.42
MAR	17	719	2.36	0.33	0.72	0.46
MAR	18	749	2.30	0.32	0.75	0.43
MAR	21	2291	8.97	1.25	2.29	0.55
MAR	22	795	2.83	0.39	0.80	0.50
MAR	23	746	2.30	0.32	0.75	0.43
MAR	24	743	2.30	0.32	0.74	0.43
MAR	25	743	1.88	0.26	0.74	0.35
MAR	28	2480	9.40	1.31	2.48	0.53
MAR	29	687	1.88	0.26	0.69	0.38
MAR	30	721	2.36	0.33	0.72	0.46
MAR	31	765	2.30	0.32	0.77	0.42
MAR		24070	77.45	10.78	24.07	0.43
DAILY AVG		776				
MAX		845				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
APR	1	750	2.40	0.33	0.75	0.45
APR	4	2575	8.02	1.12	2.58	0.43
APR	5	585	1.41	0.20	0.59	0.34
APR	6	751	2.36	0.33	0.75	0.44
APR	7	718	2.36	0.33	0.72	0.46
APR	8	752	2.36	0.33	0.75	0.44
APR	11	2542	7.08	0.99	2.54	0.39
APR	12	632	1.88	0.26	0.63	0.41
APR	13	733	1.88	0.26	0.73	0.36
APR	14	727	1.88	0.26	0.73	0.36
APR	15	763	2.30	0.32	0.76	0.42
APR	18	2497	6.61	0.92	2.50	0.37
APR	19	823	2.36	0.33	0.82	0.40
APR	20	754	2.36	0.33	0.75	0.44
APR	21	826	1.88	0.26	0.83	0.32
APR	22	639	2.36	0.33	0.64	0.51
APR	25	2359	6.61	0.92	2.36	0.39
APR	26	1195	3.30	0.46	1.20	0.38
APR	27	1104	3.30	0.46	1.10	0.42
APR	28	1149	3.77	0.52	1.15	0.46
APR	29	671	2.36	0.33	0.67	0.49
APR		23545	68.84	9.58	23.55	0.41
DAILY AVG		785				
MAX		1195				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
MAY	2	2458	7.00	0.97	2.46	0.40
MAY	3	792	1.88	0.26	0.79	0.33
MAY	4	725	1.88	0.26	0.73	0.36
MAY	5	719	1.88	0.26	0.72	0.36
MAY	6	773	2.36	0.33	0.77	0.42
MAY	9	2728	8.49	1.18	2.73	0.43
MAY	10	1045	2.36	0.33	1.05	0.31
MAY	11	891	2.36	0.33	0.89	0.37
MAY	12	801	2.36	0.33	0.80	0.41
MAY	13	743	2.36	0.33	0.74	0.44
MAY	16	2636	7.08	0.99	2.64	0.37
MAY	17	1038	2.83	0.39	1.04	0.38
MAY	18	544	1.41	0.20	0.54	0.36
MAY	19	844	2.36	0.33	0.84	0.39
MAY	20	817	2.80	0.39	0.82	0.48
MAY	23	2587	7.55	1.05	2.59	0.41
MAY	24	1107	3.77	0.52	1.11	0.47
MAY	25	919	3.30	0.46	0.92	0.50
MAY	26	940	2.83	0.39	0.94	0.42
MAY	27	921	2.36	0.33	0.92	0.36
MAY	30	3082	9.44	1.31	3.08	0.43
MAY	31	930	2.83	0.39	0.93	0.42
MAY		28040	81.49	11.34	28.04	0.40
DAILY AVG		905				
MAX		1107				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
JUNE	1	994	2.80	0.39	0.99	0.39
JUNE	2	980	2.83	0.39	0.98	0.40
JUNE	3	1201	3.30	0.46	1.20	0.38
JUNE	6	4009	11.30	1.57	4.01	0.39
JUNE	7	1203	3.77	0.52	1.20	0.44
JUNE	8	1526	3.77	0.52	1.53	0.34
JUNE	9	871	2.36	0.33	0.87	0.38
JUNE	10	1547	4.70	0.65	1.55	0.42
JUNE	13	3782	7.55	1.05	3.78	0.28
JUNE	14	1038	2.36	0.33	1.04	0.32
JUNE	15	659	1.88	0.26	0.66	0.40
JUNE	16	822	1.41	0.20	0.82	0.24
JUNE	17	859	1.88	0.26	0.86	0.30
JUNE	20	2541	7.08	0.99	2.54	0.39
JUNE	21	917	1.88	0.26	0.92	0.29
JUNE	22	753	2.36	0.33	0.75	0.44
JUNE	23	783	2.36	0.33	0.78	0.42
JUNE	24	841	2.83	0.39	0.84	0.47
JUNE	27	2922	10.38	1.44	2.92	0.49
JUNE	28	1008	3.30	0.46	1.01	0.46
JUNE	29	989	3.30	0.46	0.99	0.46
JUNE	30	885	2.80	0.39	0.89	0.44
JUN		31130	86.20	12.00	31.13	0.39
DAILY AVG		1038				
MAX		1547				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
JULY	1	1094	2.80	0.39	1.09	0.36
JULY	4	2584	9.40	1.31	2.58	0.51
JULY	5	1043	3.30	0.46	1.04	0.44
JULY	6	823	2.83	0.39	0.82	0.48
JULY	7	856	3.30	0.46	0.86	0.54
JULY	8	903	3.30	0.46	0.90	0.51
JULY	11	2553	9.44	1.31	2.55	0.51
JULY	12	928	2.36	0.33	0.93	0.35
JULY	13	1040	3.30	0.46	1.04	0.44
JULY	14	728	2.36	0.33	0.73	0.45
JULY	15	869	3.30	0.46	0.87	0.53
JULY	18	2623	10.89	1.52	2.62	0.58
JULY	19	706	2.30	0.32	0.71	0.45
JULY	20	805	2.83	0.39	0.81	0.49
JULY	21	1033	4.72	0.66	1.03	0.64
JULY	22	925	4.24	0.59	0.93	0.64
JULY	25	2774	10.80	1.50	2.77	0.54
JULY	26	1016	3.70	0.52	1.02	0.51
JULY	27	816	3.30	0.46	0.82	0.56
JULY	28	856	3.30	0.46	0.86	0.54
JULY	29	713	2.36	0.33	0.71	0.46
JUL		25688	94.13	13.10	25.69	0.50
DAILY AVG		829				
MAX		1094				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
AUG	1	2847	11.80	1.64	2.85	0.58
AUG	2	1075	3.70	0.52	1.08	0.48
AUG	3	826	3.30	0.46	0.83	0.56
AUG	4	1151	3.77	0.52	1.15	0.46
AUG	5	770	2.36	0.33	0.77	0.43
AUG	8	3330	11.80	1.64	3.33	0.49
AUG	9	1525	4.72	0.66	1.53	0.43
AUG	10	1062	3.77	0.52	1.06	0.49
AUG	11	574	2.36	0.33	0.57	0.57
AUG	12	889	3.30	0.46	0.89	0.52
AUG	15	2362	8.02	1.12	2.36	0.47
AUG	16	959	3.77	0.52	0.96	0.55
AUG	17	910	3.30	0.46	0.91	0.50
AUG	18	873	2.83	0.39	0.87	0.45
AUG	19	827	2.36	0.33	0.83	0.40
AUG	22	2300	8.49	1.18	2.30	0.51
AUG	23	878	3.77	0.52	0.88	0.60
AUG	24	717	2.83	0.39	0.72	0.55
AUG	25	905	3.77	0.52	0.91	0.58
AUG	26	765	3.30	0.46	0.77	0.60
AUG	29	2649	9.44	1.31	2.65	0.50
AUG	30	1010	2.83	0.39	1.01	0.39
AUG	31	820	2.36	0.33	0.82	0.40
AUG		30024	107.95	15.03	30.02	0.50
DAILY AVG		969				
MAX		1525				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
SEP	1	738	2.80	0.39	0.74	0.53
SEP	2	724	2.36	0.33	0.72	0.45
SEP	5	2192	7.08	0.99	2.19	0.45
SEP	6	821	3.30	0.46	0.82	0.56
SEP	7	925	4.24	0.59	0.93	0.64
SEP	8	771	2.36	0.33	0.77	0.43
SEP	9	721	2.36	0.33	0.72	0.46
SEP	12	2378	7.08	0.99	2.38	0.41
SEP	13	999	4.24	0.59	1.00	0.59
SEP	14	843	2.80	0.39	0.84	0.46
SEP	15	842	2.80	0.39	0.84	0.46
SEP	16	769	2.36	0.33	0.77	0.43
SEP	19	2405	7.55	1.05	2.41	0.44
SEP	20	732	2.83	0.39	0.73	0.54
SEP	21	790	2.30	0.32	0.79	0.41
SEP	22	783	2.36	0.33	0.78	0.42
SEP	23	784	2.83	0.39	0.78	0.50
SEP	26	8476	8.97	1.25	8.48	0.15
SEP	27	909	3.30	0.46	0.91	0.51
SEP	28	761	3.30	0.46	0.76	0.60
SEP	29	740	2.83	0.39	0.74	0.53
SEP	30	744	3.30	0.46	0.74	0.62
SEP		29847	83.35	11.60	29.85	0.48
DAILY AVG		995				
MAX		999				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
OCT	3	2453	9.91	1.38	2.45	0.46
OCT	4	812	1.88	0.26	0.81	0.32
OCT	5	868	3.30	0.46	0.87	0.53
OCT	6	807	2.36	0.33	0.81	0.41
OCT	7	780	2.80	0.39	0.78	0.50
OCT	10	2165	6.61	0.92	2.17	0.42
OCT	11	884	2.36	0.33	0.88	0.37
OCT	12	825	2.83	0.39	0.83	0.48
OCT	13	755	2.36	0.33	0.76	0.44
OCT	14	732	2.83	0.39	0.73	0.54
OCT	17	2367	8.49	1.18	2.37	0.50
OCT	18	755	2.36	0.33	0.76	0.44
OCT	19	739	2.83	0.39	0.74	0.53
OCT	20	736	2.83	0.39	0.74	0.54
OCT	21	703	2.83	0.39	0.70	0.56
OCT	24	2446	11.30	1.57	2.45	0.64
OCT	25	741	3.30	0.46	0.74	0.62
OCT	26	752	2.36	0.33	0.75	0.44
OCT	27	721	2.36	0.33	0.72	0.46
OCT	28	724	2.36	0.33	0.72	0.45
OCT	31	2422	9.44	1.31	2.42	0.54
OCT		24187	87.70	12.21	24.19	0.48
DAILY AVG		780				
MAX		884				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
NOV	1	748	2.83	0.39	0.75	0.53
NOV	2	710	2.36	0.33	0.71	0.46
NOV	3	737	3.30	0.46	0.74	0.62
NOV	4	718	2.36	0.33	0.72	0.46
NOV	7	2342	9.90	1.38	2.34	0.59
NOV	8	790	3.30	0.46	0.79	0.58
NOV	9	704	2.30	0.32	0.70	0.45
NOV	10	730	2.36	0.33	0.73	0.45
NOV	11	739	2.36	0.33	0.74	0.44
NOV	14	2370	8.49	1.18	2.37	0.50
NOV	15	720	2.36	0.33	0.72	0.46
NOV	16	736	2.36	0.33	0.74	0.45
NOV	17	665	2.36	0.33	0.67	0.49
NOV	18	725	2.36	0.33	0.73	0.45
NOV	21	2384	8.49	1.18	2.38	0.50
NOV	22	708	2.36	0.33	0.71	0.46
NOV	23	744	2.36	0.33	0.74	0.44
NOV	24	733	2.36	0.33	0.73	0.45
NOV	25	747	2.36	0.33	0.75	0.44
NOV	28	2362	9.91	1.38	2.36	0.58
NOV	29	831	3.30	0.46	0.83	0.55
NOV	30	768	2.36	0.33	0.77	0.43
NOV		22711	82.50	11.48	22.71	0.49
DAILY AVG		757				
MAX		831				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
DEC	1	755	2.83	0.39	0.76	0.52
DEC	2	715	2.36	0.33	0.72	0.46
DEC	5	2487	9.91	1.38	2.49	0.55
DEC	6	798	2.83	0.39	0.80	0.49
DEC	7	777	2.36	0.33	0.78	0.42
DEC	8	738	2.36	0.33	0.74	0.45
DEC	9	776	2.36	0.33	0.78	0.42
DEC	12	2484	8.49	1.18	2.48	0.48
DEC	13	818	2.36	0.33	0.82	0.40
DEC	14	734	2.36	0.33	0.73	0.45
DEC	15	745	2.36	0.33	0.75	0.44
DEC	16	749	1.88	0.26	0.75	0.35
DEC	19	2383	6.10	0.85	2.38	0.36
DEC	20	813	2.36	0.33	0.81	0.40
DEC	21	806	2.36	0.33	0.81	0.41
DEC	22	857	1.41	0.20	0.86	0.23
DEC	23	817	1.41	0.20	0.82	0.24
DEC	26	2554	5.19	0.72	2.55	0.28
DEC	28	1720	3.77	0.52	1.72	0.31
DEC	29	702	1.41	0.20	0.70	0.28
DEC	30	1009	1.41	0.20	1.01	0.19
DEC		24237	67.88	9.45	24.24	0.39
DAILY AVG		782				
MAX		1009				

TOWNSHIP OF RUSSELL
MARIONVILLE/RUSSELL POST WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE				
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L
JAN		25105	83.30	11.60	25.11	0.43
FEB		21811	70.10	9.76	21.81	0.44
MAR		24070	77.45	10.78	24.07	0.43
APR		23545	68.84	9.58	23.55	0.41
MAY		28040	81.49	11.34	28.04	0.40
JUNE		31130	86.20	12.00	31.13	0.39
JULY		25688	94.13	13.10	25.69	0.50
AUG		30024	107.95	15.03	30.02	0.50
SEP		29847	83.35	11.60	29.85	0.48
OCT		24187	87.70	12.21	24.19	0.48
NOV		22711	82.50	11.48	22.71	0.49
DEC		24237	67.88	9.45	24.24	0.39
TOTAL		310,395	990.89	137.93	310.40	0.45

MARIONVILLE WATER

CAPACITY REPORT

DECEMBER 31, 2005

WATER CAPACITY		
Residential Units	101 x 3.0 =	303
Apartment Units	5 x 2.0 =	10
Commercial Units	2 x 1 =	2
Residential/Commercial	3 x 1 =	3
Senior Citizen Apartments	22 x 1 =	22
Schools	=	9
TOTAL POPULATION SERVICED		349

APPROVED SUBDIVISION LOTS	NUMBER OF LOTS
Vacant Lots Infilling	14

TOTAL VACANT LOTS		=	14
TOTAL POPULATION SERVICEABLE	14 x 3.0	=	42 PERSONS
DESIGN CAPACITY		=	350 PERSONS

NOTE: AVERAGE PERSONS PER HOUSEHOLD = 3.0 (STATISTICS CANANA 1996)
SCHOOLS POPULATION BASIS: @ 40% RURAL) 3 (8 HR SCHOOL DAY)
@ 60% URBAN) 3 (8 HR SCHOOL DAY)

MARIONVILLE
WATER FLOWS AND CONSUMPTION
2005

DATE 2004	FLOW (m^3)	DAILY AVERAGE (m^3)	POPULATION	DAYS	AVERAGE PERSON/DAY (m^3)
JAN	2,934	95	349	31	0.271
FEB	1,913	68	349	28	0.196
MAR	2,205	71	349	31	0.204
APR	2,071	69	349	30	0.198
MAY	3,625	117	349	31	0.335
JUNE	3,669	122	349	30	0.350
JULY	2,937	95	349	31	0.271
AUG	3,435	111	349	31	0.317
SEP	2,467	82	349	30	0.236
OCT	3,183	103	349	31	0.294
NOV	2,168	72	349	30	0.207
DEC	2,404	78	349	31	0.222
TOTAL	33,011	90	349		0.259
2004	28,662	78	349		0.225
2003	26,785	73	349		0.210
2002	26,515	73	349		0.259
2001	27,098	77	349		0.220
2000	50,317	74	346		0.212
1999	32,846	90	383		0.234

ANNUAL SUMMARY - DISTRIBUTION SYSTEM BACTERIOLOGICAL DATA

WATER WORKS NAME: MARIONVILLE
YEAR: 2005
SERVICED POPULATION: 349
LABORATORIES WHICH PERFORMED ANALYSES: ACCUTEST LABORATORIES

MONTH	TOTAL COLIFORM				FECAL COLIFORM/ESCHERICHIA			HPC		
	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES DETERIORATING	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES UNSAFE	NO. OF SAMPLES COLLECTED	NO. OF SAMPLES SAFE	NO. OF SAMPLES DETERIORATING
JAN	8	8	0	0	12	12	0	12	12	0
FEB	8	8	0	0	12	12	0	12	12	0
MAR	10	10	0	0	15	15	0	15	15	0
APR	8	8	0	0	12	12	0	12	12	0
MAY	10	10	0	0	10	10	0	10	10	0
JUN	8	8	0	0	8	8	0	8	8	0
JUL	8	8	0	0	8	8	0	8	8	0
AUG	12	12	0	0	12	12	0	12	12	0
SEP	8	8	0	0	8	8	0	8	8	0
OCT	8	8	0	0	8	8	0	8	8	0
NOV	10	10	0	0	10	10	0	10	10	0
DEC	8	8	0	0	8	8	0	8	8	0
TOTAL	106	106	0	0	123	123	0	123	123	0

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JAN	3	842	3.10	0.43	0.84	0.51	349	2.41	0.34
JAN	10	422	1.62	0.23	0.42	0.53	349	1.21	0.17
JAN	17	468	1.61	0.22	0.47	0.48	349	1.34	0.19
JAN	24	508	1.65	0.23	0.51	0.45	349	1.46	0.21
JAN	31	694	2.09	0.29	0.69	0.42	349	1.99	0.28
JAN		2934	10.07	1.40	2.93	0.48	349	1.68	0.24
AVG		95							
MAX		120							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
FEB	7	360	1.15	0.16	0.36	0.44	349	1.03	0.15
FEB	14	537	1.74	0.24	0.54	0.45	349	1.54	0.22
FEB	21	534	1.69	0.24	0.53	0.44	349	1.53	0.22
FEB	28	482	1.74	0.24	0.48	0.50	349	1.38	0.20
FEB		1913	6.32	0.88	1.91	0.46	349	1.37	0.20
AVG		68							
MAX		77							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
MAR	7	510	1.48	0.21	0.51	0.40	349	1.46	0.21
MAR	14	505	1.69	0.24	0.51	0.47	349	1.45	0.21
MAR	21	505	1.84	0.26	0.51	0.51	349	1.45	0.21
MAR	28	685	2.26	0.31	0.69	0.46	349	1.96	0.28
MAR		2205	7.27	1.01	2.21	0.46	349	1.58	0.23
AVG		71							
MAX		98							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
APR	4	565	1.69	0.24	0.57	0.42	349	1.62	0.23
APR	11	433	1.25	0.17	0.43	0.40	349	1.24	0.18
APR	18	543	1.46	0.20	0.54	0.37	349	1.56	0.22
APR	25	530	1.55	0.22	0.53	0.41	349	1.52	0.22
APR		2071	5.95	0.83	2.07	0.40	349	1.48	0.21
AVG		69							
MAX		81							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
MAY	2	583	1.78	0.25	0.58	0.43	349	1.67	0.24
MAY	9	646	1.81	0.25	0.65	0.39	349	1.85	0.26
MAY	16	751	1.98	0.28	0.75	0.37	349	2.15	0.31
MAY	23	582	1.69	0.24	0.58	0.40	349	1.67	0.24
MAY	30	1063	3.25	0.45	1.06	0.43	349	3.05	0.44
MAY		3625	10.51	1.46	3.63	0.40	349	2.08	0.30
AVG		117							
MAX		152							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JUNE	6	1150	3.20	0.45	1.15	0.39	349	3.30	0.47
JUNE	13	1438	3.55	0.49	1.44	0.34	349	4.12	0.59
JUNE	20	369	0.87	0.12	0.37	0.33	349	1.06	0.15
JUNE	27	712	2.18	0.30	0.71	0.43	349	2.04	0.29
JUN		3669	9.80	1.36	3.67	0.37	349	2.63	0.38
AVG		122							
MAX		205							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JULY	4	834	2.60	0.36	0.83	0.43	349	2.39	0.34
JULY	11	717	2.66	0.37	0.72	0.52	349	2.05	0.29
JULY	18	624	2.17	0.30	0.62	0.48	349	1.79	0.26
JULY	25	762	3.00	0.42	0.76	0.55	349	2.18	0.31
JUL		2937	10.43	1.45	2.94	0.50	349	2.10	0.30
AVG		95							
MAX		119							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
AUG	1	707	2.70	0.38	0.71	0.53	349	2.03	0.29
AUG	8	786	2.75	0.38	0.79	0.49	349	2.25	0.32
AUG	15	727	2.44	0.34	0.73	0.47	349	2.08	0.30
AUG	22	739	2.70	0.38	0.74	0.51	349	2.12	0.30
AUG	29	476	1.85	0.26	0.48	0.54	349	1.36	0.19
AUG		3435	12.44	1.73	3.44	0.51	349	1.97	0.28
AVG		111							
MAX		112							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
SEP	5	857	2.79	0.39	0.86	0.45	349	2.46	0.35
SEP	12	423	1.54	0.21	0.42	0.51	349	1.21	0.17
SEP	19	712	2.37	0.33	0.71	0.46	349	2.04	0.29
SEP	26	475	1.74	0.24	0.48	0.51	349	1.36	0.19
SEP		2467	8.44	1.17	2.47	0.48	349	1.77	0.25
AVG		82							
MAX		122							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
OCT	3	594	2.49	0.35	0.59	0.58	349	1.70	0.24
OCT	10	784	2.54	0.35	0.78	0.45	349	2.25	0.32
OCT	17	558	1.88	0.26	0.56	0.47	349	1.60	0.23
OCT	24	634	1.35	0.19	0.63	0.30	349	1.82	0.26
OCT	31	613	2.37	0.33	0.61	0.54	349	1.76	0.25
OCT		3183	10.63	1.48	3.18	0.47	349	1.82	0.26
AVG		103							
MAX		112							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
NOV	7	519	2.07	0.29	0.52	0.56	349	1.49	0.21
NOV	14	571	2.07	0.29	0.57	0.50	349	1.64	0.23
NOV	21	585	1.97	0.27	0.59	0.47	349	1.68	0.24
NOV	28	493	1.74	0.24	0.49	0.49	349	1.41	0.20
NOV		2168	7.85	1.09	2.17	0.50	349	1.55	0.22
AVG		72							
MAX		88							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
DEC	5	620	2.49	0.35	0.62	0.56	349	1.78	0.25
DEC	12	555	1.84	0.26	0.56	0.46	349	1.59	0.23
DEC	19	512	1.50	0.21	0.51	0.41	349	1.47	0.21
DEC	26	717	1.52	0.21	0.72	0.30	349	2.05	0.29
DEC		2404	7.35	1.02	2.40	0.43	349	1.72	0.25
AVG		78							
MAX		102							

MARIONVILLE WATER PUMPAGE CHARTS
2005

		POST HYPOCHLORITE							
Mth	DAY	TOTAL POST M3	# OF LTS	# OF KGS	M3 /1000	MG/L	POP	M3 POP/DAY	M3 P/DAY
JAN		2934	10.07	1.40	2.93	0.48	349	1.68	0.24
FEB		1913	6.32	0.88	1.91	0.46	349	1.37	0.20
MAR		2205	7.27	1.01	2.21	0.46	349	1.58	0.23
APR		2071	5.95	0.83	2.07	0.40	349	1.48	0.21
MAY		3625	10.51	1.46	3.63	0.40	349	2.08	0.30
JUNE		3669	9.80	1.36	3.67	0.37	349	2.63	0.38
JULY		2937	10.43	1.45	2.94	0.50	349	2.10	0.30
AUG		3435	12.44	1.73	3.44	0.51	349	1.97	0.28
SEP		2467	8.44	1.17	2.47	0.48	349	1.77	0.25
OCT		3183	10.63	1.48	3.18	0.47	349	1.82	0.26
NOV		2168	7.85	1.09	2.17	0.50	349	1.55	0.22
DEC		2404	7.35	1.02	2.40	0.43	349	1.72	0.25
TOTAL		33,011	107.06	14.90	33.01	0.46	349	1.81	0.26

MUNICIPALITÉ DE
TOWNSHIP OF **RUSSELL**

March 31, 2006

Rhéal Délaquis
Ministry of Environment
113 Amelia Street, 2nd floor
Cornwall, Ontario
K6H 3P1

Re : Annual Operations Report – 2005
Embrun Sewer

Enclosed is a copy of our 2005 Operations Compliance Report. Included is a summary of all monitoring data as required under certificate #3-1143-80-987 for the purpose of interpretation, comparison, quality and quantity of influent, effluent and general operations. The facility has met all the terms and conditions of the COA with the exception of condition 2.1 which was addressed to the Ministry in writing on January 13th 2006. A copy of the letter and the sampling procedure is attached for your review.

Phase 2 of the ESR for the expansion of the Embrun sewage lagoon is expected to be completed by June 2006.

There were no bypassing events in 2005.

Should you have any questions, please do not hesitate to contact our office at (613) 443-1747.

Sincerely,

Craig Cullen, Superintendent
Public Utilities

cc: Members of Council
L. Hurdle, Director Corporate Services

Encl.

717 Notre-Dame, Embrun, ON K0A 1W1
Tel.: (613) 443-3066 FAX: (613) 443-1042
www.russell.twp.on.ca www.canton.russell.on.ca

EMBRUN LAGOON SPRING DISCHARGE - 2006

MONITORING AND RECORDING CONDITIONS - COA #3-1143-80-987

Prepared by: Public Utilities

Discharge not exceeding 457,300 m^3 between March 15 to- April 30 - (discharge monitoring form to be completed)

PRE-DISCHARGE LAGOON CELLS

CASTOR RIVER PARAMETER	MINIMUM FREQUENCY	COLLECTION LOCATION	# SAMPLES	OPERATOR	DATE SAMPLED	DATE SUBMITTED	DELIVERY VIA	DATE RCVD REPORT	RCVD BY
Total Phosphorus	Pre-Discharge	Lagoon cells 1-6	1						
Hydrogen Sulphide	Pre-Discharge	Lagoon cells 1-6	1						
Bacteria	Pre-Discharge	Lagoon cells 1-6	1						

CASTOR RIVER / LAGOON FINAL EFFLUENT

Samples of final effluent shall be collected at least 5 times during discharge, at the beginning, at 25%, 50%, 75% and at the end.

CASTOR RIVER PARAMETER	MINIMUM FREQUENCY	COLLECTION LOCATION	# SAMPLES	OPERATOR	DATE SAMPLED	DATE SUBMITTED	DELIVERY VIA	DATE RCVD REPORT	RCVD BY
Chemicals & Bacti	Beginning	Upstream at St.Joseph bridge southbank	1						
		Upstream at St.Joseph bridge northbank	1						
		Upstream at St.Joseph bridge mid-stream	1						
		Downtream at St.Joseph bridge southbank	1						
		Downstream at St.Joseph bridge northbank	1						
		Downstream at St.Albert Rd. bridge mid-stream	1						
		Lagoon	1						
Chemicals & Bacti	25%	Lagoon	1						
Chemicals & Bacti	50%	Lagoon	1						
Chemicals & Bacti	75%	Lagoon	1						
Chemicals & Bacti	End	Upstream at St.Joseph bridge southbank	1						
		Upstream at St.Joseph bridge northbank	1						
		Upstream at St.Joseph bridge mid-stream	1						
		Downtream at St.Joseph bridge southbank	1						
		Downstream at St.Joseph bridge northbank	1						
		Downstream at St.Albert Rd. bridge mid-stream	1						
		Lagoon	1						

Chemicals: BOD_5, SS, TP, Ammonia + Ammonium, Nitrogen, pH, Dissolved Oxygen, Temperature (H2S lagoon)

MUNICIPALITÉ DE
TOWNSHIP OF **RUSSELL**

January 13, 2006

Ministry of Environment
113 Amelia Street, 2nd floor
Cornwall ON
K6H 3P1

ATTENTION: Rhéal Délaquis, Senior Environmental Officer

RE: Embrun Lagoon Fall Discharge – Suspended Solids Correction

---

Upon review of the chemical results data for the Embrun lagoon fall discharge I offer the following comments:

1) Pre-discharge sampling of the six (6) cells was completed. Cells 3,4,5,6 are normally discharged during the fall discharge period. The suspended solids for these cells tested as follows:

Cell #	SS mg/L
3	3
4	12
5	5
6	9

2) Lab sample report #421914 (attached) is inconsistent with other samples collected during the discharge period.

3) As discussed, Accutest laboratory was informed of the inconsistencies and have reviewed their data concerning the sample.

4) Although the sample shelf time had exceeded, I asked that the sample be re-checked for suspended solids and the result was 4 mg/L.

.../2

717 Notre-Dame, Embrun, ON K0A 1W1
Tel.: (613) 443-3066 FAX: (613) 443-1042
www.russell.twp.on.ca www.canton.russell.on.ca

5) Accutest issued a correction report #2522076 (attached) to replace #421914 and have declared that suspended solids data was incorrect and is considered a non-reportable sample.

6) Our D2 and S1 forms will be revised to disregard the suspended solids sample on report #421914 and will be available for your review on January 27, 2006.

7) There were only four (4) samples taken for the fall discharge period and our certificate of approval requires five (5). This oversight is a result of the fact that both the Embrun and Russell lagoons were being discharged at the same time five (5) samples were taken in Russell and only four (4) in Embrun. I will review the sampling protocol and procedure and incorporate a check-off system to ensure that this does not happen again in the future.

If you have any questions or require additional information you may contact me at (613) 443-1747.

Sincerely,

Craig Cullen
Superintendent
Public Utilities

CC/cg

cc: L. Hurdle, Director of Corporate Affairs

Enclosures: Pre-discharge sample Report # 2521188
Reports showing inconsistent test results for suspended solids
Correction Report #2522076

EMBRUN

SANITARY CAPACITY REPORT

DECEMBER 31, 2005

Residential Units	1432 x 3.0 =	4296
Apartment Units	284 x 2.0 =	568
Commercial Units	160 x 1 =	160
Residential Units/Commercial	29 x 1 =	29
Senior Citizen Apartments	45 x 1 =	45
St-Jacques Nursing Home	99 x 1 =	99
Le Pavillon	60 x 1 =	60
Schools	=	171
TOTAL POPULATION SERVICED		5428

APPROVED LOTS	PLAN #	LOTS
Infilling – vacant lots during original construction		1
Melanie - Quartier Frontenac – Phase 4	50M-252	5
Lapointe - Maplevale	50M-239	23
Lemieux - Camelot – Phase 2	50M-246	2
Lamadeleine - Valecraft – Phase 3	50M-261	26
Lemieux – Camelot – Phase 3	50M-262	6
Hockey Academy	Not registered	28
S. Joly	Not registered	7
Lemieux – Camelot – Phase 4	50M-263	3
TOTAL		101

TOTAL POPULATION SERVICEABLE 101 x 3.0 = 303 PERSONS

DESIGN CAPACITY = 6000 PERSONS

EMBRUN

SEWAGE FLOWS

2005

DATE	METER READING	AVERAGE MONTHLY (m^3)	AVERAGE DAILY (m^3)	POP	DAYS	AVERAGE SEWAGE (m^3)
01-Jan	8162721					
31-Jan	8214792	52,071	1,680	5064	31	0.332
28-Feb	8256441	41,649	1,487	5064	28	0.294
31-Mar	8309684	53,243	1,718	5064	31	0.339
30-Apr	8373456	63,772	2,126	5064	30	0.420
31-May	8428333	54,877	1,770	5064	31	0.350
30-Jun	8482115	53,782	1,793	5064	30	0.354
31-Jul	8529626	47,511	1,533	5064	31	0.303
31-Aug	8577495	47,869	1,544	5064	31	0.305
30-Sep	8623634	46,139	1,538	5064	30	0.304
31-Oct	8680165	56,531	1,824	5064	31	0.360
30-Nov	8735843	55,678	1,856	5064	30	0.366
31-Dec	8786399	50,556	1,631	5064	31	0.322
AVG m^3		51,973	1,708			0.337
TOTAL m^3		623,678				
IRON RES						

YEAR	TOTAL YEARLY m^3	AVERAGE MONTHLY m^3	AVERAGE DAILY m^3	POP		AVERAGE SEWAGE m^3
2004	608,532	50,711	1,666	4712		0.354
2003	542,835	45,236	1,483	4178		0.356
2002	489,647	40,804	1,342	3829		0.350
2001	459,182	38,265	1,259	3672		0.343
2000	482,857	40,238	1,320	3717		0.355
1999	470,801	39,233	1,287	3638		0.354

EMBRUN HYDRAULIC RESERVE
ACTUAL CAPACITY SEWAGE
As of December 31, 2005

2005	= 1708 m^3/D	SERVICED POPULATION = 5428	FLOW = .337 m^3/D/C
2004	= 1663 m^3/D	SERVICED POPULATION = 5064	FLOW = .353 m^3/D/C
2003	= 1486 m^3/D	SERVICED POPULATION = 4712	FLOW = .356 m^3/D/C

AVERAGE = .349 m^3/D/C
AS OF DECEMBER 31, 2005
AT .349 m^3/D/C FLOW x 5428 = 1894 m^3/D

DESIGN FLOW = .360 m^3/D/C
DESIGN POPULATION = 6000
FLOW = 2160 m^3/DAY

CR = 2160 m^3/DAY - 1894 m^3/DAY = 266 m^3/DAY

P = EXISTING RESIDENTIAL POPULATION CONNECTED = 4296 AS OF DECEMBER 31, 2005

H = NO. OF CONNECTED RESIDENTIAL UNITS = 1432

A = NO. OF RESIDENTIAL APARTMENTS = 284/3 = 94 RESIDENTIAL UNITS APT. POP. = 568

F = EXISTING PER CAPITA FLOW = .349 m^3/DAY

D = DENSITY = 3.0

O = COM/RES, COMMERCIAL, SENIORS, SCHOOLS, OTHER = 564 TOTAL POPULATION

L = NO. OF UNCOMMITTED APPROVED LOTS = 101 x 3.0 = 303 population
+ ALLOCATED SEPTIC SYSTEM LOTS FOR FUTURE

SUMMARY = CU = CR - (L x F) x O
= 266 - (101 x .349) x 3
= 266 - 105
= 161 m^3/DAY UNCOMMITED RESERVE
HYDRAULIC CAPACITY FOR AVERAGE DAILY FLOW

UNCOMMITED NO. OF LOTS (LU)

LU = CU / D x F WHERE D = P / H
= 161 / 3.0 x .349
= 161 / 1.05
= 153

EMBRUN
COMPLIANCE STATUS REPORT - SEWAGE
2005

PROJECT: EMBRUN SEWAGE WORKS **COURSE: CASTOR**
WORKS NUMBER: 120002004 **DESIGN CAPACITY:** 2160 m^3/D

	FLOWS						SUSPENDED SOLIDS			PHOSPHORUS		
MONTH	TOTAL FLOW 1000 m^3	AVG DAY FLOW 1000 m^3	MAX DAY FLOW 1000 m^3	AVG RAW BOD mg/L	AVG EFF BOD mg/L	PERCENT REMOVAL	AVG RAW SS mg/L	AVG EFF SS mg/L	PERCENT REMOVAL	AVG RAW PHOS.	AVG EFF PHOS.	PERCENT REMOVAL
JAN	52.07	1.68	2.19	149			282			5.4		
FEB	41.65	1.49	1.77	155			160			6.1		
MAR	53.24	1.72	2.50	155			192			6.1		
APR	63.77	2.13	3.83	67	5.0	92	137	17.0	94	3.4	0.18	95
MAY	54.88	1.77	2.49	108			254			6.4		
JUN	53.78	1.79	3.19	114			192			4.8		
JUL	47.51	1.53	1.92	70			280			5.5		
AUG	47.87	1.54	1.74	128			355			5.2		
SEP	46.14	1.54	1.82	186			285			6.9		
OCT	56.53	1.82	2.27	178	1.0	99	195	4.0	98	6.6	0.47	93
NOV	55.68	1.86	2.73	118	3.0	87	1190	55.0	95	6.4	0.41	94
DEC	50.56	1.63	2.20	119			186			6.3		
TOTAL	623.68											
AVG	51.97	1.71		129	3.0		309	25.3		5.8	0.4	
CRITERIA					25.0			25.0			1	

EMBRUN LAGOON DISCHARGE FLOWS - SPRING 2005

DATE	TIME	METER READING	DISCHARGE FLOW (m^3)	TOTAL DISCHARGE FLOW (m^3)	LAGOON D.O.	RIVER UP STREAM D.O.	RIVER DOWN STREAM D.O.	H^2S	EFFLUENT QUALITY	RIVER FLOW	TEMP
01-Apr	3:30 PM	2182540						0	ok	78.8	2 °
02-Apr	8:30 AM	2220873	38,333	38,333	16.8	10.6	11.1	0	ok	61.7	2 °
03-Apr	9:00 AM	2271477	50,604	88,937				0	ok	78.8	2 °
04-Apr	8:20 AM	2324327	52,850	141,787	14.1	8.2	8.0	0	ok	78.8	3 °
05-Apr	8:30 AM	2366429	42,102	183,889				0	ok	71.0	3 °
06-Apr	8:30 AM	2397127	30,698	214,587	15.2	10.1	11.1	0	ok	35.8	5 °
07-Apr	8:30 AM	2420194	23,067	237,654				0	ok	36.6	5 °
08-Apr	8:30 AM	2444441	24,247	261,901				0	ok	59.9	6 °
09-Apr	7:30 AM	2464954	20,513	282,414				0	ok	37.9	6 °
10-Apr	7:15 AM	2484999	20,045	302,459				0	ok	26.0	6 °
11-Apr	8:30 AM	2501899	16,900	319,359	11.7	11	10.9	0	ok	17.4	6 °
12-Apr	10:30 AM	2513963	12,064	331,423				0	ok	13.6	6 °
13-Apr	8:30 AM	2522413	8,450	339,873				0	ok	12.6	6 °
14-Apr	8:30 AM	2530594	8,181	348,054				0	ok	11.9	6 °
15-Apr	8:30 AM	2537982	7,388	355,442				0	ok	10.5	6 °
16-Apr	9:30 AM	2544887	6,905	362,347				0	ok	8.5	7 °
17-Apr	2:00 PM	2552304	7,417	369,764				0	ok	9.5	8 °
18-Apr	8:30 AM	2557416	5,112	374,876				0	ok	7.9	9 °
19-Apr	8:30 AM	2563419	6,003	380,879				0	ok	7.7	10 °
20-Apr	8:30 AM	2569555	6,136	387,015				0	ok	8.4	11 °

DATE	TIME	METER READING	DISCHARGE FLOW (m^3)	TOTAL DISCHARGE FLOW (m^3)	LAGOON D.O.	RIVER UP STREAM D.O.	RIVER DOWN STREAM D.O.	H^2S	EFFLUENT QUALITY	RIVER FLOW	TEMP
21-Apr	8:30 AM	2575876	6,321	393,336				0	ok	10.4	11 °
22-Apr	8:30 AM	2584636	8,760	402,096				0	ok	9.8	11 °
23-Apr	9:30 AM	2592663	8,027	410,123				0	ok	12.6	11 °
24-Apr	7:00 AM	2601067	8,404	418,527				0	ok	22.0	11 °
25-Apr	11:00 AM	2603880	2,813	421,340	10.1	11.2	11.4	0	ok	29.5	11 °
TOTAL			421,340		13.6						

Waste Stabilization Ponds and Aerated Lagoons

UTILITY MONITORING SYSTEM

D2

Municipality: Township of Russell
Project Name: Village of Embrun
Project Number: 120002004
Superintendent: Craig Cullen

DATE: APRIL 2005

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOT	AV
FINAL EFFLUENT*																																	
EFF FLOW 10^3m^3		38.3	50.6	52.9	42.1	30.7	23.1	24.2	20.5	20.0	16.9	12.1	8.5	8.2	7.4	6.9	7.4	5.1	6.0	6.1	6.3	8.8	8.0	8.4	2.8							421.3	
DURATION (hrs)	8.5	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	11							571.5	
BOD mg/L		6		7		8					5													<1								5
SS mg/L		16		19		14					28													6								17
AMMONIA mg/L		1.95		5.26		6.96					6.69													2.35								4.4
TKN mg/L		9.66		9.36		10.6					8.73													4.58								8.5
NITRITE mg/L		<0.10		<0.10		<0.10					<0.10													0.19								.1
NITRATE mg/L		3.32		1.52		1.48					1.99													3.77								2.4
TOT. P. mg/L		0.13		0.23		0.25					0.19													0.08								0.1
H_2S mg/L		0		0		0					0													0								0
pH mg/L		7.85		7.75		7.59					7.57													7.64								7.6
ALUM. - CHEMICALS (BATCH DOSAGE)																																	
VOLUME m^3																																	
DOSAGE mg/L																																	
TOTAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) - INDICATE NUMBER OF SAMPLES IN EACH RANGE																																	
0-1000/100 mL				1		1					1																					3	
1001-100,000/100 mL		1																						1								2	
>100,000/100 mL																																	
FECAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) - INDICATE NUMBER OF SAMPLES IN EACH RANGE																																	
0-1000/100 mL		1		1		1					1													1								5	
1001-100,000/100 mL																																	
>100,000/100 mL																																	

EMBRUN LAGOON DISCHARGE FLOWS - FALL 2005

DATE	TIME	METER READING	DISCHARGE FLOW (m^3)	TOTAL DISCHARGE FLOW (m^3)	LAGOON D.O.	RIVER UP STREAM D.O.	RIVER DOWN STREAM D.O.	H^2S	EFFLUENT QUALITY	RIVER FLOW	TEMP
27-Oct	10:00 AM	2608752						0	ok	32.1	6 °
28-Oct	8:30 AM	2669197	60,445	60,445	13.0	10.2	10.0	0	ok	21.3	6 °
29-Oct	9:00 AM	2730402	61,205	121,650	13.0	10.4	10.1	0	ok	14.4	6 °
30-Oct	8:20 AM	2779344	48,942	170,592				0	ok	11.8	6 °
31-Oct	8:30 AM	2840031	60,687	231,279	12.2	10.6	10.3	0	ok	11.1	6 °
01-Nov	8:30 AM	2859354	19,323	250,602				0	ok	9.9	6 °
02-Nov	8:30 AM	2894822	35,468	286,070	11.3	10.4	10.1	0	ok	8.7	5 °
03-Nov	8:30 AM	2927678	32,856	318,926				0	ok	8.8	5 °
TOTAL				**318,926**							

Waste Stabilization Ponds and Aerated Lagoons

UTILITY MONITORING SYSTEM

D2

Municipality: Township of Russell
Project Name: Village of Embrun
Project Number: 120002004
Superintendent: Craig Cullen

DATE: OCTOBER 2005

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOT	AV
FINAL EFFLUENT*																																	
EFF FLOW 10^3m^3																												60.4	61.2	48.9	60.7	231.2	
DURATION (hrs)																												14	24	24	24	86	
BOD mg/L																												<1	1		1		1
SS mg/L																												3	n/a		5		4
AMMONIA mg/L																												0.04	0.02		0.04		0.0
TKN mg/L																												1.16	1.29		1.51		1.3
NITRITE mg/L																												<0.10	<0.10		<0.10		<0.1
NITRATE mg/L																												0.28	0.33		0.35		0.3
TOT. P. mg/L																												0.49	0.48		0.44		0.4
H_2S mg/L																												0	0		0		0
pH mg/L																												7.94	7.89		7.89		7.9
ALUM. - CHEMICALS (BATCH DOSAGE)																																	
VOLUME m^3																																	
DOSAGE mg/L																																	
TOTAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) - INDICATE NUMBER OF SAMPLES IN EACH RANGE																																	
0-1000/100 mL																												1	1		1	3	
1001-100,000/100 mL																																	
>100,000/100 mL																																	
FECAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) - INDICATE NUMBER OF SAMPLES IN EACH RANGE																																	
0-1000/100 mL																												1	1		1	3	
1001-100,000/100 mL																																	
>100,000/100 mL																																	

Waste Stabilization Ponds and Aerated Lagoons

UTILITY MONITORING SYSTEM

D2

Municipality: Township of Russell
Project Name: Village of Embrun
Project Number: 120002004
Superintendent: Craig Cullen

DATE: November 2005

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOT	AV
FINAL EFFLUENT*																																	
EFF FLOW 10^3m^3	19.3	35.5	32.8																													87.6	
DURATION (hrs)	24	24	10																													58	
BOD mg/L		3																															3
SS mg/L		55																															55
AMMONIA mg/L		.31																															.3
TKN mg/L		1.90																															1.9
NITRITE mg/L		<0.10																															<0.
NITRATE mg/L		0.69																															0.6
TOT. P. mg/L		0.41																															0.4
H_2S mg/L		0																															0
pH mg/L		7.94																															7.9
ALUM. - CHEMICALS (BATCH DOSAGE)																																	
VOLUME m^3																																	
DOSAGE mg/L																																	
TOTAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) - INDICATE NUMBER OF SAMPLES IN EACH RANGE																																	
0-1000/100 mL		1																														1	
1001-100,000/100 mL																																	
>100,000/100 mL																																	
FECAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) - INDICATE NUMBER OF SAMPLES IN EACH RANGE																																	
0-1000/100 mL		1																														1	
1001-100,000/100 mL																																	
>100,000/100 mL																																	

EMBRUN SANITARY SYSTEM
LAGOON ALUM DOSAGE APPLICATION

JANUARY

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg	REFILL	Mg/L
	#1	1325	928	397	160	24	1854.0	196.52		
07/01/2005	#2	1981	1981	0	160	24	0.0	0.00		
	#1	1547	1325	222	160	24	1036.7	109.89	0	
12/01/2005	#2	1985	1981	4	160	24	18.7	1.98	1222	
	#1	0	0	0	160	24	0.0	0.00		
14/01/2005	#2	1353	1222	131	160	24	611.8	64.85		
	#1	0	0	0	160	24	0.0	0.00		
21/01/2005	#2	1680	1353	327	160	24	1527.1	161.87		
	#1	334	0	334	160	24	1559.8	165.34		
28/01/2005	#2	1680	1680	0	160	24	0.0	0.00		
	#1	476	334	142	160	24	663.1	70.29		
31/01/2005	#2	1680	1680	0	160	24	0.0	0.00		
MONTHLY TOTAL:				1557			7271.2	770.75		14.80

FLOW (m^3):	52,071	52.07

D / M / Y
31/01/2005

FEBRUARY

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg	REFILL	Mg/L
	#1	640	476	164	160	24	765.9	81.18		
04/02/2005	#2	1680	1680	0	160	24	0.0	0.00		
	#1	949	640	309	160	24	1443.0	152.96		
11/02/2005	#2	1682	1680	2	160	24	9.3	0.99		
	#1	1265	949	316	160	24	1475.7	156.43		
18/02/2005	#2	1682	1682	0	160	24	0.0	0.00		
	#1	1561	1265	296	160	24	1382.3	146.53		
25/02/2005	#2	1682	1682	0	160	24	0.0	0.00		
	#1	1704	1561	143	160	24	667.8	70.79		
28/02/2005	#2	1682	1682	0	160	24	0.0	0.00		
	#1			0	160	24	0.0	0.00		
	#2			0	160	24	0.0	0.00		
MONTHLY TOTAL:				1230			5744.1	608.87		14.62

FLOW (m^3):	41,649	41.65
28/02/2005		
D / M / Y		

MARCH

D / M / Y	TANK	W2	W1	TOTAL	RR	%	LITRES	Kg	REFILL	Mg/L
	#1	1780	1704	76	160	24	354.9	37.62	55	
02/03/2005	#2	1682	1682	0	160	24	0.0	0.00	1089	
	#1	150	55	95	160	32	443.7	47.03		
04/03/2005	#2	1089	1089	0	160	32	0.0	0.00		
	#1	472	150	322	160	32	1503.7	159.40		
11/03/2005	#2	1089	1089	0	160	32	0.0	0.00		
	#1	778	472	306	160	32	1429.0	151.48		
18/03/2005	#2	1089	1089	0	160	32	0.0	0.00		
	#1	1075	778	297	160	32	1387.0	147.02		
24/03/2005	#2	1089	1089	0	160	32	0.0	0.00		
	#1	1510	1075	435	160	32	2031.5	215.33		
31/03/2005	#2	1089	1089	0	160	32	0.0	0.00		
MONTHLY TOTAL:				1531			7149.8	757.88		14.23

FLOW (m^3):	53,243	53.24

31/03/2005

D / M / Y

APRIL

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg	REFILL	Mg/L
	#1	1585	1510	75	160	32	350.3	37.13		
01/04/2005	#2	1089	1089	0	160	32	0.0	0.00		
	#1	2090	1585	505	160	32	2358.4	249.99		
08/04/2005	#2	1170	1089	81	160	32	378.3	40.10		
	#1	2090	2090	0	160	32	0.0	0.00	68	
13/04/2005	#2	1487	1170	317	160	32	1480.4	156.92	1210	
	#1	68	68	0	160	32	0.0	0.00		
15/04/2005	#2	1325	1210	115	160	32	537.1	56.93		
	#1	68	68	0	160	32	0.0	0.00		
22/04/2005	#2	1695	1325	370	160	32	1727.9	183.16		
	#1	545	68	477	160	32	2227.6	236.12		
29/04/2005	#2	1695	1695	0	160	32	0.0	0.00		
MONTHLY TOTAL:				1940			9059.8	960.34		15.06

FLOW (m^3):	63,772	63.77

30/405

D / M / Y

MAY

D/M/Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg	REFILL	Mg/L
	#1	990	545	445	160	32	2078.2	220.28		
06/05/2005	#2	1700	1695	5	160	32	23.4	2.48		
	#1	1342	990	352	160	32	1643.8	174.25		
13/05/2005	#2	1700	1700	0	160	32	0.0	0.00		
	#1	1666	1342	324	160	32	1513.1	160.39		
20/05/2005	#2	1700	1700	0	160	32	0.0	0.00		
	#1	1869	1666	203	160	32	948.0	100.49	1137	
25/05/2005	#2	1700	1700	0	160	32	0.0	0.00	119	
	#1	1233	1137	96	160	32	448.3	47.52		
27/05/2005	#2	119	119	0	160	32	0.0	0.00		
	#1	1410	1233	177	160	32	826.6	87.62		
31/05/2005	#2	119	119	0	160	32	0.0	0.00		
MONTHLY TOTAL:				1602			7481.3	793.02		14.45

FLOW (m^3):	54,877	54.87
31/05/2005		
D/M/Y		

JUNE

D / M / Y	TANK	W2	W1	TOTAL	P.R.	%	LITRES	Kg	REFILL	Mg/L
	#1	1530	1410	120	160	32	560.4	59.40		
03/06/2005	#2	119	119	0	160	32	0.0	0.00		
	#1	1832	1530	302	160	32	1410.3	149.50		
10/06/2005	#2	119	119	0	160	32	0.0	0.00		
	#1	1832	1832	0	160	32	0.0	0.00		
17/06/2005	#2	512	119	393	160	32	1835.3	194.54		
	#1	1832	1832	0	160	32	0.0	0.00		
24/06/2005	#2	965	512	453	160	32	2115.5	224.24		
	#1	1832	1832	0	160	32	0.0	0.00		
30/06/2005	#2	1260	965	295	160	32	1377.7	146.03		
	#1			0	160	32	0.0	0.00		
	#2			0	160	32	0.0	0.00		
MONTHLY TOTAL:				1563			7299.2	773.72		14.39

FLOW (m^3):	53,782	53.78
30/06/2005		

JULY

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	KG	REFILL	Mg/L
	#1	1832	1832	0	160	32	0.0	0.00		
08/07/2005	#2	1643	1260	383	160	32	1788.6	189.59		
	#1	1832	1832	0	160	32	0.0	0.00	1347	
14/07/2005	#2	1940	1643	297	160	32	1387.0	147.02	107	
	#1	1347	1347	0	160	32	0.0	0.00		
15/07/2005	#2	162	107	55	160	32	256.9	27.23		
	#1	1347	1347	0	160	32	0.0	0.00		
22/07/2005	#2	525	162	363	160	32	1695.2	179.69		
	#1	1347	1347	0	160	32	0.0	0.00		
29/07/2005	#2	841	525	316	160	32	1475.7	156.43		
	#1			0	160	32	0.0	0.00		
	#2			0	160	32	0.0	0.00		
MONTHLY TOTAL:				1414			6603.4	699.96		14.73

FLOW (m^3):	47,510	47.51

29/07/2005

AUGUST

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg.	REFILL	Mg/L
	#1	1347	1347	0	160	32	0.0	0.00		
05/08/2005	#2	1140	841	299	160	32	1396.3	148.01		
	#1	1347	1347	0	160	32	0.0	0.00		
12/08/2005	#2	1434	1140	294	160	32	1373.0	145.54		
	#1	1347	1347	0	160	32	0.0	0.00		
19/08/2005	#2	1723	1434	289	160	32	1349.6	143.06		
	#1	1347	1347	0	160	32	0.0	0.00		
26/08/2005	#2	2009	1723	286	160	32	1335.6	141.58		
31/08/2005	#1	1579	1347	232	160	32	1083.4	114.84		
	#2	2009	2009	0	160	32	0.0	0.00		
	#1			0	160	32	0.0	0.00		
	#2			0	160	32	0.0	0.00		
MONTHLY TOTAL:				1400			6538.0	693.03		14.48

FLOW (m^3):	47,869	47.87
31/08/2005		

SEPT

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg	REFILL	Mg/L
	#1	1670	1579	91	160	32	425.0	45.05		
02/09/2005	#2	2009	2009	0	160	32	0.0	0.00		
	#1	1969	1670	299	160	32	1396.3	148.01	199	
09/09/2005	#2	2059	2009	50	160	32	233.5	24.75	1477	
	#1	204	199	5	160	32	23.4	2.48		
16/09/2005	#2	1791	1477	314	160	32	1466.4	155.44		
	#1	386	204	182	160	32	849.9	90.09		
23/09/2005	#2	1926	1791	135	160	32	630.5	66.83		
	#1	735	386	349	160	32	1629.8	172.76		
30/09/2005	#2	1926	1926	0	160	32	0.0	0.00		
	#1			0	160	32	0.0	0.00		
	#2			0	160	32	0.0	0.00		
MONTHLY TOTAL:				1425			6654.8	705.40		15.29

FLOW (m^3):	46,139	46.14

30/09/2005

OCT

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg	REFILL	Mg/L
	#1	1072	735	337	160	32	1573.8	166.82		
07/10/2005	#2	1926	1926	0	160	32	0.0	0.00		
	#1	1462	1072	390	160	32	1821.3	193.06		
14/10/2005	#2	1926	1926	0	160	32	0.0	0.00		
	#1	1847	1462	385	160	32	1798.0	190.58		
21/10/2005	#2	1926	1926	0	160	32	0.0	0.00		
	#1	2110	1847	263	160	32	1228.2	130.19	205	
26/10/2005	#2	1929	1926	3	160	32	14.0	1.49	1516	
	#1	355	205	150	160	32	700.5	74.25		
28/10/2005	#2	1516	1516	0	160	32	0.0	0.00		
	#1	555	355	200	160	32	934.0	99.00		
31/10/2005	#2	1516	1516	0	160	32	0.0	0.00		
MONTHLY TOTAL:				1728			8069.8	855.39		15.13

FLOW (m^3):	56,531	56.53

31/10/2005

NOV

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg	REFILL	Mg/L
04/11/2005	#1	742	555	187	160	32	873.3	92.57		
	#2	1516	1516	0	160	32	0.0	0.00		
	#1	1075	742	333	160	32	1555.1	164.84		
10/11/2005	#2	1516	1516	0	160	32	0.0	0.00		
	#1	1557	1075	482	160	32	2250.9	238.60		
18/11/2005	#2	1516	1516	0	160	32	0.0	0.00		
	#1	1779	1557	222	160	32	1036.7	109.89	805	
22/11/2005	#2	1516	1516	0	160	32	0.0	0.00	179	
	#1	805	805	0	160	32	0.0	0.00		
25/11/2005	#2	332	179	153	160	32	714.5	75.74		
	#1	805	805	0	160	32	0.0	0.00		
30/11/2005	#2	636	332	304	160	32	1419.7	150.49		
MONTHLY TOTAL:				1681			7850.3	832.13		14.95

FLOW (m^3):	55,677	55.67
30/11/2005		

DEC

D / M / Y	TANK	W2	W1	TOTAL	F.R.	%	LITRES	Kg	REFILL	Mg/L
	#1	805	805	0	160	32	0.0	0.00		
02/12/2005	#2	779	636	143	160	32	667.8	70.79		
	#1	805	805	0	160	32	0.0	0.00		
09/12/2005	#2	1169	779	390	160	32	1821.3	193.06		
	#1	805	805	0	160	32	0.0	0.00		
16/12/2005	#2	1515	1169	346	160	32	1615.8	171.28		
	#1	805	805	0	160	32	0.0	0.00		
22/12/2005	#2	1791	1515	276	160	32	1288.9	136.63		
	#1	1194	805	389	160	32	1816.6	192.56		
30/12/2005	#2	1791	1791	0	160	32	0.0	0.00		
	#1			0	160	32	0.0	0.00		
	#2			0	160	32	0.0	0.00		
MONTHLY TOTAL:				1544			7210.5	764.31		15.12

FLOW (m^3):	50,556	50.56

30/12/2005

EMBRUN LAGOON ALUM DOSAGE APPLICATION
2005

MONTH		FLOW (m^3)	TOTAL	LITRES	Kg	Mg/L
JAN		52,071	1,557	7271.2	770.75	14.80
FEB		41,649	1230	5744.1	608.87	14.62
MAR		53,243	1,531	7149.8	757.88	14.23
APR		63,772	1,940	9,059.8	960.34	15.06
MAY		54,877	1,602	7,481.3	793.02	14.45
JUNE		53,782	1,563	7,299.2	773.72	14.39
JULY		47,510	1,414	6,603.4	699.96	14.73
AUG		47,869	1,400	6,538.0	693.03	14.48
SEP		46,139	1,425	6,654.8	705.40	15.29
OCT		56,531	1,728	8,069.8	855.39	15.13
NOV		55,677	1,681	7,850.3	832.13	14.95
DEC		50,556	1,544	7,210.5	764.31	15.12
ANNUAL TOTAL:		623,676	18,615	86,932.1	9,214.80	14.06

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DATE STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
46	1200020004	01	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

35 FLOWS (12 13)

	Parameter Code		Dec.	Monthly Value
Total Flow	(10^3m^3)	50010 (30 34)	3 (35)	5207.1 (38 46)
Avg. Day Flow	$(10^3m3/d)$	50015	3	168.0
Max. Day Flow	$(10^3m^3/d)$	50020	3	219.2

35 BYPASS (12 13)

					No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	50270	3	0	0 (48 51)
Duration	(Hrs.)	81680	1		

36 RAW SEWAGE (12 13)

				Monthly Average Results	No. of Samples
BOD	(mg/L)	00001	0	149	1
SS	(mg/L)	00006	0	282	1
TKN	(mg/L)	00020	2	49	1
Total P.	(mg/L)	00033	1	5.4	1

39 FINAL EFFLUENT (2 13)

					Seasonal Discharge Lagoons Only
Total Eff. Volume To Watercourse	(10^3m^3)	50280 (30 34)	3 (35)	(38 46)	
Flow Duration	(Hrs.)	81680	1		
Cell Depth	(m)	50290	1		
BOD	(mg/L)	00001	1		
SS	(mg/L)	00006	1		
Ammonia	(mg/L)	00019	2		
TKN	(mg/L)	00020	2		
Total P.	(mg/L)	00033	2		

09 DISINFECTION (12 13)

Chlorine Used	(kg as Cl_2)	50320 (30 34)	1 (35)	(38 46)
Chlorine Dosage	(mg/L as Cl_2)	80410	1	
Chlorine Resid.	(mg/L as Cl_2)	80420	1	(48 51)

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent

(613) 443-1747

Return completed blue form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DATE STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Data Period Year		Discharge Type	Update Code
46	1200020004	02	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

35 FLOWS (12 13)

	Parameter Code		Dec.	Monthly Average Results
Total Flow (10^3m^3)	50010	30 34	3	41649 (38 46)
Avg. Day Flow ($10^3m3/d$)	50015		3	1487
Max. Day Flow ($10^3m^3/d$)	50020		3	1767

35 BYPASS (12 13)

				No. of Occurrences
Plant Bypass Vol.	(10^3m^3) 50270	30 34	3	0 (38 46) (48 51)
Duration	(Hrs.) 81680		1	

36 RAW SEWAGE (12 13)

				Monthly Average Results	No. of Samples
BOD	(mg/L) 00001	30 34	0	155 (38 46)	(48 51)
SS	(mg/L) 00006		0	160	
TKN	(mg/L) 00020		2	57	
Total P.	(mg/L) 00033		1	6.1	

39 FINAL EFFLUENT (2 13)

					Seasonal Discharge Lagoons Only
Total Eff. Volume To Watercourse	(10^3m^3) 50280	30 34	3	(38 46)	(48 51)
Flow Duration	(Hrs.) 81680		1		
Cell Depth	(m) 50290		1		
BOD	(mg/L) 00001		1		
SS	(mg/L) 00006		1		
Ammonia	(mg/L) 00019		2		
TKN	(mg/L) 00020		2		
Total P.	(mg/L) 00033		2		

09 DISINFECTION (12 13)

Chlorine Used	(kg as Cl_2) 50320	30 34	1	(38 46)	(48 51)
Chlorine Dosage	(mg/L as Cl_2) 80410		1		
Chlorine Resid.	(mg/L as Cl_2) 80420		1		

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent

(613) 443-1747

Return completed blue form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DATE STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
46	12000200 4	03	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P. 35

FLOWS (12 13)

	Parameter Code		Dec.	Monthly Average Results
Total Flow	(10^3m^3)	50010	3	5324.3
Avg. Day Flow	$(10^3m3/d)$	50015	3	171.8
Max. Day Flow	$(10^3m^3/d)$	50020	3	25.03

(30 34) (35) (38 46)

BYPASS (35) (12 13)

					No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	50270	3	0	0
Duration	(Hrs.)	81680	1		

(30 34) (35) (38 46) (48 51)

RAW SEWAGE (36) (12 13)

				Monthly Average Results	No. of Samples
BOD	(mg/L)	00001	0	155	1
SS	(mg/L)	00006	0	192	1
TKN	(mg/L)	00020	2	53	1
Total P.	(mg/L)	00033	1	6.1	1

(30 34) (35) (38 46) (48 51)

FINAL EFFLUENT (39) (2 13)

					Seasonal Discharge Lagoons Only
Total Effl. Volume To Watercourse	(10^3m^3)	50280	3		
Flow Duration	(Hrs.)	81680	1		
Cell Depth	(m)	50290	1		
BOD	(mg/L)	00001	1		
SS	(mg/L)	00006	1		
Ammonia	(mg/L)	00019	2		
TKN	(mg/L)	00020	2		
Total P.	(mg/L)	00033	2		

(30 34) (35) (38 46) (48 51)

DISINFECTION (09) (12 13)

Chlorine Used	(kg as Cl_2)	50320	1	
Chlorine Dosage	(mg/L as Cl_2)	80410	1	
Chlorine Resid.	(mg/L as Cl_2)	80420	1	

(30 34) (35) (38 46) (48 51)

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent

(613) 443-1747

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Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	0 4	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.		Parameter Code		Dec.	Monthly Results	
3 5	**FLOWS**					
12 13	Total Flow	(10^3m^3)	5 0 0 1 0	3	6 3 . 7 7 2	
	Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	2 . 1 2 6	
	Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	3 . 8 3 5	
			30 34	35	38 46	
3 5	**BYPASS**					No. of Occurrences
12 13	Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	. 0	0
	Duration	(Hrs.)	8 1 6 8 0	1	.	48 51
			30 34	35	38 46	
3 6	**RAW SEWAGE**				Monthly Average Results	No. of Samples
12 13	BOD	(mg/L)	0 0 0 0 1	0	6 7 . 0	1
	SS	(mg/L)	0 0 0 0 6	0	1 3 7 . 0	1
	TKN	(mg/L)	0 0 0 2 0	2	3 1 . 1	1
	Total P.	(mg/L)	0 0 0 3 3	1	3 . 4	1
			30 34	35	38 46	48 51
3 9	**FINAL EFFLUENT**					
2 13	Total Eff. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	4 2 1 . 3	} Seasonal Discharge Lagoons Only
	Flow Duration	(Hrs.)	8 1 6 8 0	1	5 7 1 . 5	
	Cell Depth	(m)	5 0 2 9 0	1	.	
	BOD	(mg/L)	0 0 0 0 1	1	5 . 0	5
	SS	(mg/L)	0 0 0 0 6	1	1 7 . 0	5
	Ammonia	(mg/L)	0 0 0 1 9	2	4 . 6	5
	TKN	(mg/L)	0 0 0 2 0	2	8 . 6	5
	Total P.	(mg/L)	0 0 0 3 3	2	0 . 2	5
			30 34	35	38 46	48 51
0 9	**DISINFECTION**					
12 13	Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	.	
	Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	.	
	Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	.	
			30 34	35	38 46	48 51

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

c/o Kevin Hosler
Area Supervisor

of the Environment

Municipal Utility Monitoring Program
Lagoons S2

Municipality: TOWNSHIP OF RUSSELL

Project Name: EMBRUN SEWAGE LAGOON

Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON

Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
46	120002004	04	05	31	2	R
1 2	3 11	16	19	20 21	22	80

ADDITIONAL DATA

C.P. 36 RAW SEWAGE (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
CONDUCTIVITY			1784.0	01
DRP			0.05	01
N-NH3			4.6	01
N-N02			0.12	01
N-N03			2.42	01
	30 34	35	38 46	48 51

C.P. 39 FINAL EFFLUENT (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
NITRITE			0.12	05
NITRATE			2.42	05
H2S			0.0	05
pH			7.68	05
	30 34	35	38 46	48 51

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed yellow form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
46	1 2 0 0 0 2 0 0 4	05	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

35 FLOWS

12 13

		Parameter Code	Dec.	Monthly Results
Total Flow	(10^3m^3)	50010 (30–34)	3 (35)	54.877 (38–46)
Avg. Day Flow	$(10^3m3/d)$	50015	3	1.770
Max. Day Flow	$(10^3m^3/d)$	50020	3	2.488

35 BYPASS

12 13

		Parameter Code	Dec.	Monthly Results	No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	50270 (30–34)	3 (35)	0. (38–46)	0 (48–51)
Duration	(Hrs.)	81680	1	.	

36 RAW SEWAGE

12 13

		Parameter Code	Dec.	Monthly Average Results	No. of Samples
BOD	(mg/L)	00001 (30–34)	0 (35)	108.0 (38–46)	(48–51)
SS	(mg/L)	00006	0	254.0	
TKN	(mg/L)	00020	2	43.0	
Total P.	(mg/L)	00033	1	6.4	

39 FINAL EFFLUENT

2 13

		Parameter Code	Dec.	Monthly Results	Seasonal Discharge Lagoons Only
Total Effl. Volume To Watercourse	(10^3m^3)	50280 (30–34)	3 (35)	(38–46)	(48–51)
Flow Duration	(Hrs.)	81680	1		
Cell Depth	(m)	50290	1		
BOD	(mg/L)	00001	1		
SS	(mg/L)	00006	1		
Ammonia	(mg/L)	00019	2		
TKN	(mg/L)	00020	2		
Total P.	(mg/L)	00033	2		

09 DISINFECTION

12 13

		Parameter Code	Dec.	Monthly Results	
Chlorine Used	(kg as Cl_2)	50320 (30–34)	1 (35)	(38–46)	(48–51)
Chlorine Dosage	(mg/L as Cl_2)	80410	1		
Chlorine Resid.	(mg/L as Cl_2)	80420	1		

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Ontario Ministry of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Data Period Year		Discharge Type	Update Code
46	12002004	06	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.			Parameter Code	Dec.	Monthly Results	No. of Occurrences
35	FLOWS					
12 13	Total Flow	(10^3m^3)	50010	3	53.782	
	Avg. Day Flow	$(10^3m3/d)$	50015	3	1.793	
	Max. Day Flow	$(10^3m^3/d)$	50020	3	3.189	
			30 34	35	38 46	48 51
35	BYPASS					
12 13	Plant Bypass Vol.	(10^3m^3)	50270	3	0	0
	Duration	(Hrs.)	81680	1		
			30 34	35	38 46	48 51
36	RAW SEWAGE				Monthly Average Results	No. of Samples
12 13	BOD	(mg/L)	00001	0	140	
	SS	(mg/L)	00006	0	192.0	
	TKN	(mg/L)	00020	2	43.8	
	Total P.	(mg/L)	00033	1	4.8	
			30 34	35	38 46	48 51
39	FINAL EFFLUENT					Seasonal Discharge Lagoons Only
2 13	Total Effl. Volume To Watercourse	(10^3m^3)	50280	3		
	Flow Duration	(Hrs.)	81680	1		
	Cell Depth	(m)	50290	1		
	BOD	(mg/L)	00001	1		
	SS	(mg/L)	00006	1		
	Ammonia	(mg/L)	00019	2		
	TKN	(mg/L)	00020	2		
	Total P.	(mg/L)	00033	2		
			30 34	35	38 46	48 51
09	DISINFECTION					
12 13	Chlorine Used	(kg as Cl_2)	50320	1		
	Chlorine Dosage	(mg/L as Cl_2)	80410	1		
	Chlorine Resid.	(mg/L as Cl_2)	80420	1		
			30 34	35	38 46	48 51

Operator's Comments and Contact Person's Phone number:

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(613) 443-1747

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Ontario Ministry of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	0 7	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.		Parameter Code		Dec.	Monthly Results	
3 5	**FLOWS**					
12 13	Total Flow	(10^3m^3)	5 0 0 1 0	3	4 7 . 5 1 1	
	Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	1 . 5 3 3	
	Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	1 . 9 2 3	
			30 34	35	38 46	
3 5	**BYPASS**					No. of Occurrences
12 13	Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	. 0	0
	Duration	(Hrs.)	8 1 6 8 0	1	.	
			30 34	35	38 46	48 51
3 6	**RAW SEWAGE**				Monthly Average Results	No. of Samples
12 13	BOD	(mg/L)	0 0 0 0 1	0	7 0 .	1
	SS	(mg/L)	0 0 0 0 6	0	2 8 0 .	1
	TKN	(mg/L)	0 0 0 2 0	2	4 0 .	1
	Total P.	(mg/L)	0 0 0 3 3	1	5 . 5	1
			30 34	35	38 46	48 51
3 9	**FINAL EFFLUENT**					
2 13	Total Eff. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	.	Seasonal Discharge Lagoons Only
	Flow Duration	(Hrs.)	8 1 6 8 0	1	.	
	Cell Depth	(m)	5 0 2 9 0	1	.	
	BOD	(mg/L)	0 0 0 0 1	1	.	5
	SS	(mg/L)	0 0 0 0 6	1	.	5
	Ammonia	(mg/L)	0 0 0 1 9	2	.	5
	TKN	(mg/L)	0 0 0 2 0	2	.	5
	Total P.	(mg/L)	0 0 0 3 3	2	.	5
			30 34	35	38 46	48 51
0 9	**DISINFECTION**					
12 13	Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	.	
	Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	.	
	Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	.	
			30 34	35	38 46	48 51

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Rhéal Délaquis, Cornwall District Office, MOE

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	0 8	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

3 5 FLOWS (12 13)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (38–46)
Total Flow	(10^3m^3)	5 0 0 1 0	3	4 7 • 8 6 9
Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	1 • 5 4 4
Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	1 • 7 3 9

3 5 BYPASS (12 13)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (38–46)	No. of Occurrences (48–51)
Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	• 0	0
Duration	(Hrs.)	8 1 6 8 0	1	•	

3 6 RAW SEWAGE (12 13)

		Parameter Code (30–34)	Dec. (35)	Monthly Average Results (38–46)	No. of Samples (48–51)
BOD	(mg/L)	0 0 0 0 1	0	2 8 •	
SS	(mg/L)	0 0 0 0 6	0	3 5 5 •	
TKN	(mg/L)	0 0 0 2 0	2	4 5 •	
Total P.	(mg/L)	0 0 0 3 3	1	5 • 2	

3 9 FINAL EFFLUENT (2 13)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (38–46)	Seasonal Discharge Lagoons Only (48–51)
Total Eff. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	•	
Flow Duration	(Hrs.)	8 1 6 8 0	1	•	
Cell Depth	(m)	5 0 2 9 0	1	•	
BOD	(mg/L)	0 0 0 0 1	1	•	5
SS	(mg/L)	0 0 0 0 6	1	•	5
Ammonia	(mg/L)	0 0 0 1 9	2	•	5
TKN	(mg/L)	0 0 0 2 0	2	•	5
Total P.	(mg/L)	0 0 0 3 3	2	•	5

0 9 DISINFECTION (12 13)

		Parameter Code (30–34)	Dec. (35)	Monthly Results (38–46)
Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	•
Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	•
Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	•

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent
(613) 443-1747

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Rhéal Délaquis, Cornwall District Office, MOE

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	0 9	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.			Parameter Code		Dec.	Monthly Results		
3	5	**FLOWS**						
12	13	Total Flow	(10^3m^3)	5 0 0 1 0	3	4 6 . 1 3 9		
		Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	1 . 5 3 8		
		Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	1 . 8 2 2		
				30 34	35	38 46		
3	5	**BYPASS**					No. of Occurrences	
12	13	Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	. 0	0	
		Duration	(Hrs.)	8 1 6 8 0	1	.	48 51	
				30 34	35	38 46		
3	6	**RAW SEWAGE**				Monthly Average Results	No. of Samples	
12	13	BOD	(mg/L)	0 0 0 0 1	0	1 1 8 6 .		
		SS	(mg/L)	0 0 0 0 6	0	2 8 5 .		
		TKN	(mg/L)	0 0 0 2 0	2	5 1 .		
		Total P.	(mg/L)	0 0 0 3 3	1	6 . 9		
				30 34	35	38 46	48 51	
3	9	**FINAL EFFLUENT**						
2	13	Total Effl. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	.	} Seasonal Discharge Lagoons Only	
		Flow Duration	(Hrs.)	8 1 6 8 0	1	.		
		Cell Depth	(m)	5 0 2 9 0	1	.		
		BOD	(mg/L)	0 0 0 0 1	1	.	5	
		SS	(mg/L)	0 0 0 0 6	1	.	5	
		Ammonia	(mg/L)	0 0 0 1 9	2	.	5	
		TKN	(mg/L)	0 0 0 2 0	2	.	5	
		Total P.	(mg/L)	0 0 0 3 3	2	.	5	
				30 34	35	38 46	48 51	
0	9	**DISINFECTION**						
12	13	Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	.		
		Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	.		
		Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	.		
				30 34	35	38 46	48 51	

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Rhéal Délaquis, Cornwall District Office, MOE

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	1 0	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

	Parameter Code		Dec.	Monthly Results
3 5 FLOWS (12 13)				
Total Flow	(10^3m^3)	5 0 0 1 0	3	5 6 • 5 3 1
Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	1 • 8 2 4
Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	2 • 2 6 7
	30 34		35	38 46

3 5 BYPASS (12 13)

					No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	• 0	0
Duration	(Hrs.)	8 1 6 8 0	1	•	48 51
		30 34	35	38 46	

3 6 RAW SEWAGE (12 13)

				Monthly Average Results	No. of Samples
BOD	(mg/L)	0 0 0 0 1	0	1 7 8 •	
SS	(mg/L)	0 0 0 0 6	0	1 9 5 •	
TKN	(mg/L)	0 0 0 2 0	2	5 3 •	
Total P.	(mg/L)	0 0 0 3 3	1	6 • 6	
		30 34	35	38 46	48 51

3 9 FINAL EFFLUENT (2 13)

					Seasonal Discharge Lagoons Only
Total Effl. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	2 3 1 • 2	
Flow Duration	(Hrs.)	8 1 6 8 0	1	8 6 •	
Cell Depth	(m)	5 0 2 9 0	1	•	
BOD	(mg/L)	0 0 0 0 1	1	1 • 0	3
SS	(mg/L)	0 0 0 0 6	1	3 7 •	3
Ammonia	(mg/L)	0 0 0 1 9	2	0 • 04	3
TKN	(mg/L)	0 0 0 2 0	2	1 • 32	3
Total P.	(mg/L)	0 0 0 3 3	2	0 • 47	3
		30 34	35	38 46	48 51

0 9 DISINFECTION (12 13)

Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	•	
Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	•	
Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	•	
		30 34	35	38 46	48 51

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Rhéal Délaquis, Cornwall District Office, MOE

of the Environment

Municipal Utility Monitoring Program
Lagoons S2

Municipality: TOWNSHIP OF RUSSELL

Project Name: EMBRUN SEWAGE LAGOON

Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON

Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	1 0	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

ADDITIONAL DATA

C.P. 3 6 — RAW SEWAGE (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
CONDUCTIVITY			2000.	01
DRP			4.38	01
N-NH3 Ammonia			44.5	01
N-N02 Nitrite			<0.10	01
N-N03 Nitrate			<0.10	01
	30 34	35	38 46	48 51

C.P. 3 9 — FINAL EFFLUENT (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
NITRITE			<0.10	03
NITRATE			0.32	03
H2S			0.0	03
pH			7.91	03
	30 34	35	38 46	48 51

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed yellow form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	1 1	0 5	3 1	2	R
1 2	3 — 11	16	19	20 21	22	80

C.P.		Parameter Code		Dec.	Monthly Results		No. of Occurrences	No. of Samples
3 5	**FLOWS**							
12 13	Total Flow	(10^3m^3)	5 0 0 1 0	3	55.678			
	Avg. Day Flow	($10^3m3/d$)	5 0 0 1 5	3	1.856			
	Max. Day Flow	($10^3m^3/d$)	5 0 0 2 0	3	2.728			
			30 — 34	35	38 — 46			
3 5	**BYPASS**							
12 13	Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	.0		0	
	Duration	(Hrs.)	8 1 6 8 0	1			48 — 51	
			30 — 34	35	38 — 46			
3 6	**RAW SEWAGE**				Monthly Average Results			
12 13	BOD	(mg/L)	0 0 0 0 1	0	118.			
	SS	(mg/L)	0 0 0 0 6	0	119.0			
	TKN	(mg/L)	0 0 0 2 0	2	46.			
	Total P.	(mg/L)	0 0 0 3 3	1	6.4			
			30 — 34	35	38 — 46		48 — 51	
3 9	**FINAL EFFLUENT**							
2 13	Total Eff. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	87.6	}	Seasonal Discharge Lagoons Only	
	Flow Duration	(Hrs.)	8 1 6 8 0	1	58.			
	Cell Depth	(m)	5 0 2 9 0	1				
	BOD	(mg/L)	0 0 0 0 1	1	3.		2	
	SS	(mg/L)	0 0 0 0 6	1	55.		2	
	Ammonia	(mg/L)	0 0 0 1 9	2	.31		2	
	TKN	(mg/L)	0 0 0 2 0	2	1.90		2	
	Total P.	(mg/L)	0 0 0 3 3	2	0.41		2	
			30 — 34	35	38 — 46		48 — 51	
0 9	**DISINFECTION**							
12 13	Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1				
	Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1				
	Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1				
			30 — 34	35	38 — 46		48 — 51	

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Rhéal Délaquis, Cornwall District Office, MOE

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S2

Municipality: TOWNSHIP OF RUSSELL

Project Name: EMBRUN SEWAGE LAGOON

Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON

Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	1 1	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

ADDITIONAL DATA

C.P. 36 RAW SEWAGE (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
CONDUCTIVITY			1800.	01
DRP			3.51	01
N-NH3 Ammonia			38.0	01
N-N02 Nitrite			0.10	01
N-N03 Nitrate			0.10	01
	30 34	35	38 46	48 51

C.P. 39 FINAL EFFLUENT (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
NITRITE			<0.10	05
NITRATE			0.69	05
H2S			0.0	05
pH			7.94	05
	30 34	35	38 46	48 51

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed yellow form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 2 0 0 0 2 0 0 4	1 2	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.		Parameter Code	Dec.	Monthly Results		
3 5	**FLOWS**					
12 13	Total Flow	(10^3m^3) 5 0 0 1 0	3	5 0 • 5 5 6		
	Avg. Day Flow	$(10^3m3/d)$ 5 0 0 1 5	3	1 • 6 3 1		
	Max. Day Flow	$(10^3m^3/d)$ 5 0 0 2 0	3	2 • 2 0 2		
		30 34	35	38	46	
3 5	**BYPASS**					No. of Occurrences
12 13	Plant Bypass Vol.	(10^3m^3) 5 0 2 7 0	3	• 0		0
	Duration	(Hrs.) 8 1 6 8 0	1	•		48 51
		30 34	35	38	46	
3 6	**RAW SEWAGE**			Monthly Average Results		No. of Samples
12 13	BOD	(mg/L) 0 0 0 0 1	0	1 1 1 9 •		
	SS	(mg/L) 0 0 0 0 6	0	1 1 8 6 •		1
	TKN	(mg/L) 0 0 0 2 0	2	4 7 •		
	Total P.	(mg/L) 0 0 0 3 3	1	6 • 3		
		30 34	35	38	46	48 51
3 9	**FINAL EFFLUENT**					
2 13	Total Effl. Volume To Watercourse	(10^3m^3) 5 0 2 8 0	3	•		} Seasonal Discharge Lagoons Only
	Flow Duration	(Hrs.) 8 1 6 8 0	1	•		
	Cell Depth	(m) 5 0 2 9 0	1	•		
	BOD	(mg/L) 0 0 0 0 1	1	•		5
	SS	(mg/L) 0 0 0 0 6	1	•		5
	Ammonia	(mg/L) 0 0 0 1 9	2	•		5
	TKN	(mg/L) 0 0 0 2 0	2	•		5
	Total P.	(mg/L) 0 0 0 3 3	2	•		5
		30 34	35	38	46	48 51
0 9	**DISINFECTION**					
12 13	Chlorine Used	(kg as Cl_2) 5 0 3 2 0	1	•		
	Chlorine Dosage	(mg/L as Cl_2) 8 0 4 1 0	1	•		
	Chlorine Resid.	(mg/L as Cl_2) 8 0 4 2 0	1	•		
		30 34	35	38	46	48 51

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Rhéal Délaquis, Cornwall District Office, MOE

EMBRUN SEWER COMPLAINTS RECORD - 2005

Date D/M/Y	Address	Complaint	Problem Determined	Action Taken	Operator Signature
31/08/05	1011 Notre-Dame	Sewer backup	Blocked at property	Unblocked by Embrun Sanitation	AC
01/11/05	979 Notre-Dame	Sewer backup	Calcite deposit build-up	Unblocked by Embrun Sanitation	CC
25/12/05	40 La Croisée	Sewer backup			AC

Prepared by: Public Utilities Department

Ontario of the Environment

Municipal Utility Monitoring Program
Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: EMBRUN SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
46	1200020004	12	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

C.P.		Parameter Code	Dec.	Monthly Results	No. of Occurrences / No. of Samples
FLOWS					
35	Total Flow	(10^3m^3) 50100	3	50.556	
	Avg. Day Flow	$(10^3m3/d)$ 50015	3	1.631	
	Max. Day Flow	$(10^3m^3/d)$ 50020	3	2.202	
BYPASS					
35	Plant Bypass Vol.	(10^3m^3) 50270	3	0	0
	Duration	(Hrs.) 81680	1		
RAW SEWAGE				Monthly Average Results	
36	BOD	(mg/L) 00001	0	19.	
	SS	(mg/L) 00006	0	86.	
	TKN	(mg/L) 00020	2	47.	
	Total P.	(mg/L) 00033	1	6.3	
FINAL EFFLUENT					Seasonal Discharge Lagoons Only
29	Total Effl. Volume To Watercourse	(10^3m^3) 50280	3		
	Flow Duration	(Hrs.) 81680	1		
	Cell Depth	(m) 50290	1		
	BOD	(mg/L) 00001	1		5
	SS	(mg/L) 00006	1		5
	Ammonia	(mg/L) 00019	2		5
	TKN	(mg/L) 00020	2		5
	Total P.	(mg/L) 00033	2		5
DISINFECTION					
09	Chlorine Used	(kg as Cl_2) 50320	1		
	Chlorine Dosage	(mg/L as Cl_2) 80410	1		
	Chlorine Resid.	(mg/L as Cl_2) 80420	1		

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Rhéal Délaquis, Cornwall District Office, MOE

EMBRUN SEWER COMPLAINTS RECORD - 2005

Date D/M/Y	Address	Complaint	Problem Determined	Action Taken	Operator Signature
31/08/05	1011 Notre-Dame	Sewer backup	Blocked at property	Unblocked by Embrun Sanitation	AC
01/11/05	979 Notre-Dame	Sewer backup	Calcite deposit build-up	Unblocked by Embrun Sanitation	CC
25/12/05	40 La Croisée	Sewer backup			AC

MUNICIPALITÉ DE
TOWNSHIP OF **RUSSELL**

March 31, 2006

Rhéal Délaquis
Ministry of Environment
113 Amelia Street, 2nd floor
Cornwall, Ontario
K6H 3P1

Re : Annual Operations Report – 2005
Russell Sewer

Enclosed is a copy of our 2005 Operations Compliance Report. Included is a summary of all monitoring data and general operations. The facility is compliant with the exception of suspended solids for the spring discharge which was over the Ministry guideline. Upon review of the pre-discharge sample results and the lagoon samples collected during the discharge, it is noted that one sample result is not consistent with the four other samples making the average higher than the guideline.

It should also be noted that cell #1 was drained to its low level so the Township staff could estimated sludge levels and attempt to dry the sludge for removal. This attempt was unsuccessful as more drying time was required and hydraulically it was not possible with a 2-cell lagoon. The preferred way to de-sludge the lagoon will be after the construction of the new cell planned for 2006. Also, it should be noted that the landfill site COA has to be amended to allow the sludge to be transferred to that site.

Phase 2 of the ESR for the expansion of the Russell lagoon is expected to be completed by April 2006. There were no bypassing events in 2005. Should you have any questions, please do not hesitate to contact our office at (613) 443-1747.

Sincerely,

Craig Cullen, Superintendent
Public Utilities

cc: Members of Council
L. Hurdle, Director Corporate Services

RUSSELL

SANITARY CAPACITY REPORT

DECEMBER 31, 2005

SANITARY CAPACITY				
Residential Units	750	x 3.0	=	2250
Apartment Units	98	x 2	=	196
Commercial Units	60	x 1	=	60
Residential/Commercial	3	x 1	=	3
Senior Citizen Apartments	30	x 1	=	30
Schools			=	172
TOTAL POPULATION SERVICED				2711

APPROVED SUBDIVISION LOTS	PLAN FILE #	NUMBER OF LOTS
Vacant Lots Infilling		9
Corvinelli – Lot 12 Conc. 3		42

TOTAL VACANT LOTS = 51

TOTAL POPULATION SERVICEABLE 51 x 3.0 = 153 PERSONS

DESIGN CAPACITY = 2600 PERSONS

NOTE: AVERAGE PERSONS PER HOUSEHOLD = 3.0 (STATISTICS CANANA 1996)
SCHOOLS POPULATION BASIS: @ 40% RURAL) 3 (8 HR SCHOOL DAY)
@ 60% URBAN) 3 (8 HR SCHOOL DAY)

RUSSELL

SEWAGE FLOWS

2005

DATE	METER READING	AVERAGE MONTHLY (m^3)	AVERAGE DAILY (m^3)	POP	DAYS	AVERAGE SEWAGE (m^3)
01-Jan	735674					
31-Jan	765538	29,864	963	2698	31	0.357
28-Feb	788963	23,425	837	2698	28	0.310
31-Mar	816503	27,540	888	2698	31	0.329
30-Apr	853750	37,247	1,242	2698	30	0.460
31-May	885808	32,058	1,034	2698	31	0.383
30-Jun	915344	29,536	985	2698	30	0.365
31-Jul	940770	25,426	820	2698	31	0.304
31-Aug	964079	23,309	752	2698	31	0.279
30-Sep	988160	24,081	803	2698	30	0.298
31-Oct	1017325	29,165	941	2698	31	0.349
30-Nov	1047664	30,339	1,011	2698	30	0.375
31-Dec	1081054	33,390	1,077	2698	31	0.399
TOTAL m^3		345,380				
AVG m^3		28,782	946			0.351

YEAR	TOTAL YEARLY m^3	AVERAGE MONTHLY m^3	AVERAGE DAILY m^3	POP		AVERAGE SEWAGE m^3
2004	311,549	25,962	851	2657		0.320
2003	299,451	24,954	818	2638		0.310
2002	270,784	22,565	742	2618		0.284
2001	245,801	20,483	674	2531		0.266
2000	264,913	22,076	724	2422		0.299
1999	261,374	21,781	714	2265		0.315

RUSSELL HYDRAULIC RESERVE
ACTUAL CAPACITY SEWAGE
As of December 31, 2005

2005 = 327 m^3/D	SERVICED POPULATION = 2711	FLOW = .351 m^3/D/C
2004 = 851 m^3/D	SERVICED POPULATION = 2698	FLOW = .320 m^3/D/C
2003 = 820 m^3/D	SERVICED POPULATION = 2657	FLOW = .311 m^3/D/C

AVERAGE = .327 m^3/D/C — DESIGN FLOW = .400 m^3/D/C
AS OF DECEMBER 31, 2005 — DESIGN POPULATION = 2600
AT .327 m^3/D/C FLOW x 2711 = 886 m^3/D — FLOW = 1000 m^3/DAY

CR = 1000 m^3/DAY - 886 m^3/DAY = 114 m^3/DAY

P = EXISTING RESIDENTIAL POPULATION CONNECTED = 2250 AS OF DECEMBER 31, 2005

H = NO. OF CONNECTED RESIDENTIAL UNITS = 750

A = NO. OF RESIDENTIAL APARTMENTS = 98 / 3.0 = 33 RES. UNITS APT. POP. = 196

F = EXISTING PER CAPITA FLOW = .327 m^3/DAY

D = DENSITY = 3.0

O = COM/RES, COMMERCIAL, SENIORS, SCHOOLS, OTHER = 265 TOTAL POPULATION

L = NO. OF UNCOMMITTED APPROVED LOTS = 51 x 3.0 = 153

SUMMARY = CU = CR - (L x F) x 3.0
= 114 - (51 x .327) x 3.0
= 114 - 50
= 64 m^3/DAY UNCOMMITED RESERVE
HYDRAULIC CAPACITY FOR AVERAGE DAILY FLOW

UNCOMMITED NO. OF LOTS (LU)

LU = CU / D x F WHERE D = P / H
= 64 / 3.0 x .327
= 65

RUSSELL
COMPLIANCE STATUS REPORT - SEWAGE
2005

PROJECT: RUSSELL SEWAGE WORKS
WORKS NUMBER: 110001514

COURSE: CASTOR
DESIGN CAPACITY: 1000 m^3/D

MONTH	FLOWS			BIOCHEMICAL O^2 DEMAND			SUSPENDED SOLIDS			PHOSPHORUS		
	TOTAL FLOW 1000 m^3	AVG DAY FLOW 1000 m^3	MAX DAY FLOW 1000 m^3	AVG RAW BOD mg/L	AVG EFF BOD mg/L	PERCENT REMOVAL	AVG RAW SS mg/L	AVG EFF SS mg/L	PERCENT REMOVAL	AVG RAW PHOS.	AVG EFF PHOS.	PERCENT REMOVAL
JAN	29.86	0.96	1.35	166			242			5.2		
FEB	23.42	0.84	1.07	191			160			6.2		
MAR	27.54	0.89	1.49	178			124			5.6		
APR	37.28	1.24	2.51	59	30.0	49	116	17.0	85	2.1	0.4	81
MAY	32.06	1.03	1.57	76			126			3.6		
JUN	29.54	0.98	1.80	158			234			4.9		
JUL	25.43	0.82	1.05	80			128			4.7		
AUG	23.31	0.75	0.93	110			95			4.9		
SEP	24.08	0.80	1.02	115			110			6.3		
OCT	29.16	0.94	1.19	202	2.0	99	125	11.3	91	6.1	0.1	87
NOV	30.34	1.01	1.43	109	11.0	90	120	47.0	61	5.3	0.4	92
DEC	33.39	1.08	1.27	101			126			4.5		
TOTAL	345.41											
AVG	28.78	0.95		129	14.3		142	25.1		5.0	0.3	
CRITERIA					25.0			25.0			1	

RUSSELL LAGOON

SPRING DISCHARGE 2005

DATE 2005	*DAY*	*HRS*	*ACTUAL PLUME (mm)*	*SET PLUME (mm)*	*PLUME (L/S)*	*DISCHARGE FLOW $10^3/M^3/DAY$*	*RIVER FLOW (CMS)*	*DILUTION*	*TEMP*	*OPERATOR SIGNATURE*
22-Apr-05	1	14	330	330	128	6.4	9.05	70.7		
23-Apr-05	2	24	330	570	128	11.0	20.50	160.2		
24-Apr-05	3	24	508	580	247	21.3	32.70	132.4		
25-Apr-05	4	24	558	635	286	24.7	21.40	74.8		
26-Apr-05	5	24	635	635	346	29.8	14.90	43.1		
27-Apr-05	6	24	635	460	346	29.8	23.60	68.2		
28-Apr-05	7	24	406	406	174	15.0	24.20	139.1		
29-Apr-05	8	10	304	113	113	9.9	25.00	221.2		
TOTAL		168				147.9				

DATE	D.O. UPSTREAM	D.O. DOWNSTREAM	LAGOON DISCHARGE
22-Apr	10.2	9.9	7.7
25-Apr	10.5	10.2	7.7
29-Apr	10.6	10.7	6.0

Waste Stabilization Ponds and Aerated Lagoons

UTILITY MONITORING SYSTEM

D2

Municipality: Township of Russell
Project Name: Village of Russell
Project Number: 120002004
Superintendent: Craig Cullen

DATE: APRIL 2005

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		TOT
FINAL EFFLUENT*																																
EFF FLOW 10^3m^3																							11.0	21.3	24.7	29.8	29.8	15.0	9.9			141.5
DURATION (hrs)																							24	24	24	24	24	24	24			168
BOD mg/L																							28			39			22			
SS mg/L																							12			17			22			
AMMONIA mg/L																							13.6			13.3			13.3			
TKN mg/L																							20.			18.7			19.			
NITRITE mg/L																							<0.10			<0.10			<0.10			
NITRATE mg/L																							<0.10			<0.10			<0.10			
TOT. P. mg/L																							0.36			0.32			0.42			
H_2S mg/L																							0			0			0			
pH mg/L																							7.08			7.28			7.39			
ALUM. – CHEMICALS (BATCH DOSAGE)																																
VOLUME m^3	25																															
DOSAGE mg/L	14																															
TOTAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) – INDICATE NUMBER OF SAMPLES IN EACH RANGE																																
0-1000/100 mL																																
1001-100,000/100 mL																																
>100,000/100 mL																							1			1			1			3
FECAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) – INDICATE NUMBER OF SAMPLES IN EACH RANGE																																
0-1000/100 mL																																
1001-100,000/100 mL																							1			1			1			3
>100,000/100 mL																																

Alum Dosage

Russell Lagoon Spring

2005

Cell #1		Cell #2	
Elevation	= .56 m	Elev	= .40 m
Working Volume	=	W Vol	=
Volume	= 64.529	Volume	= 73,473
TP	= 4.33	TP	= 2.54
Phosphorus Reduction Target	= 3.83	PRT	= 2.04
Effluent Target Phosphorus	= .50	ETP	= .50
Theoretical Phosphorus Reduction	= 3.84 x 64 = 246 kg = 256 x 14 mg/L = 3,444 kg	TPR	= 2.04 x 73 = 149 kg = 149 x 14 mg/L = 2,086 kg
Total Dosage	=	TD	=
Alum Dosage	= 43,000 kg @ 8 % = 3,440 kg = 6,231 gallons	AD	= 26,000 @ 8% = 2,080 kg = 3,768 gallons

RUSSELL LAGOON
FALL DISCHARGE 2005

DATE 2005	*DAY*	*HRS*	*ACTUAL PLUME (mm)*	*SET PLUME (mm)*	*PLUME (L/S)*	*DISCHARGE FLOW $10^3/M^3/DAY$*	*RIVER FLOW (CMS)*	*DILUTION*	*TEMP*	*OPERATOR SIGNATURE*
27-Oct-05	1	14		635	346	29.80	19.00	54.9	7°	
28-Oct-05	2	24	635	635	346	29.80	16.70	48.2	7°	
29-Oct-05	3	24	405	405	174.6	15.00	9.95	56.9	7°	
30-Oct-05	4	24	405	405	174.6	15.00	7.49	42.8	7°	
31-Oct-05	5	24	305	305	113.4	9.80	6.29	55.4	7°	
1-Nov-05	6	24	280	280	99.5	8.59	5.36	53.8	7°	
2-Nov-05	7	24	202	152	60.6	7.01	4.88	80.5	7°	
3-Nov-05	8	24	152	152	39.8	3.43	4.32	108.5	7°	
4-Nov	9	8	152	152	39.8	1.14	4.16	104.5	7°	
	10									
	11									
	12									
	13									
	14									
	15									
TOTAL						119.57				

DATE	D.O. UPSTREAM	D.O. DOWNSTREAM	LAGOON DISCHARGE
27-Oct	11.0	10.80	9.7
31-Oct	11.1	10.90	9.9
03-Nov	11.5	10.60	8.5

Waste Stabilization Ponds and Aerated Lagoons

UTILITY MONITORING SYSTEM

D2

Municipality: Township of Russell
Project Name: Village of Russell
Project Number: 120002004
Superintendent: Craig Cullen

DATE: OCTOBER 2005

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOT
FINAL EFFLUENT*																																
EFF FLOW 10^3m^3																											29.8	29.8	15.0	15.0	9.80	99.4
DURATION (hrs)																											14	24	24	24	24	110
BOD mg/L																												<1	3		3	
SS mg/L																												6	21		7	
AMMONIA mg/L																												0.57	0.61		0.71	
TKN mg/L																												2.32	2.90		2.75	
NITRITE mg/L																												<0.10	<0.10		<0.10	
NITRATE mg/L																												0.83	0.81		0.70	
TOT. P. mg/L																												0.10	0.14		0.11	
H_2S mg/L																												0	0		0	
pH mg/L																												7.80	7.65		7.42	
ALUM. - CHEMICALS (BATCH DOSAGE)																																
VOLUME m^3																																
DOSAGE mg/L																																
TOTAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) - INDICATE NUMBER OF SAMPLES IN EACH RANGE																																
0-1000/100 mL																																
1001-100,000/100 mL																												1			1	2
>100,000/100 mL																																
FECAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) - INDICATE NUMBER OF SAMPLES IN EACH RANGE																																
0-1000/100 mL																															1	1
1001-100,000/100 mL																												1				1
>100,000/100 mL																																

Waste Stabilization Ponds and Aerated Lagoons

UTILITY MONITORING SYSTEM

D2

Municipality: Township of Russell
Project Name: Village of Russell
Project Number: 120002004
Superintendent: Craig Cullen

DATE: November 2005

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		TOT
FINAL EFFLUENT*																																
EFF FLOW 10^3m^3	8.59	7.01	3.43	1.14																												20.17
DURATION (hrs)	24	24	24	8																												80
BOD mg/L		14		8																												
SS mg/L		50		43																												
AMMONIA mg/L		3.42		5.03																												
TKN mg/L		7.25		7.98																												
NITRITE mg/L		<0.10		<0.10																												
NITRATE mg/L		0.24		0.28																												
TOT. P mg/L		0.46		0.34																												
H_2S mg/L		0		0																												
pH mg/L		7.67		7.76																												
ALUM. – CHEMICALS (BATCH DOSAGE)																																
VOLUME m^3																																
DOSAGE mg/L																																
TOTAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) – INDICATE NUMBER OF SAMPLES IN EACH RANGE																																
0-1000/100 mL																																
1001-100,000/100 mL		1		1																												2
>100,000/100 mL																																
FECAL COLI. - FINAL EFFLUENT* (BACTERIOLOGICAL) – INDICATE NUMBER OF SAMPLES IN EACH RANGE																																
0-1000/100 mL																																
1001-100,000/100 mL		1		1																												2
>100,000/100 mL																																

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON

Operating Authority: MUNICIPAL

Address: 717 NOTRE-DATE STREET, EMBRUN ON

Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	0 1	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

3 5 FLOWS

	Parameter Code		Dec.	Monthl
Total Flow	(10^3m^3)	5 0 0 1 0	3	2 9 8 6 4
Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	9 6 3
Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	1 3 5
		30 34	35	38 46

3 5 BYPASS

					No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	0	0
Duration	(Hrs.)	8 1 6 8 0	1		
		30 34	35	38 46	48 51

3 6 RAW SEWAGE

			Monthly Average Results	No. of Samples
BOD	(mg/L)	0 0 0 0 1	0	1 6 6	1
SS	(mg/L)	0 0 0 0 6	0	2 4 2	1
TKN	(mg/L)	0 0 0 2 0	2	5 0	1
Total P.	(mg/L)	0 0 0 3 3	1	5 2	1
		30 34	35	38 46	48 51

3 9 FINAL EFFLUENT

					Seasonal Discharge Lagoons Only
Total Effl. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3		
Flow Duration	(Hrs.)	8 1 6 8 0	1		
Cell Depth	(m)	5 0 2 9 0	1		
BOD	(mg/L)	0 0 0 0 1	1		
SS	(mg/L)	0 0 0 0 6	1		
Ammonia	(mg/L)	0 0 0 1 9	2		
TKN	(mg/L)	0 0 0 2 0	2		
Total P.	(mg/L)	0 0 0 3 3	2		
		30 34	35	38 46	48 51

0 9 DISINFECTION

Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	
Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	
Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	
		30 34	35	38 46 48 51

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent

(613) 443-1747

Return completed blue form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Municipality: TOWNSHIP OF RUSSELL	
Project Name: RUSSELL SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DATE STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	0 2	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

3 5 FLOWS (12 13)

	Parameter Code		Dec.	Monthly Average Results
Total Flow	(10^3m^3)	5 0 0 1 0	3	2 3 4 2 5
Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	8 3 7
Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	1 0 7 5
		30 34	35	38 46

3 5 BYPASS (12 13)

					No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	0	0
Duration	(Hrs.)	8 1 6 8 0	1		48 51
		30 34	35	38 46	

3 6 RAW SEWAGE (12 13)

				Monthly Average Results	No. of Samples
BOD	(mg/L)	0 0 0 0 1	0	1 9 1	1
SS	(mg/L)	0 0 0 0 6	0	1 6 0	1
TKN	(mg/L)	0 0 0 2 0	2	5 0	1
Total P.	(mg/L)	0 0 0 3 3	1	6 2	1
		30 34	35	38 46	48 51

3 9 FINAL EFFLUENT (2 13)

					Seasonal Discharge Lagoons Only
Total Effl. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3		
Flow Duration	(Hrs.)	8 1 6 8 0	1		
Cell Depth	(m)	5 0 2 9 0	1		
BOD	(mg/L)	0 0 0 0 1	1		
SS	(mg/L)	0 0 0 0 6	1		
Ammonia	(mg/L)	0 0 0 1 9	2		
TKN	(mg/L)	0 0 0 2 0	2		
Total P.	(mg/L)	0 0 0 3 3	2		
		30 34	35	38 46	48 51

0 9 DISINFECTION (12 13)

Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	
Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	
Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	
		30 34	35	38 46

48 51

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent

(613) 443-1747

Return completed blue form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Municipality: TOWNSHIP OF RUSSELL	
Project Name: RUSSELL SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DATE STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
46	11000151 4	03	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.			Parameter Code		Dec.	Monthly Value		No. of Occurrences	No. of Samples
FLOWS									
3	5	Total Flow	(10^3m^3)	50010	3	2754	0		
		Avg. Day Flow	($10^3m3/d$)	50015	3	888			
		Max. Day Flow	($10^3m^3/d$)	50020	3	1492			
BYPASS									
3	5	Plant Bypass Vol.	(10^3m^3)	50270	3	0		0	
		Duration	(Hrs.)	81680	1				
RAW SEWAGE						Monthly Average Results			
3	6	BOD	(mg/L)	00001	0	178			1
		SS	(mg/L)	00006	0	124			1
		TKN	(mg/L)	00020	2	44			1
		Total P.	(mg/L)	00033	1	5.6			1
FINAL EFFLUENT									
3	9	Total Eff. Volume To Watercourse	(10^3m^3)	50280	3			Seasonal Discharge Lagoons Only	
		Flow Duration	(Hrs.)	81680	1				
		Cell Depth	(m)	50290	1				
		BOD	(mg/L)	00001	1				
		SS	(mg/L)	00006	1				
		Ammonia	(mg/L)	00019	2				
		TKN	(mg/L)	00020	2				
		Total P.	(mg/L)	00033	2				
DISINFECTION									
0	9	Chlorine Used	(kg as Cl_2)	50320	1				
		Chlorine Dosage	(mg/L as Cl_2)	80410	1				
		Chlorine Resid.	(mg/L as Cl_2)	80420	1				

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent

(613) 443-1747

Return completed blue form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Municipality: TOWNSHIP OF RUSSELL	
Project Name: RUSSELL SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	0 4	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P. 3 5 — FLOWS

		Parameter Code	Dec.	Monthly Results
Total Flow	(10^3m^3)	5 0 0 1 0	3	37.247
Avg. Day Flow	($10^3m3/d$)	5 0 0 1 5	3	1.242
Max. Day Flow	($10^3m^3/d$)	5 0 0 2 0	3	2.508
		30 34	35	38 46

3 5 — BYPASS

		Parameter Code	Dec.	Monthly Results	No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	.0	0
Duration	(Hrs.)	8 1 6 8 0	1	.	48 51
		30 34	35	38 46	

3 6 — RAW SEWAGE

		Parameter Code	Dec.	Monthly Average Results	No. of Samples
BOD	(mg/L)	0 0 0 0 1	0	59.0	1
SS	(mg/L)	0 0 0 0 6	0	116.0	1
TKN	(mg/L)	0 0 0 2 0	2	18.0	1
Total P.	(mg/L)	0 0 0 3 3	1	2.1	1
		30 34	35	38 46	48 51

3 9 — FINAL EFFLUENT

		Parameter Code	Dec.	Monthly Results	Seasonal Discharge Lagoons Only
Total Effl. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	114.5	
Flow Duration	(Hrs.)	8 1 6 8 0	1	168.0	
Cell Depth	(m)	5 0 2 9 0	1	.	
BOD	(mg/L)	0 0 0 0 1	1	30.0	3
SS	(mg/L)	0 0 0 0 6	1	17.0	3
Ammonia	(mg/L)	0 0 0 1 9	2	13.4	3
TKN	(mg/L)	0 0 0 2 0	2	19.2	3
Total P.	(mg/L)	0 0 0 3 3	2	0.4	3
		30 34	35	38 46	48 51

0 9 — DISINFECTION

		Parameter Code	Dec.	Monthly Results
Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	.
Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	.
Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	.
		30 34	35	38 46

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON

Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON

Address:

File No.	Works Number	Data Period Month	Data Period Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	0 4	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

ADDITIONAL DATA

C.P. 3 6 (12 13) RAW SEWAGE (Chemical)

	Parameter Code (30 34)	Dec. (35)	Monthly Average Results (38 46)	No. of Samples (48 51)
CONDUCTIVITY			1590.0	01
DRP			0.04	01
N-NH3			13.4	01
N-N02			<0.10	01
N-N03			<0.10	01

C.P. 3 9 (12 13) FINAL EFFLUENT (Chemical)

	Parameter Code (30 34)	Dec. (35)	Monthly Average Results (38 46)	No. of Samples (48 51)
NITRITE			<0.10	03
NITRATE			<0.10	03
H2S			0.0	03
pH			7.25	03

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed yellow form to:

Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON | Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON | Address:

File No.	Works Number	Data Period Month	Data Period Year		Discharge Type	Update Code
46	11004151	05	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.

35 FLOWS

12 13

		Parameter Code	Dec.	Monthly Results
Total Flow	(10^3m^3)	50010	3	32.058
Avg. Day Flow	$(10^3m3/d)$	50015	3	1.034
Max. Day Flow	$(10^3m^3/d)$	50020	3	1.573
		30 34	35	38 46

35 BYPASS

12 13

		Parameter Code	Dec.	Monthly Results	No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	50270	3	0	0
Duration	(Hrs.)	81680	1		
		30 34	35	38 46	48 51

36 RAW SEWAGE

12 13

		Parameter Code	Dec.	Monthly Average Results	No. of Samples
BOD	(mg/L)	00010	0	76.0	1
SS	(mg/L)	00060	0	126.0	1
TKN	(mg/L)	00200	2	26.9	1
Total P.	(mg/L)	00333	1	3.6	1
		30 34	35	38 46	48 51

39 FINAL EFFLUENT

2 13

		Parameter Code	Dec.	Monthly Results	Seasonal Discharge Lagoons Only
Total Eff. Volume To Watercourse	(10^3m^3)	50280	3		
Flow Duration	(Hrs.)	81680	1		
Cell Depth	(m)	50290	1		
BOD	(mg/L)	00010	1		
SS	(mg/L)	00060	1		
Ammonia	(mg/L)	00191	2		
TKN	(mg/L)	00200	2		
Total P.	(mg/L)	00333	2		
		30 34	35	38 46	48 51

09 DISINFECTION

12 13

		Parameter Code	Dec.	Monthly Results
Chlorine Used	(kg as Cl_2)	50320	1	
Chlorine Dosage	(mg/L as Cl_2)	80410	1	
Chlorine Resid.	(mg/L as Cl_2)	80420	1	
		30 34	35	38 46

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON | Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON | Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	0 6	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

3 5 FLOWS

		Parameter Code	Dec.	Monthly Results
Total Flow	(10^3m^3)	5 0 0 1 0	3	2 9 • 5 3 6
Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	0 • 9 8 5
Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	1 • 7 9 8
		30 34	35	38 46

3 5 BYPASS

					No. of Occurrences
Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	• 0	0
Duration	(Hrs.)	8 1 6 8 0	1	•	48 51
		30 34	35	38 46	

3 6 RAW SEWAGE

			Monthly Average Results	No. of Samples
BOD	(mg/L)	0 0 0 0 1	0	1 5 8 • 0	1
SS	(mg/L)	0 0 0 0 6	0	2 3 4 • 0	1
TKN	(mg/L)	0 0 0 2 0	2	3 5 • 0	1
Total P.	(mg/L)	0 0 0 3 3	1	4 • 9	1
		30 34	35	38 46	48 51

3 9 FINAL EFFLUENT

					Seasonal Discharge Lagoons Only
Total Effl. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	•	}
Flow Duration	(Hrs.)	8 1 6 8 0	1	•	
Cell Depth	(m)	5 0 2 9 0	1	•	
BOD	(mg/L)	0 0 0 0 1	1	•	
SS	(mg/L)	0 0 0 0 6	1	•	
Ammonia	(mg/L)	0 0 0 1 9	2	•	
TKN	(mg/L)	0 0 0 2 0	2	•	
Total P.	(mg/L)	0 0 0 3 3	2	•	
		30 34	35	38 46	48 51

0 9 DISINFECTION

Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	•
Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	•
Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	•
		30 34	35	38 46

48 51

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed blue form to:
Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON | Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON | Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	0 7	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.		Parameter Code		Dec.	Monthly Results	
3 5	**FLOWS**					
12 13	Total Flow	(10^3m^3)	5 0 0 1 0	3	2 5 • 4 2 6	
	Avg. Day Flow	$(10^3m3/d)$	5 0 0 1 5	3	• 8 2 0	
	Max. Day Flow	$(10^3m^3/d)$	5 0 0 2 0	3	1 • 0 4 6	
			30 34	35	38 46	
3 5	**BYPASS**					No. of Occurrences
12 13	Plant Bypass Vol.	(10^3m^3)	5 0 2 7 0	3	• 0	0
	Duration	(Hrs.)	8 1 6 8 0	1	•	48 51
			30 34	35	38 46	
3 6	**RAW SEWAGE**				Monthly Average Results	No. of Samples
12 13	BOD	(mg/L)	0 0 0 0 1	0	8 0 •	
	SS	(mg/L)	0 0 0 0 6	0	1 1 2 8 •	
	TKN	(mg/L)	0 0 0 2 0	2	4 4 •	
	Total P.	(mg/L)	0 0 0 3 3	1	4 • 7	
			30 34	35	38 46	48 51
3 9	**FINAL EFFLUENT**					
2 13	Total Effl. Volume To Watercourse	(10^3m^3)	5 0 2 8 0	3	•	} Seasonal Discharge Lagoons Only
	Flow Duration	(Hrs.)	8 1 6 8 0	1	•	
	Cell Depth	(m)	5 0 2 9 0	1	•	
	BOD	(mg/L)	0 0 0 0 1	1	•	
	SS	(mg/L)	0 0 0 0 6	1	•	
	Ammonia	(mg/L)	0 0 0 1 9	2	•	
	TKN	(mg/L)	0 0 0 2 0	2	•	
	Total P.	(mg/L)	0 0 0 3 3	2	•	
			30 34	35	38 46	48 51
0 9	**DISINFECTION**					
12 13	Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	•	
	Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	•	
	Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	•	
			30 34	35	38 46	48 51

Operator's Comments and Contact Person's Phone number:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed form to:
Rhéal Délaquis, Cornwall District Office, MOE

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON | Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON | Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
46	11000151 4	08	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.		Parameter Code		Dec.	Monthly Results	
35	FLOWS					
12 13	Total Flow	(10^3m^3)	50103	3	23.309	
	Avg. Day Flow	$(10^3m3/d)$	50105	3	.752	
	Max. Day Flow	$(10^3m^3/d)$	50203	3	.934	
			30 34	35	38 46	
35	BYPASS					No. of Occurrences
12 13	Plant Bypass Vol.	(10^3m^3)	50270	3	.0	0
	Duration	(Hrs.)	81680	1	.	
			30 34	35	38 46	48 51
36	RAW SEWAGE				Monthly Average Results	No. of Samples
12 13	BOD	(mg/L)	00001	0	110.	
	SS	(mg/L)	00006	0	95.	
	TKN	(mg/L)	00020	2	47.	
	Total P.	(mg/L)	00033	1	4.9	
			30 34	35	38 46	48 51
39	FINAL EFFLUENT					
2 13	Total Effl. Volume To Watercourse	(10^3m^3)	50280	3	.	} Seasonal Discharge Lagoons Only
	Flow Duration	(Hrs.)	81680	1	.	
	Cell Depth	(m)	50290	1	.	
	BOD	(mg/L)	00001	1	.	
	SS	(mg/L)	00006	1	.	
	Ammonia	(mg/L)	00019	2	.	
	TKN	(mg/L)	00020	2	.	
	Total P.	(mg/L)	00033	2	.	
			30 34	35	38 46	48 51
09	DISINFECTION					
12 13	Chlorine Used	(kg as Cl_2)	50320	1	.	
	Chlorine Dosage	(mg/L as Cl_2)	80410	1	.	
	Chlorine Resid.	(mg/L as Cl_2)	80420	1	.	
			30 34	35	38 46	48 51

Operator's Comments and Contact Person's Phone number:

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(613) 443-1747

Return completed form to:
Rhéal Délaquis, Cornwall District Office, MOE

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON | Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON | Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	0 9	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

C.P.		Parameter Code	Dec.	Monthly Results	No. of Occurrences / Monthly Average Results	No. of Samples
FLOWS						
12 13	Total Flow (10^3m^3)	5 0 0 1 0	3	2 4 . 0 8 1		
	Avg. Day Flow ($10^3m3/d$)	5 0 0 1 5	3	. 8 0 3		
	Max. Day Flow ($10^3m^3/d$)	5 0 0 2 0	3	1 . 0 2 3		
		30 34	35	38 46		
BYPASS					No. of Occurrences	
12 13	Plant Bypass Vol. (10^3m^3)	5 0 2 7 0	3	. 0	0	
	Duration (Hrs.)	8 1 6 8 0	1	.	48 51	
		30 34	35	38 46		
RAW SEWAGE				Monthly Average Results		No. of Samples
12 13	BOD (mg/L)	0 0 0 0 1	0	1 1 5 .		
	SS (mg/L)	0 0 0 0 6	0	1 1 0 .		
	TKN (mg/L)	0 0 0 2 0	2	4 9 .		
	Total P. (mg/L)	0 0 0 3 3	1	6 . 3		
		30 34	35	38 46		48 51
FINAL EFFLUENT						Seasonal Discharge Lagoons Only
2 13	Total Eff. Volume To Watercourse (10^3m^3)	5 0 2 8 0	3	.		
	Flow Duration (Hrs.)	8 1 6 8 0	1	.		
	Cell Depth (m)	5 0 2 9 0	1	.		
	BOD (mg/L)	0 0 0 0 1	1	.		
	SS (mg/L)	0 0 0 0 6	1	.		
	Ammonia (mg/L)	0 0 0 1 9	2	.		
	TKN (mg/L)	0 0 0 2 0	2	.		
	Total P. (mg/L)	0 0 0 3 3	2	.		
		30 34	35	38 46		48 51
DISINFECTION						
12 13	Chlorine Used (kg as Cl_2)	5 0 3 2 0	1	.		
	Chlorine Dosage (mg/L as Cl_2)	8 0 4 1 0	1	.		
	Chlorine Resid. (mg/L as Cl_2)	8 0 4 2 0	1	.		
		30 34	35	38 46		48 51

Operator's Comments and **Contact Person's Phone number**:

Craig Cullen, Utilities Superintendent
(613) 443-1747

Return completed form to:
Rhéal Délaquis, Cornwall District Office, MOE

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON | Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON | Address:

File No.	Works Number	Data Period Month	Data Period Year		Discharge Type	Update Code
46	1100015154	10	05	31	2	R
1 2	3 11	16	19	20 21	22	80

C.P.		Parameter Code	Dec.	Monthly Results	Monthly Average Results	No. of Occurrences	No. of Samples
35 FLOWS							
Total Flow	(10^3m^3)	50010	3	29.165			
Avg. Day Flow	$(10^3m3/d)$	50015	3	.941			
Max. Day Flow	$(10^3m^3/d)$	50020	3	1.189			
		30 34	35	38 46			
35 BYPASS							
Plant Bypass Vol.	(10^3m^3)	50270	3	.0		0	
Duration	(Hrs.)	81680	1	.		48 51	
		30 34	35	38 46			
36 RAW SEWAGE							
BOD	(mg/L)	00001	0		202.		
SS	(mg/L)	00006	0		125.		
TKN	(mg/L)	00020	2		42.		
Total P.	(mg/L)	00033	1		6.1		
		30 34	35	38 46		48 51	
39 FINAL EFFLUENT							
Total Effl. Volume To Watercourse	(10^3m^3)	50280	3	994.			
Flow Duration	(Hrs.)	81680	1	110.			
Cell Depth	(m)	50290	1	.			
BOD	(mg/L)	00001	1	2.			3
SS	(mg/L)	00006	1	1.3			3
Ammonia	(mg/L)	00019	2	0.6			3
TKN	(mg/L)	00020	2	2.7			3
Total P.	(mg/L)	00033	2	0.1			3
		30 34	35	38 46		48 51	
09 DISINFECTION							
Chlorine Used	(kg as Cl_2)	50320	1	.			
Chlorine Dosage	(mg/L as Cl_2)	80410	1	.			
Chlorine Resid.	(mg/L as Cl_2)	80420	1	.			
		30 34	35	38 46		48 51	

Seasonal Discharge Lagoons Only

Operator's Comments and Contact Person's Phone number:

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Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON

Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON

Address:

File No.	Works Number	Data Period Month	Data Period Year		Discharge Type	Update Code
46	1100015154	10	05	31	2	R
1 2	3 11	16	19	20 21	22	80

ADDITIONAL DATA

C.P. 36 RAW SEWAGE (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
CONDUCTIVITY			1660.	01
DRP			4.76	01
N-NH3 Ammonia			34.9	01
N-N02 Nitrite			<0.10	01
N-N03 Nitrate			<0.10	01
	30 34	35	38 46	48 51

C.P. 39 FINAL EFFLUENT (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
NITRITE			0.10	03
NITRATE			0.78	03
H2S			0.0	03
pH			7.63	03
	30 34	35	38 46	48 51

Operator's Comments and **Contact Person's Phone number**:

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Michael Séguin, Cornwall District Office, MOE
c/o Rhéal Délaquis

Municipality: TOWNSHIP OF RUSSELL

Project Name: RUSSELL SEWAGE LAGOON | Operating Authority: MUNICIPAL

Address: 717 NOTRE-DAME STREET, EMBRUN ON | Address:

File No.	Works Number	Data Period Month	Data Period Year		Discharge Type	Update Code
46	11001514	11	05	31	2	R
1 2	3 — 11	16	19	20 21	22	80

C.P.		Parameter Code	Dec.	Monthly Results		
35	FLOWS					
12 13	Total Flow	(10^3m^3) 50010	3	30.339		
	Avg. Day Flow	$(10^3m3/d)$ 50015	3	1.011		
	Max. Day Flow	$(10^3m^3/d)$ 50020	3	1.431		
		30 — 34	35	38 — 46		
35	BYPASS				No. of Occurrences	
12 13	Plant Bypass Vol.	(10^3m^3) 52700	3	.0	0	
	Duration	(Hrs.) 81680	1	.		
		30 — 34	35	38 — 46	48 — 51	
36	RAW SEWAGE			Monthly Average Results	No. of Samples	
12 13	BOD	(mg/L) 00001	0	109.	1	
	SS	(mg/L) 00006	0	120.	1	
	TKN	(mg/L) 00020	2	37.	1	
	Total P.	(mg/L) 00033	1	5.3	1	
		30 — 34	35	38 — 46	48 — 51	
39	FINAL EFFLUENT					
2 13	Total Effl. Volume To Watercourse	(10^3m^3) 52800	3	20.17	} Seasonal Discharge Lagoons Only	
	Flow Duration	(Hrs.) 81680	1	80.		
	Cell Depth	(m) 50290	1	.		
	BOD	(mg/L) 00001	1	1.	2	
	SS	(mg/L) 00006	1	47.	2	
	Ammonia	(mg/L) 00019	2	4.2	2	
	TKN	(mg/L) 00020	2	7.6	2	
	Total P.	(mg/L) 00033	2	0.4	2	
		30 — 34	35	38 — 46	48 — 51	
09	DISINFECTION					
12 13	Chlorine Used	(kg as Cl_2) 50320	1	.		
	Chlorine Dosage	(mg/L as Cl_2) 80410	1	.		
	Chlorine Resid.	(mg/L as Cl_2) 80420	1	.		
		30 — 34	35	38 — 46	48 — 51	

Operator's Comments and Contact Person's Phone number:

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Municipality: TOWNSHIP OF RUSSELL	
Project Name: RUSSELL SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month	Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	1 1	0 5	3 1	2	R
1 2	3 11	16	19	20 21	22	80

ADDITIONAL DATA

C.P. 36 RAW SEWAGE (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
CONDUCTIVITY			1440.	01
DRP			3.38	01
N-NH3 Ammonia			30.4	01
N-N02 Nitrite			<0.10	01
N-N03 Nitrate			<0.10	01
	30 34	35	38 45	48 51

C.P. 39 FINAL EFFLUENT (Chemical)

	Parameter Code	Dec.	Monthly Average Results	No. of Samples
NITRITE			<0.10	02
NITRATE			0.26	02
H2S			0.0	02
pH			7.72	02
	30 34	35	38 46	48 51

Operator's Comments and **Contact Person's Phone number**:

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c/o Rhéal Délaquis

Environment

Lagoons S1

Municipality: TOWNSHIP OF RUSSELL	
Project Name: RUSSELL SEWAGE LAGOON	Operating Authority: MUNICIPAL
Address: 717 NOTRE-DAME STREET, EMBRUN ON	Address:

File No.	Works Number	Data Period Month Year		Discharge Type	Update Code
4 6	1 1 0 0 0 1 5 1 4	1 2 0 5	3 1	2	R
1 2	3 … 11	16 … 19	20 21	22	80

FLOWS

C.P. 3 5 (12 13)

	Units	Parameter Code	Dec.	Monthly Results
Total Flow	$(10^3 m^3)$	5 0 0 1 0	3	33.390
Avg. Day Flow	$(10^3 m3/d)$	5 0 0 1 5	3	1.077
Max. Day Flow	$(10^3 m^3/d)$	5 0 0 2 0	3	1.269
		30 … 34	35	38 … 46

BYPASS

3 5 (12 13)

	Units	Parameter Code	Dec.	Results	No. of Occurrences
Plant Bypass Vol.	$(10^3 m^3)$	5 0 2 7 0	3	.0	0
Duration	(Hrs.)	8 1 6 8 0	1	.	
		30 … 34	35	38 … 46	48 … 51

RAW SEWAGE

3 6 (12 13)

	Units	Parameter Code	Dec.	Monthly Average Results	No. of Samples
BOD	(mg/L)	0 0 0 0 1	0	101.	
SS	(mg/L)	0 0 0 0 6	0	126.	
TKN	(mg/L)	0 0 0 2 0	2	36.	
Total P.	(mg/L)	0 0 0 3 3	1	4.5	
		30 … 34	35	38 … 46	48 … 51

FINAL EFFLUENT

3 9 (2 13)

	Units	Parameter Code	Dec.	Results	
Total Effl. Volume To Watercourse	$(10^3 m^3)$	5 0 2 8 0	3	.	} Seasonal Discharge Lagoons Only
Flow Duration	(Hrs.)	8 1 6 8 0	1	.	
Cell Depth	(m)	5 0 2 9 0	1	.	
BOD	(mg/L)	0 0 0 0 1	1	.	
SS	(mg/L)	0 0 0 0 6	1	.	
Ammonia	(mg/L)	0 0 0 1 9	2	.	
TKN	(mg/L)	0 0 0 2 0	2	.	
Total P.	(mg/L)	0 0 0 3 3	2	.	
		30 … 34	35	38 … 46	48 … 51

DISINFECTION

0 9 (12 13)

	Units	Parameter Code	Dec.	Results	
Chlorine Used	(kg as Cl_2)	5 0 3 2 0	1	.	
Chlorine Dosage	(mg/L as Cl_2)	8 0 4 1 0	1	.	
Chlorine Resid.	(mg/L as Cl_2)	8 0 4 2 0	1	.	
		30 … 34	35	38 … 46	48 … 51

Operator's Comments and **Contact Person's Phone number**:

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(613) 443-1747

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Rhéal Délaquis, Cornwall District Office, MOE