

TABLE 1
ERU EVALUATION
WATER SERVICE AREAS
EVALUATION OF MUNICIPAL WATER SUPPLY – CLASS EA

September, 2017

17-024

AREA	CURRENT NO. OF ERU'S (JULY, 2017)	ESTIMATED, 20 YR NO. OF ERU'S
EXISTING SERVICED AREA NORTH OF INDIAN RIVER	464 *	1,100 *
SOUTH BALMY BEACH (UNSERVICED)	56	65
SUBTOTAL – AREA NORTH OF INDIAN RIVER	520	1,165
INDIAN RIVER SOUTH AND MOUNT PLEASANT AREA	98	120
30 TH STREET WEST AND EDMONSTONE STREET AREA	79	90
VLA SUBDIVISION AREA	78	90
POTTAWATOMI VILLAGE AREA	25	35
SUBTOTAL – ERU'S IN STUDY AREA	280	335
TOTAL	800 ERU'S	1,500 ERU'S

NOTES:

ERU – Equivalent Residential Unit

Above estimate of future ERU's assumes minimal lot severances as no expansion of sanitary sewer system outside of Cobble Beach assumed over next 20 years.

Total connected ERU's as of July, 2017 *. 20 year estimate (1,100 ERU's) includes 400 ERU's in Cobble Beach *.

Total Treatment Plant capacity is 1,700 ERU's (2,600 m³/d)

TABLE 2

**CAPACITY SUMMARY – WATER DEMAND ESTIMATES IN STUDY AREA ONLY
EVALUATION OF MUNICIPAL WATER SUPPLY – CLASS EA**

September, 2017

17-024

ESTIMATED, 20 YEAR NUMBER OF ERU'S	335 ERU'S
EST. MAX. DAY DEMAND PER ERU	1.5 M ³ /D PER ERU
EST. PEAK FLOW DEMAND PER ERU – 1.5 X 1.5 M ³ /D PER ERU	2.3 M ³ /D PER ERU
ESTIMATED 20 YEAR MAX DAY FLOW FOR 335 ERU'S	503 M ³ /D (6 L/S)
ESTIMATED 20 YEAR PEAK FLOW FOR 335 ERU'S	754 M ³ /D (9 L/S)
RECOMMENDED FIRE FLOW REQUIRED (IF PROVIDED)	64 L/S (845 IGPM)
MINIMUM FIRE FLOW STORAGE FOR 2 HOURS MINIMUM (IF PROVIDED)	461 M ³
RECOMMENDED TOTAL STORAGE INCLUDING EQUALIZATION STORAGE, FIRE STORAGE AND EMERGENCY STORAGE*	734 M ³ (800 M ³)

NOTES:

ERU – Equivalent Residential Unit

SF – Safety Factor

* Storage Calculation as per MOECC Design Guidelines

TABLE 3
CAPACITY SUMMARY – EXISTING EAST LINTON
WATER TREATMENT PLANT
EVALUATION OF MUNICIPAL WATER SUPPLY – CLASS EA

September, 2017

17-024

EXISTING, RATED TREATMENT PLANT CAPACITY	2,600 M ³ /D
CURRENT, AVERAGE WATER DEMAND (JULY, 2017) *	386 M ³ /D
CURRENT, MAXIMUM DAY DEMAND (JULY, 2017) *	688 M ³ /D
CURRENT NUMBER OF ERU'S SERVICED (JULY, 2017)	464 ERU'S
CURRENT MAXIMUM DAY DEMAND PER ERU (688 M ³ /D ÷ 464 ERU'S)	1.5 M ³ /D PER ERU
TOTAL ERU'S THAT CAN BE SERVICED (2,600 M ³ /D ÷ 1.50 M ³ /D)	1,733 ERU'S (1,700 ERU'S)
CURRENT ERU'S SERVICED IN AREA NORTH OF INDIAN RIVER	464 ERU'S
TOTAL ESTIMATED 20 YEAR NO. OF ERU'S (2037) INCLUDING 335 ERU'S IN STUDY AREA SOUTH OF INDIAN RIVER	1,500 ERU'S
ESTIMATED, ADDITIONAL ERU'S THAT CAN BE SERVICED AFTER 20 YEARS	200 ADDITIONAL ERU'S
ESTIMATED, 20 YEAR MAXIMUM DAY FLOW (1,500 ERU'S X 1.5 M ³ /D)	2,250 M ³ /D

* Based on review of water consumption records from July 2016 to June 2017

NOTE – Major leaks experienced in July, November, and December, 2016. Increased average water demand between July, 2016 and December, 2016. Once leaks repaired, average flows in first 6 months of 2017 were 344 m³/d

TABLE 4

**SUMMARY OF WATER SERVICING ALTERNATIVES
EVALUATION OF MUNICIPAL WATER SUPPLY – CLASS EA
TOWNSHIP OF GEORGIAN BLUFFS**

September, 2017

17-024

ALTERNATIVE	DESCRIPTION OF ALTERNATIVE	ESTIMATED COST	COST PER EXISTING ERU* EXCL. VLA SUBD.	COST PER ERU * EXCL. VLA SUBD. WITH 50% GRANT
ALTERNATIVE 1	EXTEND WATER SERVICE TO STUDY AREA FROM EAST LINTON WATER SYSTEM			
ALT. 1A	Large Diameter watermains providing peak and fire flows to serviced areas in Study Area. Booster station and storage reservoir at Mount Pleasant Drive.	\$8,400,000	\$32,700/EACH	\$16,400/EACH
ALT. 1B	Peak Flows only to serviced areas in Study Area. Smaller water mains provided. No fire flows. Booster station only provided at Mount Pleasant Drive.	\$6,700,000	\$26,100/EACH	\$13,100/EACH
ALTERNATIVE 2	CONSTRUCT NEW WATER PLANT AND INTAKE PIPE AT SARAWAK FAMILY PARK TO SERVICE STUDY AREA			
ALT. 2A	New water intake and water treatment plant at Sarawak Family park. New booster station and treated water standpipe at Mount Pleasant Drive. Large diameter watermains for fire flows for serviced areas.	\$11,700,000	\$45,600/EACH	\$22,800/EACH
ALT. 2B	As per Alt. 2a (new water intake and water treatment plant at Sarawak Family park) but do not provide fire flows. Smaller diameter watermains only for serviced areas. New booster station only at Mount Pleasant Drive.	\$9,350,000	\$36,400/EACH	\$18,200/EACH

* Based on a total of 335 ERU's (20-year estimate) for new service area south of the Indian River. However, includes 78, existing ERU's in VLA Subdivision. Net, future ERU's used for cost calculation is 257 ERU's (335-78 ERU's). Costs do not include \$6,000 hook up fee for East Linton Water Plant or for a new water plant at Sarawak Family Park or \$700 plumbing fee.

* Costs do not include cost to replace existing, small diameter watermains in Pottawatomi Village with new larger watermains if fire flows provided for Pottawatomi Village.