



BURNSIDE

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**Appendix B**  
**Kenny Drain**



# BURNSIDE

## Memo

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DATE	Thursday, May 31, 2007	FILE NO.	MCG 10665
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PROJECT	Owen Sound East MSP Field Investigations
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PREPARED BY	Jeremy Lighthouse
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DISTRIBUTION

### Comments

The following is a picture summary from my field investigation on Thursday May 31, 2007.

- Picture #100\_2006

Picture was taken from the south side of the Canadian Tire parking lot facing south at the Kenny Drain SWM pond. The rear of the Canadian Tire parking lot does not drain to the Kenny Drain pond; it drains to the WalMart pond.

- Picture #100\_2007

Picture is taken from 10<sup>th</sup> Street east facing north looking into the major system swale that enters the Kenny Drain pond. The buildings to the north are the rear of the Canadian Tire building and Marks Work Warehouse.

- Picture #100\_2008

Picture is taken from within the major system swale that enters the Kenny Drain pond looking south at 10<sup>th</sup> Street east at the downstream end of the pipe entering the major system swale. The hospital and/or health centre is just on the left side of the picture up over the hill.

- Picture #100\_2009

Picture was taken from directly south of the WalMart pond on 10<sup>th</sup> Street east looking north into the WalMart pond.

- **Picture #100\_2010**

Picture was taken from the southeast corner of the Kenny Drain pond standing on 10<sup>th</sup> Street east looking into the Kenny Drain pond and at the rear of Canadian Tire.

- **Picture #100\_2011**

Picture was taken from 10<sup>th</sup> Street east at the south end of the WalMart pond looking north into the WalMart pond.

- **Picture #100\_2012**

Picture was taken from the southeast corner of the WalMart pond facing southeast to the large embankment behind WalMart and Home Depot.

- **Picture #100\_2013**

Picture was taken from the northwest corner of Marks Work Warehouse looking northwest across the Canadian Tire parking lot towards the intersection of 16<sup>th</sup> Street East to the right of the picture and 16<sup>th</sup> Avenue east to the left of the picture.

- **Picture #100\_2014**

Picture was taken from the northwest corner of Marks Work Warehouse facing across the north side of Canadian Tire towards 16<sup>th</sup> Avenue East.

- **Picture #100\_2015**

Picture was taken from the top of the berm and/or embankment south of WalMart and Home Depot, facing southwest towards the hospital.

- **Picture #100\_2016**

Picture is taken from the same location as Picture 100\_2015 but facing east.

- **Picture #100\_2017**

Picture was taken from the same location as Picture 100\_2015 but facing north towards the WalMart building. Note there is a small channel and/or swale traversing the north face of the embankment I am standing on. The pond to the left of the picture collects drainage from this swale and provides a location for sediment deposit. This swale and pond are just temporarily constructed to prevent drainage from reaching the south side of WalMart and Home Depot.

- **Picture 100\_2018**

Picture was taken from half way down the north face of the embankment. The fence to the left of the picture runs along the rear of the Home Depot and WalMart property. This picture faces east looking along the temporary ditch and/or swale that traverses the embankment to intercept drainage before reaching the rear of the Home Depot and WalMart site.

- **Picture 100\_2019**

Picture was taken from the same location as Picture 100\_2018 but now facing west towards the small pond and/or depressed area that provides some sort of sediment disposition. This pond and/or depressed area was mentioned in Picture 100\_2017.

- **Picture 100\_2020**

Picture was taken from between WalMart and Home Depot. Home Depot is to the left of the picture and WalMart is to the right of the picture facing south towards the embankment.

- **Picture 100\_2021**

Looking in to a catchbasin located at the southeast corner of Montana's parking lot adjacent to a new strip mall. The WalMart and Home Depot drainage sheets overland from the north face of the buildings to a series of catchbasins such as the one shown in the picture which ultimately drain west to the WalMart pond on the west side of 18<sup>th</sup> Avenue East. The picture shows that the north side of the catchbasin which is to the right of the picture has no outlet pipe or inlet pipe. The outlet pipe for the catchbasin is to the left of the picture which is south and runs reverse grade relative to the parking lot back to the main trunk sewer that takes the drainage to the WalMart pond.

- **Picture 100\_2022**

Picture was taken from the catchbasin mentioned in Picture 100\_2021 facing southeast towards Home Depot.

- **Picture 100\_2023**

Picture was taken to show the catchbasin mentioned in Picture 100\_2021 and 100\_2022. This picture faces west towards Marks Work Warehouse on the west side of 18<sup>th</sup> Avenue East. The parking lot entrance just ahead of the catchbasin shown in this picture is for Montana's which is just around the corner of this building to the right.

- **Picture 100\_2024**

Picture was taken from the north entrance to Home Depot and/or WalMart from 18<sup>th</sup> Avenue East and is facing 18<sup>th</sup> Avenue East across the road is Mark's Work Warehouse and the WalMart SWM pond is just before that building.

- **Picture 100\_2025**

Picture was taken from the intersection of 16<sup>th</sup> Street East and 16<sup>th</sup> Avenue East. This picture faces north along 16<sup>th</sup> Avenue East. The Heritage Heights Mall is to the left of the picture and the industrial lands along 16<sup>th</sup> Avenue East are to the right of the picture.

- **Picture 100\_2026**

This picture was taken from the west entrance to the Heritage Heights Mall along 16<sup>th</sup> Street East and is facing north.

- **Picture 100\_2027**

This picture was taken from the same location as Picture 100\_2026 but now facing east towards the east entrance of the Heritage Heights Mall from 16<sup>th</sup> Street East.

- **Picture 100\_2028**

This picture was taken from the east entrance of the Heritage Heights Mall from 16<sup>th</sup> Street East. This picture faces north.

- **Picture 100\_2029**

This picture was taken from the northeast corner of the Heritage Heights Mall facing east towards 16<sup>th</sup> Avenue East.

- **Picture 100\_2030**

This picture was taken from the same location as Picture 100\_2029 but now facing west along the back of the Heritage Heights Mall and/or the north side of the Mall.

- **Picture 100\_2031**

This picture was taken from the same location as Picture 100\_2029 but now facing north. The lands north of the Heritage Heights Mall are vacant and grass covered.

- **Picture 100\_2033**

This picture was taken from the east side of 16<sup>th</sup> Avenue East across from the northeast entrance to the Heritage Heights Mall. The industrial lands and/or large buildings are to the right of the picture and this picture faces north along the drainage swale that runs parallel to 16<sup>th</sup> Avenue East on the east side the road.

- **Picture 100\_2034**

This picture was taken from the same location as Picture 100\_2033 but now facing southeast towards one of the industrial buildings. The building in the picture is directly east of the Heritage Heights Mall on the east side of 16<sup>th</sup> Avenue East.

- **Picture 100\_2035**

This picture was taken from the intersection of 20<sup>th</sup> Street East and 16<sup>th</sup> Avenue East. This picture faces the industrial lands to the southeast of the intersection mentioned above.

- **Picture 100\_2036**

This picture was taken from the same location as Picture 100\_2035 but now facing north along the east ditch of 16<sup>th</sup> Avenue East.

- **Picture 100\_2037**

This picture was taken just north of the intersection of 20<sup>th</sup> Street East and 16<sup>th</sup> Avenue East. This picture faces south at the intersection mentioned above. The concrete pipe within the picture is the storm sewer outlet that runs of the west side of 16<sup>th</sup> Avenue East and collects drainage from the Heritage Heights Mall and those areas upstream of that point.

- **Picture 100\_2038**

This picture faces south along 16<sup>th</sup> Avenue East looking upstream along the ditch running on the east side of 16<sup>th</sup> Avenue East. From the point where this picture was taken the channel turns 90° to the east which is the left of this picture.

- **Picture 100\_2039**

This picture was taken from the same location as Picture 100\_2038 but now facing east from 16<sup>th</sup> Avenue East.

- **Picture 100\_2040**

This picture was taken from 23<sup>rd</sup> Street East facing south from overtop of the crossing under 23<sup>rd</sup> Street East (flow node 5).

- **Picture 100\_2041**

This picture was taken from the same location as Picture 100\_2040 but now facing north at the downstream end of the crossing under 23<sup>rd</sup> Street East.

- **Picture 100\_2042**

This picture was taken from the south side of 23<sup>rd</sup> Street East facing the crossing at its upstream end. The roadway above the 2 box culverts is 23<sup>rd</sup> Street East.

- **Picture 100\_2043**

This picture was taken from 20<sup>th</sup> Street East just west of 16<sup>th</sup> Avenue East. The picture is facing south across the vacant grass lands that are located just north of the Heritage Heights Mall. The hospital is in the background of the picture up on the hill and to the left are the industrial lands that are located east of 16<sup>th</sup> Avenue East. The Heritage Heights Mall is on the other side of this grass lands to the right of the picture.

- **Picture 100\_2044**

This picture is taken from the same location as Picture 100\_2043. The picture is facing south and the Heritage Heights Mall is the building to the right of the picture with the big trucks located in front of it. This ditch appears to pick up drainage from these lands and directs it north underneath 20<sup>th</sup> Street East.

- **Picture 100\_2045**

This picture is taken from the same location as Picture 100\_2043 but now facing north across 20<sup>th</sup> Street East.

- **Picture 100\_2046**

This picture was taken from the same location as Picture 100\_2043 but now facing south towards the Heritage Heights Mall and the vacant grass lands just north of the mall. 20<sup>th</sup> Street East is the roadway seen in this picture.

- **Picture 100\_2047**

This picture is of the crossing underneath 26<sup>th</sup> Street East just east of 9<sup>th</sup> Avenue East. The picture shows the upstream end of the crossing and is facing north. This location is at flow node 6.

- **Picture 100\_2048**

This picture was taken from the same location as Picture 100\_2047 but now standing on 26<sup>th</sup> Street East facing south looking upstream along the creek that crosses under 26<sup>th</sup> Street East. This location is the same as flow node 6.

- **Picture 100\_2049**

This picture was taken from the same location as Picture 100\_2048 but now facing north looking downstream along the creek.

- **Picture 100\_2050**

The picture faces south looking across 26<sup>th</sup> Street East. This crossing is the first crossing west of 28<sup>th</sup> Avenue East. The picture is taken from the north side of 26<sup>th</sup> Street East looking at the downstream end of the culvert.

- **Picture 100\_2051**

This picture is the same as Picture 100\_2050 but now for the second culvert west of 28<sup>th</sup> Avenue East.

- **Picture 100\_2052**

This picture was taken from the railway line and/or snowmobile trail facing south looking towards 26<sup>th</sup> Street East.

- **Picture 100\_2053**

This picture was taken from the same location as Picture 100\_2053 but now looking south along the east side of the railway line and/or snowmobile trail.

- **Picture 100\_2054**

This picture was taken from the same location as Picture 100\_2052 but now looking north up the railway line and/or snowmobile trail.



- **Picture 100\_2055**

This picture is taken facing north at the upstream end of a cross culvert underneath 26<sup>th</sup> Street East. This culvert is the third culvert east of 9<sup>th</sup> Avenue East along 26<sup>th</sup> Street East.

- **Picture 100\_2056**

This picture was taken from the same location as Picture 100\_2055 but now facing south towards the upstream end of the cross culvert.

- **Picture 100\_2057**

This picture was taken facing north looking at the upstream end of the cross culvert under 26<sup>th</sup> Street East. This cross culvert is the second culvert west of 9<sup>th</sup> Avenue East along 26<sup>th</sup> Street East.

- **Picture 100\_2058**

This picture was taken from the same location as Picture 100\_2057 but now facing north looking downstream along the channel and/or spill area.

- **Picture 100\_2059**

This picture was taken from the same location as Picture 100\_2057 but now facing south.

- **Picture 100\_2060**

This picture was taken from on top of the railway line and/or snowmobile trail above the cross culvert underneath the railway line facing south.

- **Picture 100\_2061**

This picture was taken from the same location as Picture 100\_2060.

- **Picture 100\_2062**

This picture was taken from the south side of the railway line looking at the upstream face of the cross culvert underneath the railway line.

- **Picture 100\_2063**

This picture was taken from on top of the railway line looking down at the downstream end of the culvert crossing under the railway line.

- **Picture 100\_2064**

This picture was taken from the same location as Picture 100\_2063 but now looking across the soccer complex area to the north side of the railway line. The outlet of the cross culvert underneath the railway line is to the right of the picture.

- **Picture 100\_2065**

This picture was taken from the north side of the railway line looking at the outlet or downstream end of the culvert crossing under the railway line.

- **Picture 100\_2066**

This picture was taken from the same location as Picture 100\_2065 but now looking west along the channel that conveys water around the north and west side of the soccer complex.

- **Picture 100\_2067**

This picture is facing east from the north side of the railway line and is of the channel that runs parallel to the railway line on the north side. From where the picture was taken the channel makes almost a 90° bend and runs north (to the left of the picture). On the far side of the big tree in the picture is where the cross culvert under the railway line outlets into this channel.

- **Picture 100\_2068**

This picture is taken from the same location as Picture 100\_2067 but now facing north. To the left of the left fence is the SWM pond and to the right of the right fence is the soccer complex.

- **Picture 100\_2069**

This picture is taken facing north just south of the split between the bypass channel and the inlet to the SWM pond. To the right of the picture is a small concrete weir structure within the channel and to the left of the picture is another concrete weir structure for the inlet of the SWM pond.

- **Picture 100\_2070**

This picture was taken from on top of the railway line facing north looking at the SWM pond. To the right of the SWM pond is the soccer pitch area.

- **Picture 100\_2071**

This picture was taken facing south across the soccer pitch areas with the channel and SWM pond to the right of the picture (to the west). This picture was taken from the parking lot of the soccer complex.

- **Picture 100\_2072**

This picture was taken from the soccer field facing northwest looking at the split between the bypass channel and inlet to the SWM pond.

- **Picture 100\_2073**

This picture was taken from the same location as Picture 100\_2072 and shows a little more closely the 2 weir structures at the split between the bypass channel to the right and the inlet to the SWM pond to the left of the picture.

- **Picture 100\_2074**

This picture was taken from the same location as Picture 100\_2073 but just a little further back (east) within the soccer pitch area. The bypass channel runs parallel to the fence shown in this picture and runs north. The SWM pond is located straight ahead in this picture.

- **Picture 100\_2075**

This picture was taken facing northwest from the soccer pitch area and shows the SWM pond to the far left of the picture and the bypass channel running parallel to the fence to the right of picture in a northern direction. Note that the outlet structure for the SWM pond is located on the far right of the picture.

- **Picture 100\_2076**

This picture was taken facing east from the east side of the bypass channel and is showing the swale running between the 2 soccer pitches into the bypass channel. This picture faces upstream along the swale.

- **Picture 100\_2077**

This picture was taken from the same location as Picture 100\_2076 but now facing west. This picture illustrates the inlet of the swale running between the 2 soccer pitches into the bypass channel.

- **Picture 100\_2078**

This picture was taken facing northwest looking at the outlet structure from the SWM pond into the bypass channel. This picture was taken from the soccer pitch area.

- **Picture 100\_2079**

This picture was taken from the same location as Picture 100\_2078 and illustrates more closely the outlet structure from the SWM pond into the bypass channel. This picture is facing west.

- **Picture 100\_2080**

This picture was taken facing south looking down the bypass channel in an upstream direction. From the location where the picture is taken the channel makes a 90° turn and goes west towards the Bay.

- **Picture 100\_2081**

This picture was taken from the same location as Picture 100\_2081 but is now facing west looking down at the Bay. The crossing shown on this picture is under 9<sup>th</sup> Avenue East. To the left of the picture 9<sup>th</sup> Avenue East ends and to the right it extends further north to 32<sup>nd</sup> Street East.

- **Picture 100\_2082**

This picture was taken from the east side of 9<sup>th</sup> Avenue East and is facing south towards the railway line. This picture shows the upstream face of the crossing under 9<sup>th</sup> Avenue East.

- **Picture 100\_2083**

This picture was taken from 9<sup>th</sup> Avenue East facing east towards the soccer complex and shows the upstream end of the culvert crossing under 9<sup>th</sup> Avenue East.

- **Picture 100\_2084**

This picture was taken from the same location as Picture 100\_2083 but is now facing west looking towards the Bay and the downstream end of the crossing under 9<sup>th</sup> Avenue East.

- **Picture 100\_2085**

This picture was taken from the west side of 9<sup>th</sup> Avenue East and illustrates the downstream end of the crossing under 9<sup>th</sup> Avenue East. From here the flows will carry on west to the Bay (left of the picture).

- **Picture 100\_2086**

This picture was taken from the centre line of East Bay Shore Road looking east upstream along the channel. This picture faces the upstream end of the crossing underneath East Bay Shore Road.

- **Picture 100\_2087**

This picture was taken from the same location as Picture 100\_2086 but now facing west towards the outlet at the Bay.

- **Picture 100\_2088**

This picture was taken east of East Bay Shore Road looking west at the Bay and the inlet of the crossing under East Bay Shore Road.



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