



Mr. Jim de Lambert
Bassett Creek Watershed Management Commission
7800 Golden Valley Road
Golden Valley, MN 55427

Page # 1
Invoice # 23270051-2018-9
Project # 23/27-0051
Client # 59
November 2, 2018

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
September 29, 2018 through October 26, 2018

ENGINEERING

TECHNICAL SERVICES

Send email to MPCA responding to their questions regarding infiltration BMPs in the watershed; provide Flood Control Project information to Golden Valley staff; South Shore Drive flooding issue: review information from Plymouth resident regarding extent of flooding and follow-up communications with resident, communications with administrator and internal staff regarding potential next steps, review XPSWMM Phase 2 model results in the area to understand likely flooding and review construction record plans, and communications with administrator and Plymouth staff regarding review results and potential next steps; communications with administrator regarding Minnetonka ordinance update; staff evaluation: prepare staff evaluation form and provide to administrator for Administrative Services Committee meeting, prepare for committee meeting, and prepare draft summary of evaluation comments; and respond to question from Crystal staff regarding repair/replacement responsibility for culvert crossing of the North Branch.

James P. Herbert, Principal Engineer/Scientist		
0.5 hours @ \$190.00 per hour	\$	95.00
Karen L. Chandler, Principal Engineer/Scientist		
15.7 hours @ \$175.00 per hour	\$	2,747.50
Ross S. Mullen, Engineer/Scientist/Specialist II		
4.6 hours @ \$100.00 per hour	\$	460.00
Josh P. Phillips, Engineer/Scientist/Specialist I		
0.2 hours @ \$85.00 per hour.....	\$	17.00
<i>Subtotal, Technical Services</i>	\$	3,319.50

MONTHLY MEETING PREPARATION

Communications/coordination with administrator and internal staff regarding draft/final agenda and meeting packet for October Commission meeting; review/edit draft September meeting minutes; prepare for October Commission meeting, including preparing engineer communications; and

communications with administrator and internal staff regarding follow-up items from October Commission meeting and upcoming meeting agenda items.

James P. Herbert, Principal Engineer/Scientist 2.0 hours @ \$190.00 per hour	\$ 380.00
Karen L. Chandler, Principal Engineer/Scientist 15.4 hours @ \$175.00 per hour	\$ 2,695.00
Technicians/Administrative.....	\$ <u>572.00</u>
<i>Subtotal, Monthly Meeting Preparation.....</i>	<i>\$ 3,647.00</i>

WCA LGU Administration

Review submittal and communications with Golden Valley consultant regarding wetland delineation (not BCWMC wetland).

James P. Herbert, Principal Engineer/Scientist 0.3 hours @ \$190.00 per hour	\$ <u>57.00</u>
<i>Subtotal, WCA LGU Administration.....</i>	<i>\$ 57.00</i>

CIP PRIORITIZATION PROCESS

Communications with administrator regarding draft notes from July 31 committee meeting; and October 26 meeting with administrator to plan for November 5 CIP Prioritization Committee meeting.

Karen L. Chandler, Principal Engineer/Scientist 2.2 hours @ \$175.00 per hour	\$ 385.00
Sterling 'Greg' Williams, Engineer/Scientist/Specialist III 1.5 hours @ \$135.00 per hour	\$ <u>202.50</u>
<i>Subtotal, CIP Prioritization Process.....</i>	<i>\$ 587.50</i>
<i>Subtotal Technical Services</i>	<i>\$ 7,611.00</i>

PLAT REVIEW

Dakota Growers Pasta Rail Exp (2017-04)

Communications with New Hope staff regarding project status; and project close-out filing.

Josh P. Phillips, Engineer/Scientist/Specialist I 1.1 hours @ \$85.00 per hour	\$ <u>93.50</u>
<i>Subtotal, Dakota Growers Pasta Rail Exp.....</i>	<i>\$ 93.50</i>

10th Ave N Culvert Replacement (2017-12)

Project close-out filing.

Josh P. Phillips, Engineer/Scientist/Specialist I 0.4 hours @ \$85.00 per hour	\$ <u>34.00</u>
<i>Subtotal, 10th Ave N Culvert Replacement.....</i>	<i>\$ 34.00</i>

Minneapolis Impound Lot Facility Improvements (2017-37)

Communications with Minneapolis staff regarding project status.

Josh P. Phillips, Engineer/Scientist/Specialist I 0.4 hours @ \$85.00 per hour.....	\$	34.00
<i>Subtotal, Mpls Impound Lot Facility Improvements.....</i>		<i>\$ 34.00</i>

Plymouth Commons Apartments (2018-19)

Project close-out filing.

Josh P. Phillips, Engineer/Scientist/Specialist I 0.5 hours @ \$85.00 per hour.....	\$	42.50
<i>Subtotal, Plymouth Commons Apartments.....</i>		<i>\$ 42.50</i>

Westwood Hills Nature Center (2018-23)

Review revised grading, drainage and erosion control plan; prepare and send approval letter to city staff; and project close-out filing.

James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$190.00 per hour	\$	190.00
Josh P. Phillips, Engineer/Scientist/Specialist I 3.4 hours @ \$85.00 per hour.....	\$	289.00
<i>Subtotal, Westwood Hills Nature Center.....</i>		<i>\$ 479.00</i>

Starbucks Building Shell and Future Apartment Bldg (2018-25)

Review grading drainage and erosion control plan; prepare and send comment letter to city staff; coordination with applicant; review revised grading, drainage and erosion control plan; and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist 3.1 hours @ \$190.00 per hour	\$	589.00
Josh P. Phillips, Engineer/Scientist/Specialist I 10.2 hours @ \$85.00 per hour	\$	867.00
<i>Subtotal, Starbucks Bldg Shell and Future Apartment.....</i>		<i>\$ 1,456.00</i>

Vicksburg Square (2018-26)

Review grading drainage and erosion control plan; prepare and send comment letter to city staff; coordination with applicant; review revised grading, drainage and erosion control plan; prepare and send approval letter to city staff; and project close-out filing.

James P. Herbert, Principal Engineer/Scientist 3.6 hours @ \$190.00 per hour	\$	684.00
Josh P. Phillips, Engineer/Scientist/Specialist I 3.3 hours @ \$85.00 per hour.....	\$	280.50

Technicians/Administrative.....	\$	47.50
Expenses (Postage)	\$	<u>0.47</u>
<i>Subtotal, Vicksburg Square</i>	\$	<i>1,012.47</i>

Neighborhood Drainage Improvements (2018-27)

Plat review set up and preliminary review.

Josh P. Phillips, Engineer/Scientist/Specialist I 0.6 hours @ \$85.00 per hour.....	\$	51.00
Technicians/Administrative.....	\$	38.00
Expenses (Postage)	\$	<u>0.47</u>
<i>Subtotal, Neighborhood Drainage Improvements.....</i>	\$	<i>89.47</i>
Subtotal Plat Review.....	\$	3,240.94

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Review MDNR permit application and provide comments; and internal communications regarding upcoming BCWMC submittal for project in Minnetonka.

James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$190.00 per hour	\$	95.00
Josh P. Phillips, Engineer/Scientist/Specialist I 0.2 hours @ \$85.00 per hour.....	\$	<u>17.00</u>
Subtotal, Preliminary Communications.....	\$	112.00
Subtotal Preliminary Communications and Non-Fee Reviews	\$	112.00

COMMISSION AND TAC MEETINGS

Attend October 18 Commission meeting; and attend October 24 Administrative Services Committee meeting to perform staff evaluation.

Karen L. Chandler, Principal Engineer/Scientist 5.1 hours @ \$175.00 per hour	\$	892.50
Michelle A. Kimble, Engineer/Scientist/Specialist III 2.4 hours @ \$130.00 per hour	\$	312.00
Expenses (Mileage)	\$	<u>18.53</u>
Subtotal, Commission and TAC Meetings.....	\$	1,223.03

SURVEYS & STUDIES

Subtotal Surveys & Studies.....	\$	0.00
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WATER QUALITY/MONITORING

Sweeney Lake Aeration Study

Learn and troubleshoot three-dimensional lake water quality model (AEM3D); and complete report regarding modeling results and methodology.

Gregory J. Wilson, Consultant/Advisor 19.2 hours @ \$160.00 per hour	\$	3,072.00
Keith M. Pilgrim, Consultant/Advisor 28.0 hours @ \$160.00 per hour	\$	4,480.00
Technicians/Administrative.....	\$	<u>220.00</u>
<i>Subtotal, Sweeney Lake Aeration Study.....</i>	<i>\$</i>	<i>7,772.00</i>
<i>Less Barr contribution to project.....</i>		<i><u>- 6,638.56</u></i>
<i>Total payable after adjustment.....</i>	<i>\$</i>	<i>1,133.44</i>

Routine Lake Monitoring - Parkers and Westwood Lakes

Review lab reports, revised lab reports and lab invoices; communications with lab; and lab analysis expenses.

Margaret R. Rattei, Engineer/Scientist/Specialist III 1.5 hours @ \$135.00 per hour	\$	202.50
Erin M. Dietrich, Engineer/Scientist/Specialist III 0.4 hours @ \$145.00 per hour	\$	58.00
Terri A. Olson, Engineer/Scientist/Specialist III 2.3 hours @ \$135.00 per hour	\$	310.50
Technicians/Administrative.....	\$	77.00
Expenses (Pace Analytical)	\$	<u>212.00</u>
<i>Subtotal, Routine Lake Monitoring – Parkers and Westwood</i>	<i>\$</i>	<i>860.00</i>

Biotic Index Monitoring

Prepare for and perform macroinvertebrate monitoring and habit/morphology surveys at three sites (one on North Branch and two on the Main Stem); and prepare/ship samples to subconsultant for analysis.

Christopher J. Bonick, Engineer/Scientist/Specialist III 11.5 hours @ \$125.00 per hour	\$	1,437.50
Brent A. Lindstrom, Engineer/Scientist/Specialist III 0.2 hours @ \$130.00 per hour	\$	26.00
Technicians/Administrative.....	\$	1,433.00
Expenses (Flow meter/2WD vehicle/mileage)	\$	<u>98.15</u>
<i>Subtotal, Biotic Index Monitoring.....</i>	<i>\$</i>	<i>2,994.65</i>
<i>Subtotal, Water Quality/Monitoring.....</i>	<i>\$</i>	<i>4,988.09</i>

WATER QUANTITY

Measure and review lake level elevations as part of the lake-gauging program.

Technicians/Administrative.....	\$	380.00
Expenses (Mileage/2WD Field)	\$	<u>57.89</u>
Subtotal, Water Quantity.....	\$	437.89

FLOOD CONTROL PROJECT INSPECTION+DEEP TUNNEL

Communications and coordination with administrator, internal staff, city staff, and U.S. Army Corps of Engineers staff regarding deep tunnel inspection and annual flood control project inspection; prepare for and conduct annual inspection.

James P. Herbert, Principal Engineer/Scientist 5.7 hours @ \$190.00 per hour	\$	1,083.00
William W. Spychalla, Consultant/Advisor 0.5 hours @ \$175.00 per hour	\$	87.50
Patrick E. Brockamp, Engineer/Scientist/Specialist II 11.7 hours @ \$95.00 per hour	\$	1,111.50
Josh P. Phillips, Engineer/Scientist/Specialist I 12.9 hours @ \$85.00 per hour.....	\$	1,096.50
Expenses (Mileage/Digital Camera)	\$	<u>56.70</u>
Subtotal, Flood Control Proj Inspect+Deep Tunnel.....	\$	3,435.20

MUNICIPAL PLAN REVIEWS

Minneapolis WRMP Review

Review city's response to comments document.

Karen L. Chandler, Principal Engineer/Scientist 1.4 hours @ \$175.00 per hour	\$	<u>245.00</u>
Subtotal, Minneapolis MRMP	\$	245.00

St. Louis Park Plan

Download SWMP files; preliminary review of SWMP; and communications with administrator and internal staff.

Karen L. Chandler, Principal Engineer/Scientist 1.3 hours @ \$175.00 per hour	\$	<u>227.50</u>
Subtotal, St. Louis Park Plan	\$	227.50

New Hope LSWMP Review

Communications with New Hope consultant regarding LSWMP revisions status and deadline.

Karen L. Chandler, Principal Engineer/Scientist
0.4 hours @ \$175.00 per hour \$ 70.00
Subtotal, New Hope LSWMP \$ 70.00

Medicine Lake LSWMP Review

Communications with Medicine Lake consultant regarding BCWMC review of LSWMP; and download LSWMP files.

Karen L. Chandler, Principal Engineer/Scientist
0.7 hours @ \$175.00 per hour \$ 122.50
Subtotal, Medicine Lake LSWMP \$ 122.50

Plymouth SWMP Review

Communications with administrator and internal staff regarding SWMP review process; communications with Met Council staff regarding comment letter schedule; review draft SWMP; prepare comments on draft SWMP and provide comments to city staff; and discuss review comments with Plymouth staff.

Karen L. Chandler, Principal Engineer/Scientist
5.3 hours @ \$175.00 per hour \$ 927.50
Sterling 'Greg' Williams, Engineer/Scientist/Specialist III
9.5 hours @ \$135.00 per hour \$ 1,282.50
Subtotal, Plymouth LSWMP \$ 2,210.00
***Subtotal, Municipal Plan Reviews* \$ 2,875.00**

XP-SWMM MODEL UPDATES-REVIEWS

***Subtotal, XP-SWMM Model Updates-Reviews* \$ 0.00**

TOTAL ENGINEERING \$ 23,923.15

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

Conduct flow measurement at WOMP station; download and send data to MCES staff; and communications with MCES staff.

Christopher J. Bonick, Engineer/Scientist/Specialist III
4.5 hours @ \$125.00 per hour \$ 562.50
Expenses (Mileage, 2WD Field Vehicle/Sontek ADV) \$ 104.99
Subtotal, Watershed Outlet Monitoring Program \$ 667.49

TOTAL WOMP \$ 667.49

APM/AIS WORK

Loppet/Red Bull Urban Portage event: review agenda, prepare for and attend October 4 stakeholder meeting regarding protection of Sweeney/Twin Lakes from AIS during event, review administrator's summary of consensus items from October 4 meeting, and conference call with administrator regarding AIS protection approach after zebra mussel identification in Lake Bde Maka Ska; and communications with MDNR staff regarding 2018 Medicine Lake Starry Stonewort treatments and results.

Karen L. Chandler, Principal Engineer/Scientist 5.3 hours @ \$175.00 per hour	\$	927.50
Margaret R. Rattei, Engineer/Scientist/Specialist III 5.2 hours @ \$135.00 per hour	\$	702.00
<i>Subtotal, APM/AIS Work</i>	\$	1,629.50
TOTAL APM/AIS WORK	\$	1,629.50

ADMINISTRATIVE SERVICES

TOTAL ADMINISTRATIVE SERVICES	\$	0.00
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ANNUAL REPORT

TOTAL ANNUAL REPORT	\$	0.00
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WEBSITE

TOTAL WEBSITE	\$	0.00
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PUBLIC COMMUNICATIONS

TOTAL PUBLIC COMMUNICATIONS	\$	0.00
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CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)

SCHAPER POND 2018 MONITORING AND REPORTING (SL-3)

Perform the final two (fall) water quality sampling events within Schaper Pond; perform the analytical sample testing for the two fall events and the last of the summer sampling events; coordinate with Carp Solutions and Golden Valley staff for the third carp survey; and connect Carp Solutions with the proper Golden Valley utility and permit staff to answer their questions about PIT antenna installation and housing/powering the equipment; complete the third/fall carp survey and attach PIT tags to carp in Schaper Pond, as well as Sweeney Lake, to monitor the movement of carp from Schaper into Sweeney and from Sweeney into Schaper Pond; and coordinate with Golden Valley and Carp Solutions staff for PIT antenna equipment installation, including power supply from the lift station near the Highway 55 frontage road.

Henry M. Runke, Principal Engineer/Scientist 0.2 hours @ \$175.00 per hour	\$ 35.00
Gregory J. Wilson, Consultant/Advisor 8.3 hours @ \$160.00 per hour	\$ 1,328.00
Heather N. Hlavaty, Engineer/Scientist/Specialist I 7.2 hours @ \$95.00 per hour	\$ 684.00
Samantha A. Beck, Engineer/Scientist/Specialist I 6.5 hours @ \$70.00 per hour	\$ 455.00
Technicians/Administrative.....	\$ 105.00
Expenses (Pace Analytical/Carp Solutions/2WD vehicle/mileage)	\$ 4,191.20
Subtotal, Schaper Pond 2018 Monitoring and Reporting	\$ 6,798.20

BRYN MAWR MEADOWS WATER QUALITY IMPROVEMENT PROJECT FEASIBILITY STUDY (2020) (BC-5)

Develop design concepts; perform P8 and SWMM modeling for design concepts; prepare GIS figures for draft report; communications with administrator, city staff and MPRB staff; prepare text and CAD figures for draft report; and prepare presentation for Commission meeting.

James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$190.00 per hour	\$ 95.00
Kurt A. Leuthold, Principal Engineer/Scientist 7.1 hours @ \$180.00 per hour	\$ 1,278.00
Karen L. Chandler, Principal Engineer/Scientist 4.1 hours @ \$175.00 per hour	\$ 717.50
Gregory J. Wilson, Consultant/Advisor 1.8 hours @ \$160.00 per hour	\$ 288.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 0.6 hours @ \$140.00 per hour	\$ 84.00
Michelle A. Kimble, Engineer/Scientist/Specialist III 41.8 hours @ \$130.00 per hour	\$ 5,434.00
Ross S. Mullen, Engineer/Scientist/Specialist II 1.4 hours @ \$100.00 per hour	\$ 140.00
Josh P. Phillips, Engineer/Scientist/Specialist I 42.2 hours @ \$85.00 per hour.....	\$ 3,587.00
Rachel C. Mitcavish, Engineer/Scientist/Specialist I 5.1 hours @ \$80.00 per hour.....	\$ 408.00
Joshua R. Vosejпка, Engineer/Scientist/Specialist I 1.0 hours @ \$80.00 per hour.....	\$ 80.00
Subtotal, Bryn Mawr Meadows Feasibility Study	\$ 12,111.50

WESTWOOD LAKE WATER QUALITY IMPROVEMENT PROJECT (2019) (WST-2)

Edit BCWMC sign per list of requested changes; and communications with internal staff and administrator.

Michelle A. Kimble, Engineer/Scientist/Specialist III 5.2 hours @ \$130.00 per hour	\$ 676.00
Karen C. Kaul, Contracted 4.8 hours @ \$85.00 per hour	\$ <u>408.00</u>
Subtotal, Westwood Lake WQ Feasibility Study	\$ 1,084.00

JEVNE PARK STORMWATER MANAGEMENT FEASIBILITY STUDY (2020) (ML-21)

Coordinate agency meeting; develop draft presentation for agency meeting; prepare summary of MPCA leak site file review; process GPS data for wetland delineations; complete figures, photo log, datasheets, and precipitation analysis for wetland delineation; draft, review, and finalize wetland delineation report and complete Joint Application form; perform topographic, utility, and tree survey of project area; develop topographic survey map and base map of project area; perform threatened and endangered species and cultural resource reviews; and develop and review threatened and endangered species and cultural resource review memos.

Jennifer A. Koehler, Engineer/Scientist/Specialist III 8.3 hours @ \$140.00 per hour	\$ 1,162.00
Shanna R. Braun, Engineer/Scientist/Specialist III 0.5 hours @ \$130.00 per hour	\$ 65.00
Brian K. Burgner, Engineer/Scientist/Specialist II 18.9 hours @ \$100.00 per hour	\$ 1,890.00
John W. Kubiak, Engineer/Scientist/Specialist II 1.0 hours @ \$120.00 per hour	\$ 120.00
Mack M. Wyatt, Engineer/Scientist/Specialist I 3.0 hours @ \$70.00 per hour	\$ 210.00
Megan R. Quinlan, Engineer/Scientist/Specialist I 1.0 hours @ \$70.00 per hour	\$ 70.00
Technicians/Administrative.....	\$ 8,472.50
Expenses (Mileage/2WD field vehicle/Robotic Total Station/GPS system/GPS trimble)	\$ <u>1,323.81</u>
Subtotal, Jevne Park Stormwater Feasibility Study	\$ 13,313.31

CRANE LAKE IMPROVEMENT PROJECT (2020) (CL-3)

Communications with administrator and Minnetonka staff regarding feasibility study revision/review schedule.

Karen L. Chandler, Principal Engineer/Scientist 0.7 hours @ \$175.00 per hour	\$ <u>122.50</u>
Subtotal, Crane Lake Improvement Project	\$ 122.50

BRYN MAWR MEADOWS WATER QUALITY IMPROVEMENT PROJECT (2020) (BC-5)

Prepare for and attend October 23 meeting with MPRB and City of Mpls staff to discuss MnDOT ponds and how to move forward. Follow up with files to MPRB and City, and contact with MnDOT to set up future meeting.

Kurt A. Leuthold, Principal Engineer/Scientist 1.8 hours @ \$180.00 per hour	\$	324.00
Michelle A. Kimble, Engineer/Scientist/Specialist III 4.2 hours @ \$130.00 per hour	\$	546.00
Josh P. Phillips, Engineer/Scientist/Specialist I 1.1 hours @ \$85.00 per hour	\$	93.50
Subtotal, Bryn Mawr Meadows Feasibility Study(2020).....	\$	963.50

TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)\$ 34,393.01

TMDL WORK

TOTAL TMDL WORK\$ 0.00

IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

Review MDNR survey data; communications with MDNR to discuss structures not included in the survey data, the survey not including data required for FEMA certification, and to request performance of remainder of scoped survey data; and update XP-SWMM model with survey data received to-date.

Karen L. Chandler, Principal Engineer/Scientist 0.5 hours @ \$175.00 per hour	\$	87.50
Jennifer A. Koehler, Engineer/Scientist/Specialist III 0.2 hours @ \$140.00 per hour	\$	28.00
Ross S. Mullen, Engineer/Scientist/Specialist II 10.1 hours @ \$100.00 per hour	\$	1,010.00
Samantha A. Beck, Engineer/Scientist/Specialist I 11.3 hours @ \$70.00 per hour	\$	791.00
<i>Subtotal, Improved FEMA Floodplain Modeling & Mapping (MDNR).....</i>	<i>\$</i>	<i>1,916.50</i>

TOTAL IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR).....\$ 1,916.50

SUMMARY TOTALS

Total Engineering	\$ 23,923.15
Total WOMP	\$ 667.49
Total APM/AIS Work	\$ 1,629.50
Total Administrative Services	\$ 0.00
Total Annual Report/Website/Public Communications	\$ 0.00
Total TMDL Work	\$ 0.00
Total Capital Improvement Projects (Tax Levy)	\$ 34,393.01
Total Improved FEMA Floodplain Modeling & Mapping (MDNR)	\$ <u>1,916.50</u>
TOTAL PAYABLE	\$ 62,529.65

Barr declares under the penalties of law that this account, claim or demand is just and that no part of it has been paid.


