



Bassett Creek Watershed Management Commission

Regular Meeting
Wednesday, November 20, 2019
8:30 – 11:00 a.m.

Council Conference Room, Golden Valley City Hall, Golden Valley, MN

AGENDA

1. CALL TO ORDER and ROLL CALL

2. **CITIZEN FORUM ON NON-AGENDA ITEMS** - *Citizens may address the Commission about any item not contained on the regular agenda. A maximum of 15 minutes is allowed for the Forum. If the full 15 minutes are not needed for the Forum, the Commission will continue with the agenda. The Commission will take no official action on items discussed at the Forum, with the exception of referral to staff or a Commissions Committee for a recommendation to be brought back to the Commission for discussion/action.*

3. APPROVAL OF AGENDA

4. CONSENT AGENDA

- A. Approval of Minutes – October 17, 2019 Commission Meeting
- B. Acceptance of November 2019 Financial Report
- C. Approval of Payment of Invoices
 - i. Keystone Waters, LLC – October 2019 Administrative Services
 - ii. Keystone Waters, LLC – October 2019 Expenses
 - iii. Barr Engineering – October 2019 Engineering Services
 - iv. Triple D Espresso – November 2019 Meeting Refreshments
 - v. Wenck – October 2019 WOMP Monitoring
 - vi. Lawn Chair Gardener – October 2019 Administrative and Education Services
 - vii. Wenck – October 2019 Bassett Creek Valley Study
 - viii. Kennedy & Graven – September 2019 Legal Services
 - ix. HDR – Website Maintenance & Hosting
 - x. Hennepin County – 2019 River Watch Program
 - xi. Met Council – 2019 CAMP
 - xii. Shingle Creek WMO – West Metro Water Alliance Special Projects
- D. Approval of City of Plymouth Reimbursement Request for Plymouth Creek Restoration Project (PC-2017)
- E. Approval of Amendment to Extend Term of Clean Water Fund Grant Agreement for Harrison Neighborhood Project

5. BUSINESS

- A. Receive Presentation of Draft Bassett Creek Valley Floodplain and Stormwater Study Report (45 min)
- B. Make Determination on Contracting Entity for Four Seasons Redevelopment Project (15 min)
- C. Receive Report on Ordinance Updates by Member Cities (15 min)
- D. Assign TAC Meeting Liaison (5 min)

6. COMMUNICATIONS (10 minutes)

- A. Administrator's Report
 - i. Update on BWSR Watershed Based Funding
 - ii. Update on Sochacki Park/Rice Ponds
 - iii. Update on Revised Requirements Documents
- B. Chair
- C. Commissioners
- D. TAC Members
 - i. Upcoming Meeting 11/25
- E. Committees
- F. Education Consultant
- G. Legal Counsel
- H. Engineer
 - i. Update on Deep Tunnel Inspection

7. INFORMATION ONLY (Information online only)

- A. Administrative Calendar
- B. CIP Project Updates <http://www.bassettcreekwmo.org/projects>
- C. Grant Tracking Summary and Spreadsheet
- D. WMWA October Meeting Minutes
- E. AIS Education Cards for Lake Residents
- F. Children's Water Festival Thank You
- G. WCA Notice of Application, Golden Valley
- H. WCA Notice of Applications (3), Plymouth Hollydale Development Project
- I. WCA Notice of Application, Plymouth
- J. WCA Notice of Decision, Crystal

8. ADJOURNMENT

Upcoming Meetings & Events

- BCWMC Technical Advisory Committee Meeting: Monday, November 25th, 10:00 a.m., Golden Valley City Hall
- [Minnesota Association of Watershed Districts Annual Meeting and Conference](#): December 5 – 7, Alexandria MN
- [Bassett Creek Watershed Management Commission Regular Meeting](#): Thursday December 19th, 8:30 a.m., Golden Valley City Hall



Bassett Creek Watershed Management Commission

AGENDA MEMO

Date: November 12, 2019

To: BCWMC Commissioners

From: Laura Jester, Administrator

RE: Background Information for 11/20/19 BCWMC Meeting

1. **CALL TO ORDER and ROLL CALL**
2. **CITIZEN FORUM ON NON-AGENDA ITEMS**
3. **APPROVAL OF AGENDA – ACTION ITEM with attachment**
4. **CONSENT AGENDA**
 - A. Approval of Minutes – October 17, 2019 Commission Meeting- **ACTION ITEM with attachment**
 - B. Acceptance of November Financial Report - **ACTION ITEM with attachment (more details online)**
 - C. Approval of Payment of Invoices - **ACTION ITEM with attachments (online) – I reviewed the following invoices and recommend approval of payment.**
 - i. Keystone Waters, LLC – October 2019 Administrative Services
 - ii. Keystone Waters, LLC – October 2019 Expenses
 - iii. Barr Engineering – October 2019 Engineering Services
 - iv. Triple D Espresso – November 2019 Meeting Refreshments
 - v. Wenck – October 2019 WOMP Monitoring
 - vi. Lawn Chair Gardener – October 2019 Administrative and Education Services
 - vii. Wenck – October 2019 Bassett Creek Valley Study
 - viii. Kennedy & Graven – September 2019 Legal Services
 - ix. HDR – Website Maintenance & Hosting
 - x. Hennepin County – 2019 River Watch Program
 - xi. Met Council – 2019 CAMP
 - xii. Shingle Creek WMO – West Metro Water Alliance Special Projects
 - D. Approval of City of Plymouth Reimbursement Request for Plymouth Creek Restoration Project (PC-2017) – **ACTION ITEM with attachment (more detail online) – At their meeting in September 2016, the Commission approved an agreement with the City of Plymouth to design and construct this project. This is the 4th reimbursement request. The construction was completed in 2018 and vegetation was established and maintained with year along with some minor repairs. The city is requesting reimbursement for construction costs, vegetation management, and construction-related expenses (July 2018 – present). Staff recommends approval.**
 - E. Approval of Amendment to Extend Term of Clean Water Fund Grant Agreement for Harrison Neighborhood Project – **ACTION ITEM with attachment – In April 2017, the Commission received a BWSR Community Partnership Clean Water Fund Grant for the Harrison Neighborhood Project to engage with businesses and install water quality BMPs in the Harrison Neighborhood. The Commission entered an agreement with Metro Blooms to carry out that project. Due to various circumstances (see “request details” in the attached), the project is slightly behind schedule and BWSR has agreed to extend the term of the grant from 12/31/19 to 12/31/20. Staff recommends approval of the extension. (The agreement with Metro Blooms remains in effect until the term of the grant is complete and therefore does not require an amendment.)**

5. BUSINESS

- A. Receive Presentation of Draft Bassett Creek Valley Floodplain and Stormwater Study Report (45 min) – **INFORMATION ITEM with attachment (appendices online)** – *In February, the Commission contracted with Wenck Associates to complete this study to evaluate options to unlock the potential in natural resources, recreation, and redevelopment by integrating floodplain and stormwater management into a regional solution for the Bassett Creek Valley. (This project is being conducted largely on behalf of the City of Minneapolis; the city is reimbursing the Commission for this study and all but \$2,000 of our engineers' time related to the study.) The Commission Engineer and I participated in a design charette and other meetings and have reviewed and commented on the draft report. Staff with Wenck will present the draft report at this meeting.*

- B. Make Determination on Contracting Entity for Four Seasons Redevelopment Project (15 min) – **ACTION/CONSENSUS ITEM with attachment** – *BCWMC Attorney, David Anderson, has carefully reviewed the BCWMC Joint Powers Agreement and state law regarding the Commission's ability to contract with a private entity for a capital improvement project. He presents his findings in the attached memo. The Commission should provide direction on how to proceed with contracting for the Four Seasons Redevelopment Project, which is likely to come before the Commission for official consideration at the December meeting.*

- C. Receive Report on Ordinance Updates by Member Cities (15 min) – **INFORMATION ITEM with attachment** – *I recently polled the member cities regarding the status of ordinances and enforcement of stream and wetland buffers required by the 2015 Bassett Creek Watershed Management Plan. The results are varied and presented in the attached memo. Most cities have adopted appropriate ordinances or are in the process of doing so.*

- D. Assign TAC Meeting Liaison (5 min) – **ACTION ITEM no attachment** – *The Commission should appoint a liaison to attend the November 25th TAC meeting (10:00 – 12:00, Golden Valley City Hall). The agenda will include a review of the water monitoring goals developed at the last TAC meeting, a discussion on how the Commission is achieving those goals; and development of recommendations on any needed changes to the water monitoring programs.*

6. COMMUNICATIONS (10 minutes)

- A. Administrator's Report - **INFORMATION ITEM with attachment**
 - i. Update on BWSR Watershed Based Funding
 - ii. Update on Sochacki Park/Rice Ponds
 - iii. Update on Revised Requirements Documents
- B. Chair
- C. Commissioners
- D. TAC Members
 - i. Upcoming Meeting 11/25
- E. Committees
- F. Education Consultant
- G. Legal Counsel
- H. Engineer
 - i. Update on Deep Tunnel Inspection

7. INFORMATION ONLY (Information online only)

- A. Administrative Calendar
- B. CIP Project Updates <http://www.bassettcreekwmo.org/projects>
- C. Grant Tracking Summary and Spreadsheet
- D. WMWA October Meeting Minutes
- E. AIS Education Cards for Lake Residents
- F. Children's Water Festival Thank You
- G. WCA Notice of Application, Golden Valley
- H. WCA Notice of Applications (3), Plymouth Hollydale Development Project
- I. WCA Notice of Application, Plymouth
- J. WCA Notice of Decision, Crystal

8. ADJOURNMENT

Upcoming Meetings & Events

- BCWMC Technical Advisory Committee Meeting: Monday, November 25th, 10:00 a.m., Golden Valley City Hall
- [Minnesota Association of Watershed Districts Annual Meeting and Conference](#): December 5 – 7, Alexandria MN
- [Bassett Creek Watershed Management Commission Regular Meeting](#): Thursday December 19th, 8:30 a.m., Golden Valley City Hall



Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting

Thursday, October 17, 2019

8:30 a.m.

Golden Valley City Hall, Golden Valley MN

1. CALL TO ORDER and ROLL CALL

On Thursday, October 17, 2019 at 8:31 a.m. in the Council Conference Room at Golden Valley City Hall (7800 Golden Valley Rd.), Vice Chair Prom called the meeting of the Bassett Creek Watershed Management Commission (BCWMC) to order.

Commissioners and city staff present:

City	Commissioner	Alternate Commissioner	Technical Advisory Committee Members (City Staff)
Crystal	Dave Anderson	<i>Vacant Position</i>	Mark Ray
Golden Valley	Stacy Harwell (Treasurer)	Jane McDonald Black	Eric Eckman
Medicine Lake	Clint Carlson	Gary Holter	Susan Wiese
Minneapolis	Michael Welch (Vice Chair)	<i>Vacant Position</i>	Shahram Missaghi
Minnetonka	Mike Fruen	<i>Absent</i>	Sarah Schweiger
New Hope	<i>Absent</i>	Pat Crough	Megan Hedstrom
Plymouth	Jim Prom (Chair)	<i>Absent</i>	Ben Scharenbroich
Robbinsdale	<i>Vacant Position</i>	<i>Absent</i>	Richard McCoy, Marta Roser
St. Louis Park	<i>Absent</i>	Patrick Noon	Erick Francis
Administrator	Laura Jester, Keystone Waters		
Engineer	Karen Chandler and Greg Wilson from Barr Engineering		
Recorder	Dawn Pape, Lawn Chair Gardener		
Legal Counsel	Dave Anderson, Kennedy & Graven		
Presenters/ Guests/Public	Ted Hoshal, Medicine Lake resident		

2. CITIZEN FORUM ON NON-AGENDA ITEMS

None.

3. APPROVAL OF AGENDA

MOTION: Commissioner Welch moved to approve the agenda. Commissioner Fruen seconded the motion. Upon a vote, the motion carried 8-0, the City of Robbinsdale absent from the vote.

4. CONSENT AGENDA

The following items were approved as part of the consent agenda: September 19, 2019 Commission meeting minutes, acceptance of the October 2019 financial report, and payment of invoices.

The general and construction account balances reported in the October 2019 Financial Report are as follows:

Checking Account Balance	\$ 569,608.22
<hr/>	
TOTAL GENERAL FUND BALANCE	\$ 569,608.22
<hr/>	
TOTAL CASH & INVESTMENTS ON-HAND (10/09/19)	\$ 4,280,847.84
<hr/>	
CIP Projects Levied – Budget Remaining	\$ (6,830,281.49)
<hr/>	
Closed Projects Remaining Balance	\$ (345,053.42)
<hr/>	
2012-2017 Anticipated Tax Levy Revenue	\$ 7,330.29
<hr/>	
2018 Anticipated Tax Levy Revenue	\$ 8,770.47
<hr/>	
Anticipated Closed Project Balance	\$ (328,952.66)
<hr/>	

MOTION: Commissioner Fruen moved to approve the consent agenda. Commissioner Carlson seconded the motion. Upon a vote, the motion carried 8-0, the City of Robbinsdale absent from the vote.

5. BUSINESS

A. Receive Presentation on Results of Carp Population Study on Schaper Pond and Sweeney Lake

Administrator Jester noted that at the September 2018 meeting, the Commission approved additional study on the movement and population of carp in Schaper Pond and Sweeney Lake after an initial survey found large numbers of carp in Schaper Pond that may be impacting water quality in the pond and downstream in Sweeney Lake. Commission Engineer, Greg Wilson, gave a presentation with an overview of pollutant loads in Schaper Pond and the final results of the carp study. And, he made management recommendations to consider as part of the grant-funded Sweeney Lake Water Quality Improvement Project.

Engineer Wilson explained that there were a few potential factors that could be limiting the effectiveness of the pond to remove pollutants including limited time to equilibrate to start up conditions after the Schaper Pond Diversion Project, high flows through the pond, carp, watershed construction on Douglas Drive, new upstream water treatment, and changes to bathymetry. He noted it was clear just by looking at the pond that carp were a major factor because they were visible from the surface in three areas of the pond.

Commissioner Welch asked if the baffle (diversion project) made a difference? Engineer Wilson replied there was no evidence of that so far, that total phosphorus and total suspended solids concentrations had increased since the project was complete.

Engineer Wilson reported that a bathymetric survey and initial carp population survey were completed and the carp survey showed that Schaper Pond is likely serving as a carp hatchery. He described how the carp survey was completed by PIT tagging the carp and noted that most of the 206 tagged carp stayed where they were tagged and didn't move between Schaper Pond and Sweeney Lake. He reported that the 2018-19 carp monitoring confirmed large numbers of carp inhabit Schaper Pond and Sweeney Lake at densities five to ten times higher than the threshold associated with water quality impacts. PIT tag monitoring indicated movement between Schaper and Sweeney in the spring, along with upstream movement. There was no movement of the young of year carp confirming that Schaper functions as a nursery.

Engineer Wilson recommended removing as many carp as possible in spring 2020, performing post-removal monitoring, and determining additional actions, if needed.

Commissioner Welch asked if the baffle could have increased the carp population. Engineer Wilson didn't see evidence of that, explaining that there is no impediment to carp movement on either side of the pond, and there is no way to build a structure to impede movement.

Commissioner Welch asked if removing carp from the pond is just temporary solution. There was a discussion about tagging and tracking of carp to better target carp removal.

Engineer Wilson reported the first alum treatment in Sweeney Lake is scheduled for the fall of 2020. It will be followed by post-treatment monitoring. The second phase of the alum treatment will take place some time thereafter.

Commissioner Welch noted that he likes the idea of barriers in addition to carp removal. Engineer Wilson said there are non-physical barriers (electrical current, for instance) that could be considered. The Commission would like to keep apprised of management techniques.

Alternate Commissioner McDonald Black asked if more curly-leaf pondweed is likely to grow as a result of better water quality following alum treatment. Chair Prom shared a similar experience on a different lake where more curly-leaf pondweed grew after an alum treatment.

Engineer Wilson noted that carp are not likely to affect alum treatment because they are in shallow areas and alum is effective in deeper waters. Commissioner Welch mentioned again that he thinks it's important to prioritize the investigation of carp barriers in addition to carp removal.

Engineer Wilson's recommendations include implementing carp removal and control consistent with the 319 grant funded workplan/budget. The project should be designed to:

- Obtain necessary permits
- Drawdown Schaper Pond (water level)
- Electrofish and remove carp from Schaper Pond and Sweeney Lake in the spring of 2020
- Install four baited box nets for carp removal from Sweeney Lake.
- Perform post-treatment carp monitoring. If the post-treatment monitoring shows original carp, we can determine the difference in population before and after removal. Pollutant removal can be estimated from the number of carp removed. The post-treatment monitoring will include looking at longitudinal total phosphorus monitoring.

B. Receive Update on Jevne Park Stormwater Improvement Project

Administrator Jester reported that the Medicine Lake City Council voted not to move forward with the Jevne Park Stormwater Quality Improvement Project at their October 4, 2019 city council meeting. The Commission discussed options for moving forward: putting the project on indefinite hold or removing the project from its 2020 CIP list and

reallocating those 2020 levy funds to a different project. Administrator Jester noted she had discussed the situation with Hennepin County staff and that the timing was such that if the Commission decided to remove the project from the 2020 list right now, the \$500,000 that was allocated to the Jevne Project could be allocated to a different project on the 2020 list before the County Board approves the final 2020 list of projects and levy. She noted that either way, the Commission can and should keep the final levy at its current level – it's just a matter of which projects are officially on the list.

Commissioner Carlson explained that the city council meeting was confusing, at times hard to distinguish fiction from fact, and that there was a brand-new city council member in attendance, and another city council member who may have supported the project was absent. He noted the city had selected Wenck Associates to design the project and that their quote was \$27,000 less than estimated in the feasibility study. He requested that the Commission not remove the project from the 2020 list right now in order to have more time to make sure all facts are presented to the city council.

Chair Prom noted that the Medicine Lake City Council still had not agreed to the language in the draft agreement between the City and the Commission.

MOTION: Alternate Commissioner Crough moved to table discussion of the Jevne Park Stormwater Improvement Project regarding its placement on or off of the 2020 CIP list. Commissioner Fruen seconded the motion.

Discussion: The Commission discussed how approval of the motion would result in giving the city more time to discuss the project by ending discussion of the project at this meeting. Administrator Jester provided a recap of the implications of removing the project from the 2020 CIP list and noted it would not mean a different project that currently is not on the 2020 list would get added. Commissioner Harwell indicated that it doesn't feel like the right time to totally remove the project from the list. Commissioner Welch noted that there are a long list of good projects. Chair Prom noted he wasn't comfortable with this project due to possible construction impacts on the road or adjacent properties.

VOTE: Upon a roll call vote, the motion carried 6-2, the cities of Crystal, Golden Valley, Medicine Lake, Minnetonka, New Hope, and St. Louis Park voting in favor of the motion; the cities of Minneapolis and Plymouth voting against the motion; and the City of Robbinsdale absent from the vote.

C. Receive Update on Rice Ponds/Sochaki Park Subwatershed Assessment

Administrator Jester reminded the Commission about a meeting with residents near South Rice Pond about their frustration with the poor water quality in the ponds (including North Rice Pond and Grimes Pond). She noted that Three Rivers Park District (TRPD) is committed to improving Sochacki Park and assessing the ponds. Also, the Sochacki Park Joint Powers Agreement (JPA) group that includes Golden Valley, Robbinsdale, and TRPD recently approved a resolution to create and develop a water resources plan for the ponds. She reported that she and Commission Engineer Chandler recently met with TRPD staff to discuss the scope of the project. Engineer Chandler added that Grimes Pond is outside of the park, but will be included in some of the monitoring and subwatershed analysis.

Administrator Jester informed the Commission about the subwatershed assessment and explained there might be a future request for funding or technical support from the Commission to perform the assessment.

D. Receive Additional Information on Status of Main Stem Erosion Repair Project

Administrator Jester noted that at the September meeting, the city of Minneapolis provided an update and memo on new developments and constraints related to this project. At that meeting, the Commission requested additional information about the implications of these changes. Answers to those questions are included in the memo in the meeting packet. TAC member Shahram Missaghi, Minneapolis, was there to answer questions, but there were none.

E. Appoint Delegates to Minnesota Association of Watershed Districts (MAWD)

Administrator Jester reported that according to the MAWD bylaws, the Commission should appoint two delegates to attend the MAWD conference and may also appoint alternate delegates. The delegates (or alternates in the

delegates' absence) would represent the Commission at MAWD meetings and would cast votes on resolutions and other business. She noted that ideally, the delegates would attend MAWD's annual meeting in Alexandria December 5 – 7 (or at least the business meeting and regional caucus on December 6).

MOTION: Chair Prom moved to appoint Michael Welch as one delegate. Commissioner Fruen seconded the motion. Upon a vote, the motion carried 8-0, with the City of Robbinsdale absent from the vote.

MOTION: Commissioner Welch moved to appoint Jim Prom as a second delegate. Commissioner Fruen seconded the motion. Upon a vote, the motion carried 8-0, with the City of Robbinsdale absent from the vote.

MOTION: Chair Prom moved to appoint Stacy Harwell as the alternate delegate. Commissioner Welch seconded the motion. Upon a vote, the motion carried 8-0, with the City of Robbinsdale absent from the vote.

6. COMMUNICATIONS

A. Administrator's Report

- i. Reminder: WEDNESDAY November 20 Commission Meeting
- ii. Administrator Jester noted there was progress regarding the manufactured treatment devices (MTD) with MPCA responding to the Commission's letter from July and asking clarifying questions (to which the Commission and partnering watersheds responded) and requested a meeting with watersheds.

B. Chair

- i. Nothing to report

C. Commissioners

- i. Report on Golden Valley Sustainability Fair—TAC member Susan Wiese noted it was cold and wet and that she and Commissioner Harwell were present and talked with a few folks.
- ii. Commissioner Harwell noted she attended a session on effective signage and how to develop educational signage at the Water Resources Conference. She will share the presentation with the Commission.
- iii. Alternate Commissioner McDonald Black noted she met the executive director of BOMA, Kevin Lewis. She shared that this would be a great organization to partner with, particularly on chloride reduction.
- iv. Commissioner Welch talked about the watershed "reform" group that is organizing and meeting. He noted it is a nonprofit comprised of a small group of people who have proposed legislation with unreasonable restraints on water resource protection agencies.
- v. Commissioner Carlson asked Ben Scharenbroich about the Medicine Lake dam survey. The survey results will be included in the Flood Control Inspection report to the Commission.

D. TAC Members

- i. Report on 10/4 TAC Meeting. TAC chair, Mark Ray, noted the TAC discussed the current monitoring program, brainstormed goals for the program, and prioritized those goals.

E. Education Consultant

- i. Update on Chloride Education Activities. Education Consultant, Dawn Pape, gave a presentation. She explained that the MPCA wants the Commission to concentrate efforts on educating residents, rather than contract applicators. She outlined the audiences, objectives, messages, strategies and timeline. She also walked through potential partners and showed rough drafts of the hand-outs and saltsmart.info website. Ms. Pape explained that websites are efficient ways to link to information through social media, etc. While the MPCA's website is comprehensive, it is not geared for our audiences and is difficult to link to.

Commissioner Harwell thought was a great idea to catch people doing good practices, but wondered if store managers needed to attend trainings. Ms. Pape replied that attending trainings will always be encouraged, but the basic best practices are simple to summarize and implement without trainings. Harwell suggested to add that salt "permanently" pollutes to the handout.

F. Legal Counsel

- i. Nothing to report.

G. Engineer

- i. Engineer Chandler reported that she attended the chloride session at the Water Resources Conference.

7. INFORMATION ONLY (Information online only)

- A. Administrative Calendar
- B. CIP Project Updates <http://www.bassettcreekwmo.org/projects>
- C. Grant Tracking Summary and Spreadsheet
- D. WMWA August and September Meeting Minutes
- E. WCA Notice of Decision, Four Seasons Area Plymouth
- F. WCA Notice of Application, Crystal

8. ADJOURNMENT

The meeting adjourned at 10:30 a.m.

Signature/Title Date

Signature/Title Date

DRAFT

Bassett Creek Watershed Commission
 General Fund (Administration) Financial Report
 Fiscal Year: February 1, 2019 through January 31, 2020
 MEETING DATE: November 21, 2019

Item 4B.
 BCWMC 11-20-19
 Full Document
 Online

(UNAUDITED)

BEGINNING BALANCE	9-Oct-19		569,608.22
ADD:			
General Fund Revenue:			
Interest less Bank Fees			21.89
Permits:			
Augusta Development	BCWMC 019-24		2,500.00
Reimbursed Construction Costs			33,972.40
		Total Revenue and Transfers In	36,494.29
DEDUCT:			
Checks:			
3242 Barr Engineering	Oct Engineering		66,562.96
3243 Kennedy & Graven	Sept Legal		1,084.55
3244 Keystone Waters	Oct Admin		5,681.66
3245 Lawn Chair Gardener	Oct Admin/Outreach		3,035.13
3246 Triple D Espresso	Nov Meeting		111.75
3247 Wenck Associates	WOMP/Bassett Cr Study		17,810.14
3248 HDR Engineering	Website		1,057.04
3249 Hennepin Cty Environment	River Watch Program		1,000.00
3250 Metropolitan Council	CAMP		6,460.00
3251 Shingle Creek WMO	Special Projects		2,000.00
3252 City of Plymouth	Plymouth Creek Restoration		14,384.14
		Total Checks/Deductions	119,187.37
ENDING BALANCE	13-Nov-19		486,915.14

Bassett Creek Watershed Commission
 General Fund (Administration) Financial Report

(UNAUDITED)

Fiscal Year: February 1, 2019 through January 31, 2020

MEETING DATE: November 21, 2019

	2019/2020 BUDGET	CURRENT MONTH	YTD 2019/2020	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSMENTS TO CITIES	529,850		529,850.00	0.00
PROJECT REVIEW FEES	60,000		42,596.50	17,403.50
WOMP REIMBURSEMENT	5,000		4,500.00	500.00
METROPOLITAN COUNCIL - LRT			10,399.50	
METRO BLOOMS - MET COUNCIL GRANT			1,000.00	
THREE RIVERS PARK DISTRICT - CURLY LEAF POND			1,694.22	
CITY OF MINNEAPOLIS-BASSETT CREEK STUDY			0.00	
TRANSFERS FROM LONG TERM FUND & CIP	76,000		0.00	76,000.00
REVENUE TOTAL	670,850	0.00	590,040.22	93,903.50
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	130,000	15,379.30	114,433.60	15,566.40
DEV/PROJECT REVIEWS	80,000	1,241.40	43,918.20	36,081.80
NON-FEE/PRELIM REVIEWS	15,000	4,243.00	23,334.80	(8,334.80)
COMMISSION AND TAC MEETINGS	12,000	2,421.50	10,293.74	1,706.26
SURVEYS & STUDIES	20,000	1,047.50	16,315.96	3,684.04
WATER QUALITY/MONITORING	78,000	3,076.00	52,294.47	25,705.53
WATER QUANTITY	10,000	860.00	9,998.36	1.64
WATERSHED INSPECTIONS -EROSION CONTROL	0	0.00	771.50	(771.50)
ANNUAL FLOOD CONTROL INSPECTIONS	48,000	17,127.00	19,149.00	28,851.00
REVIEW MUNICIPAL PLANS	4,000	1,207.50	3,638.50	361.50
WOMP	20,500	991.30	14,700.84	5,799.16
XP-SWMM MODEL UPDATES/REVIEWS	0	0.00	0.00	0.00
APM / AIS WORK	32,000	94.50	16,246.12	15,753.88
ENGINEERING & MONITORING TOTAL	449,500	47,689.00	325,095.09	124,404.91
PLANNING				
Next Generation Plan Development	12,000	0.00	0.00	12,000.00
MAINTENANCE FUNDS TOTAL	12,000	0.00	0.00	12,000.00
ADMINISTRATION				
ADMINISTRATOR	69,200	5,346.00	49,392.00	19,808.00
LEGAL COSTS	17,000	1,084.55	8,507.75	8,492.25
AUDIT, INSURANCE & BONDING	18,000	0.00	15,892.00	2,108.00
FINANCIAL MANAGEMENT	3,500	0.00	0.00	3,500.00
MEETING EXPENSES	1,500	111.75	1,117.50	382.50
ADMINISTRATIVE SERVICES	15,000	967.86	9,476.29	5,523.71
ADMINISTRATION TOTAL	124,200	7,510.16	84,385.54	39,814.46
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	1,300	0.00	1,263.00	37.00
WEBSITE	3,000	1,057.04	1,617.48	1,382.52
PUBLIC COMMUNICATIONS	1,000	0.00	877.72	122.28
EDUCATION AND PUBLIC OUTREACH	25,000	4,402.93	21,476.95	3,523.05
WATERSHED EDUCATION PARTNERSHIPS	15,850	7,460.00	13,810.00	2,040.00
OUTREACH & EDUCATION TOTAL	46,150	12,919.97	39,045.15	7,104.85
MAINTENANCE FUNDS				
EROSION/SEDIMENT (CHANNEL MAINT)	25,000	0.00	0.00	25,000.00
LONG TERM MAINTENANCE (moved to CF)	25,000	0.00	0.00	25,000.00
MAINTENANCE FUNDS TOTAL	50,000	0.00	0.00	50,000.00
TMDL WORK				
TMDL IMPLEMENTATION REPORTING	10,000	214.50	214.50	9,785.50
TMDL WORK TOTAL	10,000	214.50	214.50	9,785.50
DUE FROM OTHER GOVERNMENTS				
Due from City of Minneapolis	0	16,881.34	91,681.96	(91,681.96)
	0	16,881.34	91,681.96	(91,681.96)
TOTAL EXPENSES	691,850	85,214.97	540,422.24	151,427.76

Cash Balance 10/09/19				
Cash			1,705,464.51	1,705,464.51
		Total Cash		
Investments:				
	Minnesota Municipal Money Market (4M Fund)		2,500,000.00	
	2018-19 Dividends		44,653.88	
	2019-20 Dividends		30,729.45	
	Dividends-Current		3,659.10	
		Total Investments		2,579,042.43
		Total Cash & Investments		4,284,506.94
Add:				
	Interest Revenue (Bank Charges)		105.36	
		Total Revenue		105.36
Less:				
	CIP Projects Levied - Current Expenses - TABLE A		(19,120.14)	
	Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B		(11,914.76)	
		Total Current Expenses		(31,034.90)
		Total Cash & Investments On Hand	11/13/19	4,253,577.40
	Total Cash & Investments On Hand		4,253,577.40	
	Current Anticipated Levy -2019 (July 19/Dec 19/Jan 20)		704,380.23	
	Current Anticipated Levy -2020 (July 20/Dec 20/Jan 21)		1,500,000.00	
	CIP Projects Levied - Budget Remaining - TABLE A		(6,811,161.35)	
	Closed Projects Remaining Balance		(353,203.72)	
	2012 - 2017 Anticipated Tax Levy Revenue - TABLE C		7,330.29	
	2018 Anticipated Tax Levy Revenue - TABLE C		8,770.47	
	Anticipated Closed Project Balance		(337,102.96)	
	Proposed & Future CIP Project Amount to be Levied - TABLE B		0.00	

TABLE A - CIP PROJECTS LEVIED

	Approved Budget	Current Expenses	2019 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget	Grant Funds Received
Lakeview Park Pond (ML-8) (2013)	11,590	0.00	0.00	11,589.50	0.00	
Four Seasons Mall Area Water Quality Proj (NL-2)	990,000	1,063.00	3,070.72	165,978.06	824,021.94	
2014						
Schaper Pond Enhance Feasibility/Project (SL-1)(SL-3)	612,000	2,811.50	50,939.19	426,994.05	185,005.95	
Briarwood / Dawnview Nature Area (BC-7)	250,000	0.00	0.00	250,000.00	0.00	
Twin Lake Alum Treatment Project (TW-2)	163,000	0.00	0.00	91,037.82	71,962.18	
2015						
Main Stem 10th to Duluth (CR2015) Close Project	1,503,000	0.00	114,601.05	1,118,347.29		
2016						
Northwood Lake Pond (NL-1) ²	822,140					
Budget Amendment	611,600	1,433,740	0.00	1,447,143.38	(13,403.38)	700,000
2017						
Main Stem Cedar Lk Rd-Dupont (2017CR-M) 2017 Levy	400,000	1,064,472	0.00	132,029.25	932,442.75	
2018 Levy	664,472					
Plymouth Creek Restoration (2017 CR-P) 2017 Levy	580,930	863,573	14,384.14	14,384.14	609,074.30	254,498.70
2018 Levy	282,643					200,000
2018						
Bassett Creek Park & Winnetka Ponds Dredging (BCP-2)	1,000,000	0.00	179.10	132,991.90	867,008.10	
2019						
Decola Ponds B&C Improvement(BC-2,BC-3,BC-8)	1,031,500	0.00	157.50	85,967.56	945,532.44	34,287
Westwood Lake Water Quality Improvement Project(Feasibility)	404,500	0.00	0.00	41,064.20	363,435.80	
2020						
Bryn Mawr Meadows (BC-5)	904,900	0.00	2,183.47	97,687.03	807,212.97	
Jevne Park Stormwater Mgmt Feasibility (ML-21)	500,000	0.00	15,936.46	46,390.75	453,609.25	
Crane Lake Improvement Proj (CL-3)	582,837	0.00	6,838.50	12,000.85	570,836.15	
Sweeney Lake WQ Improvement Project (SL-8)	550,000	861.50	1,001.50	1,001.50	548,998.50	
	11,865,112	19,120.14	209,291.63	4,669,297.44	6,811,161.35	

TABLE B - PROPOSED & FUTURE CIP PROJECTS TO BE LEVIED

	Approved Budget - To Be Levied	Current Expenses	2019 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget
2021					
Main Stem Dredging Project (BC-7)	0	8,990.76	17,585.62	26,576.38	(26,576.38)
Mt Olivet Stream Restoration (MN-20)	0	1,266.00	3,786.50	5,052.50	(5,052.50)
Parkers Lake Stream Restoration (PL-7)	0	1,658.00	7,397.46	9,055.46	(9,055.46)
2021 Project Totals	0	11,914.76	28,769.58	40,684.34	(40,684.34)
Total Proposed & Future CIP Projects to be Levied	0	11,914.76	28,769.58	40,684.34	(40,684.34)

TABLE C - TAX LEVY REVENUES

	County Levy	Abatements / Adjustments	Adjusted Levy	Current Received	Year to Date Received	Inception to Date Received	Balance to be Collected	BCWMO Levy
2020 Tax Levy	1,500,000.00		1,500,000.00				1,500,000.00	1,500,000.00
2019 Tax Levy	1,436,000.00		1,436,000.00	0.00	731,619.77	731,619.77	704,380.23	1,436,000.00
2018 Tax Levy	1,346,815.00		1,346,815.00	0.00	1,546.10	1,338,044.53	8,770.47	947,115.00
2017 Tax Levy	1,303,600.00	(10,691.48)	1,292,908.52	0.00	(754.74)	1,289,004.89	3,903.63	1,303,600.00
2016 Tax Levy	1,222,000.00	(9,526.79)	1,212,473.21	0.00	181.73	1,210,006.40	2,466.81	1,222,000.00
2015 Tax Levy	1,000,000.00	32.19	1,000,032.19	0.00	99.45	999,337.49	694.70	1,000,000.00
2014 Tax Levy	895,000.00	(8,533.75)	886,466.25	0.00	412.44	886,201.10	265.15	895,000.00
				<u>0.00</u>			<u>720,480.99</u>	

OTHER PROJECTS:

	Approved Budget	Current Expenses / (Revenue)	2019 YTD Expenses / (Revenue)	INCEPTION To Date Expenses / (Revenue)	Remaining Budget
TMDL Studies					
TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
TOTAL TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
Flood Control Long-Term					
Flood Control Long-Term Maintenance	694,573.00	2,937.50	46,050.00	387,500.41	
Less: State of MN - DNR Grants		0.00	(44,304.90)	(141,846.90)	
	694,573.00	2,937.50	1,745.10	245,653.51	448,919.49
Annual Flood Control Projects:					
Flood Control Emergency Maintenance	500,000.00	0.00	0.00	0.00	500,000.00
Annual Water Quality					
Channel Maintenance Fund	400,000.00	0.00	0.00	255,619.60	144,380.40
Metro Blooms Harrison Neighborhood CWF Grant Project					
BWSR Grant	134,595.00	0.00	36,745.95	60,622.79	73,972.21
	134,595.00	0.00	36,745.95	(67,298.00)	(67,298.00)
	134,595.00	0.00	36,745.95	(6,675.21)	
Total Other Projects	1,864,168.00	2,937.50	38,491.05	535,065.05	1,127,208.95

Cash Balance 10/09/19	1,023,156.50
Add:	
Transfer from GF	0.00
Less:	
Current (Expenses)/Revenue	(2,937.50)
Ending Cash Balance 11/13/19	1,020,219.00
Additional Capital Needed	(106,990)



Adding Quality to Life

Item 4D.
BCWMC 11-20-19
Full document online

November 6, 2019

Laura Jester, Administrator
Bassett Creek Watershed Management Commission
16145 Hillcrest Lane
Eden Prairie MN 55346

SUBJECT: Plymouth Creek Stream Restoration Project
City Project No. 16007

Dear Ms. Jester,

Enclosed/attached you will find payment documentation totaling \$14,384.14 for construction of the Plymouth Creek Stream Restoration Project in Plymouth. Per the Cooperative Agreement for the Plymouth Creek Stream Restoration Project between the City of Plymouth and the Bassett Creek Watershed Management Commission, the City is requesting reimbursement of \$14,384.14 for this project at this time.

Budget Impact

The overall budget of \$863,573.00 was included with Bassett Creek levy requests in 2016/2017 and 2017/2018. With this request, total expenditures including feasibility, legal, administration, design, and construction total \$595,784.86.

The City is grateful for the partnership with the Bassett Creek Watershed Management Commission on water quality improvements and protections.

Sincerely,

A handwritten signature in blue ink that reads 'Ben Scharenbroich'.

Ben Scharenbroich
Interim Water Resources Manager

enc



Table 1. Design, Construction, and Monitoring Costs through November 6, 2019**Design Costs**

<u>Date</u>	<u>Vendor</u>	<u>Description</u>	<u>Amount</u>
3/3/2017	Wenck Associates	Professional Design Services	\$6,309.60
4/4/2017	Wenck Associates	Professional Design Services	\$21,560.50
5/3/2017	Wenck Associates	Professional Design Services	\$14,397.90
6/7/2017	Wenck Associates	Professional Design Services	\$7,618.05
7/10/2017	Wenck Associates	Professional Design Services	\$7,880.40
8/3/2017	Wenck Associates	Professional Design Services	\$6,634.50
9/6/2017	Wenck Associates	Professional Design Services	\$2,890.85
9/21/2017	ECM Publishers	Advertisement for Bids	\$540.50
10/3/2017	Wenck Associates	Professional Design Services	\$2,290.70
12/6/2017	Wenck Associates	Professional Design Services	\$1,461.90

Total Design Costs:**\$71,584.90****Construction Costs**

<u>Date</u>	<u>Vendor</u>	<u>Description</u>	<u>Amount</u>
1/3/2018	Wenck Associates	Construction Services	\$8,673.60
1/3/2018	Standard Contracting	Construction	\$66,016.00
2/5/2018	Wenck Associates	Construction Services	\$2,798.28
2/5/2018	Standard Contracting	Construction	\$4,150.45
3/6/2018	Wenck Associates	Construction Services	\$3,470.72
3/7/2018	Standard Contracting	Construction	\$51,666.55
4/3/2018	Standard Contracting	Construction	\$62,957.45
4/6/2018	Wenck Associates	Construction Services	\$8,363.60
5/7/2018	Standard Contracting	Construction	\$78,850.61
5/7/2018	Wenck Associates	Construction Services	\$4,986.40
6/5/2018	Wenck Associates	Construction Services	\$5,290.04
6/14/2018	Standard Contracting	Construction	\$118,431.33
7/5/2018	Wenck Associates	Construction Services	\$7,028.46
8/8/2019	Wenck Associates	Construction Services	\$986.40 *Req Reimb
9/10/2019	Standard Contracting	Construction	\$13,164.94 *Req Reimb
10/7/2019	Wenck Associates	Construction Services	\$232.80 *Req Reimb

Total Construction Costs:**\$437,067.63****Grand Total:****\$508,652.53**

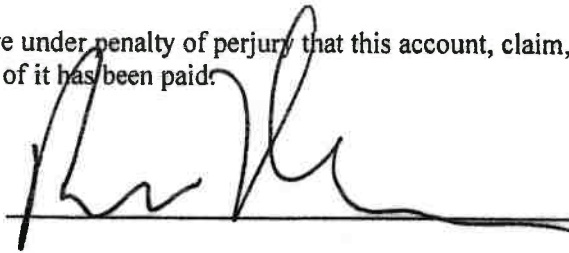
PAYMENT REQUEST FORM

OWNER: City of Plymouth
PROJECT: Plymouth Creek Streambank Restoration Project
City Project No. 16007
CONTRACTOR: Standard Contracting, Inc.

PAY ESTIMATE NO. 7

Original Contract Amount	\$ <u>399,053.65</u>
Contract Changes approved to Date (List Change Order Numbers)	\$ <u>20,475.00 (FA1)</u>
	\$ <u>12,017.00 (FA2)</u>
	\$ <u>270.00 (FA3)</u>
Revised Contract Price	\$ <u>431,762.65</u>
Work Completed to Date (attached)	\$ <u>400,768.05</u>
Retainage to Date, 2.5%	\$ <u>8,431.13</u>
Work Completed to Date Less Retainage to Date	\$ <u>392,336.92</u>
Total Amount Previously Certified	\$ <u>379,171.98</u>
Payment Request This Estimate	\$ <u>13,164.94</u>

I declare under penalty of perjury that this account, claim, or demand is just and correct and that no part of it has been paid:


_____ CONTRACTOR

Invoice

October 4, 2019
 Invoice No: 11906898



Mr. Derek Asche
 City of Plymouth
 3400 Plymouth Blvd.
 Plymouth, MN 55447

Responsive partner.
 Exceptional outcomes.

Project Manager Lucius Jonett

Project B1756-0010 Plymouth Creek Streambank Restoration Project
 City Project No. 16007

Professional Services Through September 30, 2019

Phase LSGP Plymouth Creek Streambank Restoration Pr
 Plymouth Creek Streambank Restoration Project

Fee

Billing Phase	Phase Fee	Percent Complete	Fee Earned	Prior Billing	Current Fee
1.1 Topographic/Field/Boundary Survey	21,032.00	100.00	21,032.00	21,032.00	0.00
1.2 Wetland Delineation Coordination	2,002.00	100.00	2,002.00	2,002.00	0.00
1.3 Plans	23,876.00	100.00	23,876.00	23,876.00	0.00
1.4 Specs and Contract Documents	10,430.00	100.00	10,430.00	10,430.00	0.00
1.5 Bidding Administration	2,955.00	100.00	2,955.00	2,955.00	0.00
2.1 Construction Staking - Field Survey	4,952.00	100.00	4,952.00	4,952.00	0.00
2.2 Coordination and Scheduling	3,032.00	100.00	3,032.00	3,032.00	0.00
3.1 Construction Inspection	21,680.00	100.00	21,680.00	21,680.00	0.00
3.2 Construction Administration	4,084.00	100.00	4,084.00	4,084.00	0.00
3.3 Final Review	2,328.00	100.00	2,328.00	2,095.20	232.80
4.1 As-Built Obtain Record Information	3,894.00	100.00	3,894.00	3,894.00	0.00
4.2 Prepare Record Drawings	3,186.00	95.00	3,026.70	3,026.70	0.00
5.1 Obtain Permits	7,399.00	100.00	7,399.00	7,399.00	0.00
5.2 Environmental Review (If Needed)	0.00	0.00	0.00	0.00	0.00
5.3 Miscellaneous	2,184.00	100.00	2,184.00	2,184.00	0.00
Total Fee	113,034.00		112,874.70	112,641.90	232.80
	Total Fee				232.80
			Phase Total		\$232.80
			Total Invoice Amount		\$232.80

Billing Summary	Current	Prior	Total
	232.80	112,641.90	112,874.70

Invoice

August 8, 2019
 Invoice No: 11905376



Mr. Derek Asche
 City of Plymouth
 3400 Plymouth Blvd.
 Plymouth, MN 55447

Responsive partner.
 Exceptional outcomes.

Project Manager Lucius Jonett

Project B1756-0010 Plymouth Creek Streambank Restoration Project
 City Project No. 16007

Professional Services Through July 31, 2019

Phase LSGP Plymouth Creek Streambank Restoration Pr
 Plymouth Creek Streambank Restoration Project

Fee

Billing Phase	Phase Fee	Percent Complete	Fee Earned	Prior Billing	Current Fee
1.1 Topographic/Field/Boundary Survey	21,032.00	100.00	21,032.00	21,032.00	0.00
1.2 Wetland Delineation Coordination	2,002.00	100.00	2,002.00	2,002.00	0.00
1.3 Plans	23,876.00	100.00	23,876.00	23,876.00	0.00
1.4 Specs and Contract Documents	10,430.00	100.00	10,430.00	10,430.00	0.00
1.5 Bidding Administration	2,955.00	100.00	2,955.00	2,955.00	0.00
2.1 Construction Staking - Field Survey	4,952.00	100.00	4,952.00	4,952.00	0.00
2.2 Coordination and Scheduling	3,032.00	100.00	3,032.00	3,032.00	0.00
3.1 Construction Inspection	21,680.00	100.00	21,680.00	21,680.00	0.00
3.2 Construction Administration	4,084.00	100.00	4,084.00	4,084.00	0.00
3.3 Final Review	2,328.00	90.00	2,095.20	1,746.00	349.20
4.1 As-Built Obtain Record Information	3,894.00	100.00	3,894.00	3,894.00	0.00
4.2 Prepare Record Drawings	3,186.00	95.00	3,026.70	2,389.50	637.20
5.1 Obtain Permits	7,399.00	100.00	7,399.00	7,399.00	0.00
5.2 Environmental Review (If Needed)	0.00	0.00	0.00	0.00	0.00
5.3 Miscellaneous	2,184.00	100.00	2,184.00	2,184.00	0.00
Total Fee	113,034.00		112,641.90	111,655.50	986.40
	Total Fee				986.40
			Phase Total		\$986.40
			Total Invoice Amount		\$986.40

Billing Summary	Current	Prior	Total
	986.40	111,655.50	112,641.90

INVOICES ARE DUE UPON PRESENTATION. Subject to 1-1/2% 18% Annum interest/finance charge. Please reference the invoice number when sending payment. Federal Tax ID #41-1520095 -Wenck Associates, Inc.-1800 Pioneer Creek Center PO Box 249- Maple Plain, MN 55359-0249 Toll Free:800-472-2232 Main:763-479-4200 E-mail:accounting@wenck.com Web www.wenck.com

**FY 2017 STATE OF MINNESOTA
 BOARD OF WATER and SOIL RESOURCES
 2017 Competitive Grant - Bassett Creek WMC
 GRANT AMENDMENT**

Grant Agreement Start Date:	4/28/2017
Original Grant Agreement Expiration Date:	12/31/2019
Original Agreement Amount:	\$534,595.00

This amendment is by and between the State of Minnesota, through its Board of Water and Soil Resources (“Board”) and Bassett Creek WMC, c/o 16145 Hillcrest Ln, Eden Prairie, MN 55346 (“Grantee”).

Recitals

1. The Board has a Grant Agreement with the Grantee identified as the 2017 Competitive Grant - Bassett Creek WMC, PO # 3000007742, for the following grants:

Grant ID	Grant Title	Previous Expiration Date	Amended Expiration Date	Previous Award Amount	Amended Award Amount
C17-5029	BCWMC Plymouth Creek Restoration	12/31/2019		\$400,000.00	
C17-7939	BCWMC Harrison Neighborhood Project	12/31/2019	12/31/2020	\$134,595.00	

2. The Bassett Creek WMC requests an extension for BCWMC Harrison Neighborhood Project to 12/31/2020 for the purpose of expanding the implementation area of the watershed due to unanticipated complications within the originally defined area including soil contamination and property sales.
3. Grant reporting must be completed by February 1, 2021 or within 30 days of work completion, whichever comes first.
4. The Board and Watershed Management Organization are willing to amend the Original Contract as stated below.

Contract Amendment

- REVISION 1. 1. Term of Grant Agreement**
1.2 EXPIRATION DATE: is amended as follows:
~~December 31, 2019~~ December 31, 2020 or until all obligations have been satisfactorily fulfilled, whichever comes first.
- REVISION 2. 2. Grantee’s Duties**
2.2 Reporting
2.2.3 Final Progress Report: is amended as follows:
 The Grantee will submit a final progress report to the Board by ~~February 1, 2020~~ February 1, 2021 or within 30 days of completion of the project, whichever occurs sooner. Information provided must conform to the requirements and formats set by the Board.

Except as amended herein, the terms and conditions of the Original Grant Agreement remain in full force and effect.

APPROVED:

Bassett Creek WMC

Board of Water and Soil Resources

By: _____

By: _____

Title: _____

Title: _____

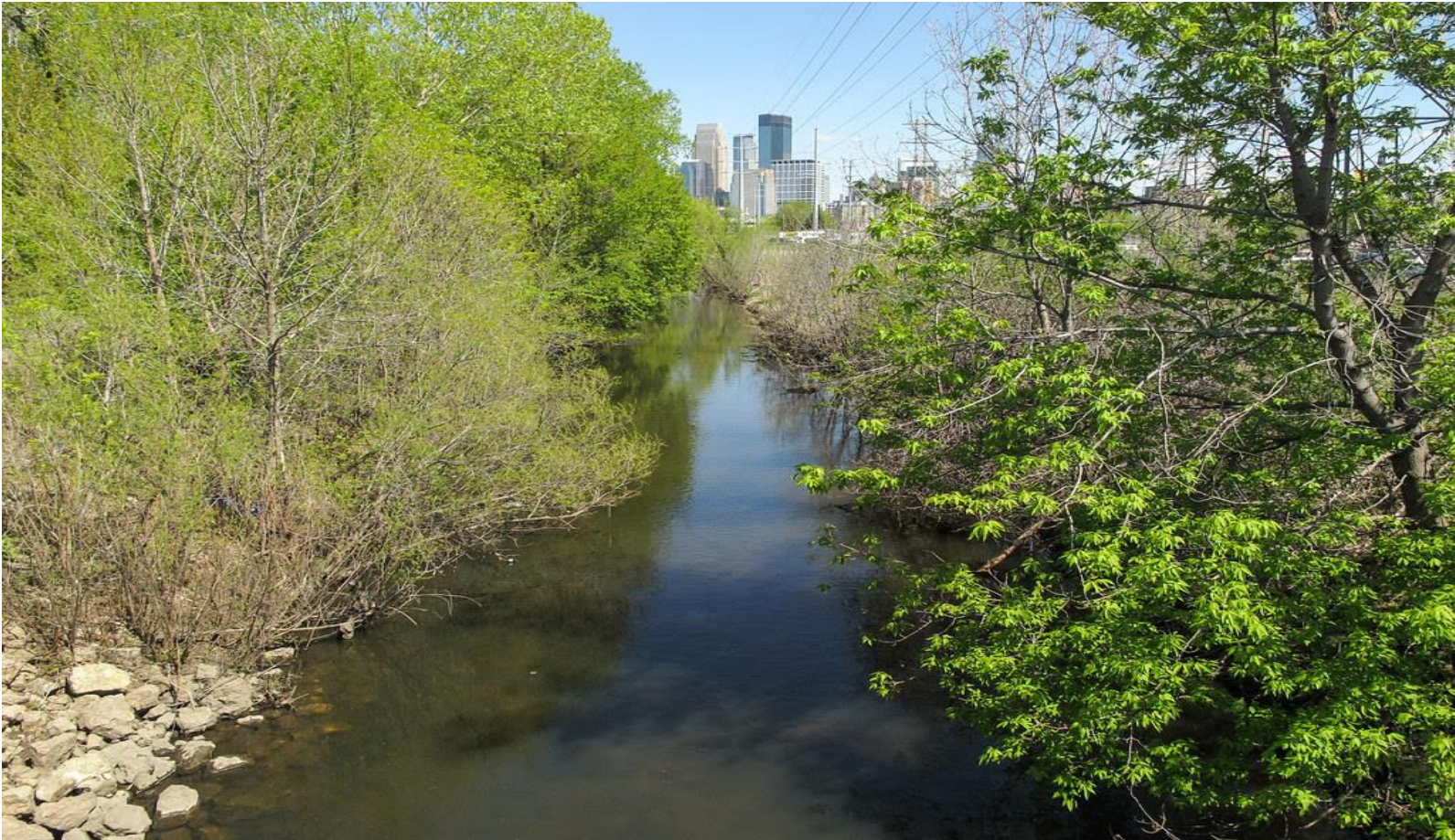
Date: _____

Date: _____

Request Details (from Metro Blooms):

- ***Fiscal year and grant name: FY17 BCWMC Harrison Neighborhood Project***
- ***eLINK activity name(s), if applicable: Not applicable***
- ***The purpose and extent of the request: Extension to the grant period. Extension to December 31, 2020 requested.***
- ***Explanation of request: We've had several challenges implementing the community partner projects in the Harrison Neighborhood. While community engagement continues to go well, some projects (even if fully designed) haven't been constructed for a variety of reasons. These include unexpected sale of property, soil contamination, property owner/renter disputes, misaligned timelines, and redevelopment opportunities. In addition to an extended timeline, we are requesting an increased focus area for engagement and installation outside of the Harrison Neighborhood, though still within the Near North community of Minneapolis, to result in more implementation of practices. Three projects within Harrison have been or are currently being installed. Two more are in the design phase. We are working to recruit a sixth and hopefully final property for installation.***
- ***Describe how the amendment or work plan revision will affect the originally proposed eLINK activities: Requested amendment will not affect activities, activity details or indicators other than timeline. Additional outcomes include engagement of additional commercial property owners. We originally anticipated the engagement of up to 6 property owners. We have had the opportunity to engage with more than 10 property owners through this grant.***

Bassett Creek Valley – Floodplain and Stormwater Management Study - DRAFT



Prepared for:
Bassett Creek Watershed Management
Commission and City of Minneapolis



Prepared:
WENCK Associates, Inc.
7500 Olson Memorial Hwy
Golden Valley, MN 55427
Phone: 763-252-6800
Fax: 763-479-4242

Table of Contents

EXECUTIVE SUMMARY	1
1.0 BACKGROUND, PURPOSE AND SCOPE	1-1
1.1 Background	1-1
1.2 Purpose and Scope	1-1
1.3 Study Area	1-1
2.0 SITE CONDITIONS AND PRIOR STUDIES	2-1
2.1 Site conditions	2-1
2.2 Prior Studies, Reports and Projects	2-1
2.3 Ongoing Site Investigations and Development	2-2
2.4 Data Acquisition For Study Area	2-3
3.0 REGULATIONS, PROBLEMS, OPPORTUNITIES	3-1
3.1 Development Requirements	3-1
3.1.1 Floodplain	3-1
3.1.2 Stormwater Runoff	3-3
3.1.3 Other	3-3
3.2 Primary Development Constraints	3-4
3.2.1 Floodplain	3-4
3.2.2 Contaminated Soils	3-6
3.2.3 Groundwater	3-7
3.2.4 Geotechnical Challenges	3-8
3.2.5 Land Ownership	3-9
4.0 GOALS, OBJECTIVES, AND SCENARIOS	4-1
4.1 Planning Objectives	4-1
4.2 Assumptions and Limitations	4-1
4.2.1 Assumptions	4-1
4.2.2 Limitations and Exceptions of Existing and Proposed Models	4-2
4.3 Overview of Scenario Development	4-2
4.4 Step 1: Areas of Interest	4-2
4.5 Step 2: Establish Baseline Conditions	4-4
4.6 Step 3: Siting Analysis (Potential Project Locations)	4-6
4.6.1 Project Locations Eliminated	4-7
4.6.2 Project Locations Further Reviewed	4-7
4.7 Step 4: Establish Potential Project Scenarios	4-8
4.7.1 Scenario 1: Underground Storage in Bryn Mawr Meadows Park.	4-9
4.7.2 Scenario 2: Surface Storage in Bryn Mawr Meadows Park	4-12
4.7.3 Scenario 3: Surface and Underground Storage in Bryn Mawr Meadows Park	4-15
4.7.4 Scenarios 4, 5 and 6: Bassett Creek Corridor	4-18
4.7.5 Scenario 7 Channel Expansion and Surface Storage in Bryn Mawr Meadows Park	4-21
4.7.6 Scenarios Summary	4-24
4.8 Water Quality	4-25

5.0	COST AND PROJECT PHASING	5-1
5.1	Cost Considerations	5-1
5.2	Project Phasing	5-2
6.0	CONCLUSION AND RECOMMENDATIONS.....	6-4
6.1	Summary	6-4
6.1.1	Bryn Mawr Meadows Park.....	6-4
6.1.2	Bassett Creek Corridor	6-5
6.1.3	Combining Project Locations	6-7
6.1.4	Development Area Water Quality Requirements	6-8
6.2	Recommendation and Next steps	6-8
7.0	REFERENCES.....	7-10

IN-TEXT TABLES

Table 4-1.	Bassett Creek Valley decision matrix.	4-1
Table 4-2.	Scenario Overview.	4-9
Table 4-3.	Bassett Creek corridor Scenario results.....	4-18
Table 4-4.	Scenario influences on flooding at Irving Avenue.	4-24
Table 4-5.	Land use comparison between 2016 and 2040.....	4-25
Table 5-1.	Estimated capital costs and unit cost in millions.	5-1
Table 6-2.	Bryn Mawr Meadows Park scenarios estimated capital costs and unit cost in millions.	6-5
Table 6-3.	Corridor Scenarios estimated capital costs and unit cost in millions.	6-7
Table 6-4.	Combined Scenario estimated capital costs and unit cost in millions.	6-7
Table 6-5.	Next Steps	6-8

Table of Contents (Cont.)

IN-TEXT FIGURES

Figure 1-1. Study Area, Bassett Creek Valley Area, Development Area.....	1-2
Figure 3-1. Jurisdictional and nonjurisdictional flooding.	3-2
Figure 3-2. Floodplain location and depth within the Study Area.....	3-5
Figure 3-3. Contamination within the Bassett Creek Valley Development Area.	3-6
Figure 3-4. Minnesota Department of Health depth to groundwater.	3-7
Figure 3-5. Foundation recommendations based on soil type.	3-8
Figure 3-6. Parcel ownership.	3-9
Figure 4-1. Potential project locations based on various parcel information.....	4-3
Figure 4-2. Local and regional drainage influence on floodplain elevation at Irving Avenue.	4-4
Figure 4-3. Local drainage area.....	4-5
Figure 4-4. Local drainage influence on floodplain elevation at Irving Avenue.	4-6
Figure 4-5. Project locations eliminated for flood projects.....	4-7
Figure 4-6. Project locations kept for further evaluation.	4-8
Figure 4-7. Scenario 1: Underground storage in Bryn Mawr Meadows Park.	4-10
Figure 4-8. Updated flood extent for Scenario 1.	4-11
Figure 4-9. Scenario 2: Surface storage in Bryn Mawr Meadows Park.....	4-13
Figure 4-10. Updated flood extent for Scenario 2.	4-14
Figure 4-11. Scenario 3: Combination storage in Bryn Mawr Meadows Park.	4-16
Figure 4-12. Updated flood extent for Scenario 3.	4-17
Figure 4-13. Scenarios 4-6: Creek expansion.....	4-19
Figure 4-14. Updated flood extent for Scenario 5.	4-20
Figure 4-15. Scenario 7: Storage and creek expansion.....	4-22
Figure 4-16: Flood extent for Scenario 7	4-23
Figure 4-17. City of Minneapolis 2040 Plan land use.	4-26
Figure 4-18. Anticipated redevelopment locations.....	4-27
Figure 5-1. Anticipated Construction phases of redevelopment.....	5-3

APPENDICES

A	Design Charrette Meeting Notes
B	Hydrology and Hydraulics
C	Precedents and Amenities

Executive Summary

The Bassett Creek Valley Floodplain and Stormwater Management Study identified and evaluated numerous scenarios to manage flood waters within Bassett Creek Valley. The project focused on managing water resources on a regional scale with the goal of unlocking land while providing flood storage, water quality and ecological benefits, land use opportunities and additional amenities. The process included the active involvement of key partners to develop and evaluate scenarios to address flooding concerns that could limit the redevelopment of the Bassett Creek Valley Development Area. The technical team evaluated site conditions, ran hydrologic models, and prepared cost estimates to evaluate the impacts of the scenarios on flooding in the area to complete these improvements. These technical findings are accompanied by information about other factors, such as the potential for partner funding and consistency with City and MPRB plans.

Through the scenario development process, two areas within Bassett Creek Valley became the focus of large-scale flood mitigation projects: Bryn Mawr Meadows Park and Bassett Creek corridor between Cedar Lake Rd and Van White Blvd. Each area was reviewed for multiple scenarios to determine specific influences on the flood elevation, flood extent, and the ability to provide regional amenities.

Scenarios in Bryn Mawr reduce the flood elevation in Bassett Creek Valley Development Area but only around the existing flood boundary. It does not unlock full parcels for redevelopment. Scenarios within the Bassett Creek corridor relocate the flood waters to precise locations to remove numerous parcels from the floodplain.

Funding partnerships among benefited parties will likely be necessary to allow for regional amenities and development. It is anticipated that full redevelopment of the area designed with a Regional Surface Water Management Plan could provide new market value for the area of over \$300 million dollars which would generate real estate taxes of over \$10 million a year. If the development were completed with parcel-by-parcel approach, the estimated market value and real estate taxes would be significantly less and would likely not provide regional amenities and valuable connections. Funding of these projects will need to be a combined effort between public and private sectors.

Next steps include bringing additional government agencies and developers to the table to create a Regional Surface Water Management Plan. This Plan will include taking the concept level design presented in this Study to construction level design and ensure compliance with regulatory requirements. In conjunction with creating the Regional Surface Water Management Plan, additional environmental investigation should be completed in the area to gain a better understanding of the level of cleanup needed and potential impacts to project cost.

1.0 Background, Purpose and Scope

1.1 BACKGROUND

The Bassett Creek Valley Development Area in the City of Minneapolis currently contains the city's Impound Lot, Pioneer Paper, abandoned CP rail lines, vacant lots, other older industrial properties and rental housing properties. The area has begun to redevelop, and several challenges and opportunities have emerged. Bassett Creek flows through the study area though it is hidden from view, which limits opportunities for serving as a natural amenity and focal point for public use and adjacent redevelopment. More problematic, Bassett Creek's flood stage encompasses much of the potential redevelopment area and site conditions include contaminated soils, unstable soils, limited opportunity for storm water quality treatment and infiltration, and existing utilities. These large-scale challenges are difficult to address on a site by site basis, which is the approach typically used in areas with multiple and varied uses and ownership.

Seeing the potential for redevelopment in this area while also recognizing the advantage of a systematic and comprehensive approach, the Bassett Creek Watershed Management Commission, City of Minneapolis Public Works and Community Planning and Economic Development Departments, and the Minneapolis Park and Recreation Board worked together to strategize regional solutions to integrate floodplain and stormwater management into the Bassett Creek Valley to facilitate redevelopment. This group is collectively known as the Partners.

1.2 PURPOSE AND SCOPE

The purpose of the Bassett Creek Valley Floodplain and Stormwater Management Study is to integrate natural resources, recreation, and redevelopment into a regional solution that provides adequate floodplain storage and stormwater quality treatment to support the redevelopment of the Bassett Creek Valley Development Area and bring regional amenities to the area.

The scope of the study included establishing guidelines, quantifying floodplain and water quality needs to meet regulatory requirements for redevelopment areas, and the development of siting analyses for key project locations, conceptual designs, cost estimates, implementation timeline, construction constraints, and funding opportunities.

1.3 STUDY AREA

The area of focus (Study Area) for the floodplain mitigation options extends through the Bassett Creek corridor between the creek crossing of Glenwood Avenue and I-94 to I-394 on the south and Glenwood Ave on the north and is approximately 300 acres. Bassett Creek Valley Area is similar to the Study Area but does not include the corridor area west of Cedar Lake Rd, it is approximately 230 acres. The Development Area is a smaller subset of Bassett Creek Valley and is bound by Cedar Lake Rd on the west, Van White Memorial Blvd on the east, 2nd Ave on the north and existing railroad tracks on the south and is approximately 60 acres. Bassett Creek is roughly 1.2 miles in length between Hwy 55 and the tunnel, which eventually discharges to the Mississippi River. See Figure 1-1 for the Study Area, Bassett Creek Valley, and the Development Area.

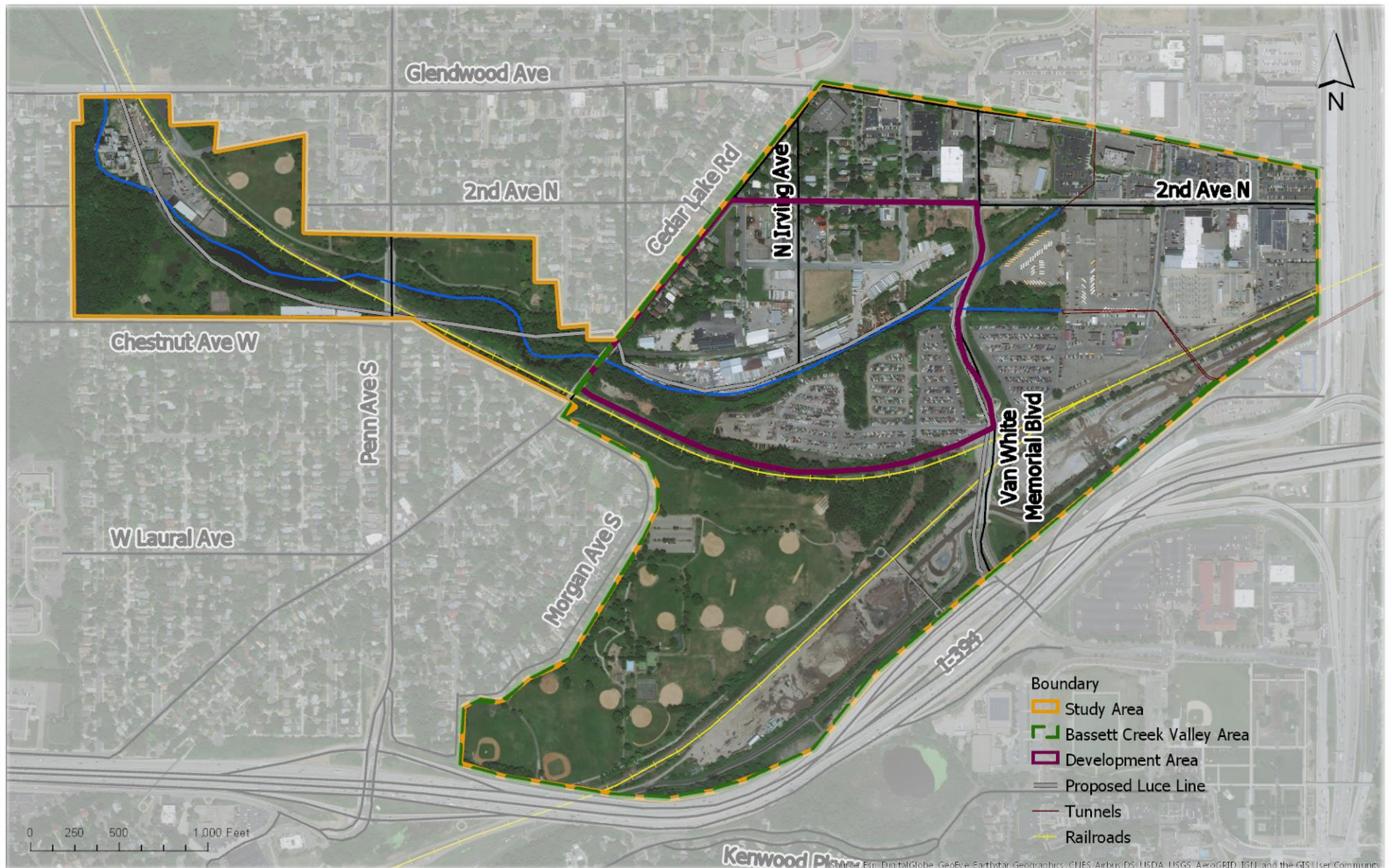


Figure 1-1. Study Area, Bassett Creek Valley Area, Development Area.

2.0 Site Conditions and Prior Studies

2.1 SITE CONDITIONS

Bassett Creek flows through the 230-acre Bassett Creek Valley, located just west of downtown Minneapolis and north of Interstate 394. Small area planning has been done with the Van White Station Area Plan for the Bottineau LRT line adopted in December 2018 and an earlier master plan adopted in 2007. The planning envisions redeveloping the area into commercial and flex space, multifamily housing and a linear park along Bassett Creek. As large tracts of land area owned by the City of Minneapolis, high quality redevelopment on those properties is viewed as catalytic for spurring more new investment. More information about the Van White Station Area Plan can be found at: <http://www.minneapolismn.gov/cped/projects/vanwhitestationareaplan>

2.2 PRIOR STUDIES, REPORTS AND PROJECTS

Various entities over the last few decades have undertaken studies and projects in the Bassett Creek Valley that centered around natural resources, transportation, redevelopment and environmental cleanup. The projects ranged from small, single parcel sites to regionally scaled plans.

The Bassett Creek Redevelopment Oversight Committee (ROC) was established by the City Council in 2000 and includes representatives from the Harrison and Bryn Mawr neighborhoods including business owners and residents, and City Council Member and Mayoral appointments. ROC directed the development of the Master Plan and has continued to play a role in reviewing redevelopment projects and issues in the area.

Bassett Creek Watershed Management Commission (BCWMC) has included streambank restoration projects, water quality basins in Bryn Mawr Meadows Park and wetland restoration projects in Bassett's Creek park as part of its Capital Improvement Program (CIP). In addition to the CIP plan, BCWMC is currently updating their Hydrology and Hydraulic XP-SWMM model, water quality P8 model, has continuous water monitoring of Bassett Creek at Irving Ave and completed a 2015 Watershed Management Plan.

The Minneapolis Parks and Recreation Board (MPRB) developed the Luce Line Regional Trail Master Plan and North Service Plan, which includes both Bryn Mawr Meadows Park and Bassett's Creek Park. These Master Plans provide direction for local and regional amenities such as trails, play areas, recreational sport fields and gathering places. The Luce Line Master Plan also provides details on necessary land acquisitions and potential funding sources.

City of Minneapolis Community Planning & Economic Development (CPED) has funded redevelopment studies and environmental site cleanup within the Development Area. The Predevelopment Study (2018) reviewed area near Van White and 2nd Ave, including the portion of the impound lot west of Van White Memorial Boulevard that will be emptied of impounded vehicles and transferred to CPED for redevelopment. Constraints such as environmental contamination, geotechnical limitations of existing soils, existing utilities, and floodplain mitigation were identified. The Study also provided alternative site layouts that focused on maximizing development area, minimizing impacts and meeting BCMWC/City

redevelopment requirements. The environmental studies have provided additional information regarding level and location of environmental contamination. The concept designs were informed by the following design principles:

- Ponds should be placed in areas directly adjacent to existing floodplain elevations to reduce soil impacts
- Prioritize density adjacent to roadways.
- Reduce significant excavation through known contamination areas.
- An elongated creek allows for more mitigation/storage.
- Parking structures would reduce surface parking needs.
- Buildings in the western portion of the impound lot should be multistory, of a height to rise above the Van White Memorial bridge structure.

The Predevelopment Study recommended proceeding using the following strategies:

- Start with Phase 1 - Creekside at Van White - a multistory commercial building with structured parking underneath (designed to allow flooding on occasion)
- Investigate potential 9-acre public green space and water feature south of Bassett Creek to leverage additional development on Impound West and 2nd Ave & Van White Blvd area parcels
- Explore transferring some property to another public agency in order to leverage federal and state environmental clean-up funding
- Work to secure more study funding to design creative ways to construct innovative ponds/creek enhancements that address pollution and flood mitigation
- Explore partnerships with public agencies and community stakeholders to address design, planning and implementation
- Explore options for broader public sector funding to address major costs of this effort

2.3 ONGOING SITE INVESTIGATIONS AND DEVELOPMENT

CPED has ongoing site investigation work underway, in the West Impound Lot The evaluation is necessary to advance redevelopment of the area for buildings, utilities and stormwater/flood management and soil management planning. The investigation includes completing 50 test pits to evaluate upper soils, debris and contamination just south of Bassett Creek in the West Impound Lot. This investigation is anticipated to be completed in the near future.

The City of Minneapolis Public Works (Surface Waters & Sewers) is currently reviewing layout options for replacement of the sanitary sewer line in the Irving Avenue area that bisects Bassett Creek Valley. This study may impact the potential location of floodplain storage.

Wellington Management, Inc -a private developer- recently completed and has additional projects planned in the area The LEEF properties are located in the northwestern portion of near Irving and 2nd Ave. A three-story office building was completed in early 2019, while a 100unit affordable housing facility began construction in November 2019, to be completed in early 2021. Another, larger office building will be constructed in 2020 on an adjacent site south of Currie. These projects are located just north of the floodplain and are designed to meet BCWMC and City requirements.

2.4 DATA ACQUISITION FOR STUDY AREA

In addition to the above referenced information, the following data was acquired from partners and open sources and used as a basis for this study.

City of Minneapolis Public Works:

- GIS for municipal utilities
- EPA-SWMM, XP-SWMM and supporting files
- GIS-based water quality model

Bassett Creek Watershed Management Commission:

- 2017 XP-SWMM Model and supporting files (GIS, LiDAR, storm sewer info, pipesheds, etc.)
- 2017 P8 Model and supporting files (GIS, LiDAR, storm sewer info, pipesheds, etc.)

CPED

- Impound Lot Action Plan
- 2040 Land Use
- LRT Plans

Hennepin County

- Parcel data
- Areawide Groundwater Study

3.0 Regulations, Problems, Opportunities

3.1 DEVELOPMENT REQUIREMENTS

Development within the Bassett Creek Valley Development Area will need to meet City of Minneapolis and Bassett Creek Watershed Management Commission requirements for development and redevelopment. This study focused on the floodplain and stormwater runoff requirements of both entities.

3.1.1 Floodplain

Portions of the Study Area are considered part of the BCWMC trunk system and therefore under BCWMC jurisdiction. Other areas are under City of Minneapolis jurisdiction. Figure 3-1 is from the BCWMC H&H Analysis- Phase 2 XPSWMM Model Report, Figure 3-19 (Barr, 2017) and illustrates the different locations for jurisdictional boundaries within the study area.

Section 4.0 of BCWMC regulations deals with floodplain policy. Requirements that are relevant to this study are summarized below:

- BCWMC regulations apply to the floodplain of the Bassett Creek trunk system only.
- There shall be no net loss in floodplain storage and no increase in flood level along the trunk system.
- Land use cannot be damaged by floodwaters or increase flooding.
- The lowest floor elevation must be at least two-feet above the 100-year flood level.

The City of Minneapolis maintains a Floodplain Overlay Ordinance that regulates land use and development within the floodplain. The floodplain regulated under the City's ordinance include the Flood Insurance Study for Hennepin County, Minnesota, and the flood insurance rate map panels dated November 4, 2016. This ordinance establishes Floodway and Flood Fringe Districts and specifies allowable land uses and standards for conditional uses. The Regulatory Flood Elevation is established as one foot above the 100-year flood elevation. A limited amount of fill for purposes other than elevating a building above the regulatory flood elevation is allowed as a conditional use.

Inundation extents shown in this figure were created using a level pool mapping methodology based on the modeled peak flood elevation for each subwatershed and the MnDNR LiDAR elevation data. The inundation extents shown along Plymouth Creek, North Branch Bassett Creek, and Bassett Creek (main stem) are approximate and should be determined based on elevations presented in Table 3-7.

Flood elevations within the shaded area of the City of Minneapolis should be sourced from the City's detailed Minneapolis North Region XP-SWMM model.



Figure 3-1. Jurisdictional and nonjurisdictional flooding.
 Source: BCWMC H&H Analysis- Phase 2 XPSWMM Model Report, Figure 3-19.

3.1.2 Stormwater Runoff

Sections 5.0 and 6.0 of BCWMC regulations sets forth rate control and water quality requirements. Requirements that are relevant to this study are summarized below.

- Proposed peak flow rates leaving the site for the 2-, 10-, and 100-yr events must be equal or less to existing flow rates and use Atlas-14 precipitation values.
 - Trails and sidewalks and other miscellaneous disconnected impervious surfaces are exempt from BCWMC rate control policies.
- All stormwater must be treated in accordance to BCWMC performance goals or flexible treatment options if site constraints exist.
 - Full requirement (infiltrate 1.1-inch)
 - Flexible treatment option #1: 0.55-inch and 75% TP removal
 - Flexible treatment option #2: Volume reduction to the maximum extent practicable and 60% TP removal off-site mitigation

Contaminated soils and shallow groundwater are existing site constraints within the Project Area. Infiltration practices must maintain a three-foot separation from seasonally high groundwater.

City of Minneapolis Stormwater and Sanitary Sewer Guide Section 4.3.1.2 currently requires proposed peak flow rates leaving the site for the 2-, 10-, and 100-yr events to be equal or less than existing flow rates and must use MSE-3 rainfall distribution. Section 4.3.1.2 also requires development projects to provide 70% TSS removal from a 1.25-inch storm event.

Updates to City of Minneapolis stormwater requirements are expected to be approved in 2020 to align with recent permit and plan changes.

3.1.3 Other

Section 8.0 of BCWMC regulations requires any projects that involve streambank restorations or development directly adjacent to the Creek be consistent with City buffer rules and requirements. BCWMC does require member cities to maintain and enforce wetland and stream buffer requirements that are listed in Appendix B of the Requirements Document.

City of Minneapolis Shoreland Overlay District requirements specifies a minimum setback of 50 feet from the ordinary high water mark of any protected water.

3.2 PRIMARY DEVELOPMENT CONSTRAINTS

3.2.1 Floodplain

In 2017, the Bassett Creek Watershed Commission updated its XP-SWMM model, which established new flood elevations throughout the watershed. The model was revised to incorporate updated NOAA precipitation data (Atlas 14), topographic data and more detailed stormwater pond and pipe information. The update was done to protect structures from damaging floodwaters given increasing and changing precipitation patterns.

Because of higher precipitation amounts, the new flood elevations for Bassett Creek Valley are approximately two feet higher than previously calculated and resulted in an additional 25 acres (38% of the Development Area) subject to BCWMC floodplain policies. Figure 3-2 illustrates the updated flood elevations produced from the BCMWC XP-SWMM model.

BCMWC floodplain policy requires that lowest floor elevation of new buildings be two feet above the flood elevation. If properties are developed without a regional system, it is likely that the existing streets and sidewalks would remain at existing grade while buildings are required to build well above the existing grade to remain out of the floodplain. This disconnect between businesses and sidewalks/streets could lead to a development that is disjointed and lacks a feeling of community.

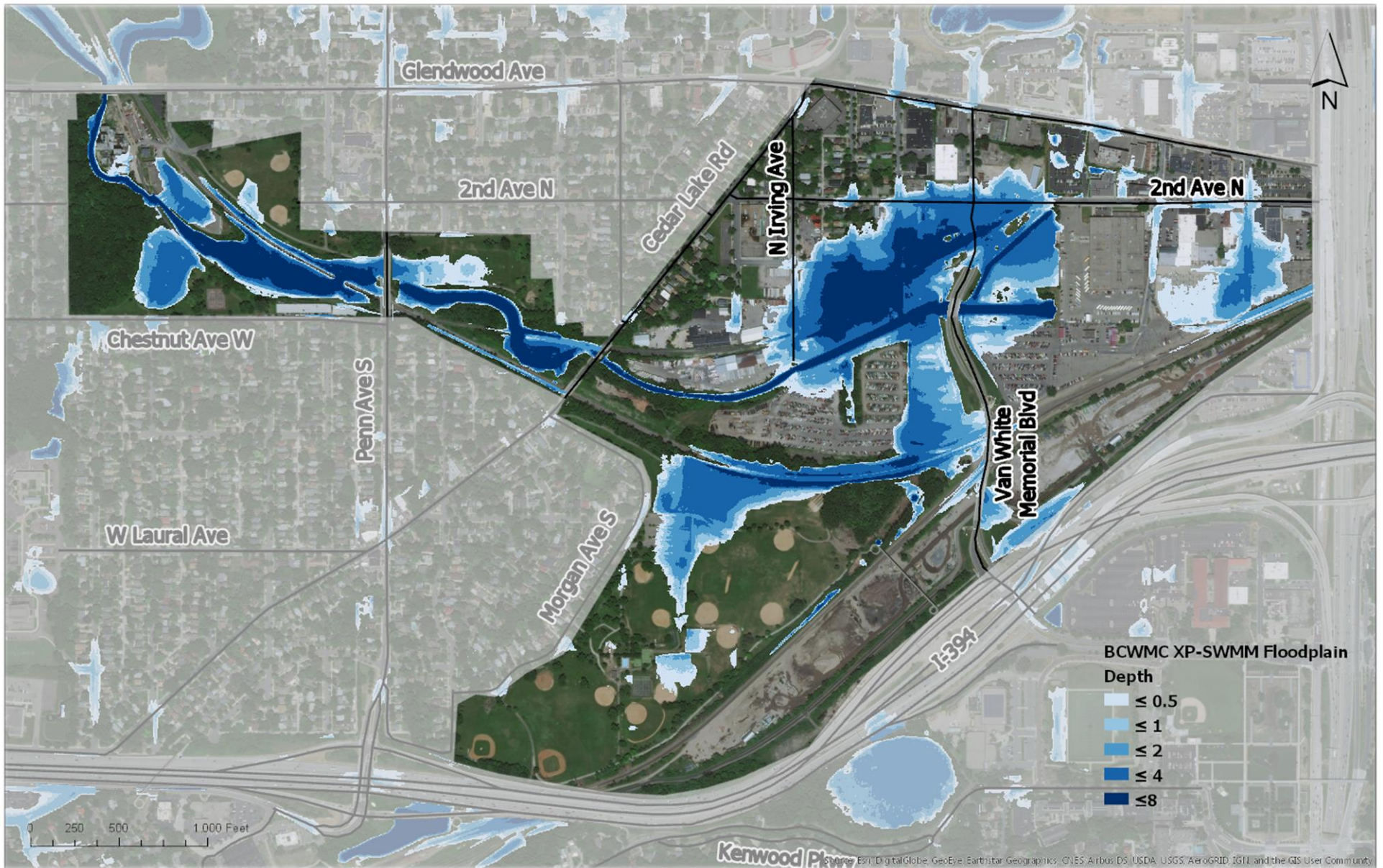


Figure 3-2. Floodplain location and depth within the Study Area.

3.2.2 Contaminated Soils

Historical land uses in the Bassett Creek Valley Development Area included industrial operations for storage of bulk chemicals, petroleum, scrap metal operations and unpermitted dumping from the early 1900's through 2000. Significant contamination remains in the soil, groundwater, and soil vapor.

Planning efforts will need to consider potential clean-up requirements and the risk of further disseminating of contaminants during site activities. Contaminated soils may disqualify infiltration practices onsite and may require stormwater features to be lined. Figure 3-3 is from the 2006 Bassett Creek Valley Master Plan and illustrates locations of existing contamination.

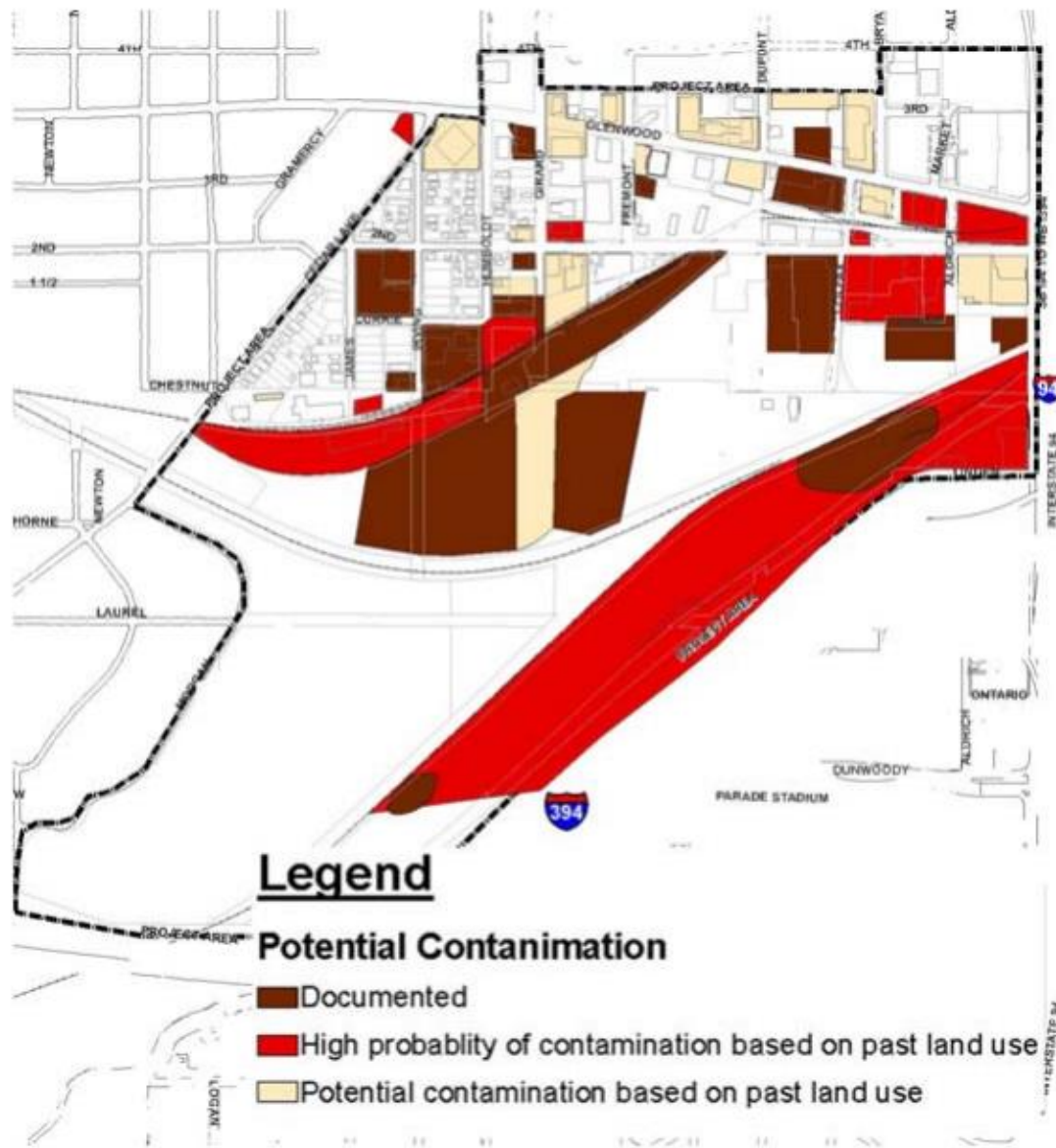


Figure 3-3. Contamination within the Bassett Creek Valley Development Area.

3.2.3 Groundwater

Shallow groundwater may restrict project types, locations and infiltration ability within Bassett Creek Valley. Figure 3-4 illustrates the depth to groundwater based on Minnesota Department of Health data. Most of the study area has groundwater within 10 feet of the surface.

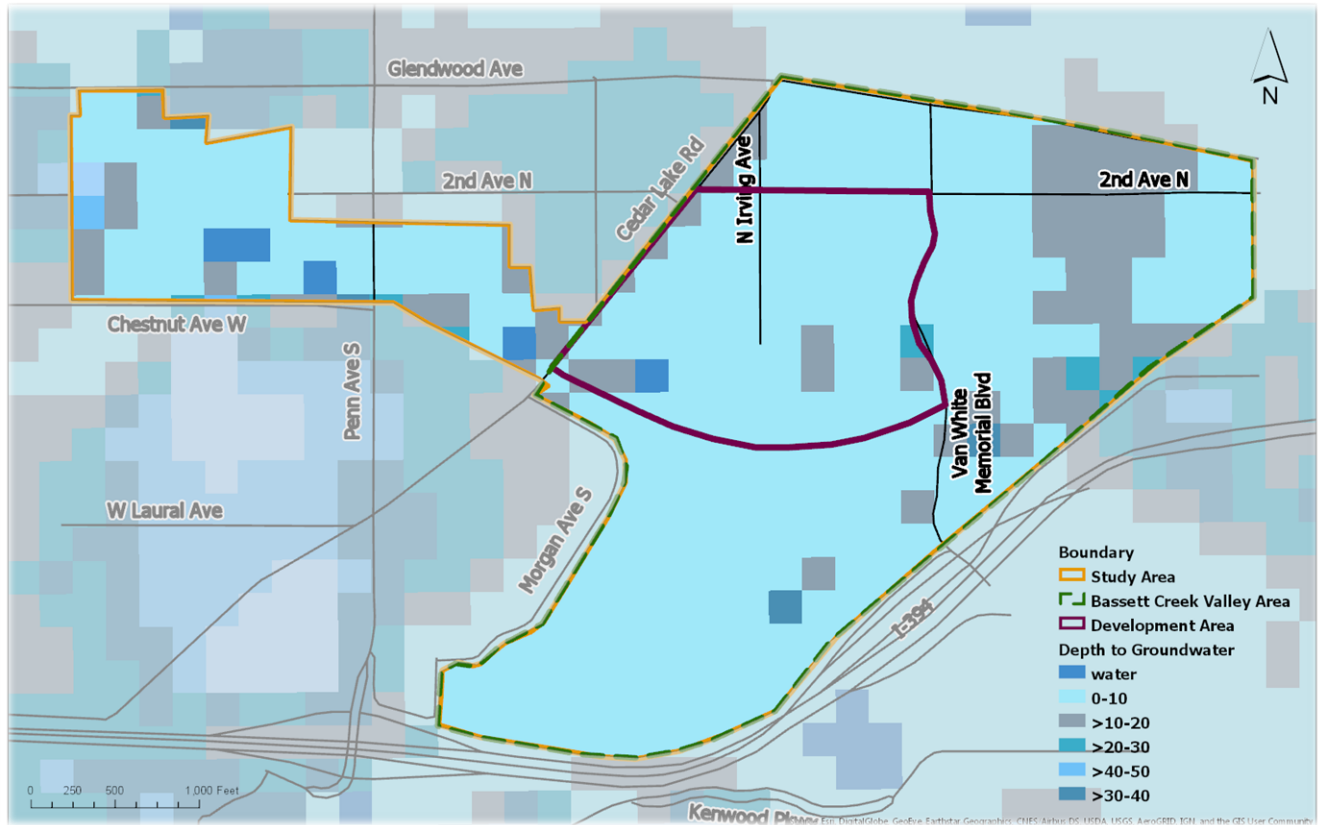
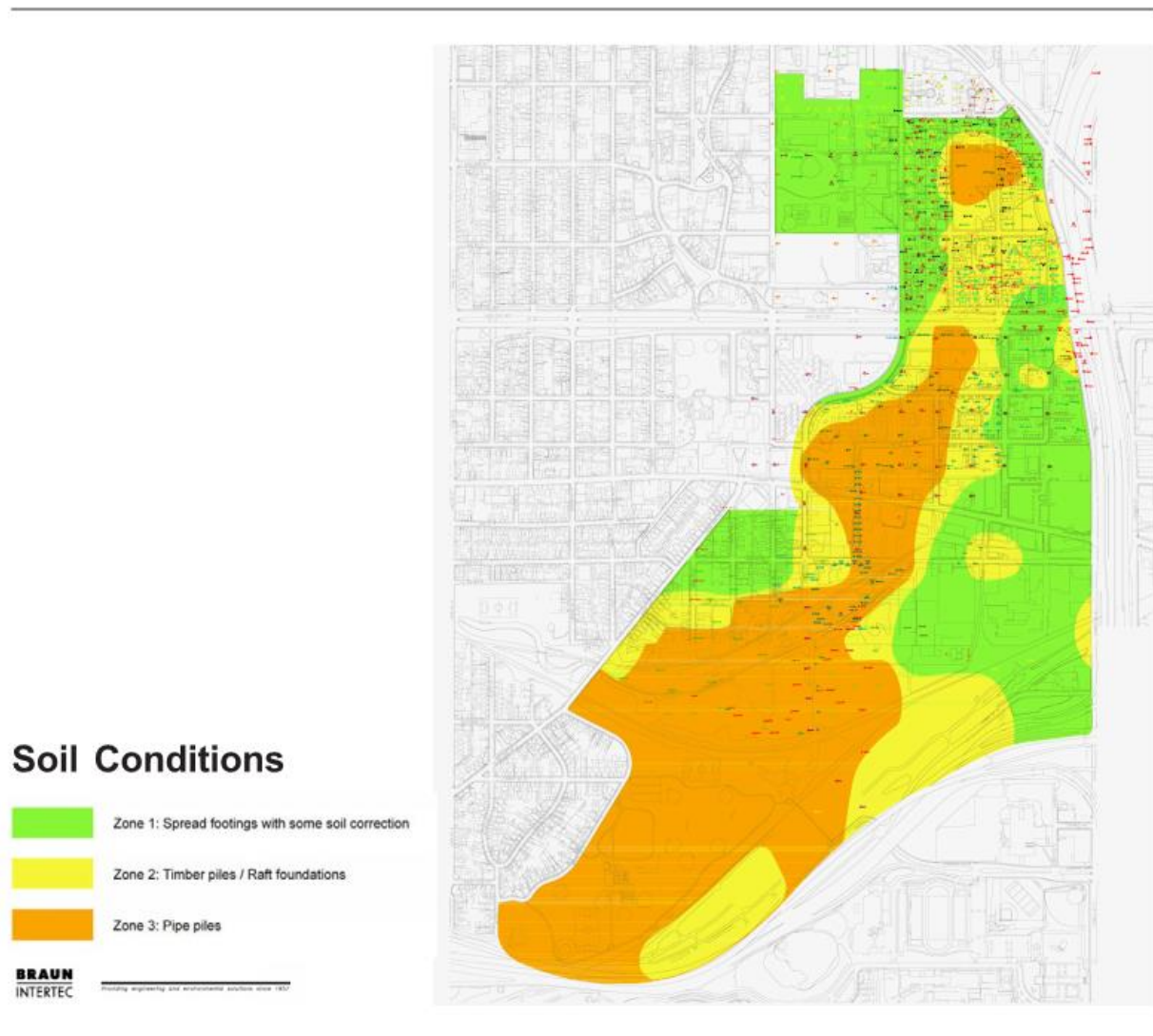


Figure 3-4. Minnesota Department of Health depth to groundwater.

3.2.4 Geotechnical Challenges

Geotechnical challenges are present in the entirety of Bassett Creek Valley due to soft soils extending to great depths overlain by dump fill. Raising the grade to comply with the two-foot flood elevation separation requirement could compress the soils and result in significant settlement.

Figure 3-5 from the Bassett Creek Valley Master Plan shows generalized soil conditions and probable foundation types. Buildings will require deep foundation systems (piers/pilings) with a structural slab. Slab on grade or shallow foundations are not feasible due to excessive settlement. Paved areas will likely require more frequent maintenance due to settlement. One option is to reduce settlement by surcharging soil with successive layers of soil until it reaches a stable consolidated base. This process can take several years depending on the properties of the underlying soils.



Bassett Creek Valley Master Plan

Figure 3-5. Foundation recommendations based on soil type.

3.2.5 Land Ownership

Land ownership within Bassett Creek Valley is a mix of public and private entities and ranges from residential to industrial and office space to rail systems. Parcel ownership was obtained from Hennepin County GIS, June 2019. Developing a regional solution requires multiple property owners to 'buy' into the plan. Figure 3-6 illustrates land ownership in the Bassett Creek Valley. Areas not colored are privately owned parcels.

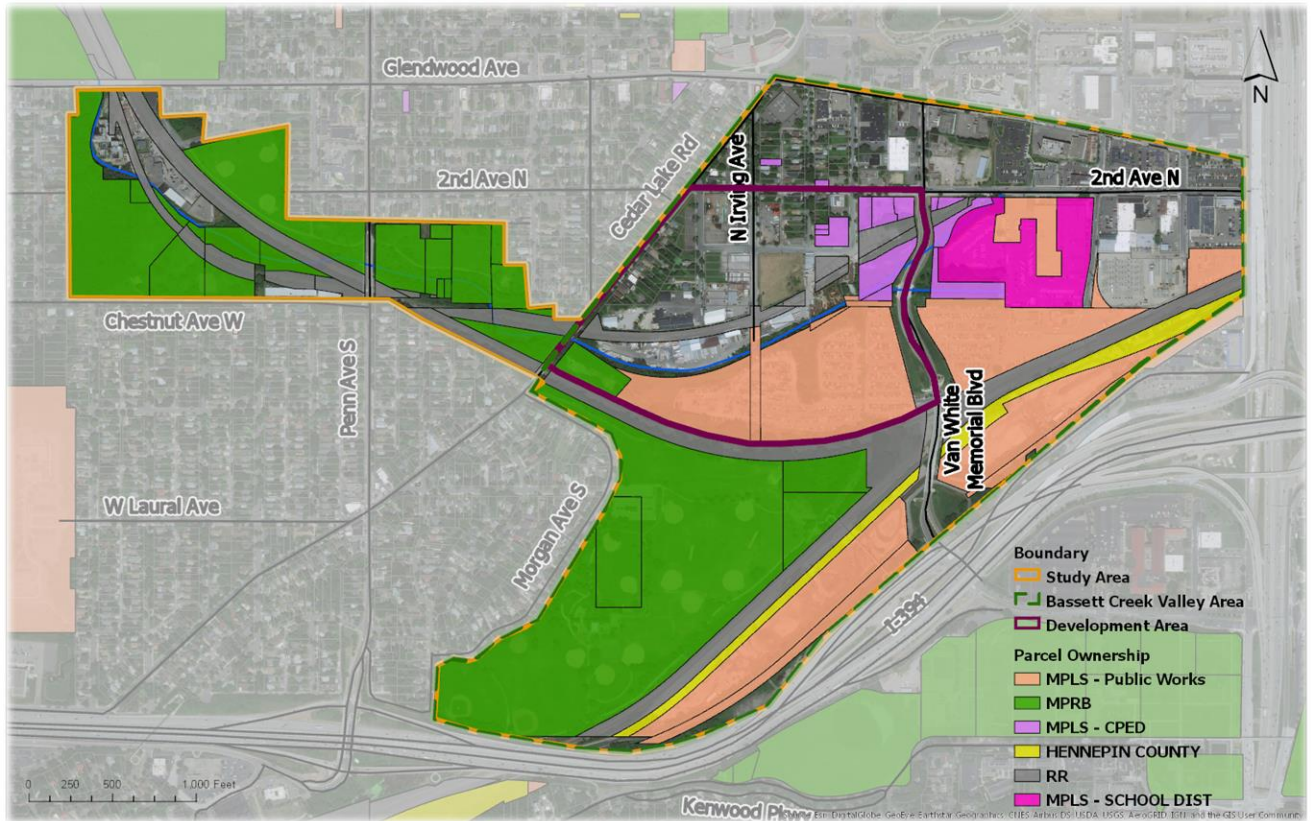


Figure 3-6. Parcel ownership.

4.0 Goals, Objectives, and Scenarios

4.1 PLANNING OBJECTIVES

The Partners began the study process by reviewing the above information, known or potential development, capital project opportunities, and creating a Decision Matrix (Table 4-1). The Decision Matrix established factors that the Partners agreed were important considerations and could be used to compare design scenarios.

The scenarios consider various design options to take advantage of the existing site conditions and overcome or limit constraints to create opportunities for sustainable water resources management through comprehensive planning. This Regional Surface Water Management Plan strategy can unlock the Bassett Creek Valley’s potential by layering natural, ecological and cultural resources with community amenities to create a destination corridor.

Table 4-1. Bassett Creek Valley decision matrix.

Factor	Definitions
Ecological and Additional Water Quality Benefits	<ol style="list-style-type: none"> 1. Will it support habitat and a green corridor concept and connect already existing or proposed green spaces? 2. Does it provide additional water quality above regulatory compliance? I.e., does it assume 2040 Plan land use?
Regulatory Compliance	<ol style="list-style-type: none"> 1. Scenario provides direct compliance with regulations or additional practices (BMPs) need to be installed to meet requirements? Assume 2040 Plan land use for region. 2. Can it be constructed prior to development and over time to accommodate floodplain fill?
Land Use and Stacked Benefit	<ol style="list-style-type: none"> 1. Optimizing land use (park land used as flood control; new creek XS with trails, platform overlooks) 2. Unlock developable land in Bassett Creek Valley
Funding	<ol style="list-style-type: none"> 1. Projects allow for budgets associated with Partner Plans to be a potential funding source 2. Other entities/groups that would benefit from projects that could be leveraged for funding
Cost	<ol style="list-style-type: none"> 1. Ballpark capital cost 2. Parcel swapping or acquisitions needed

4.2 ASSUMPTIONS AND LIMITATIONS

4.2.1 Assumptions

The scenarios were developed conceptually, so the potential impacts and range of costs could be estimated and compared. They do not represent the final design, and necessarily, have not been designed to the level of meeting regulatory and other requirements. The underlying assumption is that all scenarios will comply with City/Watershed requirements and do not harm to the public. It is also assumed that projects specific to this Study would not be subjected to the “no net loss of storage” requirement if modeled results illustrate no increase in flood level but would require a variance and/or approval form the BCWMC. The

approved BCMWC model must be used for flood analysis within the Bassett Creek trunk system.

4.2.2 Limitations and Exceptions of Existing and Proposed Models

The City of Minneapolis's EPA-SWMM model was reviewed as part of the floodplain analysis but was not used as part of the study. The City's EPA-SWMM model and BCMWC XP-SWMM are at different scales which results in small variations in outlet values. The City model is scaled down to manholes and catch basins; the BCMWC model is scaled to larger storm sewer trunk lines. Since the BCMWC requires any projects within the trunk system to use their model, it was decided that the analysis proceed with only the BCMWC's XP-SWMM model. To understand the impacts of the project on the localize drainage network, the City of Minneapolis's H&H model should be updated to include proposed project.

The 100-year storm event (equivalent to 7.4 inches in a 24-hour period) was the only model run for the feasibility study. To determine the impacts on project for smaller storm events, additional modeling efforts will be required. However, discussion below includes anticipated impacts to the scenarios under smaller storm events.

4.3 OVERVIEW OF SCENARIO DEVELOPMENT

Several brainstorming sessions and design charettes were held with the Partners to discuss project locations, existing and future plans, amenities of interest and project types. Bassett Creek Valley Design Charette meeting minutes (Appendix A) provide details of these brainstorming sessions and are summarized by the following steps.

- Step 1: Identified areas of interest based on parcel data.
- Step 2: Establish baseline conditions - reviewed existing regional and local drainage areas influences on regulatory floodplain.
- Step 3: Siting analysis - overlaid areas of interest with highly influential drainage areas to determine potential project locations.
- Step 4: Establish potential project scenarios - determined the influence of proposed project scenarios on flood elevations.

4.4 STEP 1: AREAS OF INTEREST

The first step of the process was to identify areas of interest by locating parcels owned by partners, parcels that may offer land swapping opportunities, and parcels where land use was predicted to change based on the 2040 Plan. Potential land use change between current land use and the 2040 Plan indicated that construction was likely to occur and therefore stormwater management could be integrated into the design. Locations that meet one of these criteria are presented in Figure 4-1.



Figure 4-1. Potential project locations based on various parcel information.

4.5 STEP 2: ESTABLISH BASELINE CONDITIONS

The second step in the scenario development process was to establish the baseline condition for flood extent, elevation, volume and runoff routing in the Bassett Creek Valley Development Area. The BCWMC XP-SWMM model discussed in Section 3.1 (used to establish the flood elevations) was also used as the baseline conditions model for this study. The model is currently undergoing review by the Minnesota Department of Natural Resources (DNR) as part of a state-wide FEMA floodplain review. Once the model is approved by the DNR, the flood elevations will be recognized by FEMA as the regulatory flood elevation. It is anticipated that future work within the Bassett Creek Valley will utilize the DNR approved model. All elevations in the report reference the NAVD 88 datum.

The baseline conditions helped to determine the influences of regional and local drainage areas on the floodplain within the Development Area. The regional drainage area was defined as land upstream of Hwy 55 that drains to Bassett Creek, and encompasses over 20,000 acres. The local drainage area includes land that drains to Bassett Creek downstream of Hwy 55 and upstream of the tunnel entrance. It is approximately 900 acres in size and is shown in Figure 4-3.

The model indicates that the local drainage area has a significantly larger influence on the flood elevation than the regional drainage area. The local drainage enters the creek rapidly, producing the peak elevation of 811.1 feet at Irving Avenue. Regional drainage enters this location about 10 hours later and results in a flood elevation of 809.1 feet at Irving Avenue. This is illustrated by the hydrograph (river stage versus time) in Figure 4-2. Figure 4-2 also illustrates that the peak flood elevation occurs for only a few hours. The short flooding time allows significantly more opportunities for floodplain mitigation than if the peak flood elevation lasted for multiple days.

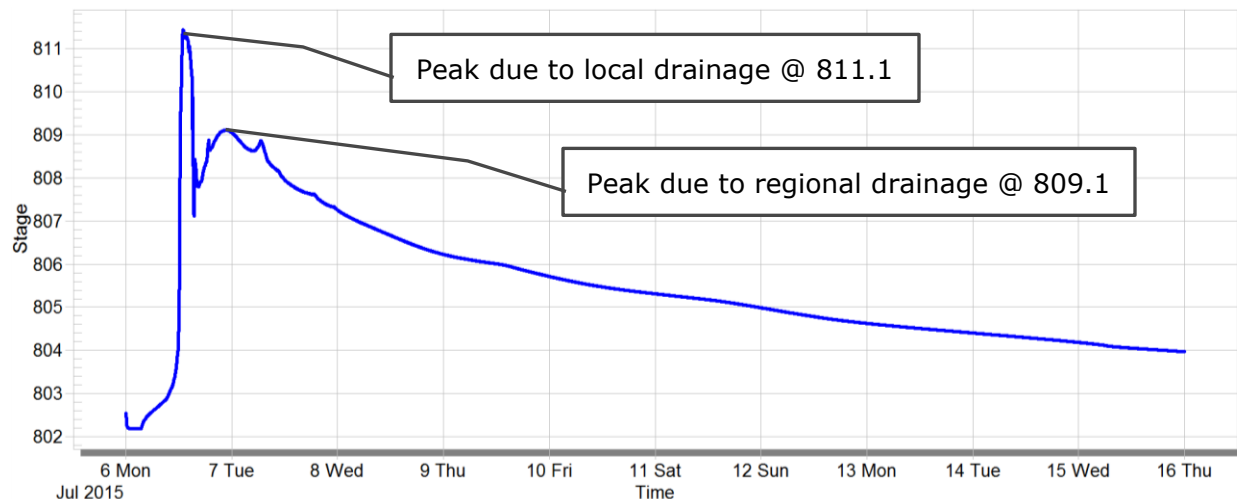


Figure 4-2. Local and regional drainage influence on floodplain elevation at Irving Avenue.

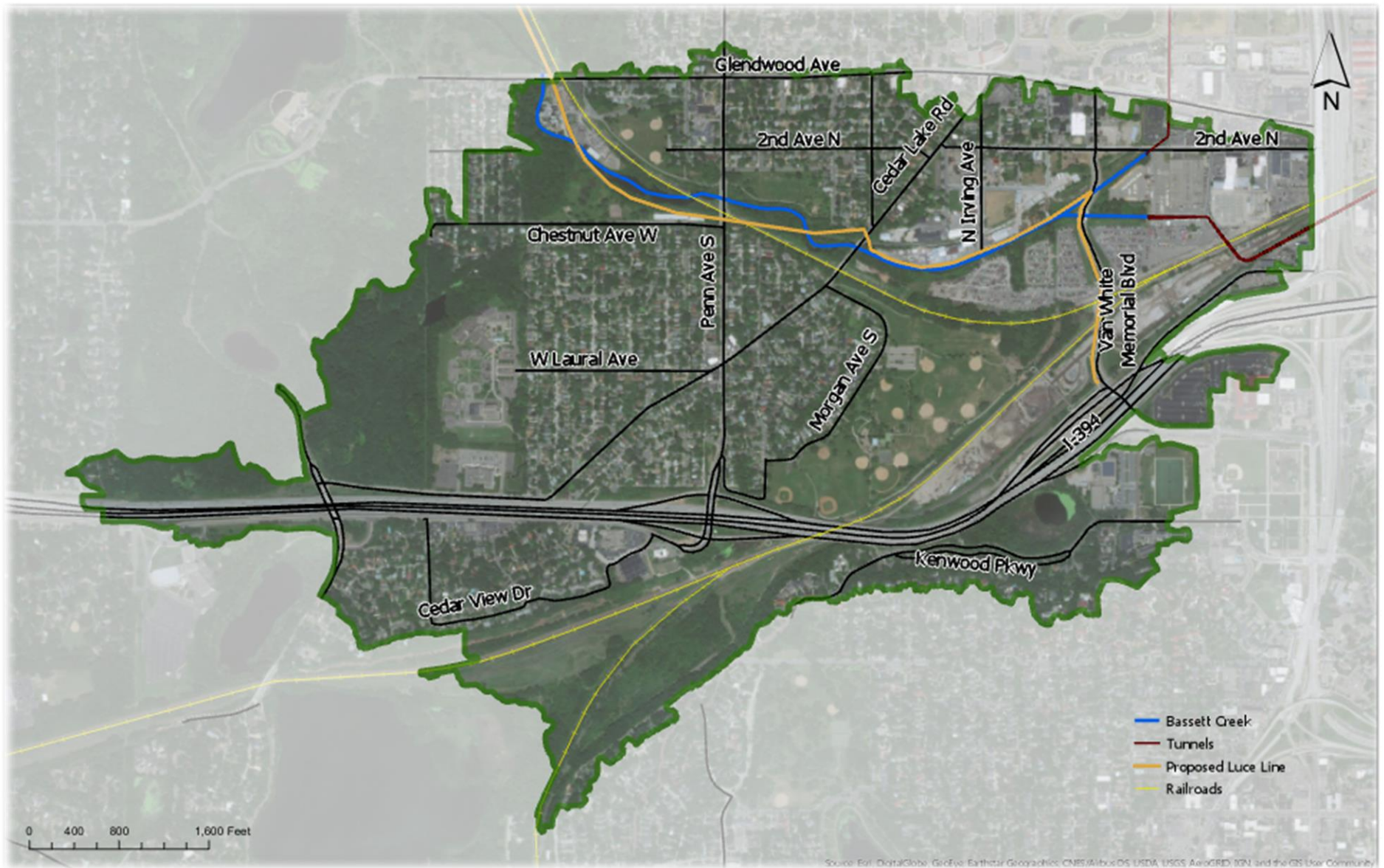


Figure 4-3. Local drainage area.

Once it was established that the local drainage area had higher influence on the flood elevation in the Bassett Creek Valley Development Area, an in-depth review of how the City's storm sewer network and overland flow influences specific drainage points at the Creek was completed.

Figure 4-4 illustrates the influence of smaller storm sewer drainage areas within the local drainage area on the flood elevation. The arrows indicate where storm sewer pipes and overland flow generally enter Bassett Creek. To estimate the impact of runoff from these smaller drainage areas on the flood elevation, the model was run assuming there was no flow contributing from them. The depth presented indicates how much the flood elevation at Irving Avenue would be lowered without that flow. For example, if there was no flow contributed from the north development area, the flood elevation would be 0.4 feet lower. Based on this analysis, flows from the south, including the I-394 corridor, had the largest influence on the water surface elevation at Irving Avenue.

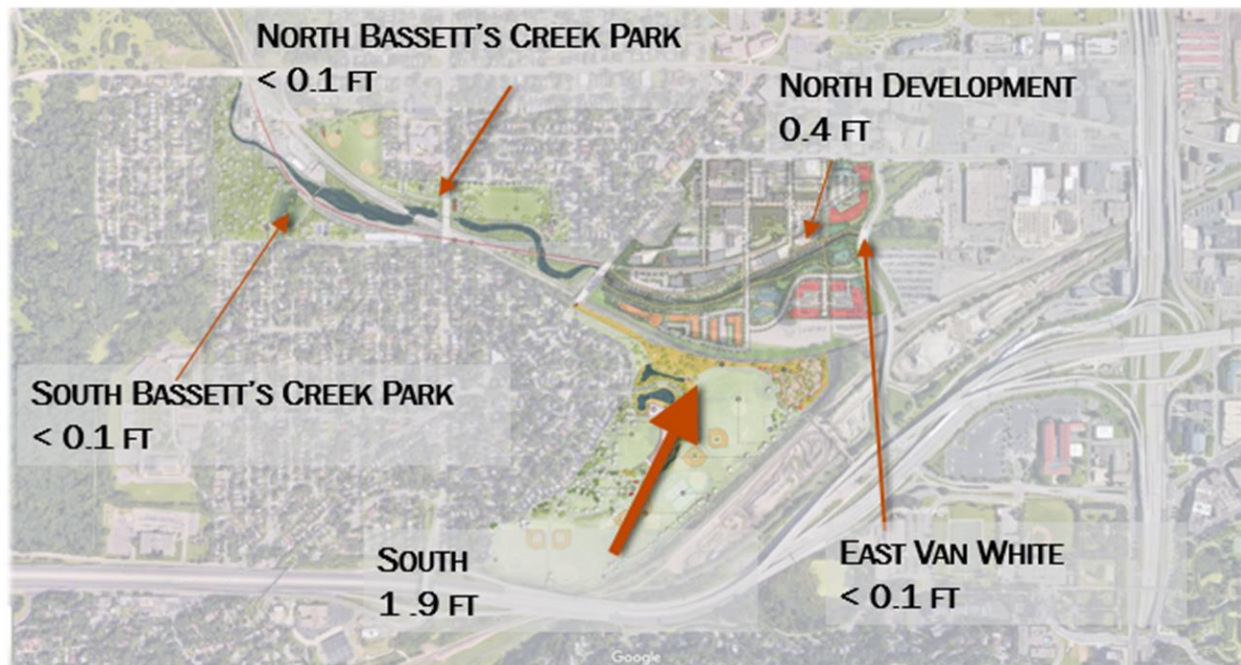


Figure 4-4. Local drainage influence on floodplain elevation at Irving Avenue.

4.6 STEP 3: SITING ANALYSIS (POTENTIAL PROJECT LOCATIONS)

Step 3 used the results from the first two steps to determine potential project locations. These sites were then reviewed for other site constraints present that would impact scenario options. Site constraints included topography that would prevent water from being routed to a project location, wetland impacts, and development that was already under or soon to be constructed. Areas of interest identified in Step 1 were either eliminated in Step 3 or kept for further review in Step 4.

4.6.1 Project Locations Eliminated

Figure 4-5 shows the locations of areas eliminated based on the overlapping potential or existing site constraints listed above. These options could be considered for alternative water quality project sites.

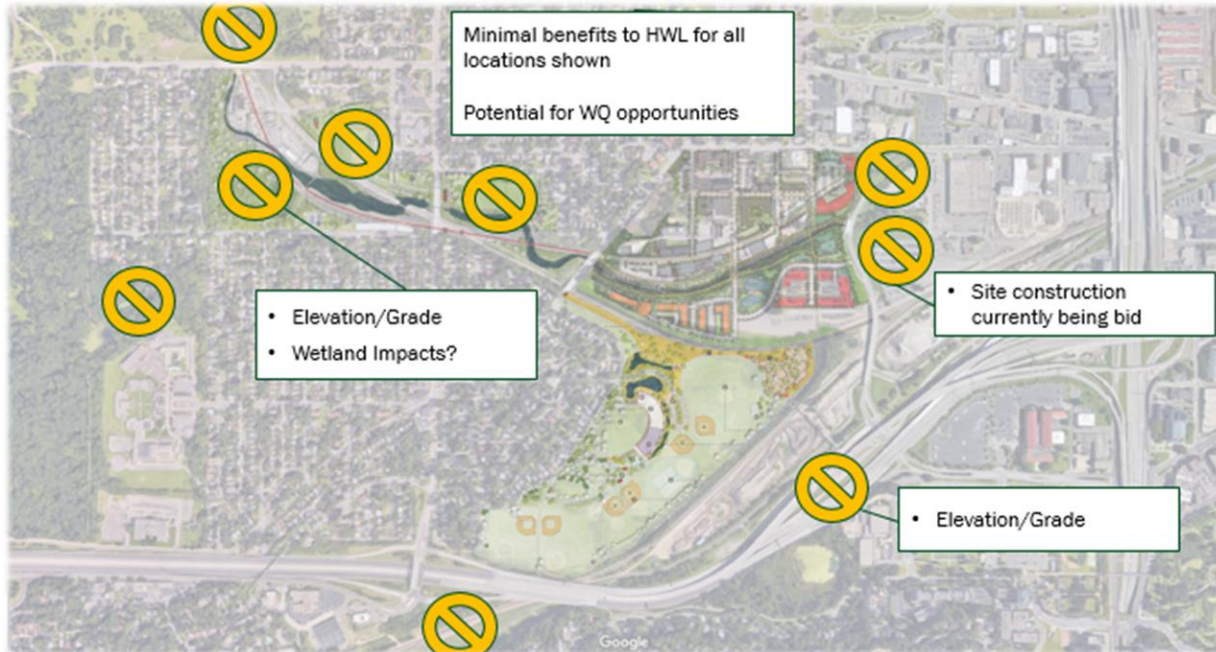


Figure 4-5. Project locations eliminated for flood projects.

4.6.2 Project Locations Further Reviewed

Two main areas were identified for further review: Bassett Creek corridor in the Bassett Creek Valley Development Area and Bryn Mawr Meadows Park (Figure 4-6). These project locations have an ability to store water, could be integrated into future construction plans and had significant influences on reducing the flood elevation in Bassett Creek Valley Development Area.



Figure 4-6. Project locations kept for further evaluation.

4.7 STEP 4: ESTABLISH POTENTIAL PROJECT SCENARIOS

Step 4 further evaluated project opportunities in Bassett Creek corridor and Bryn Mawr Meadows Park as identified in Step 3. Project scenarios included either surface storage, underground storage or expansion of Bassett Creek channel. Table 4-2 provides an overview of the scenarios and are discussed in detail below. Each scenario is presented under four different conditions to understand the influences of the designs on the landscape. The baseline and conditions include:

1. Existing land use (baseline)
2. Land use that reflects approved MPRB Master Plans and potential development
3. Proposed scenario during the
 - 2-year storm event (2.9 inches of rainfall in 24 hours) for projects within Bryn Mawr Meadows Park.
 - 10-year storm event (4.9 inches of rainfall in 24 hours)) for projects within Bassett Creek Development Area
4. Proposed scenario during the 100-year storm event (7.4 inches of rainfall in 24 hours))

Table 4-2. Scenario Overview.

Scenario	Location	Type of Storage
1	Bryn Mawr Meadows Park	Underground
2	Bryn Mawr Meadows Park	Surface
3	Bryn Mawr Meadows Park	Both
4	Development Area	Creek Expansion
5	Development Area	Creek Expansion
6	Development Area	Creek Expansion
7	Bryn Mawr Meadows Park & Development Area	Surface and Creek Expansion

The proposed scenario models revised the storage and/or routing of existing XP-SWMM parameters within the Study Area to determine the influence on flood elevation and extent within Bassett Creek Valley. All other model inputs match existing conditions inputs. See Appendix B for details related to the proposed scenario models. Downstream of Irving Avenue, the established Bassett Creek flood elevation is 811.1 feet. The flood waters cover approximately 24.0 acres or 40% of the Development Area.

A summary of the scenarios impacts to the floodplain is provided at the end of Section 4.7. Also presented in the summary is the anticipated interaction between the proposed Scenarios and BCWMC CIP projects: water quality basins in Bryn Mawr Meadows and reducing erosion and streambank stabilization

4.7.1 Scenario 1: Underground Storage in Bryn Mawr Meadows Park.

Scenario 1 Setup Scenario 1 integrates subsurface storage beneath athletic fields in Bryn Mawr Meadows Park. Figure 4-7 shows the 8.5-acre footprint of the underground storage system and has a depth of 5.75 feet. The scenario would route flow from storm sewer pipes and surface runoff from south and west of the park into the underground storage prior to discharging to Bassett Creek; flow is illustrated by blue arrows in the figures. The underground storage would provide both water quality treatment and the option for water reuse through irrigation or integrated into the proposed splash pad. Special treatment would be required for water reuse that will result in human contact.

All rainfall events would be directed to the system with the goal of having no impacts to surface activities, even during the 100-year flood. To ensure the best use of MPRB park space, the scenario would require the installation of planned athletic fields at the time the underground storage was constructed and would allow MPRB funding to be focused on other aspects of the Master Plan and complete full reconstruction of the park sooner.

Scenario 1 Results Scenario 1 retains 50 AF of runoff volume during the 100-year storm event from the drainage area south of Bassett Creek. This results in an updated flood elevation of 810.3 feet, or a reduction of 0.8 feet, and removes 30% of Bassett Creek Valley Development Area from the floodplain (16.9 acres, down from 24.0 acres). Figure 4-8 illustrates the difference between existing flood extent to Scenario 1 flood extent. As shown, Scenario 1 flood reductions do not remove full parcels from the floodplain but do remove area along the fringe. This change in floodplain extent does not provide a significant improvement of unlocking developable land in Bassett Creek Valley.



Existing land use



Proposed master plan land use



Proposed scenario under the 2-year storm event. Rainfall directed to underground system, no impacts to athletic fields.



Proposed scenario under 100-year storm event. Rainfall directed to underground system, no impacts to athletic fields.

Figure 4-7. Scenario 1: Underground storage in Bryn Mawr Meadows Park.

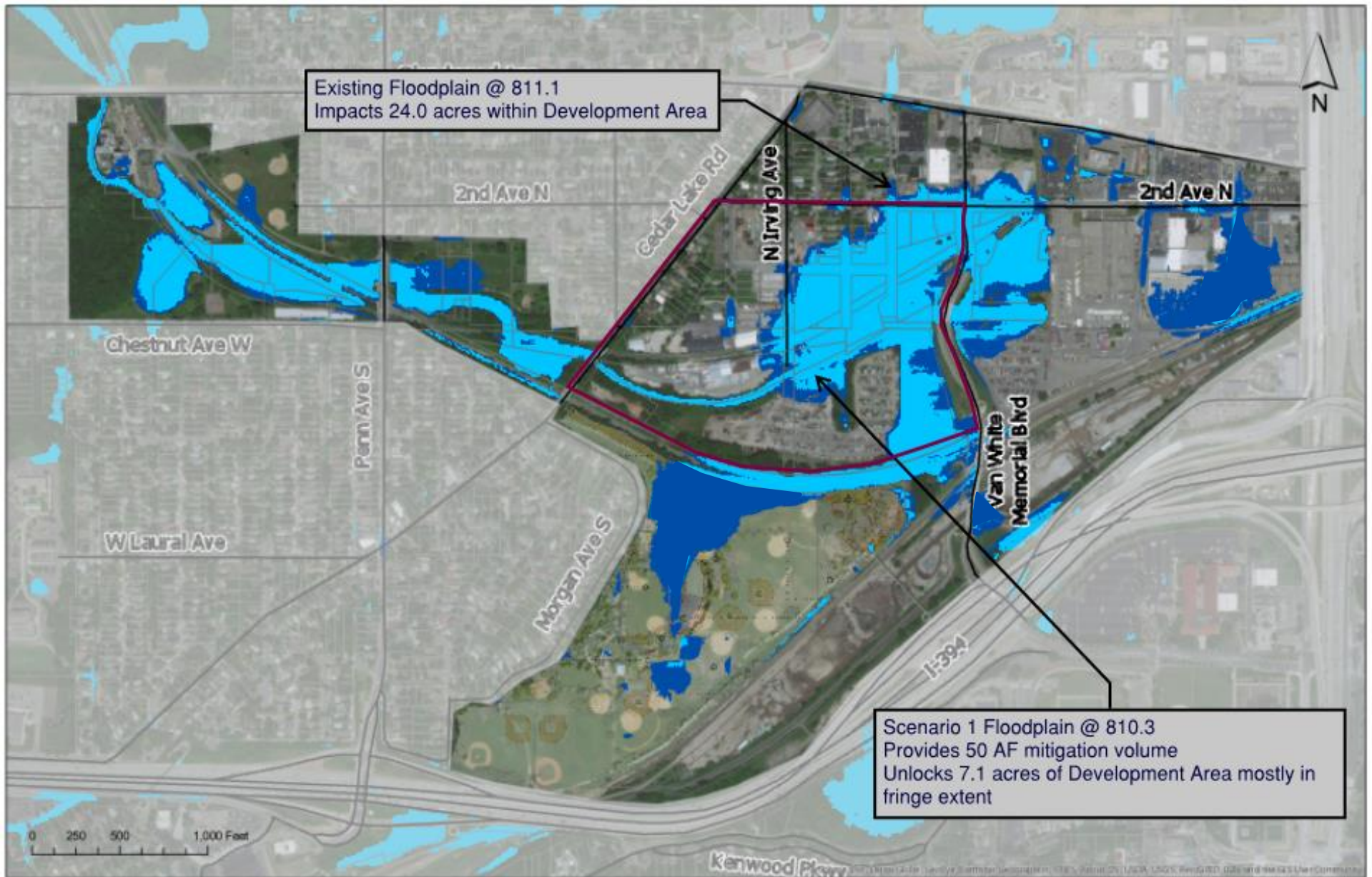


Figure 4-8. Updated flood extent for Scenario 1.

4.7.2 Scenario 2: Surface Storage in Bryn Mawr Meadows Park

Scenario 2 Setup Scenario 2 integrates surface storage at the athletic fields in Bryn Mawr Meadows Park. Figure 4-9 shows the 14-acre footprint of the surface storage system with a maximum depth of three feet. Surface runoff would only be routed to the system during events that produced greater than 2.9 -inches of rain in 24 hours, which is the event at which MPRB cancels games and would not use the athletic fields. Under larger rainfall events, runoff would pool at the surface but would drawdown within 24 hours to prevent damage to athletic field vegetation. The fields would need to be tiered to allow for storage over a large, linear area; the tiers would utilize existing grade to the maximum extent practical. See the cross section at the bottom of Figure 4-9 for illustration of Scenario 2 under the 2-year and 100-year storm events below.

Scenario 2 Results Scenario 2 retains 42 AF of runoff volume during the 100-year storm event from the drainage area south of Bassett Creek. This results in an updated flood elevation of 809.9 feet, or a reduction of 1.2 feet, and removes 34% of the Development Area from the floodplain (15.8 acres down from 24.0 acres). Figure 4-10 illustrates the difference between existing flood extent to Scenario 2 flood extent. Again, Scenario 2 flood reductions do not remove many full parcels from the floodplain but do remove area along the fringe. This change in floodplain extent does not provide a significant improvement of unlocking developable land in Bassett Creek Valley.

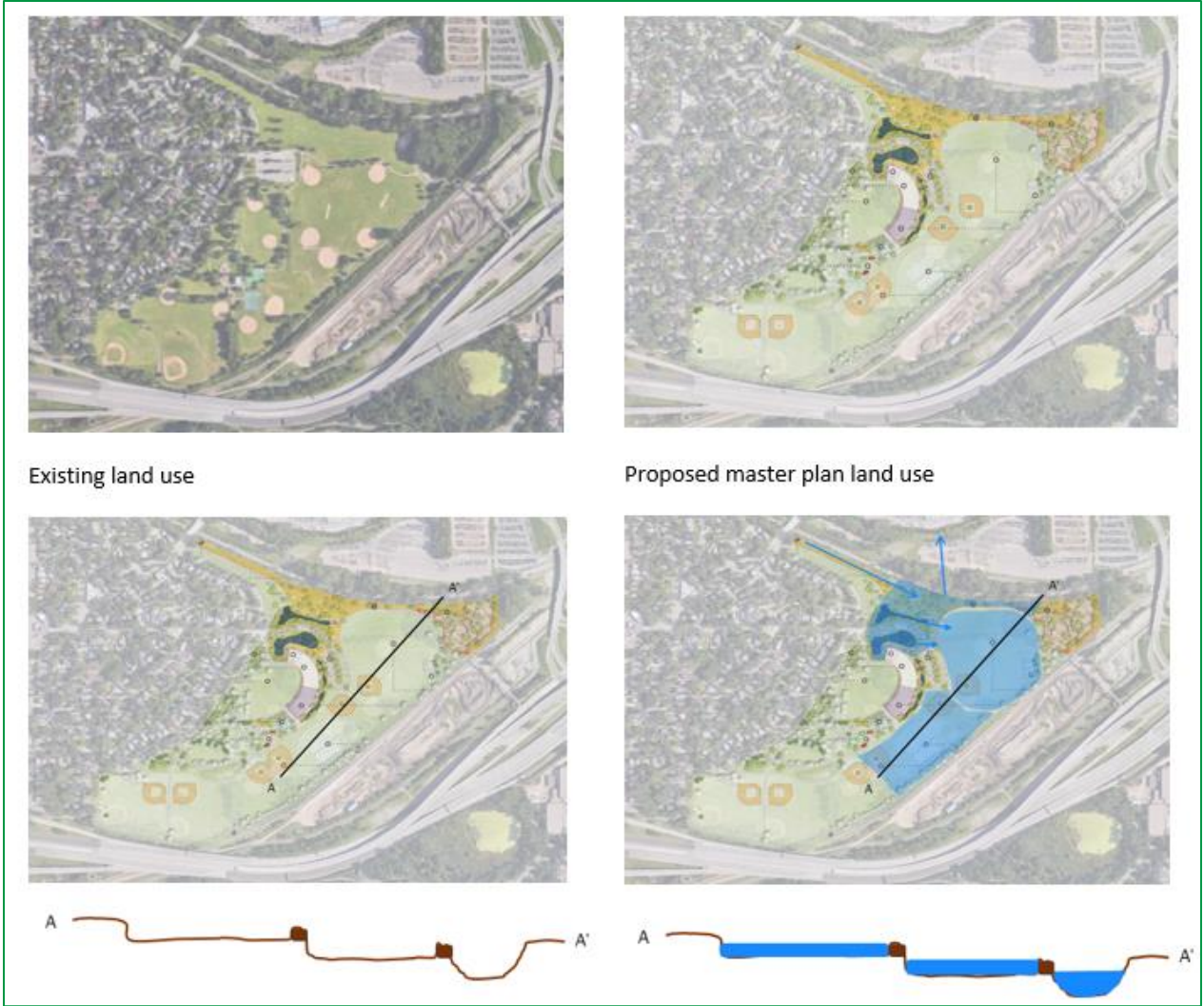


Figure 4-9. Scenario 2: Surface storage in Bryn Mawr Meadows Park.

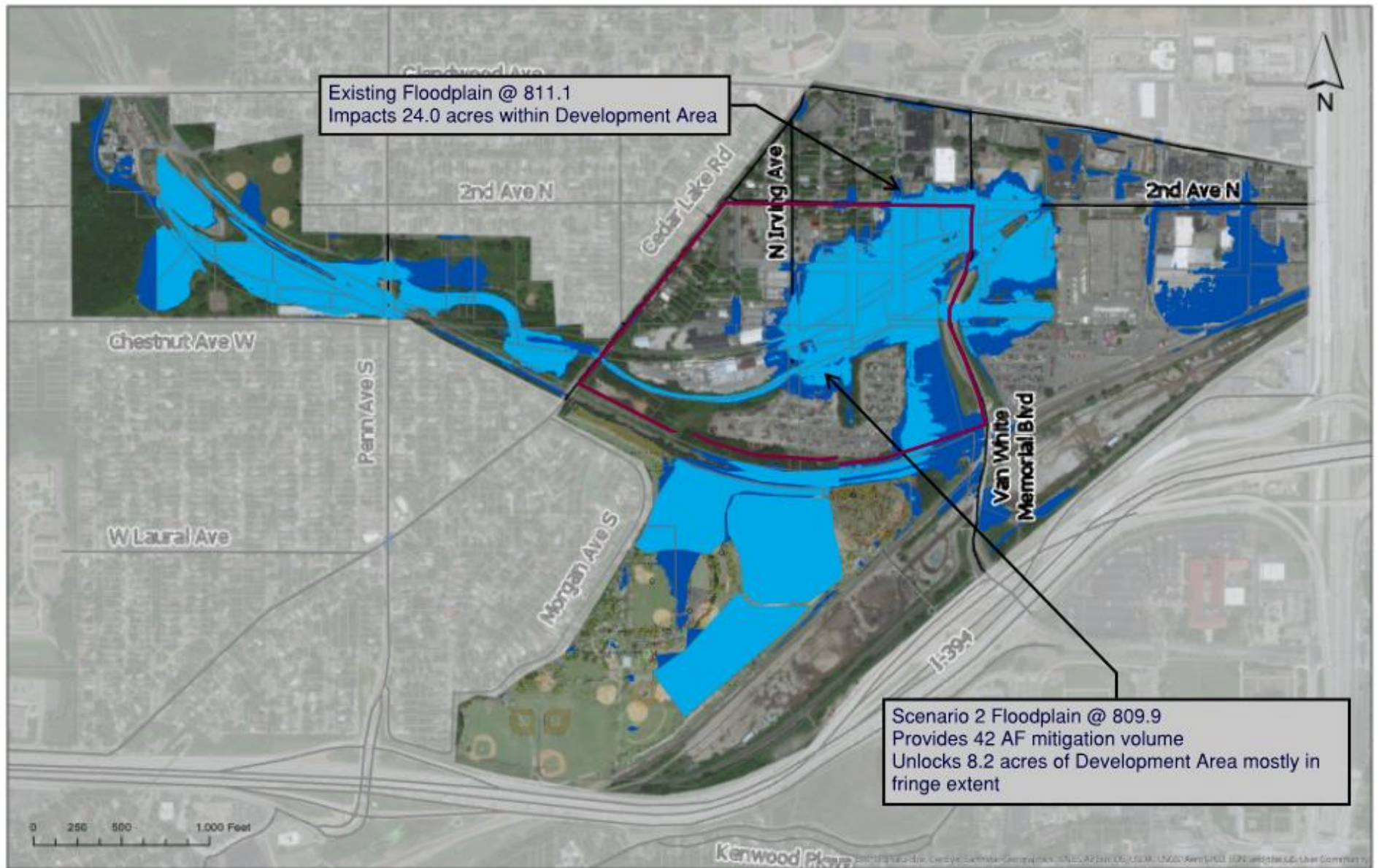


Figure 4-10. Updated flood extent for Scenario 2.

4.7.3 Scenario 3: Surface and Underground Storage in Bryn Mawr Meadows Park

Scenario 3 Setup Scenario 3 is a combination of subsurface and surface storage at the athletic fields in Bryn Mawr Meadows Park. Figure 4-11 shows the 8-acre footprint of surface storage (3-foot depth) and 3.6-acre footprint (5.75 feet) of the underground system. Similar to Scenario 2, the surface storage would only pool water from overland flow during large storm events and the athletic fields would be tiered. Runoff would be directed to the underground system under all rainfall events.

Scenario 3 Results Scenario 3 retains a total of 44 AF (21 AF of underground and 23 AF of surface storage) of runoff volume during the 100-year storm event from the drainage area south of Bassett Creek. This results in an updated flood elevation of 810.2 feet, or a reduction of 0.9 feet, and removes 31% of Bassett Creek Valley Development Area from the fringe of the floodplain (16.5 acres as compared to 24 acres). Figure 4-12 illustrates the difference between existing flood extent to Scenario 3 flood extent. As with Scenarios 1 and 2, Scenario 3 does not remove many full parcels from the floodplain. This change in floodplain extent does not provide a significant improvement of unlocking developable land in Bassett Creek Valley.

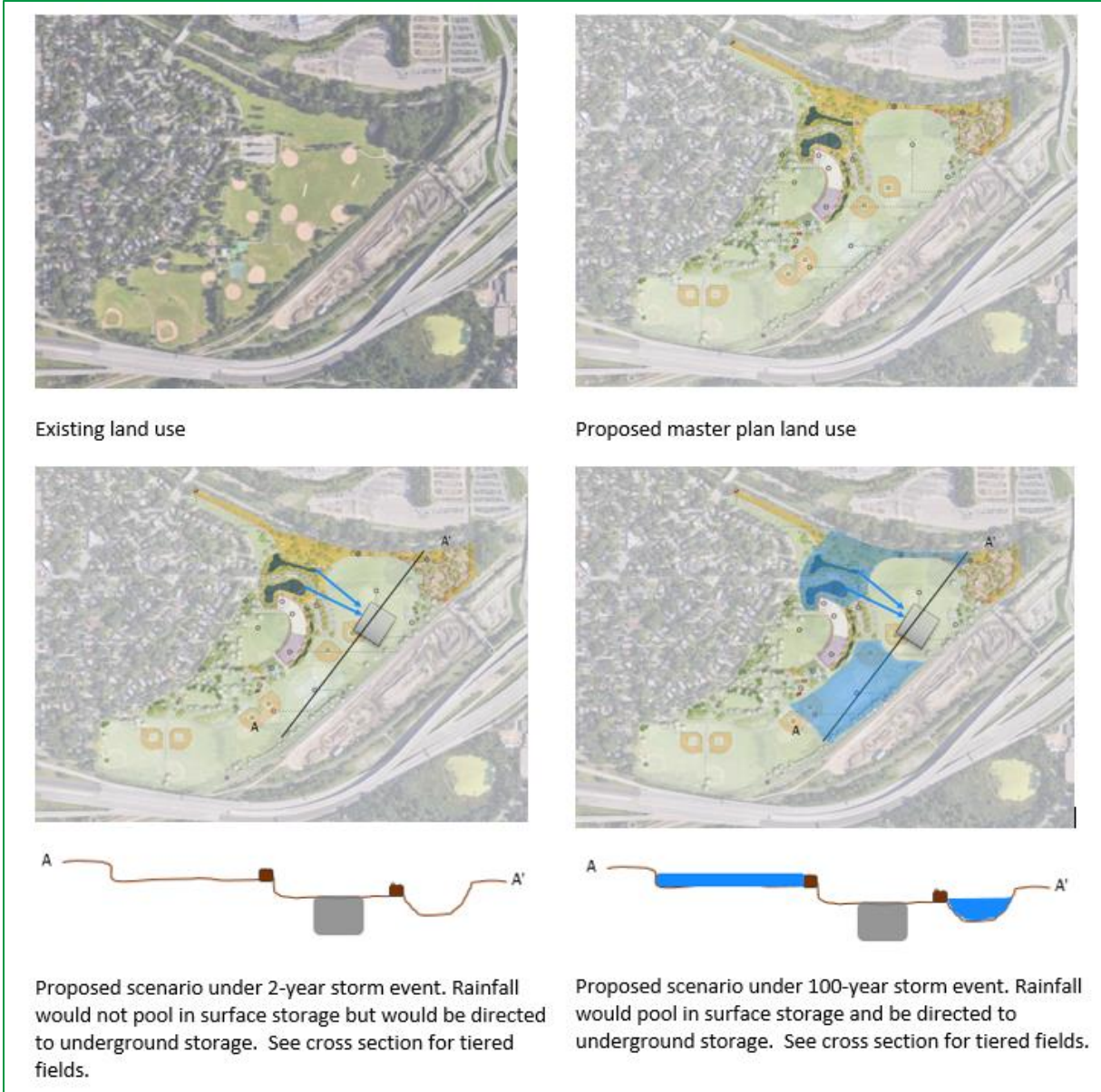


Figure 4-11. Scenario 3: Combination storage in Bryn Mawr Meadows Park.

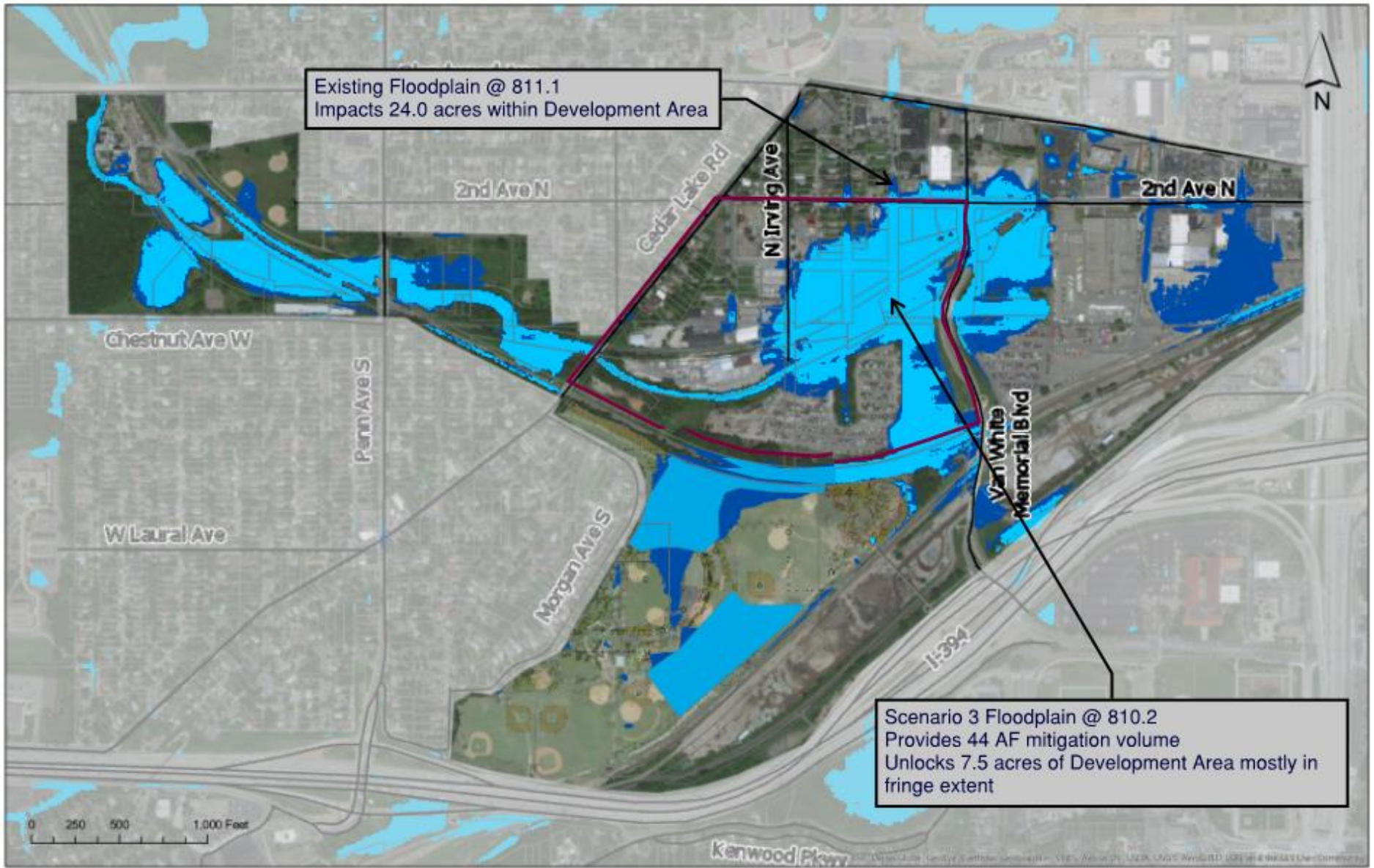


Figure 4-12. Updated flood extent for Scenario 3.

4.7.4 Scenarios 4, 5 and 6: Bassett Creek Corridor

Scenarios 4-6 Setup These Scenarios involve enlarging the Bassett Creek channel cross section between Cedar Lake Rd and Van White Blvd. The current top width of the channel is approximately 40 feet wide. The updated cross section was modeled to be tiered with a channel to contain storm events equal to or less than the 10-year storm event, and a floodplain bench where a new Luce Line trail could be constructed. During higher rainfall events the entire channel would be utilized for flood storage.

Figure 4-13 provides one example of a cross section design and illustrates what was used in the model. However, as long as the volume provided in the cross section is maintained and connected to the floodplain, the proposed cross section can be manipulated to include braided channels, online or offline basins, trails on both sides and other amenities. The modeled cross section has a wider bottom than in existing conditions during normal flow but a final design could include a refined channel configuration to match existing conditions during normal flow and the 2-year storm event. Due to the short flood duration, the terrace would be designed to be flooded for less than 24-hours.

- Scenario 4 would expand the top width of the channel to about 150 feet for the entire length, Cedar Lake Rd to Van White Blvd.
- Scenario 5 would expand the top width of the channel to about 150 feet between Cedar Lake Rd and Irving Avenue and to 235 feet from Irving Avenue to Van White Boulevard.
- Scenario 6 would expand the top width of the channel to about 150 feet between Cedar Lake Rd and Irving Avenue and to 280 feet from Irving Avenue to Van White Boulevard.

Scenarios 4-6 Results are summarized in Table 4-3 below and illustrate as the channel storage increases, the flood elevation is reduced. However, the larger cross sections have a greater top width which uses more of the Development Area land and therefore removes less of the existing floodplain. Scenarios 4-6 were designed to strategically relocate the floodplain into the proposed Bassett Creek channel to remove numerous parcels from the floodplain.

Table 4-3. Bassett Creek corridor Scenario results.

Scenario	Average Top Width (ft)	Mitigation Storage Provided (AF)	Flood Elevation (ft)	Surface Area Floodplain (ac) ⁽¹⁾	Floodplain Removal (%)
4	150	34	811.1	6.9	71
5	235	48	810.3	8.8	63
6	280	62	809.9	10.0	58

¹ Surface area within Bassett Creek Valley Development Area

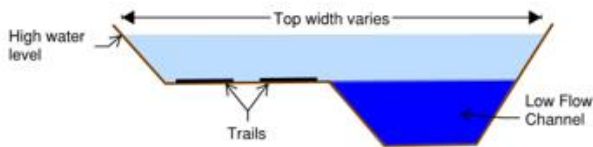
Figure 4-15 illustrates top width (flood extent) associated with Scenario 5. As indicated, flood waters are contained within the updated channel cross section between Cedar Lake Rd and Van White Blvd and also removes flooding from Bryn Mawr Meadows Park. Scenarios 4 and 6 flood extents scale to the top width noted in Table 4-4 but are similar to the extent shown in Figure 4-15 for Scenario 5.



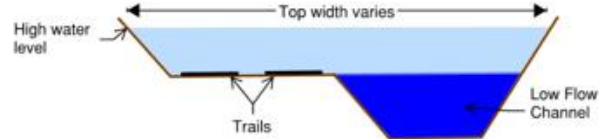
Existing land use



Predevelopment Study Concept Design



Proposed scenario under the 10-year storm event. Water would remain in low flow channel with trails accessible. See cross section for tiered creek cross section.



Proposed scenario under 100-year storm event. Flood would use entire channel, submerging trails.

Figure 4-13. Scenarios 4-6: Creek expansion.

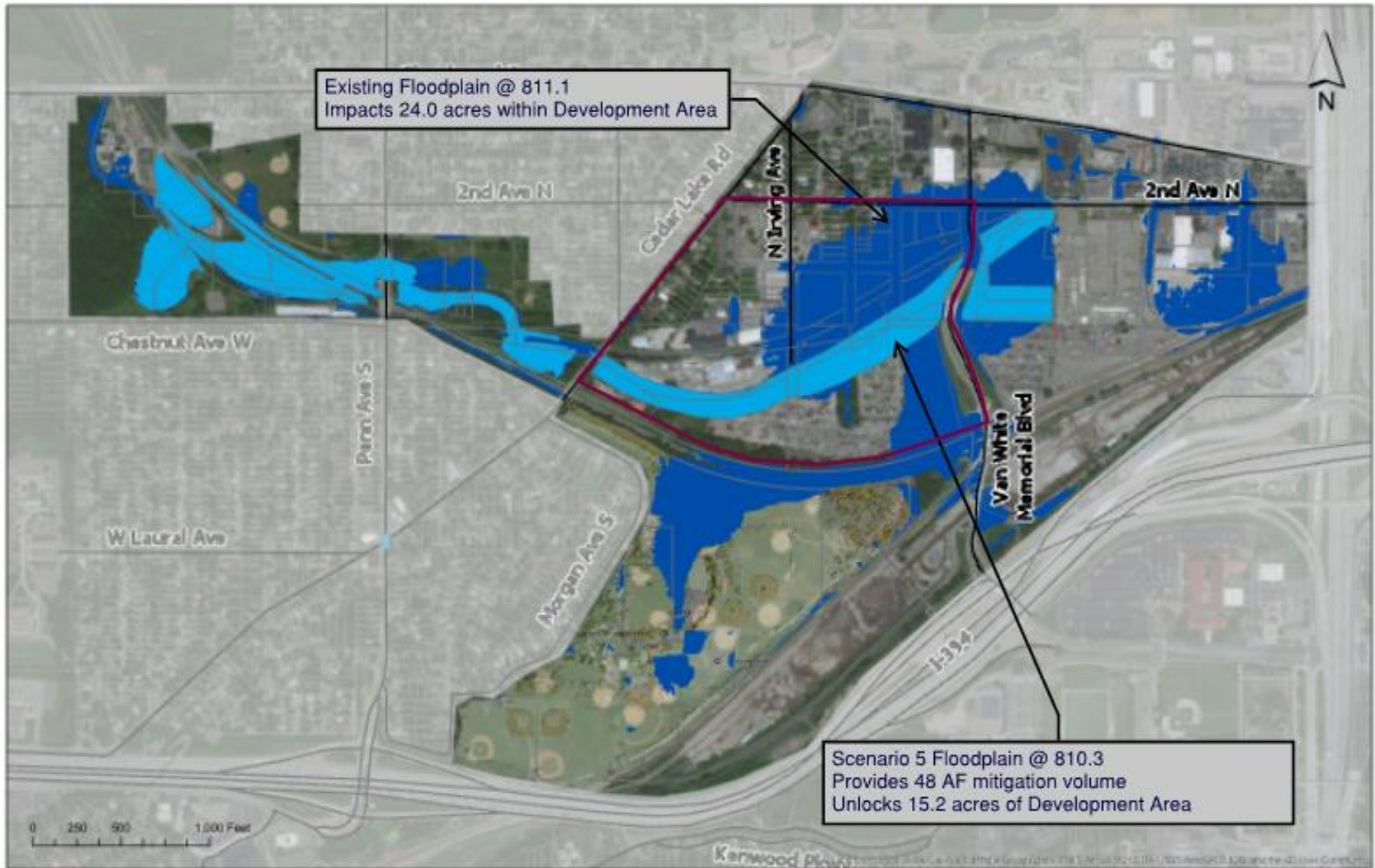


Figure 4-14. Updated flood extent for Scenario 5.

4.7.5 Scenario 7 Channel Expansion and Surface Storage in Bryn Mawr Meadows Park

Scenario 7 Setup This scenario combines surface storage from Scenario 2 with the expansion of the creek noted in Scenario 6 and is shown in Figure 4-15. The scenario is meant to illustrate how combining projects for both areas of interest can have additive impacts on reducing the flood elevation, relocate the flood extent, and potentially provide amenities that a single project area could not.

Scenario 7 Results Scenario 7 retains 105 AF of runoff volume during the 100-year storm event from the drainage area south of Bassett Creek and within the Creek itself. This results in an updated flood elevation of 809.0 feet, or a reduction of 2.1 feet, and removes 63% of Bassett Creek Valley Development Area from the floodplain, or 15.0 AF. Figure 4-16 illustrates the difference between existing flood extent and Scenario 7 flood extent.



Existing land use



Predevelopment Study Concept Design



Proposed scenario under the 10-year storm event). Water would remain in low flow channel with trails accessible. No pooling within athletic fields.



Proposed scenario under 100-year storm event. Flood would use entire channel, submerging trails and use surface storage in Bryn Mawr Meadows Park.

Figure 4-15. Scenario 7: Storage and creek expansion.

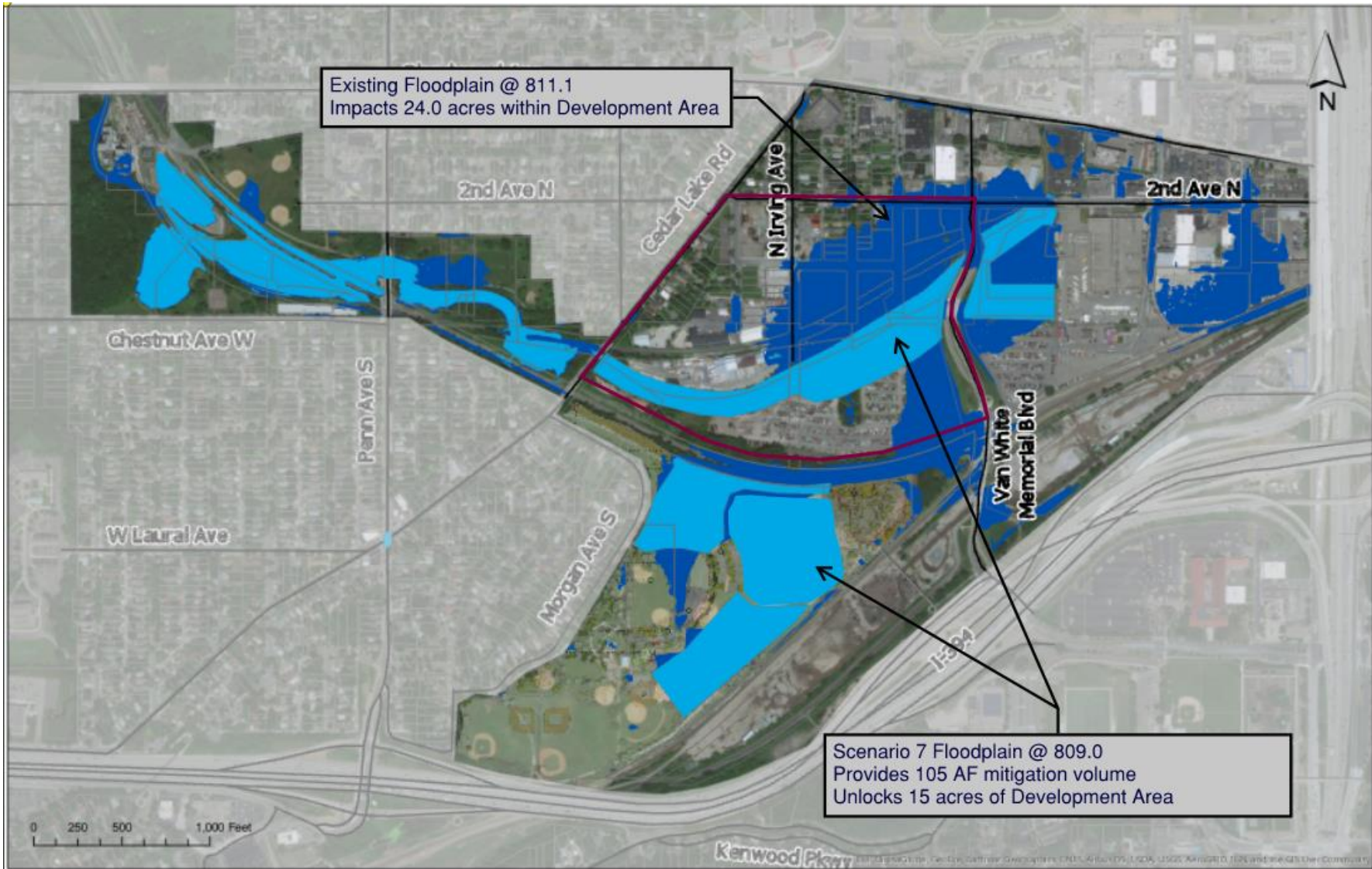


Figure 4-16: Flood extent for Scenario 7

4.7.6 Scenarios Summary

Table 4-4 provides a summary of the mitigation storage volume provided, flooded surface area within Bassett Creek Valley Development Area and the updated flood elevation downstream of Irving Ave as a result of the proposed scenario models.

Scenario 2 provides only surface storage in Bryn Mawr Meadows Park whereas Scenarios 1 and 3 provide less surface storage but includes underground storage for a greater total storage amount. Based on the proposed model, the larger the storage provided at the surface appears to have a greater influence on reducing the flood elevation at Irving Ave.

Scenarios 2 and 6 have the same flood elevation but have significantly different impacts on the proposed flood location. Scenario 6 involved relocated the floodplain to a precise location to unlock as many parcels in the Development Area as possible. Scenario 2 does reduce the flood extent and depth of flooding but doesn't necessarily unlock developable areas to a great extent.

Scenario 4 produces the smallest flood extent and keeps the floodplain within the proposed channel. However, the flood elevation still requires proposed structures in the area to be built up a few feet from existing ground elevation to meet the two-foot freeboard. This disconnect between businesses and sidewalks/streets could lead to a development that is disjointed and lacks a feeling of community.

Scenarios 5 and 7 have similar surface areas for the floodplain in the Development Area but the flood elevation for Scenario 7 is about one-foot lower. This is the result of combining storage in Bryn Mawr Meadows Park and expanding the creek. The storage in the park reduces the total runoff to the Creek during peak conditions which also requires less storage in the proposed cross section.

Table 4-4. Scenario influences on flooding at Irving Avenue.

Scenario	Storage Provided (AF) ⁽¹⁾	Surface Area Floodplain (ac) ⁽²⁾	Reduction in Flooded Area (ac)	Flood Elevation ⁽³⁾
Existing	-	24.0		811.1
1	50	16.9	7.1	810.3
2	42	15.8	8.2	809.9
3	44	16.5	7.5	810.2
4	34	6.9	17.1	810.7
5	48	8.8	15.2	810.3
6	62	10.0	14.0	809.9
7	105	9.0	15.0	809.0

¹ For Scenarios 4-6, volume provided between Cedar Lake Rd and Van White Blvd in the channel

² Surface area within Development Area

³ Flood elevation downstream of Irving Ave

BCWMC CIP plan includes projects for water quality improvement opportunities in Bryn Mawr Meadows Park and erosion control and stream bank improvements through Bassett Creek corridor. Scenarios 1 – 3 and 7 would potential enhance the BCWMC proposed water quality basins in Bryn Mawr Meadows Park. The Bryn Mawr Meadows Park Water Quality Feasibility Study (Barr, 2019) presented three scenarios summarized below for treatment areas and volumes:

- Diverts 15.9 acres from residential area west of park to basins; provides 1.6 AF of treatment
- Divert 29.2 acres from residential area and low flow from Penn Pond; provides 3.8 AF of treatment
- Combination of 1&2 which diverts 45.1 acres from residential area and low flow from Penn Pond; provides 5.4 AF of treatment

As noted in the Water Quality Feasibility Study, consideration was given to direct all flows from Penn Pond and downstream of I-394 to the water quality basins but was determined to not be feasible (at the water quality study level) due to significant cost and necessary land consumption. The scenarios presented in this Feasibility Study, which included a larger study level provided the additional volume that could provide treatment to full flow from Penn Pond and downstream of I-394. The additional storage could be used as an overflow for the water quality basins or as a standalone system.

Scenarios 4-7 design includes improvements to the stream banks from Cedar Lake Rd and Van White Blvd and therefore, will reduce or control current erosion concerns.

4.8 WATER QUALITY

The BCWMC’s P8 water quality model and City’s GIS water quality model were reviewed to establish existing watershed sediment and phosphorus loading from regional and local drainage areas. Comparing regional versus local drainage areas, the local area accounts for less than 10% of the total phosphorus load entering Bassett Creek.

The model outputs were compared to the Bassett Creek water quality monitoring station located at Irving Ave. The BCWMC P8 model appears to produce similar results to the actual conditions observed at the monitoring station. The 2015 Water Quality Report for the Irving Ave. monitoring station indicates that all water quality parameters meet MPCA requirements.

Due to the uncertainty of future changes within the Development Area, the existing water quality models were not used to determine watershed phosphorus and sediment loading and potential reductions. Based on current and future land use, it is anticipated that the loading would be less than or equal to existing conditions. Table 4-5 and Figure 4-17 illustrate that future land use may have a slight decrease in impervious with additional park land being predicted in the 2040 Plan which would results in less loading and also, redevelopment in the area would include improvements to degraded site conditions.

Table 4-5. Land use comparison between 2016 and 2040.

Landuse Type	Existing (ac)	Proposed (ac)	Change (ac)
Park/Open Space	8	20	+12
Production Mixed Use	102	90	-12

BCWMC regulations require 1.1-inch volume retention from new or redevelopment impervious surfaces. Unlike previous land use definitions, the 2040 land use does not assume an impervious area but instead refers only to type of land use. Assumptions used in this study for land use and associated impervious values are

- 20% impervious for parks,
- 85% for production mixed use.

Using the impervious percentages listed above, 1.1-inch volume would equate to 3.2 AF of volume retention for parcels assumed to be redeveloped in the Bassett Creek Development Area (Figure 4-18). This calculation assumes that lots currently under 1 acre (47 of the 60 parcels) will likely be developed with adjacent parcels so water quality requirements will be triggered. If contamination and high groundwater are confirmed site constraint throughout the Development Area, flexible treatment options would be followed and would reduce water quality volume required.

For Bryn Mawr Meadows Park reconstruction, there may be close to 5 acres of new impervious which would require 0.5 AF of storage. BCWMC CIP project for water quality basins in Bryn Mawr do not provide treatment for Bryn Mawr Meadow reconstruction.

The Bryn Mawr Meadows scenarios offer water quality benefits via settlement of sediment and pollutants in an underground chamber. Small storms are meant to bypass the surface storage to minimize impacts on the athletic fields. These small storms are what produce the majority of pollutants so surface storage may offer only minimal benefits to water quality. As noted in the Scenario Summary section, underground storage provided could provide the additional volume needed to treat full flow from Penn Pond and downstream of I-394, enhancing the proposed CIP water quality basins.

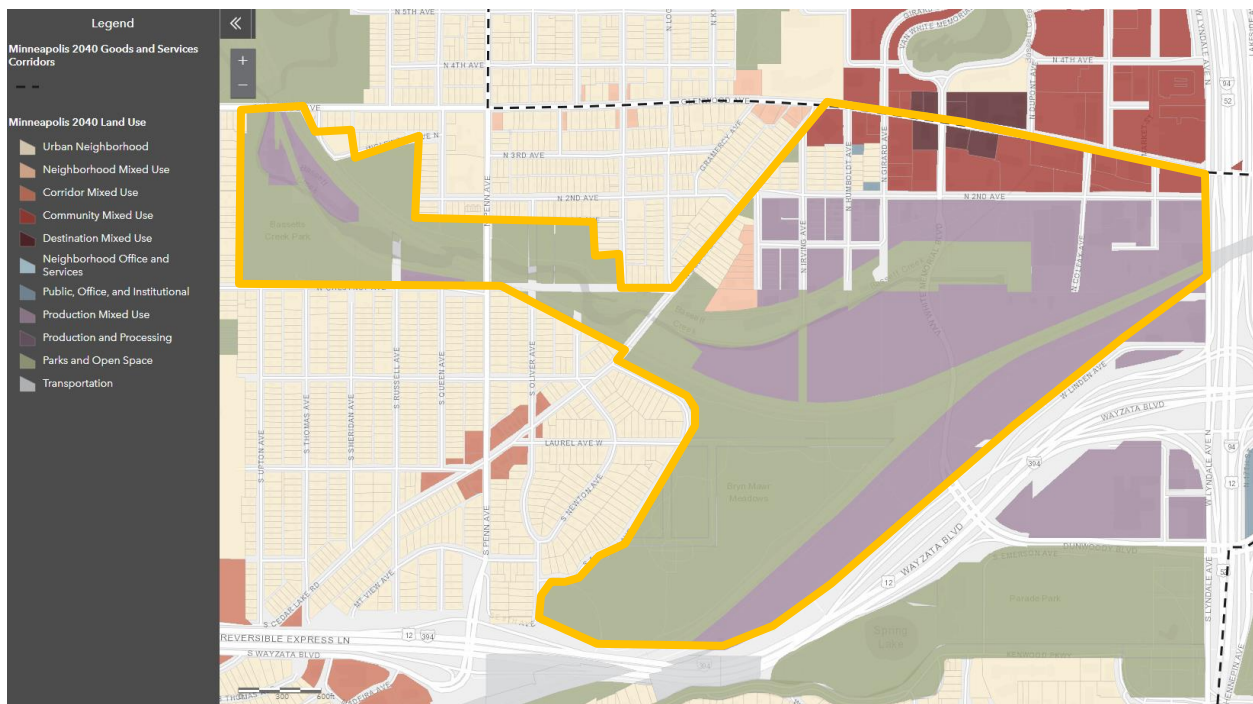


Figure 4-17. City of Minneapolis 2040 Plan land use.



Figure 4-18. Anticipated redevelopment locations.

5.0 Cost and Project Phasing

5.1 COST CONSIDERATIONS

Scenarios discussed in Section 4 identified various floodplain management options to unlock land in the Bassett Creek Valley Development Area. This section presents ballpark level opinion of cost for those scenarios. These generalized estimated costs are based on conceptual designs focused on flood storage and floodplain enhancements.

The costs reflect the following assumptions:

- The construction line item includes mobilization/demobilization, excavation, soil disposal, material cost and utility removal and installation.
- Engineering and Construction Management is 30% of construction cost and Contingency is 20%.
- Includes cost of athletic field installation for scenarios within Bryn Mawr Meadows Park.
- Includes cost of 12-foot wide bituminous trail for scenarios within Bassett Creek Valley Development Area.
- Water reuse options do not include pumping system or additional treatment required to meet City code (RO filters, chlorination, UV)
- The costs for projects within Bassett Creek Valley are shown as an upper and a lower cost. The low range assumes no soil contamination while the high range assumes all soil is contaminated throughout the Development Area.
- Range is $\pm 40\%$.

Table 5-1. Estimated capital costs and unit cost in millions.

Scenario	Flood Elevation	Reduction in Flooded Area (ac) ⁽¹⁾	Estimated Capital Cost (\$M) ⁽²⁾	Cost per Acre Flood Reduction (\$M/ac)
1	810.3	7.1	\$36 - 72.7	5.1 - 10.2
2	809.9	8.2	\$2.8 - 5.6	0.34 - 0.68
3	810.2	7.5	\$13.8 - 27.7	1.8 - 3.7
4	810.7	17.1	\$3.3 - 6.6 \$8.3 - 16.7	0.19- 0.39 0.49 - 0.98
5	810.3	15.2	\$3.7 - 7.3 \$10.3 - 20.5	0.24 - 0.48 0.68 - 1.3
6	809.9	14.0	\$3.9 - 7.9 \$11.9 - 23.8	0.28 - 0.56 0.85 - 1.7
7	809.0	15.0	\$6.4 - 13.5 \$14.7 - 29.4	0.43 - 0.9 0.98 - 1.96

¹ Existing condition has 24.0 acres of flooding in Bassett Creek Valley Development Area

² Scenarios 4-7: lower range assumes no soil contamination, upper range assumes all soil contaminated

Funding partnerships among benefited parties will likely be necessary to allow for regional amenities and development. It is anticipated that full redevelopment of the area designed with a regional concept could provide new market value for the area of over \$300 million dollars which would generate real estate taxes of over \$10 million a year. If the development were completed with a parcel-by-parcel approach, the estimated market value and real estate taxes would be significantly less and would likely not provide regional amenities and valuable connections (natural/transportation).

The MPRB can utilize state and regional funding, including bonds, for approved MPRB Master Plans that have been adopted by the Met Council. Within Bryn Mawr Meadows Park, the projects would be designed to be consistent with the existing MPRB Master Plan. To use MPRB park space, the scenario would require the construction of the athletic fields at the time storage was constructed (underground or surface storage). This could allow MPRB funding to be focused on other aspects of the Master Plan and complete the reconstruction sooner.

The MPRB also has a Master Plan for the Luce Line Regional Trail which is currently designed to use land adjacent to the Bassett Creek corridor. If projects within Bassett Creek corridor support or enhance the Luce Line plan, state funding could potentially be used for scenarios within the corridor.

Mechanisms for funding a regional system could also include park dedication fees. The MPRB has implemented funding agreements with other groups (agencies/developers) in the past and could assist with developing a similar agreement for Bassett Creek Valley. As an abbreviated explanation, the park dedication fees follow a hierarchy system with the following (government agencies are exempt):

1. Dedicated land on the parcels being developed. The amount of land to be dedicated is based on acres/unit or up to 10% of land if supported by MPRB Master Plans for the area near or including the development site. The MPRB can choose any area of the parcel to use as park lands.
2. Developers can pay a fee that must be spent by the MPRB within the neighborhood for park related amenities. This is the system used 99% of the time by the MPRB.
3. Land in-lieu. An example of this is a developer who creates/pays for/constructs a park, but the park is eventually bought by the MPRB. Requires approval by the Board, whereas the first two can be decided by staff.

In addition to funding options related to MPRB, CPED or other City of Minneapolis entities could potentially work on creating a special taxing district that developers could pay into to help fund the cost of the flood mitigation projects prior to development. Also, Brownfield Redevelopment funding from Hennepin County and potential MnDOT if the Scenario provides treatment necessary for the I-394 corridor.

Thirty-year life cycle analysis for the scenarios have not been included in current cost considerations. However, it is recommended that as concept designs move forward with details, a life cycle analysis should be completed.

5.2 PROJECT PHASING

To meet BCWMC floodplain policy, there can be no net loss in floodplain storage and no increase in flood level along the trunk system. Also, land use cannot be damaged by

floodwaters or increase flooding issues. In order to redevelop Bassett Creek Valley Development Area, flood storage will need to be provided prior to construction. Figure 5-1 illustrates the potential phasing of Bassett Creek Valley Development Area.

As demonstrated in this study, mitigation projects would need to occur in Bassett Creek Valley Development Area to unlock the majority of the developable land. Projects in Bryn Mawr Meadows Park reduce the flood extent within the Development Area but have minimal impact on removing entire parcels from the floodplain. Therefore, construction of the expanded creek section should occur first to unlock the greater number of parcels. The creek expansion could be completed in sections with Bryn Mawr Meadows Park scenarios being constructed second.

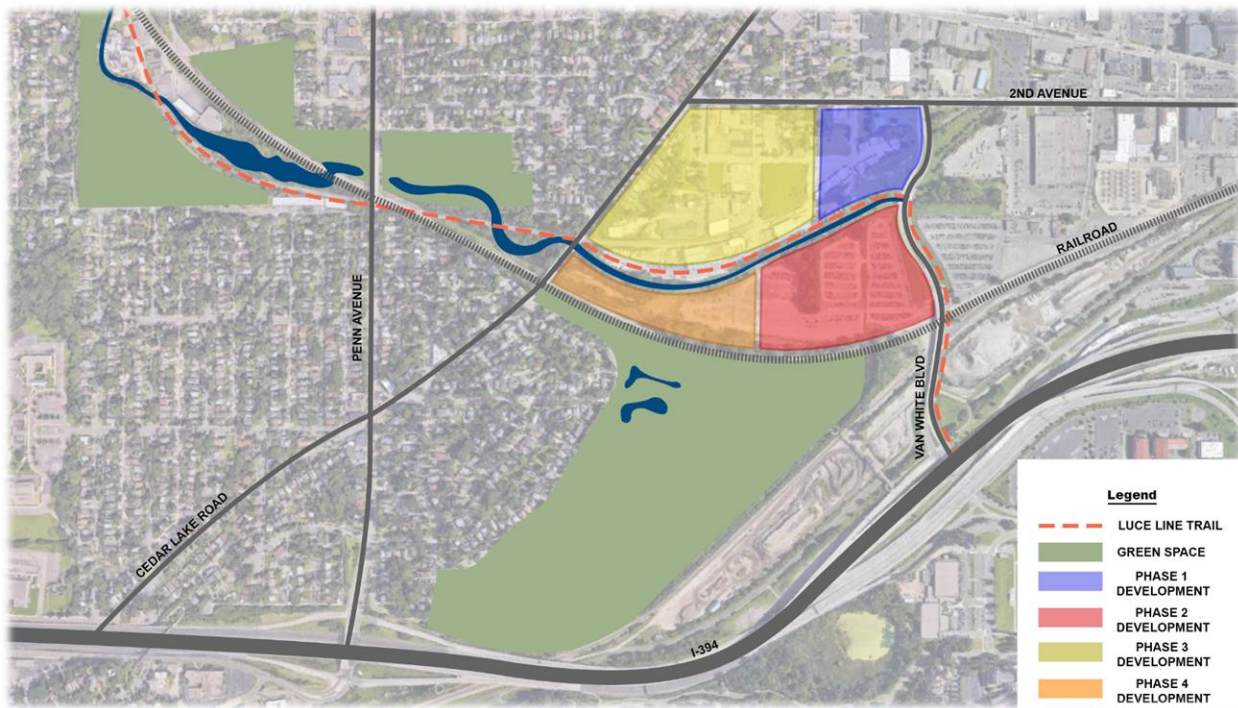


Figure 5-1. Anticipated Construction phases of redevelopment.

6.0 Conclusion and Recommendations

6.1 SUMMARY

Through the scenario development process, two areas within Bassett Creek Valley became the focus of large-scale flood mitigation projects: Bryn Mawr Meadows Park and the Bassett Creek corridor between Cedar Lake Rd and Van White Blvd (Figure 4-6). Each area was reviewed for multiple scenarios to determine specific impacts not only to the flood elevation but also to the flood extent of the region and ability to provide regional amenities.

6.1.1 Bryn Mawr Meadows Park

Scenarios 1, 2 and 3 are in Bryn Mawr Meadows Park and have underground storage, surface storage or a combination of the two within the park boundary. An underlying assumption of the scenarios is that they can be integrated into the exiting MPRB Master Plan. This means that they would not displace proposed amenities such as ball fields but be designed to support or enhance the ball fields. For underground storage, the ball fields would need to be raised from current grade to reduce impacts of groundwater on the system. These higher fields would create drier conditions than existing conditions, therefore, and potentially reduce vegetation maintenance in the park. Underground storage could also be used to promote water reuse through irrigation or integrated into the proposed splash pad. For surface storage, runoff would only be directed to pooled areas during rainfall events that the MPRB would cancel activities and be designed to drawdown within 24 hours. Scenarios within Bryn Mawr Meadows Park do not include any grading within the Development Area.

To reduce disruption to park activities, scenarios within Bryn Mawr Meadows Park have minimal additional ecological benefits and do not extend the concept of the green corridor within the region. For example, the short storage duration and use of vegetation associated with ball fields would discourage native plantings or wetland restoration. The layout required to fit the proposed amenities within the park requires water features in specific areas instead of throughout the park.

As shown in Table 4-3, the lowest flood elevation achieved for scenarios in Bryn Mawr Meadows Park is 809.9 feet. Even though this is a reduction of 1.2 feet, it only reduces the flooded area within the Development Area by 4.5 acres and mostly around the fringe. There is still significant flooding to overcome for high valued areas: 2nd Ave and Van White Blvd area and the west impound lot- (Figures 4-8, 4-10, and 4-12). Additional projects would be required to reduce the flood elevation. If flood elevations were not reduced further, large scale development would be difficult to achieve and may lead to parcel-by-parcel development which may prevent regional amenities and reduce estimated market value of the parcels; thus, reducing real estate taxes.

Concept design for the currently approved MPRB Master Plan for Bryn Mawr Meadows Park will begin in 2020 with some park amenities being constructed/installed as early as 2021. The scenarios in Bryn Mawr Meadows Park will likely need to follow a similar timeline and could be constructed prior to significant development. The projects require no additional land acquisitions or swapping.

To eliminate multiple construction phases within the park, scenarios would require the installation of planned athletic fields at the time mitigation storage was constructed. The cost of ball fields impacted by project locations were included in the capital cost of the scenarios (Table 5-1). The inclusion of the ball fields in the capital cost would allow MPRB funding to be focused on other aspects of the Master Plan and complete the park overhaul sooner.

As noted in the Water Quality Feasibility Study, consideration was given to direct all flows from Penn Pond and downstream of I-394 to the water quality basins but was determined to not be feasible (at the water quality study level) due to significant cost and necessary land consumption. The scenarios presented in this Feasibility Study, which included a larger study level provided the additional volume that could provide treatment to full flow from Penn Pond and downstream of I-394. The additional storage could be used as an overflow for the water quality basins or as a standalone system.

The estimated capital costs of scenarios within Bryn Mawr Meadows Park have significant cost variation between underground storage and surface storage; see Table 6-2. The underground system itself is costly to build and install and becomes even more costly with the requirement to construct piles for support due to poor soil conditions. Costs presented assume contaminated soil is not present in Bryn Mawr Meadows Park.

See Scenario Summary Section (4.7.6) for additional discussion on storage provided and its influence on flood elevations.

Table 6-1. Bryn Mawr Meadows Park scenarios estimated capital costs and unit cost in millions.

Scenario	Storage Type	Mitigation Storage Volume (AF)	Flood Elevation (ft)	Estimated Capital Cost (\$M)	Cost per Acre Flood Reduction (\$M/ac)
1	Underground	50	810.3	\$36 - 72.7	5.1 - 10.2
2	Surface	42	809.9	\$2.8 - 5.6	0.34 - 0.68
3	Combination	44	810.2	\$13.8 - 27.7	1.8 - 3.7

6.1.2 Bassett Creek Corridor

Scenarios 4, 5 and 6 utilize the existing Bassett Creek corridor between Cedar Lake Rd and Van White Blvd which runs through the Bassett Creek Valley Development Area. The scenarios include reconstructing the channel and adjacent land into a multipurpose tiered cross section. The fundamental assumption of the design includes a low flow channel with a terrace that can be used for the proposed regional Luce Line trail up to a 10-year storm event (4.9-inches in 24-hr). For rainfalls greater than the 10-year, the terrace would act as floodplain, submerging the trail for less than 24 hours and being inaccessible to the public.

Figure 4-14 provided one example of a cross section design. However, as long as the volume provided in the cross section is maintained and connected to the floodplain, the proposed cross section can be manipulated to include braided channels, online or offline

basins, wetland restoration, trails on both sides and other amenities. The design should also include aspects of the Luce Line Regional Trail Master Plan and other activities to enhance the community and make the corridor a destination. Amenities that could be incorporated in the design could include activities that focus on the natural corridor such as loop trails, birding, landscape painting opportunities, and play areas that offer activities not currently included in nearby parks (natural wading pools, in-water play areas). Design could also include overlooks and piers that extend over Bassett Creek. These amenities would not only promote Bassett Creek as a destination but also provide ecological benefits and extend the concept of the green corridor within the region. See Appendix C for precedents of potential amenities. See Appendix C for precedent designs and amenities.

Water quality benefits were not explicitly modeled for scenarios within the corridor. However, the design could incorporate features that would promote water quality through channel enhancements and basins adjacent to the creek. Examples include oxbows, riffles, and settling basins at storm sewer outlets in channel. These scenarios would result in reconstructed banks which will reduce or control current erosion concerns.

All scenarios in the Bassett Creek corridor involve manipulation of the channel below the DNR regulated ordinary high-water level. Therefore, the DNR should be included in future discussion regarding design to ensure compliance with their regulations. The modeled cross section has a wider bottom than in existing conditions during normal flow but a final design could include a refined channel configuration to match existing conditions during normal flow and the 2-year storm event.

As shown in Table 4-3, the lowest flood elevation achieved for scenarios in the corridor is 809.9 feet. This is the same elevation achieved for projects within Bryn Mawr Meadows Park but has significantly more influence on reducing the flood extent within the Development Area which unlocks more developable land.

Scenarios in the corridor contain flood waters within the channel as shown in Figure 4-14 instead of the flooded area extending into the Development Area.

- 24.0 acres – existing area impacted by flood waters
- 15.8 acres – smallest extent of flood waters for projects in Bryn Mawr Meadows Park
- 10.0 acres – smallest extent of flood waters to achieve same HWL of 809.9 for projects within Bassett Creek corridor

In addition to reducing the flooded area in the Development Area, Scenarios 4-6 also remove Bryn Mawr Meadows Park from the floodplain which has a positive impact on field conditions and usable land.

The corridor scenarios do not require land acquisitions or swapping; however, acquiring land from properties adjacent to the creek would allow for more flexibility in the design. Properties which may be candidates for acquisition or swapping include Pioneer Paper and abandoned CP rail lines on the north side of Bassett Creek.

Flood mitigation is required prior to filling in the floodplain which means construction of flood mitigation projects in the corridor would be required prior to development of high valued areas at 2nd Ave and Van White Blvd area and west impound lot. Scenarios 4-6 provide needed flood storage for development to move forward in Bassett Creek Valley but also provide regional amenities to the community and enhance MPRB Master Plans and the City's 2040 Plans. Funding of these projects will need to be a combined effort between public and private sectors.

The estimated capital costs of scenarios within the corridor have significant cost range due to unknown levels of contamination within soil and groundwater in the area; see Table 6-2. CPED has on-going investigations to understand extent and levels of contamination south of Bassett Creek in the west impound lot which will greatly impact project costs.

Table 6-2. Corridor Scenarios estimated capital costs and unit cost in millions.

Scenario	Max Top of Bank Width (ft)	Mitigation Storage Volume (AF)	Flood Elevation (ft)	Estimated Capital Cost (\$M) ⁽¹⁾	Cost per Acre Flood Reduction (\$M/ac)
4	150	34	810.7	\$3.3 – 6.6 \$8.3 – 16.7	0.19- 0.39 0.49 - 0.98
5	235	48	810.3	\$3.7 – 7.3 \$10.3 – 20.5	0.24 - 0.48 0.68 - 1.3
6	280	62	809.9	\$3.9 – 7.9 \$11.9 – 23.8	0.28 - 0.56 0.85 - 1.7

¹ Lower range assumes no soil contamination, upper range assumes all soil contaminated within Development Area.

6.1.3 Combining Project Locations

Scenario 7 presents a combination of projects in Bryn Mawr Meadows Park and the Bassett Creek corridor. Including both locations for project consideration enhances the overall regional plan, has the potential to benefit additional entities and could therefore have a greater funding options.

Scenarios in Bryn Mawr Meadows Park are more likely to provide water quality benefits to both the Development area and areas currently untreated south and west of the park and provide water reuse options. However, these scenarios do not reduce the flood extent in the Development Area to any significant degree or provide additional ecological benefits.

Scenarios within the corridor provide significant flood reductions and enhance regional amenities but don't necessarily meet water quality requirements and will be required to overcome contamination issues.

Scenario 7 provided a single option to combine these projects. However, influences on the flood elevation could be re-evaluated if the storage volumes change to fit with other project designs such as Bryn Mawr Meadows Park redevelopment, BCWMC sponsored water quality basins.

Table 6-3. Combined Scenario estimated capital costs and unit cost in millions.

Scenario	Max Top of Bank Width (ft)	Mitigation Storage Volume (AF)	Flood Elevation (ft)	Estimated Capital Cost (\$M) ⁽¹⁾	Cost per Acre Flood Reduction (\$M/ac)
7	280	105	809.0	\$6.4 – 13.5 \$14.7 – 29.4	0.43 - 0.9 0.98 - 1.96

6.1.4 Development Area Water Quality Requirements

Volume management requirements for Bassett Creek Valley Development Area is 3.2 AF - calculations in Section 4.6. Assuming the infiltration will be underground, on pilings, and not factoring in soil contamination, the unit is estimated to be \$16-24/CF for a total cost of \$2.2M to \$3.3M. This cost is to meet water quality requirements, it does not include additional storage that may be required for floodplain compensatory storage. These values are generally below costs provided for the scenarios but provide a comparison of the funds needed to potentially meet only water quality requirements.

The Bryn Mawr Meadows Park Water Quality Feasibility Study (Barr, 2019) presented three scenarios that provided 1.5 AF to 5.4 AF of storage and removed 6 to 30 lbs TP/year. As noted in Water Quality Feasibility Study, providing additional storage was not feasible at the current study level due to significant cost and land usage. The proposed basins were not designed to provide volume management requirements for the reconstruction of Bryn Mawr Meadows Park; assuming 5 acres of new impervious which would require 0.5 AF of storage. Scenarios presented in this Floodplain Feasibility Study do not look to replace the proposed BCWMC water quality basins but to supplement them to provide additional treatment as noted in the Scenario Summary section.

It was assumed that in future land use would result in less watershed loading due to:

- Anticipated that future land use will include less impervious, naturally improving water quality
- Future land use will include improved site conditions such as stabilized banks and fewer degraded surfaces.
- Water quality monitoring at Irving Ave indicates water quality parameters all currently meet MPCA standards
- Can be included in Regional Surface Water Management Plan easier than flood mitigation measures due to smaller volume needed to meet regulatory requirements.

6.2 RECOMMENDATION AND NEXT STEPS

As noted in the Bassett Creek Valley Master Plan and carried through updated plans for the area, development should not be completed in a single step but a series of actions and smaller projects that follow a “road map” laid out in a comprehensive plan. Development in this area could potentially span decades. However, to meet regulatory requirements and ensure public safety, site constraints such as floodplain and contamination need to be dealt with prior to large scale redevelopment.

This study serves the purpose of understanding how to unlock additional land within Bassett Creek Development Area by narrowing down flood mitigation opportunities and understanding design constraints. The following steps are recommendations to continue advancing development within Bassett Creek Valley Development Area while providing opportunity for regional amenities.

Table 6-4. Next Steps

Next Step	Reason
Create mechanism for funding that possibly includes MPRB + CPED + Developers+ Hennepin County +Bonds + Others	Projects will need to be constructed prior to development instead of during.

Refine design for projects within Bryn Mawr Meadows Park, including reuse options and proposed water quality basins	Concept design to begin in 2020 for park design
Meet with MnDOT to discuss water quality treatment options	
Complete geotechnical investigation within Bryn Mawr Meadows Park for foundation design	
Review City Irving sanitary sewer line location for impacts to Scenario designs	
Meet with MnDNR	Understand potential limitations of working within Bassett Creek
Investigate contamination within Development area	Gain better understanding of level of cleanup need and impacts to cost estimate
Create a Regional Surface Water Management Plan for Bassett Creek Valley	Advance concept designs and allow developers a road map for construction opportunities
Update BCWMC Model for FEMA Twin Cities HUC8 Update (most recent BCWMC model) which is expected to be approved by MnDNR mid-2020.	BCWMC model has been updated since study has started and should be used moving forward. Need to model scenarios under smaller storm events.
Update City H&H model with scenarios	Determine impacts of projects on local level
Consider land acquisitions along Bassett Creek	Allows for more flexibility in design



David T. Anderson
470 US Bank Plaza
200 South Sixth Street
Minneapolis MN 55402

(612) 337-9274 telephone
(612) 337-9310 fax
danderson@kennedy-graven.com
<http://www.kennedy-graven.com>

MEMORANDUM

Date: November 11, 2019

To: BCWMC Commissioners

From: David T. Anderson

Re: Dominion Redevelopment/Four Seasons Mall CIP Project

I. Background and Dominion Proposal

In 2012, the Commission accepted and approved the feasibility report for the “Four Seasons Mall Project,” a capital improvement project designed in the area southwest of Highway 169 and Rockford Road (the former Four Seasons Mall area). The primary purpose of the water quality improvement project was to help meet the phosphorous reduction goals for Northwood Lake. The original project was designed in 2013, but due to residents’ concerns about tree removal and other components, the original plans were never implemented. In 2017, the project was nearly resurrected when a private developer, Rock Hill Management, proposed to implement similar water quality improvements in conjunction with the Agora redevelopment of the former Four Seasons Mall site. At the time, the Commission executed an agreement directly with Rock Hill Management to implement what were considered “above and beyond” water quality improvements through capital improvement fund reimbursement. Unfortunately, that redevelopment project also fell through and with it, so did the proposed water quality improvements.

Recently, Dominion Management Services, Inc. (“Dominium”) initiated yet another redevelopment proposal at the former Four Seasons Mall site. As part of said proposal, Dominion has indicated a willingness to construct water quality improvement elements that both exceed the Commission’s stormwater treatment requirements for the proposed redevelopment and provide at least the level of treatment that was expected to be realized by the original Four Seasons Mall Project.

Dominium’s redevelopment proposal is in the process of obtaining the required approvals from the City of Plymouth, and ultimately, if approved, Dominion will be required to enter

into a development agreement with Plymouth before it can construct the project. Because the proposed project can be designed to include water quality components that either meet or exceed the benefits that were originally expected from the 2017 Four Seasons Mall Project, the Commission is being asked to consider whether it wishes to contract directly with Dominion for the implementation of those “above and beyond” components, including Commission reimbursement to Dominion. If implemented, ongoing maintenance of the constructed improvements would ultimately be shared by both Dominion and the City of Plymouth, as the City intends to be responsible for all maintenance related to certain wetland restoration components.

II. Project Implementation; Contracting

Historically, the Commission has implemented capital improvement projects by entering into cooperative agreements with its member cities. Through those agreements, the respective member city is made responsible for contracting for the construction of a project, and the Commission commits to providing the member city with reimbursement up to the amount previously determined by the Commission in its authorizing resolution.

The Commission’s ability to contract with private entities for the implementation of capital projects recently came into question due to some convoluted language in the Commission’s Joint Powers Agreement (“JPA”). However, upon careful review of applicable state law and the provisions in the JPA, and despite the Commission’s standard practice of having its member cities construct capital improvement projects, there is authority for the Commission to contract directly with a private developer, such as Dominion, for the implementation of capital improvements. Generally, Minnesota Statutes, section 103B.251 contains language regarding the use of levy dollars for capital improvements and provides that “[a] watershed management organization which has adopted a watershed plan... may certify for payment by the county as provided in this section all or any part of the cost of a capital improvement contained in the capital improvement program of the plan.” Additionally, Article VI of the JPA provides authority for the Commission to “cooperate or contract with the State of Minnesota or any subdivision thereof or federal agency or private or public organization to accomplish the purposes for which it is organized,” and “make contracts, incur expenses and make expenditures necessary and incidental to the effectuation of these purposes and powers and may disburse therefor in the manner hereinafter provided.” The language is certainly broad enough to authorize a cooperative agreement for capital improvements with a private developer.

III. Commission Direction; Next Steps

Based on the foregoing, the Commission should consider whether it wishes to enter into a capital improvement construction agreement with Dominion to install those elements necessary to meet the certain water quality benefits that were originally identified in the Four Seasons Mall Project. The agreement would include all of the usual components provided in its typical cooperative agreements, including, for example, formal Commission review and approval of the construction plans, inspection of the improvements by

Commission engineers, and reimbursement by the Commission with levy dollars for actual costs, up to the amount expressly approved by the Commission.

Should the Commission desire to contract with Dominion for these improvements, next steps would be to prepare and approve formal agreements with not only Dominion for construction and reimbursement of the project in conjunction with its overall redevelopment, but also with the City of Plymouth to specify ongoing maintenance. For the sake of efficiency, it likely makes sense for the maintenance agreement between the Commission and the City to not only address the City's long-term obligations with respect to the wetland restoration, but also to require that the City incorporate various maintenance components into its development agreement with Dominion, including a requirement that Dominion record an operations and maintenance plan or declaration against the Dominion property.



Bassett Creek Watershed Management Commission

MEMO

To: BCWMC Commissioners
 From: Laura Jester, Administrator
 Date: November 11, 2019

RE: Status of Ordinance Updates in Member Cities

Included in the 2015 Bassett Creek Watershed Management Plan are requirements for cities to adopt certain ordinances and enforce buffer standards to protect and improve water resources. The status of ordinance adoption for each city is presented in Table 1 below. (The exact BCWMC Policy language can be found starting on page 2.)

Table 1. Status of adoption and enforcement of applicable ordinances/requirements for each member city.

City	Floodplain Ordinance	Shoreland Ordinance	Stream Buffer Requirements	Wetland Buffer Requirements	Wetland Protection Ordinance
Crystal	Drafted; working on codification	No ordinance required by DNR	Drafted; working on codification	Drafted; working on codification	Drafted; working on codification
Golden Valley	Adopted 2016	Last adopted 1986. Plans to update in 2020.	Currently enforced thru stormwater mgmt ordinance and permits, development agreements & conditions, drainage and utility easements, and conservation easements, where applicable	Currently enforced thru stormwater mgmt ordinance and permits, development agreements & conditions, drainage and utility easements, and conservation easements, where applicable	No Ordinance. However, completed 2015 citywide wetland assessment; require MnRAM or similar, and wetland buffers with all wetland applications and all projects impacting wetlands.
Medicine Lake	Adopted	Being drafted; first quarter 2020 expected adoption	Not applicable	Being drafted; first quarter 2020 expected adoption	Not covered in ordinance

City	Floodplain Ordinance	Shoreland Ordinance	Stream Buffer Requirements	Wetland Buffer Requirements	Wetland Protection Ordinance
Minneapolis	Last updated 11/2016. Not consistent w/ BCWMC requirements	Adopted May 2000	Not included in ordinance; maintenance of existing buffers addressed by shoreland ordinance	Equivalent ordinance adopted 10/2014	Not covered in ordinance
Minnetonka	Ordinance updated 3/2008; should be updated to reference BCWMC floodplain	Ordinance updated 11/2018	Not applicable	Draft Ordinance 2019-05	Not covered in ordinance
New Hope	Some pieces updated 2/2019; Others adopted as city code w/ Local Water Plan	Established 2012; Currently checking w/DNR for updates	Ordinance drafted; likely adoption 2/2020	Ordinance drafted; likely adoption 2/2020	Ordinance drafted; likely adoption 2/2020
Plymouth	Adopted 9/2019 but not consistent w/ BCWMC requirements	Adopted 9/2019	Adopted 9/2019	Adopted 9/2019	Adopted 9/2019 but not consistent with BCWMC requirements
Robbinsdale	Recently drafted; under city council review	Recently drafted; under city council review	Not Applicable	Recently drafted; under city council review	Recently drafted; under city council review
St. Louis Park	Adopted with Local Water Plan	Adopted with Local Water Plan	Enforced through development requirements	Enforced through development requirements	Adopted with Local Water Plan

Floodplain ordinance BCWMC Policy: Section 4.2.2, Policy 39: *The BCWMC requires member cities to maintain ordinances that are consistent with BCMWC floodplain standards. Member cities must submit ordinances to the BCWMC for review.*

Shoreland ordinance BCWMC Policy: Section 4.2.8, Policy 80: *The member cities are responsible for shoreland regulation and are required to adopt MDNR-approved shoreland ordinances, in accordance with the MDNR's priority phasing list.*

Stream buffer requirements

Applicable BCWMC Policy: Section 4.2.5, Policy 64: *Member cities shall maintain and enforce buffer requirements adjacent to priority streams for projects that will result in more than 200 yards of cut or fill, or more than 10,000 square feet of land disturbance. Buffer widths adjacent to priority streams must be at least 10 feet or 25 percent of the distance between the ordinary high water level and the nearest existing structure, whichever is less. Allowable land uses, and vegetative criteria for buffers are specified in the BCWMC's Requirements for Development and Redevelopment (BCWMC, 2015, as amended). Member cities may allow exemptions for public recreational facilities parallel to the shoreline (e.g. trails) up to 20 feet in width, with that width being added to the required buffer width.*

Wetland buffer requirements

Applicable BCWMC Policy: Section 4.2.6, Policy 68: *Member cities shall maintain and enforce buffer requirements for projects containing more than one acre of new or redeveloped impervious area. Average minimum buffer widths are required according to the MnRAM classification (or similar classification system): - An average of 75 feet and minimum of 50 feet from the edge of wetlands classified as Preserve. An average of 50 feet and minimum of 30 feet from the edge of wetlands classified as Manage 1. An average of 25 feet and minimum of 15 feet from the edge of wetlands classified as Manage 2 or 3. Allowable land uses and vegetative criteria for buffers are specified in the BCWMC's Requirements for Development and Redevelopment (BCWMC, 2015, as amended). Member cities may allow exemptions for public recreational facilities parallel to the shoreline (e.g. trails) up to 20 feet in width, with that width being added to the required buffer width.*

Wetland protection ordinance

Applicable BCWMC Policy: Section 4.2.6, Policy 66: *The BCWMC requires member cities to develop and implement wetland protection ordinances that consider the results of wetland functions and values assessments, and are based on comprehensive wetland management plans, if available. For wetlands classified as Preserve or Manage 1, member cities shall implement standards for bounce, inundation, and runoff control that are similar to BWSR guidance; member cities are encouraged to apply standards for other wetland classifications.*



Bassett Creek Watershed Management Commission

MEMO

Date: November 12, 2019
From: Laura Jester, Administrator
To: BCWMC Commissioners
RE: **Administrator's Report**

Aside from this month's agenda items, the Commission Engineers, city staff, committee members, and I continue to work on the following Commission projects and issues.

CIP Projects (more resources at <http://www.bassettcreekwmo.org/projects>.)

2019 Medicine Lake Road and Winnetka Avenue Area Long Term Flood Mitigation Plan Implementation Phase I: DeCola Ponds B & C Improvement Project (BC-2, BC-3 & BC-8) Golden Valley: A feasibility study for this project was completed in May 2018 after months of study, development of concepts and input from residents at two public open houses. At the May 2018 meeting, the Commission approved Concept 3 and set a maximum 2019 levy. Also in May 2018, the Minnesota Legislature passed the bonding bill and the MDNR has since committed \$2.3M for the project. The Hennepin County Board approved a maximum 2019 levy request at their meeting in July 2018. A BCWMC public hearing on this project was held on August 16, 2018 with no comments being received. Also at that meeting the Commission officially ordered the project and entered an agreement with the City of Golden Valley to design and construct the project. In September 2018, the City of Golden Valley approved the agreement with the BCWMC. The [Sun Post](#) ran an article on this project October 2018. Another public open house and presentation of 50% designs was held February 6, 2019. An EAW report was completed and available for public review and comment December 17 – January 16, 2019. At their meeting in February 2019, the Commission approved the 50% design plans. Another public open house was held April 10th and a public hearing on the water level drawdown was held April 16th. 90% Design Plans were approved at the April Commission meeting. It was determined a Phase 1 investigation of the site is not required. The City awarded a contract to Dahn Construction for the first phase of the project, which involves earthwork, utilities, and trail paving and extends through June 2020. Dewatering began late summer 2019 and is ongoing for the north ends of Ponds B & C. Last week tree removal began and continues through this week. Test trenching for further environmental investigations is happening this week in the area north of DeCola Pond B to help determine disposal requirements for this area once excavation begins. Once the tree removal is complete Dahn plans to start excavation on the SE side of the site (along Pond C) at the end of this week or next week, and then will work their way north. This will start the major earthwork efforts! The schedule provided by Dahn suggests this will likely be complete in January 2020 assuming everything goes as anticipated. Project website: <http://www.bassettcreekwmo.org/index.php?cID=433>.

2020 Bryn Mawr Meadows Water Quality Improvement Project (BC-5), Minneapolis (no change since Oct): A feasibility study by the Commission Engineer began last fall and included wetland delineations, soil borings, public open houses held in conjunction with MPRB's Bryn Mawr Meadows Park improvement project, and input from MPRB's staff and design consultants. At their meeting in April, the Commission approved a TAC and staff recommendation to move this project from implementation in 2019 to design in 2020 and construction in 2021 to better coincide with the MPRB's planning and implementation of significant improvements and redevelopment Bryn Mawr Meadows Park where the project will be located. The final feasibility study was approved at the January 2019 Commission meeting. Staff discussed the maintenance of Penn Pond with MnDOT and received written confirmation that pond maintenance will occur prior to the park's reconstruction project with coordination among the BCWMC, MPRB, and MnDOT. A public hearing for this project was held September 19, 2019. The project was officially ordered at that meeting. A Clean Water Fund grant application for this project was submitted September 9th. An agreement with the MPRB and the city of Minneapolis will be considered at a future meeting. Project website: <http://www.bassettcreekwmo.org/projects/all-projects/bryn-mawr-meadows-water-quality-improvement-project>

2020 Jevne Park Stormwater Improvement Project (ML-21) Medicine Lake (See Item 5B): At their meeting in July 2018, the Commission approved a proposal from the Commission Engineer to prepare a feasibility study for this project. The study got underway last fall and the city's project team met on multiple occasions with the Administrator and Commission Engineer.

The Administrator and Engineer also presented the draft feasibility study to the Medicine Lake City Council on February 4, 2019 and a public open house was held on February 28th. The feasibility study was approved at the April Commission meeting with intent to move forward with option 1. The city's project team is continuing to assess the project and understand its implications on city finances, infrastructure, and future management. The city received proposals from 3 engineering firms for project design and construction. At their meeting on August 5th, the Medicine Lake City Council voted to continue moving forward with the project and negotiating the terms of the agreement with BCWMC. Staff was directed to continue negotiations on the agreement and plan to order the project pending a public hearing at this meeting. Staff continues to correspond with the city's project team and city consultants regarding language in the agreement. The BCWMC held a public hearing on this project on September 19, 2019 and received comments from residents both in favor and opposed to the project. The project was officially ordered on September 19, 2019. On October 4, 2019, the Medicine Lake City Council took action not to move forward with the project. At their meeting on October 17th, the Commission moved to table discussion on the project. The project remains on the 2020 CIP list. Project webpage: <http://www.bassettcreekwmo.org/index.php?cID=467>.

2019 Westwood Lake Water Quality Improvement Project (WST-2) St. Louis Park (No change since August): At their meeting in September 2017, the Commission approved a proposal from the Commission Engineer to complete a feasibility study for this project. The project will be completed in conjunction with the Westwood Hills Nature Center reconstruction project. After months of study, several meetings with city consultants and nature center staff, and a public open house, the Commission approved Concept 3 (linear water feature) and set a maximum 2019 levy at their May meeting. 50% designs were approved at the July meeting and 90% design plans were approved at the August meeting. The Hennepin County Board approved a maximum 2019 levy request at their meeting in July. A BCWMC public hearing on this project was held on August 16th with no comments being received. At that meeting the Commission officially ordered the project and entered an agreement with the City of St. Louis Park to design and construct the project and directed the Education Committee to assist with development of a BCWMC educational sign for inside the nature center. The draft sign was presented at the October meeting and was finalized over the winter. Construction on the new building started this spring. The Sun Sailor printed [an article](#) on the project in October 2018. All educational signs were finalized and are currently in production. Some slight modifications to the project plans may be necessary to satisfy city inspectors. More information on that coming soon! Project website: <http://www.bassettcreekwmo.org/projects/all-projects/westwood-lake-water-quality-improvement-project> .

2018 Bassett Creek Park Pond Phase I Dredging Project: Winnetka Pond, Crystal (BCP-2): The final feasibility study for this project was approved at the May 2017 meeting and is available on the project page online at <http://www.bassettcreekwmo.org/index.php?cID=403>. At the September 2017 meeting, the Commission held a public hearing on the project and adopted a resolution officially ordering the project, certifying costs to Hennepin County, and entering an agreement with the City of Crystal for design and construction. Hennepin County approved the 2018 final levy request at their meeting in November 2017. The City of Crystal hired Barr Engineering to design the project. At their meeting in April, the Commission approved 50% design plans. A public open house on the project was held May 24th where four residents asked questions, provided comments, and expressed support. 90% design plans were approved at the June 2018 meeting. An Environmental Assessment Worksheet was recently approved and a construction company was awarded the contract. A pre-construction meeting was held December 14th and construction began in January. A large area of contamination was discovered during excavation in February 2019. At their meeting February 21, 2019 the Commission approved additional funding for this project in order to properly dispose of the contamination and continue building the project as designed. An amended agreement with the city of Crystal was approved at the March Commission meeting. Pond dredging and other storm sewer work was completed in early summer. The landscaping contractor completed a final herbicide treatment in preparation for seeding in late October and was set to perform dormant seeding in late October or early November.

2017 Plymouth Creek Restoration Project, Annapolis Lane to 2,500 feet Upstream (2017CR-P) (See Item 4D): All project documents including the feasibility study and 90% design plans are available online at <http://www.bassettcreekwmo.org/index.php?cID=284>. The BCWMC executed agreements with the BWSR for a \$400,000 Clean Water Fund grant and with Hennepin County for a \$50,000 Opportunity Grant and a subgrant agreement with the City was executed. Project design was completed by the city's contractor, Wenck Associates, with 60% and 90% design plans approved by the Commission at the April and August 2017 meetings, respectively. Plymouth City Council awarded a construction contract in early December 2017 and construction got underway on December 11, 2017. Streambank restoration work is complete in all three reaches. Vegetation is currently being established. Requests for reimbursement to the city were approved at the June and July BCWMC meetings. A Clean Water Fund

grant interim report was submitted in February. Some vegetation management and minor streambank repairs are happening this summer. A reimbursement request is presented at this meeting (Item 4D).

2017 Main Stem Bassett Creek Streambank Erosion Repair Project (2017CR-M): The feasibility study for this project was approved at the April Commission meeting and the final document is available on the project page at: <http://www.bassettcreekwmo.org/index.php?cid=281>. A Response Action Plan to address contaminated soils in the project area was completed by Barr Engineering with funding from Hennepin County and was reviewed and approved by the MPCA. The Commission was awarded an Environmental Response Fund grant from Hennepin County for \$150,300 and a grant agreement is in the process of being signed by the county. A subgrant agreement with the City will be developed. The City hired Barr Engineering to design and construct the project. Fifty-percent and 90% designs were approved at the August and October Commission meetings, respectively. In September 2017, design plans were presented by Commission and city staff to the Harrison Neighborhood Association's Glenwood Revitalization Team committee and through a public open house on the project. Bidding for construction is complete and a pre-construction meeting was recently held. Construction was to begin summer of 2018 but will be delayed until summer 2019 due to the unanticipated need for a field based cultural and historical survey of the project area required by the Army Corps of Engineers and the preference for Pioneer Paper (a significant landowner and access grantor) for a spring/summer construction window. The cultural and historical survey fieldwork is complete and a final report was sent to the State Historical Preservation Office (SHPO) in February. Sunram. The Hennepin County ERF grant agreement was amended to extend the term. Construction was scheduled to begin in September but will be pushed to late November. City staff updated the Commission on the latest developments with this project at the Sept 19 and Oct 17, 2019 meetings (see memos in those meeting packets). The section along Pioneer Paper will no longer be stabilized/restored due to lack of access and cooperation from Pioneer Paper.

2014 Schaper Pond Diversion Project, Golden Valley (SL-3): Repairs to the baffle structure were made in 2017 after anchor weights pulled away from the bottom of the pond and some vandalism occurred in 2016. The city continues to monitor the baffle and check the anchors, as needed. Vegetation around the pond was planted in 2016 and a final inspection of the vegetation was completed last fall. Once final vegetation has been completed, erosion control will be pulled and the contract will be closed. The Commission Engineer began the Schaper Pond Effectiveness Monitoring Project last summer and presented results and recommendations at the May 2018 meeting. Additional effectiveness monitoring is being performed this summer. At the July meeting the Commission Engineer reported that over 200 carp were discovered in the pond during a recent carp survey. At the September meeting the Commission approved the Engineer's recommendation to perform a more in-depth survey of carp including transmitters to learn where and when carp are moving through the system. A Federal 319 grant for management of carp in relation to Schaper Pond and Sweeney Lake was recently approved by the MPCA and the grant agreement may be available by the December Commission meeting. At the October 17th meeting, the Commission received the a report on the carp surveys and recommendations for carp removal and management. Project webpage: <http://www.bassettcreekwmo.org/index.php?cid=277>.

The grant-funded project (the [Sweeney Lake Water Quality Improvement Project, SL-8](#)) was added as a separate CIP project for 2020/2021 levy funding and was officially ordered after a public hearing on September 19, 2019.

2014 Twin Lake In-lake Alum Treatment, Golden Valley (TW-2): (No change since June 2018) At their March 2015 meeting, the Commission approved the project specifications and directed the city to finalize specifications and solicit bids for the project. The contract was awarded to HAB Aquatic Solutions. The alum treatment spanned two days: May 18- 19, 2015 with 15,070 gallons being applied. Water temperatures and water pH stayed within the desired ranges for the treatment. Early transparency data from before and after the treatment indicates a change in Secchi depth from 1.2 meters before the treatment to 4.8 meters on May 20th. There were no complaints or comments from residents during or since the treatment. Water monitoring continues to determine if and when a second alum treatment is necessary. Lake monitoring results from 2017 were presented at the June 2018 meeting. Commissioners agreed with staff recommendations to keep the CIP funding remaining for this project as a 2nd treatment may be needed in the future. Project webpage: <http://www.bassettcreekwmo.org/index.php?cid=278>.

2013 Four Seasons Area Water Quality Project/Agora Development (NL-2) (No change since August): At their meeting in December 2016, the Commission took action to contribute up to \$830,000 of Four Seasons CIP funds for stormwater management at the Agora development on the old Four Seasons Mall location. At their February 2017 meeting the Commission approved an agreement with Rock Hill Management (RHM) and an agreement with the City of Plymouth allowing the developer access to a city-owned parcel to construct a wetland restoration project and to ensure ongoing maintenance of the CIP project components. At the August 2017 meeting, the Commission approved the 90% design plans for the CIP portion of the project. At the April 2018 meeting, Commissioner Prom notified the Commission that RHM recently disbanded its efforts to purchase the property for redevelopment. In spring 2019, a new potential buyer/developer is preparing plans for redevelopment at the site. Alternate Commissioner Cesnik and I attended the neighborhood meeting and briefly discussed opportunities for funding above and beyond stormwater management features to improve water quality leaving the area and entering Northwood Lake. The Commission Engineer and I met with city staff and the redevelopment team to review potential “above and beyond” stormwater management techniques. The redevelopment team continues to work through Plymouth city permitting, etc. Project webpage: <http://www.bassettcreekwmo.org/index.php?cID=282>.

2020 Crane Lake Improvement Project (CL-3): This project will be constructed in conjunction with the reconstruction of Ridgedale Drive in the City of Minnetonka. At their meeting on March 21, 2019, the BCWMC approved the project's feasibility study and chose to implement Option 3 from the study. At their meeting on May 16, 2019, the BCWMC approved the 90% design plans for the project. Construction is expected in early 2020. A public hearing on this project was held on September 19, 2019. No persons commented on the project. The project was officially ordered and an agreement with the city of Minnetonka was approved at the same meeting. Project webpage: <http://www.bassettcreekwmo.org/index.php?cID=490>.

Other Work

CIP Project Work and Technical Assistance

- Set Technical Stakeholder meeting for Main Stem Lagoon Dredging Project
- Reviewed MTD updates to Requirements Document, suggested revisions, posted final revisions online and corresponded with TAC
- Requested and gathered information from member cities regarding status of ordinances
- Reviewed 2020 monitoring plans with Commission Engineer and MPCA staff
- Attended Bassett Creek Valley Study meeting; reviewed and commented on draft report

Administration and Education

- Attended meeting on chloride regulations in NMCWD and RPBCWD
- Attended WMWA meeting; reviewed meeting materials
- Reviewed chloride education press release
- Reviewed AIS prevention education cards, gathered feedback from county and lake groups, requested parcel data from county
- Prepared for and presented on Commission’s AIS work with NMCWD workshop
- Attended Metro MAWD meeting
- Participated on panel re: Metro watershed planning for BWSR Senior Management Team retreat
- Reported 2019 WOMP expenses to Met Council
- Met with Minneapolis staff re: watershed partnerships and opportunities
- Worked with Commission Engineer to revise 319 grant work plan and budget; submitted to MPCA
- Attended BWSR meeting re: watershed based funding