

December 26, 2013

MEMORANDUM (Draft Copy-For Discussion)

**TO: Mr. James Wisker
Minnehaha Creek Watershed District**

**FROM: Ms. Mary C. Bujold
Maxfield Research Inc.**

RE: Economic Impact of Centralizing Stormwater Management on the Cold Storage Site

Introduction and Assumptions

Introduction

This memorandum summarizes analysis of the potential economic impact of centralizing stormwater management on a portion of the Cold Storage parcel nearest Minnehaha Creek and thereby alleviating the need for other development parcels in the area to construct individual ponding areas for stormwater management.

Assumptions

- An initial analysis was completed by Maxfield Research Inc. which reviewed each of the parcels in the district and determined a timeframe for potential redevelopment. Parcels will redevelop according to the use and timeframes already identified in the earlier analysis
- Loads will remain consistent based on previous WINSLAMM estimates by type of use
- No significant environmental or other type of remediation is contemplated at this time for any of the redevelopment parcels; significant remediation or environmental contamination was outside of the scope of this analysis;
- Higher Densities are anticipated to result from redevelopment due to the substantial costs of removal of existing structures and the cost of new construction. No structures currently located on the parcels are anticipated to have significant renovation or rehabilitation potential.

- No new technologies have been factored into the analysis for future redevelopment sites.
- Current rules of MCWD are considered to be the guiding rules.

Watershed District

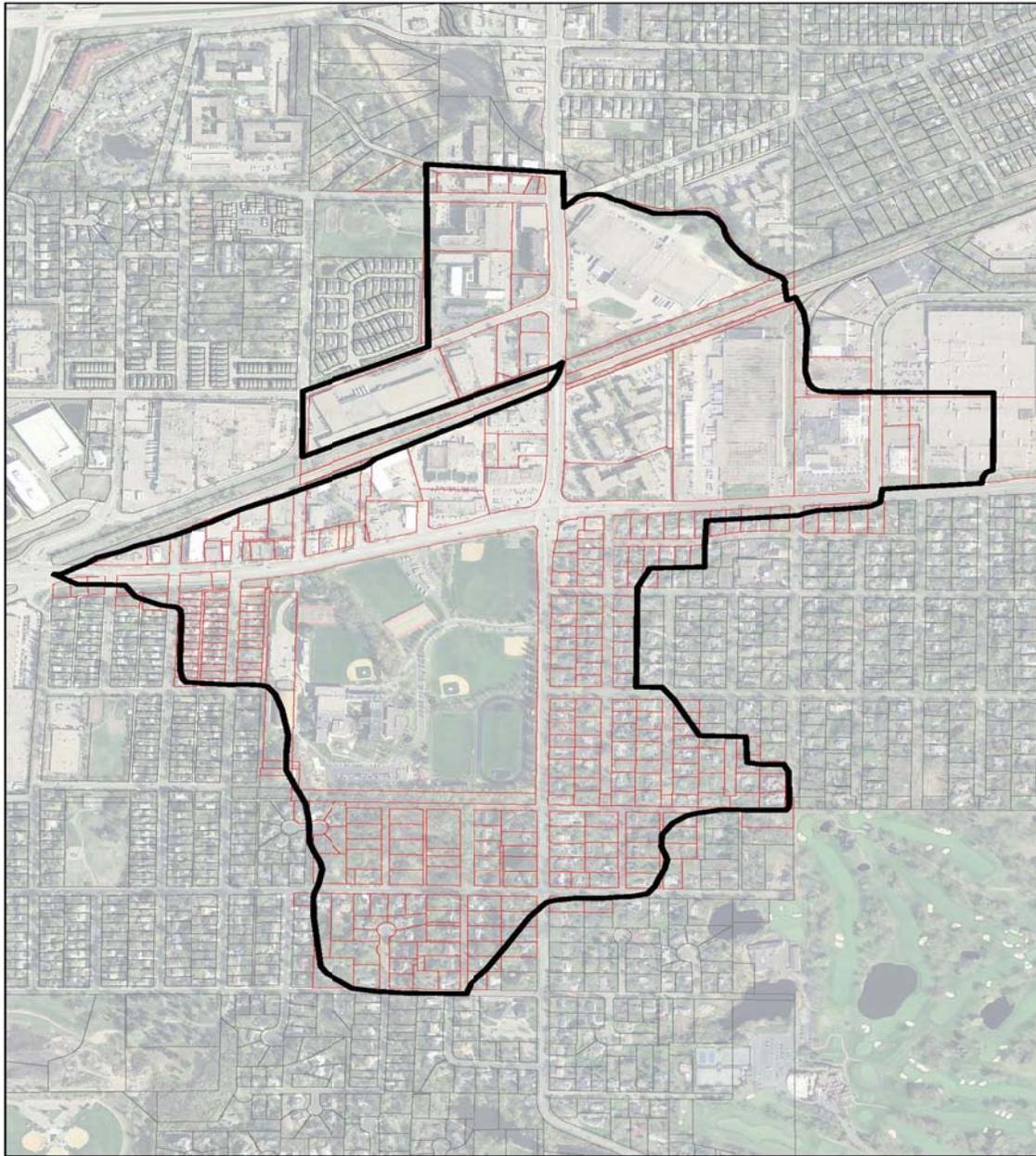
The following map shows the boundaries of the Watershed District used for this analysis. The District includes a diverse array of land uses from single-family residential to industrial uses.

Approach and Methodology

Maxfield Research Inc. considered the current use of each of the parcels in the Watershed Area and the parcels' guided uses as designated in the Comprehensive Guide Plan for each community. Although several parcels in the Blake Road Area are currently guided to remain as their current use, we consider the development of the Southwest LRT through this area will have a substantial impact on current land use and a number of parcels that are guided for industrial and/or commercial use are likely to transition to a higher densities and to either mixed-use or multifamily residential use. Although some industrial uses are contemplated to remain in the area for some time and there is a renewed interest in light industrial uses in urban and suburban areas, new industrial uses are most likely to locate outside of the Blake Road Station Area.

Therefore, we assume, based on development and market pressures resulting from the implementation of the Southwest LRT, that multifamily residential, commercial and office uses will increase in this area, particularly on parcels that are in closest proximity to the SWLRT Line.

The total amount of the land area under consideration in this analysis is about 246 acres including right-of-way. Excluding right-of-way, the acreage is reduced to 215 acres. The majority of this property is developed with a very limited amount of land that is currently vacant. A portion of the available vacant land was identified as highway or railroad right of way and is unlikely to be developed. Total right of way is 31.4 acres. This land is assumed to remain as right-of-way for the respective agencies and will not be redeveloped in the near-term. Air rights may be considered for sale by either MNDOT or the Railroad at some time in the future; however, the sale or lease of air rights was excluded from this analysis due to a high level of uncertainty regarding value and timing.



-  Watershed
-  Study Parcels
-  MCWD_Parcels



The remaining 215 acres are considered for potential development or redevelopment based on a timeframe that begins with 2013 and end with 2050. The SWLRT is anticipated to open in 2018, but delays in funding and other administrative processes could result in an opening closer to 2020. Redevelopment timeframes were grouped into the following segments:

2013 to 2020 (pre- and post SWLRT opening)
2020 to 2030 (post-SWLRT opening)
2030 to 2050

Some narrower redevelopment timeframes were also identified for specific parcels such as 2015 to 2018 and 2018 to 2023 because of these parcels' proximity to the SWLRT line and considering potential development pressures that would result from the physical construction of the line and land speculation.

An increase in development densities is assumed as properties would redevelop because of the high costs of removing existing structures, development regulations at the time of redevelopment and escalating land prices.

Land Area for Ponding

Land area designated for ponding was estimated at 3% of the total land area for each parcel according to Wenck Associates Inc. Parcels were grouped where appropriate to create parcel sizes that would provide sufficient land area for development that would provide a marketable product.

Based on a current estimated market value for the land, the total amount of land value that would be given over to ponding from the district is approximately \$3.6 million. This amount is reduced by the amount of ponding that would be required to redevelop low and medium density parcels, retain existing density or increase density only modestly. As such, we group the low and medium density parcels together in clusters and assume only 3% of the clustered area, not each individual parcel.

Accounting for residential clustering results in a reduction of \$400,000 from the total. Therefore, the remaining amount of land given over to ponding is given an estimated value of \$3.2 million in 2013 dollars.

Amount of Land Developable

The amount of land not dedicated to ponding could be given over to a variety of uses including open space, parking, and other amenities or it could be developed. We assume for the purpose of this analysis that this land would be utilized as its highest use which would be for development in order to maximize return on investment for the developer.

Depending on the use contemplated for the parcels in the Watershed District, building cost per square foot in today's dollars was estimated to range from \$140 per square foot for low-density residential use to \$300 per square foot for institutional buildings.

Using the projected building costs for various types of development, Maxfield Research Inc. calculated the potential amount of building value that could be generated from having the additional land available for development.

This amount was calculated at \$51.9 million dollars between 2013 and 2050 in today's dollars and not accounting for inflation.

Breaking out the amounts based on estimated time of redevelopment results in the following breakdown:

2013 to 2020 \$22.2 million
2020 to 2030 \$7.6 million
2030 to 2050 \$22.1 million

The higher amount for the first period reflects higher intensity development nearer the Station Area in the period between 2013 and 2020 including construction of the park and ride and potential mixed use development along with the redevelopment of several parcels adjacent to the Station Area.

The higher amount for the third period reflects significant redevelopment of currently low density parcels through cluster redevelopment or through tear down and redevelopment of existing single-family homes and intensification of development on the Blake School property.

Development Costs of Ponding Area

The following are estimates of the additional costs that would result from the development of additional ponding areas as a result of redevelopment. According to Wenck Associates Inc., the cost of development and design of the ponding areas is approximately \$30,000 per acre of impervious surface. The calculations of impervious surface were provided to Maxfield Research Inc. by Wenck Associates for the purpose of this analysis.

Maxfield Research estimated the development and design for ponding areas considering that the redevelopment areas would result in additional a shift in impervious surface ranging from 40% to 70%. Based on total impervious surface, the total additional costs associated with developing and designing ponding areas for redevelopment of parcels in the District is estimated at \$4.7 million over the redevelopment period between 2013 and 2050. This considers that all parcels located in the Watershed District would be redeveloped to a higher usage level during this period, excluding current right-of-way.

Operating Costs for Maintenance of Ponding

Wenck Associates Inc. estimates that annual operating costs for the care and maintenance of ponding areas would range between \$500 and \$1,500 depending on the use and size of the ponding area and parcel. Maxfield Research chose the mid-point of this range at \$1,000 to determine the annual costs that would be derived for maintenance of each ponding area.

Combining parcels into cluster segments and calculating the average annual operating cost for ponding maintenance results in total annual maintenance costs of between \$35,000 and \$40,000 for all of the parcels in the Watershed District combined. This cost would not however, be incurred all at the same time due to ongoing transition of parcels in the District.

Economic Impacts Over Time

Maxfield Research calculated the economic impacts of not centralizing stormwater management using the proposed redevelopment timeframes and incorporating an inflation rate for cost escalation for various components.

The economic impacts considered include:

- Revenues lost from potential future development on the property (buildings only)
- Revenues lost from potential future development on the property (land value only)
- Additional costs incurred from construction and design of ponding for redevelopment parcels
- Additional costs incurred from ongoing maintenance of existing ponding areas for the redevelopment parcels.

These impacts are less subjective and most easily quantified.

Inflation rates for cost escalation were considered for each of the impact segments.

For the three timeframes, the cost escalation is assumed from the middle of the time period. For example, for 2013 to 2020, the cost escalation is assumed from 2016. For 2020 to 2030, the cost escalation is assumed from 2025 and from 2030 to 2050, the cost escalation is assumed from 2040.

Cost escalation for land:	5%
Cost escalation for development:	3%
Cost escalation for ponding construction:	3%
Cost escalation for maintenance:	2%

All cost escalation figures exclude the area of the Cold Storage site that would be used for ponding. If this area were not to be used for ponding, we recommend the development of for-sale townhomes on the property at an estimated development cost in 2013 dollars of roughly \$6.5 million. Development of for-sale townhomes is recommended after the opening of the SWLRT.

Summary of Economic Impacts from Scattered Ponding Sites

Table 1 shows a breakdown of the costs associated with requiring individual ponding areas on redevelopment parcels in the District. These costs reflect the extra expense of constructing and maintaining the ponding areas in addition to the lost development value from not developing the property to a higher use.

Over time, the escalated cost of not centrally locating the stormwater management function for the District is estimated at just over \$100 million by 2050. This amount must be offset by the costs to construct and maintain the ponding on the Cold Storage site which is considered in Table 2. Ongoing maintenance costs are the smallest component in light of other costs incurred or revenues or value foregone as a result of the central location.

Costs of construction and maintenance of the ponding areas are allocated to the period in which those costs are incurred due to redevelopment. Revenues foregone from development and additional value from land areas that would not be developed are also taken into consideration according to the timeframes that were estimated.

TABLE 1			
ESTIMATED ECONOMIC IMPACTS OF NO CENTRALIZATION OF STORMWATER MANAGEMENT			
COLD STORAGE SITE - BLAKE ROAD STATION			
	Redevelopment Period		
	2013-2020	2020-2030	2030-2050
Cost of Land for Ponding			
Base Cost	\$413,201	\$451,890	\$1,730,385
Escalated Cost	\$502,248	\$1,251,718	\$6,636,536
Cost of Development			
Base Cost	\$14,754,405	\$7,018,259	\$22,123,265
Escalated Cost	\$16,606,213	\$30,453,448	\$84,733,862
Cost of Ponding Construction			
Base Cost	\$837,387	\$1,219,296	\$2,245,447
Escalated Cost	\$942,486	\$2,680,120	\$7,858,289
Cost of Annual Maintenance			
Base Cost	\$10,000	\$6,000	\$19,000
Escalated Cost	\$52,040	\$210,783	\$944,175
Totals			
Base Cost	\$16,014,993	\$8,695,445	\$26,118,097
Escalated Cost	\$18,102,987	\$34,596,069	\$100,172,862
All figures exclude the portion of the Cold Storage Site that would be used for the ponding.			
Sources: Maxfield Research Inc.; Minnehaha Creek Watershed District; Wenck Associates Inc.			

Table 2 shows a summary of the costs to develop and maintain the ponding area on the Cold Storage Site and the economic impact of developing a centralized ponding area on the Cold Storage Site or developing an individual ponding area on the Cold Storage Site that would serve only the Site.

Escalated costs for the CSS site represent only the costs to construct and maintain the ponding area on the CSS site as there are no additional costs that would be incurred in each of the successive periods because the Site would be fully-developed.

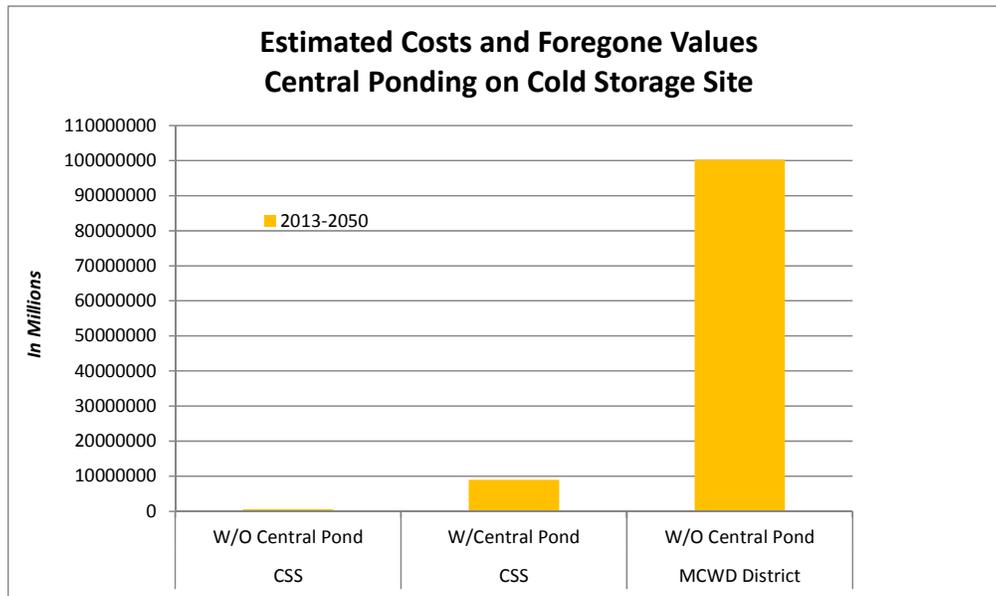
In terms of development costs, the foregone development costs to develop a centralized ponding system reflect the monies that would not be received from for-sale development on the property up to the time where the land and buildings would be sold to individual property owners.

As shown on Table 2, the costs incurred to centrally locate the stormwater management function on the Cold Storage Site would total an estimated \$8.9 million, factoring in lost value in land and buildings that would result from development on the 3.3 acres of property reserved for the ponding area. Subtracting the costs for a ponding area that would be required if there was no centralized stormwater management function totals \$607,929. Therefore, net loss in value and additional costs would total \$8.3 million.

TABLE 2 ESTIMATED ECONOMIC IMPACTS FOR THE COLD STORAGE SITE COLD STORAGE SITE - BLAKE ROAD STATION						
	Costs for CSS Pond			Costs for Central Pond		
	2013-2020	2020-2030	2030-2050	2013-2020	2020-2030	2030-2050
Cost of Land for Ponding						
Base Cost	\$96,049	\$0	\$0	\$537,872	\$0	\$0
Escalated Cost	\$116,748	\$190,170	\$556,297	\$653,787	\$756,840	\$0
Cost of Development						
Base Cost	\$0	\$0	\$0	\$6,528,030	\$0	\$0
Escalated Cost	\$0	\$0	\$0	\$7,347,355	\$8,028,653	\$0
Cost of Ponding Construction						
Base Cost	\$15,000	\$0	\$0	\$99,000	\$0	\$0
Escalated Cost	\$16,883	\$22,689	\$43,475	\$111,425	\$0	\$0
Cost of Annual Maintenance						
Base Cost	\$1,000	\$0	\$0	\$2,000	\$0	\$0
Escalated Cost	\$4,328	\$5,276	\$8,157	\$8,660	\$34,587	\$108,069
Totals						
Base Cost	\$112,049	\$0	\$0	\$7,166,902	\$0	\$0
Escalated Cost	\$137,959	\$218,135	\$607,929	\$8,121,227	\$8,820,080	\$108,069
Note: Costs shown include costs to develop the central ponding system and the costs for a smaller ponding area that would serve only the Cold Storage Site. Base cost for 2020 to 2030 is zero because land would have been developed for for-sale townhomes Escalated cost reflects additional cost of land out to development						
Sources: Maxfield Research Inc.; Minnehaha Creek Watershed District; Wenck Associates Inc.						

Summary – Net Economic Impacts of No Central Stormwater Management

By 2050, total costs and lost value would equal \$100 million. This set against the net costs to the MCWD of developing the central stormwater management function of \$8.2 million would result in a net benefit or gain of \$91.7 million over the total timespan considered for redevelopment between 2013 and 2050.



The benefits derived to the District reflect increased land and building values that would also directly impact future tax benefits to the City.

Other benefits may also be derived in terms of developers' willingness to undertake redevelopment efforts in the area when they know that there is a central stormwater management system and that they do not have to purchase additional land in order to comply with providing on-site ponding.

Therefore, it is our professional opinion that the benefits of removing this challenge and being able to increase densities further on sites that are well-suited to higher land utilizations far outweigh the total costs and lost value to MCWD to undertake this effort.