Honeywell Pond Expansion Project

BC-4

FINAL REPORT

June 11, 2018

I. Project Description and Outcomes

This project was completed in conjunction with Hennepin County's Douglas Drive Reconstruction Project. The project expanded Honeywell pond from a surface area of 1.5 acres to 2.4 acres which also increased the flood storage and dead storage of the pond.

A 48-inch low flow diversion pipe was installed from Douglas Drive to maximize the volume of water to Honeywell Pond from low flow events. A native buffer was also installed to provide habitat around much of the pond.

Honeywell Pond was also used as a source of irrigation for both the Sandburg athletic fields and an infiltration system that was installed along Douglas Drive. A pump system was installed along with a force main to allow the water to be pumped from the pond and run to the different sites. The pumps have automatic sensors that will not allow the pond to be pumped below a designated level.

The project's 90% design plans estimated that 61 lbs of total phosphorus per year will be removed by the pond after expansion, compared to 36 lbs/year prior to expansion. The irrigation and infiltration systems will remove an additional 15 lbs of total phosphorus per year.

II. Project Area

Honeywell Pond is located on the south side of Honeywell's property in Golden Valley, between St. Croix Avenue North and Hampshire Place, on the west side of Douglas Drive North. The outlet is located on the south side of the pond and discharges south along the Canadian Pacific Railroad into the Main Stem of Bassett Creek.

The indirect drainage area of Honeywell Pond receives runoff from a system of ponds northwest of Honeywell pond, including DeCola Ponds. This area is approximately 620 acres consisting of land in the cities of Golden Valley, Crystal, and New Hope.

The direct drainage is approximately 105 acres and consists of much of the runoff from the Honeywell property. The direct drainage area also consists of runoff from several of the homes on Duluth Street and much of the SEA School property at Duluth Street and Kelly Drive.

III. Project Documents, Timeline and Budget

Key Documents

- The Honeywell Pond Expansion Project was identified in the 2015 Bassett Creek Watershed Management Plan, Table 5-3 as project BC-4.

  http://www.bassettcreekwmo.org/application/files/6415/0367/7836/BCWMC_Section_5_Final_Revised_August_2017.pdf.

- The feasibility report for the project was completed in July 2015.

  http://www.bassettcreekwmo.org/application/files/7514/4693/5989/FeasibilityReportFinal-071415-HoneywellPondImprovProj-2016.pdf.

- A resolution ordering the project was approved on August 20, 2015.

  http://www.bassettcreekwmo.org/application/files/5214/4693/5990/Resolution-15-04-Ordering2016projects-HoneywellPondImprov2016-GV.pdf

- 50% design plans were approved (with Commission Engineer's comments in September) and 90% design plans were approved (with Commission Engineer's comments) in November 2015

  http://www.bassettcreekwmo.org/application/files/8814/5633/7265/Honeywell_Project_90_Percent_Design_Plans.pdf

Construction Timeline

Construction started onsite in October of 2016 to clear and grub site. During the winter of 2016-2017 the pond was excavated and expanded. Work continued in 2017 with the construction of the lift station and force main to Sandburg ball fields. Final stabilization and restoration will be completed in 2018.

Project Budget

The estimated cost for the project was $1,260,930 of which the BCWMC had $810,930 set aside for the funding of the project. Funding needed above the Commission's contribution is the responsibility of the city. Currently the project has incurred $938,596 in expenses. After out of pocket expenses by the Commission (design review, etc.) the reimbursement to the city totaled $785,623.

IV. Lessons Learned

One of the issues we faced with this project was the changes in plumbing code. As planning for the project began we started running into issues with the design and having our blowouts and irrigation all meet the new standards.

Because this project was completed with the Douglas Drive Reconstruction Project it faced challenges with the phasing of the pond work. The street project seemed to get the majority of the attention and we had a hard time getting crews back in a timely manner to work on completing the pond. As construction of the road work slowed in winter, these issues resolved themselves.

V. Maintenance

The contractor has a 3-year maintenance and warranty period for the construction of the project. That will begin in spring 2018 once the work has been completed. After the 3-year maintenance period the City will assume maintenance of the system.

VI. Photos


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