Background
Recent discussions with the City of Forest Lake along with past permitting activates have indicated the need for regional treatment to address areas that were developed prior to stormwater treatment requirements. The cities have expressed the desire to provide added flexibility for roads and redeveloping areas that have limited green space available for stormwater treatment. This spring MnDOT submitted plans for repair and or replacement of several culverts along the Highway 8 corridor. Some of these crossings are just downstream of portions of downtown Forest Lake.

Preliminary coordination and meetings were held to assess regional opportunities and at the same time determine if any of the infrastructures along Highway 8 should be modified to accommodate regional stormwater treatment or future projects. Also some initial data collection and review was completed. This initial effort would provide the needed background to guide future efforts.

MnDOT Coordination
Multiple meetings and communications with MnDOT occurred during the review of the Highway 8 Infrastructure Improvement Project. No modifications of infrastructure were identified as being needed at this time to accommodate regional treatment. In general, the infrastructure work was limited to cleaning, repair, and replacement in-kind of existing pipes and there was not any proposed work identified that would preclude future regional treatment. The background review of the infrastructure and modeling was useful and identified some inconsistencies in the MnDOT plans regarding flow direction and crossing elevations. These inconsistencies were addressed and corrected through the permitting process.

City of Wyoming Coordination
A meeting was held with the City of Wyoming to discuss potential opportunities for regional treatment. The City of Wyoming did not feel there was a strong need for regional treatment for their future road projects, but they were open to coordinating with the District if opportunities were identified. The conversations and post-meeting data exchange yielded some useful information regarding drainage in the City of Wyoming:

1. The City indicated that they have easements on several parcels on the lower portion of the Sunrise River before it enters into Comfort Lake. This information was shared with the District and will be useful if projects are undertaken to address streambank erosion through this stretch of the Sunrise River.
2. Construction plans that include the Heath Avenue pipe that discharges to Little Comfort Lake were provided to the District. These plans show the inlet structure and the
plan/profile of the pipe. The City indicated that this pipe was intended to replace an old drain tile pipe that previously provided an outlet for the same wetland areas to Little Comfort Lake. Review of historic aerial photos also indicated that there was an old pipe connection to Little Comfort Lake through private property.

Photo: Inlet Structure located along Heath Avenue
City of Forest Lake Coordination

A meeting was held with the City of Forest Lake to discuss potential opportunities for regional treatment. The City of Forest Lake was interested exploring regional treatment that could be utilized for future road projects. The City of Forest Lake brought some highlighted maps identifying a few areas that potentially could be utilized for regional treatment. A field visit was conducted to review the potential opportunities at these locations. Many of the locations were existing wetlands or ponds that had limited potential. A few sites were identified as having potential for future projects. A summary of sites visited and additional photos will be presented at the board meeting.

The site identified with the highest potential for regional treatment is the drainage that flow north from downtown into MnDOT ROW, then through a long City of Forest Lake parcel and then finally passing through property owned by CLFLWD. This is a large drainage area the flows directly to the Sunrise River. There appears to be significant opportunity for projects at multiple locations along this corridor. Collection of monitoring data and further assessment of this drainage area is highly recommended to determine the potential benefit.
Review of Available Data

The District's existing XP-SWMM model for this area was reviewed to determine the need for refinement in specific areas. It appears that further refinement of the model would be helpful in assessment of potential projects and their benefit. As-built drawings for the Highway 8 corridor and the I-35 improvements should be incorporated once available. Additional survey data of the City of Forest Lake stormwater pipe system is also needed for assessment of projects (such as the one discussed above) that appear to have the potential to treat a significant portion of the Forest Lake urban area. Once the model is refined it should be run with updated Atlas 14 storm events to determine the effects of these larger storm events on flows and water levels.

Recommendations

Phase – 1 was a data collection effort. This effort yielded some useful and interesting data. The following are some recommended next steps:

- Further explore potential regional treatment areas identified in this process
- Diagnostic study of the Sunrise River and assessment of other regional opportunities
- Future update of Hydrologic/Hydraulic Model for the Sunrise River Drainage Area