

SMIC minutes 6/25/26

Meeting with GZA engineers to review progress to date

Present: Jennifer Wallace/SMIC, Greg Day/SMIC, Jim Moore/SMIC, Bob Douglas/SMIC, Stephen Smith/SMIC, Rosalie Starvish/GZA, Cassandra Shore/GZA, Leslie DiCristofaro/GZA, Mark Rivers/LWAC, Kate Pfordresher/LWA, Catherine Hilton/LWAC & Bd. of Health

Meeting called to order: 7:05 pm

Quick recap

The meeting was the first presentation of GZA's Hydrologic and Hydraulic (H&H) study findings for the Lake Wyola stormwater mitigation project. GZA engineers Cassandra Shore, Leslie DiCristofaro and Rosalie Starvish presented their background research, drainage area delineations, peak flow calculations, and preliminary drainage basin prioritization for up to 10 locations where conceptual stormwater management designs would be developed. The team identified 5 high-priority and 5 medium-priority areas around the lake, with the committee adding Randall Road as a high-priority location based on field observations and sediment concerns. The group discussed the methodology used to determine priorities, which combined quantitative flow data with visual observations of erosion and development impacts. Participants raised questions about climate change adjustments to storm data, beaver dam impacts on Fisk Brook, and the availability of existing survey data that could enhance the study's accuracy. The presentation concluded with a discussion of next steps, including SMIC committee review of priority areas, including addition of outfall area #4—Randall Road [see maps and power point], as well as GZA's plans to develop conceptual designs for the priority areas and the potential for future collaboration with Nick Miller's geomorphic study findings.

Lake Wyola H&H Study Meeting

The meeting began with introductions from committee members and GZA engineers working on the H&H study for Lake Wyola. Shore presented the agenda, which included background research, drainage area delineations, peak flow calculations, and preliminary drainage basin prioritization.

Lake Wyola Stormwater Management Planning

GZA presented the first phase of a stormwater management project focused on prioritizing up to 10 locations for concept designs around Lake Wyola. The team conducted background research including reports from DCR, COG, and a wildlife habitat evaluation, and performed field visits starting in March to identify areas of concern. They calculated drainage areas around the lake using GIS and digital elevation data, and determined peak flows using HydroCAD software with publicly available data inputs including land cover, soil characteristics, and precipitation data.

Lake Sedimentation Project Prioritization

Further presentation of a prioritization analysis of 10 projects to address sedimentation in the lake, identifying 5 high-priority and 5 medium-priority watersheds based on peak flow,

watershed area, and field observations. The high-priority areas include three watersheds on the west side near Locks Pond Road and 66 Lake Drive, while medium-priority areas include Watson Straits and several properties on Shore Drive. The team discussed Randall Road as a potential priority area, with Rivers noting significant sediment contribution during the winter lake lowering and James mentioning recent culvert repairs due to road damage.

Drainage and Culvert Issues Discussion

The group discussed drainage issues and sediment problems, particularly focusing on Randall Road where a culvert was cleaned out but not replaced five years ago. Shannon explained that while the culvert is functioning better than before, there are concerns about water running directly from the road into the lake during heavy rain events. The team reviewed their priority classification system for addressing drainage areas, with high priorities based on field observations and medium priorities based on drainage area characteristics and development status. Starvish and Shore confirmed they used NOAA Atlas 14 precipitation data but noted they did not account for future climate change projections in their current analysis.

Research Material Sharing Discussion

The team discussed sharing research materials, including PowerPoint presentations, maps, and summary tables. Starvish confirmed they would share these materials. Rivers asked about the independence of conceptual BMP designs from property ownership, to which Starvish responded that at the concept level, property ownership details aren't needed as they use publicly available LIDAR data. DiCristofaro explained their focus on identifying areas where water can be slowed down to reduce sediment pickup, noting that the next phase will involve developing conceptual design recommendations for implementation. The discussion concluded with concerns about beaver dams potentially affecting sediment flow during microbursts, with Rivers raising questions about the impact of these dams on North Cove sediment levels.

Beaver Dam Sediment Control Study

Starvish discussed the role of beaver dams in sediment control and mentioned consulting with the fluvial geomorphologist, about potential studies on beaver dam sediment retention. Rivers inquired about a specific study regarding sediment from a microburst, and offered to share the study with the group. Starvish outlined the next steps in the study, which include identifying priority locations, developing concepts for controlling and slowing flow, and sketching out potential solutions for further discussion. The group agreed to review and confirm the priority spots before proceeding.

Water Flow Intervention Project Planning

The team discussed a project funded by grant money that requires completion by next June. They addressed how to approach water flow interventions in sub-basins, with Starvish and DiCristofaro explaining that while upslope versus downslope interventions weren't quantitatively weighted in the priority assessment, their methodology allows for intervention at multiple locations including upper watershed areas. Rivers inquired about whether the deliverable would be sufficient for securing next-level funding, and Starvish confirmed that a detailed design and permitting phase would be appropriate for seeking construction funding.

Design Funding and Phasing Strategy

Rivers expressed concern about funding for the final design rather than construction, noting that construction resources are available around the lake if a design were in place. Starvish explained that moving from conceptual to shovel-ready design requires more detailed grading information and surveys, though existing survey data from nearby properties could be useful as a reference. The discussion concluded with Wallace outlining a phased approach using GZA's work on priority areas, with plans to pursue grants to move from conceptual to construction designs.

Documents Discussed: GZA PowerPoint-*Lake Wyola Watershed H & H study progress report*, Lake Wyola Base Map, Lake Wyola Drainage Areas and Prioritization, Drainage Area Delineation Summary Table

MEETING ADJOURNED 8:07 pm