

Title:	Authorization to Purchase Replacement Equipment for the Real-Time Sensor Network		
Resolution number:	25-033		
Prepared by:	Name: Brian Beck Phone: 952-471-8306 bbeck@minnehahacreek.org		
Recommended action:	Authorize purchase of replacement equipment for real-time sensor network		
Budget considerations:	Fund name and code: Water Quality-Supplies/Equipment 500-5001-4570 Fund budget: \$85,000.00 Expenditures to date: \$6,229.46 Requested amount of funding: \$25,000		
Past Board action:	Res #: 20-007Approval to Purchase Real-time Sensor Network EquipmentRes #: 22-084Adoption of the Climate Action FrameworkRes #: 24-048Authorization to execute contract with Stantec for the Flood Action Plan		

Summary:

Background

Climate change is measurably altering the distribution, frequency, and intensity of rainfall in Minnesota. Between 2013 and 2019, the Minnehaha Creek Watershed District (MCWD) experienced its wettest seven-year period on record. Over the past decade, Minnesota has faced both unprecedented flooding and severe drought conditions statewide, resulting in ecological impacts, stressed stormwater infrastructure, and billions of dollars in property damage. To successfully adapt to these increasingly volatile weather extremes, MCWD and partner communities must develop a more refined understanding of how water moves through MCWD to improve Grays Bay Dam management, interagency flood communication, and identification of landscape interventions.

The first stage of MCWD's Climate Action Framework, known as the "Understand and Predict" phase, involves leveraging advanced datasets and modeling techniques to forecast climate scenarios, evaluate vulnerabilities, and inform adaptation strategies. As part of this phase, MCWD implemented a real-time sensor network designed to enhance dam management, emergency planning and communication, and calibration of its two-dimensional (2D) hydrologic model.

Between 2021 and 2024, MCWD staff installed critical monitoring infrastructure and deployed 23 real-time level and flow sensors across the watershed. This sensor network has significantly improved MCWD's capability to manage Gray's Bay Dam and communicate real-time water level information to partner agencies.

However, sensor equipment at two essential locations—Six Mile Creek and Long Lake Creek—are nearly five years old and approaching the end of their useful lifespan. Replacing the aging equipment at these sites in 2025 is critical, as recent sensor outages have disrupted reliable data collection. Timely replacement will ensure accurate flow estimates into Lake Minnetonka, thereby maintaining MCWD's ability to manage Gray's Bay Dam with a data driven approach.

Recommendation

Staff are requesting approval of resolution 25-033 authorizing the purchase of replacement equipment for the real-time sensor network in an amount not to exceed \$25,000

Supporting documents (list attachments):

Tech Sales Quote



MINNEHAHA CREEK WATERSHED DISTRICT QUALITY OF WATER, QUALITY OF LIFE

RESOLUTION

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WHEREAS,	climate change is measurably changing the distribution, frequency and intensity of rainfall in Minnesota;
WHEREAS,	during high water periods, the District has assumed a role to collect data and communicate information for and among its partner agencies and the public;
WHEREAS,	watershed managers, in partnership with local communities, must accelerate efforts to monitor, evaluate and adapt to these changes;
WHEREAS,	the Minnehaha Creek Watershed District, in partnership with Hennepin County and the U.S. Geological Survey, has developed a real-time remote sensing network (RESNET) to monitor precipitation and watershed response in high resolution;
WHEREAS,	the District, with input from its partners, identified locations at which to obtain water-level data, and selected the suite of necessary equipment to provide real-time data;
WHEREAS,	the District deployed sensors at 23 locations between 2021 and 2024 that have been utilized to support Grays Bay Dam management and high water level communication with partners;
WHEREAS,	staff is recommending replacing the two aging velocity sensor units the outlet of Long Lake Creek Subwatershed and Six Mile Creek Subwatershed to avoid equipment malfunction;
WHEREAS,	staff is recommending the purchase of reserve and replacement monitoring equipment from Tech Sales, Inc.;
NOW, THEREFC the District Adn \$25,000.	ORE, BE IT RESOLVED that the Minnehaha Creek Watershed District Board of Managers authorize ninistrator to purchase reserve and replacement equipment from Tech Sales in a total not to exceed

Resolution Number 25-033 was moved by Manager_____, seconded by Manager_____. Motion to adopt the resolution___ayes,___nays,___abstentions. Date: 5/22/2025

_____Date:_____Secretary

QUOTATION

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Quotation For:

Minnehaha Creek Watershed 15320 Minnetonka Blvd	Quotation#: Revision#:	2250626				
Minnetonka MN 55345 Ph: (952) 471-8306 Fx: (952) 471-0682	Date:	05/19/25				
Attn: Brian Beck E-Mail: bbeck@minnehahacreek.org Ref: SonTek SL1500 ADCP's						
Please Address Order To:	FOB: Shipment: Salosman:	Factory 3-6 Weeks ARO				
TECH SALES CO. 311 W. 44TH STREET MINNEAPOLIS MN 55409	Validity: Terms:	30 Days NET 30 DAYS				

Item	Qty	Part#/Description	Unit Price	Total Price
1	2	SL1500-3G SonTek-SL 1500-kHz 2-D side-looking real time acoustic Doppler current meter/flowmeter. Features advanced data processing including the SmartPulseHD feature, integrated velocity measurement cell plus current profiling, vertical acoustic beam and pressure sensor (20m range, 0.25% accuracy) for water level, internal flow calculations for both instantaneous discharge as well as total volume, temperature sensor, tilt sensor, RS232, SDI-12, Modbus interfaces and 4 GB recorder in a low profile urethane pressure case.	11,625.00	23,250.00
2	2	36-0040-040 40-m power and RS232/SDI-12/Modbus communications cable, compatible with the SonTek-IQ Flow Display, 5-pin male dry-pluggable to terminal block	868.00	1,736.00
			Quote Total:	24,986.00

Prices shown do not include freight or sales tax. MasterCard/Visa payments are accepted but may be subject to a 4% surcharge. Please review this quotation and let us know if you have any questions.

By:

Travis DeGroot