

SUBJECT

BOARD RESOLUTION NO. 26-641

Pertaining to Amendment of Scope of Work for Hydraulic Modeling Services with Black & Veatch.

2026 STRATEGIC PLAN GOALS: Infrastructure Strategy and Performance

See attached

RECOMMENDATION

Approval

BACKGROUND

On May 14, 2024, the Board of Water Commissioners approved Master Contract No. 4743 with Black & Veatch to provide professional engineering services in the discipline of Utility System Services and Planning, including hydraulic modeling services.

Subsequently, on August 20, 2024, the Board approved a Scope of Work under Master Contract No. 4743 authorizing Black & Veatch to provide hydraulic modeling services for Saint Paul Regional Water Services (SPRWS). That original scope included hydraulic assessment of the Cottage Avenue Standpipe, system-wide pumping operations review, calibration of the Low Service pressure zone, development of a hydraulic modeling software roadmap, and limited on-call hydraulic modeling support.

In the Fall of 2025, SPRWS received the final deliverables from Black & Veatch for the Cottage. These deliverables completed the primary analytical components of the original scope of work approved by the Board.

PURPOSE OF ADDITIONAL HYDRAULIC MODELING SERVICES

SPRWS continues to advance its hydraulic modeling capabilities to support asset management, capital improvement planning, operational optimization, and system resiliency. Building on the completed analyses delivered under the previous efforts, additional hydraulic modeling services are required in 2026.

The purpose of the 2026 hydraulic modeling efforts is to support:

- Calibration and validation of the High Service pressure zone
- Evaluation of transmission pipeline hydraulic constraints serving the Hillcrest and High Service reservoirs
- Identification and prioritization of Capital Improvement Program (CIP) projects
- Evaluation of system grid improvements to enhance redundancy and resiliency
- Expanded on-call hydraulic modeling support
- Enhanced project coordination through structured progress meetings

These efforts represent a logical next phase of hydraulic modeling support and will continue to be provided under Master Contract No. 4743.

SCOPE OF WORK

1. High Service Pressure Zone Calibration and Validation
 - Development of a field testing plan (up to 20 hydrant pairs/sets)
 - Calibration of C-Factors using SPRWS-collected field data
 - Delivery of updated C-Factor tables, model files, and updated model scripts
2. Hillcrest / High Service Reservoirs CIP Analysis
 - Establishment of base year and future year hydraulic model scenarios

- Evaluation of large-diameter transmission mains (≥ 16 inches)
- Identification of system deficiencies affecting Hillcrest and adjacent reservoirs
- Development of CIP-level solutions and high-level cost estimates
- Preparation of a technical memorandum summarizing findings

3. Grid Improvement Analysis

- Hydraulic analysis of up to ten grid improvement locations
- Evaluation under base year and future year scenarios
- Documentation of system performance improvements and resiliency benefits
- Project Administration Enhancements
- Monthly progress meetings between SPRWS staff and Black & Veatch

4. On-Call Hydraulic Modeling Support

- 40 hours of on-call hydraulic modeling support

The scope of work, including detailed tasks, assumptions, deliverables, and schedules, is attached and dated November 25, 2025. The total cost not to exceed for this scope of work is \$50,000.

COST AND FUNDING

Services under this amended scope of work will be billed on an hourly basis in accordance with the rates established in Master Contract No. 4743.

Funding for these services is available within the approved SPRWS operating budget.