Stormwater subsurface gravel wetland hydraulics, phosphorus retention, and chloride dynamics in cold climates

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SUPPLEMENTARY MATERIALS
Figure S1. Fairview Drive SGW over time. Year 1 photos are on the top, and Year 2, 2021, on the bottom.

Figure S2. Kennedy Drive SGW over time. Year 1 photos are on the top, and Year 2, 2021, on the bottom.
Table S1. Rainfall and flow volumes for the storm events monitored in this study.

<table>
<thead>
<tr>
<th>Site</th>
<th>Date</th>
<th>Rainfall (cm)</th>
<th>Inlet volume (m³)</th>
<th>Outlet volume (m³)</th>
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<tr>
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<td>Measured</td>
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<tr>
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<td>2.59</td>
<td>521.2</td>
<td>509.4</td>
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</table>
Seed Mixes used at Both Field Sites:

**Wet Meadow & Detention Basin Mix:**
- *Elymus virginicus* (Virginia wildrye)
- *Panicum virgatum* (Switchgrass)
- *Festuca rubra* (Creeping red fescue)
- *Carex vulpinoidea* (Fox sedge)
- *Verbena hastata* (Blue vervain)
- *Scirpus cyperinus* (Woolgrass)
- *Onoclea sensibilis* (Sensitive fern)
- *Bidens cernua* (Nodding bur marigold)
- *Eutrochium maculatum* (Joe-pye weed)
- *Juncus effusus* (Soft rush)
- *Symphyotrichum nova-angliae* (New England aster)

**Swamp, Bog, and Marsh Mix:**
- *Sparganium eurycarpum* (Broadfruited bur-reed)
- *Pontederia cordata* (Pickerelweed)
- *Verbena hastata* (Blue vervain)
- *Schoenoplectus tabernaemontani* (Softstem bulrush)
- *Alisma subcordatum* (Northern water plantain)
- *Eutrochium maculatum* (Joe-pye weed)
- *Scirpus atrovirens* (Green bulrush)
- *Asclepias incarnata* (Swamp milkweed)
- *Carex lurida* (Shallow sedge)
- *Iris versicolor* (Blueflag iris)
- *Acorus americanus* (Sweetflag)
- *Carix vulpinoidea* (Fox sedge)
- *Eupatorium perfoliatum* (Boneset)
- *Sagittaria latifolia* (Broadleaf arrowhead)

Next 32 Pages: Hydrographs from storms monitored during the field study
Storm 1
Fairview Drive Wetland

Total Rainfall: 0.66 cm
Peak Inflow Rate: 0.00575 m³/s
Peak Outflow Rate: 0.00 m³/s
Storm 6
Fairview Drive Wetland

Total Rainfall: 7.06 cm

Peak Inflow Rate: 0.084 m³/s

Peak Outflow Rate: 0.111 m³/s
Storm 11
Fairview Drive Wetland

Total Rainfall: 4.75 cm

Peak Inflow Rate: 0.073 m³/s

Peak Outflow Rate: 0.046 m³/s
Storm 12
Fairview Drive Wetland

Total Rainfall: 1.35 cm

Peak Inflow Rate: 0.083 m³/s

Peak Outflow Rate: 0.027 m³/s

Oct 7 Wed 2020

10/7/2020 1:20:00 PM - 10/8/2020 6:05:00 AM
Storm 13
Fairview Drive Wetland

Total Rainfall: 0.56 cm

Peak Inflow Rate: 0.013 m³s

Peak Outflow Rate: 0.00041 m³s
Storm 15
Fairview Drive Wetland

Total Rainfall: 1.19 cm

Peak Inflow Rate: 0.032 m³/s

Peak Outflow Rate: 0.025 m³/s
Storm 4
Fairview Drive Wetland

Total Rainfall: 4.90 cm
Peak Inflow Rate: 0.0202 m³/s
Peak Outflow Rate: 0.0091 m³/s

Jul 2021

7/17/2021 9:42:00 PM - 7/18/2021 6:43:00 PM
Storm 6
Fairview Drive Wetland

Total Rainfall: 0.46 cm

Peak Inflow Rate: 0.011 m³s

Peak Outflow Rate: 0.000 m³s
Storm 7
Fairview Drive Wetland

Total Rainfall: 2.54 cm

Peak Inflow Rate: 0.025 m³s

Peak Outflow Rate: 0.010 m³s
Storm 8
Fairview Drive Wetland

Total Rainfall: 2.06 cm

Peak Inflow Rate: 0.013 m³s

Peak Outflow Rate: 0.006 m³s

Aug 19 Thu 2021
Storm 11
Fairview Drive Wetland

Total Rainfall: 2.24 cm
Peak Inflow Rate: 0.0196 m³s
Peak Outflow Rate: 0.0182 m³s

Oct 26 Tue 2021
10/26/2021 6:00:00 AM - 10/27/2021 6:00:00 AM
Storm 2
Kennedy Drive Wetland

Total Rainfall: 0.71 cm
Peak Inflow Rate: 0.00485 m^3/s
Peak Outflow Rate: 0.00169 m^3/s
Storm 3
Kennedy Drive Wetland

Total Rainfall: 0.79 cm

Peak Inflow Rate: 0.015 m³/s

Peak Outflow Rate: 0.003 m³/s
Storm 4
Kennedy Drive Wetland

Total Rainfall: 0.51 cm

Peak Inflow Rate: 0.0155 m³/s

Peak Outflow Rate: 0.003 m³/s
Storm 5
Kennedy Drive Wetland

Total Rainfall: 0.81 cm

Peak Inflow Rate: 0.0096 m3/s

Peak Outflow Rate: 0.0016 m3/s
Storm 6
Kennedy Drive Wetland

Total Rainfall: 6.20 cm
Peak Inflow Rate: 0.032 m³/s
Peak Outflow Rate: 0.126 m³/s
Storm 8
Kennedy Drive Wetland

Total Rainfall: 0.81 cm

Peak Inflow Rate: 0.0495 m³s

Peak Outflow Rate: 0.0027 m³s
Storm 9
Kennedy Drive Wetland

Total Rainfall: 1.52 cm
Peak Inflow Rate: 0.094 m³s
Peak Outflow Rate: 0.004 m³s
Storm 10
Kennedy Drive Wetland

Total Rainfall: 0.53 cm

Peak Inflow Rate: 0.016 m³/s

Peak Outflow Rate: 0.003 m³/s
Storm 11
Kennedy Drive Wetland

Total Rainfall: 5.49 cm

Peak Inflow Rate: 0.155 m³/s
Peak Outflow Rate: 0.027 m³/s
Storm 12
Kennedy Drive Wetland

Total Rainfall: 0.74 cm

Peak Inflow Rate: 0.133 m³/s

Peak Outflow Rate: 0.004 m³/s
Storm 14
Kennedy Drive Wetland

Total Rainfall: 2.18 cm
Peak Inflow Rate: 0.024 m³s
Peak Outflow Rate: 0.004 m³s
Storm 15
Kennedy Drive Wetland

Total Rainfall: 1.19 cm
Peak Inflow Rate: 0.0224 m³s
Peak Outflow Rate: 0.002 m³s
Storm 3
Kennedy Drive Wetland

Total Rainfall: 1.25 cm

Peak Inflow Rate: 0.055 m³/s

Peak Outflow Rate: 0.002 m³/s
Storm 4
Kennedy Drive Wetland

Total Rainfall: 5.69 cm

Peak Inflow Rate: 0.072 m³/s

Peak Outflow Rate: 0.015 m³/s
Storm 5
Kennedy Drive Wetland

Total Rainfall: 2.46 cm

Peak Inflow Rate: 0.60 m³s

Peak Outflow Rate: 0.012 m³s
Storm 6
Kennedy Drive Wetland

Total Rainfall: 1.91 cm

Peak Inflow Rate: 0.13 m³s

Peak Outflow Rate: 0.008 m³s
Total Rainfall: 1.80 cm

Peak Inflow Rate: 0.044 m³s

Peak Outflow Rate: 0.0085 m³s
Storm 8
Kennedy Drive Wetland

Total Rainfall: 3.07 cm
Peak Inflow Rate: 0.033 m³/s
Peak Outflow Rate: 0.0078 m³/s
Storm 9
Kennedy Drive Wetland

Total Rainfall: 3.23 cm
Peak Inflow Rate: 0.36 m³/s
Peak Outflow Rate: 0.03 m³/s
Storm 10
Kennedy Drive Wetland

Total Rainfall: 2.59 cm

Peak Inflow Rate: 0.028 m³s
Peak Outflow Rate: 0.017 m³s