THE WINOOSKI
WATER QUALITY ASSESSMENT

VERMONT
**Stressed Stream**

Elevated *E. coli*

**Dog River**

**Most Recent Bio Assessment**
- Exc
- Exc-Vgood
- Vgood
- Good-Vgood
- Good
- Fair-good
- Fair
- Fair-Poor
- Poor
- Unable to Assess

**Other Sub Watersheds of the Winooski**

**MAP ID**

**Stressed Stream**

**Problem**

**Pollutant**

**Use Impairment**

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>Stressed Stream</th>
<th>RO Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dog River</td>
<td>Elevated <em>E. coli</em> Sources</td>
<td>E. Coli</td>
<td>Contact Recreation</td>
</tr>
</tbody>
</table>
**Huntinton River**

**Other Sub Watersheds of the Winooski Priority D List**

**MAP**

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>Stressed Stream</th>
<th>Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Huntington River</td>
<td>E. coli</td>
<td>E. coli</td>
<td>Contact Recreation</td>
</tr>
</tbody>
</table>

**Most Recent Bio Assessment**

- Unable to Assess
- Good
- Fair-Poor
- Poor
- Fair
- Good-Vgood
- Vgood
- Exc-Vgood
- Exc

**E. coli (TMDL)**

**Percent of Watershed**

- Developed
- Forest
- Planted/Cultivated Wetlands

**Road Density (mi/5mi²)**

- 0
- 1
- 2
- 3
- 4
- 5
- 6

**% of Sites Passing WQ Standards**

- 50
- 70
- 90
- 100

**Sub Watersheds**

- BUGS FISH
1. Jail Branch, Barre City
   - Problem: Elevated E. coli sources unknown
   - Pollutant: E. Coli
   - Use Impairment: Contact Recreation

2. Jail Branch, Washington/Orange
   - Problem: Land development, erosion, sedimentation, urban runoff
   - Pollutant: Sediment Nutrients, E. Coli
   - Use Impairment: Aquatic Life Support

Map showing stressed streams with elevated E. coli. Most recent bioassessment for Site 1 is unable to assess.
Kingsbury Branch North Montpelier Pond to Mouth
Warm Water Discharge from Pond
Elevated Temp.

MAP ID: 1

Stressed Stream
Problem: Warm Water Discharge from Pond
Pollutant: Elevated Temp.
Use Impairment: 2CR

Most Recent Bio Assessment: Unable to Assess

Stressed Stream
Kingsbury Branch
Other Sub Watersheds of the Winooski

Percent of Watershed

Road Density (mi / mi²)

% of Sites Passing WQ Standards

Developed Forest Planted/Cultivated Wetlands

Sub Watersheds

BUGS FISH

KINGSBURY BRANCH WINOOSKI RIVER

Most Recent Bio Assessment

Exe
Exc-Vgood
Vgood
Good
Fair-good
Fair
Fair-Poor
Poor
Unable to Assess

VT08-14
Kingsbury Branch
Other Sub Watersheds of the Winooski

MAP
ID
Listing
Problem
Pollutant
Use Impairment

1
Gold Brook
Land Development, Past Recreational Gold Mining
Sediment, Physical alterations
ALS, 2CR, AES

2
Little River to Waterbury Reservoir
Channel Instability, Channel Manipulation, Development
Urban runoff, Sediment
ALS, 2CR, AES

3
Waterbury Reservoir
Abundant Najas Minor, Level Fluctuation
Exotic Species, Flower Alteration
All Uses

4
Lower Little River
Artificial Flower Regime
Flower Alteration
All Uses

Most Recent Bio Assessment
- Exc
- Exc-Vgood
- Vgood
- Good-Vgood
- Good
- Fair-good
- Fair
- Fair-Poor
- Poor
- Unable to Assess

Percent of Watershed
- Developed
- Forest
- Planted/Cultivated Wetlands

Stressed Stream
Priority F List
Flow Alteration

LOWER LITTLE RIVER

Waterbury Reservoir

100

3

1

2

3

4

Sub Watersheds

% of Sites Passing WQ Standards
- BUGS
- FISH

Road Density (mi/mi^2)
- 0
- 2
- 4
- 6

Underhill
Worcester
Duxbury
Moretown
Huntington

VT08-11

This page contains a map of the Winooski River basin showing the locations of stressed streams and priority listing sites. The map highlights specific water bodies and issues such as land development, past recreational gold mining, sediment, and channel alterations. Various sites are marked with different colors representing different types of stressors and impairments. The data includes recent bioassessment results and listing problem information for each site.
Lower Mad River

Other Sub Watersheds of the Winooski

MAP ID | Listing | Problem | Pollutant | Use Impairment
--- | --- | --- | --- | ---
1 | Mad River, Mouth to Moretown | Possible Failing Septic | E. Coli | Contact Recreation

Priority

Stressed

Most Recent Bio Assessment

Exc
Exc-Vgood
Vgood
Good-Vgood
Good
Fair-good
Fair
Fair-Poor
Poor
Unable to Assess
<table>
<thead>
<tr>
<th>MAP ID</th>
<th>Stream</th>
<th>Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hancock Brook</td>
<td>Low pH</td>
<td>Acid</td>
<td>Aquatic Life Support</td>
</tr>
<tr>
<td>2</td>
<td>Minister Brook</td>
<td>Low pH, Gravel Road runoff</td>
<td>Acid</td>
<td>Aquatic Life Support</td>
</tr>
<tr>
<td>3</td>
<td>Lower North Branch</td>
<td>Combined Sewer Overflow</td>
<td>E. coli</td>
<td>Contact Recreation</td>
</tr>
</tbody>
</table>

**Stressed**

**Impaired**

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[Map of Winooski River and North Branch showing affected areas and data points.]

[Graphs showing data on road density, percent of watershed, sites passing WQ standards, and sub-watersheds for the Winooski River and North Branch.]
<table>
<thead>
<tr>
<th>MAP ID</th>
<th>Stream</th>
<th>Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Goose Pond Brook</td>
<td>Aquatic Biota Stressed</td>
<td>Acidity</td>
<td>ALS</td>
</tr>
<tr>
<td>2</td>
<td>Lower Winooski River</td>
<td>Locally Abundant Eurasian Water Milfoil</td>
<td>Exotics</td>
<td>AES, ALS, CR</td>
</tr>
<tr>
<td>3</td>
<td>Joiner Brook</td>
<td>Water removal by Bolton Valley Snowmaking</td>
<td>Flow Alteration</td>
<td>ALS</td>
</tr>
</tbody>
</table>

**Priority, Flow**

**Priority, Exotics**

**Stressed**
<table>
<thead>
<tr>
<th>MAP ID</th>
<th>Stream</th>
<th>Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Winooski River to Alder Brook</td>
<td>Stormwater, Industry, Ag</td>
<td>E. Coli</td>
<td>CR</td>
</tr>
<tr>
<td>2</td>
<td>Winooski River, to Winooski Dam</td>
<td>Sewer Overflow</td>
<td>E. Coli</td>
<td>CR</td>
</tr>
<tr>
<td>3</td>
<td>Sunnyside Brook</td>
<td>Exceeded Cl Levels</td>
<td>Chloride</td>
<td>ALS</td>
</tr>
<tr>
<td>4</td>
<td>Allen Brook</td>
<td>Elevated E. Coli</td>
<td>E. Coli</td>
<td>CR</td>
</tr>
<tr>
<td>5</td>
<td>Allen Brook RM 2.4 to RM 5.0</td>
<td>Stormwater Runoff, Land Development,</td>
<td>ALS, CR</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Centennial Brook, Mouth to RM 1.2</td>
<td>Stormwater Runoff, Land Development,</td>
<td>ALS, CR</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Lower Winooski River</td>
<td>Locally Abundant Eurasian Water Milfoil</td>
<td>Exotics</td>
<td>ALS, ALS, CR</td>
</tr>
<tr>
<td>8</td>
<td>Morehouse Brook, mouth to RM 0.6</td>
<td>Stormwater Runoff, Erosion</td>
<td>Stormwater</td>
<td>ALS</td>
</tr>
<tr>
<td>9</td>
<td>Sunderland Brook, RM 3.5 to 5.3</td>
<td>Stormwater Runoff, Land Development,</td>
<td>ALS</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Unnamed Trib To Winooski</td>
<td>SO. Burlington Landfill Leachate</td>
<td>Metals (Fe, As)</td>
<td>ALS</td>
</tr>
<tr>
<td>11</td>
<td>Winooski River, Mouth to Winooski Dam</td>
<td>Elevated Levels of Hg in Walleye</td>
<td>Hg</td>
<td>FC</td>
</tr>
<tr>
<td>MAP ID</td>
<td>Stream</td>
<td>Problem</td>
<td>Pollutant</td>
<td>Use Impairment</td>
</tr>
<tr>
<td>--------</td>
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<td>-----------</td>
<td>----------------</td>
</tr>
<tr>
<td>1</td>
<td>Shelburne Pond</td>
<td>Abundant Curly Leaf Pondweed</td>
<td>Exotic Species</td>
<td>Impaired</td>
</tr>
<tr>
<td>2</td>
<td>Muddy Brook</td>
<td>Elevated Chloride</td>
<td>Chloride</td>
<td>ALS</td>
</tr>
</tbody>
</table>

**Tributaries to Lower Winooski**

**Other Sub Watersheds of the Winooski**

**Most Recent Bio Assessment**
- Exc
- Exc-Vgood
- Vgood
- Good-Vgood
- Good
- Fair-good
- Fair
- Fair-Poor
- Poor
- Unable to Assess

**Impaired**

**Priority, SW, E. Coli, Mercury**
<table>
<thead>
<tr>
<th>MAP</th>
<th>Stream</th>
<th>Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Thatcher Brook</td>
<td>Morphological Instability</td>
<td>Sediment</td>
<td>AES, ALS</td>
</tr>
<tr>
<td>2</td>
<td>Graves Brook</td>
<td>Development, AG, Riparian encroachment</td>
<td>Sediment</td>
<td>ALS</td>
</tr>
<tr>
<td>3</td>
<td>Winooski River</td>
<td>Urban Runoff, Channelization, Storm Water</td>
<td>Sediments, Nutrients, SW</td>
<td>ALS, CR, 2CR</td>
</tr>
<tr>
<td>4</td>
<td>Winooski River</td>
<td>Sewer Overflow</td>
<td>E. Coli</td>
<td>CR</td>
</tr>
<tr>
<td>5</td>
<td>Tyler Brook &amp; Merriam Brook,</td>
<td>Water removal by Village Water Supply</td>
<td>Flow Alteration</td>
<td>All Uses</td>
</tr>
<tr>
<td></td>
<td>Thatcher Brook</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Winooski River at Middlesex #2</td>
<td>Water removal by hydro power</td>
<td>Flow Alteration</td>
<td>All Uses</td>
</tr>
<tr>
<td>7</td>
<td>Winooski River, Impoundment of</td>
<td>Water level fluctuation</td>
<td>Flow Alteration</td>
<td>AES, ALS</td>
</tr>
</tbody>
</table>
Tributaries to Upper Winooski

Other Sub Watersheds of the Winooski

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>Stream</th>
<th>Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blanchard Brook</td>
<td>Impacted Fish Community</td>
<td>Undefined</td>
<td>ALS</td>
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<tr>
<td>2</td>
<td>Winooski River, Below Marshfield Hydrofacility</td>
<td>Low DO from bottom draw dam</td>
<td>LOW D.O.</td>
<td>ALS</td>
</tr>
<tr>
<td>3</td>
<td>Winooski River up to Molly Falls Brook</td>
<td>Streambank Erosion, Channel Instability</td>
<td>Physical alteration, sediments, Nutrients, Turbidity, E. coli</td>
<td>ALS, CR, 2CR</td>
</tr>
<tr>
<td>4</td>
<td>Winooski River, RM 72.8 to Molly's Brook</td>
<td>Elevated E. coli</td>
<td>E. coli</td>
<td>CR</td>
</tr>
<tr>
<td>5</td>
<td>Winooski River, RM 70.7 to RM 71.4</td>
<td>Elevated E. coli</td>
<td>E. coli</td>
<td>CR</td>
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Stressed

Impaired
### Impaired Streams

<table>
<thead>
<tr>
<th>MAP ID</th>
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<th>Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Big Spruce Brook RM 0.3 to 0.8</td>
<td>Multiple Iron Seeps from Unknown Causes</td>
<td>Iron</td>
<td>ALS</td>
</tr>
<tr>
<td>8</td>
<td>Inn Brook RM 0.3 to 0.6</td>
<td>Iron Seeps Originating from Disturbed Soils</td>
<td>Iron</td>
<td>ALS, AES</td>
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</tbody>
</table>

### Stressed Streams

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>Stream</th>
<th>Problem</th>
<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Little River, up to the West Branch Confluence</td>
<td>Land Development, AG Runoff, Bank Instability</td>
<td>Sediment, Nutrients, E. coli</td>
<td>AES, ALS, CR</td>
</tr>
<tr>
<td>2</td>
<td>Little Spruce Brook</td>
<td>Development</td>
<td>Sediment, Physical Alteration</td>
<td>ALS, AES</td>
</tr>
<tr>
<td>3</td>
<td>Long Trail Trib</td>
<td>Sediment Sources Need Further Assessment</td>
<td>Sediment, Acid</td>
<td>ALS</td>
</tr>
<tr>
<td>4</td>
<td>Sterling Brook</td>
<td>Low Alk Conditions, Acid Rain</td>
<td>Acidity</td>
<td>ALS, 2Cr</td>
</tr>
<tr>
<td>5</td>
<td>West Branch Little River RM 7.0 to 7.3</td>
<td>Past Construction Erosion</td>
<td>Sediment</td>
<td>ALS</td>
</tr>
<tr>
<td>6</td>
<td>West Branch Little River RM 8.3 and up</td>
<td>Sediment Sources need Further Assessment</td>
<td>Sediment, Acid</td>
<td>ALS</td>
</tr>
<tr>
<td>7</td>
<td>Big Spruce Brook RM 0.3 to 0.8</td>
<td>Multiple Iron Seeps from Unknown Causes</td>
<td>Iron</td>
<td>ALS</td>
</tr>
<tr>
<td>8</td>
<td>Inn Brook RM 0.3 to 0.6</td>
<td>Iron Seeps Originating from Disturbed Soils</td>
<td>Iron</td>
<td>ALS, AES</td>
</tr>
<tr>
<td>MAP ID</td>
<td>Stream</td>
<td>Problem</td>
<td>Pollutant</td>
<td>Use Impairment</td>
</tr>
<tr>
<td>--------</td>
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<td>---------</td>
<td>-----------</td>
<td>----------------</td>
</tr>
<tr>
<td>1</td>
<td>Mad River, From dam to RT 100</td>
<td>Morphological Instability, and contributions from nearby sandpit</td>
<td>Sediment</td>
<td>AES, ALS</td>
</tr>
<tr>
<td>2</td>
<td>Clay Brook, RM 1.8 to RM 2.3</td>
<td>Stormwater Runoff, Erosion from construction &amp; Gravel parking Lot</td>
<td>Stormwater, Iron</td>
<td>ALS, AES</td>
</tr>
<tr>
<td>3</td>
<td>Mill Brook</td>
<td>Water removal by Mad River Glen Snow</td>
<td>Flow Alteration</td>
<td>All Uses</td>
</tr>
<tr>
<td>4</td>
<td>Slide Brook</td>
<td>Water removal by Mad River Glen Snow</td>
<td>Flow Alteration</td>
<td>All Uses</td>
</tr>
</tbody>
</table>

**Upper Mad River Tributaries**

- **Stressed**
- **Impaired**
- **Priority, Flow**

**Most Recent Bio Assessment**

- Exc
- Exc-Vgood
- Vgood
- Good-Vgood
- Good
- Fair-good
- Fair
- Fair-Poor
- Poor
- Unable to Assess
<table>
<thead>
<tr>
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<th>Pollutant</th>
<th>Use Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Winooski River, From Mollys Falls Brook Upstream 6 Miles</td>
<td>Streambank Erosion, Lack of Riparian Vegetation, Phys. Alt.</td>
<td>Sediment</td>
<td>AES, ALS</td>
</tr>
<tr>
<td>2</td>
<td>Winooski River, Caot, Confluence Molly’s Brook up to RM 83.8</td>
<td>Elevated E. Coli</td>
<td>E. Coli</td>
<td>CR</td>
</tr>
<tr>
<td>3</td>
<td>Mollys Falls Brook</td>
<td>Flow Alteration</td>
<td>All Uses</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sucker Brook Below Peacham Pond</td>
<td>Water removal by hydro power</td>
<td>Flow Alteration</td>
<td>All Uses</td>
</tr>
<tr>
<td>5</td>
<td>Winooski River—Cabot Village</td>
<td>E. coli</td>
<td>E. coli</td>
<td>CR</td>
</tr>
<tr>
<td>6</td>
<td>Peacham Pond</td>
<td>Water Fluctuation by Dam</td>
<td>Flow Alteration</td>
<td>ALS</td>
</tr>
<tr>
<td>7</td>
<td>Mollys Falls Reservoir</td>
<td>Water Fluctuation by Dam</td>
<td>Flow Alteration</td>
<td>ALS, CR, 2CR</td>
</tr>
</tbody>
</table>

**Stressed**

**Impaired**

**Priority**