LOCATION.—Lat 39°40'04", long 74°57'38", Gloucester County, Hydrologic Unit 02040302, at bridge on Malaga Road, 1.2 mi upstream from Hedges Branch, 2.0 mi southeast of Williamstown, and 2.1 mi southwest of New Brooklyn.


REMARKS.—Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570).

COOPERATION.—Field data and samples for laboratory analyses were provided by the New Jersey Department of Environmental Protection. Determination of chlorophyll a was performed by the New Jersey Department of Environmental Protection, Bureau of Freshwater and Biological Monitoring Laboratory.

COOPERATIVE NETWORK SITE DESCRIPTOR.—Statewide Status, New Jersey Department of Environmental Protection Watershed Management Area 15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Turbidity, water, unfltrd, NTU</th>
<th>UV absorbance, 254 nm, wat fltr units/cm</th>
<th>UV absorbance, 280 nm, wat fltr units/cm</th>
<th>Barometric pressure, mm Hg</th>
<th>Dissolved oxygen, mg/L</th>
<th>Dissolved oxygen, percent of saturation (00301)</th>
<th>pH, water, unfltrd field, std units (00025)</th>
<th>Specif. conductance, wat unfltrd, µS/cm</th>
<th>Temperature, air, deg C</th>
<th>Temperature, water, deg C</th>
<th>Hardness, water, unfltrd mg/L as CaCO3</th>
<th>Calcium water, fltrd, mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 07...</td>
<td>0930</td>
<td>3.7</td>
<td>0.857</td>
<td>0.673</td>
<td>759</td>
<td>7.3</td>
<td>64</td>
<td>6.0</td>
<td>92</td>
<td>8.0</td>
<td>9.5</td>
<td>20</td>
<td>4.82</td>
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<tr>
<td>FEB 13...</td>
<td>0930</td>
<td>2.2</td>
<td>0.159</td>
<td>790</td>
<td>10.4</td>
<td>76</td>
<td>5.5</td>
<td>190</td>
<td>4.5</td>
<td>2.3</td>
<td>26</td>
<td>5.86</td>
<td></td>
</tr>
<tr>
<td>MAY 01...</td>
<td>0930</td>
<td>0.9</td>
<td>0.222</td>
<td>759</td>
<td>7.5</td>
<td>70</td>
<td>6.0</td>
<td>140</td>
<td>15.0</td>
<td>12.1</td>
<td>25</td>
<td>5.79</td>
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</tr>
<tr>
<td>AUG 12...</td>
<td>1000</td>
<td>1.6</td>
<td>0.403</td>
<td>0.310</td>
<td>759</td>
<td>5.1</td>
<td>54</td>
<td>6.3</td>
<td>151</td>
<td>27.0</td>
<td>17.7</td>
<td>31</td>
<td>8.17</td>
</tr>
</tbody>
</table>

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Magnesium, water, fltrd, mg/L</th>
<th>Potassium, water, fltrd, mg/L</th>
<th>Sodium, water, fltrd, mg/L</th>
<th>ANC, wat un fixed end pt, lab, mg/L as CaCO3</th>
<th>Chloride, water, fltrd, mg/L</th>
<th>Fluoride, water, fltrd, mg/L</th>
<th>Silica, water, fltrd, mg/L</th>
<th>Sulfate water, fltrd, mg/L</th>
<th>Residue water, fltrd, sum of constituents mg/L</th>
<th>Residue on evap. at 180 degC mg/L</th>
<th>Residue total at 105 degC mg/L</th>
<th>Residue total at 105 degC mg/L</th>
<th>Ammonia + org-N, water, fltrd, mg/L as N</th>
<th>Ammonia water, fltrd, mg/L as N</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 07...</td>
<td>2.01</td>
<td>1.08</td>
<td>8.38</td>
<td>13</td>
<td>6.21</td>
<td>&lt;0.17</td>
<td>4.6</td>
<td>11.2</td>
<td>49</td>
<td>80</td>
<td>&lt;1</td>
<td>0.56</td>
<td>&lt;0.030</td>
<td></td>
</tr>
<tr>
<td>FEB 13...</td>
<td>2.89</td>
<td>1.44</td>
<td>22.3</td>
<td>E8</td>
<td>38.3</td>
<td>&lt;0.17</td>
<td>6.0</td>
<td>9.3</td>
<td>--</td>
<td>107</td>
<td>7</td>
<td>0.23</td>
<td>&lt;0.030</td>
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</tr>
<tr>
<td>MAY 01...</td>
<td>2.54</td>
<td>1.44</td>
<td>15.0</td>
<td>11</td>
<td>21.6</td>
<td>&lt;0.17</td>
<td>5.0</td>
<td>10.3</td>
<td>74</td>
<td>88</td>
<td>1</td>
<td>0.28</td>
<td>&lt;0.030</td>
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</tr>
<tr>
<td>AUG 12...</td>
<td>2.51</td>
<td>1.94</td>
<td>15.1</td>
<td>17</td>
<td>22.3</td>
<td>&lt;0.17</td>
<td>7.1</td>
<td>9.5</td>
<td>82</td>
<td>96</td>
<td>&lt;1</td>
<td>0.41</td>
<td>0.056</td>
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</tr>
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</table>

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Ammonia water, unfltrd mg/L as N</th>
<th>Nitrate water, unfltrd mg/L as N</th>
<th>Orthophosphate water, unfltrd mg/L as P</th>
<th>Particulate nitrogen, susp, mg/L</th>
<th>Phosphorus water, unfltrd mg/L as P</th>
<th>Total nitrogen water, unfltrd mg/L</th>
<th>Total carbon suspended total mg/L</th>
<th>Inorganic carbon suspended total mg/L</th>
<th>Organic carbon water, fltrd, mg/L as N</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 07...</td>
<td>&lt;0.030</td>
<td>0.64</td>
<td>0.005</td>
<td>0.036</td>
<td>0.06</td>
<td>0.030</td>
<td>0.040</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>FEB 13...</td>
<td>0.034</td>
<td>1.70</td>
<td>&lt;0.003</td>
<td>0.023</td>
<td>--</td>
<td>0.008</td>
<td>0.020</td>
<td>1.9</td>
<td>2.4</td>
</tr>
<tr>
<td>MAY 01...</td>
<td>&lt;0.030</td>
<td>1.27</td>
<td>&lt;0.003</td>
<td>0.022</td>
<td>0.04</td>
<td>0.012</td>
<td>0.017</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>AUG 12...</td>
<td>0.054</td>
<td>1.24</td>
<td>0.005</td>
<td>0.028</td>
<td>0.05</td>
<td>0.025</td>
<td>0.040</td>
<td>1.6</td>
<td>1.7</td>
</tr>
</tbody>
</table>
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>BOD, water, unfltrd 5 day, 20 degC mg/L (00310)</th>
<th>Chlorophyll a fluorometric method, corrctd ug/L (32209)</th>
<th>Boron, water, unfltrd ug/L (01020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 07...</td>
<td></td>
<td>&lt;1.0</td>
<td>--</td>
<td>27</td>
</tr>
<tr>
<td>FEB 13...</td>
<td></td>
<td>&lt;1.0</td>
<td>--</td>
<td>23</td>
</tr>
<tr>
<td>MAY 01...</td>
<td></td>
<td>&lt;1.0</td>
<td>1.60</td>
<td>27</td>
</tr>
<tr>
<td>AUG 12...</td>
<td></td>
<td>E1.9</td>
<td>0.200</td>
<td>30</td>
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</tbody>
</table>

Remark codes used in this table:
< -- Less than
E -- Estimated value

WATER-COLUMN TRACE-ELEMENT ANALYSES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date  | Time | Arsenic, water, unfltrd recoverable ug/L (01002) | Barium, water, unfltrd recoverable ug/L (01007) | Beryllium, water, unfltrd recoverable ug/L (01012) | Boron, water, unfltrd recoverable ug/L (01022) | Cadmium, water, unfltrd recoverable ug/L (01027) | Chromium, water, unfltrd recoverable ug/L (01034) | Copper, water, unfltrd recoverable ug/L (01042) | Iron, water, unfltrd recoverable ug/L (01051) | Lead, water, unfltrd recoverable ug/L (01055) | Manganese, water, unfltrd recoverable ug/L (01045) | Mercury, water, unfltrd recoverable ug/L (71900) | Nickel, water, unfltrd recoverable ug/L (01067) |
|-------|------|-------------------------------------------------|-----------------------------------------------|-----------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| AUG 12... | 1000 | <2                                             | 75.2                                          | 0.06                             | 24                              | 0.07                            | <0.8                             | 1.9                             | 380                             | 1.43                             | 36.1                             | 0.11                             | 2.43                             |

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Selenium, water, unfltrd recoverable ug/L (01147)</th>
<th>Silver, water, unfltrd recoverable ug/L (01077)</th>
<th>Zinc, water, unfltrd recoverable ug/L (01092)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG 12...</td>
<td></td>
<td>0.8</td>
<td>&lt;0.16</td>
<td>22</td>
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</tbody>
</table>

Remark codes used in this table:
< -- Less than

WATER-COLUMN VOLATILE ORGANIC COMPOUND ANALYSES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>1,1,1-Trichloroethane, water, unfltrd ug/L (34506)</th>
<th>1,1-Dichloroethylene, water, unfltrd ug/L (34496)</th>
<th>1,2-Dichloroethane, water, unfltrd ug/L (34536)</th>
<th>1,2-Dichloropropane, water, unfltrd ug/L (34541)</th>
<th>1,3-Dichlorobenzene, water, unfltrd ug/L (34571)</th>
<th>1,4-Dichlorobenzene, water, unfltrd ug/L (34030)</th>
<th>Bromo-1,1-Dichloroethane, water, unfltrd ug/L (34011)</th>
<th>Chlorobenzene, water, unfltrd ug/L (34011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEB 13...</td>
<td>0930</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
<td>0.2</td>
<td>&lt;0.2</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
<td>0.1</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

Remark codes used in this table:
< -- Less than
### GREAT EGG HARBOR RIVER BASIN

01410865 SQUANKUM BRANCH AT MALAGA ROAD, NEAR WILLIAMSTOWN, NJ—Continued

#### WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>cis-1,2-Dichloroethene, water, unfltrd ug/L (77093)</th>
<th>Dichloromethane, water, unfltrd ug/L (34668)</th>
<th>Dichloroethene, water, unfltrd ug/L (34423)</th>
<th>Diethyl ether, water, unfltrd ug/L (81576)</th>
<th>Disopropyl ether, water, unfltrd ug/L (34371)</th>
<th>Ethylbenzene, water, unfltrd ug/L (50005)</th>
<th>Methy1tert-butyl ether, water, unfltrd ug/L (85795)</th>
<th>t-Butyl methyl ether, water, unfltrd ug/L (77128)</th>
<th>t-Butyl ethyl ether, water, unfltrd ug/L (78032)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEB 13...</td>
<td>&lt;0.1</td>
<td>&lt;0.2</td>
<td>&lt;0.2</td>
<td>&lt;0.2</td>
<td>&lt;0.1</td>
<td>&lt;0.2</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
<td>10.5</td>
<td></td>
</tr>
</tbody>
</table>

#### WATER-COLUMN PESTICIDE ANALYSES

The following were determined using laboratory schedule 2001 (listed in its entirety, with laboratory reporting levels, in "Laboratory Measurements" in the Explanation of Water-Quality Records section of this report). Only pesticides detected in one or more surface-water samples are listed in the following table.

#### WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>2,6-Diethylaniline, water fltrd 0.7u GF (82660)</th>
<th>Acetochlor, water fltrd 0.7u GF (49260)</th>
<th>Alachlor, water fltrd 0.7u GF (34253)</th>
<th>Alpha-HCH, water fltrd 0.7u GF (39632)</th>
<th>Atrazine, water fltrd 0.7u GF (82686)</th>
<th>Benfluralin, water fltrd 0.7u GF (82673)</th>
<th>Butylate, water fltrd 0.7u GF (82680)</th>
<th>Carbaryl, water fltrd 0.7u GF (82674)</th>
<th>Carbofuran, water fltrd 0.7u GF (82678)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAY 01...</td>
<td>0930</td>
<td>&lt;0.006</td>
<td>&lt;0.006</td>
<td>&lt;0.006</td>
<td>&lt;0.005</td>
<td>&lt;0.007</td>
<td>&lt;0.050</td>
<td>&lt;0.010</td>
<td>&lt;0.002</td>
<td>&lt;0.041</td>
</tr>
</tbody>
</table>

#### WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Desulfophenyl, water fltrd 0.7u GF (82682)</th>
<th>Diezoxynil, water fltrd 0.7u GF (39572)</th>
<th>Diclofop-methyl, water fltrd 0.7u GF (39381)</th>
<th>EPTC, water fltrd 0.7u GF (82668)</th>
<th>Fipronil, sulfoxide, water fltrd 0.7u GF (82619)</th>
<th>Fipronil, sulfone, water fltrd 0.7u GF (62168)</th>
<th>Fipronil, water fltrd 0.7u GF (82616)</th>
<th>Malathion, water fltrd 0.7u GF (39532)</th>
<th>Metolachlor, water fltrd 0.7u GF (82630)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAY 01...</td>
<td>&lt;0.003</td>
<td>&lt;0.004</td>
<td>&lt;0.005</td>
<td>&lt;0.005</td>
<td>&lt;0.009</td>
<td>&lt;0.005</td>
<td>&lt;0.005</td>
<td>&lt;0.007</td>
<td>&lt;0.027</td>
<td>E.002</td>
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</tbody>
</table>
### Water-Column Bacteria Analyses

Samples were collected synoptically over a 30-day period during the summer.

### Water-Quality Data, Water Year October 2002 to September 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Entero-cocci, m-E MF, water, col/100 mL</th>
<th>E coli, m-TEC MF, water, col/100 mL</th>
<th>Fecal coli-form, water, col/100 mL</th>
<th>Fecal coli-form, EC broth water, MPN/100 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAY</td>
<td>01...</td>
<td>&lt;0.022</td>
<td>0.03</td>
<td>0.007</td>
<td>&lt;0.02</td>
</tr>
</tbody>
</table>

Remark codes used in this table:

- `<` -- Less than
- `E` -- Estimated value

### Water-Quality Data, Water Year October 2002 to September 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Entero-cocci, m-E MF, water, col/100 mL</th>
<th>E coli, m-TEC MF, water, col/100 mL</th>
<th>Fecal coli-form, water, col/100 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUL</td>
<td>09...</td>
<td>1030</td>
<td>110</td>
<td>&lt;100</td>
</tr>
<tr>
<td></td>
<td>16...</td>
<td>1055</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>23...</td>
<td>1055</td>
<td>--</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>30...</td>
<td>1100</td>
<td>180</td>
<td>&lt;100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Entero-cocci, m-E MF, water, col/100 mL</th>
<th>E coli, m-TEC MF, water, col/100 mL</th>
<th>Fecal coli-form, water, col/100 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG</td>
<td>06...</td>
<td>1110</td>
<td>2,900</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Remark codes used in this table:

- `<` -- Less than
GREAT EGG HARBOR RIVER BASIN

LOCATION.--Lat 39°38’36", long 74°58’39", Gloucester County, Hydrologic Unit 02040302, at bridge on Blue Bell Road, 1.2 mi upstream of Timber Lakes and 2.0 mi west of Cecil.

DRAINAGE AREA.--4.51 mi².

PERIOD OF RECORD.--Water years 1998 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570).

COOPERATION.--Determination of dissolved ammonia, total ammonia, dissolved nitrite, dissolved orthophosphate, biochemical oxygen demand, total suspended solids, fecal coliform, E. coli, and enterococcus bacteria was performed by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services. Determination of chlorophyll a was performed by the New Jersey Department of Environmental Protection, Bureau of Freshwater and Biological Monitoring Laboratory.

COOPERATIVE NETWORK SITE DESCRIPTOR.--Mixed Land Use Indicator, New Jersey Department of Environmental Protection Watershed Management Area 15.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Calcium water, mg/L (00915)</th>
<th>Magnesium water, mg/L (00925)</th>
<th>Potassium water, mg/L (00930)</th>
<th>Sodium water, mg/L (00935)</th>
<th>Chloride water, mg/L (00950)</th>
<th>Fluoride water, mg/L (00940)</th>
<th>Silica water, mg/L (00945)</th>
<th>Sulfate water, mg/L (00955)</th>
<th>Ammonia+Nitrite water, mg/L (00900)</th>
<th>Ammonia+Organic water, mg/L (00608)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 25...</td>
<td>1140</td>
<td>1.9</td>
<td>1.54</td>
<td>3.54</td>
<td>2</td>
<td>6.27</td>
<td>0.17</td>
<td>8.0</td>
<td>15.5</td>
<td>48</td>
<td>62</td>
</tr>
<tr>
<td>MAR 05...</td>
<td>1100</td>
<td>1.2</td>
<td>1.67</td>
<td>3.67</td>
<td>--</td>
<td>7.08</td>
<td>0.17</td>
<td>5.1</td>
<td>13.5</td>
<td>--</td>
<td>56</td>
</tr>
<tr>
<td>MAY 13...</td>
<td>1130</td>
<td>5.8</td>
<td>1.89</td>
<td>4.17</td>
<td>6</td>
<td>7.58</td>
<td>0.17</td>
<td>4.6</td>
<td>6.3</td>
<td>36</td>
<td>70</td>
</tr>
<tr>
<td>AUG 12...</td>
<td>1130</td>
<td>6.0</td>
<td>1.86</td>
<td>4.04</td>
<td>9</td>
<td>7.26</td>
<td>0.17</td>
<td>7.8</td>
<td>3.5</td>
<td>39</td>
<td>64</td>
</tr>
</tbody>
</table>

### WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2003

| Date | Calcium water, mg/L (00915) | Magnesium water, mg/L (00925) | Ammonia-Nitrate water, mg/L as N (00608) | Ammonia+Organic water, mg/L as N (00610) | Nitrite water, mg/L as N (00613) | Nitrate water, mg/L as N (00631) | Orthophosphate, mg/L (00061) | Particulate nitrogen, mg/L (49570) | Phosphorus water, mg/L (00666) | Total nitrogen, mg/L (00602) | Total nitrogen, mg/L (00600) | Total carbon, mg/L (00694) | Inorganic carbon, mg/L (00688) | Organic carbon, mg/L (00689) |
|------|----------------------------|-------------------------------|-----------------------------------------|----------------------------------|----------------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| NOV 25... | <0.030 | <0.030 | 1.14 | <0.003 | <0.020 | 0.04 | 0.012 | 0.016 | 1.4 | 1.4 | 0.2 | <0.1 | 0.2 |
| MAR 05... | <0.030 | 0.044 | 0.77 | 0.004 | <0.020 | 0.03 | 0.010 | 0.005 | 1.0 | 1.1 | 0.2 | <0.1 | 0.2 |
| MAY 13... | 0.097 | 0.095 | 0.56 | 0.004 | <0.020 | 0.08 | 0.013 | 0.032 | 1.2 | 1.2 | 1.2 | <0.1 | 1.2 |
| AUG 12... | 0.165 | 0.198 | 0.37 | 0.006 | <0.020 | 0.17 | 0.014 | 0.038 | 1.2 | 1.3 | 2.8 | <0.1 | 2.8 |
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Organic carbon, water, fltrd, mg/L (00681)</th>
<th>BOD, water, unfltrd, 5 day, 20 degC mg/L (00310)</th>
<th>Chlorophyll a, fluorometric method, corrected ug/L (32209)</th>
<th>Boron, water, fltrd, ug/L (01020)</th>
<th>Iron, water, fltrd, ug/L (01046)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 25.</td>
<td>7.1</td>
<td>&lt;1.0</td>
<td>--</td>
<td>19</td>
<td>--</td>
</tr>
<tr>
<td>MAR 05.</td>
<td>7.5</td>
<td>&lt;1.0</td>
<td>--</td>
<td>E12</td>
<td>--</td>
</tr>
<tr>
<td>MAY 13.</td>
<td>13.8</td>
<td>&lt;1.0</td>
<td>2.40</td>
<td>14</td>
<td>--</td>
</tr>
<tr>
<td>AUG 12.</td>
<td>17.8</td>
<td>&lt;1.0</td>
<td>1.40</td>
<td>13</td>
<td>1,530</td>
</tr>
</tbody>
</table>

Remark codes used in this table:
< -- Less than
E -- Estimated value

WATER-COLUMN BACTERIA ANALYSES

Samples were collected synoptically over a 30-day period during the summer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
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<tr>
<th>Date</th>
<th>Time</th>
<th>Entero- cocci, m-E MF, water, col/100 mL (31649)</th>
<th>E coli, m-TEC MF, water, col/100 mL (31633)</th>
<th>Fecal coliform, ECbroth water, MPN/100 mL (31615)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUL 09.</td>
<td>1020</td>
<td>630</td>
<td>1,300</td>
<td>600</td>
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<tr>
<td>16..</td>
<td>1045</td>
<td>460</td>
<td>200</td>
<td>130</td>
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<td>23..</td>
<td>1045</td>
<td>--</td>
<td>1,100</td>
<td>1,400</td>
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<tr>
<td>30..</td>
<td>1050</td>
<td>170</td>
<td>200</td>
<td>130</td>
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<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Entero- cocci, m-E MF, water, col/100 mL (31649)</th>
<th>E coli, m-TEC MF, water, col/100 mL (31633)</th>
<th>Fecal coliform, ECbroth water, MPN/100 mL (31615)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG 06..</td>
<td>1100</td>
<td>280</td>
<td>800</td>
<td>500</td>
</tr>
</tbody>
</table>
LOCATION.--Lat 39°30'50", long 74°46'46", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322 in Weymouth, 0.5 mi upstream from Deep Run, and 20.9 mi upstream from mouth.

DRAINAGE AREA.--154 mi².

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570).

COOPERATION.--Determination of dissolved ammonia, total ammonia, dissolved nitrite, dissolved orthophosphate, biochemical oxygen demand, and total suspended solids was performed by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services. Determination of fecal coliform, E. coli, and enterococcus bacteria was performed by the New Jersey Department of Environmental Protection, Bureau of Marine Water Monitoring Laboratory. Determination of chlorophyll a was performed by the New Jersey Department of Environmental Protection, Bureau of Freshwater and Biological Monitoring Laboratory.

COOPERATIVE NETWORK SITE DESCRIPTOR.--Watershed Integrator, New Jersey Department of Environmental Protection Watershed Management Area 15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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<tr>
<th>Date</th>
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<th>Instantaneous discharge, cfs (00061)</th>
<th>Turbidity, water, unfltrd field, NTU (61028)</th>
<th>UV absorbance, 254 nm, wat fltrd units /cm (50624)</th>
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<th>Barometric pressure, mm Hg (00025)</th>
<th>Dissolved oxygen, mg/L (00300)</th>
<th>Dissolved oxygen, percent of saturation (00301)</th>
<th>pH, water, unfltrd field, std units (00400)</th>
<th>Specif. conductance, wat unf ss/cm 25 degC (70301)</th>
<th>Temperature, air, deg C (00020)</th>
<th>Temperature, water, deg C (00010)</th>
<th>Hardness, water, unfltrd mg/L as CaCO₃ (00900)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 06...</td>
<td>1140</td>
<td>158</td>
<td>5.3</td>
<td>0.246</td>
<td>0.188</td>
<td>747</td>
<td>9.9</td>
<td>88</td>
<td>4.5</td>
<td>70</td>
<td>12.0</td>
<td>9.5</td>
<td>11</td>
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<tr>
<td>FEB 25...</td>
<td>1100</td>
<td>514</td>
<td>2.3</td>
<td>0.447</td>
<td>0.339</td>
<td>767</td>
<td>12.9</td>
<td>90</td>
<td>3.7</td>
<td>102</td>
<td>6.0</td>
<td>0.9</td>
<td>11</td>
</tr>
<tr>
<td>MAY 14...</td>
<td>1040</td>
<td>208</td>
<td>2.7</td>
<td>0.647</td>
<td>0.506</td>
<td>755</td>
<td>9.0</td>
<td>88</td>
<td>5.1</td>
<td>62</td>
<td>19.5</td>
<td>14.2</td>
<td>10</td>
</tr>
<tr>
<td>AUG 19...</td>
<td>1040</td>
<td>208</td>
<td>4.0</td>
<td>1.01</td>
<td>0.798</td>
<td>766</td>
<td>7.5</td>
<td>84</td>
<td>5.3</td>
<td>61</td>
<td>30.0</td>
<td>21.2</td>
<td>11</td>
</tr>
</tbody>
</table>

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Calcium, water, fltrd, mg/L (00915)</th>
<th>Magnesium, water, fltrd, mg/L (00925)</th>
<th>Potassium, water, fltrd, mg/L (00935)</th>
<th>Sodium, water, fltrd, mg/L (00930)</th>
<th>Fixed end pt, lab, mg/L as CaCO₃ (00410)</th>
<th>Chloride, water, fltrd, mg/L (00940)</th>
<th>Fluoride, water, fltrd, mg/L (00950)</th>
<th>Silica, water, fltrd, mg/L (00955)</th>
<th>Sulfate, water, fltrd, mg/L (00945)</th>
<th>Total residue, sum of constituents, mg/L (70301)</th>
<th>Residue on evap. at 180 degC, wat mg/L (70300)</th>
<th>Residue total at 105 deg C, suspended, mg/L (00530)</th>
<th>Ammonia + org-N, water, fltrd, mg/L as N (00623)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 06...</td>
<td>2.28</td>
<td>1.37</td>
<td>1.17</td>
<td>5.11</td>
<td>&lt;2</td>
<td>7.64</td>
<td>&lt;0.17</td>
<td>7.0</td>
<td>11.3</td>
<td>--</td>
<td>51</td>
<td>9</td>
<td>0.24</td>
</tr>
<tr>
<td>FEB 25...</td>
<td>2.28</td>
<td>1.40</td>
<td>1.24</td>
<td>8.14</td>
<td>--</td>
<td>15.2</td>
<td>&lt;0.17</td>
<td>4.7</td>
<td>9.3</td>
<td>--</td>
<td>67</td>
<td>3</td>
<td>0.33</td>
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<tr>
<td>MAY 14...</td>
<td>2.16</td>
<td>1.18</td>
<td>1.23</td>
<td>6.06</td>
<td>3</td>
<td>10.0</td>
<td>&lt;0.17</td>
<td>4.7</td>
<td>5.6</td>
<td>34</td>
<td>59</td>
<td>9</td>
<td>0.40</td>
</tr>
<tr>
<td>AUG 19...</td>
<td>2.20</td>
<td>1.23</td>
<td>1.31</td>
<td>5.72</td>
<td>3</td>
<td>10.0</td>
<td>&lt;0.17</td>
<td>7.8</td>
<td>3.7</td>
<td>36</td>
<td>73</td>
<td>7</td>
<td>0.66</td>
</tr>
</tbody>
</table>

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Ammonia water, fltrd, mg/L as N (00608)</th>
<th>Ammonia water, unfltrd, mg/L as N (00610)</th>
<th>Nitrate + nitrate water, fltrd, mg/L as N (00651)</th>
<th>Nitrate water, fltrd, mg/L as N (00613)</th>
<th>Orthophosphate water, fltrd, mg/L as P (00671)</th>
<th>Particulate nitrogen,suspend, water, unfltrd mg/L (49570)</th>
<th>Phosphorus, water, fltrd, mg/L (00666)</th>
<th>Phosphorus, water, unfltrd mg/L (00602)</th>
<th>Total nitrogen, water, fltrd mg/L (00600)</th>
<th>Total carbon, suspd sediment total mg/L (00694)</th>
<th>Inorganic carbon, suspd sediment total mg/L (00688)</th>
<th>Organic carbon, suspd sediment total mg/L (00689)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 06...</td>
<td>&lt;0.030</td>
<td>&lt;0.030</td>
<td>0.36</td>
<td>&lt;0.003</td>
<td>0.022</td>
<td>0.05</td>
<td>0.009</td>
<td>0.026</td>
<td>0.60</td>
<td>0.65</td>
<td>1.2</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>FEB 25...</td>
<td>0.046</td>
<td>0.057</td>
<td>0.37</td>
<td>0.003</td>
<td>&lt;0.020</td>
<td>0.06</td>
<td>0.008</td>
<td>0.019</td>
<td>0.69</td>
<td>0.76</td>
<td>1.4</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>MAY 14...</td>
<td>0.037</td>
<td>0.052</td>
<td>0.32</td>
<td>&lt;0.003</td>
<td>&lt;0.020</td>
<td>0.08</td>
<td>0.007</td>
<td>0.025</td>
<td>0.72</td>
<td>0.80</td>
<td>1.2</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>AUG 19...</td>
<td>0.049</td>
<td>0.060</td>
<td>0.21</td>
<td>0.004</td>
<td>0.025</td>
<td>0.11</td>
<td>0.018</td>
<td>0.040</td>
<td>0.87</td>
<td>0.98</td>
<td>1.6</td>
<td>&lt;0.1</td>
</tr>
</tbody>
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<th>BOD, water, unfltrd, 5 day, 20 degC, mg/L (00310)</th>
<th>Chlorophyll a fluorometric method, corrected ug/L (32209)</th>
<th>Boron, water, fltrd, ug/L (01020)</th>
<th>Iron, water, fltrd, ug/L (01046)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 06...</td>
<td>7.3</td>
<td>E1.9</td>
<td>--</td>
<td>28</td>
<td>--</td>
</tr>
<tr>
<td>FEB 25...</td>
<td>9.8</td>
<td>&lt;1.0</td>
<td>--</td>
<td>19</td>
<td>--</td>
</tr>
<tr>
<td>MAY 14...</td>
<td>11.5</td>
<td>&lt;1.0</td>
<td>1.90</td>
<td>27</td>
<td>--</td>
</tr>
<tr>
<td>AUG 19...</td>
<td>18.0</td>
<td>&lt;1.0</td>
<td>1.50</td>
<td>26</td>
<td>1,070</td>
</tr>
</tbody>
</table>

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</tr>
</thead>
<tbody>
<tr>
<td>JUN 12...</td>
<td>1020</td>
<td>50</td>
<td>30</td>
<td>20</td>
<td>07...</td>
<td>1105</td>
<td>113</td>
</tr>
<tr>
<td>19...</td>
<td>1045</td>
<td>65</td>
<td>93</td>
<td>117</td>
<td>10...</td>
<td>1037</td>
<td>791</td>
</tr>
<tr>
<td>26...</td>
<td>1040</td>
<td>15</td>
<td>10</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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<th>UV absorbance, 254 nm, wat flt units /cm (50624)</th>
<th>UV absorbance, 280 nm, wat flt units /cm (61726)</th>
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<th>Dissolved oxygen, mg/L (00300)</th>
<th>Dissolved oxygen, percent of saturation (00301)</th>
<th>pH, water, unfluflr'd field, std units (00400)</th>
<th>Specif. conductance, wat unf fltrd unfltrd mg/L as CaCO3 (00425)</th>
<th>Temperature, air, deg C (00020)</th>
<th>Temperature, water, deg C (00101)</th>
<th>Hardness, water, unfluflr'd mg/L as CaCO3 (00900)</th>
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</thead>
<tbody>
<tr>
<td>NOV 06...</td>
<td>0930</td>
<td>34</td>
<td>8.9</td>
<td>0.349</td>
<td>0.275</td>
<td>748</td>
<td>8.5</td>
<td>78</td>
<td>4.8</td>
<td>45</td>
<td>11.5</td>
<td>10.5</td>
<td>9</td>
</tr>
<tr>
<td>FEB 25...</td>
<td>0950</td>
<td>74</td>
<td>2.0</td>
<td>0.609</td>
<td>0.460</td>
<td>767</td>
<td>12.0</td>
<td>84</td>
<td>3.1</td>
<td>150</td>
<td>5.0</td>
<td>1.2</td>
<td>12</td>
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<tr>
<td>MAY 14...</td>
<td>0950</td>
<td>15</td>
<td>0.8</td>
<td>0.424</td>
<td>0.327</td>
<td>755</td>
<td>8.5</td>
<td>79</td>
<td>4.0</td>
<td>82</td>
<td>16.5</td>
<td>11.8</td>
<td>8</td>
</tr>
<tr>
<td>AUG 19...</td>
<td>0950</td>
<td>9.7</td>
<td>1.0</td>
<td>0.483</td>
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<td>766</td>
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<td>79</td>
<td>4.2</td>
<td>57</td>
<td>27.0</td>
<td>16.8</td>
<td>7</td>
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<table>
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<tr>
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<th>Magnesium water, unfilted, mg/L (00925)</th>
<th>Potassium water, unfilted, mg/L (00935)</th>
<th>Sodium water, unfilted, mg/L (00930)</th>
<th>Chloride water, unfilted, mg/L (00940)</th>
<th>Fluoride water, unfilted, mg/L (00950)</th>
<th>Silica water, unfilted, mg/L (00955)</th>
<th>Sulfate water, unfilted, mg/L (00945)</th>
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<th>Residue total at 105 deg C, mg/L (00530)</th>
<th>Ammonia + org-N water, unfilted, mg/L as N (00623)</th>
<th>Ammonia water, unfilted, mg/L as N (00608)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 06...</td>
<td>1.93</td>
<td>1.09</td>
<td>0.73</td>
<td>2.94</td>
<td>E2</td>
<td>4.97</td>
<td>&lt;0.17</td>
<td>4.3</td>
<td>6.3</td>
<td>35</td>
<td>7</td>
<td>0.23</td>
</tr>
<tr>
<td>FEB 25...</td>
<td>2.37</td>
<td>1.54</td>
<td>0.77</td>
<td>12.2</td>
<td>--</td>
<td>23.3</td>
<td>&lt;0.17</td>
<td>4.6</td>
<td>12.1</td>
<td>82</td>
<td>3</td>
<td>0.43</td>
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<tr>
<td>MAY 14...</td>
<td>1.58</td>
<td>1.05</td>
<td>0.86</td>
<td>6.52</td>
<td>--</td>
<td>12.8</td>
<td>&lt;0.17</td>
<td>5.2</td>
<td>7.3</td>
<td>53</td>
<td>4</td>
<td>0.22</td>
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<tr>
<td>AUG 19...</td>
<td>1.20</td>
<td>0.927</td>
<td>0.68</td>
<td>4.22</td>
<td>&lt;2</td>
<td>9.22</td>
<td>&lt;0.17</td>
<td>9.0</td>
<td>3.9</td>
<td>49</td>
<td>2</td>
<td>0.35</td>
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### WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Ammonia water, unfilted, mg/L as N (00610)</th>
<th>Nitrate + nitrite water, unfilted, mg/L as N (00631)</th>
<th>Nitrite water, unfilted, mg/L as N (00613)</th>
<th>Orthophosphate water, unfilted, mg/L as P (00671)</th>
<th>Particulate nitrogen water, unfilted, mg/L as N (00661)</th>
<th>Phosphorus, unfilted, mg/L (00666)</th>
<th>Total nitrogen, water, unfilted, mg/L (00662)</th>
<th>Total carbon, suspnd sedimnt total, mg/L (00669)</th>
<th>Inorganic carbon, suspnd sedimnt total, mg/L (006888)</th>
<th>Organic carbon, water, unfilted, mg/L (00681)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOV 06...</td>
<td>&lt;0.030</td>
<td>0.30</td>
<td>&lt;0.003</td>
<td>--</td>
<td>0.06</td>
<td>0.015</td>
<td>0.028</td>
<td>0.53</td>
<td>0.59</td>
<td>1.1</td>
</tr>
<tr>
<td>FEB 25...</td>
<td>0.043</td>
<td>0.23</td>
<td>&lt;0.003</td>
<td>0.020</td>
<td>0.06</td>
<td>0.007</td>
<td>0.015</td>
<td>0.67</td>
<td>0.73</td>
<td>0.8</td>
</tr>
<tr>
<td>MAY 14...</td>
<td>&lt;0.030</td>
<td>0.43</td>
<td>&lt;0.003</td>
<td>&lt;0.020</td>
<td>&lt;0.02</td>
<td>0.004</td>
<td>0.007</td>
<td>0.65</td>
<td>--</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>AUG 19...</td>
<td>0.047</td>
<td>0.53</td>
<td>&lt;0.003</td>
<td>&lt;0.020</td>
<td>0.03</td>
<td>0.014</td>
<td>0.016</td>
<td>0.88</td>
<td>0.91</td>
<td>0.3</td>
</tr>
</tbody>
</table>
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>BOD, mg/L (00310)</th>
<th>Chlorophyll a, ug/L (32209)</th>
<th>Boron, ug/L (01020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 06</td>
<td>E2.1</td>
<td>--</td>
<td>E6.4</td>
</tr>
<tr>
<td>Feb 25</td>
<td>E1.2</td>
<td>--</td>
<td>18</td>
</tr>
<tr>
<td>May 14</td>
<td>2.7</td>
<td>2.40</td>
<td>&lt;13</td>
</tr>
<tr>
<td>Aug 19</td>
<td>&lt;1.0</td>
<td>0.400</td>
<td>12</td>
</tr>
</tbody>
</table>

Remark codes used in this table:
< -- Less than
E -- Estimated value

WATER-COLUMN BACTERIA ANALYSES

Samples were collected synoptically over a 30-day period during the summer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Entero-cocci, m-E MF, col/100 mL (31649)</th>
<th>E.coli, m-TEC MF, col/100 mL (31633)</th>
<th>Fecal coliform, E.Chbroth water, MPN/100 mL (31615)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun 12</td>
<td>0952</td>
<td>40</td>
<td>55</td>
<td>100</td>
</tr>
<tr>
<td>Jun 19</td>
<td>1025</td>
<td>67</td>
<td>330</td>
<td>310</td>
</tr>
<tr>
<td>Jun 26</td>
<td>1015</td>
<td>25</td>
<td>5</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Entero-cocci, m-E MF, col/100 mL (31649)</th>
<th>E.coli, m-TEC MF, col/100 mL (31633)</th>
<th>Fecal coliform, E.Chbroth water, MPN/100 mL (31615)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 07</td>
<td>1040</td>
<td>45</td>
<td>67</td>
<td>110</td>
</tr>
<tr>
<td>Jul 10</td>
<td>1025</td>
<td>982</td>
<td>1,400</td>
<td>1,440</td>
</tr>
</tbody>
</table>