**Table 1**
**Digital Mapping Data**
**Addison, Maine**

| Agency/Company | Materials | Date | CD Number and Data Title |
|---|---|---|---|
| James W. Sewall Company | Pleasant River Project Files:<br>CAD Data<br>- 12 dxf files | 8/21/06 | CD 1- Addison Project Files: GIS, CAD, Ortho Photos, Recharge Report, NOAA. Includes 1-foot topographic contours between river and the 12-foot contour. |
| EA Engineering, Science, and Technology, Inc. | Pleasant River Project Files:<br>GIS Shapefiles<br>- Culvert Points<br>- EA Veg and Soil Sampling<br>- Points<br>- Soil Coverage<br>- Survey Benchmarks<br>- Vegetation Coverage | 8/25/06 | CD 1 - Addison Project Files: GIS, CAD, Ortho Photos, Recharge Report, NOAA |
| EA Engineering, Science, and Technology, Inc. | Pleasant River Project Files:<br>Photographs from May 2005 Sampling Event<br>- jpg images for stations A-L | 8/25/06 | CD 1 - Addison Project Files: GIS, CAD, Ortho Photos, Recharge Report, NOAA |
| James W. Sewall Company | Pleasant River Project Files:<br>Seamless Orthophoto Plot<br>-orthomap.pdf | 12/7/05 (photo date 11/19/04) | CD 1 - Addison Project Files: GIS, CAD, Ortho Photos, Recharge Report, NOAA |
| EA Engineering, Science, and Technology, Inc. | Pleasant River Project Files:<br>Technical Report<br>- Pleasant River Tech Report pdf<br>"Vegetation Cover Type and Substrate Summary Report for the Pleasant River Marsh Restoration Project Addison, Maine" | August 2006 | CD 1 - Addison Project Files: GIS, CAD, Ortho Photos, Recharge Report, NOAA |
| Natural Resources Conservation Service (NRCS) | pdf file: Addison and Columbia, Maine, Field Survey Overview, L.P. Crosby | 4/19/07 | CD 2 - NRCS Reports, Addison |
| Natural Resources Conservation Service (NRCS) | pdf file: West Branch Pleasant River Watershed, Hydraulic Engineer's Report, L.P. Crosby | 4/19/07 | CD 2 - NRCS Reports, Addison |
| Jacques Whitford | Addison Final Report | 10/29/07 | CD 3 - Oct 2007 Final Report |
| Jacques Whitford | Figure 2 – Surface Geology | 10/25/07 | CD 3 - Oct 2007 Final Report |
| Jacques Whitford | Figure 3 – Bedrock Geology | 10/25/07 | CD 3 - Oct 2007 Final Report |

**Table 1, continued**
**Digital Mapping Data**
**Addison, Maine**

| Agency/Company | Materials | Date | CD Number and Data Title |
|---|---|---|---|
| Sebago Technics, Inc. | Color orthophotos from the National Agricultural Imagery Program (NAIP) for Washington County 1-meter resolution. | Summer 2007 | CD NAIP Addison |
| Maine Office of GIS | Topographic contours for Addison, Columbia and Columbia Falls | various | not applicable, data downloaded |
| Maine Office of GIS | E911 Roads | publication date 6/16/06 | not applicable, data downloaded |
| Maine Office of GIS | Hydrography (hyd24) | publication date 2004 | not applicable, data downloaded |
| Maine Geological Survey (MGS) | Wells in Addison, Columbia and Columbia Falls | | MGS sent data electronically |

**Table 2**
**Water Level Data**
**Addison, Maine**

| Well Number | Water Level from top of casing (ft) | Riser Height (ft) | Ground Elevation (ft NGVD29) | Ground Elevation (ft NAVD88) | Depth from Ground Surface to Water (ft) | Water Elevation (ft NGVD29) | Water Elevation (ft NAVD88) | Data Source of Ground Elevation | Approximate thickness of freshwater lens in ft below Sea Level | Estimated distance from the bottom of the well to salt/fresh interface (ft) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 40.0 | 39.3 | na | na | na | usgs topo | na | na |
| 2 | | | 40.0 | 39.3 | na | na | na | usgs topo | na | na |
| 3 | | | 40.0 | 39.3 | na | na | na | usgs topo | na | na |
| 4 | | | 40.0 | 39.3 | na | na | na | usgs topo | na | na |
| 5 | | | 16.7 | 16.0 | na | na | na | sewall topo | na | na |
| 6 | | | 19.7 | 19.0 | na | na | na | sewall topo | na | na |
| 7 | | | 35.0 | 34.3 | na | na | na | usgs topo | na | na |
| 8 | | | 42.0 | 41.3 | na | na | na | usgs topo | na | na |
| 9 | 15.15 | 2.20 | 35.0 | 34.3 | 12.95 | 22.05 | 21.35 | usgs topo | 861 | 736 |
| 10 | 15.10 | 0.81 | 25.0 | 24.3 | 14.29 | 10.71 | 10.01 | usgs topo | 408 | 33 |
| 11 | | | 40.0 | 39.3 | na | na | na | usgs topo | na | na |
| 12 | 2.82 | 2.75 | 14.5 | 13.8 | 0.07 | 14.43 | 13.73 | sewall topo | 556 | 563 |
| 13 | | | 7.7 | 7.0 | na | na | na | sewall topo | na | na |
| 14 | 7.22 | 3.00 | 11.6 | 10.9 | 4.22 | 7.38 | 6.68 | sewall topo | 274 | 106 |
| 15 | | | 78.0 | 77.3 | na | na | na | usgs topo | na | na |
| 16 | | | 78.0 | 77.3 | na | na | na | usgs topo | na | na |
| 17 | | | 78.0 | 77.3 | na | na | na | usgs topo | na | na |

**Notes:**

1) Water levels measured from top of casing by Robinson Resources on October 21, 2008.
2) Water levels were measured within approximately one hour of low tide which occurred at about 10:00 a.m. (Daylight Savings Time) on 10/21/08.
3) USGS topographic elevations based on contour data from Maine Office of GIS.
4) Sewall topographic data based on digital mapping by James Sewall Company for the EA Engineering report (2006).
5) "na" indicates no water level was recorded.
6) Well location information provided by the West Branch Study Committee.
7) Thickness of freshwater below Sea Level estimated from the Ghyben-Herzberg Ratio (Caswell, 1987).

**Table 3**
**Tidal Information**
**Addison, Maine**

| Datum | Elevation NGVD29 (feet) | Elevation NAVD88 (feet) | Data Sources |
|---|---|---|---|
| Mean Spring High Water (MSHW) | 6.740 | 6.040 | Tidal Flood Profiles, U.S. Army Corps of Engineers, September 1988 |
| Mean Higher High Water (MHHW) | 6.540 | 5.860 | Milbridge station data |
| Mean High Water (MHW) | 5.900 | 5.200 | Tidal Flood Profiles, U.S. Army Corps of Engineers, September 1988 |
| NAVD88 | 0.700 | 0.000 | Vertcon |
| Mean Sea Level (MSL) | 0.500 | -0.180 | Milbridge station data |
| Mean Tide Level (MTL) | 0.280 | -0.420 | Tidal Flood Profiles, U.S. Army Corps of Engineers, September 1988 |
| NGVD29 | 0.000 | -0.700 | Vertcon |
| Mean Low Water (MLW) | -5.280 | -5.980 | Tidal Flood Profiles, U.S. Army Corps of Engineers, September 1988 |
| Mean Lower Low Water (MLLW) | -5.580 | -6.260 | Milbridge station data |
| **Tidal Events** | | | |
| 1-yr tidal | 8.310 | 7.610 | Tidal Flood Profiles, U.S. Army Corps of Engineers, September 1988 |
| 10-yr tidal | 10.340 | 9.640 | Tidal Flood Profiles, U.S. Army Corps of Engineers, September 1988 |
| 50-yr tidal | 11.150 | 10.450 | Tidal Flood Profiles, U.S. Army Corps of Engineers, September 1988 |
| 100-yr tidal | 11.520 | 10.820 | Tidal Flood Profiles, U.S. Army Corps of Engineers, September 1988 |
| FEMA Zone AE Elevation | 12.000 | 11.300 | Firm Flood Insurance Rate Map, Town of Addison, Maine, Washington County, 1991. |

**Notes:**

1) Conversion from NGVD29 to NAVD88 for Addison, Maine, based on VERTCON North American Vertical Datum Conversion Utility, National Geodetic Survey.
2) VERTCON Conversion from NGVD29 to NAVD88 based on location in Addison, Maine, Latitude: 44.617709, Longitude: 67.7453253

**Table 4**
**Summary of Water Quality Test Results**
**Addison, Maine**

| Parameter | Units | Oct #9 | Nov #9 | Oct #10 | Nov #10 | Oct #12 | Nov #12 | Oct #13 | Nov #13 | Oct #14 | Nov #14 | Oct #15 | Nov #15 | Seawater | PQL | Drinking Water Standards EPA primary | EPA secondary | Maine MEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/l | 0.0137 | 0.0141 | 0.0110 | 0.0103 | nd | nd | nd | nd | 0.0092 | 0.0099 | nd | nd | 0.003 | 0.0080 | 0.01 | | 0.01 |
| Boron | mg/l | nd | nd | 0.234 | 0.213 | nd | nd | nd | nd | nd | nd | nd | nd | 4.5 | 0.100 | | | 1.4 |
| Calcium | mg/l | 19.9 | nd | 20.3 | 18.7 | 4.72 | 4.70 | 25.8 | 25 | 5.81 | 5.75 | 19.3 | 21.6 | 410 | 0.050 | | | |
| Hardness | mg/l | 85.3 | nd | 102 | 96.8 | 20.2 | 20.6 | 83.3 | 82.0 | 21.5 | 21.7 | 56.5 | 62.6 | | 0.66 | | | |
| Iron | mg/l | 1.22 | nd | nd | nd | nd | nd | nd | nd | 0.273 | 0.409 | nd | nd | 0.003 | 0.100 | | 0.3 | |
| Magnesium | mg/l | 8.67 | nd | 12.5 | 12.2 | 2.05 | 2.15 | 4.62 | 4.74 | 1.70 | 1.78 | 2.04 | 2.13 | 1350 | 0.05 | | | |
| Manganese | mg/l | 0.167 | nd | 0.0598 | 0.0546 | 0.0074 | 0.0077 | nd | nd | 0.0275 | 0.0262 | 0.0081 | nd | 0.002 | 0.0050 | | 0.05 | 0.5 |
| Potassium | mg/l | 3.7 | nd | 8.0 | 7.0 | nd | 1.6 | 1.3 | 1.6 | 1.9 | 2.1 | 1 | 1.1 | 390 | 1.0 | | | |
| Sodium | mg/l | 11.4 | 52.4 | 599 | 581 | 5.29 | 5.89 | 10.2 | 10.3 | 43.5 | 44.2 | 10.8 | 12.1 | 10,500 | 1.00 | | | 20 |
| Strontium | mg/l | 0.115 | nd | 0.238 | 0.218 | nd | nd | nd | nd | nd | nd | nd | nd | 8 | 0.100 | | | 4.2 |
| Bicarbonate (as CaCO3) | mg/l | 84 | 83 | 300 | 300 | 21 | 20 | 55 | 56 | 100 | 120 | 43 | 55 | 142 | 5 | | | |
| Bromide | mg/l | nd | nd | nd | 2.6 | nd | nd | nd | nd | nd | nd | nd | nd | 67 | 0.5 | | | |
| Chloride | mg/l | 14 | 12 | 850 | 880 | 6.1 | 6.7 | 18 | 21 | 8.4 | 10 | 20 | 21 | 19,000 | 2 | | 250 | |
| Solids - Filterable Residue | mg/l | 120 | 140 | 1700 | 1600 | 97 | 69 | 130 | 120 | 130 | 110 | 100 | 82 | 34,480 | 10 | | 500 | |
| Specific Conductivity | umhos/cm | 220 | 220 | 3100 | 3000 | 70 | 72 | 220 | 220 | 220 | 230 | 170 | 190 | 50,000 | 1 | | | |
| Sulfate - Turbidimetric | mg/l | 15 | 15 | 53 | 55 | 4.1 | 4.3 | 10 | 9.2 | 16 | 17 | 8.5 | 7.6 | 2700 | 1 | | 250 | |
| Total Fluoride | mg/l | nd | 0.26 | 0.62 | 0.67 | nd | nd | nd | nd | 0.64 | 0.74 | nd | nd | 1.3 | 0.2 | 4.0 | 2.0 | 1.68 |
| pH (laboratory) | pH units | 7.3 | 7.7 | 8.2 | 8.0 | 7.2 | 6.6 | 7.2 | 7.1 | 8.2 | 8.3 | 7.4 | 7.1 | na | 0.1 | | 6.5 - 8.5 | |
| pH (field) | pH units | 7.3 | 7.6 | 8.0 | 8.0 | 6.0 | 6.1 | 7.3 | 7.3 | 8.4 | 8.3 | 6.5 | 7.1 | na | na | | 6.5 - 8.5 | |
| Conductivity (field) | umhos/cm | 229 | 92 | 3276 | 1325 | 73 | 40 | 239 | 161 | 254 | 131 | 156 | 109 | 50,000 | na | | | |

**Notes:**

1) Highlight indicates that the test result exceeds the EPA Primary Drinking Water Standard and/or the Maine Maximum Exposure Guideline.
2) Highlight indicates that the test result exceeds the EPA Secondary Drinking Water Standard
3) "nd" = Compound not detected above the Practical Quantitation Limit.
4) EPA drinking water guidelines last updated on 6/5/08.
5) Maine MEG guidelines last updated on 12/5/08.
6) Seawater from Hem (1985) for all parameters except Solids-Filterable Residue which is from Chow (1964).

**Table 5**
**Culvert Information**
**Addison, Maine**

| | | HEC Modeling | | HEC Modeling | | NRCS | |
|---|---|---|---|---|---|---|---|
| | | NRCS Elevations Old: | | NRCS Elevations revised: | | from 4-19-07 | |
| | | | | *(NRCS added 0.9 feet)* | | field survey report | |
| **INVERT ELEVATIONS** | **Location** | **NGVD29** | **NAVD88** | **NGVD29** | **NAVD88** | **NGVD29** | **NAVD88** |
| Tide Gates upstream | Ridge Road | -4.7 to -4.4 | | -3.8 to -3.5 | -4.5 to -4.2 | | -4.5 |
| Tide Gates downstream | Ridge Road | -6.1 | | -5.2 | -5.9 | | |
| Culvert CLF#2 larger upstream | Water Street | -4.7 | | -3.8 | -4.5 | | |
| Culvert CLF#2 larger downstream | Water Street | -4.9 | | -4.0 | -4.7 | | -4.5 |
| Culvert CLF#2 smaller upstream | Water Street | 3.6 | | 4.5 | 3.8 | | |
| Culvert CLF#2 smaller downstream | Water Street | 2.1 | | 3.0 | 2.3 | | 2.2 |
| Culvert CLF#3 upstream | Point Street | -0.2 | | 0.7 | 0.0 | | |
| Culvert CLF#3 downstream | Point Street | 0.2 | | 1.1 | 0.4 | | 0.4 |
| Culvert EPP#1 upstream | Abbatoir Road | -5.1 | | -4.2 | -4.9 | | |
| Culvert EPP#1 downstream | Abbatoir Road | -5.1 | | -4.2 | -4.9 | | -4.8 |
| Culvert EPP#2 upstream | Abbatoir Road | -4.7 | | -3.8 | -4.5 | | |
| Culvert EPP#2 downstream | Abbatoir Road | -5.0 | | -4.1 | -4.8 | | -4.7 |

**Notes:**
1) HEC modeling elevation data from NRCS Hydraulic Engineer's Report (2007) and Field Survey Overview (2007).
2) Elevations confirmed with Crosby by email communication on 12/4/08.