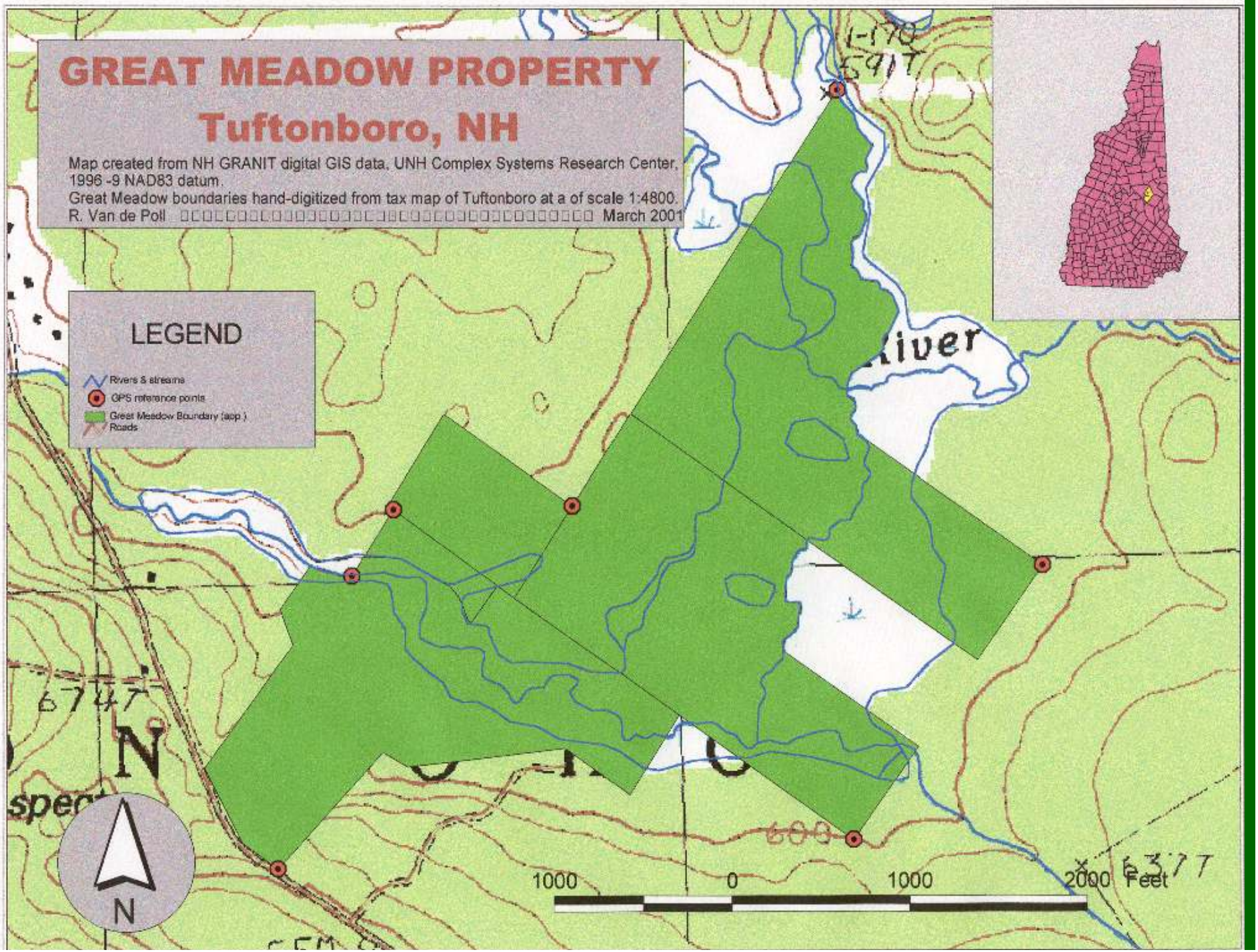
WHY PROTECT THE GREAT MEADOW?
Tuftonboro, NH

January 31, 2011

Dr. Rick Van de Poll
Ecosystem Management Consultants
Sandwich, NH

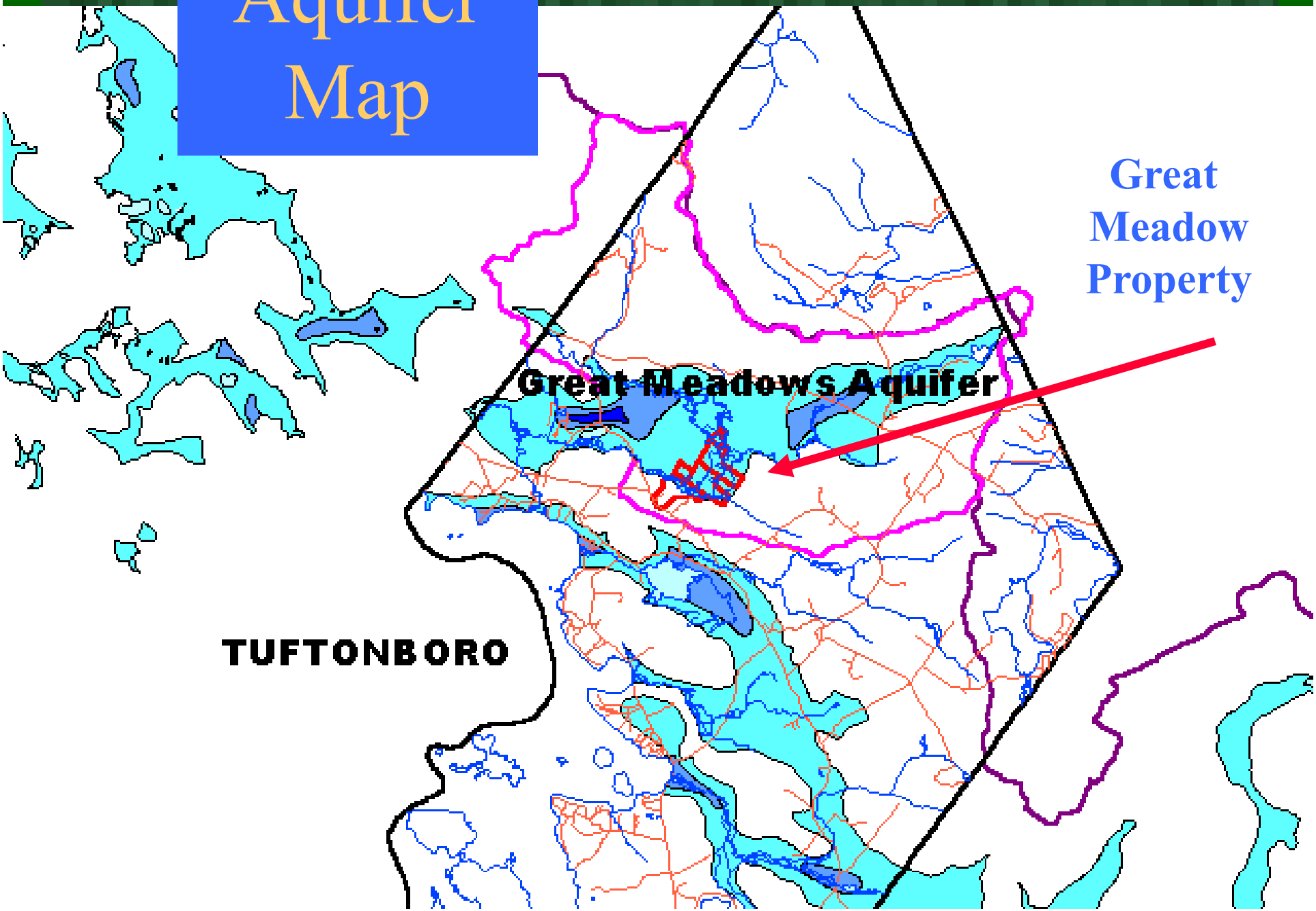
Attributes of the Great Meadow Property

- 6 lots - Tax Map #31-1-3, 31-1-2, 31-1-4, 31-1-6, 31-1-7 and 31-1-10
- ±177 acres of Town land
- 152 acres of wetlands, 25 acres of uplands
- Principal headwater wetland of Melvin R.
- Largest wetland complex in Tuftonboro
- Site of largest drinking water supply in Region


GREAT MEADOW PROPERTY
Tuftonboro, NH
Map created from NH GRANIT digital GIS data, UNH Complex Systems Research Center, 1996 -9 NAD83 datum.
Great Meadow boundaries hand-digitized from tax map of Tuftonboro at a of scale 1:4800.
R. Van de Poll March 2001
LEGEND
Rivers & streams
GPS reference points
Great Meadow Boundary (app.)
Roads
N
1000
0
1000
2000 Feet

Great Meadows Property

Aquifer Map



Ecological Inventory 2001-2

- GIS Map Preparation
- Tax Parcel Identification
- GPS survey of features
- Soil Test Pits, GWMW establishment
- Water quality monitoring
- Qualitative Plant & Animal Surveys

Groundwater Monitoring Wells (GWMW's)

- 60" x 2" pvc, screened
- 2 Established along 4 transects in different soil types
- Monitored bi-weekly in fall & spring, monthly in winter
- T (^{o}C), DO, pH, EC, TDS, Turbidity
- 2 Ambient monitoring stations added in winter

Findings

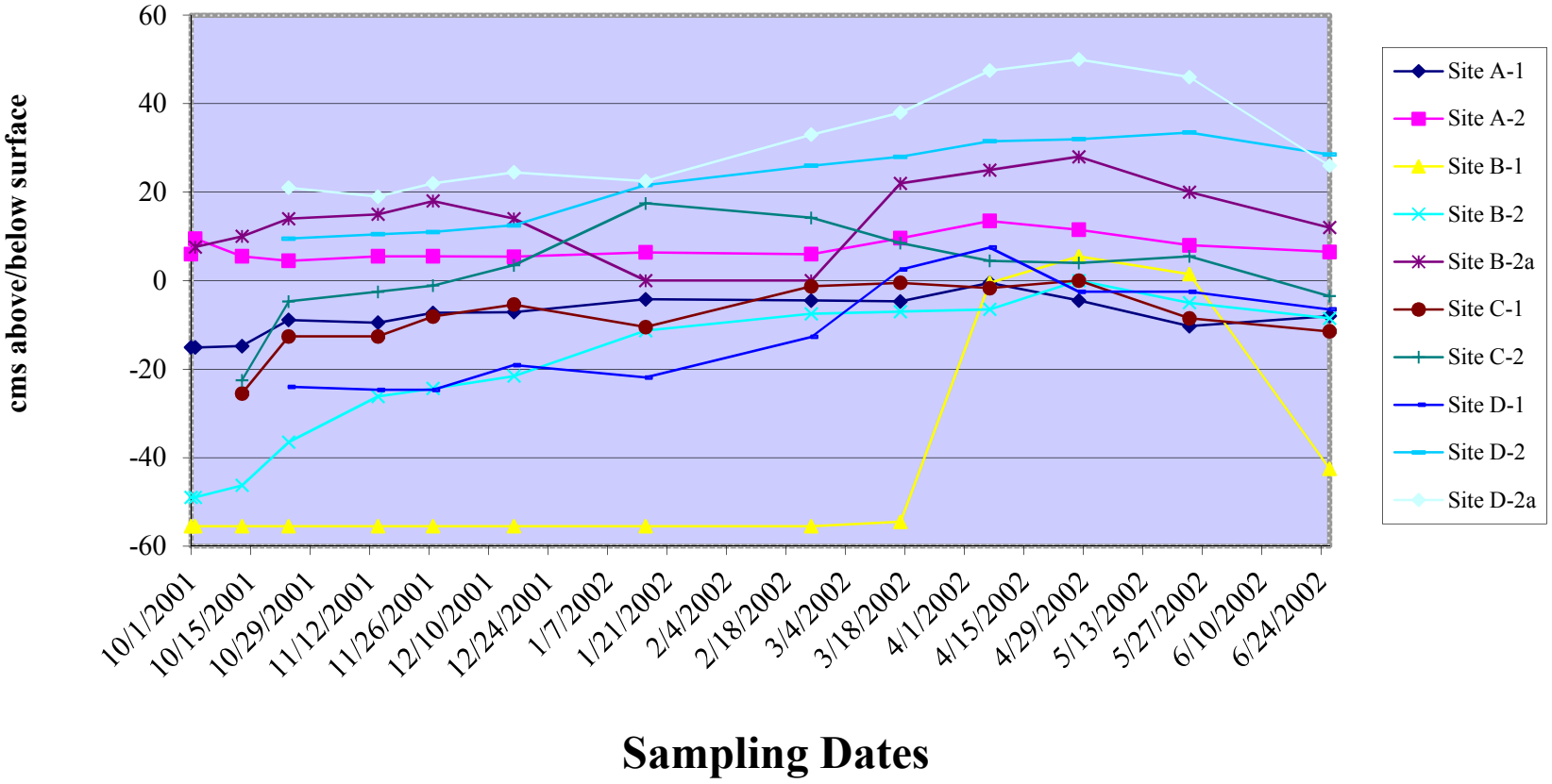
- Soils mainly hydric spodosols, shallow histosols
- Water quality very high
- Some WQ concerns below town garage at old dump
- Generally low water table in fall and winter
- No unusual GWMW readings except at A-1, A-2
- > 300 spp. of plants, 31 spp. of mammals, 13 spp. of amphibians & reptiles, 83 spp. of birds, 2 spp. of fish

More Findings

- Resident populations of bear, moose, deer, bobcat, fisher, otter, beaver, muskrat, and raccoon
- High quality groundwater seepage areas throughout
- Very little past disturbance in certain areas
- Very high flood retention and groundwater use value
- Excellent hunting & fishing opportunities

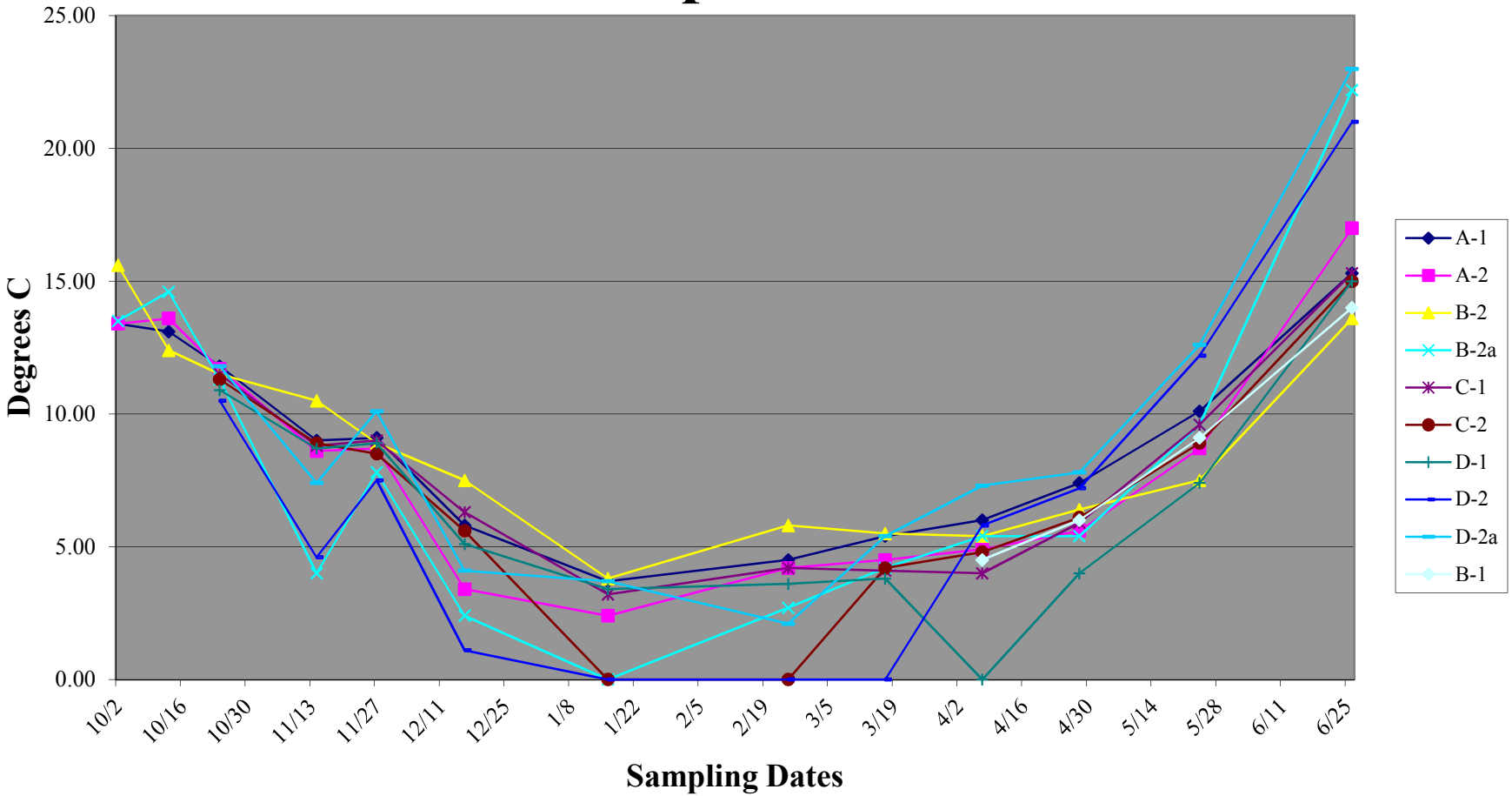
WATER LEVEL

Great Meadow GWMW Summary Data: Water Level



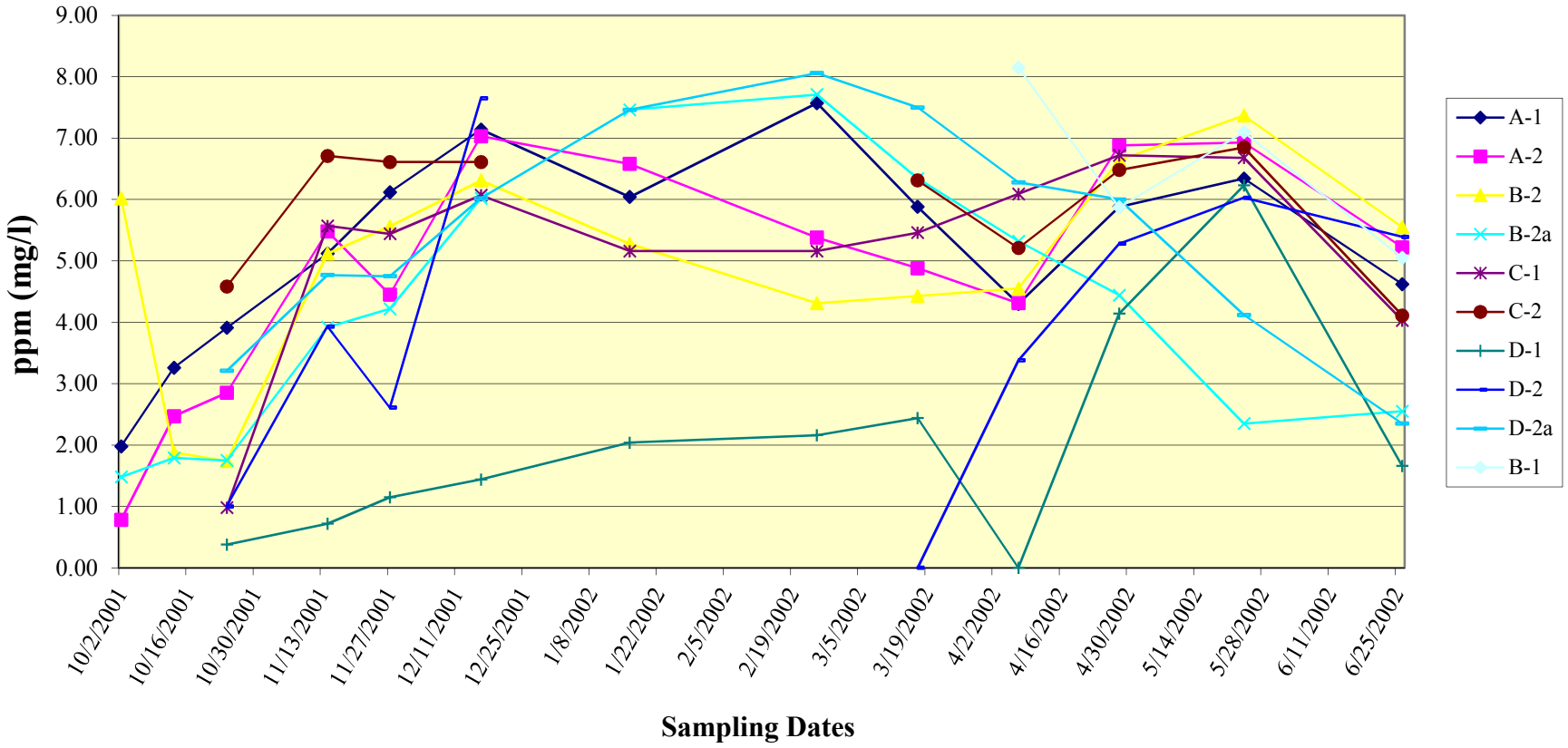
Temperature

Great Meadows GWMW Summary Data: Temperature



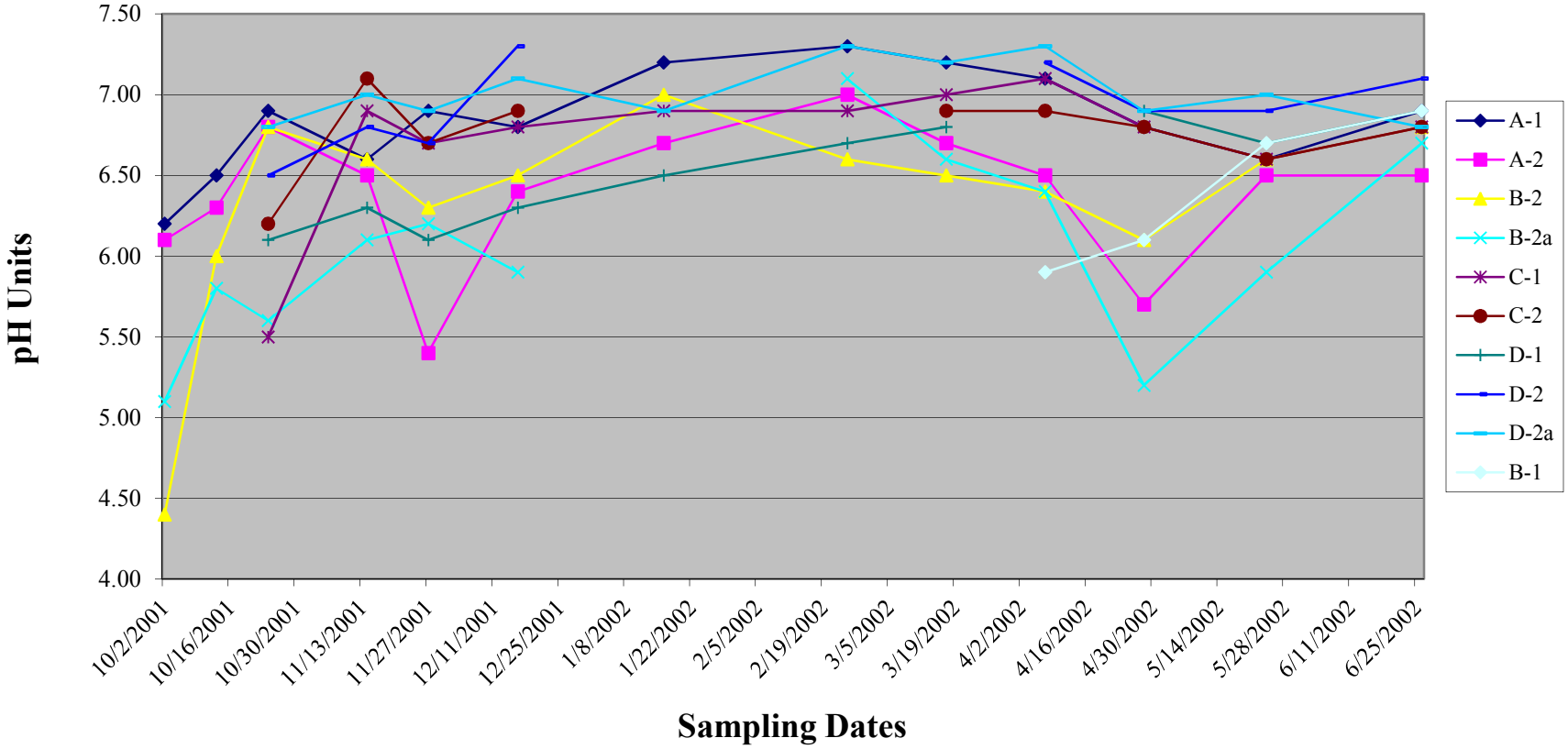
Dissolved Oxygen

Great Meadows GWMW Summary Data: Dissolved Oxygen



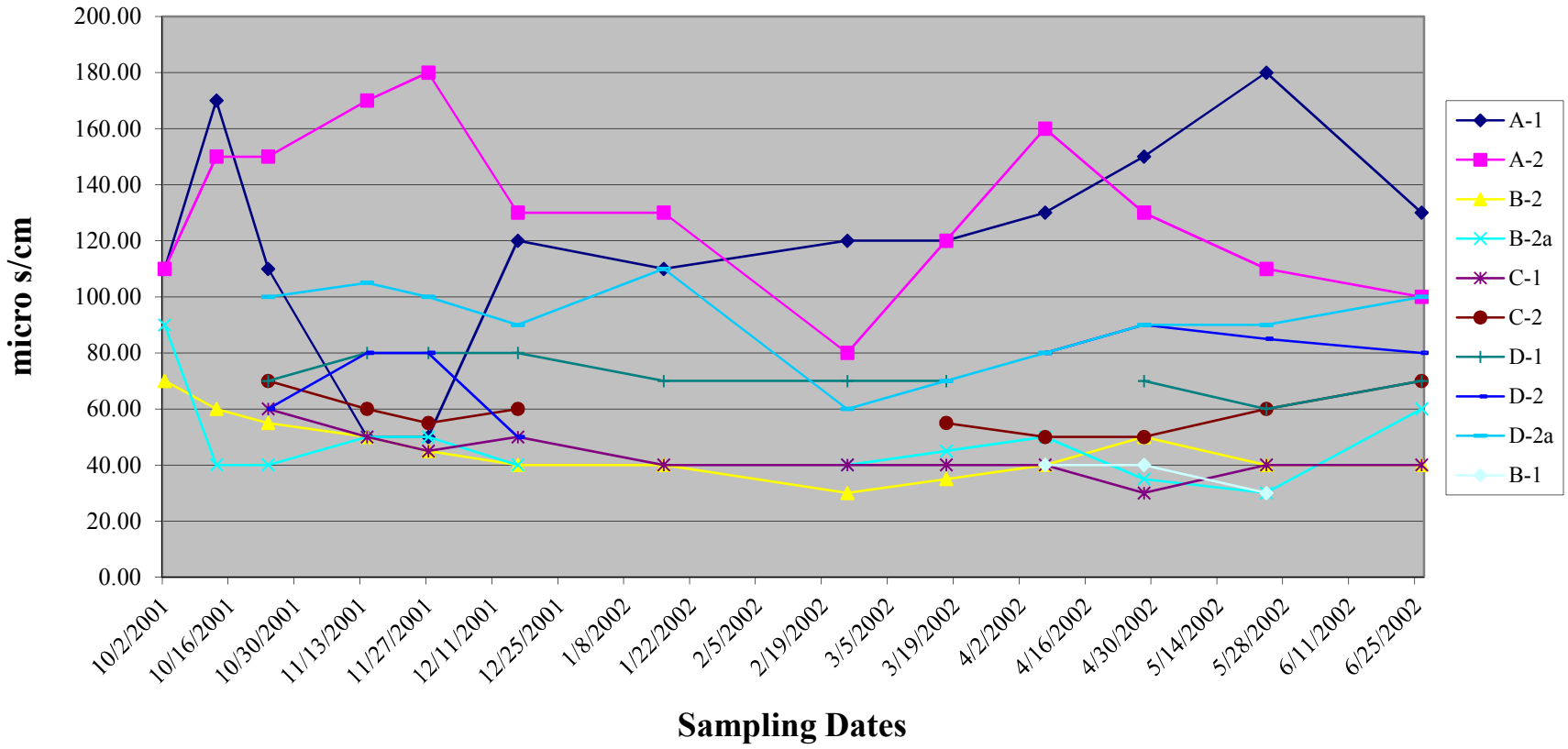
pH

Great Meadows GWMW Summary Data: pH



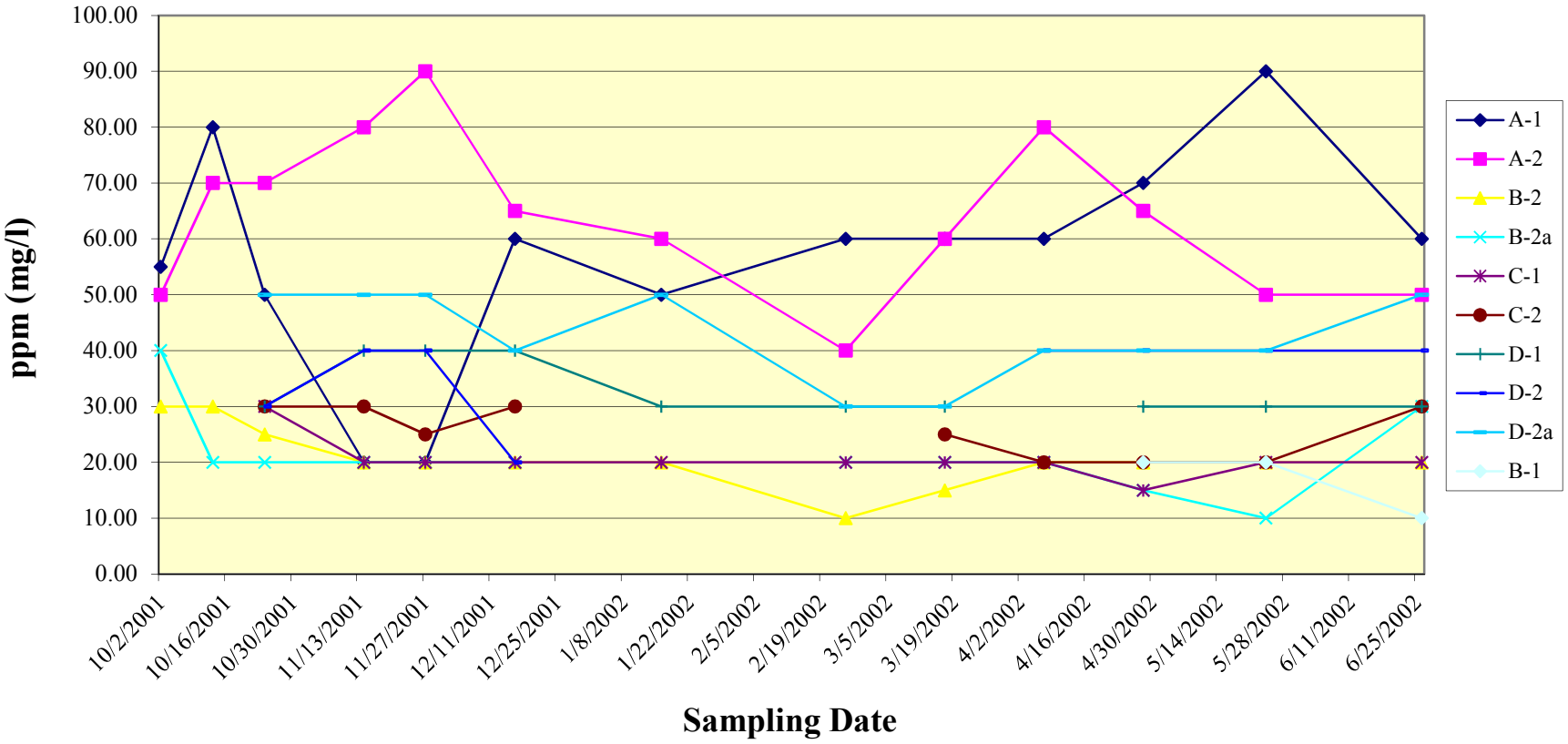
Conductivity

Great Meadows GWMW Summary Data: Conductivity



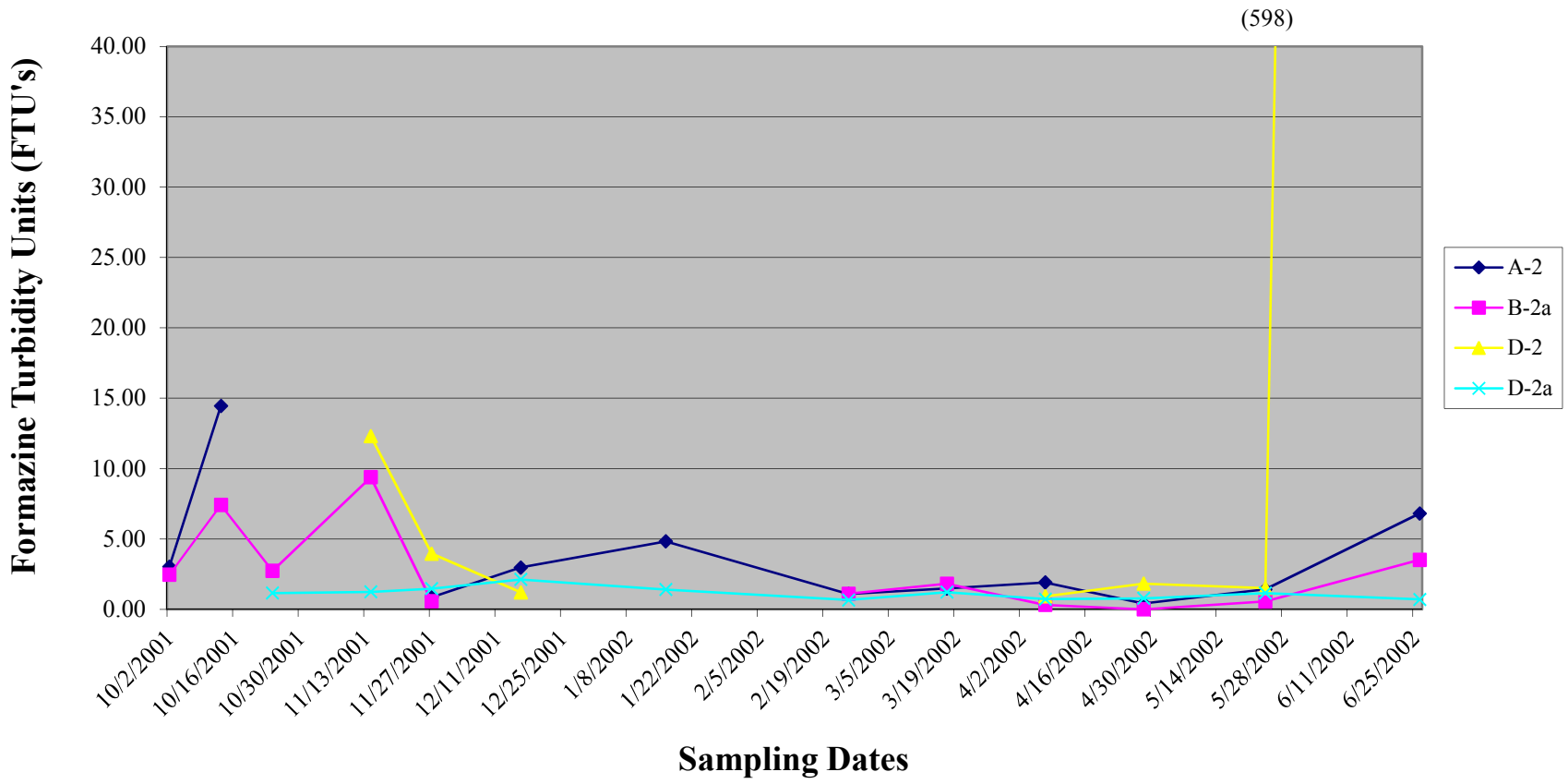
Total Dissolved Solids

Great Meadows GWMW Summary Data: Total Dissolved Solids



Turbidity

Great Meadows GWMW Summary Data: Turbidity



Benefits of Conservation Easement

- Prevention of conversion to development
- Permanent protection of drinking water supply
- Protection of Tier 2 wildlife habitat (best in region)
- Assurance for long-term recreational use of property
- Enhancement for adjacent conservation initiatives

Remaining Steps

- Approve easement at town meeting
- Determine exclusion area below town garage
- Budget closing costs
- Conduct appraisal
- Negotiate transfer with third party (Grantee)
- Agree on terms of CE
- Solicit volunteer land steward
- Coordinate management with Tuftonboro Conservation Commission

Further Recommendations

- Seek additional conservation easements on parcels in the Great Meadows area
- Encourage adjacent property owners to cooperate in protecting the remaining aquifer and wetland areas
- Establish protective legislation for both the aquifer and the wetland area – consider conservation zoning of these resources
- Continue long-term monitoring program of the Great meadows aquifer
- Establish protective easements or covenants on remaining parcels owned by the Town