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“SENSITIVE WATERS GIS PROJECT”

INFORMATION CONTAINED IN THIS GIS PROJECT SHOULD ONLY BE RELEASED TO TRUSTED SOURCES

This project contains three GIS views:

- V1-Sensitive Waters 2006.
- V2-Source Water Assessment Areas/Drinking Water Supply Management Areas.
- V3-Public Water Supply Sources/Wellhead Protection Areas.

VI-SENSITIVE WATERS 2006

The V1 view is used to:

- Assign “sensitive water body” points in Environmental Quality Incentives Program (EQIP) applications if the applicant’s land is within boundaries of Impaired Watersheds and a practice will be implemented to mitigate the impairment.
- Identify stream segments impaired because of turbidity and/or fecal coliforms. Fields draining to these segments may require special emphasis when developing conservation plans and/or nutrient management plans.
- Identify lakes impaired because of nutrients when developing nutrient management plans. Fields draining to these lakes may require special emphasis including evaluation using the University of Minnesota’s Phosphorus Index.

Minnesota Pollution Control Agency 2006 impaired waters data were used to create view V1:

1. **Fecal ‘06, Turbidity ‘06 or Fecal-Turbidity ‘06 Streams.** Reaches of streams impaired because of fecal coliforms, turbidity, or both are color coded to the impairment(s) in this view.
2. **Other Stream Impairments ‘06.** Reaches of streams impaired because of all other reasons receive the same color coding regardless of the impairment. These “other” impaired reaches are presented for information only and are currently not used for conservation planning or EQIP ranking purposes.
3. **PCA ‘06 TMDL Lakes.** Lakes whose uses are impaired are “outlined”. The outlines are color coded to the water quality impairment. The impairment is almost always attributed to excessive phosphorus. Land areas impacting an impaired “lake” are not delineated.
4. **PCA ‘06 Fecal-Turbidity Watersheds.** Hydrologic units that may have the most influence on a stream reach impaired because of fecal coliforms or turbidity are color coded to the impairment.
5. **NRCS ‘06 Impaired Watersheds.** Additional HUs that abut or drain to a PCA ‘06 watershed and that may influence an impaired reach are shown as green to indicate that NRCS selected these HUs. The impairment is the same as the PCA ‘06 watershed that the HU abuts or drains to.

NOTE: PCA and NRCS watersheds shown in V1 can be used to help rank EQIP applications “within” a given county. However, the watersheds were selected by NRCS state staff based on review of state level stream information. In some cases, a HU not shown may impact an impaired reach more than a “shown” HU. **Local judgment is critical when determining if a HU can or should be used for EQIP ranking purposes within a county.**

V2-SOURCE WATER ASSESSMENT AREAS / DRINKING WATER SUPPLY MANAGEMENT AREAS

The V2 view is used:

- When developing nutrient management plans to identify fields needing a nitrogen loss potential evaluation and requiring use of regional nitrogen Best Management Practices.
- When developing pest management plans to identify areas requiring special pest management activities.
- To evaluate EQIP applications. Applicants with fields located within DWSMAs having moderate or greater vulnerability or fields located within vulnerable SWAAs are eligible for “sensitive waterbody” points if the applicant will be implementing either nutrient (590) or pest (595) management.

Minnesota Department of Health (MDH) data was used to develop view V2. It contains the following information:

1. **Public Water Supply Sources (PWSS).** There are thousands of water supply sources (mainly wells) that have been or are being used by the public. These sources are indicated by dots in V2.
2. **Active Sources for SWAA.** PWSSs that have or will have Source Water Assessments conducted as required by the Federal Safe Drinking Water Act are represented by colored squares surrounding the PWSS dot.. Some PWSSs delineate a 200 foot inner management area around their wells. Other PWSSs have preliminary source water assessments developed for them by MDH. Still others are required to conduct detailed source water assessments.
3. **Source Water Assessment Areas (SWAA).** Land surface areas having the most influence on the quality and possibly quantity of a PWSS well, as determined by MDH preliminary source water assessments, are shown by outlines surrounding the PWSS dot.
4. **Vulnerable Source Water Assessment Areas (SWAA).** Shading is added within the boundaries of SWAAs considered vulnerable to contamination based on preliminary assessments.
5. **Drinking Water Supply Management Areas (DWSMA).** Approximately 1500 public water suppliers are required to conduct detailed assessments of their water supplies to help delineate SWAAs. But the boundaries of these delineated SWAAs are referred to as DWSMAs and are shown in view V2 by outlines colored differently than preliminary SWAA boundaries. **DWSMAs are Wellhead Protection Areas (WPAs) with boundaries expanded to definable features such as roads, section lines etc.**
6. **Vulnerability of DWSMA.** The vulnerability of DWSMAs to contamination is shown by different colored shadings within the outlined boundaries of the DWSMA. DWSMAs may encompass more than one well. In some cases those wells draw water from different aquifers and the vulnerability will change within a DWSMA dependent on the aquifer.

NOTE: Information described in 4 and 6 immediately above is the information used for EQIP ranking purposes and nutrient and pest management planning.

V3- PUBLIC WATER SUPPLY SOURCES / WELLHEAD PROTECTION AREAS (WPAs)

The V3 view is only provided because FSA currently does not recognize the term Drinking Water Supply Management Areas (view V2) in its Conservation Reserve Program (CRP). **NRCS staff should use view V2 instead of view V3 for most program and planning activities related to drinking water protection.**

Minnesota Department of Health data was used to develop view V3. It contains the following information:

1. **Public Water Supply Sources (PWSS).** More than 7,000 existing water supply systems in Minnesota are considered as used by the public. These systems are indicated by dots in view V3.
2. **Active/Approved Sources for WPA.** Many PWSSs using groundwater must delineate wellhead protection areas and develop wellhead protection plans for their wells. Locations of those water supplies that have or will have WPAs delineated for them are represented by squares in V3. Many will or have delineated a 200 foot radius inner management zone around their wells. But roughly 1500 water suppliers must delineate a wellhead protection area based on detailed analyses conducted by the water supplier.
3. **Wellhead Protection Areas.** WPAs that have been delineated based on detailed analysis by the water supplier are shown in View V3 as shaded shapes with dark boundaries. WPA vulnerabilities to contamination are not shown. When WPA boundaries are expanded to features definable on the earth's surface they are referred to as Drinking Water Supply Management Areas (DWSMAs). DWSMAs are shown in View V2 along with their vulnerability to contamination.

Click on the following Minn. Dept. of Health site for additional detail on source water protection.
<http://www.health.state.mn.us/divs/eh/water/swp/>

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