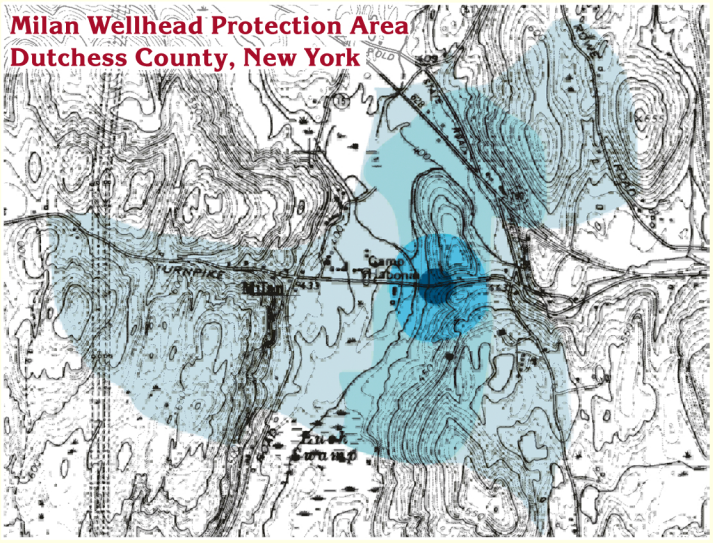
# WELLHEAD AND AQUIFER PROTECTION

***Designate wellhead protection areas and adopt measures against potential sources of aquifer contamination to ensure long-term sources of clean drinking water.***

The cleanup of a contaminated groundwater source can be 30 to 40 times more costly than preventing it in the first place, and some contaminants are virtually impossible to remove. Contaminants can make their way through soil and fractures in the rock to underlying groundwater aquifers, then travel to a water supply well. The pumping action of larger public wells can actively draw contaminants into wells. Unsealed or abandoned wells can further act as direct conduits for contamination of groundwater, as can carbonate geology with its solution channels and sinkholes.

**Milan Wellhead Protection Area**
**Dutchess County, New York**

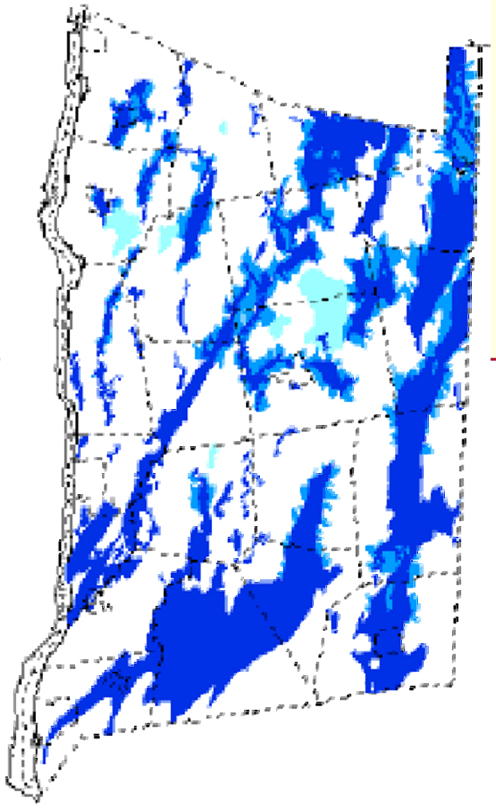


Secondary Management Area
Primary Management Area
1 Year Time of Travel
200-Foot Remedial Action Area

## Define the area to be protected

Choose a method of defining the wellhead and aquifer protection areas, such as:

- Detailed delineation of one or more wellheads or an aquifer area by a professional hydrogeologist.
- Generalized delineation of one or more wellheads by a non-professional.
- Map priority protection areas.



## Dutchess County Aquifer Protection Areas

| | |
|---|---|
| **Zone I** | Permeable deposits directly overlying the aquifer |
| **Zone II** | Less permeable deposits located upgradient from the aquifer |
| **Zone III** | Area which may contribute to the aquifer through stream infiltration |