



## Carlson Hydrology Module

Carlson Hydrology allows the design of runoff control structures including ponds, channels, and culverts during the design of other earth moving projects.

### Surface Runoff Control Structure Design

Watersheds are determined by triangulation of grid points. Runoff volumes and peak flows are calculated based on the weighted average curve number method based upon the types of cover found in a watershed. Erosion is based on the Universal Soil Loss Equation.

### Runoff Control Structure Designs

- Delineate watersheds.
- Size culverts.
- Size channels.
- Size ponds and have the basin and embankment automatically graded into the site design.

### SOFTWARE:

Carlson Hydrology

### SMCRA BENEFITS/USES:

- Allows delineation of the watershed above a chosen point or of an entire gridded area.
- Allows the sizing of basic surface water control structures without going to other software.
- Includes some basic sedimentology analysis.
- Structures are built with on-site materials.

### TIPS TRAINING CLASSES:

CAD301: Carlson Mining; Field, Hydrology, and Natural Regrade for Permitting and Reclamation

### NEED HELP ????

Contact: Chris Kiser  
ckiser@osmre.gov

[www.tips.osmre.gov](http://www.tips.osmre.gov)