



## How to determine the Contributory Drainage Area for a Stream and Why?

Contributory Drainage Area is the area upstream of a proposed or existing dam, water obstruction or encroachment that contributes runoff to a watercourse.

Under the authority of the Dam Safety and Encroachments Act (32 P. S. § 693.1 et. seq.) and 25 Pa. Code Chapter 105, certain structures or activities are regulated along streams and floodways which may negatively result in obstruction of flood waters, increased flooding, water quality, property damage, and health and safety.

Certain activities and structures may qualify for a Chapter 105 waiver in streams with less than 100-acre Contributory Drainage Area. See the DEP list of Waivers for more information 105.12 Waiver of Permit Requirements.

Water Obstructions or encroachments in Streams with greater than 1.0 square mile Drainage Area requires a Joint Permit 3150-PM-BWEW0036. The Joint Permit Package can be found here <http://www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4088>

How to calculate the Contributory Drainage Area for your project using USGS Stream Stats:

1. Go to <https://streamstats.usgs.gov/ss/>
2. Search for a place, may enter exact address or town name or zip code or county
3. Select State as [Pennsylvania](#) for Study Area
4. Zoom into see blue streams appear on screen
5. Locate your exact project location, change the Base Maps in the upper right to imagery or other base maps as needed
6. Click the [Delineate](#) Button to activate delineation tool
7. Click on the stream reach location closest to your project location, should see that your clicked point is valid and delineating basin in progress
8. A yellow delineated drainage basin will appear on the screen
9. Now, on the lower left select [Continue](#) button
10. Under Basin Characteristics drop down arrow select Drainage Area ([DRNAREA](#))
11. Then scroll all the way down and hit [Continue](#) to calculate selected basin characteristics
12. The selected basin characteristics report to display is checked, click [Continue](#) to see the report
13. Recommend [print](#) to PDF to save the report
14. The value is given in square miles, but need to convert to acres
15. Use an online google search to find [calculator for Square Miles to Acre conversion](#), enter the value from the report into the square mile side of the calculator and the acre conversion will be given on the acre side of the calculator. Or use the conversion factors: 1 acre =0.0015625 square miles and 1 square mile =640 acres