

Dirt, Gravel, and Low Volume Road Program
FY 2020-21 Allocation Formula for Low Volume Road Allocations
6/18/2020

Formula is unchanged since previous year

Miles Urban Road > 500' to Stream X 1 = A (*urban, no stream*)

Miles Urban Road < 500' to Stream X 3 = B (*urban, stream*)

Miles Non-Urban Road > 500' to Stream X 3 = C (*non-urban, no stream*)

Miles Non-Urban Road < 500' to Stream X 4 = D (*non-urban, stream*)

Miles of road near HQ/EV stream X 1 = E (*HQ/EV "bonus"*)

$$\text{County Allocation} = \left(\frac{\text{A + B + C + D + E for County}}{\text{A + B + C + D + E for State}} \right) \times \text{Total to be distributed to Counties}$$

How LVR Allocation Formula Works:

Each county receives points for miles of road in the four categories above (A, B, C, and D above represent these "points"). Points are based on the miles of road in each category, multiplied by the weighting factor for that category (1, 3, 3, 4 respectively). Miles of roads in any of the four categories above are given an additional "bonus" weighting of X1 if they are within 1,000' of a High Quality or Exceptional Value stream. A County's points are totaled, and divided by the statewide point total to obtain a percentage for each county. If a county has 2% of the statewide point total, they would receive 2% of the allocation. A minimum allocation of \$40,000 and a maximum allocation of \$550,000 is also in effect.

Definition of GIS Data Used:

- **"Miles" of road:** data from PennDOT Local Road Data Management System from 2020.
 - Includes State roads with less than 500 ADT.
 - Includes all paved municipal roads. (*ADT counts not available statewide*)
 - Does not include unpaved roads, Federal roads, or other state roads such as Gamelands or State Forest.
- **"Urban":** road classification based on 2018 US Census classification of "urban areas".
- **"Streams":**
 - "blue-line" channels as defined by USGS in the National Hydrography Dataset in 2019.
 - Chapter 93 (High Quality / Exceptional Value) from DEP updated in 2019.

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$$\begin{array}{l} \text{Worksites} \\ \text{Factor} \end{array} \quad \mathbf{50\%} \quad = \quad \frac{\text{County Miles of Worksites}}{\text{State Miles of Worksites}}$$

$$\begin{array}{l} \text{Unpaved Road} \\ \text{Factor} \end{array} \quad \mathbf{45\%} \quad = \quad \begin{array}{l} \text{Miles of Unpaved Road in} \\ \text{County} \end{array} \quad + \quad \begin{array}{l} \text{Miles of Unpaved Road in County} \\ \text{within 1,000' of HQ/EV stream} \end{array}$$

$$\begin{array}{l} \text{Stone Cost} \\ \text{Factor} \end{array} \quad \mathbf{5\%} \quad = \quad \frac{\text{Stone Cost in County (minus)- Minimum Stone cost in State}}{\text{Minimum Stone cost in State}}$$

How D&G Allocation Formula Works:

"Worksites" are road segments that are causing stream impacts, and have been field verified by Conservation Districts. Allocations are determined by creating an index value for each county using the above formula and weighting. Each county's index value is then compared to the statewide total of index values to obtain a percentage. A county whose index value is 2% of the statewide total would receive 2% of the funding. A minimum allocation of \$100,000 and a maximum allocation of \$1,375,000 are also in effect. All data derived from Conservation District GIS records.