

## 12. Watershed Enhancement Areas

The Watershed Conservation Analysis (Chapter 10) selected the top 20% high-quality watersheds in the Pennsylvania region in terms of high water quality and ecological value. The Watershed Restoration Analysis (Chapter 11) set apart the bottom 20% of watersheds in the region. These watersheds were determined to be in the worst condition of all watersheds in the region, and appear to be in need of immediate rehabilitation for a variety of reasons. This portion of the study, termed “Watershed Enhancement Areas,” addresses the middle 60% of watersheds that cover the rest of Pennsylvania. These watersheds reflect conditions that are likely not pristine, and are prime candidates for restoration action because they are not as severely degraded as the Restoration watersheds (Chapter 11). The restoration of these Watershed Enhancement Areas will likely yield the most significant ecological gains for the amount of conservation dollars spent.

Watersheds in the Enhancement category are divided into two tiers (Figure 12-1), like watersheds discussed in the Preservation and Restoration chapters (10 and 11). Tier 1 watersheds represent areas of better water quality and watershed condition than those with Tier 2 status. The methodology for determining the tiers was similar to that applied in selecting the tiers in the Watershed Conservation analysis. Watersheds were selected for Tier 1 restoration status if they met at least two of the three following criteria:

- Have at least one Least-Disturbed Stream (LDS; Chapter 9) reach in the watershed
- Have at least one stream reach with a Biological Metric score above the 80th percentile for macroinvertebrates or fish
- Have at least one occurrence of a high-quality biological community (Table 10-1)

The Tier 1 criteria identified roughly half of these middle-category watersheds. The remaining watersheds in the Enhancement category were designated as Tier 2.

Tier 1 Enhancement watersheds represent areas that are in the top half of this middle category; they are likely in good condition but face some threats to water quality that should be addressed. These watersheds probably do not require immediate action but should be considered in restoration projects because they may only need a relatively small amount of effort to greatly enhance their water quality and biological condition.

Tier 2 Enhancement watersheds represent the bottom half of the Enhancement category. They are likely to have significant water quality and watershed condition issues and could benefit greatly from restoration action. Without restorative action, watersheds in this category will probably fall into the “Restoration” category over time. Because the Tier 2 category represents watersheds that are exceptionally close to the worst conditions found in the region, these catchments are likely in the most immediate need of restoration action.

It is important to note that these Enhancement watersheds, like any of the other watersheds discussed in this report, may be degraded at different levels of severity for a variety of reasons. The watersheds listed as part of this Enhancement category should be used only to guide conservation efforts; on-the-ground site visits and knowledge of specific streams and watersheds will be needed to verify conditions that have been described here. The most common water quality problems in Pennsylvania are discussed in Chapter 11.

### Related Shapefiles:

Watershed\_Enhancement\_Areas.shp



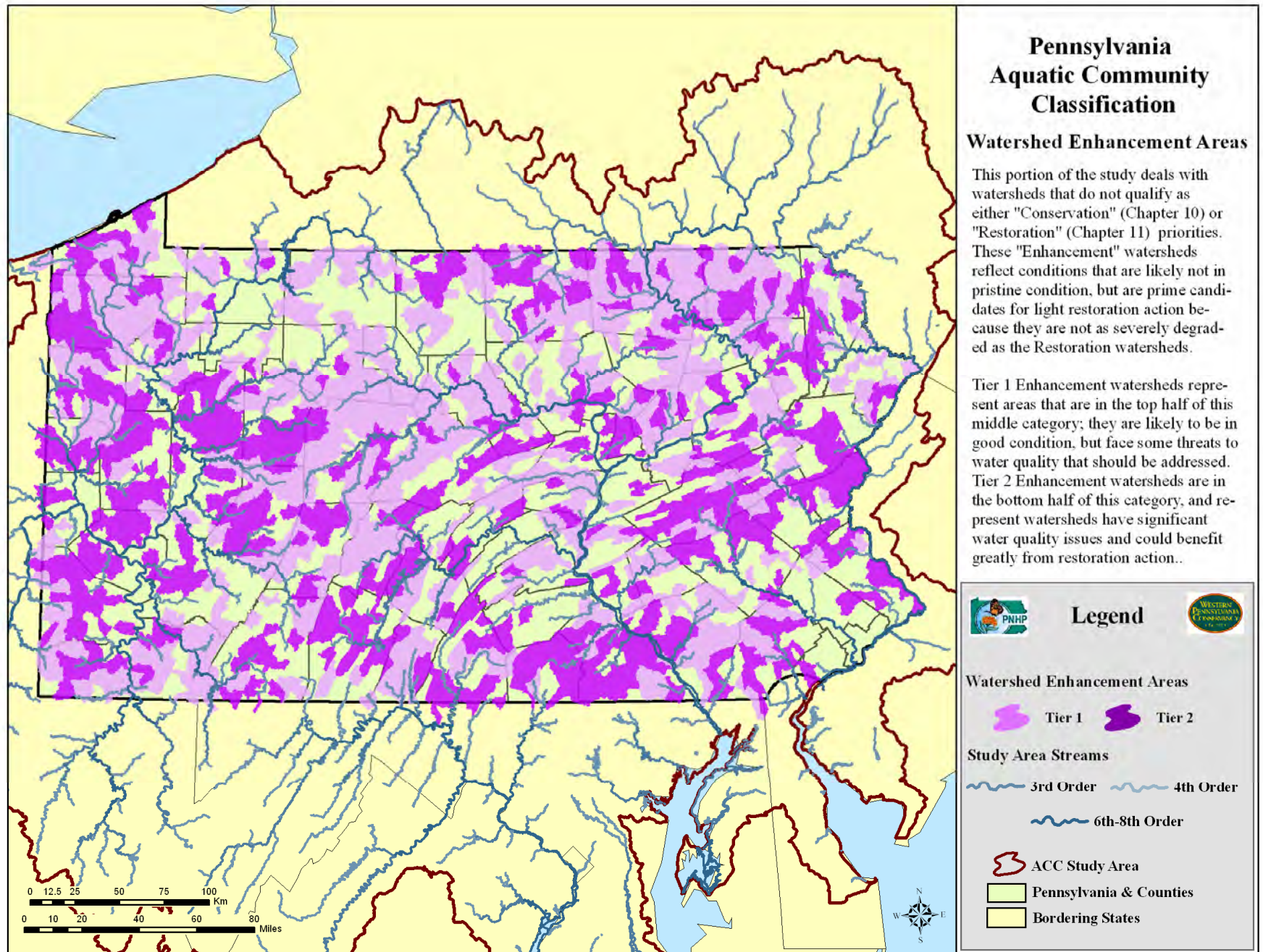


Figure 12-1. Watershed Enhancement Areas for Pennsylvania.