

Initial Land Use and Wastewater Classification for 2017 Mid-point Assessment

1. Developed
 - a. Impervious
 - i. Connected (via storm drain or proximity to waterway)
 1. Regulated (inside MS4/CSO)
 - a. Low-density Residential
 - b. High-density Residential
 - c. Mixed Commercial/ Residential
 - d. Commercial
 - e. Industrial/ Institutional
 2. Unregulated (outside MS4/CSO)
 - a. Low-density Residential
 - b. High-density Residential
 - c. Mixed Commercial/ Residential
 - d. Commercial
 - e. Industrial/ Institutional
 - ii. Disconnected
 1. Regulated (inside MS4)
 - a. Low-density Residential
 - b. High-density Residential
 - c. Mixed Commercial/ Residential
 - d. Commercial
 - e. Industrial/ Institutional
 2. Unregulated (outside MS4)
 - a. Low-density Residential
 - b. High-density Residential
 - c. Mixed Commercial/ Residential
 - d. Commercial
 - e. Industrial/ Institutional
 - b. Pervious developed (e.g., turf grass)
 - i. Connected (via storm drain or proximity to waterway)
 1. Regulated (inside MS4/CSO)
 - a. Low-density Residential
 - b. High-density Residential
 - c. Mixed Commercial/ Residential
 - d. Commercial
 - e. Industrial/ Institutional
 2. Unregulated (outside MS4/CSO)
 - a. Low-density Residential
 - b. High-density Residential

- c. Mixed Commercial/ Residential
 - d. Commercial
 - e. Industrial/ Institutional
 - ii. Disconnected
 - 1. Regulated (inside MS4)
 - a. Low-density Residential
 - b. High-density Residential
 - c. Mixed Commercial/ Residential
 - d. Commercial
 - e. Industrial/ Institutional
 - 2. Unregulated (outside MS4)
 - a. Low-density Residential
 - b. High-density Residential
 - c. Mixed Commercial/ Residential
 - d. Commercial
 - e. Industrial/ Institutional
 - f. Industrial/ Institutional
 - c. Roads
 - i. Federal vs. state vs. other?
 - d. Construction
 - i. Proportion of land with active sediment/erosion control permits; or
 - ii. Annual change in impervious cover * factor representing disturbed acreage
2. Extractive
- a. Disturbed or permitted acreage
 - b. Distinguished by type: quarries/gravel pits, surface coal mines, and reclaimed mines
 - c. Shale gas pads and associated infrastructure
3. Natural/ Managed Natural
- a. Uplands
 - i. Forested (with unmanaged understory- differentiated by species/age/"health")
 - 1. Floodplain forests
 - 2. Riparian forests
 - 3. Harvested
 - ii. Wooded (with managed/ turf grass understory)
 - 1. Urban wooded (e.g., urban tree canopy)
 - 2. Rural wooded
 - b. Wetlands
 - i. Floodplain wetlands
 - ii. Forested wetlands
 - iii. Emergent/tidal wetlands
 - c. Water (all non-tidal water area)
4. Agriculture

- a. High Till (i.e., conventional tillage)
 - i. Manure (e.g., corn, soybeans, wheat, barley, dry beans, and more)
 - 1. Nutrient management (request to drop this distinction)
 - 2. No nutrient management
 - ii. No manure (e.g., cotton, tobacco, Irish potatoes, orchards, and vegetables)
 - 1. Propose revising this land use (VA comments)
 - 2. Nutrient management (request to drop this distinction)
 - 3. No nutrient management
 - b. Low Till (i.e., conservation tillage)
 - i. Manure (e.g., corn, soybeans, wheat, barley, dry beans, and more)
 - ii. Nutrient management (request to drop this distinction)
 - c. Hay
 - i. Nutrients applied (e.g., tame and small grain hay, failed cropland)
 - ii. No nutrients (e.g., wild hay, idle cropland, fallow land)
 - iii. Nutrient management (request to drop this distinction)
 - iv. Alfalfa
 - 1. Nutrient management (request to drop this distinction)
 - 2. No nutrient management
 - d. Pasture
 - i. Nutrient management (request to drop this distinction)
 - ii. No nutrient management
 - iii. Degraded riparian (i.e., unfenced riparian pasture)
 - e. Nursery
 - f. Animal Feeding Operations (converted to acres based on animal density assumptions)
 - i. Regulated (CAFOs)
 - ii. Unregulated (AFOs)
5. Wastewater
- a. Population on Sewer
 - i. Improve maps of areas served by sewer and relate areas to individual plants and their efficiencies.
 - b. Households on septic
 - i. Distinguish different types of systems: commercial/retail, mass drain fields, failing systems, and direct discharges
 - ii. Adjust soil attenuation rates based on distance to waterways
 - iii. Examine relationship between household size assumptions, # of systems, and loads.