

1 **Appendix D. Procedures for Preparing and Processing Landuse**
 2 **Data**

3 GAP Reclassification

4 The overall land cover classification system for Gap Analysis refers to the surface cover on
 5 the ground and consists of three primary categories: natural terrestrial cover (Terrestrial), natural
 6 aquatic cover (Palustrine), and cultural or developed cover (Developed). Each of these is
 7 subsequently classified according to specific attributes shown in Table 18.

8 Reclassification of the 1992 GAP data was undertaken to more accurately compare GAP data
 9 to the 2001 digitized landuse data. From the 1992 GAP land cover classifications and basic
 10 familiarity with the watershed, general landuse classifications were inferred for the watershed.
 11 Landuse differs from land cover in that it refers to the purpose for which the land is being used.
 12 Landuse classification descriptions are also shown in Table 18.

13 **Table 18. GAP landuse classification**

GAP Class/Value	Land Cover Description	Landuse classification
1	Unclassified: Cloud/Shadow	
2	Developed: Other Non-Vegetated	Commercial/Industrial
3	Developed: Urban High Density	Commercial/Industrial
4	Developed: Urban Low Density	High Density Residential
6	Developed: Agriculture Row Crop	Agriculture
7	Developed: Agriculture Pasture/Grassland	Agriculture
8	Terrestrial: Shrubland Deciduous	Forest/Wetland
9	Terrestrial: Woodland Deciduous	Forest/Wetland
10	Terrestrial: Forest Deciduous	Forest/Wetland
11	Terrestrial: Forest Evergreen	Forest/Wetland
12	Terrestrial: Forest Mixed	Forest/Wetland
13	Palustrine: Forest, Deciduous	Forest/Wetland
14	Palustrine: Woodland Deciduous	Forest/Wetland
15	Palustrine: Shrubland Deciduous	Forest/Wetland
16	Palustrine: Herbaceous Deciduous	Forest/Wetland
17	Palustrine: Sparsely Vegetated Point Bar/Flood Zone/Shoreline	Forest/Wetland
18	Water	Water



2001 Digital Aerial Photographs

Black and white digital aerial photographs, taken in March 2001 with six inch pixel resolution, were provided by Johnson County government. These photographs were imported into ArcView and used to digitize 2001 landuse for the Youngs Creek Watershed. Landuse categories were created primarily to assess impervious cover in the watershed. The classification, description, and criteria used to classify the landuses are listed in Table 19.

Table 19. Classification, description, and criteria for the 2001 landuse layer

Classification	Description	Criteria
Roads	Major roadways	4-lane highways
Commercial/Industrial	Commercial and Industrial areas	Areas characterized by non-residential buildings, usually surrounded by parking lots
High Density Residential	High Density residential areas	Subdivision developments and high-density urban housing with lots typically less than 1/3 acre
Low Density Residential	Low density residential areas	Rural farmsteads and isolated houses outside urban areas
Agriculture	Pasture and Row Crop	Large fields/tracts of land that do not contain forests, houses, or other buildings
Forest/Wetland	Areas covered with forest or woodland	Any land covered with dense tree stands
Water	Open water	Visible ponds and lakes

The digitizing of 6-inch pixel aerial photographs provided a much more accurate view of landuse in the watershed than GAP data provided. The photographs allowed the detection of rural residential areas (isolated homes and farmsteads) that were not detected by GAP analysis. However, accurately differentiating between forest and wetland was not possible on the black and white photographs, so these two categories were combined.

2001 Zoning Map

A digital copy in AutoCAD format of the February 2002 zoning map for Johnson County was obtained from the county Surveyor’s Office. The county map consisted of nine separate AutoCAD files, one for each township in the county. These maps were imported into ArcView, and the 2001 landuse layer for the Youngs Creek Watershed was overlaid. Areas that were zoned for residential development that were not already classified as residential were digitized onto the existing 2001 landuse map and classified as “high density residential.” The categories, descriptions, and criteria in the 2001 zoning map are identical to those used in the 2001 landuse layer, listed in Table 19.

