

## **PART II**

## **SECTION 5: Framework of Institutional and Regulatory Responsibility**

**Section 5 describes the responsibilities of federal, state, and local government agencies for mandatory and voluntary programs, policies, and regulations.**

Neither the MPPDC nor its Dragon Run Steering Committee has regulatory authority. Rather, they serve to encourage and facilitate local-local and state-local government cooperation in addressing regional issues. Consisting of elected officials and citizens appointed by member local governments, the MPPDC and the Dragon Run Steering Committee offer recommendations and technical assistance to the localities. The MPPDC's purpose is "to promote the orderly and efficient development of the physical, social and economic elements of the Planning District by planning, and encouraging, and assisting governmental subdivisions to plan for the future" (MPPDC, 1972).

The Virginia Coastal Program is a system of state laws and policies administered by a network of core agencies and coastal localities that manage a variety of coastal resources. The Department of Environmental Quality (DEQ) serves as the lead agency for Virginia's networked Coastal Program and helps agencies and localities to develop and implement coordinated coastal policies.

Within the context of the SAMP, county governments are responsible for long-range planning of public facilities, utilities, transportation, and land use, and for developing, implementing, reviewing and updating the local Comprehensive Plan, Zoning Ordinance and other ordinances. Through Boards of Supervisors, Planning Commissions, and staff, counties process and review rezoning, conditional use permits, special exceptions, site plans, and subdivisions. Therefore, counties implement land use policies and regulations.

Counties also have responsibility for implementing the Chesapeake Bay Preservation Act (Bay Act). The Chesapeake Bay Local Assistance Department (CBLAD) is charged with oversight of local implementation of the Bay Act and the Chesapeake Bay Preservation Area Designation and Management Regulations. The Bay Act (§10.1-2100 et seq.) requires that localities protect water quality by establishing and protecting Chesapeake Bay Preservation Areas, including wetlands, shorelines, and a 100-foot buffer.

The Virginia Department of Conservation and Recreation (DCR) administers: 1) the Coastal Nonpoint Source Pollution Control Program under authority of Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990; 2) the Nonpoint Source Pollution Management Program under authority of Section 319 of the Clean Water Act of 1987; 3) the Virginia Stormwater Management Program; 4) the Erosion and Sediment Control Program; 5) the Nutrient Management Program; and 6) and the Chesapeake Bay and Tributary Strategies Programs. DCR's Natural Heritage Program reviews development proposals that might affect the state's natural heritage resources (e.g. rare species and natural communities). DCR's Shoreline Erosion Advisory Service offers assistance to landowners experiencing erosion problems.

The authority to issue National Pollutant Discharge Elimination System (NPDES) permits lies with the DEQ. Furthermore, the DEQ regulates air quality, waste management (e.g. landfills), ground water management, water withdrawal, and petroleum storage tanks. The DEQ is also responsible for setting state water quality

standards and preparing the 305(b) Water Quality Assessment Report and the 303(d) Report on Impaired Waters. Impaired waters do not meet water quality standards and usually require the development of a Total Maximum Daily Load (TMDL) report. The implementation of TMDLs may require regulations governing discharges and nonpoint source pollution to impaired waters.

The Virginia Department of Game and Inland Fisheries (DGIF) regulates hunting, freshwater fishing, and boating. Furthermore, the DGIF maintains public boating access sites. The DGIF also regulates threatened and endangered species.

The U.S. Army Corps of Engineers' Norfolk District Regulatory Branch (ACOE) regulates waters and wetlands under the authority of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.

The Virginia Marine Resources Commission's Habitat Management Division (MRC) regulates physical encroachment into bottomlands, tidal wetlands, and coastal primary sand dunes under Subtitle III of Title 28.2 of the Code of Virginia. The permit process is the joint responsibility of local wetlands boards, the MRC, the DEQ (Section 401 certification), and the ACOE. Additionally, the MRC regulates saltwater fishing.

The Virginia Department of Forestry (DOF) has authority to regulate forestry operations throughout the state. Silvicultural activities are exempt from most laws such as the Clean Water Act, the Chesapeake Bay Preservation Act, and Erosion and Sediment Control. In exchange for these exemptions, silvicultural activities must comply with Best Management Practices designated by DOF in *Virginia's Forestry Best Management Practices for Water Quality, 4<sup>th</sup> Edition* (2002). DOF has responsibility for inspecting forestry operations, reporting violations, and enforcing regulatory requirements.

The Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture administers: the Conservation Reserve Program; the Conservation Reserve Enhancement Program; the Environmental Quality Incentives Program; the Farm and Ranch Lands Protection Program; the Forest Land Enhancement Program; the Wetland Reserve Program; and the Wildlife Habitat Incentives Program. The NRCS helps private landowners conserve soil, water, and other natural resources through technical assistance, cost sharing, and financial incentives. The NRCS also provides assistance to local, state, and federal agencies.

## **SECTION 6: Watershed Characterization**

**Section 6 describes the watershed in detail to establish the Dragon Run's current status. Physical and environmental features are characterized. Land use policies and recreational and educational activities are assessed. This information is designed to serve as a baseline to which to compare the success or failure of the watershed management plan in achieving its goals and objectives. Finally, gaps in the baseline information are identified.**

## Physical and Environmental Factors

Located entirely within the coastal plain physiographic province, Virginia's Middle Peninsula is bracketed by the Rappahannock River to the north, the York River to the south, and the Chesapeake Bay to the east. The Dragon Run watershed is the Middle Peninsula's geographic centerpiece, expanding outward from its 40-mile fresh and brackish water stream that runs through Essex, Gloucester, King and Queen, and Middlesex Counties. The watershed encompasses 90,000 acres or 140 square miles and exhibits topography typical of coastal plain stream systems in Virginia (**Figure 5**). Watershed area by locality is shown in **Table 2**.

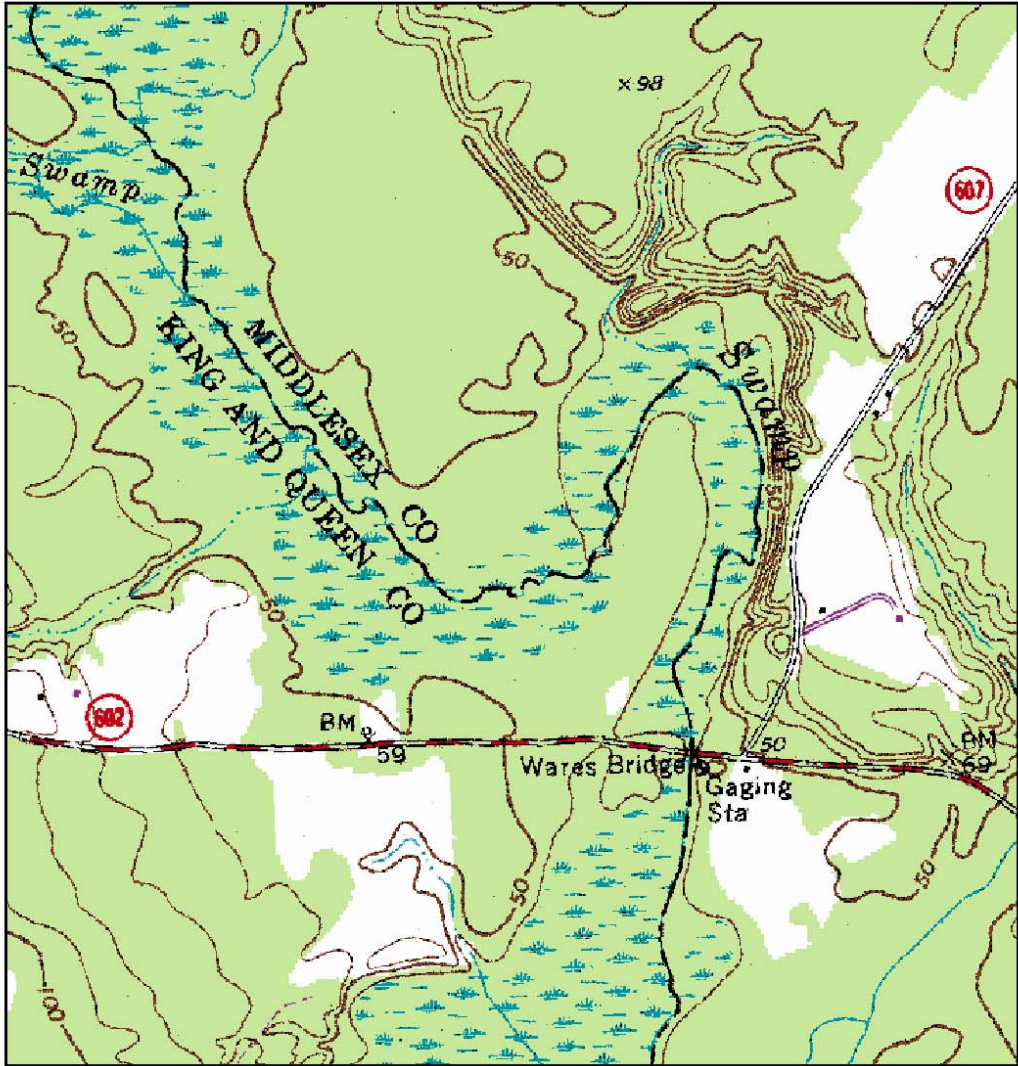
County	Area within Locality (acre)	% of Total Watershed	% of Locality within Watershed
Essex	18466.6	20.6	10.1
Gloucester	5671.7	6.3	3.1
King and Queen	46425.1	51.7	22.2
Middlesex	19207.7	21.4	16.3
Total	89771.1	100	

**Table 2.** Dragon Run watershed statistics by locality (from MPPDC, 2001).

The Dragon Run watershed, state hydrologic unit CO2, is a fourth-order stream system that is nontidal freshwater above the U.S. Route 17 bridge and tidal freshwater from the U.S. 17 bridge to its mouth at Meggs Bay (**Figure 6**). There it forms the Piankatank River, where it becomes estuarine, and eventually drains into the Chesapeake Bay (**Figure 7**). Underground springs, feeder swamps, and surface waters support streamflow in the Dragon Run. Significant tributaries include Dragon Swamp, Yonkers Swamp, Exol Swamp, Timber Branch Swamp, Briery Swamp, Holmes Swamp, White Marsh, Zion Branch, Carvers Creek, Mill Stream, and Meggs Bay (MPPDC, 2001).

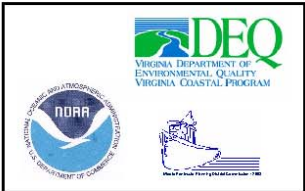
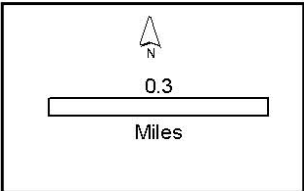
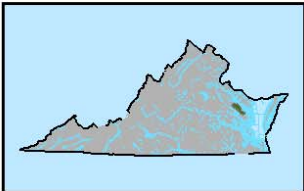
Land cover data indicate that the watershed is 80.3-83.9% forested and wetlands, 15.1-18.4% agricultural, and 1.0-1.3 % commercial and residential (**Figure 8**) (MPPDC, 2002; DCR, 2003). The Dragon Run watershed lies within the transitional Oak-Pine vegetation region where dominant oaks share the forest with Virginia pine, shortleaf pine, and loblolly pine. Although loblolly pine originally appeared in the forest as scattered associates of oaks and other hardwoods, loblolly pine plantations are increasingly common.

Since the watershed is relatively intact, it contains many unique resources. For example, the Baldcypress-Tupelo Swamp community is extensive and is the northernmost example of this community type in Virginia and the best example north of the James River (Belden, Jr. et al., 2001). Natural heritage resources are abundant in the Dragon Run (**Figure 9**). Several rare natural communities occur in the Dragon Run, including Baldcypress-Tupelo Swamp, Tidal Baldcypress-Tupelo Swamp, Tidal



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This map production is a product of the MPPDC's Dragon Run SAMP and was funded by the Virginia Department of Environmental Quality's Coastal Program through Grant #NA17OZ1142-01 of the National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resources Management, under the Coastal Zone Management Act of 1972, as amended.

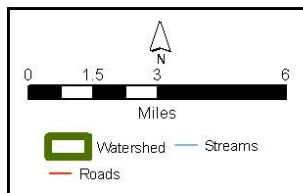
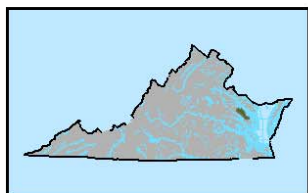


**Figure 5.** U.S. Geological Survey topographic map of the Dragon Run watershed in Middlesex and King and Queen Counties.



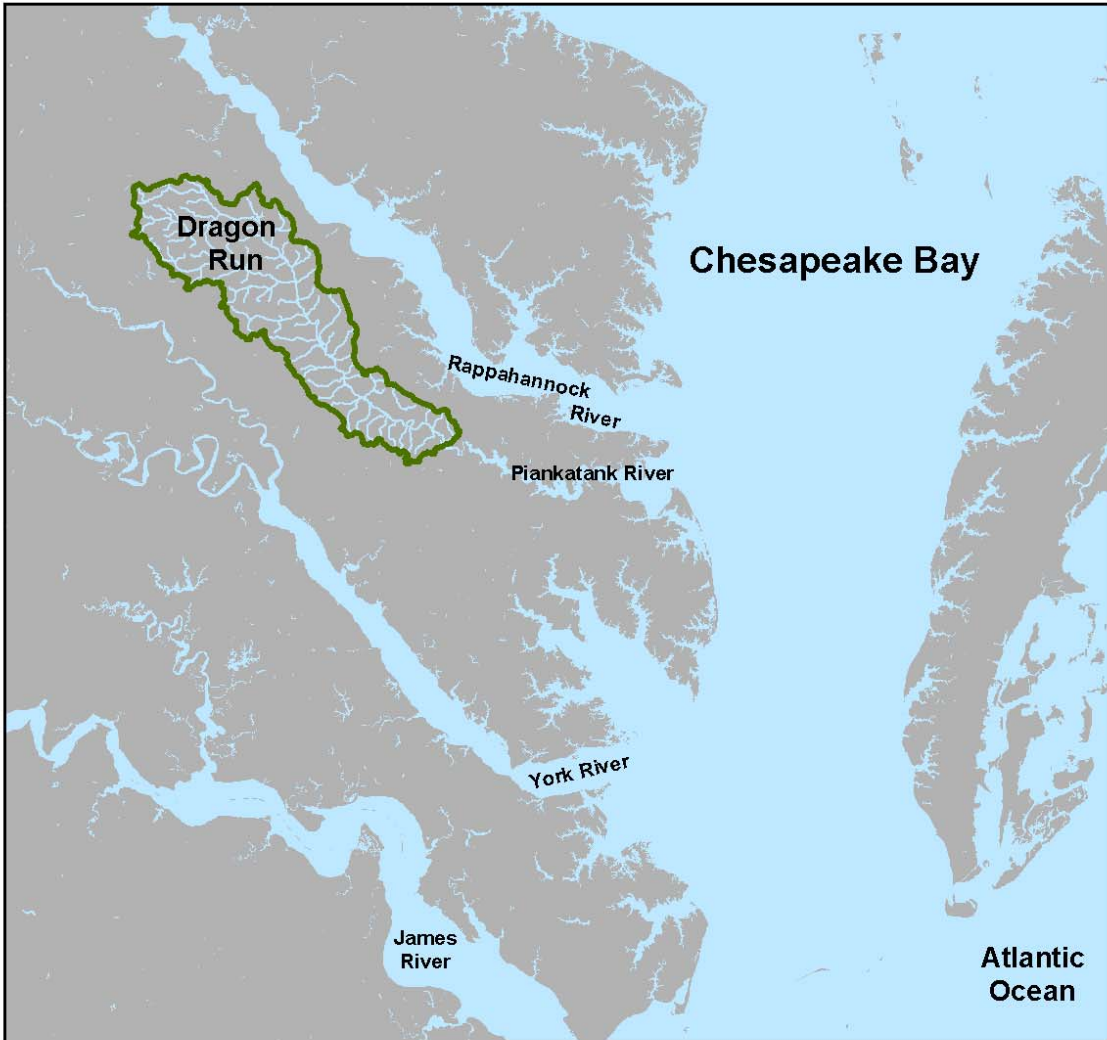
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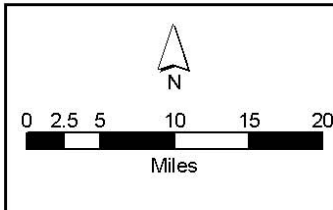
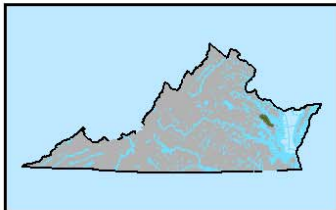
**Figure 6.** Map of the Dragon Run watershed boundary showing villages and towns.



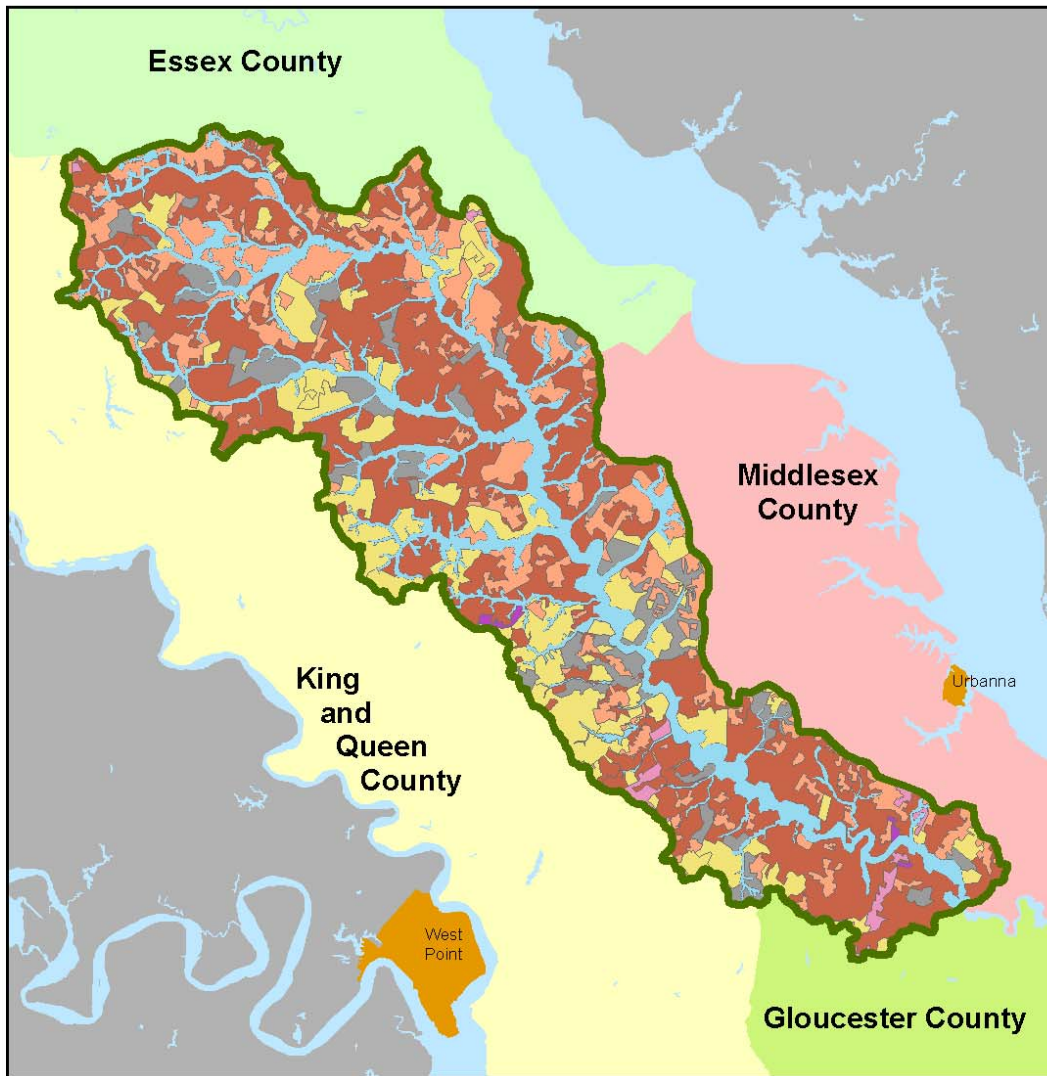


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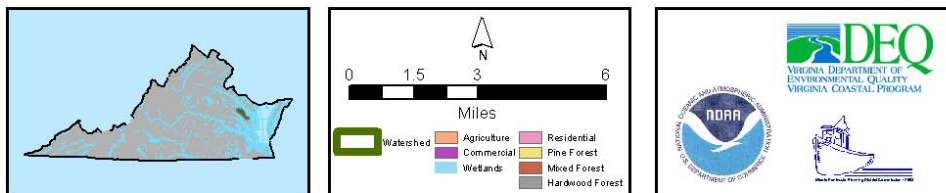


**Figure 7.** Map showing the Dragon Run watershed (in green) flowing into the Piankatank River and ultimately into the Chesapeake Bay.



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**Figure 8.** Land cover designations in the Dragon Run watershed.