

NAO-2007-04262-GDC

---

**Selected Water**

---

**Folder** NAO-2007-04262-GDC  
**Form** JD2  
**Name** Wetland 35ac  
**Local Waterway** New Market Creek

**Determination**

---

**Type** Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

**Area** 140790.12024

**Characteristics of all wetlands adjacent to the tributary**

---

All wetland(s) being considered in [ ]

Directly Abuts? 

Summarize overall biological, chemical and physical functions being performed

A. These wetlands provide a source of higher quality water to the tributary system and James River than would developed sites. By the relatively impervious nature of the soils and seasonally high water table, the site detains water and allows it to settle, thereby being subjected to the wetland's filtering properties, the water that runs from this site into interstate waters is of higher quality than from sites with less detention. Also, the detention times for water in wetlands such as these provide the function of de-nitrification; or bacterial uptake of nitrogen during anaerobic conditions. Nitrogen is a deleterious pollutant that does significant harm to receiving waters, and is also usually bound to sediment runoff. The James River has experienced problems with red algal tides due to N and P loading. Red tides harm aquatic organisms. B. The wetland's leaf litter and root mat at the soil surface, along with its vegetation, make it very stable during rain events, resulting in minimal discharge of sediment in runoff from the site. If this site's wetlands were cleared and developed, there would inherently be more discharge of sediment into the tributaries to interstate waters. Long term water quality of the inputs from this site to receiving waters would be degraded post development from chemicals associated with asphalt and other construction materials, petroleum products from vehicles, trash, and etc. Also, the faster rates of storm-water runoff from hardened surfaces will carry more of these pollutants into receiving waters, along with causing more erosion within the tributary to the receiving waters. Experience with similar sites and with the study of stream processes has shown this to be highly probable and predictable. C. In the aggregate, the hundreds or thousands of acres of wetlands in this part of the James River watershed would be similarly affected, and the detriments to interstate waters outlined in A and B above would be multiplied in the aggregate by the loss across the entire system over time. With development pressures in Southeastern Virginia, unregulated wetlands would not last long. The negative impact would actually be exponential, because the sum of the whole, if lost, would be greater than the proportion of any individual or project specific loss. It would potentially cause degradation to the navigable capacity (siltation) and water quality of the James River and its tributaries. Experience has shown similar degradations on other watersheds that have experienced similar development and loss of wetlands in their upstream reaches. Examples are the Elizabeth River, Chesapeake Bay, and western rivers where the shellfish have now become threatened or endangered.