1. THE MEADOWS

Native meadows in highly developed areas of Fairfax County are extremely rare. Salona's meadow complex is special. In describing the three meadows located along Dolley Madison Boulevard, the Cultural Landscape Report, written by John Milner & Associates, consultants to FCPA, stated: "According to Charles Smith of the Park Authority, altogether, the three fields, referred to as the eastern, western, and central fields, comprise the largest remaining open meadow in this part of Fairfax County." This area could provide a rich resource for walking, nature observation, student historical and environmental education and scientific inquiry.

The high conservation value of the meadows stems in part from their species richness, particularly that of the central field. Diverse meadows can support up to 40 species of plant per square meter; Salona boasts 42 identified species thus far. High floral diversity in turn leads to a high diversity of invertebrates and birds that are dependent upon them. The presence of regionally-rare plants such as the Big Bluestem in the central meadow adds further to the meadows' value.

Salona's meadows form the basis of a rich food web and a complex ecological system. Their location in the headwaters area of Pimmit Run and their sensitivity to nutrient and water level changes in the wider catchment makes them important early indicators of environmental change. They yield substantial benefits to the area as a natural system of stormwater management. And they provide a rare opportunity for nature study in a region where nature centers are perennially overbooked by school groups.

2. WETLANDS and STREAMS

Wetlands offer valuable services to wildlife and humans. They host rare and endangered species, e.g. amphibians which depend on them for food, habitat, hibernation and reproduction. These areas also capture and filter storm and flood waters, removing contaminants and preventing property damage. It is possible to construct replacement wetland, although it is less expensive and offers more certain ecological results to protect the natural wetlands (American Rivers).

Two wetland areas at Salona are federally protected, and need new mapping and study in order to determine how they currently interact with nearby streams.

Pimmit Run's 'Salona' tributary waters are in fair condition. The stream banks and channels are in good to fair condition. The three main problems for water quality are fecal coliform, nitrogen, and phosphorus levels. Intact meadows provide valuable ecosystem services by filtering these pollutants. In addition, the Salona tributary suffers high flow/low flow problems due to upstream development, resulting in stream erosion and sediment loading problems.

In considering proposals for development, planners should consider carefully their impact on Salona's wetlands and streams

THE VALUE OF A PERENNIAL STREAM STUDY

Under the Chesapeake Bay Preservation Act and the Code of Virginia, Fairfax County protects its perennial streams via designated Resource Protection Areas (RPAs). An area that has been designated as an RPA is subject to strict development limitations. The mapped RPA at Salona is more than 10 years old, and stream courses can shift frequently in response to natural conditions.

The Task Force asked to conduct a study of whether there should be any change in the perennial stream designation at Salona. A change in the RPA designation would affect any development that could occur there. Up-to-date, accurate knowledge of the correct RPA designation at Salona before development plan submission, rather than after, would help planners to make informed recommendations for development of Salona Park, including making a more accurate evaluation of the impact of development options on the streams, wetlands, and hedgerow integrity. The County has not yet reported any results of such a study.

Fairfax County's Approach to Site Planning

Under the County's rules and procedures, there must be a site plan before there is any ground disturbing activity. This plan must be reviewed by all applicable agencies to ensure that it meets all standards for environmental protection and stormwater management, as well as for traffic, parking, size, safety, and zoning. Under current practice, the site plan is created just prior to construction, after funding has been appropriated. This means that proposals for development, including those made by the Park Authority, may subsequently be found not to meet the required standards, and new proposals must be prepared, requiring that the approval process be repeated. An integrated conservation area planning process that allows for a study to determine whether a proposal for development prior to site plan development meets environmental standards would make this iterative process unnecessary.