

**MASTER PLAN REPORT  
DOVES LANDING  
PRINCE WILLIAM COUNTY, VA**



Coles Magisterial District  
Prince William County, Virginia

## OUTLINE

- I. Project History/Background
- II. Project Objectives
- III. The Master Plan Process
- IV. Site Inventory/Analysis
  - Land Use/Comprehensive Plan
  - Viewsheds
  - Forest
  - Flora/fauna
  - Existing Utilities
  - Hydrology
  - Topography
  - Soils/Geology
  - Cultural Resources
- V. Site Development Constraints
  - Sensitive Environmental Areas
    - Habitat inventory
    - Wetlands
    - Flood plains
  - Historic Significance Areas
  - Potential Development Areas
- VI. Program Development
  - Citizen Input
  - Program Uses
- VII. Development Concept Plans
  - Concept Plan (A)
  - Concept Plan (B)
  - Concept Plan (C)
  - Citizen Meetings
- VIII. Master Site Development Plan
  - Plan Recommendations
    - Watershed Management
    - Forest Management
    - Cultural Landscape
    - Archeological Resources
    - Site Development
    - Phasing
- IX. Conclusion

## **I. PROJECT HISTORY/BACKGROUND**

This master plan proposal is consistent with the current Parks and Open Space Chapter of the Comprehensive Plan. The development of Doves Landing as a passive recreational natural area offers a unique opportunity to fulfill the County's goals to provide a countywide system of well-maintained and managed parks. This will allow the County to continue to strike the balance between development and infrastructure needs with the protection and conservation of land and historic sites. Open space and outdoor experiences provide a greater quality of life for our citizens. In addition, open space and corridors help

- protect stream water quality including sources of drinking water
- provide food, water and habitat for wildlife
- minimize environmental damage from development
- conserve natural and cultural resources
- provide outdoor opportunities for the community

A network of trails offers users a chance to safely and confidently experience the outdoors by providing a well-marked path to follow. The user can explore natural, historic and cultural resources. Trails can connect parks and natural areas to other areas of interest. By promoting and highlighting all the available trails, whether maintained by the County or others, the County can advise the community about the full range of hiking experiences and the opportunity to access various destinations in Prince William County.

## **II. PROJECT OBJECTIVES**

The objective of the Master Plan is to establish a physical plan that addresses the long term preservation, use and protection of Doves Landing. This Master Plan is based upon an analysis of the site's physical capacities, the market that it serves and the needs and desires of the citizens of Prince William County.

As a vehicle by which the project objectives are achieved, the Master Plan plays a critical role in the long term success of the project. As a road map, it will guide use and development of Doves Landing. The decision making process used in the Master Plan process allows the concepts of the project objectives to be translated into physical reality.

This proposal for the management of the Dove's Landing property is based on the mission of protection of natural and cultural resources. The stewardship mission of the County will be the guiding factor in all decisions regarding the site and all planned and proposed activities. The passive recreation footprint will be limited in scope and focused on the areas of historical use and existing facilities. The County's cultural resource ethic will be a component of the management of Dove's Landing.

## **III. THE MASTER PLAN PROCESS**

The Master Plan Process for Doves Landing has been broken down into five phases:

- Site Analysis Phase
- Site Development/Constraints Phase
- Program Development Phase
- Conceptual Development Phase
- Master Plan Development

#### **IV. SITE INVENTORY ANALYSIS**

The Site Inventory/Analysis for Doves Landing includes an evaluation of the 234+ acre parcel that comprises the County owned property.

#### **LAND USE/COMPREHENSIVE PLAN**

The land uses and zoning that surround Doves Landing have changed significantly on the past 270 years. The most drastic changes have occurred within the past 50 years. Prior to the late 1950's most of Prince William County was comprised of small farms and undeveloped land. The second half of the twentieth century has seen thousands of new homes and businesses constructed in the County. The Coles District, in which Doves Landing sits, continues to evoke a more rural context within the County. The land use around Doves Landing consists of private residences.

Today Doves Landing and its 234+ acres remain undisturbed from recent development. The County Comprehensive Land Use Plan was recently amended to identify the land that contains Doves Landing as Parks/Open Space. This designation has recently changed from governmental. The County acquired the parcels through the settlement of two court actions regarding the development of the parcels. In 1986, Omni Homes, Inc. (Omni) executed a contract to purchase a 72.68-acre parcel of unimproved land located in Prince William County and, in 1989, bought the parcel for \$436,091. The property was zoned R-10, urban residential development, and Omni proposed to develop the land as Doves Landing subdivision with 106 residential lots. The property was located adjacent to an undeveloped 188-acre parcel owned by Doves Landing Associates (DLA). DLA planned to develop its property as Doves Overlook subdivision with approximately 405 residential lots. Prince William County, objected to adding a three mile extension to the water and sewer service for the Doves Overlook property. On October 6, 1993 the ensuing litigation was settled by a consent decree, in which the County paid DLA \$3.7 million for Doves Overlook under a three-year lease/purchase agreement.

Omni Homes brought suit against the County as the development of Doves Landing was predicated on the development of Doves Overlook. In 1997, at the conclusion of the legal process, the Virginia Supreme Court ruled in favor of Prince William County. The County then acquired the second parcel which comprises Doves Landing.

In 2013, a Comprehensive Plan Amendment was approved by the Board of county Supervisors that changed the land use designation from Public Lands to Parks and Open Space. The Parks, Open Space and Trails Chapter of the Comprehensive Plan includes the goal to protect and preserve environmentally sensitive land, habitat connectivity, and water resources, and areas of archaeological, historical and/or cultural significance; and to provide opportunities for residents, workers and visitors to pursue leisure activities in safe, accessible, and enjoyable parks and community recreational facilities.

#### **VIEWSHEDS**

The Doves Landing property's is comprised of wetlands, forest, and waterfront. This provides for views of the Occoquan River as well as Broad and Cedar Runs. The adjacent properties are single family homes and are only visible from the property line. There are a number of residential houses visible from the trail along the Occoquan River. These houses are located in the rural area of the County and do not negatively impact the property.

The importance of maintaining vegetative buffers in critical areas along the perimeter of the property is a key to maintaining the natural beauty of the Doves Landing property as well as acting as a buffer for adjacent landowner

## FOREST

The Doves Landing site has changed during its two hundred and seventy year history, as has most of Prince William County. The forest that is visible today is the result of land use changes that have occurred within the past fifty to sixty years. Changing from a rural area of small farms to vacant land, the farms that once occupied the hillsides and bottomland along the Occoquan River are gone. These areas have been replaced with a forest cover of varying age and succession.

Today, the Doves Landing property is covered with forests that comprise approximately 95 percent of the land area. The forest area within the current two hundred and sixty acre parcel has increased since farming operations ended thirty to forty years ago. There are three dominant forest types on the property. Acidic Oak Forest, Mesic Mixed Hardwood, Piedmont Floodplain Forest.

Acidic Oak Hickory Forest comprises a significant portion of the property. The overall vegetation condition is fair. This stand is heavily oak dominant, is likely 40 to 60 years old and shows moderate soil disturbance resulting in relatively low invasive cover and moderate species diversity. It is likely that this site was cut over in the mid to late 20<sup>th</sup> century and either went through succession from old field and pine-cedar forest or was deciduous forest prior to cut over (given the moderate diversity of this stand while the stand immediately to the north and east was heavily disturbed and has very low species diversity.).

Another interesting note within this forest stand is the presence of a few large eastern hemlocks. This species is found along the Bull Run-Occoquan River basin further east, but the presence in the oldest forest stand of this otherwise heavily disturbed landscape may indicate that eastern hemlock had a larger presence in forests in this region prior to massive land conversion for agriculture.

Within this forest type, is in the oldest, most mature forest stand on the site. This forest shows up as a woodlot on the 1937 aerial images of the site. The largest age class of trees is oaks in the 30 to 32" diameter breast height range and tulip trees up to 40" diameter breast height. The forest is very oak dominant with northern red oak, white oak and black oak forming the majority. Tulip tree and scattered hickories have been present in the stand since it began growing approximately 150 years ago. This age is evidenced by the size and branching patterns of the largest trees which are uniform both in diameter and branching pattern. Branching in these oldest trees is between halfway to two-thirds of the way up, indicating that the trees were in a fairly crowded condition when young but were released from some competition when they reached about 30 to 40 feet in height. At this point they grew in a fairly spreading branch pattern until they encountered each other. This would indicate that either the area was deciduous forest that was cut over all at once with intermittent smaller trees left standing which outgrew newer seedlings and saplings, or the area succeeded in pine forest that was evenly colonized by oak, tulip tree and hickory. It is more likely that the stand was deciduous forest that was cut over sometime around the Civil War and then was left to grow almost undisturbed from then on.

The southern portion of the stand was cut over about 80 years ago but the soil was not disturbed and the stumps left in place, resulting in a very uniform re-sprouting from the stumps in that portion of the forest, with the southernmost trees growing out over a field that was present 80 years ago close to the floodplain for the Occoquan River.

The second forest type is the Mesic Mixed Hardwood Forest. The forest stand is less than 60 years old evidenced by the remaining Virginia pine co-dominant with tulip tree. Larger tulip trees (20 to 40 inch diameter breast height) near and adjacent to the stream indicate that the 20<sup>th</sup> century land use practices disturbed uplands and side slopes but generally retained trees along stream courses. American beech is dominant in the understory demonstrating the stress on the system by heavy deer browse which is limiting regeneration to beech which is a non-preferred species by deer. The relatively good diversity in the herbaceous layer indicates that despite clearing, this site underwent moderate soil disturbance in the 20<sup>th</sup> century.

Piedmont Floodplain Forest makes up the remainder of the forest type located in the floodplain of the Occoquan River just downstream of the confluence of Cedar Run and Broad Run. Ash-leaved maple completely dominates

the over story with river birch and tulip tree also well represented but not co-dominant. The shrub layer and understory are in poor condition. There is little to no recruitment or regeneration. The forest appears to be less than 60 years old and may be growing on sediments that accumulated after construction of the Lake Jackson dam.

Another aspect of this forest is that although ash-leaved maple is still dominant, there were more tulip tree, some sycamore, both slippery and American elm and black walnut in the over story. The presence of tulip tree in both floodplain plots and especially the presence of black walnut are indicators of a levee forest condition where the floodplain is elevated high enough above the groundwater table that species that are not wet-tolerant can thrive.

Beeches occur almost ubiquitously as small trees in the understory. One can infer from this that at some point in the future the mature forest will contain significant amounts of beech. Other areas will have healthy oak populations, and may come to look like stand eleven, the most mature stand at Doves Landing. A couple of areas of concern exist, including the less than stellar reforestation occurring around the old farm house archeological site, and the low stocking levels along the river-especially in light of a probable emerald ash borer infestation. Overall the forest cover of Doves Landing is in the early to mid-stages of reforestation following an extended period of farming and shows signs that it is a functioning forest ecosystem. Two forest summaries were completed for the master plan. They are included as **Appendix I: Doves Landing Initial Forest Inventory Summary**, February 7, 2013, and **Appendix II: Doves Landing – Prince William County Preliminary Vegetation Classification**, December 11, 2012.

## **FLORA/FAUNA**

Flora and fauna refer to plant and wildlife, respectively. The term is often used to refer to the indigenous plant and wildlife of a geographical region. Both are collective terms, referring to groups of plant or wildlife specific to a region or a time period. The Doves landing parcel is located in the piedmont region of Virginia with plant and animal population indicative to the Piedmont. As 95% of the land is forested, the plant and animal life reflects the existing condition. The significant riparian and wetlands areas also determine the existing communities.

The existing plant list for Doves Landing has been developed by volunteers and is heavily skewed towards spring plants. Additional surveys will be undertaken to more fully identify seasonal plant species. There are significant populations of non-native species. These species compete for survival with native species and should be eradicated as time and resources allow. **Appendix III** outlines the various species list to date. Due to the seasonal nature of species surveys, County and volunteers will continue to update the surveys.

The indigenous fauna are comprised of animal species commonly found in the Piedmont and in Prince William County. There is a potential for endangered species on the property. According to The U.S. Fish and Wildlife Service two such species could occupy the project area. The Dwarf wedgemussel (*Alasmidonta heterodon*) is listed by the USFWS as endangered as is the harperella (*Ptilimnium nodosum*). Ground reconnaissance has not identified either species but development should avoid areas where they could be found.

The complete list of potential fauna provided by the Virginia Department of Game and Inland Fisheries is listed in **Appendix IV**. The forest survey indicates that there is a fair to significant amount of plant damage related to the overpopulation of White tail Deer in the project area. This damage is not unique to this parcel and a county wide approach to the issue should be developed.

## **EXISTING UTILITIES**

As the character of the area surrounding Doves Landing has changed little over the past 50 years, the development of utilities in the area is scarce. The County leases a cell tower site to Verizon. All utilities are residential in nature. The adjacent property owners rely on well and septic. Electric service of various levels is available along Doves Lane. Phone service is available on Doves Lane as well. In addition there is a phone line easement that enters the property along the waterfront.

## HYDROLOGY

Doves Landing is situated at the confluence of Kettle Run and Broad Run as they merge to form the Occoquan River. The property drains into the Occoquan River which is part of the Chesapeake Bay watershed. The 240 acre site includes over 25 acres of wetlands as well as extensive floodplain. The site is 95% forested and the forest acts as a filter for rainwater and off site drainage. This serves as an important feature that greatly improves the water quality of the surrounding water resources. It is essential that any improvements to the property protect the existing forested condition and its value to the areas water quality. **Appendix V: Wetlands Delineation Map, Appendix VI: Floodplain map**

## TOPOGRAPHY

The topography of Doves Landing is similar to the surrounding landscape. The property is within the piedmont region of Virginia. Virginia's piedmont is the gently rolling land between the mountains and the Tidewater. It begins at the foot of the Blue Ridge Mountains and extends eastward, becoming less undulating the closer it comes to the fall line. Prince William County lies in the northern portion of the region where the Piedmont is narrow as it approaches the tidewater of the Potomac River.

Doves Landing topography features moderately steep slopes to the approaches of the Occoquan River and Broad Run. Project area elevations vary from 145 to 225 feet above sea level. The existing trails along the downward slopes are forested and thus absorb rain water well. **Appendix VII: Topographic Map**

## SOILS/GEOLOGY

The project area is located on the interface of the Culpeper Basin and the Piedmont Plateau Physiographic Provinces. The project area is located where Broad Run and Cedar Run join to form the Occoquan River, approximately 26 miles upstream from the confluence of the Occoquan River and the Potomac River, in central Prince William County, Virginia. Project area elevations vary from 145 to 225 feet above sea level.

This portion of the piedmont plateau formed in the residuum of sedimentary rocks of siltstone, sandstone conglomerate, and basic rocks of diabase and basalt. The mapped soil complex for the project area is the Arcola-Panoram-Nestoria. This soil complex is moderately deep, deep, and shallow soils that are well drained and have loamy subsoil. The major soils types' onsite are Arcola Silt Loam, Arcola-Nestoria Complex, Bermudian Silt Loam, Braddock Loam, Brentsville Sandy Loam, Calverton Silt Loam, Manassas Silt Loam, Meadowville, Silt Loam, Panorama Silt Loam, and Rowland silt loam (United States Department of Agriculture, Soil Conservation Service 1989). The soil types have slopes that range from 0 to 50 percent slopes and are mapped on the custom soils report included in **Appendix VIII** (U.S. Department of Agriculture, Natural Resources Conservation Service, Prince William County Soil Survey). Below is a chart which highlights the major soil types and includes the percentages of area encompassed by the soil type.

**Prince William County, Virginia (VA153)**

<b>Map Unit Symbol</b>	<b>Map Unit</b>	<b>Acres in AOI</b>	<b>Percent of</b>
1A	Aden silt loam, 0 to 2 percent slopes	0.1	
3A	Albano silt loam, 0 to 4 percent slopes	2.2	
4B	Arcola silt loam, 2 to 7 percent slopes	4.9	
5C	Arcola-Nestoria complex, 7 to 15	5.7	
5D	Arcola-Nestoria complex, 15 to 25	2.2	
7A	Bermudian silt loam, 0 to 2 percent	43.3	1
8C	Braddock loam, 7 to 15 percent slopes	6.4	
9C	Brentsville sandy loam, 7 to 15 percent	68.1	2
11	Calverton silt loam, 0 to 7 percent slopes	36.8	1
14	Codorus loam, 0 to 2 percent slopes	0.3	
19	Elioak loam, 2 to 7 percent slopes	0.0	
20	Elsinboro sandy loam, 2 to 7 percent	1.9	
24	Glenelg-Buckhall complex, 7 to 15	1.7	
35	Manassas silt loam, 2 to 7 percent slopes	42.4	1
38	Meadowville loam, 0 to 5 percent slopes	2.5	
43	Nestoria gravelly silt loam, 25 to 50	0.7	
46	Panorama silt loam, 2 to 7 percent	17.1	
46	Panorama silt loam, 7 to 15 percent	2.6	
49	Rowland silt loam, 0 to 2 percent slopes	4.2	
51	Stumptown very flaggy loam, 25 to	1.9	
E	50 percent slopes		
W	Water	25.1	9.3%
<b>Totals for Area of</b>		<b>270.1</b>	<b>100.0%</b>

**CULTURAL RESOURCES**

The intention of the cultural resource assessment is to identify avenues of future research, identify known cultural resources and offer a preliminary assessment of their eligibility for listing on the National Register of Historic Places, and identify areas of high potential for finding cultural resources. The study area consisted of the entire property. The investigation was conducted in accordance with the most recent version of the *Virginia Department of Historic Resources (VDHR) Guidelines For Conducting Cultural Resource Survey In Virginia*. The full cultural resources assessment is located in **APPENDIX IX** and is summarized here.

Archival and historic map research identified numerous cultural resources on or potentially on the Dove's Landing property. Reconnaissance pedestrian surveys identified one historic farmstead and one cemetery on the property. Additionally, the property exhibits a high potential for finding prehistoric archaeology sites. Any new infrastructure will likely require archaeological testing and excavation before project approval.



## **Previous Investigations**

Site file research was conducted at VDHR to determine if any recorded archaeological or architectural sites are present in the project area or in the vicinity. Three archaeology sites have been recorded within a one-mile radius of the project area. These sites are classified as prehistoric camp sites. None of these sites were evaluated for their eligibility for listing on the National Register of Historic Places (NRHP).

Four architectural resources were recorded within a one mile radius of the project area. These sites include two steel truss bridges (now destroyed), a cemetery, the Sinclair Mill and an historic house. The Sinclair Mill is located on the east side of Occoquan River across from the Dove's Landing property. The Brentsville National Register Historic District and the County's Brentsville Courthouse Historic Centre are also located within the one-mile radius.

## **Site History**

Lands in the vicinity of Dove's Landing were likely vacant or sparsely occupied by colonists through the first half of the 1600s. Not until the 1730s does the historical record suggest land use and occupation in the vicinity of the project area.

By the nineteenth century onwards, maps of the region reveal land ownership and indicate the presence of at least two possible farmsteads in the project area. These maps also suggest potential sites of archaeological interest as well as a woodlot and two river crossing fords. Further investigation of these sites may yield information regarding how the project area was utilized and how the landscape evolved.

Prepared in 1862 at the division headquarters of General Irvin McDowell, the "McDowell Map" shows one possible farmstead belonging to Goodwin. Both tax lists and land deeds demonstrate that in August of 1847, William E. Goodwin acquired a 120 acre tract situated on the Broad and Occoquan Runs, which adjoined the lands of a Mr. John Molair and included the road leading from Brentsville to both runs. Listed as Ivy Mill in subsequent tax rolls, he resided there with his wife, Anne, for a number of years. In July 1869, this tract was deeded to F. C. Rorabaugh, who is named on the 1901 William Brown Map of the area. For a sum of three thousand dollars, Rorabaugh then sold the tract in 1914 to Charles L. Dove. The Dove family owned a majority of the 250 acres under investigation prior to selling many of their individual tracts to the Commonwealth of Virginia from 1930 through the 1970s.

## **Cultural Resources Conclusions and Recommendations**

Historical maps and aerial photographs show a number of historic cultural resources either located in or potentially in the project area. These historic resources include two farmsteads and possibly a third, one ford across Broad Run and one ford across the Occoquan River, fence lines, farm roads, and wood lots. Pedestrian reconnaissance survey found one historic farm complex including two cut stone foundations and a well and a cemetery.

There is the potential for finding significant prehistoric sites. The property's topography and location on Broad Run and the Occoquan River, with substantial flood plan and bluffs overlooking the rivers, are conducive to prehistoric land occupation and land use.

Having outlined the cultural and historical significance of the 250 acres at Dove's Landing, the following recommendations are proposed to protect these resources:

- Public activity and site planning for Dove's Landing should be limited to non-motorized passive recreation. Historic Preservation and Passive Recreation are mutually supporting activities. Support for passive

recreation infrastructure may require additional cultural resource studies. The setting of Dove's Landing is inherently unique due to the blending of both cultural and natural resources on-site.

- For the safety of visitors and the protection of cultural and historic resources on-site, protective fencing should be installed to preserve significant features on the property and ensure public safety.
- The trail network currently existing inside the 250 acres of Dove's Landing property should continue to be maintained and utilized for the purposes of passive recreation (i.e. hiking, bird watching).
- Motor vehicles and bikes should not be permitted on the trail system.
- Following selection of an area suitable for vehicle and visitor parking, a Phase I archaeological and cultural resources survey should be undertaken by the County, with no further development on-site taking place until the Phase I survey is completed.
- Continued phased archaeological surveys should be performed on site, and pursued through grant programs offered at the state and federal level. Development of public archaeology programs would also allow for additional educational and interactive recreation at Dove's Landing.

## **V. SITE DEVELOPMENT CONSTRAINTS**

With the completion of the site analysis phase, site conditions were evaluated to determine where development was appropriate. In the case of Doves Landing, suitability for development means what is suitable from the standpoint of physical limits and historic limits. A given area on the site may be considered suitable for construction of a parking lot/driveway but not be appropriate in the context of maintaining or preserving the cultural and natural resources of the site.

The site contains extensive forest canopy, wetlands, and floodplain. The Forest makes up 95% of the land mass, the 25.51 acres of wetlands are primarily found along the Occoquan River and Broad Run. The floodplain is also extensive. Overlaying both cultural and site physical criteria, potential development areas could be located in the northeast corner of the property adjacent to Doves Lane. Development should only include a gravel parking lot in accordance with the local roads, the use of existing trails, and limited gathering spots for citizens recreating on the parcel.

Sensitive areas within steep slopes or drainage ways are not recommended for development. Existing forest stands that serve as visual buffers to off-site uses should be preserved and maintained.

Overall development should remain low-profile with limited activities and access.

## **VI. PROGRAM DEVELOPMENT**

Doves Landing is intended to be developed and maintained as a passive recreational natural area. This allows for a limited amount of uses and associated infrastructure.

There are many passive recreation opportunities available at Dove's Landing. The previous activities on the site appear to have included farming and timber clearing. The topography of the land, resource protection areas, flood plain, existing open water and wetlands resources as well as bottom land and upland forest types allow for water and land based passive recreation and environmental education. The placement and scale of passive recreation facilities must be compatible with the land and adjacent lands. They must also be located away from sensitive environmental features, and any identified important natural communities. These passive recreation opportunities should generate revenue to help offset the operation and maintenance costs but revenue generation is a secondary outcome to proper stewardship of the natural resource. Additionally passive recreation offerings should be consistent with the County and the State's identified needs.

The *Virginia Outdoors Plan* is the state's official document regarding land conservation, outdoor recreation and open space planning. Based on the Virginia Outdoors Survey of 2006, "the two highest needs for outdoor recreation in the next five years are access to passive recreation waters of the State and trails close to home." The proposed passive recreation offerings are consistent with the Virginia Outdoors Plan as well as the identified desires of County citizens for passive recreation opportunities. This proposal utilizes the current five mile trail system that is kept open by unauthorized ATV activity. This will minimize the passive recreation footprint on the land and will allow for significant access to the entire parcel

Appropriate passive recreation activities on the site include, canoeing and kayaking group tent camping, hiking and horseback riding. These activities will be augmented with interpretive programming, environmental education and adventure program offerings.

#### 1. **Trails**

Trails are the most sought after passive recreation amenities in the county. Dove's Landing supports terrific trail opportunities. The trail system will be developed to support multi users wherever possible. These users will include hikers, mountain bikers and equestrians. The trails will be developed to take advantage of opportunities for bird watching and environment education opportunities. The trail system will, when possible, utilize existing trails, roads, and paths. This will minimize the need to disturb the land. **Appendix X** outlines the existing trails on the property.

Forest management will ensure that the proper views and screening remain viable. It will also make the experience of being in the forest more enjoyable. In rapidly developing Prince William County, the opportunity to observe and experience a hardwood forest is declining. Paths that wind through the property will enable people to walk comfortably through the woods and enjoy the solitude that only a large stand of trees can provide. Along the paths, interpretative plaques will be used to illustrate unique features within the forest that otherwise may not be noticed.

#### 2. **/Interpretation and Environmental Education**

Doves Landing is a unique County natural and cultural resource. As such, the County should utilize the property for natural and historic interpretive programs and environmental education initiatives. Programs such as nature hikes, tree identification, and bird watching are activities that can easily be accommodated on the site.

#### 3. **Group Camping**

Camping is a resource intensive use and should be managed to protect the resources, Camping will be limited to group tent camping only with focus on scout and service based groups. Individual camp sites are not contemplated due to the topography of the land and the need for more intensive service facilities needed to provide this type of camping. Camping should be restricted to designated areas as to not negatively impact the resource. Camping should only be offered as part of a service project to assist with resource management activities on the resource. Service projects can include litter and debris pickup, the removal of invasive plant communities, trail development and maintenance, and other resource management based projects as needed.

#### 4. **Water Access**

Dove's Landing borders the Occoquan River at the confluence of Cedar Run and Broad Run. The distance from the proposed parking area to potential water access points will require a long hike to portage of canoe and kayaks. This will be a challenge to the establishment of this passive recreational opportunity. In lieu of individual access points, water access will be provided through staff guided programs. During the spring and fall, if water levels allow, staff will conduct guided canoe and kayak programs. The program will be fee

based with floats starting at the Brentsville Courthouse Historic Centre and ending at Doves Landing. A long term goal could include a limited canoe and kayak access point and site based guided programs on weekends from April – October.

## 5. **Fishing**

The potential exists to utilize portions of the shoreline for fishing opportunities. Fishing is an outdoor activity where there is very limited public access in Prince William County. The County will work with the Virginia Department of Game and Inland Fisheries to assess the condition of the Occoquan River and Broad Run for fishing. More investigation will need to be undertaken to ensure that there are safe places along the bank to fish without damaging the resource protection areas. The potential exists for the development of small fishing platforms, this will allow for bank access without the associated environmental damage to the bank and riparian area.

## 6. **Picnicking**

Picnicking is a very important and limited passive recreation opportunity in this area. Dove’s Landing offers the potential for small, primitive picnicking to accommodate the users of the facility. The picnic area will support use by the general public and educational groups. Picnic areas are intense passive recreation areas that can negatively impact the natural area. Soil compaction, erosion, stress on the tree canopy and loss of vegetative cover and forest under story are some of the negative impacts. This proposal will limit the size of the picnic area as well as establish a secondary picnic area for cyclical rotation. Rotation, similar to crop rotation minimizes the negative effects on the resource by giving the land time to recuperate from the intense use. Intensive public education on the care of the picnic area will be part of park management.

## **Public Input**

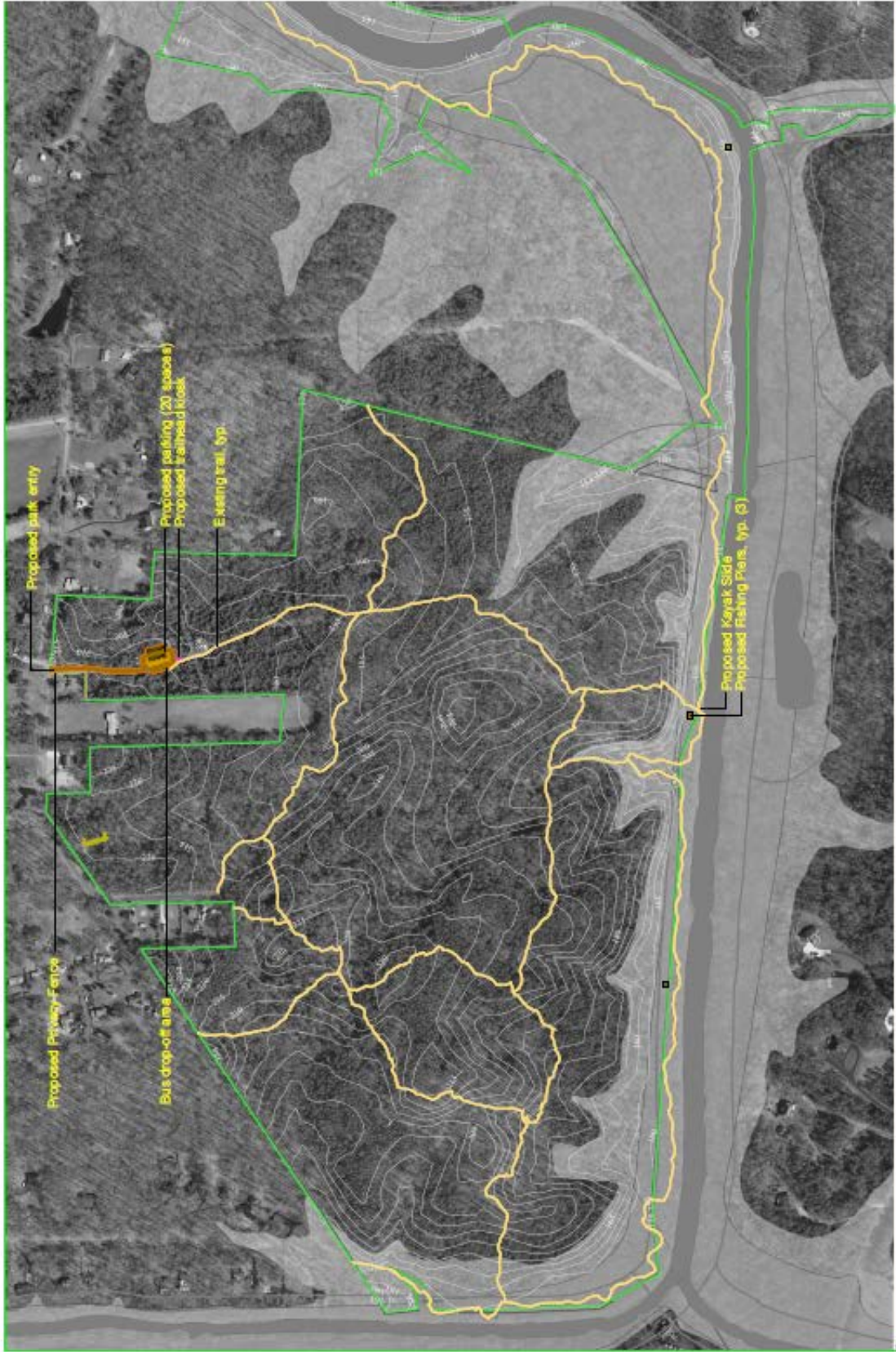
The Cultural Resource Assessment, the precursors to the Master Plan was developed with significant input from various environmental and community stakeholders. This process included informational mailings to the community, research based hikes, and meetings.

The Master Plan document is one in a number of processes that request public input. The Comprehensive Plan Amendment (CPA) was initiated to change the land use designation from Governmental to Parks and Open Space. This process included public hearings. The Prince William Trails and Blueways Committee recommended that the County adopt the CPA on November 27, 2012. The Planning Commission approved the CPA on December 2012. The Prince William Board of County Supervisors approved the adoption of the CPA on February 19, 2013. This action included a public hearing. Additionally staff held a public meeting on March 27, 2013 to discuss potential public uses of Doves Landing. Over 60 citizens attended the public meeting.

## **VII. DEVELOPMENT CONCEPT PLANS**

Concept Plan C was the consensus alternative stemming from public meeting and site visits. The three conceptual plans call for the same trail system utilizing the existing trails, as well as the same improvements for fishing and water aces. The parking and roadway improvements in Concept Plan C focus on the area adjacent to Bradley Forest Drive. This area is located away from residences and the one lane, gravel Doves Lane. Directional signage from Brentsville Road should utilize Smithfield Road. Smithfield road is wider and provides more visibility to oncoming traffic.

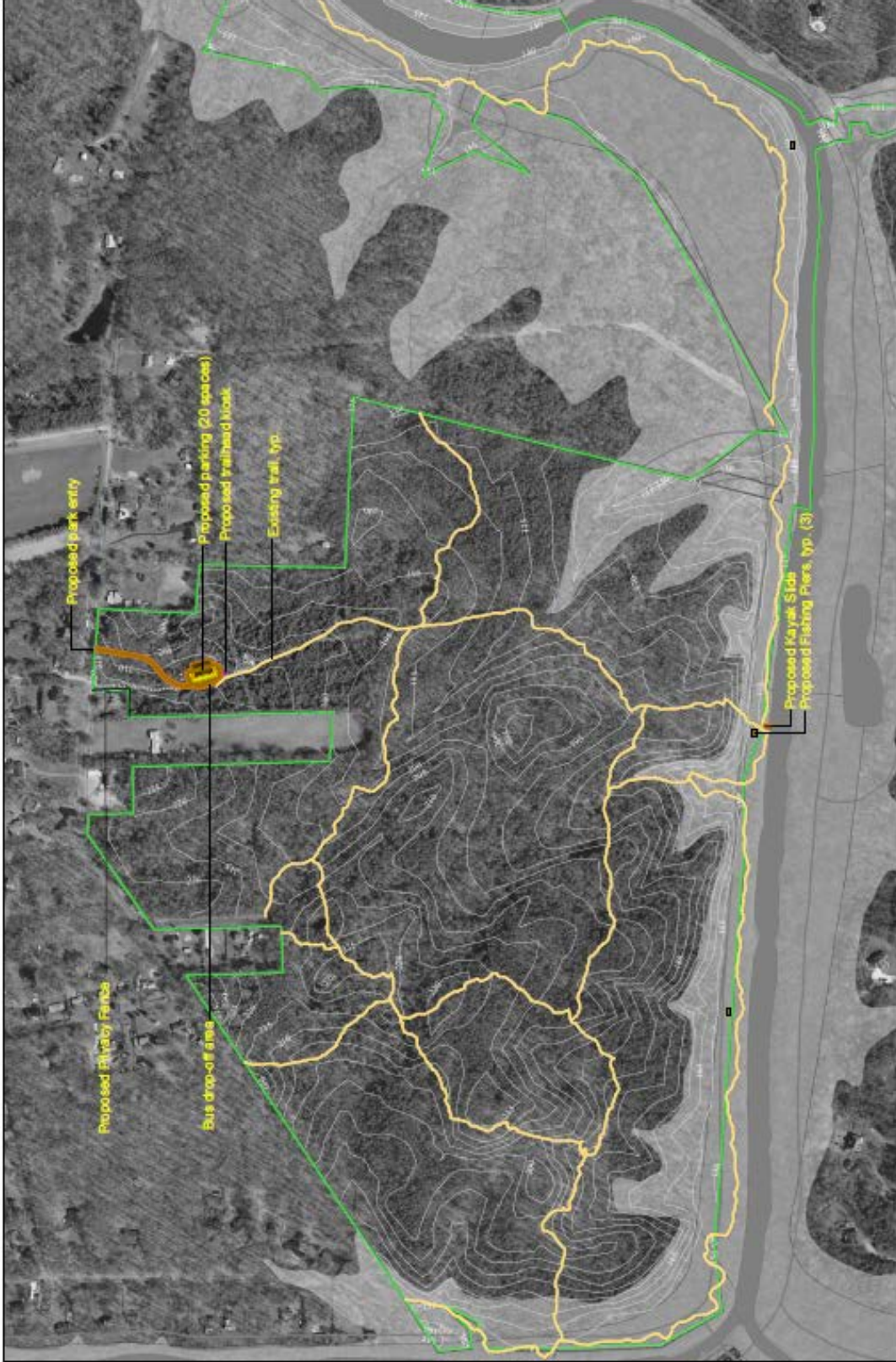




# Doves Landing Concept A



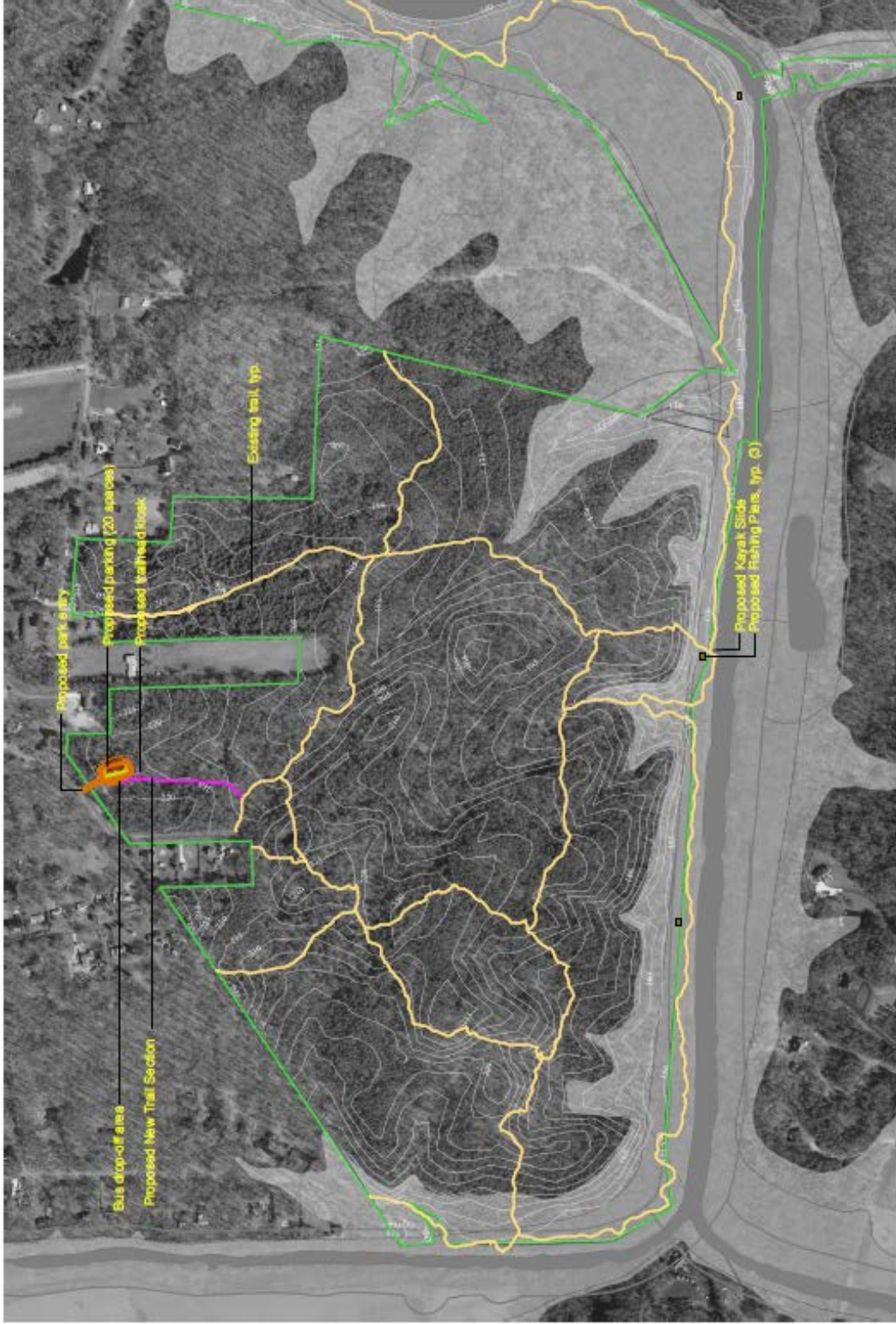
March 17,



# Doves Landing Concept B



0 10 20 30 40 50 60 70 80 90 100



# Doves Landing Concept C

March



## **VIII. MASTER SITE DEVELOPMENT PLAN**

The Master Site Development proposed for the Doves Landing property is the development scenario proposed in Concept Plan C.

As part of the Master Plan process, this report makes several recommendations:

### **1. Forest Management**

A forest management program consists of various practices designed to enhance the existing vegetation and provide a hospitable habitat for the regeneration and development of new vegetation. The forest is a dynamic entity, slowly developing over centuries and gradually changing from one type of dominant vegetation to another. Due to the influence of humans, this process has been radically altered, so that most forests today bear little resemblance to the vast forests that once covered the entire eastern seaboard. Many species of native forest plants are very rare today due to the degradation of the habitats they once flourished within. The forest management program for Doves Landing will not create a pristine example of a forest from the 18<sup>th</sup> Century, but it will be designed to take advantage of all the native vegetation on site. Undesirable, invasive plants, such as Japanese honeysuckle, will be targeted for removal while native species, such as Virginia Creeper, will be allowed to grow. In this way the forest moves towards the condition that nature would have created in its own time.

The importance of the forest to this site cannot be overstated. One look at the Master Plan illustrates how the forest is used not only as a program element, but also defines other uses. The property can be likened to several large rooms, with the trees acting as the walls. The tree stands in several locations screen less desirable offsite elements from view.

The forest management program will ensure that the proper views and screening remain viable. It will also make the experience of being in the forest more enjoyable. In rapidly developing Prince William County, the opportunity to observe and experience a hardwood forest is declining. Paths that wind through the property will enable people to walk comfortably through the woods and enjoy the solitude that only a large stand of trees can provide. Along the paths, interpretative plaques will be used to illustrate unique features within the forest that otherwise may not be noticed. Educational programs can be developed using these resources that will appeal to both school children and adults.

Part of the education may be centered on the practices of forest management. For instance, selective cutting may be used to remove less desirable, invasive, or diseased trees and other vegetation from the forest. Many people are not aware that thinning a stand of trees in such a way is actually beneficial to vigor of the forest, but a program could be initiated that would explain this practice as well as a host of others. Just as the forest changes and adapts over time, so too can the programs designed to educate us about it.

One such program could be the establishment of managed meadows. Although the site is 95% wooded, a significant portion of the land has recently begun forest succession. These areas are dominated by young cedar and pine trees. The establishment of meadows would provide more and diverse habitat, additional passive recreation and environmental education activities.

The Doves Landing property is fortunate to have a forest worth managing. It forms the basis or is at least part of many of the program elements that have been identified. Imagine the site with no forested areas, and it is quickly apparent how much character and value is added to the site with the forests in place. Through proper management, this attribute will remain viable for generations to come.

## **2. Cultural and Natural Resource Protection**

Public activity and site planning for Dove's Landing should be limited to non-motorized passive recreation. Cultural and natural resources and passive recreation are mutually supporting activities. Support for passive recreation infrastructure may require additional cultural resource studies. The setting of Dove's Landing is inherently unique due to the blending of both cultural and natural resources on-site.

For the safety of visitors and the protection of cultural and historic resources on-site, protective fencing should be installed to preserve significant features on the property and ensure public safety.

The trail network currently existing inside the 240 acres of Dove's Landing property should continue to be maintained and utilized for the purposes of passive recreation (i.e. hiking, bird watching).

Motor vehicles and bikes should not be permitted on the trail system.

Following selection of an area suitable for vehicle and visitor parking, a Phase I archaeological and cultural resources survey should be undertaken by the County, with no further development on-site taking place until the Phase I survey is completed.

Continued phased archaeological surveys should be performed on site, and pursued through grant programs offered at the state and federal level. Development of public archaeology programs would also allow for additional educational and interactive recreation at Dove's Landing.

## **3. Site Development**

Concept Plan C was the consensus alternative stemming from public meeting and site visits. The three conceptual plans call for the same trail system utilizing the existing trails, as well as the same improvements for fishing and water aces. The parking and roadway improvements in Concept Plan C focus on the area adjacent to Bradley Forest Drive. This area is located away from residences and the one lane, gravel Doves Lane. Directional signage from Brentsville Road should utilize Smithfield Road. Smithfield road is wider and provides more visibility to oncoming traffic.

The Master Plan and Site Development Program should be reviewed by County staff at 5 year intervals to assure ongoing compliance and to address the need for revision and changes to the plan and program. Citizen input into the review process should be maintained.

Roadways, driveways and parking lots should be constructed of materials that reduce runoff and are visually compatible with the site's natural setting. Ditch section roadways should be used in lieu of curb and gutter and storm drainage systems. Site Development as a whole should embrace low impact design. Stormwater management should be bioretention, infiltration trenches or wet ponds where possible.

Phasing of development and improvements to the Doves Landing site will depend to a great extent on funding that is available. To best determine the true and accurate costs of this Master Plan, additional Preliminary Design and Final Development drawings should be prepared for improvements to the site.

Preliminary cost estimates will identify the potential general costs for the work that is identified in the Master Plan. Detailed plans, specifications and cost estimates will provide the County with a more accurate idea of how and when to phase development and improvements.

## **IX. CONCLUSION**

Doves Landing is unique from the standpoint that it has lay fallow for a significant portion of time. The Master Plan that has been developed for Doves Landing and its 240 acres is intended to guide the protection and use. The Master Plan is not a static document and it should be reviewed periodically to ensure that it is providing the programs and enjoyment that it was planned for.

Limited infrastructure improvements should be carried out with great care and study. Materials and installation should be used in such a way to maintain the natural and cultural context of the site.