

**Habitat Assessment of the Proposed New River Valley  
Commerce Park, Dublin, Virginia to Investigate the Potential  
to Support the Upland Sandpiper, Loggerhead Shrike, or  
Henslow's Sparrow**

**report by**

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## Summary

Assessments of the grassland/open habitats of the proposed New River Valley Commerce Park, Dublin, Virginia were made on 6 June 2009. While this property contains habitat that could be used by both Henslow's Sparrow and Loggerhead Shrikes, the habitat is not ideal for the species, and not unique when compared to other more suitable habitat in the general area. No Henslow's Sparrows, Loggerhead Shrikes, or Upland Sandpipers were observed during the habitat assessment and no large patches of ideal habitat for these species were observed.

## Introduction

A habitat assessment of the proposed New River Valley Commerce Park was required by the Virginia Department of Game and Inland Fisheries before construction because state records indicated that the project area potentially could support 2 state threatened bird species (Loggerhead Shrike and Upland Sandpiper) and one bird species listed as a federal Species of Special Concern (Henslow's Sparrow). State threatened species are protected from activities that take, harm, or harass individuals or their critical habitat (Virginia Administrative Code: 4VAC15-20-130).

All three of these bird species require early successional habitat characterized by a ground cover of grasses and forbs that are also interspersed with shrubs or scattered trees. These general habitat conditions are common in pastures and open areas such as those that occur on the proposed project area.

The Loggerhead Shrike (*Lanius ludovicianus*) is considered a rare or uncommon breeder and winter resident bird in Virginia. Historically, the Loggerhead Shrike was known to breed throughout all physiographic zones of Virginia and has been documented in 54 of 95 counties and 12 of 41 independent cities (Luukkonen 1987). By 1989, the Virginia Breeding Bird Atlas project confirmed breeding in only 26 counties (Trollinger and Reay 2001). The USGS Breeding Bird Survey indicated a > 50% decline over the last 30 years in Virginia and throughout the Mid-Atlantic Region (Sauer et al. 2007). The Loggerhead Shrike was officially listed as a state Threatened species in 2002 to protect populations from further declines. The most recent observations in Virginia are from the mountain and piedmont physiographic regions and it is believed to be extirpated from the coastal plain (Watts and Scholle 1999). Within the piedmont region, most recent records are concentrated in adjoining Culpeper, Rappahannock, and Madison counties.

The Upland Sandpiper (*Bartramia longicauda*) is a rare or uncommon breeder in Virginia that migrates to South America for winter. The Upland Sandpiper population in Virginia has been declining since the 1940's. In the mountain region, breeding records are known in Pulaski and Rockingham counties and Blacksburg from the late 1980s. No breeding or observations of birds has been documented since 1986 (Rottenborn and Brinkley 2007). There are more recent records in the northern Piedmont within Loudon, Fauquier, and Prince William counties but has not been observed there since 2002.

Henslow's Sparrow (*Ammodramus henslowii*) is a rare breeder in Virginia that winters throughout the deeper Southeastern United States. It has declined in Virginia and throughout its range. Currently, most records of this species are from scattered individuals. The largest and most consistent population in Virginia occurs at the Radford Arsenal in Pulaski County where up to 10 individuals have been documented since 1997 (Rottenborn and Brinkley 2007).

Although all three species share general habitat requirements, each has a special affinity for specific habitat features. The Loggerhead Shrike primarily uses oldfield or pasture areas within a zone of scattered shrubs, Red Cedars (*Juniperus virginiana*), or hawthorns (*Crataegus* spp.) (Yosef 1992). Upland Sandpipers use the more open areas away from the shrub zone (Houston and Bowen 2002). In Virginia, Upland Sandpipers have consistently been observed to require low to medium grass heights and often are found in more heavily grazed pastures, or at airports and sod farms because the grass is frequently mowed. Henslow's sparrow uses a mixture of shrubs and low grassy areas. They often are found in wetter conditions such as grassy swales and require a well developed litter layer and standing dead vegetation (Herkert et al. 2002).

The objective of this report is to document the current habitat conditions at the proposed New River Valley Commerce Park, Dublin, Virginia and assess the conditions for the potential to support the three bird species. The property contains a mixture of pastureland, active agriculture, fallow agriculture, shrub hedgerows, and young/early successional forest land habitats.

## **Methods**

Habitat assessments were conducted by walking parcels (Figure 1) and visually evaluating the quality of the habitat for the state threatened species known to occur within the area. Factors used in evaluation of habitats included; habitat type, vegetation type, height and density, and size of habitat patch. In conjunction with habitat assessments, area surveys were conducted for the species of interest. Photographs were taken of all open habitats within all parcels.

## **Results**

The property at the proposed New River Valley Commerce Park, Dublin, Virginia, possesses a nice mix of grassland habitats, early successional habitats, young forest, hedgerows, and active agriculture (Figure 2). While many of the property's grassland habitats supported grassland species (Meadowlarks, Red-winged Blackbirds, Bobwhite Quail, etc), no habitat was observed that would be considered ideal or exemplary for the Loggerhead Shrike, Henslow's Sparrow, or Upland Sandpiper. The proposed project area is embedded within adjacent properties of similar habitat. No observations of any of the three bird species of concern were made during the visit.

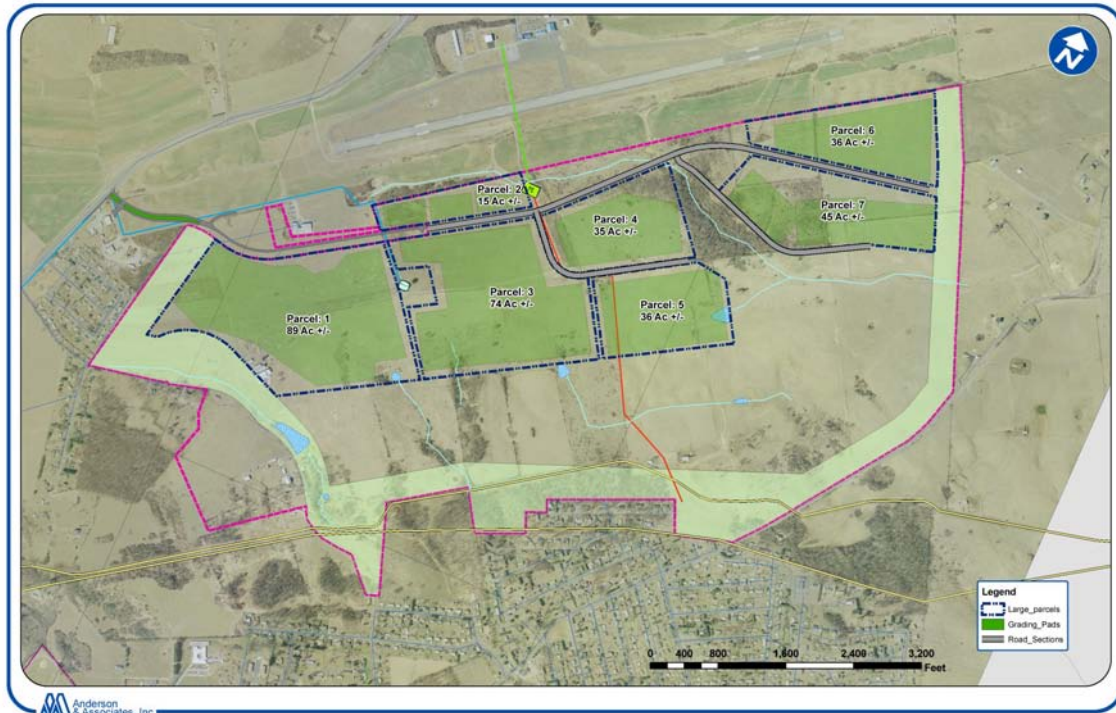


Figure 1. Map of New River Valley Commerce Park property with open habitat parcels and proposed grading pads indicated.

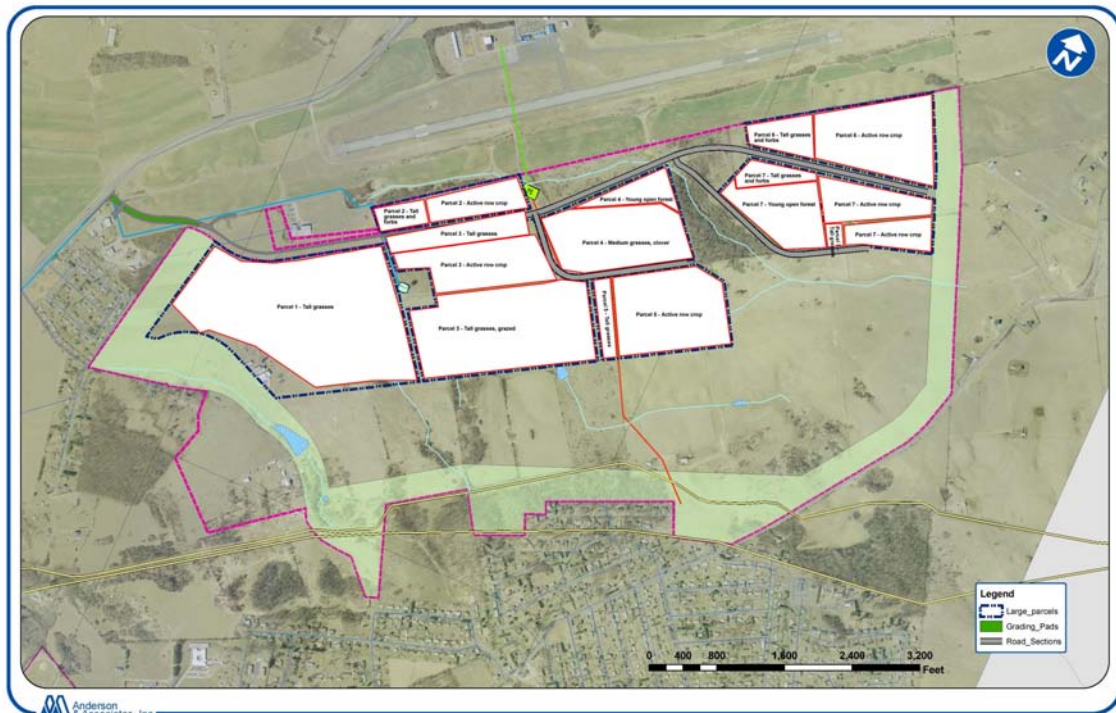


Figure 2. Parcel map with habitat types designated.

## **Detailed Parcel Description**

### **Parcel 1**

The approximately 41 acres in the northern section of parcel 1 was situated in a low swale area and consisted of dense tall grasses (figure 3). The southern portion of parcel 1 was situated on higher ground or well drained soil and consisted of tall grasses that looked like it may be used for grazing (Figure 4).

### **Parcel 2**

The approximately 4 acres on the southwestern end of parcel 1 consisted of tall grasses and forbs with some *Rhubus* spp and patches of bare earth (Figure 5). The remaining portion of parcel 2 was in active row crop (Figure 6).

### **Parcel 3**

Parcel 3 consisted of 3 distinct habitats. The approximately 16 acres, on the northern side of parcel 3 was dominated by dense tall grass (Figure 7). The central 15 acre was in active row crop (Figure 8). And the remaining 43 acres, on the southern side of this parcel, consisted of tall grass pasture with a small number of cattle present (Figure 9).

### **Parcel 4**

The approximately 23 acres of open habitat in parcel 4 was dominated by moderately tall grass and clover surrounded by young open forest and hedge rows (figure 10). Compared to the other open habitats on the property we feel that this field has the most potential to support Loggerhead Shrike and/or Henslow's Sparrows. However the habitat in this field is not ideal for these species, nor unique to other habitats in the surrounding area.

### **Parcel 5**

Parcel 5 consisted of 2 habitats types. A strip of approximately 7 acres on the western side of parcel 5 consisted of tall grass pasture (Figure 11). The majority of the remaining portion of parcel 5 consisted of active row crop (Figure 12).

### **Parcel 6**

The western third (approximately 8 acres) of parcel 6 consists of tall thick grasses and forbs (Figure 13). The remaining portion of parcel 6 is in active row crops (figure 14).

### **Parcel 7**

The open habitat of Parcel 7 consisted of both tall grass/forb fields, and active row crops. The grass/forb fields were restricted to an approximately 5 acre patch on the northwest corner of parcel 7 (Figure 15) and a small 1 acre patch on the southcentral edge (figure 16). The active row crops were located on the eastern half of the parcel (Figure 17).



Figure 3. Northern section of parcel 1, looking west.



Figure 4. Southern section of parcel 1, looking west.



Figure 5. Southwestern section of parcel 2, looking west.



Figure 6. Northeastern section of parcel 2, looking northeast.



Figure 7. Northern section of parcel 3, looking northeast.



Figure 8. Central section of parcel 3, looking northeast.



Figure 9. Southern section of parcel 3, looking southeast.



Figure 10. Parcel 4, looking north.



Figure 11. Southwestern portion of parcel 5, looking south.



Figure 12. Northeastern portion of parcel 5, looking east.



Figure 13. Western portion of parcel 6, looking northeast.



Figure 14. Eastern portion of parcel 6, looking east.



Figure 15. Northwestern corner of parcel 7, looking east.



Figure 16. Small, 1-acre grass field in southcentral parcel 7, looking southeast.



Figure 17. Western portion of parcel 7, looking east.

## Literature Cited

- Herkert, J.R., P. D. Vickery and D. E. Kroodsmma. 2002. Henslow's Sparrow (*Ammodramus henslowii*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/672doi:10.2173/bna.672>
- Houston, C. S. and D. E. Bowen, Jr. 2001. Upland Sandpiper (*Bartramia longicauda*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/580doi:10.2173/bna.580>
- Rottenborn, S. R. and E. S. Brinkley. Virginia's Birdlife: An Annotated Checklist. Virginia Avifauna no. 7. Virginia Society of Ornithology
- Luukkonen, D. R. 1987. Status and distribution of the Loggerhead Shrike in Virginia. Master's thesis, Virginia Polytechnic Institute and State University.
- Sauer, J. R., J. E. Hines, and J. Fallon. 2007. The North American Breeding Bird Survey, Results and Analysis 1966 - 2004. Version 2005.2.
- Trollinger, J. B., and K. K. Reay. 2001. Breeding Bird Atlas of Virginia 1985-1989. Virginia Department of Game and Inland Fisheries and The Virginia Society of Ornithology Special Publication, NO 3., Richmond, VA.
- Watts, B. D. and E. R. Scholle. 1999. Loggerhead Shrike breeding on Fort Lee Army Installation. Center for Conservation Biology Academic Publication CCBA-24, College of William and Mary.
- Yosef, R. 1996. Loggerhead Shrike (*Lanius ludovicianus*). In The Birds of North America, No. 231 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.