

2. Methodology

This biological assessment is based on a review of information from regulatory agencies and other available sources, and field surveys of the project area. Vegetative communities within the project area were characterized and evaluated, with emphasis on natural communities known to support federal or state listed species. The results presented in the next section are a compilation of field investigations performed by CH2M HILL, from on-going investigations by Wekiva River Basin State Parks staff and individuals knowledgeable of the local environment, and from extensive literature review of various agencies' databases.

2.1 Agency Coordination and Information Review

Jurisdiction over listed species is shared among several federal and state agencies. Most federal listed wildlife species are protected under the auspices of the USFWS. The Florida Fish and Wildlife Conservation Commission (FWC) maintains jurisdiction over most state-listed fish and wildlife species. Florida plants that are classified as threatened, endangered, or commercially exploited are listed by the Florida Department of Agricultural and Consumer Services (FDACS).

Research of available information on recorded occurrences, and potential occurrences, of protected species in the project study area was conducted; this information was obtained and reviewed. Information sources included FNAI, staff at the Wekiva River Basin State Parks, as well as USFWS and FWC on-line database. Information pertaining to protected species occurrence was reviewed. The FNAI, with funds from the Florida Department of Environmental Protection (FDEP), maintains a database of information on federal and state listed plant and animal species and their habitats (www.fnai.org). **Appendix A** contains copies of the species occurrence records received from the wildlife agencies.

Land use categories and vegetative community classifications identified in the project study area are based on FDOT's 1999 *Florida Land Use Cover and Forms Classification System* (FLUCFCS) and are described in Section 3 of this report.

2.2 Field Surveys

The general survey activities consisted of characterizing land uses and vegetative communities within the study area, and conducting wildlife use assessments and protected species habitat assessments. The study area was generally defined as an 800-foot wide corridor centered on the viable alternative alignments and immediate vicinity, along with any areas proposed for use as stormwater ponds for the project.

Field activities consisted of vehicular and pedestrian surveys within and adjacent to the project study area conducted by CH2M HILL biologists in:

- 2007 - January
- 2006 - March, May, and August
- 2005 - March, April, May, and June
- 2004 - April and May
- 2002 - January, February, April, and June

Field observations and signs of wildlife were documented, such as tracks, burrows, dens, scat, nests, and calls. The list of protected species and habitats that may occur within the study area was used for reference and to concentrate survey efforts in areas most likely to support listed species; this was done with a focus on upland natural areas, managed agricultural areas that have low intensity management, wetlands, and surface water bodies. Biologists conducted pedestrian surveys of the proposed pond sites to document potentially sensitive environmental resources.

Uniform Mitigation Assessment Method (UMAM) was conducted for representative wetland systems potentially impacted by the project. UMAM results are presented and discussed in detail in the updated final *Wetland Evaluation Report* (CH2M HILL, June 2010) prepared for this PD&E study.