

## General

All manure management structures shall have an environmental risk assessment completed. Appendix F contains FL-CPA-30 and NRCS-CPA-52. This evaluation of waste management system found a few potential adverse effects, but none exceed the beneficial effects and no special environmental concerns were found. Therefore, no Quality Assurance Plan is required.

Fields where nutrients are applied will be managed to soil loss tolerance. The settled solids from the settling pond will be land applied to Fields 38-42 and the Hayfield Field 43 (See Figure 3, showing effluent and solids application areas and any sensitive areas.) As shown by the buffer on Figure 3, no manure products will be placed within 50' of any property boundary or sinkholes. Fertilizer, pesticide, and herbicide will be applied via a mechanical spreader in those areas. When the center pivot system is used for fertigation, individual sprinklers will be shut off in those areas. Pasture1 is a pasture for the young animals for conditioning prior to them being moved to the confinement barns (Figure 5).

The topological features of the farm are shown in Figure 10 while Figure 11 provides a soils map for the farm. There are several soils on the farm, but they are dominated by the Alpin Fine Sand and related deep sand complexes (see Figure 11 and also See Non-Technical Descriptions of the soils in Appendix E). Soil borings and site specific soil investigation in the construction site area verified the soil descriptions are accurate.

Planned land treatment practices for the NMP for the farm are presented in Appendix C.

## P Index

The Florida Phosphorus (P) Index is an assessment tool used to evaluate the potential for P transport from the land application area. One of the factors used in the P Index is the current soil test. The current soils test report (Appendix E) recommends no application of  $P_2O_5$  to the crops. Also, a soil study (Appendix E) was conducted by Ron Kuehl to verify the soil classifications and the presence of any clay layers and coated sands. Based on the soil survey as verified by Mr. Kuehl, recent soil test for P levels, and proposed application rates, the P Indices were computed for all fields (See Phosphorus Index Worksheet in Appendix E and Table 4 for results of the P assessment) to determine the potential for P transport.

The field locations and ID numbers are shown in Figure 3. The phosphorus index is based the soil's erosion, runoff, and leaching potential, sensitivity of nearby waterbodies, soil phosphorus test results, and phosphorus fertility rates and application methods. Figure 11 shows the soils map for the farm that was used for the assessment. Table 4 shows the assessment parameters and the resulting phosphorus indices for each field. An index category of "low" or "medium" means the field can be nutrient balanced based on nitrogen, while indices of "high" or higher require nutrient balancing based on phosphorus. As seen in Table 4, all fields can receive manure/bedding materials based on nitrogen loading rates.