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## **Ryland Homes - Oakleaf Hammock Community**

### **Environmental Monitoring Program (EMP)**

Gaydos Hydro Services, LLC (GHS) was contracted to conduct to develop and implement the annual Environmental Monitoring Plan (EMP) as required by the Water Use Permit (WUP) for the Oakleaf Hammock Community. The special condition of the permit requires a staff gage located in West Moon Lake to be read for water level elevation biweekly, groundwater withdrawals to be recorded monthly and UMAM transects to be conducted annually. The condition requires a descriptive report on the environmental assessments made during the previous year and is to include documentation and analysis of how those assessments relate to the water elevation in West Moon Lake and how it relates to groundwater pumping.



To be proactive in mitigating for potential wetland impacts, GHS was contracted to conduct an assessment of the surficial aquifer groundwater flow. Several of the surface water ponds are utilized as irrigation ponds and are located adjacent to several wetland systems. Within several of the wetlands, tree mortality has been identified and is reasoned to be due to the hydrologic cycle within those wetlands being

predominantly wet versus dry during the winter and spring seasons. GHS collected various water elevation data including rainfall with analysis focusing on horizontal seepage through the pond banks into the adjacent wetlands. Conclusions were that surface water was not able to flow offsite as engineered due to an impoundment not within the community. This impoundment was causing the staging of surface water and was maintaining artificially high water levels within the wetland system.

