

impacts. The secondary impacts or cumulative effects are more subtle, often not recognized, and even more often not interrupted as negative consequences of development.

### Drying Out The Landscape

The most far reaching effects of developing the Florida landscape are the long term changes to hydrologic patterns that result from manipulation of ground and surface waters under the guise of "flood control" or "storm water management". No other impact is so pervasive, and alters landscape processes to such an extent as the engineered solutions to developing "wet" lands in a landscape whose main driving energy is rainfall. As shown in Figure 4, on lands where wet season rains once to saturated the soil column, collected in depressions, and slowly ran off through sloughs and meandering streams, developments now sit that are engineered to respond in exactly an opposite manner. Ground water levels are lowered to accommodate storm water retention and detention basins and the management system is designed to discharge storm waters as quickly as the law allows; all in the name of flood protection.

The practice of systematically drying out the landscape creates multiplicative impacts that effect a much wider area than the individual development project. Water tables lowered in one area lower water tables in surrounding lands and runoff waters effect all downstream water bodies including estuaries. These practices are at odds with most well intentioned management and regulatory programs. Programs designed to protect water quality, for the most part, do not address nonpoint sources of pollution. Programs to protect wetlands, for the most part, do not address the losses of wetland function as a result of lack of water and natural hydroperiods due to lowered ground water levels. Management programs for natural areas that find themselves at the downstream ends of watersheds are at the mercy of all upstream development interests. Loss of upstream storage results in down stream flooding in wet years and drought in dry years.