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### Effect of flow routing through a wet pond and a dry pond connected in series: A runoff mitigation plan evaluation

In a complex urban site, where the construction of new pond is not feasible due to site constraints, a careful systematic evaluation of storm flow routing through existing facilities can provide a solution to mitigate runoff. This study evaluates an existing storm water management design and utilized the advantage of the combined effect two ponds (a wet pond and a dry pond) in series to manage the excess runoff due to construction of a 0.7 acre parking lot. The site located at Tallahassee, Florida, USA was paved resulting in 0.6 acre impervious area. This increased runoff was managed by conveying the flow through pipes and inlet system and routing through an existing wet pond and a dry detention pond that are connected in series. The runoff simulation results (5 yr, 10 yr and 25 yr design storm events) confirmed the excellent performance of the entire system. The two ponds in series can handle the excess runoff efficiently in an integrated manner. The analysis revealed that the system utilizes its extra capacity, retains as much water as possible within the site and safely releases excess volume downstream with no significant increase of post-development offsite runoff.

#### Biography

Hafiz Ahmad is a faculty of Civil and Environmental Engineering of Florida State University- Panama City. On average he teaches about nine courses in a year. He is a professional engineer (P.E.) registered in Florida, U.S.A. He has more than five years of industrial experience in the area of hydraulic and hydrologic modeling, water and wastewater treatment.

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