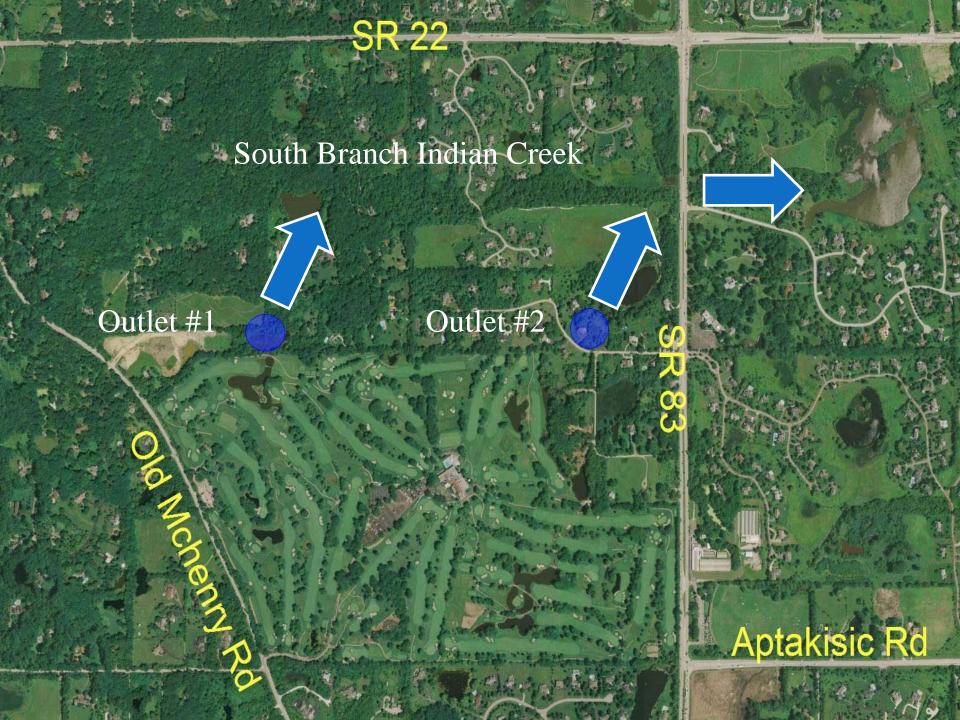
TWIN ORCHARD COUNTRY CLUB DRAINAGE IMPROVEMENTS IASFM 2010 CONFERENCE

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DRAINAGE IMPROVEMENT PLAN DEVELOPEMENT

DRAINAGE PROBLEMS

- Existing Drainage System Capacity is Exceeded on a Yearly Basis
- Various Portions of the Two 18-Hole Courses are Inundated
- Damages to the Courses Include Dead Bend Grass Fairways (Depth & Duration), Loss of Revenue Due to Course Closure (Duration), Erosion and Debris

DRAINAGE PROBLEM CAUSES

- Not Enough Storage Volume Available
- Deteriorating and Undersized Infrastructure
- Downstream Outlet Restrictions (Failed 18" Field Tile)



DRAINAGE IMPROVEMENT PLAN DEVELOPEMENT

PROJECT OBJECTIVE: REDUCE FREQUNECY AND MAGNITUDE OF FLOODING SOLUTION:

- Additional Stormwater Storage at Effective Locations
- Floodplain Fill to Raise Fairways (Reduce Frequency, Depth & Duration of Inundation)
- New Storm Sewers
- Replace Failed 18" Field Tile

ISSUES:

- Location of Stormwater Storage Basins?
- Look and Feel of Stormwater Storage Basins?



