Potential Impediments to Implementing Stormwater Diversions to POTWs

Primary Concerns/Impediments

- Policy and Legal Issues
  - Some POTWs do not have statutory authority to treat stormwater
  - Once implemented, agencies may not be allowed to discontinue the diversion
  - Responsibility and liability for diversions in the case of failure, overflow, etc.
  - Defining "First Flush" (e.g. once in beginning of wet season)
  - Capital and O&M costs incurred by POTW to accept diversions
  - Lack of authority to control sources of pollutants to storm system (e.g. pretreatment authority for special districts does not apply)
  - Potential to be regulated under the federal CSO Policy during wet weather
  - Downstream water rights issues

- Discharge Flow Issues
  - Loss of capacity for future growth
  - Ability to limit the flow to the plant
  - Increased frequency and/or duration of blending events

- Discharge Quality Issues
  - Violation of permit limits due to pass-through of pollutants in stormwater
  - Triggering of reasonable potential for a new constituent
  - Potential to exceed wasteload allocation for constituents with TMDLs
  - Increased loading, due to increased flow, of constituents such as nutrients that cannot be reduced below a biologically-determined minimum concentration
  - Impact on biosolids quality
  - Reduced pollutant allocations to pretreatment program permitees
  - Toxicity to WET testing – Chronic Toxicity Testing - unknown toxicity at low levels and cost for reanalysis and TIE/TRE
  - Toxicity to WET testing – Acute Toxicity Testing – unknown toxicity at low levels and cost for reanalysis
  - Constituents in stormwater may cause treatment plant upset
  - Possible challenges to enterococcus and coliform limits

- Operational Issues
  - Loading of barscreens and impact on pumping systems at treatment plant causing overflows and failure of equipment due to solids, sand, silt, grit, rocks
  - Increased difficulty in meeting removal rates for BOD with stormwater dilution
  - WDRs and SSMPs would need to address additional flow and pumping to POTWs which would affect collection and treatment plant design
  - Toxicity to activated sludge process from uncontrolled substances in stormwater
    - Possible permit violations
    - Time needed to recover process
  - Possible challenges to activated sludge process
    - Selection for different filaments when treating stormwater
    - Process changes for aeration and detention time with the additional flows

- Salt water intrusion from stormwater systems in low lying areas along the bay and increased tide and bay water intrusion during storm events that could
  - Be toxic to treatment process
  - Adversely affect water re-use option to prevent damage to membranes
- Chemical costs – chlorination and dechlorination
- Potential fire/explosion due to gasoline or other flammable liquid released to stormwater system prior to diversion

Potential Mitigating Strategies

- Avoid uniform implementation strategy
  - Some agencies more prepared to accept diversions (e.g. physical limitations)
  - Cost recovery vs. cost sharing agreements
    - Different options/challenges for municipalities vs. special districts

- Regulatory relief for potential violations resulting from accepting diversions
  - Unanticipated upset conditions
  - WET failures

- Adjustments to effluent limits (concentration and/or mass) when accepting diversions

- Control discharge quality if treat diversions as a permitted discharge under pretreatment standards (capital and O&M costs)

- Consider starting with finite, manageable diversions (e.g. low DO in stormwater pumping station wet wells)