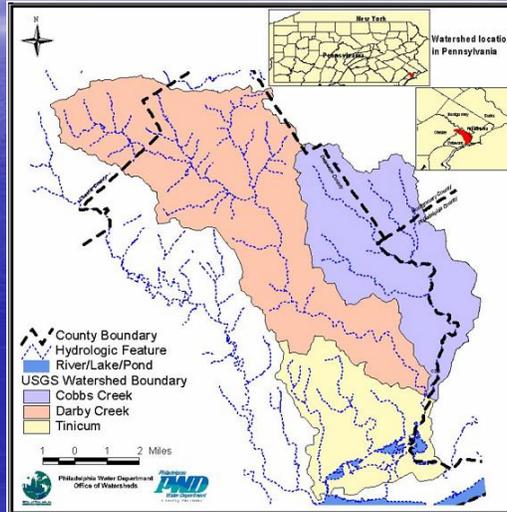




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Darby-Cobbs Watershed Sediment Assessment

- Darby-Cobbs watershed discharges to the Delaware Estuary through the wetlands of the John Heinz National Wildlife Refuge at Tinicum
 - 80 mi² of southeastern Pennsylvania
 - parts of Chester, Delaware, Montgomery, and Philadelphia Counties
 - Divided into 3 subwatersheds: Cobbs Creek, Darby Creek, and Tinicum



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Darby-Cobbs Watershed Sediment Assessment

- Highly urbanized
 - Up to 66% of the surfaces are impervious
- Urban sprawl, channelization, armored banks, increased stormwater runoff have unbalanced the sediment equilibrium
 - sediment deposition,
 - increased flood stage,
 - streambank erosion,
 - threatened infrastructure
 - ecological degradation, and
 - poor aesthetics



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- NAP initiated 16 official studies over the past 35 years
 - Studies from a municipality-based scale have not been effective
 - \$, politics, "band aid", sediment, upstream/downstream effects
- 34 separate project requests from communities within the Darby-Cobbs watershed in FY05, due in part to recurring severe floods
- An unbiased watershed-scale assessment is needed
 - Determine specific causes
 - Identify appropriate methods for immediate and long-term solutions



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- Ideal RSM demonstration project
 - Urban sprawl, degraded habitat, multiple stakeholders with conflicting interests, multiple problems- flooding, limited space not unique to Philly
 - Provide framework applicable nationwide
 - Opportunity for USACE to provide unbiased technical expertise (ERDC)
 - Results will supplement ongoing (small-scale) projects and aide in future project development



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Darby-Cobbs Watershed Sediment Assessment

FY07 and future efforts

- Continue coordination
 - USGS, USFWS
 - Additional watershed groups
 - COG, Borough council
- Build SIAM-like model to identify the areas where restoration will have the most significant benefit to the watershed
 - Run various restoration scenarios- stormwater management, barrier removal, etc.



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Darby-Cobbs Watershed Sediment Assessment

FY07 and future efforts (cont.)

- Develop comprehensive watershed plan based on the findings that will recommend appropriate methods for immediate and long-term solutions
 - Address bank erosion/sediment deposition, dam/impediment removal, greenways, and riparian buffer re-establishment, sediment input into Delaware Estuary
 - Include advance designs (in-stream structures) for more immediate objectives, such as erosion that is threatening homes and sewage infrastructure
- Initiate projects- ID sponsors
 - Should expedite time to construction

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Darby-Cobbs Watershed Sediment Assessment

- Recurrent floods are a reminder that we can't wait for studies that take several years
 - Sponsorship, politics



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