

Conowingo Relicensing

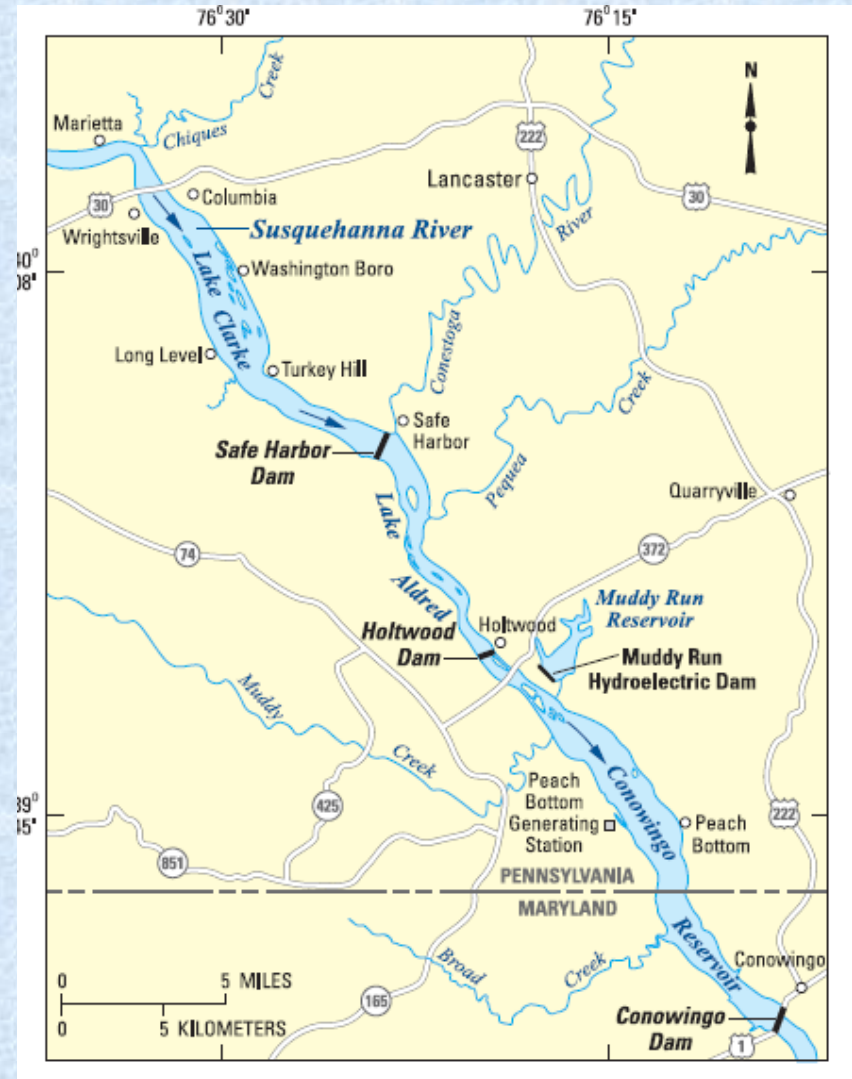
CBC Presentation

January 3, 2013



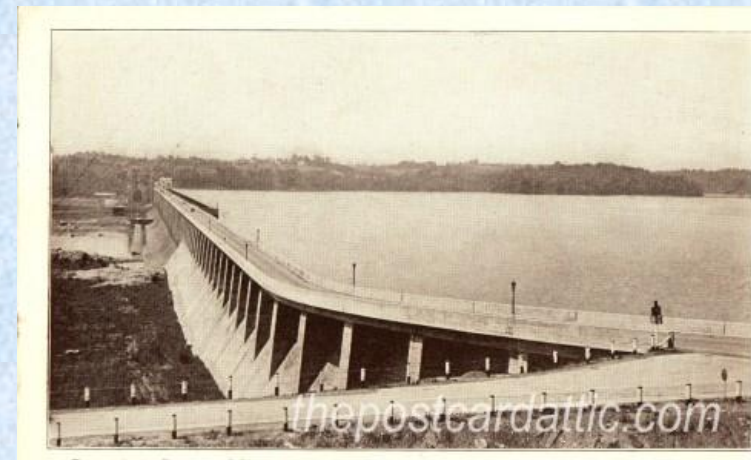
Other Susquehanna River Hydro

- Muddy Run (Pump/Storage)
 - in FERC relicensing
 - expires 2014
- Holtwood Dam
 - adding new turbines
 - amended to 2030
- Safe Harbor Dam
 - expires 2030
- York Haven Dam
 - in FERC relicensing
 - expires 2014



Relicensing Participants (Conowingo)

- Federal Energy Regulatory Commission (FERC)
- Exelon – Applicant / Owner
- Maryland – DNR & MDE
- Pennsylvania – PADEP, PAFBC
- USFWS/NOAA
- National Park Service (NPS)
- Susquehanna River Basin Commission (SRBC)
- The Nature Conservancy (TNC)
- Lower Susquehanna Riverkeeper



Conowingo Dam and U. S. Highway No. 1

Conowingo, Maryland

FERC's Relicensing Schedule

- Pre-Application Document - 2009
 - Maryland participated in development of study plans
 - FERC approved a total of 32 studies
 - Exelon conducted studies between 2010 and 2012
- Final License Application (FLA) - August 31, 2012
- FERC expected to issue Ready for Environmental Assessment (REA) in early 2013 ???
 - Within 60 days following issuance of the REA
 - FWS must issue fish passage prescriptions;
 - MD can enter 10j licensing recommendations
- Settlement negotiations began October 2012
- Current license expires September 1st, 2014

Studies Approved by FERC

- 3.1 Seasonal and Diurnal Water Quality in Conowingo Pond and below Conowingo Dam
- 3.2 Downstream Fish Passage Effectiveness Study
- 3.3 Biological and Engineering Studies of American Eel at the Conowingo Project
- 3.4 American Shad Passage Study
- 3.5 Upstream Fish Passage Effectiveness Study
- 3.6 Conowingo East Fish Lift Attraction Flows
- 3.7 Fish Passage Impediments Study below Conowingo Dam
- 3.8 Downstream Flow Ramping and Fish Stranding Study
- 3.9 Biological and Engineering Studies of the East and West Fish Lifts
- 3.10 Maryland Darter Surveys
- 3.11 Hydrologic Study of the Lower Susquehanna River
- 3.12 Water Level Management (Littoral Zone and Water Level Fluctuation)
- 3.13 Study to Assess Tributary Access in Conowingo Pond
- 3.14 Debris Management Study
- 3.15 Sediment Introduction and Transport (Sediment and Nutrient Loading)
- 3.16 Instream Flow Habitat Assessment below Conowingo Dam

Studies Approved by FERC (Continued)

- 3.17 Downstream EAV/SAV Study (Water Level Vegetative Cover Study)
- 3.18 Characterization of Downstream Aquatic Communities
- 3.19 Freshwater Mussel Characterization Study below Conowingo Dam
- 3.20 Salinity and Salt Wedge Encroachment
- 3.21 Impact of Plant Operations on Migratory Fish Reproduction
- 3.22 Shortnose and Atlantic Sturgeon Life History Studies
- 3.23 Study to Identify Habitat Use Areas for Bald Eagle
- 3.24 Dreissenid Mussel Monitoring Study
- 3.25 Creel Survey of Conowingo Pond and the Susquehanna River below
Conowingo Dam
- 3.26 Recreational Inventory and Needs Assessment
- 3.27 Shoreline Management
- 3.28 Archaeological and Historic Cultural Resource Review and Assessment
- 3.29 Effect of Project Operations on Downstream Flooding
- 3.30 Osprey Nesting Survey
- 3.31 Black-crowned Night Heron Nesting Survey
- 3.32 Re-evaluate the Closing of the Catwalk to Recreational Fishing

Significant Issues

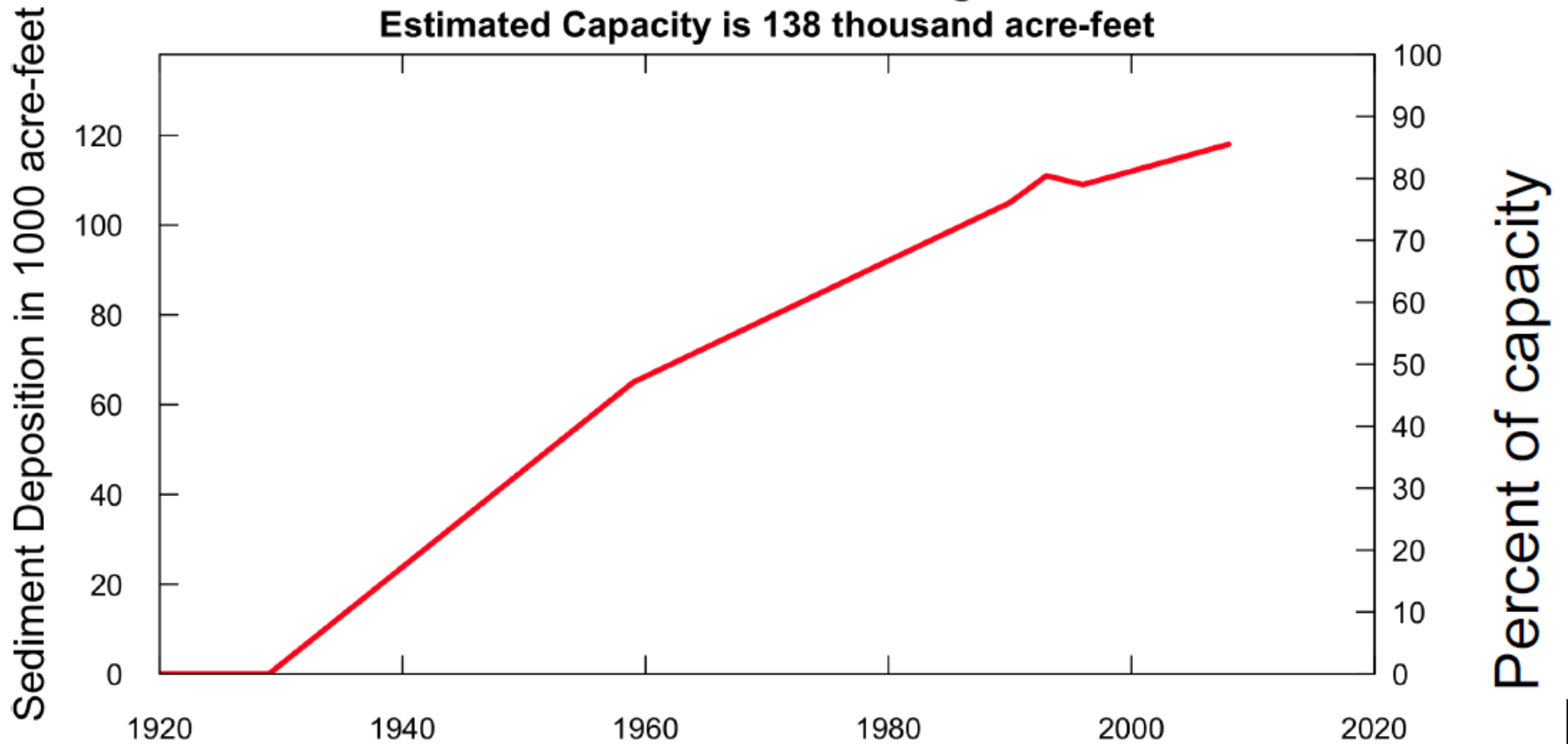
- Sediment Management
- Fish Passage (upstream & downstream)
- Flow Management
 - fish stranding
 - downstream habitat
- Water Quality / Freshwater Mussels
- Recreation / Catwalk
- Debris Management
- Land Conservation
- RTE Species

Sediment

- Holtwood and Safe Harbor already at dynamic equilibrium
- 3 million tons/year loading with 2 million tons/year captured
- Sediment Capacity at $\approx 86\%$
- 10-15 yrs of storage capacity?
- Tropical Storm Lee (2011) scoured ≈ 4 million tons of sediment / added about 2 yrs
- Hurricane Agnes (1972)
- Project operations (peaking) continue to scour deposited sediment below the dam which reduces habitat quality and availability



**History of Sediment Deposition
In the lower 11.5 miles of Conowingo Reservoir
Estimated Capacity is 138 thousand acre-feet**



Source: Langland, 2009
<http://pubs.usgs.gov/sir/2009/5110/>

Fish Passage

- Migratory fish passage impeded by series of 4 dams and several intakes
- Migratory fish are important to the ecology of the river
- American eel are believed to be a larval host for freshwater mussels that provide water filtration benefits
- Adult eels effectively remove nutrient biomass with outward migration

What We Want To Accomplish Through Relicensing

- Proper Management of Sediment
- Improved Fish Passage
 - American Shad
 - American Eel
- Restore Freshwater Mussels
 - Water quality / filtration capabilities
- Enhance Flow Conditions
 - Improve downstream habitat
 - Reduce fish stranding
- Expand and Improve Recreational Opportunities
- BMP for Debris Management
- Land Preservation
- Protection of RTE Species



MDE's 401 Water Quality Certification Process

- Exelon must file its 401 WQC Application within 60 days of REA.
- State must act within 1 year of receipt of the WQC application or it waives its rights (there are ways to extend).
- State's 401 WQC authority has been interpreted broadly by courts.
 - Includes authority to condition as necessary to ensure compliance with State water quality standards.
 - Courts have upheld WQC conditions related to fish passage, habitat, minimum flows, and recreation.
- FERC cannot grant license without WQC from Maryland (although 1 year licenses are possible)
- FERC has little to no authority to reject or modify our WQC conditions.
- WQC determination is appealable to State court.