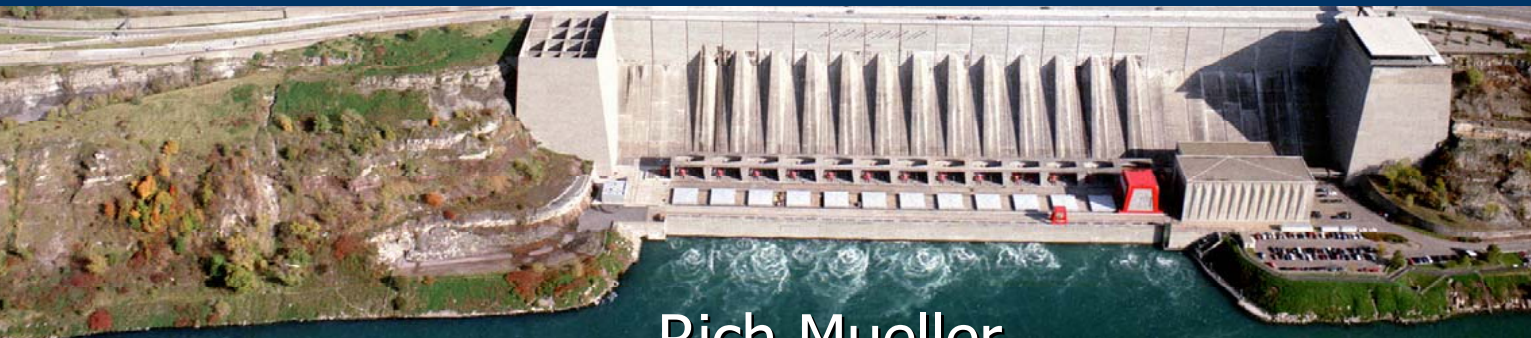




New York Power Authority Niagara Power Project

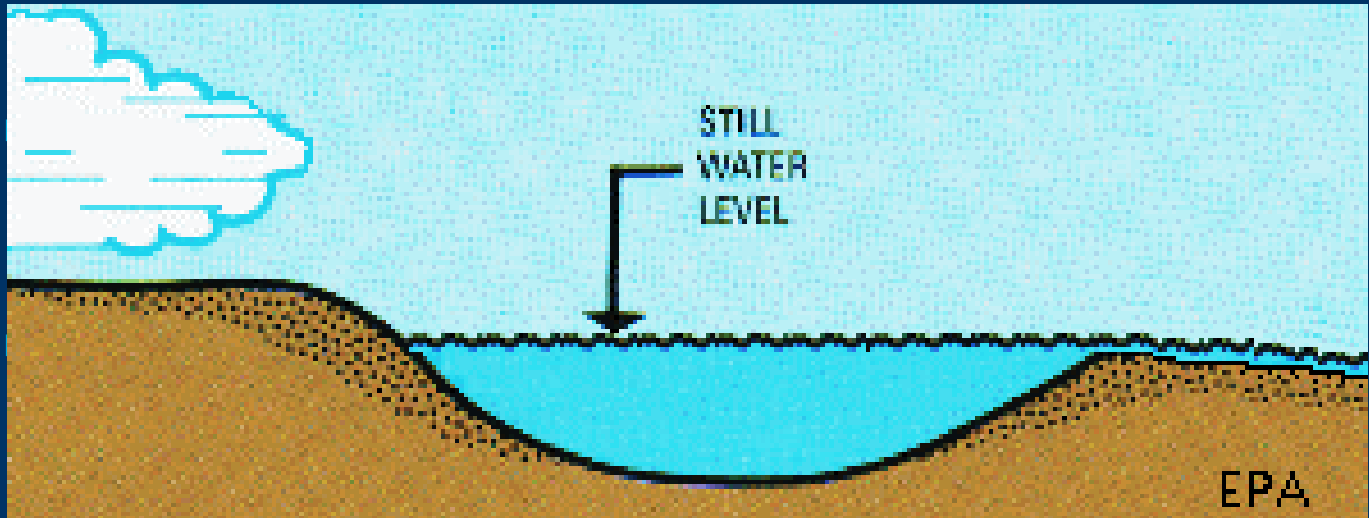
\$ impact of forecasting error
sources of uncertainty
What is NYPA doing about it?
HEPEX keys for success



Rich Mueller

Impact of forecasting error

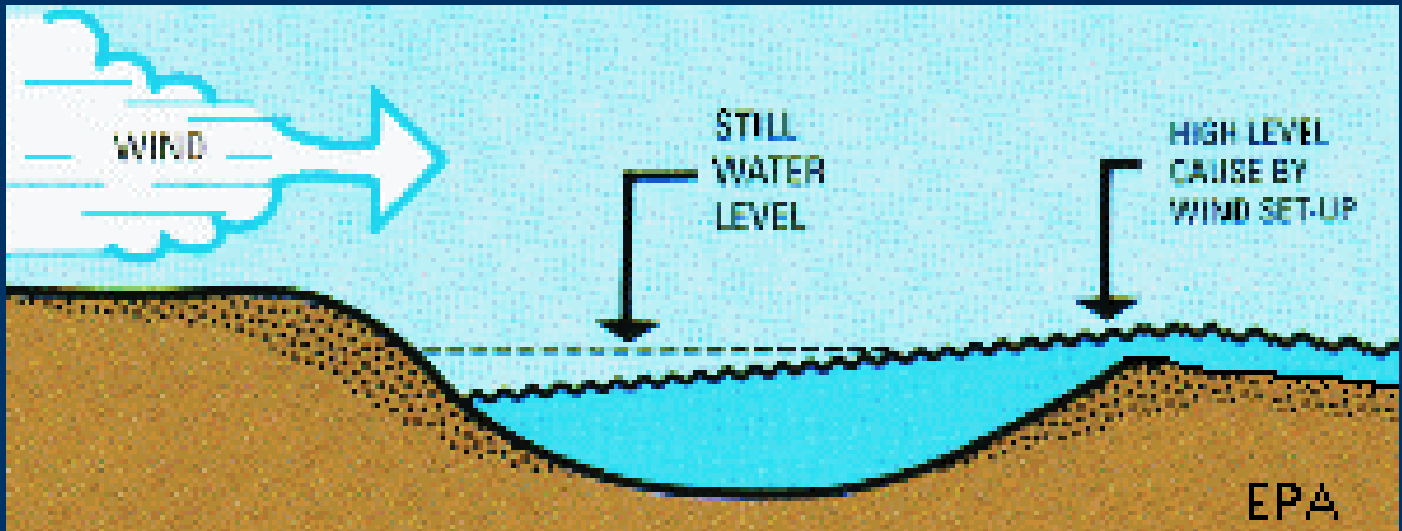
- Example 1: Month ahead Niagara River flow
 - \$xx million since 2000



Impact of forecasting error



- Example 2: Lake Erie water level surges
 - \$x million/yr



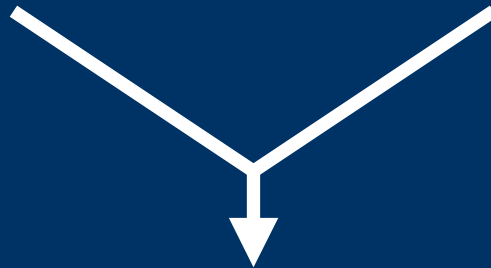
Integrate hydrologic uncertainty and market price uncertainty

Weather
uncertainty



Hydrologic
uncertainty

Market price
uncertainty



Hydropower operating decisions

HEPEX and beyond, Two keys to success, from the user perspective

■ Flexibility

- Location
- Timestep
- Length
- Frequency
- Format
- Unique hydraulics

■ Marketing

- Identify users
- User commitment
- Value-added vendors