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Advancing the management of water resources

Neuse Hydrologic Model
Kickoff Meeting
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Discussion Topics

- Who and what is HydroLogics?
- What is OASIS?
- Concept of the Neuse Hydrologic Model
- Demonstration of OASIS
- Project timeline
- Questions?

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Who and What is HydroLogics?

- 10 people, 3 states
- Specialties: hydrology, modeling, systems analysis, operations research
- Developers of OASIS
- Services:
  - Water allocation/conflict resolution
  - Risk/drought management
  - Water supply planning
  - System operations

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Small Firm - Big Experience

- NYC
- DRBC
- SRBC
- NHI
- ALCOA
- PPL
- SFWMD
- NCDWR
- TNC
- PG&E
- MWD
- EID
- YRBWREMS
- USACE
- USBOR
- RWSA

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What is OASIS?

- A patented, mass balance, water resources simulation/optimization model
- Purposes:
  - Alternatives evaluation
  - Real-time operations
  - Gaming
- Used in
  - Water allocation/conflict resolution
  - Hydropower relicensing and operations
  - Municipal system planning and operations

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Alternatives Evaluation

A major purpose of OASIS is to compare alternatives. That is, to compare the performance of alternative sets of facilities, demands, and operating policies over the whole range of the hydrologic record.

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Concept of Neuse Hydrologic Model

A basinwide model of the Neuse River Basin at the finest practical geographic resolution and timestep.

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Concept of Neuse Hydrologic Model

A basinwide model of the Neuse River Basin at the finest practical geographic resolution and timestep.

Possible Uses:

1. Evaluation of the combined effects of municipal water supply plans
2. Evaluation of interbasin transfer permit applications
3. Development of individual water supply plans – NHM will be on the DWR server and available to stakeholders and their consultants
4. A platform for developing risk-based drought plans.

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Demonstration of
Cape Fear Hydrologic Model

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Project Timeline

- Two-year effort, but …
- Components
  - Basin schematic – 2 months
  - Inflow data – 6 to 18 months
    - Calibration
  - Agricultural data – 9 months
  - Operating rule – 2 months
  - Integration with Durham's AWWARF climate change study?

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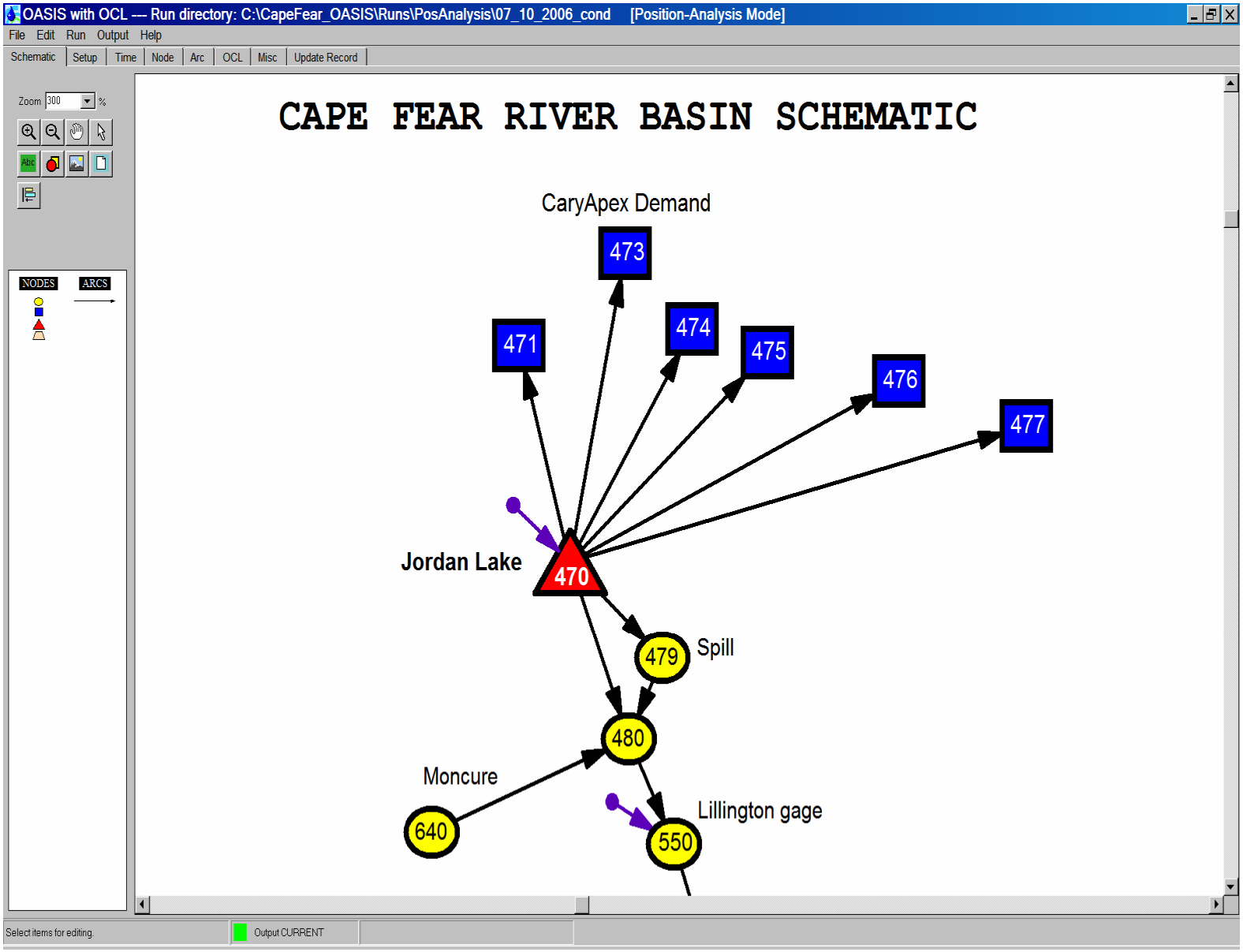

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The model will always be subject to revision,

because even experts make mistakes!

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Questions?

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