# Creating WATER9 Project fFiles

Session 2 of 2

The Use of WATER9 to Model Processes

# Session 2

- Preparation of a flow diagram for the process
- Transferring process information into a project
- Methanol in a basin
- Split flow for parallel units
- Debugging methods
- Validation methods

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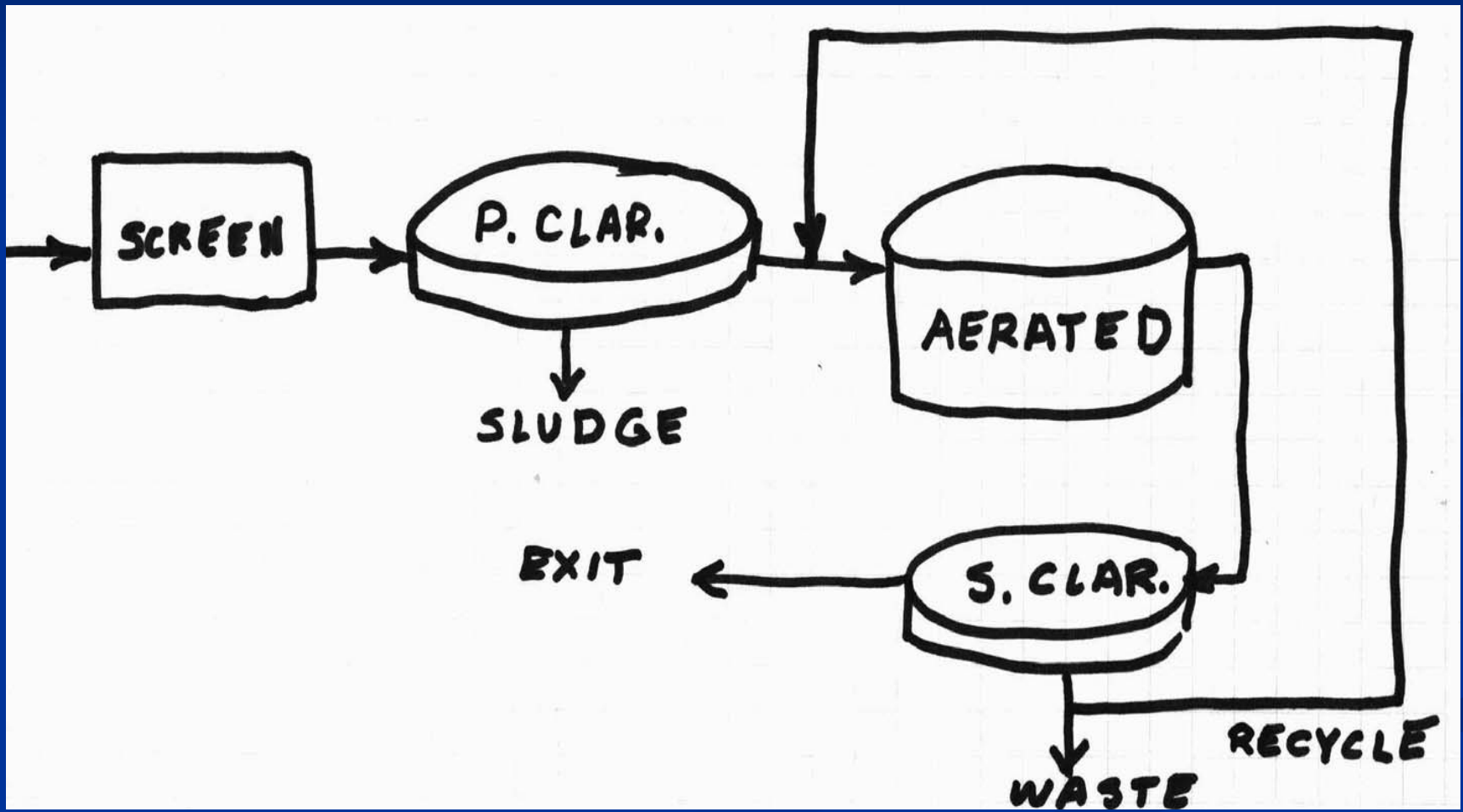
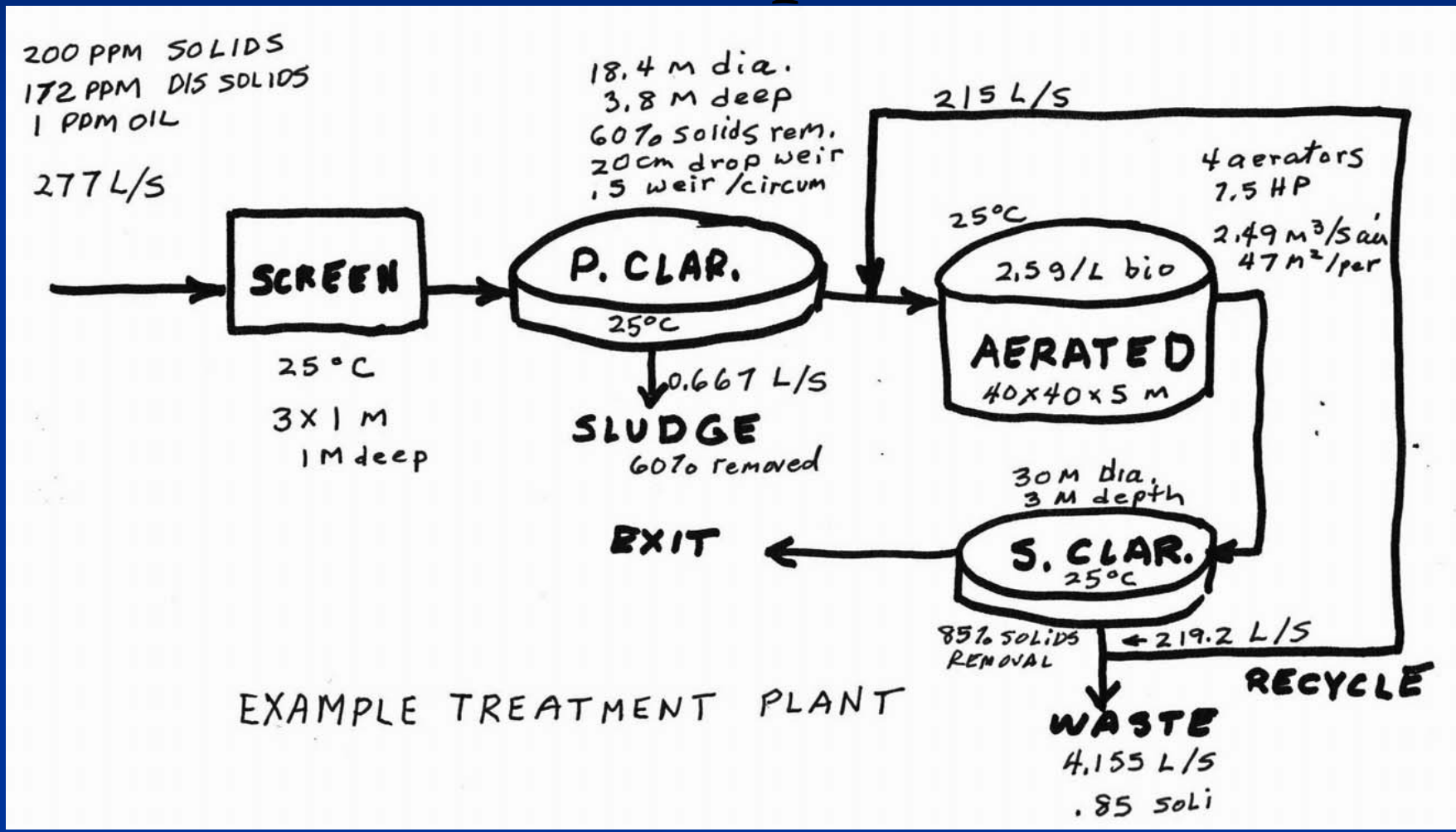
# Flow Diagram



# Flow Diagram for the Process with Inputs



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# Transferring Information to a Project File

- Place units on WATER9 screen
- Add unit information to the units
- Select compounds
- Specify a waste stream
- Add flow rates and concentrations to the waste.

# WATER9 Lines

| Mouse action | Result |
|---|---|
| Locate unit press mouse button down | Starts a line. Puts unit icon at start. |
| Move mouse location with button down | Draws a line from start of line to end. |
| Move mouse to end of line location. Release button | Fixes line from start to end locations |

**Adding units to a project**

# WATER9 Project File

- Place units on WATER9 screen
- Add solids divert line
- Select compounds
- Specify a waste stream

Illustration of creating a project file

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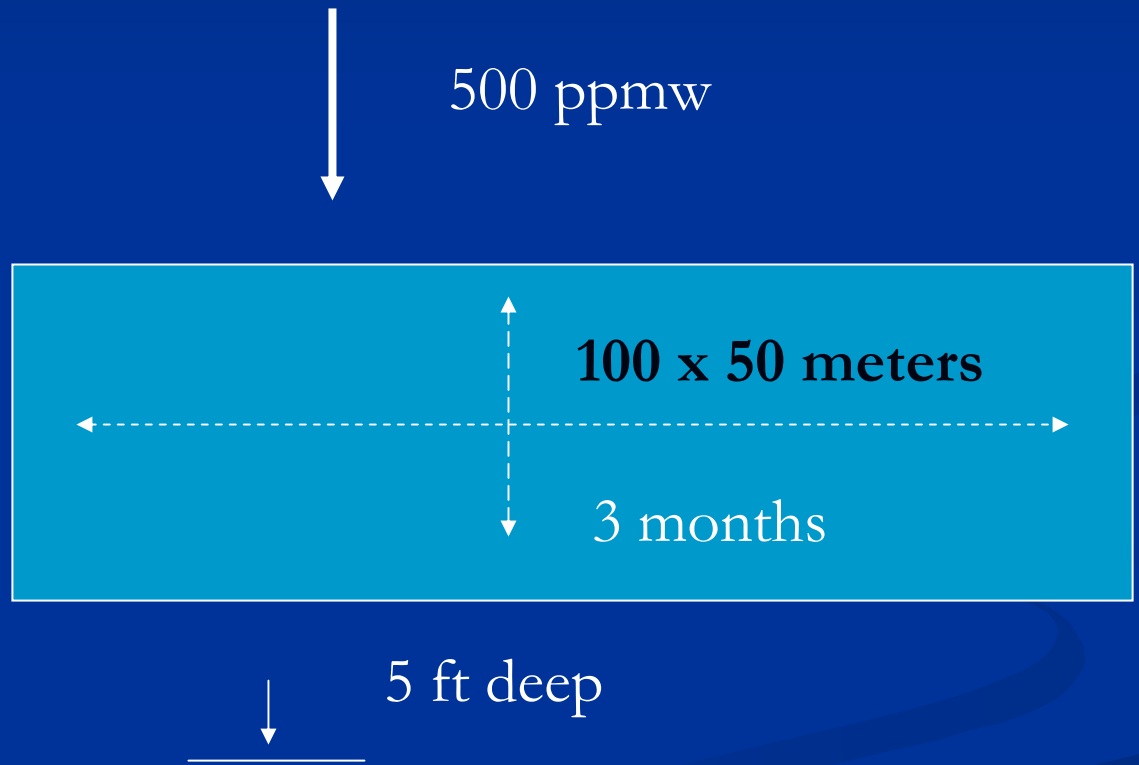
# Methanol in a Basin



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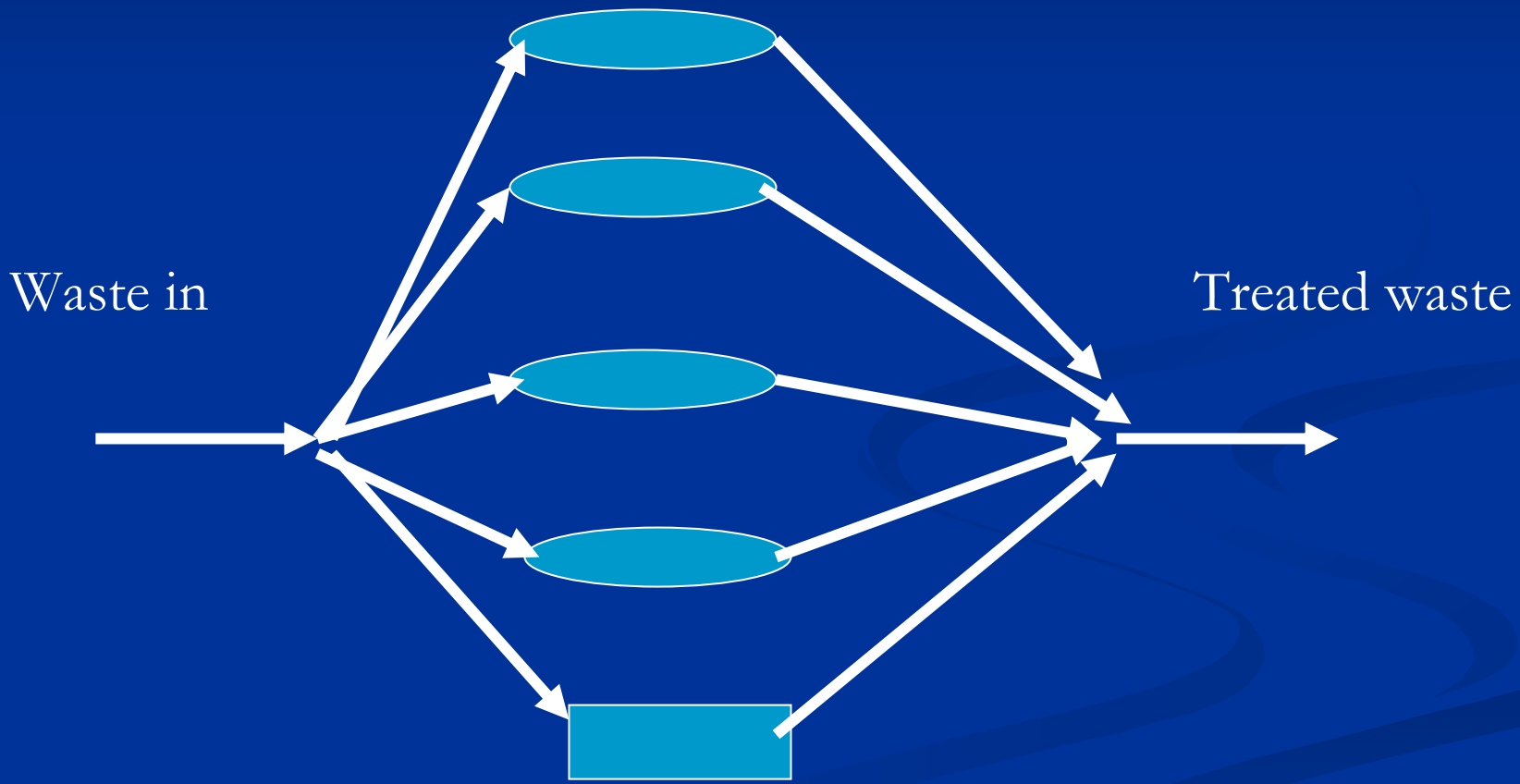
# Split Flow for Parallel Units



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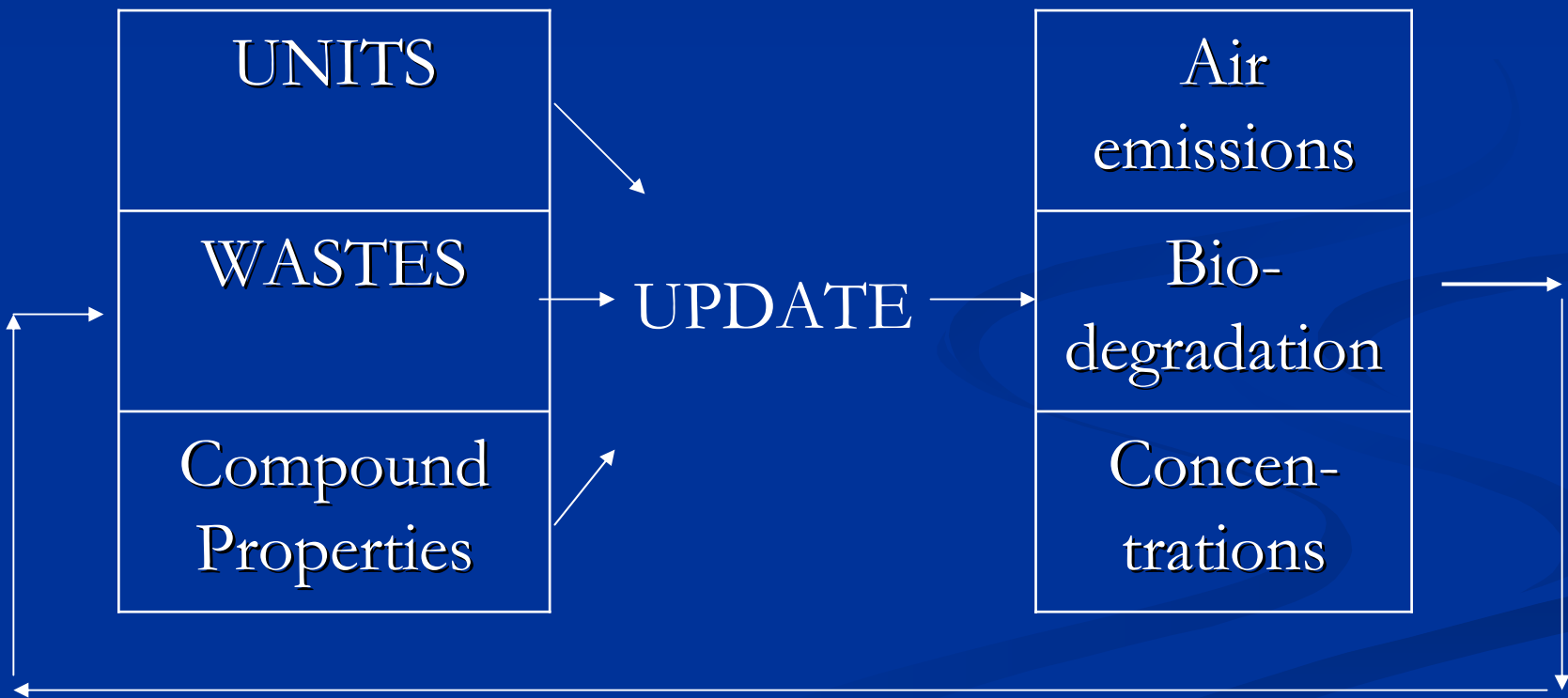
# Debugging Methods

- Material balance
- Correct input specifications (waste and units)
- Check pH, DO
- Change chemical properties
- Change convergence numbers

# Debugging Methods

**Specify** **Calculate** **Review**



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# Validation methods

- Comparison with process data
  - Flow rate
  - Concentration
  - Dissolved Oxygen
  - Temperature
- Amount of biomass production
- Comparison with similar systems

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# Data Input into a Project I

- Open unit pop-up window
- Select [Edit Properties]
- Enter properties in text box
- Help information
- Range of values
- Conversion factors

**Example of editing properties in a unit**

# Data Input into a Project II

- Bar screen KL input
- Temperature, drop, pipe diameter in waste specifications
- Input toggle
  - Draw
  - No draw
  - Move lines

**Example of editing properties in a unit**

# Collection System Project