

Regulators

Controller (PID Decision Making)

Integral (past)

$$K_i \int_0^t e(\tau) d\tau$$

Proportional (present)

$$K_p e(t)$$

Derivative (future)

$$K_d \frac{de(t)}{dt}$$

Sensor

Water quality
Measurement

Health Risk
Measurement

Plant

Water Supply

Society

Environment

Output
Water

Reference
Risk or Concentration
Threshold

Error
 $e(t)$

Specify number of
experts and ads

Concentration Feedback

Risk Feedback

Risk

