

# Drinking Water Academy Web Conference

## **The Public Water System Supervision Logic Model**

**Will Bowman**  
**Thursday, February 24, 2005**  
**11:30 – 2:00 EST**



# Opening Remarks from Steve Heare, DWPD Director

# Logic Model Web Conference Agenda

Presentation 11:30 – 12:30

Break 12:30 – 12:40

Q&A: First Round ■ 12:40 – 1:15

Break 1:15 – 1:25

Q&A: Second Round 1:25 – 2:00

# Presentation Overview

- ✓ Introducing the Logic Model Development Work Group
- ✓ Brief Recap of Logic Models: What and Why?
  -
- ✓ Summary of Concerns and DWPD Responses
- ✓ Remaining Project Milestones
- ✓ Closing Thoughts

# Logic Model Development Work Group

Region 1 – Mark Sceery

Region 2 – Robert Poon

Region 3 – Michelle Hoover

Region 4 – Janine Morris

Region 5- Alicia Brown,  
Joe Janczy

Region 6 – Blake Atkins

Region 7 – Doug Brune

Region 8 – Anthony Deloach

Region 9 – Barry Pollock

Region 10 – Craig Paulsen

Other Headquarters Participants: Evelyn Washington,  
Elizabeth McDermott and Ray Enyeart

# I. Brief Recap of Logic Models: What and Why?

# What is a Logic Model?

A Logic Model is:

a diagram or flow chart that shows how a program should work in theory



“Logic” : *how* do resources and activities lead to results?

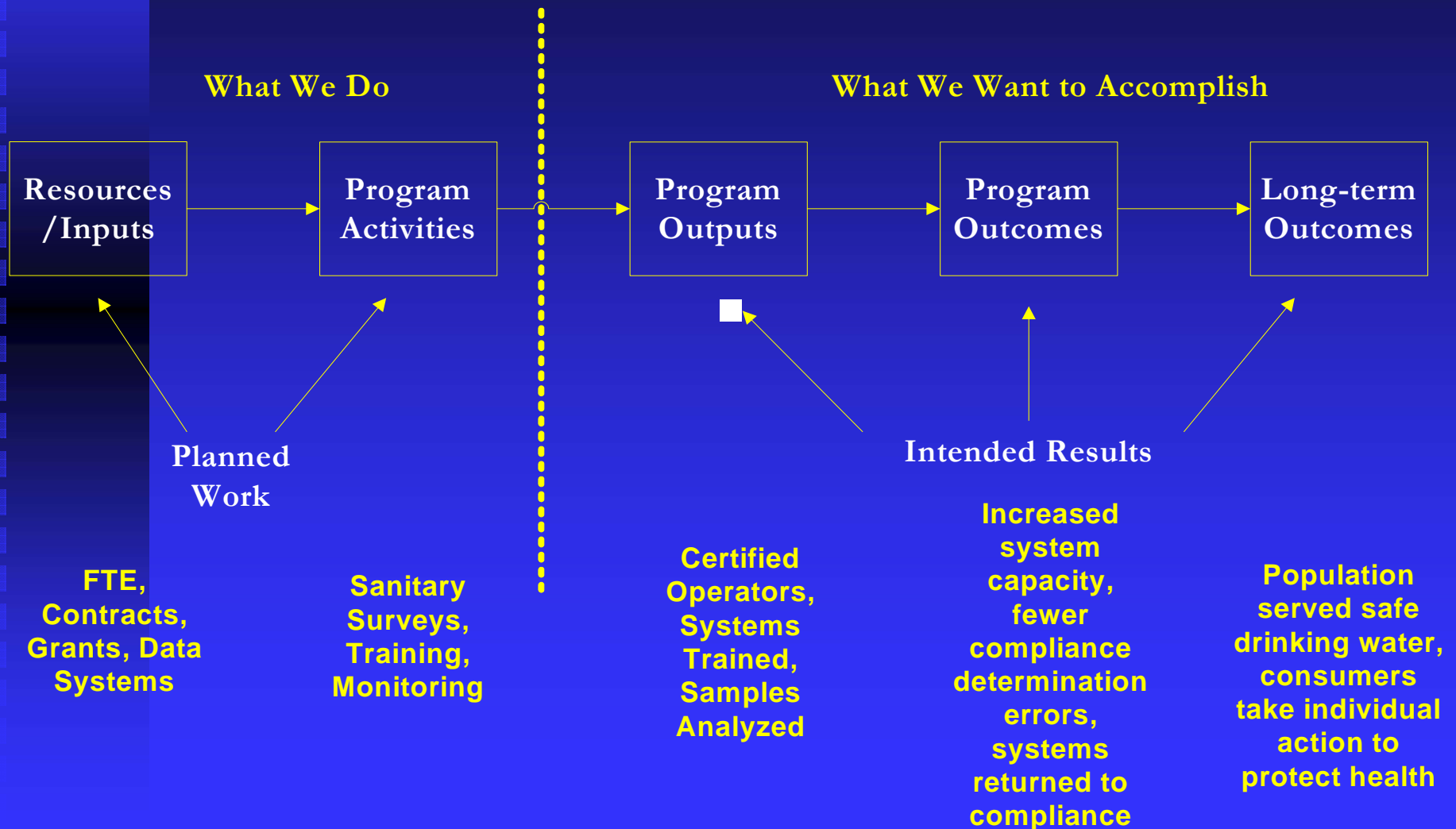
“Model” : *what* does our program look like?

## Background: Components of a Logic Model

- ✓ **Inputs** – human resources, funding, technology
- ✓ **Activities** – ongoing work on products and services to achieve results
- ✓ **Outputs** – most direct results of our efforts – evidence of products and service delivery.
- ✓ **Outcomes** – changes in behavior, knowledge, skills or attitudes
- ✓ **Impacts** – changes in conditions, such as improvements in health and safety.



# A Basic Logic Model



# Why Create a Logic Model?



# Why create a logic model?

## To meet external demands to explain our program...

- ✓ Increasing demands for program performance data
- ✓ Increasing interest in logic models and indicators
- ✓ EPA Inspector General: logic models for evaluation of drinking water programs and practices
- ✓ OMB: program evaluation for budget decision making\*\*

## To improve program management and oversight relationship

- ✓ Develop shared frame of reference for understanding the program
- ✓ Develop better indicators of program health, status and trends
- ✓ Create framework for systematic assessment

# Why Create a Logic Model? External Demands

**“The principle here is clear: Taxpayer dollars must be spent wisely, or not at all.”**

- President Bush, State of the Union Address, 2/2/05

**“Program assessments [by OMB] factor into Bush plan to trim deficit”**

- Government Executive, 2/8/05

**“ Big Role for PART Ratings in 2006 Budget Cuts”**

- Fedweek, 2/22/05

**“ ‘ People on Capitol Hill don’t always understand what PART does and how it can be useful to us.’ “**

- Will Hart, Spokesman for Senate Environment and Public Works  
Committee Chairman Inhofe

# The New Budget Reality

## President's Management Agenda: Principles

- ✓ Programs [read: WE] bear the burden of proof to show achievement of goals
- ✓ Programs supported in the past will not necessarily be supported today
- ✓ Funding not just on the basis of need, but also on accomplishments
- ✓ Mismanaged, wasteful or duplicative programs will receive less funding, be redesigned, or eliminated altogether

## Budget decision-making criteria

- ✓ Does the program meet the Nation's priorities?
- ✓ Does the program meet the President's principles?
- ✓ Does the program produce the intended results?

## Budget Risks are Real: Proposed FY 2006 budget cuts

- ✓ 99 discretionary programs eliminated totaling \$8.6 billion
- ✓ 55 discretionary programs' funding reduced totaling \$6.5 billion\*

\*source: OMB. "Major Savings and Reforms in the FY 2006 President's Budget." February 11, 2005

# Use the PWSS Logic Model to Help Manage the Budget Risk

What does this mean?

- ✓ *Information demands* increasing even as our budgets are flat or decreasing
- ✓ *Drinking water budget at increased risk.* We must improve our ability to justify our program or we increase the chances of a budget cut.



Our response? Budget risk management. Let's meet these demands and manage the budget risk by developing a logic model and indicators.

- ✓ *Make the best possible case* for our program with existing information
- ✓ *Describe our performance in context* to ensure that external factors and unique aspects of programs are acknowledged



**Why Create a Logic Model?  
Improve Program Management and  
Oversight**

# Characteristics of the PWSS Oversight and Management Relationship Today

## “Fire-drills”

- ✓ we redirect limited resources to react to, rather than anticipate, implementation problems

## Rule-Focused

- ✓ we do assessments or attempt to diagnose problems without a sense of the bigger picture

## Anecdotal

- ✓ we do not use indicators to understand relationships between inputs, activities and results

## Assumptions Implicit

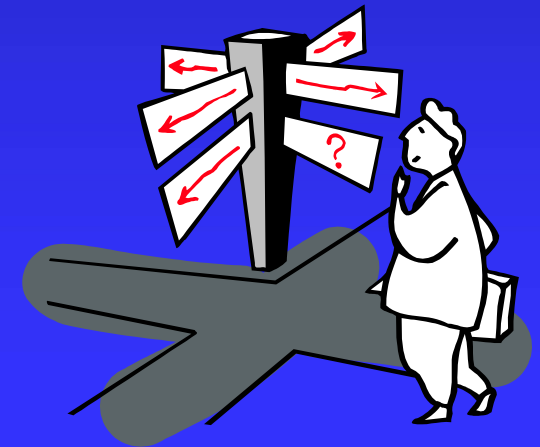
- ✓ we rely mostly on unstated assumptions about what’s working, what’s not, and why

## Ad Hoc Assessments

- ✓ we do not do program assessments using a common framework

## Context Secondary to Meeting Performance Targets

- ✓ we do not fully appreciate the importance of the story behind the results





# Potential Characteristics of Oversight and Management Relationship in the Future

## Proactive

- ✓ let's limit fire drills by anticipating implementation challenges

## Program-Focused

- ✓ let's do program assessments to see how the pieces fit together

## Fact-based

- ✓ let's use qualitative and quantitative information to support better decision making

## Explicit

- ✓ let's test our assumptions based on a common framework

## Systematic

- ✓ let's do program assessments regularly using the model and indicators

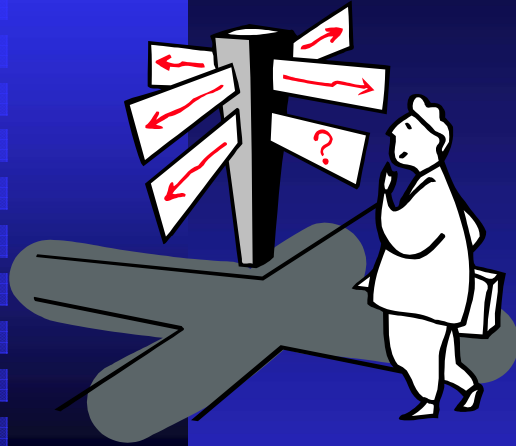
## Context Seen as Critical to Performance Measures

- ✓ let's put our results in context to fully explain the performance story



# Why Develop a Logic Model?

## Improve Oversight and Management Relationship



### Current approach:

- ✓ Fire-drills
- ✓ Rule-focused
- ✓ Anecdotal
- ✓ Implicit
- ✓ Ad Hoc
- ✓ Context Secondary

Let's change how we:

Understand

Measure

Assess

Communicate

**Gradual Transition**



### Logic model approach:

- ✓ Proactive
- ✓ Program-focused
- ✓ Fact-based
- ✓ Explicit
- ✓ Systematic
- ✓ Context *Critical*

## Using the Logic Model and PWSS Indicators: Limitations

- ✓ We know that a logic model and indicators cannot tell the whole story. Every program has a story to tell and context is important.
- ✓ Let's remember that although indicators can give us a sense of what's going on, they can't tell us what to do about it.
- ✓ Sustained leadership is essential to making this process work. DWPD is fully committed to using the model and indicators to improve management and oversight for the long term.

## II. Comment Summary and DWPD Responses

# Comment Summary: Regions and States Generally OK with Model

Nearly all Region and State comments affirmed that:

- ✓ The model has all the core program elements
- ✓ The model flow is (with some minor refinements) logical and plausible
- ✓ Some concerns about using it as shared frame of reference

Recommended changes were:

- ✓ Update or add definitions to the logic model boxes
- ✓ Reword activities and outputs
- ✓ Clarify relationships of activities to outputs

Given these comments:

- ✓ DWPD will issue a revised Model by the end of March
- ✓ New release will include descriptions and rationale for changes

# How does DWPD envision using the model?

## Understand through Program Evaluation

- ✓ Identify problem areas and their root causes
- ✓ Identify best practices in program operations
- ✓ Find barriers to implementation

## Measure Our Progress

- ✓ Develop range of indicators to support management, planning and decision making

## Assess Where We Are

- ✓ Assess state of program based on indicators (quantitative and qualitative)

## Communicate Internally and Externally

- ✓ Improve dialogue within the program
- ✓ Protect our budget in the short run, make a case for additional resources in the long run

## Take Action

- ✓ Share best practices in program operations
- ✓ Remove barriers to lessen implementation burden on states and utilities
- ✓ Set training and technical assistance priorities

# Using the Logic Model: A Brief Example



# Using the Logic Model: AWOP Example

*If TSC, Regions and States engage in:*

- ✓ Outreach to small systems to make them aware of available expertise
- ✓ Technical assistance for small systems on filtration technology
- ✓ Training for small systems on using filtration technology to meet rule requirements

*Then...*

- ✓ Information about AWOP expertise is available to small systems to encourage enrollment in this voluntary program
- ✓ Systems are trained to optimize filtration through PBT
- ✓ Systems receive on-site technical assistance to optimize their system



## AWOP Example (continued...)

*If systems enroll in the program and receive performance-based training and on-site technical assistance, **then...***

- ✓ Systems improve their understanding of how AWOP training and technical assistance can help them meet rule requirements
- ✓ Systems maintain adequate (technical) capacity to meet (or even exceed) turbidity standards

*If systems optimize filtration to maintain or enhance their technical capacity to comply with, or even exceed, turbidity requirements, **then...***

- ✓ Where *Cryptosporidium* is found in the source water, risk of exposure decreases as turbidity in finished water decreases (human health protection via safe water)

## AWOP Example (continued...)

The logic model flow can help managers and engineers improve AWOP, focusing on the following kinds of questions:

- ✓ What assumptions did we make about what's working, what's not working and why?
- ✓ What do our data suggest about the relationships between AWOP technical assistance and training, systems' increased understanding of optimization, and systems' ability to reduce turbidity?
- ✓ Did the training and technical assistance reach the right people at the right time, and in the right way?
- ✓ Do we see the expected reductions in turbidity violations, or potential turbidity violations found in sanitary surveys, for systems that have received Performance-based Training?

# Will the Model Limit Flexibility?

The Logic Model focuses on core programs common to all Regions and States

Balancing flexibility with budget risk management and meeting program needs.

✓ *How* we do oversight varies across Regions

✓ *What national core indicators* are would be the same: “common denominators”

Remember: The model is scalable for Region and State use

✓ How could a modified version of the model help you manage issues unique to each Region?

✓ Core indicators would not preclude additional indicators suited to management needs within each Region

# What is the relationship between the Model and the Strategic Plan?

Today we use the following to communicate our progress in the Strategic Plan:

- ✓ Strategic Plan Targets A through D (population served, systems in compliance, in terms of old and new rules)
- ✓ Sanitary Survey program activity measure (PAM)

Key Questions:

- 
- ✓ Are these 4 Strategic Targets and 1 PAM enough to explain the program?
- ✓ Are these 4 Targets and PAM enough for us to manage the budget risk?

Answer: No. Let's use the logic-model to influence how future Strategic Plans portray the drinking water program

- ✓ Develop better measures for portraying PWSS accomplishments
- ✓ Develop better baselines for performance
- ✓ Clarify how external factors (things outside our control or influence) affect our performance

# What is EPA doing to minimize the potential burden of using the model and indicators?

Minimizing the burden one of DWPD's top priorities. To do so we will:

- ✓ Use existing data flows (Data Verifications, SDWIS, and Regional Reviews) to support the pilot
- 
- ✓ Use existing reporting relationships to collect the data
- ✓ Test the model and indicators through a pilot in FY 2006.
- ✓ Conduct post-pilot assessment to assess whether we were able to use only existing data and reporting relationships.

# How does the model relate to other drinking water programs?

Need to strike the right balance between:

- ✓ “Macro-level” for Strategic Plan
- ✓ “Operational level” for Programs *within* PWSS (e.g. AWOP)

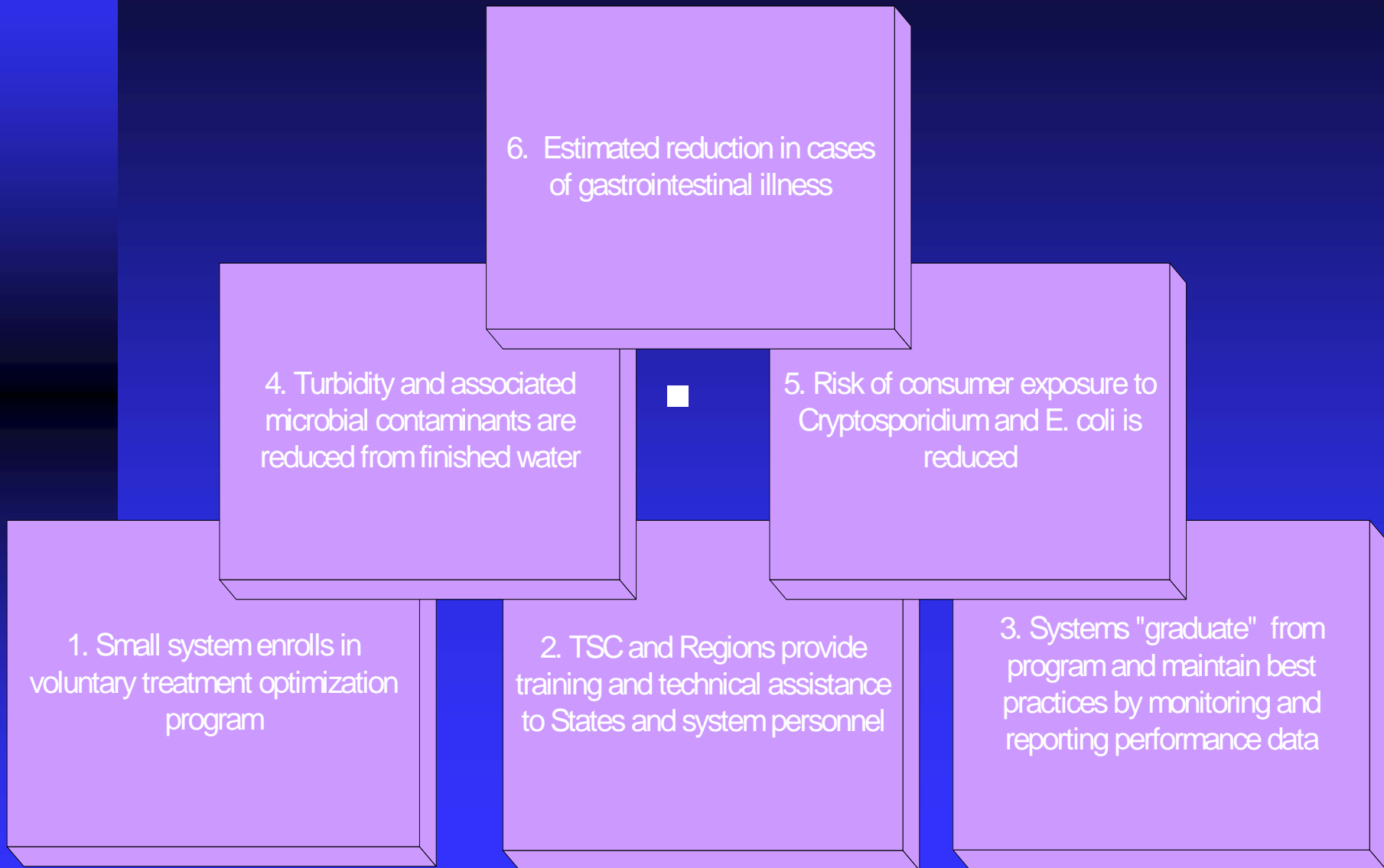
PWSS model intended for managers of core PWSS program

- ✓ Focus on the core program elements that describe PWSS
- ✓ Core program lies between Macro and Operational levels

Let's pilot the PWSS logic model, consider other programs based on experience

- ✓ Good approximation for purposes of a pilot in FY 2006
- ✓ All models subject to change through experience

## AWOP Logic Model: Building Blocks for Optimizing Filtration Performance



# Can you describe the Model Pilot in more detail?

## Piloting means we will:

- ✓ Collect data using existing data flows and reporting arrangements
- ✓ Assess value of model and indicators for future use
- ✓ Assess effects of model and indicators on work load



## Logic Model Work Group will clarify in Summer 2005:

- ✓ Expected roles and responsibilities
- ✓ Final pilot indicators and associated data sources
- ✓ Process for post-pilot assessment



# III. Next Steps

# Project Schedule: Remaining Milestones

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<b>Pilot Logic Model Finalized</b>	<b>March 2005</b>
<b>DRAFT Pilot Indicators Complete</b>	<b>June 2005</b>
<b>Region and ASDWA Review of Indicators</b>	<b>June-July 2005</b>
<b>Pilot Indicators Finalized</b>	<b>August 2005</b>
<b>Issue "Guidance" for Logic Model Pilot</b>	<b>September 2005</b>
<b>FY '06 PWSS Pilot Begins</b>	<b>October 2005</b>
<b>Post-Pilot Assessment</b>	<b>January 2007</b>

# IV. Closing Thoughts

# Putting Our Model in Perspective

**“It’s better to be roughly right than precisely ignorant”**

- ✓ We can – and are expected to – know more about the relationship between what we do and the outcomes we want to achieve

**Let’s focus on using indicators as “marker buoys” rather than “highway lanes”**

- ✓ Even the best indicators can only provide us direction; they cannot explain our program definitively

**Let’s not let “the perfect be the enemy of the good”**

- ✓ The model we have is a starting point. It is not set in stone.

**The more we use the model and indicators, the greater their potential value.**

- ✓ The usefulness of the model and indicators will improve with sustained leadership and through our shared experience.