



Regional Salt and Nutrient Planning

Doing the Work

The Recycled Water Policy outlined a structure that balanced water quality and water supply

Intent

Stakeholders committed to quality & quantity

Water Boards responsible for water quality

CDPH responsible for public health

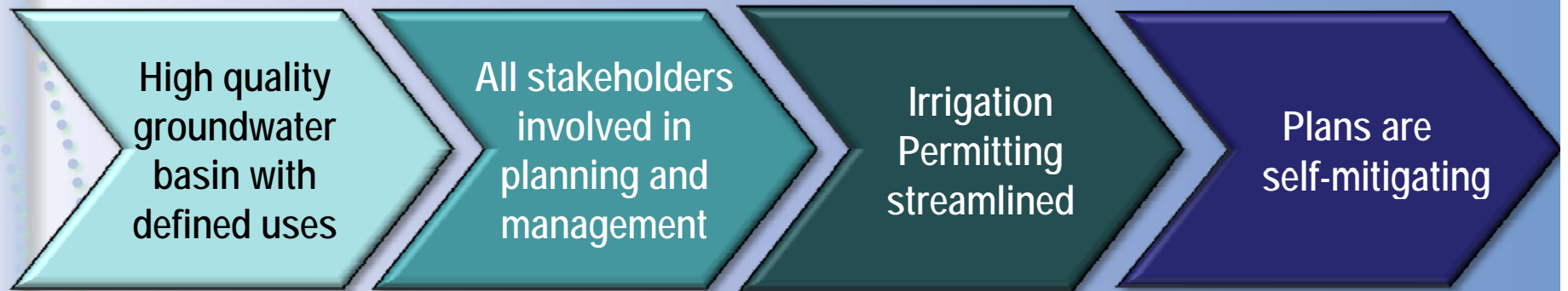
How it Manifested

Develop shared goals & mandates for recycled water supply

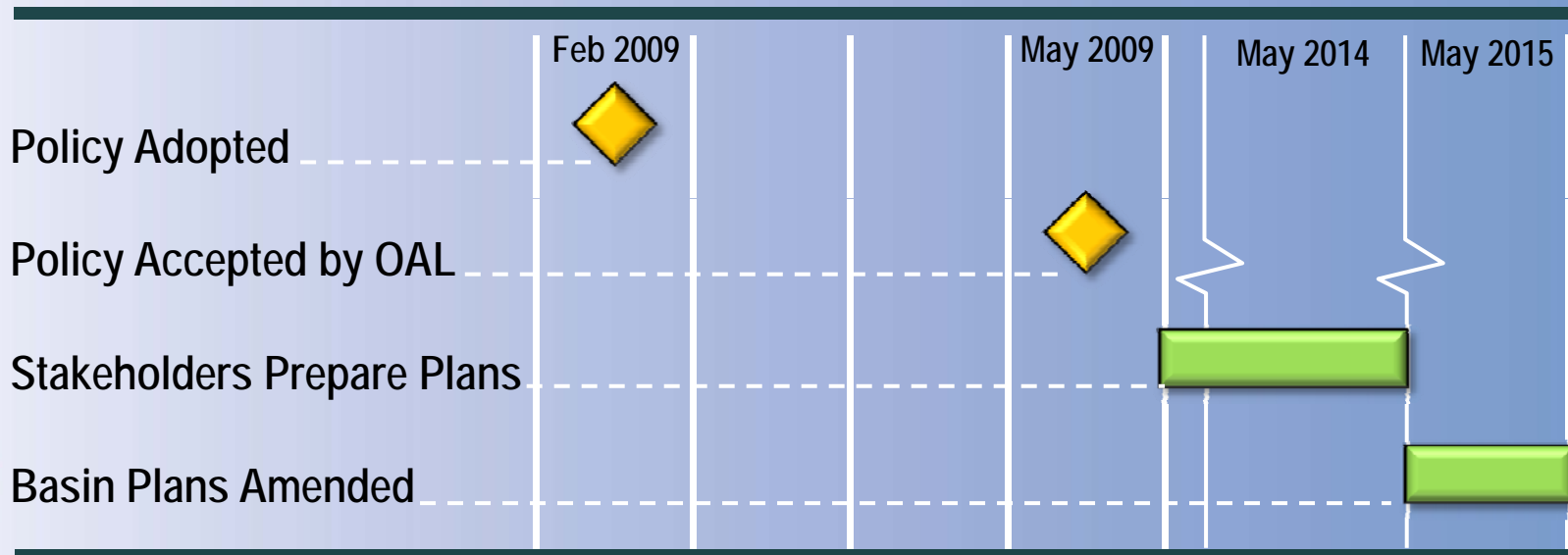
Require Water Quality Impact Analysis for Basin or Sub-basin

Convene expert panel on CECs to propose recommendations

The Policy anticipated adaptive-management through regional salt and nutrient plans

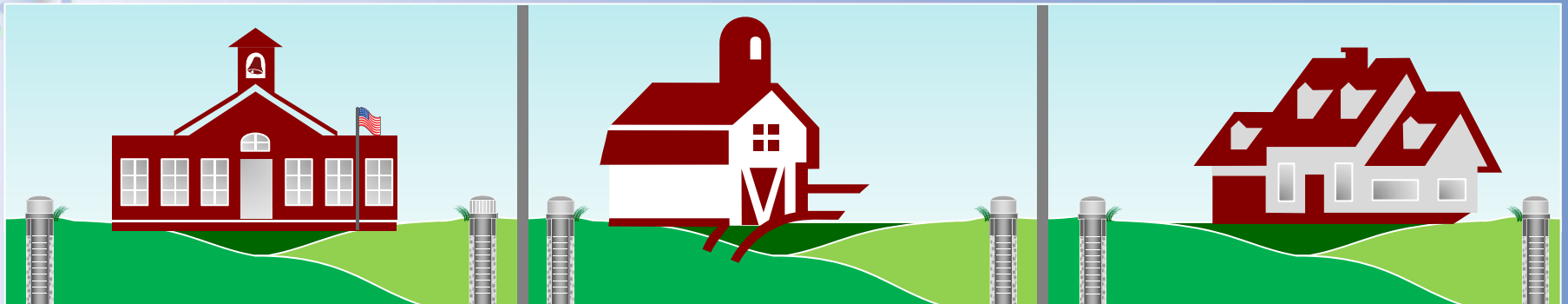


“Stakeholders” have 5 to 7 years to prepare these plans



What happens if we don't do this?

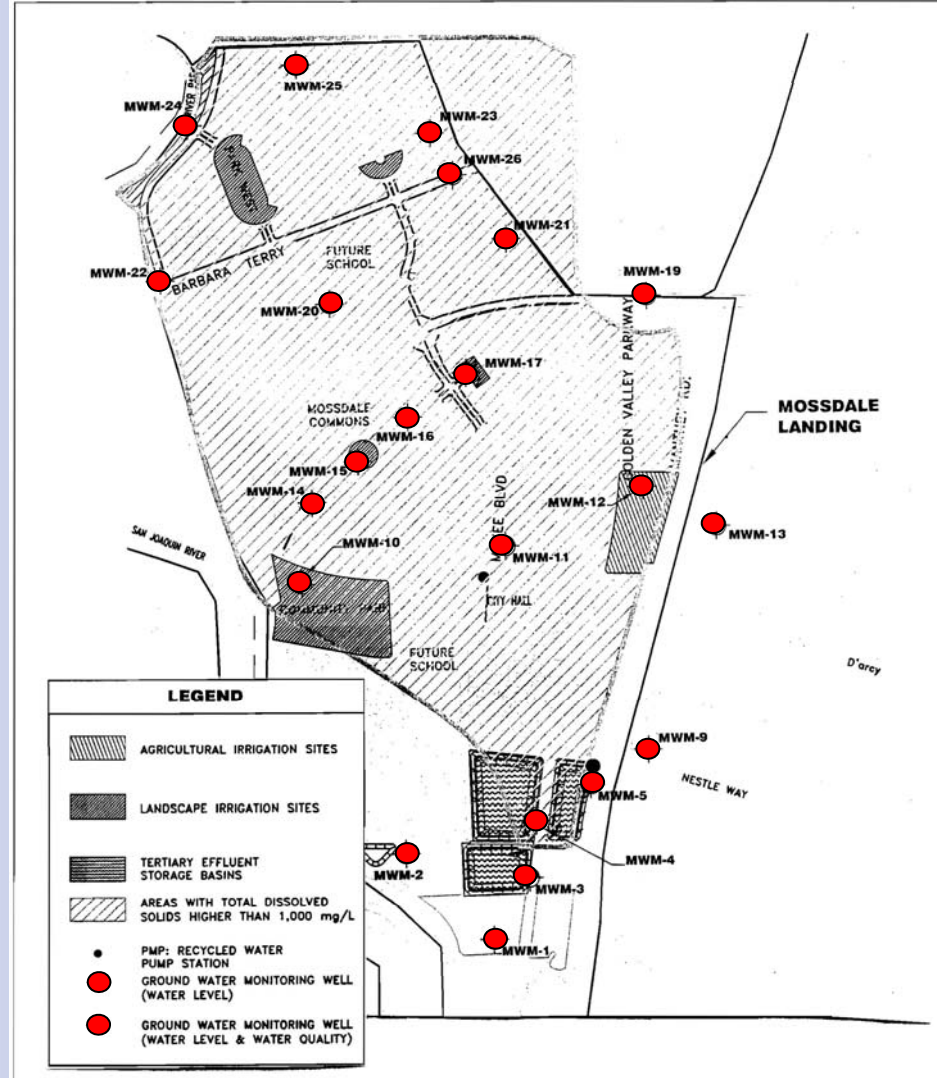
- ❖ Back to 'Square 1'
 - ◆ Each individual project separately permitted
 - ◆ Individual monitoring programs
 - ◆ Sole mitigation requirements
- ❖ Lose opportunity for regional salinity management
- ❖ Lose link between recycled water and sustainability



Here's an example of 'monitoring well madness'

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ATTACHMENT E.2

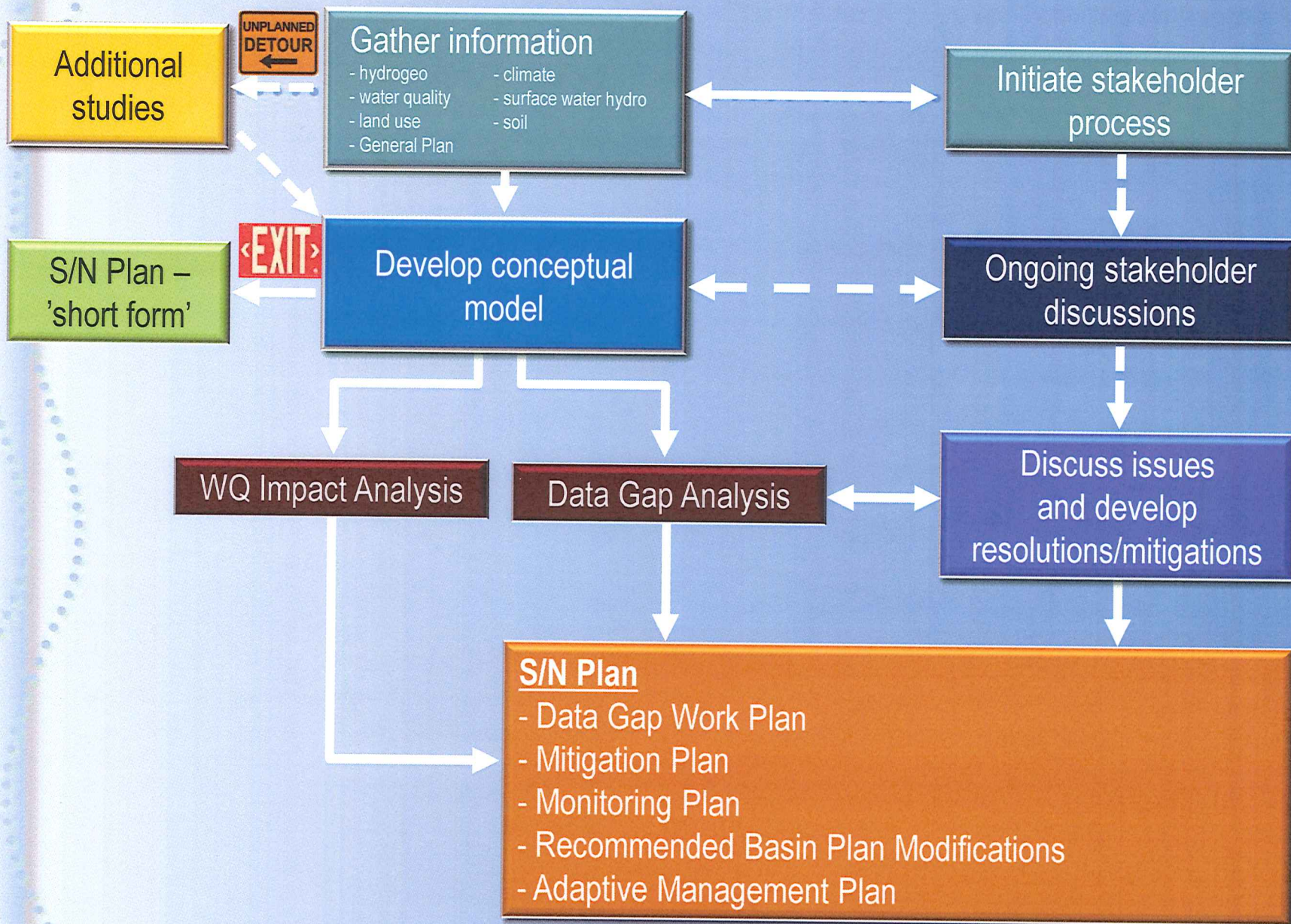




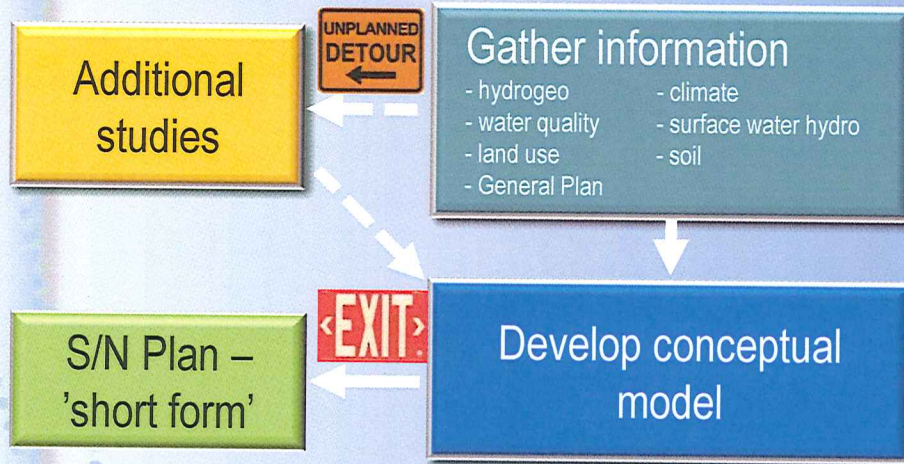
So, What Do We Do Next?

Technical

Stakeholder/Institutional



The First Step – Conceptual Model Development



- ❖ Understand the regulatory context
- ❖ Understand your basin
- ❖ Understand all current and potential future basin uses
- ❖ Be prepared to adjust basin management strategy and regulatory context to work better together

Understand the Regulatory Context

❖ Basin Plan

- ◆ Defined Beneficial Uses
- ◆ Numeric Objectives (if any)
- ◆ Narrative Objectives (why these matter)

❖ Other special requirements

- ◆ Habitat Plans
- ◆ Special basin needs

Understand the Basin

- ❖ Hydrogeology/Aquifer Uses
- ❖ Soil Types
- ❖ Climate
- ❖ Land Uses
- ❖ Water Balance
- ❖ Water Quality
- ❖ Salt & Nutrient Balances
- ❖ Dominant Transport Pathways

Understand Current and Future Basin Uses

- ❖ Current land uses contributing to salt and/or nutrient loading
- ❖ Foreseen changes in land use
- ❖ Proposed future development/industries that could contribute to salt and/or nutrient loading
- ❖ Economic and political implications of changing proposed future projects
- ❖ Proposed or possible recycled water projects

Tools for Defining the Basin

- ❖ Your Basin Plan,
- ❖ DWR Bulletin 118
- ❖ Watershed lines
- ❖ USGS and CDMG Reports
- ❖ Groundwater Management Plans
- ❖ Soil Reports
- ❖ Consumer Confidence Reports (water quality)
- ❖ Annual drinking water quality reports
- ❖ Other local documents

Case Study of Additional Data Gathering – San Ramon Valley Groundwater Basin

- ❖ East Bay valley with groundwater-bearing alluvial deposits
- ❖ Little groundwater use in the basin
- ❖ No published data available on water quantity, quality, or use/production
- ❖ No Groundwater Management Plan
- ❖ Solution: Collect data necessary to prepare basin-wide water, salt and nutrient balances

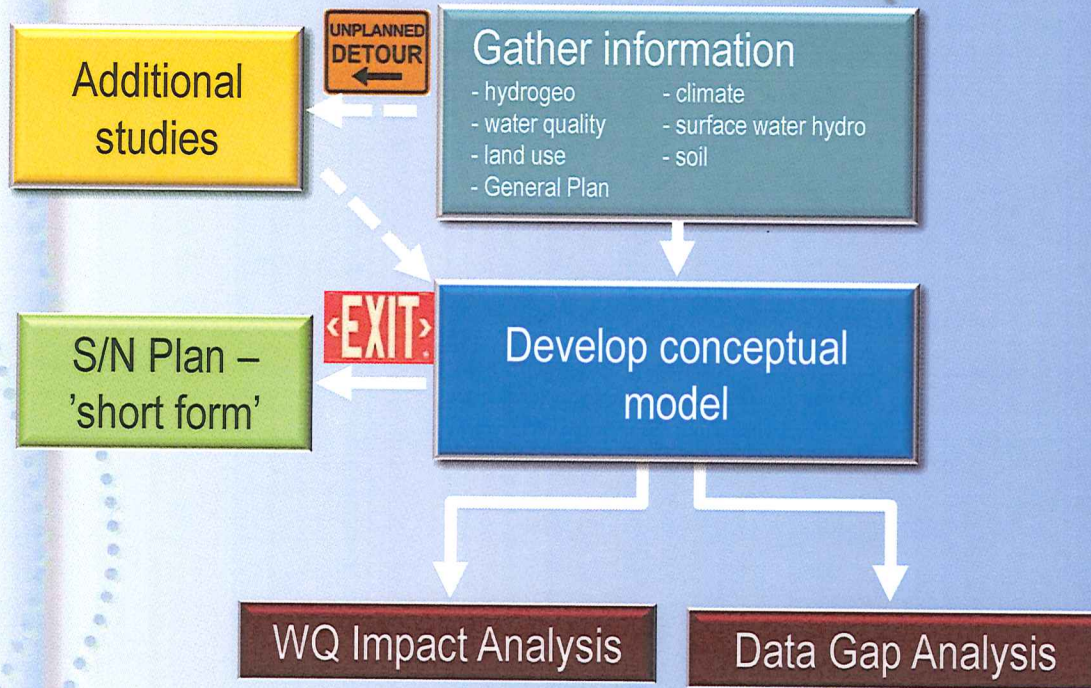


Case Study of an Early Exit Strategy - Marina, California

- ❖ Salinas Valley Groundwater Basin
 - ◆ A Aquifer – unused due to water quality and quantity
 - ◆ Salinas Valley Aquitard
 - ◆ 180-Foot Pressure Aquifer
 - ◆ 400-Foot Pressure Aquifer
 - ◆ Deep Aquifer
- ❖ Basin designated as municipal supply
- ❖ Potential Solution: Obtain variance/letter of concurrence regarding no anticipated impacts



The Second Step – Water Quality Impact Analysis and Data Gap Analysis



- ❖ Part of State Policy for water quality control
- ❖ Applies to high quality waters only
- ❖ Requires existing high quality be maintained to maximum extent possible
- ❖ Allows lowering if consistent with maximum benefit to people of the state

Factors that matter in a Water Quality Impact Analysis

- ❖ Constituent-by-constituent analysis
- ❖ Requires determination of groundwater as 'high quality'
- ❖ Determine if activity will lower existing high water quality

Preparing a Water Quality Impact Analysis and Data Gap Analysis

- ❖ Prepare Water and Constituent Balances
 - ◆ Salt
 - ◆ Nutrients
 - ◆ Other
- ❖ Compare against regulatory objectives
- ❖ Evaluate land use impacts on current and future groundwater quality
- ❖ Identify areas where more information is needed

What about CEQA?

- ❖ S/N Plan would amend the Basin Plan
- ❖ Basin Plan Amendments are a Certified State Regulatory Program - exempt from preparing a Negative Declaration or EIR [Guidelines Section 15251(g)]
- ❖ Proposed Basin Plan Amendment must still:
 - ◆ Evaluate environmental impacts
 - ◆ If significant adverse impacts, then adopt feasible alternatives or mitigation measures to reduce impacts
 - ◆ Comply with noticing requirements (PRC 21080.5)

Case Study: Salt Management Plan – Chino Basin

- ❖ Developing Optimum Basin Management Program (OBMP)
- ❖ Managed by Water Master
- ❖ Elements included in plan:
 - ◆ Comprehensive groundwater monitoring program
 - ◆ Groundwater Management Plan
 - ◆ Salt Management Program
 - Cooperative effort with Santa Ana RWQCB
 - Investigating/remediating legacy plumes
 - Includes TDS and nitrogen monitoring of both groundwater and surface water pursuant to 2004 Basin Plan Amendment
 - Actively desalting groundwater and stormwater



And there's still this side of the chart

Tools for gathering stakeholders:

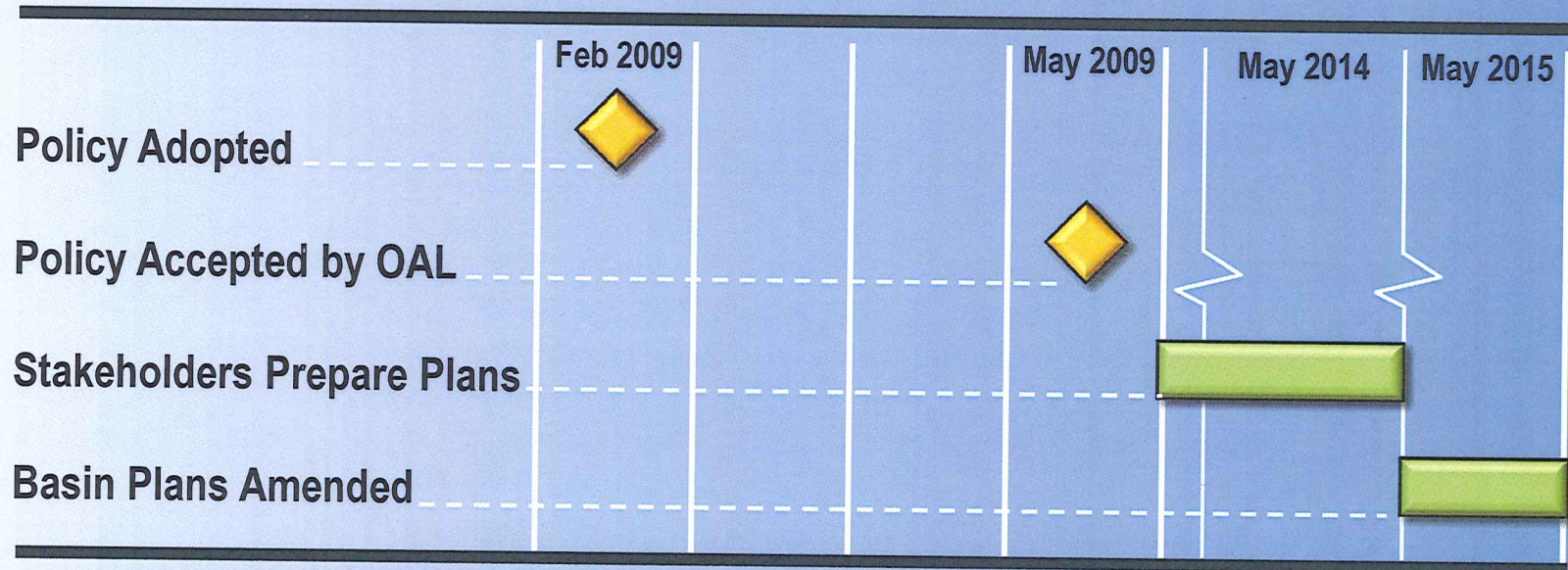
- ❖ Existing interest groups
- ❖ UWMP coordination process
- ❖ AB 3030 (GWMP) process
- ❖ Let the Regional Board do it



S/N Plan

- Data Gap Work Plan
- Mitigation Plan
- Monitoring Plan
- Recommended Basin Plan Modifications
- Adaptive Management Plan

“Stakeholders” have 5 to 7 years to prepare these plans



So What Should that Schedule Really Look Like?

- ❖ Gather Data and Stakeholders – 6 to 9 months
- ❖ Define Purpose and Need – 2 additional months
- ❖ Analyze Data – 3 to 4 months
- ❖ Early Exits – within 1 year
- ❖ Additional Data Gathering and Analysis – 9 months to 2 years
- ❖ Refine Conceptual Model – 6 months
- ❖ 68-16 Analysis – 6 months
- ❖ Complete Plan – 6 to 18 months
- ❖ **Total Time – 3 to 6 years**