

# Update on San Diego Water Board Activities and How Bioassessment is Integrated into Water Quality Programs

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*CABW, November 16, 2010*

# Outline

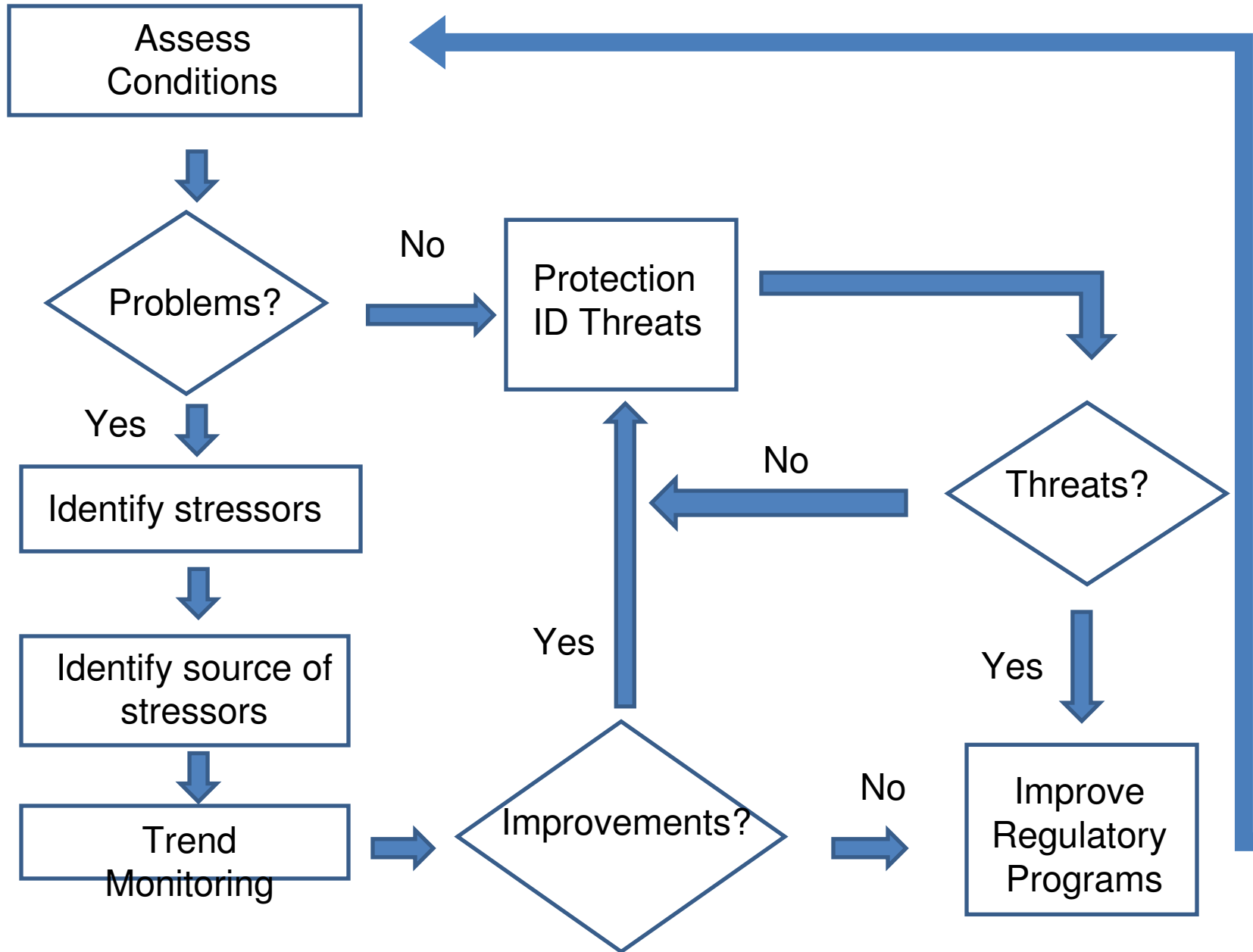
1. Why Integrating Bioassessment into Water Quality Programs?
2. Monitoring Strategy
3. Water Quality Programs
4. Current Status of Bioassessment and Water Quality Programs
5. Areas that need to be addressed
6. Take Home Messages

# Why Integrating Bioassessment Monitoring into Water Quality Programs?

- Bioassessment is directly assessing ecological health
- Bioassessment is integrating over time and pollutants
- More emphasis on bioassessment and toxicity testing, less emphasis on individual pollutants → monitoring at more locations/times
- Step 1: Assess conditions  
Step 2: Determine stressors  
Step 3: Identify sources of stressors

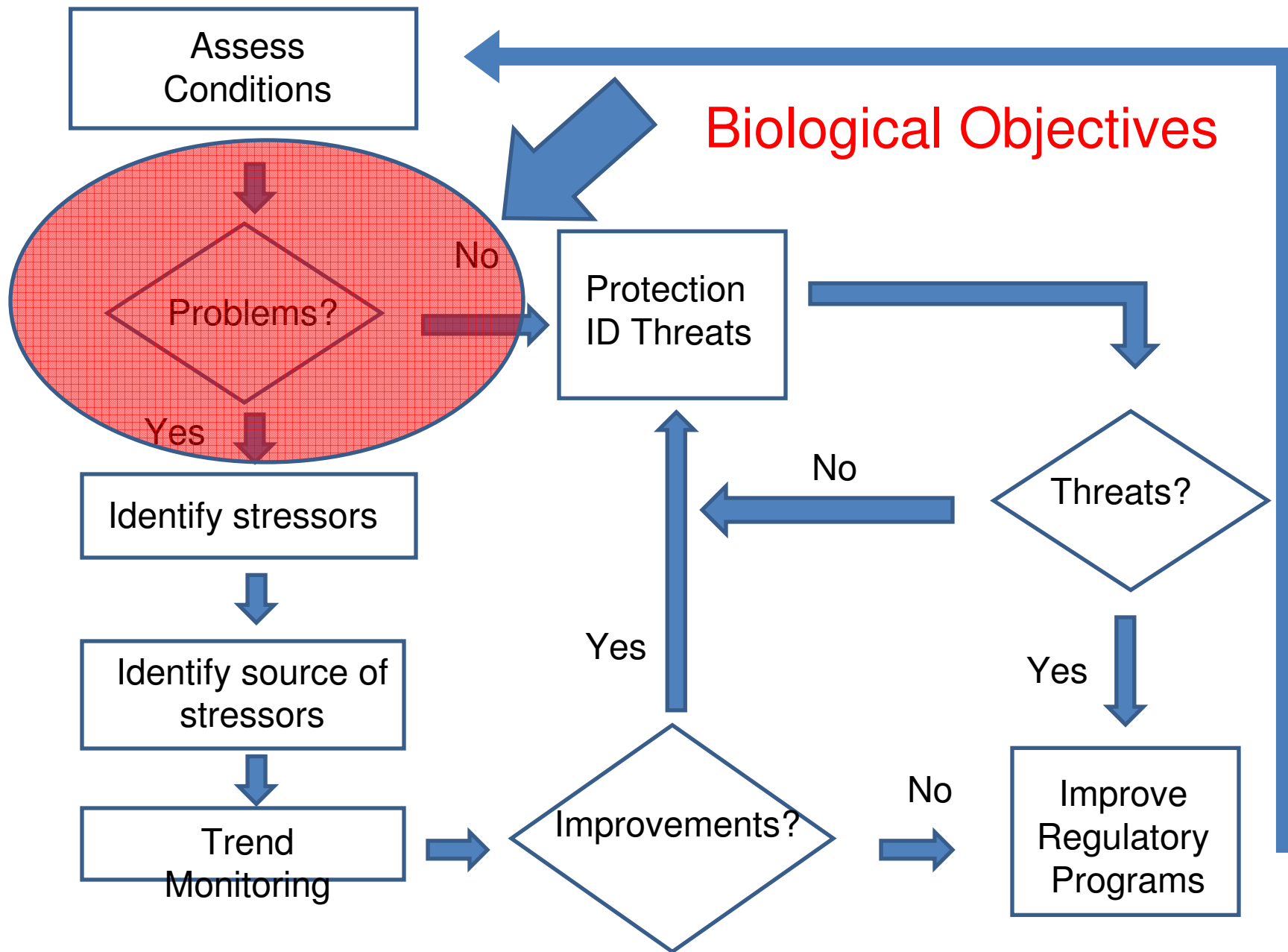
**GOAL: IMPROVE  
WATER QUALITY**

# Monitoring Strategy



**GOAL: IMPROVE  
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# Monitoring Strategy



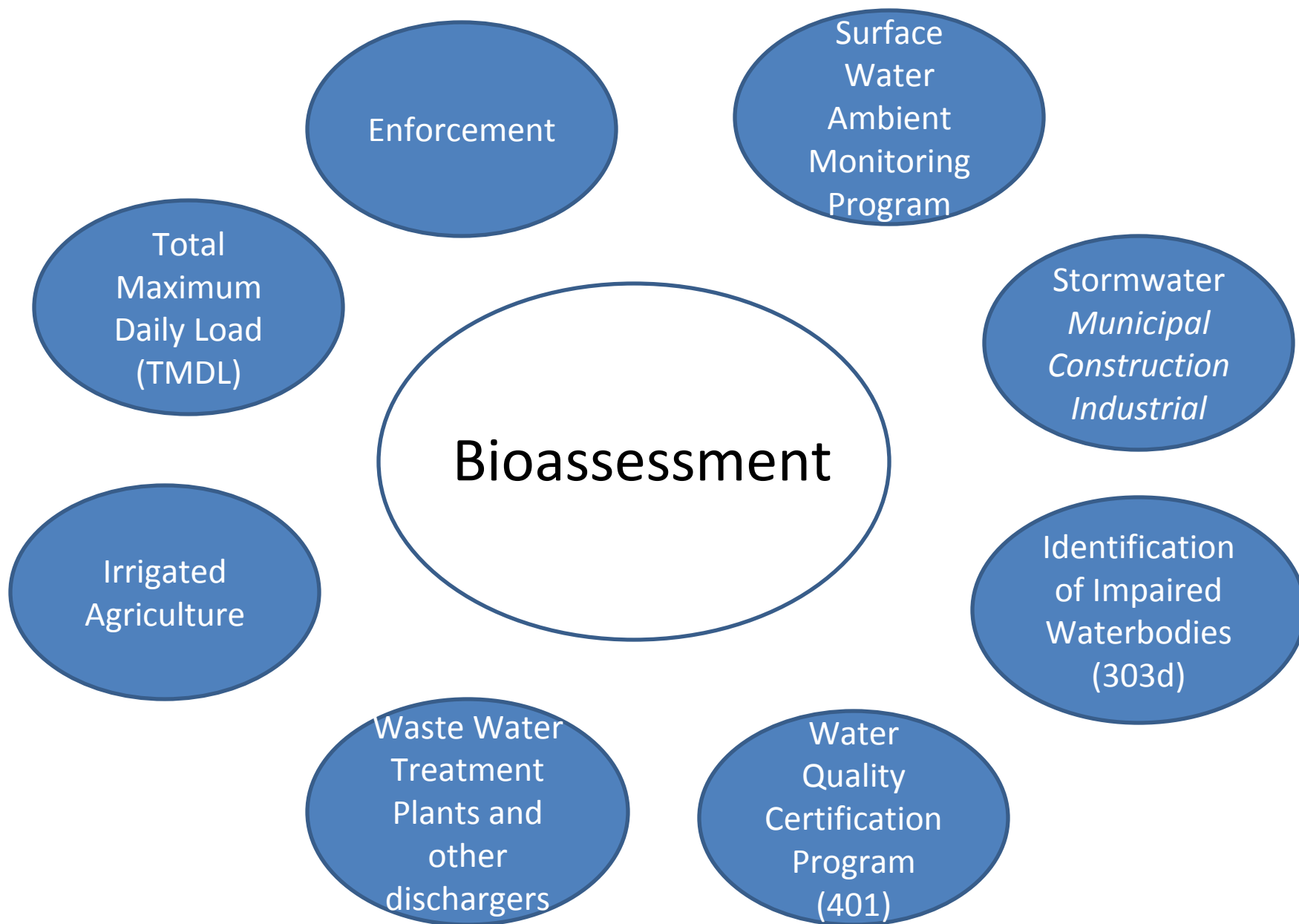
# Short History of Bioassessment in the San Diego Region

- 1996-1997: San Diego River sewage spill sampling
- 1998-2002: Bioassessment Sampling by San Diego Water Board
- 2005: Publication of Southern CA Index of Biotic Integrity (IBI)
- 2001-2008: SWAMP Bioassessment (since 2008 also algae)
- 2009: SMC program (“Stormwater Monitoring Coalition”)

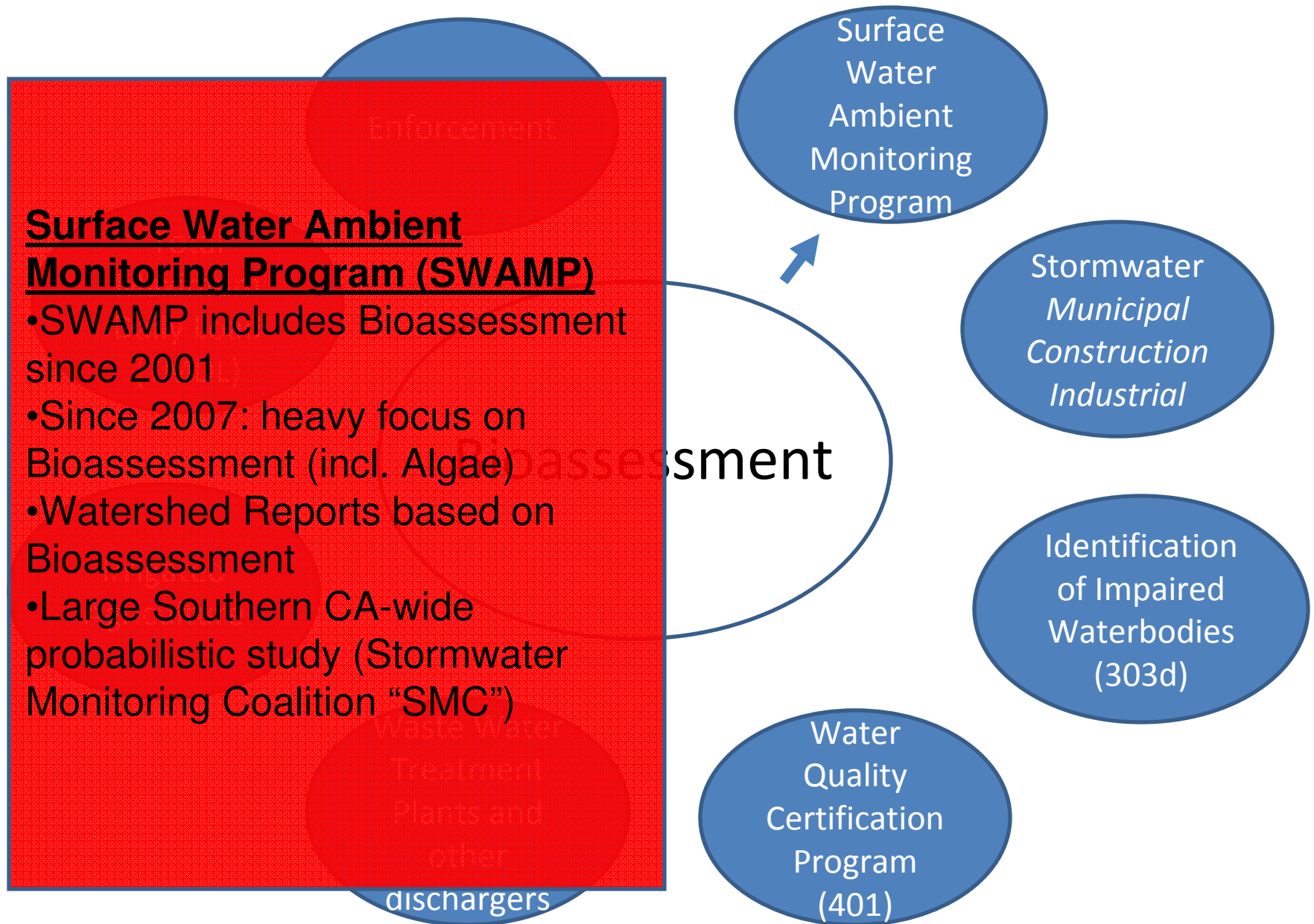
Municipal Stormwater Program (since 1991)

- Bioassessment included since 2001

# San Diego Water Quality Programs



# San Diego Water Quality Programs





# San Diego Water Quality Programs

## Municipal Stormwater Permit

- Bioassessment included since 2001
- Bioassessment at Impaired and Reference sites (14-19 sites/yr)
- Assessment shows poor/very poor quality, no follow-up/stressor identification
- New Regional Permit in 2012, will heavily focus on monitoring and stressor identification

## New Construction Stormwater Permit

- Bioassessment for dischargers disturbing 30 acres or more

dischargers

Bioassessment

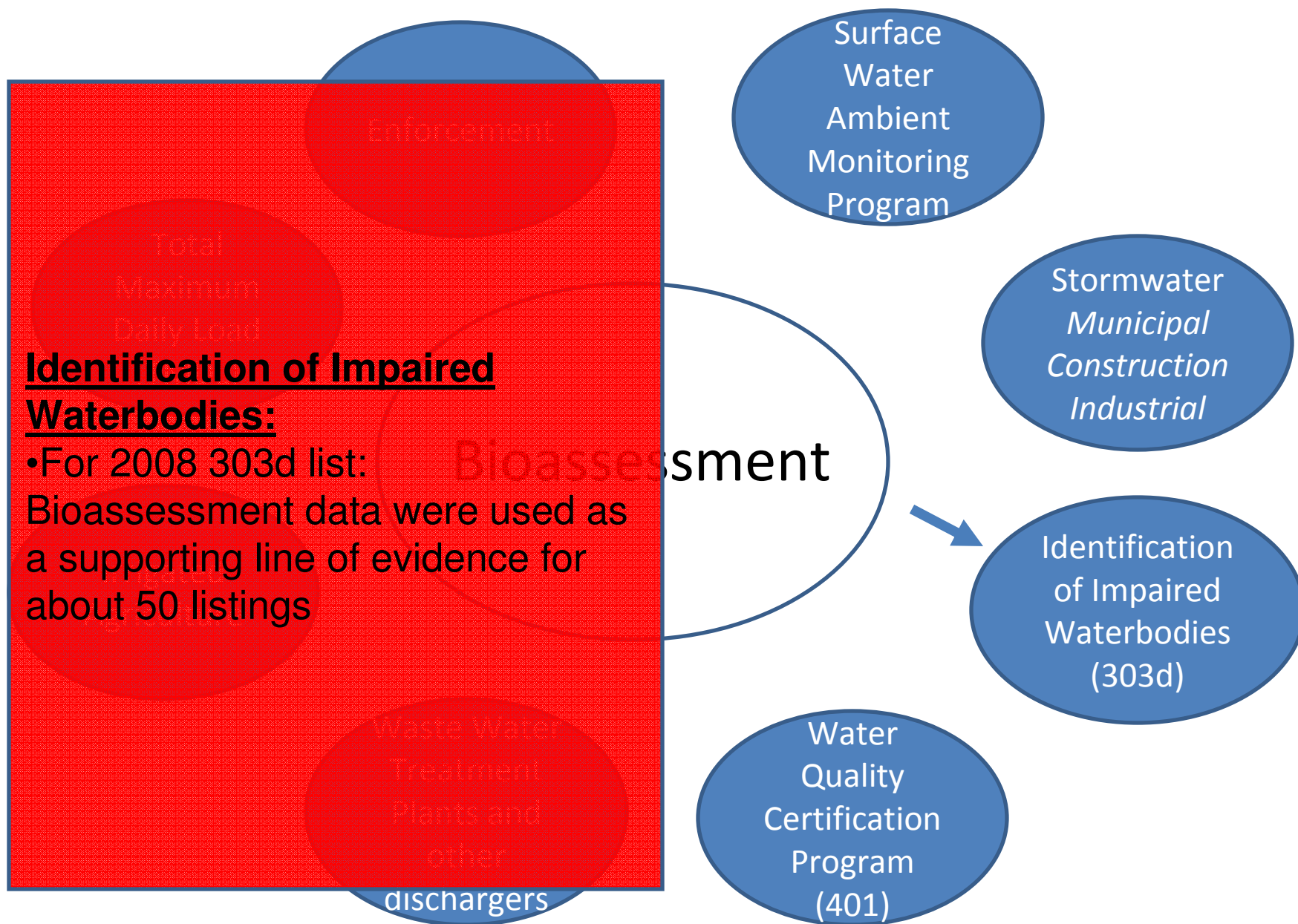
Surface  
Water  
Ambient  
Monitoring  
Program

Stormwater  
*Municipal  
Construction  
Industrial*

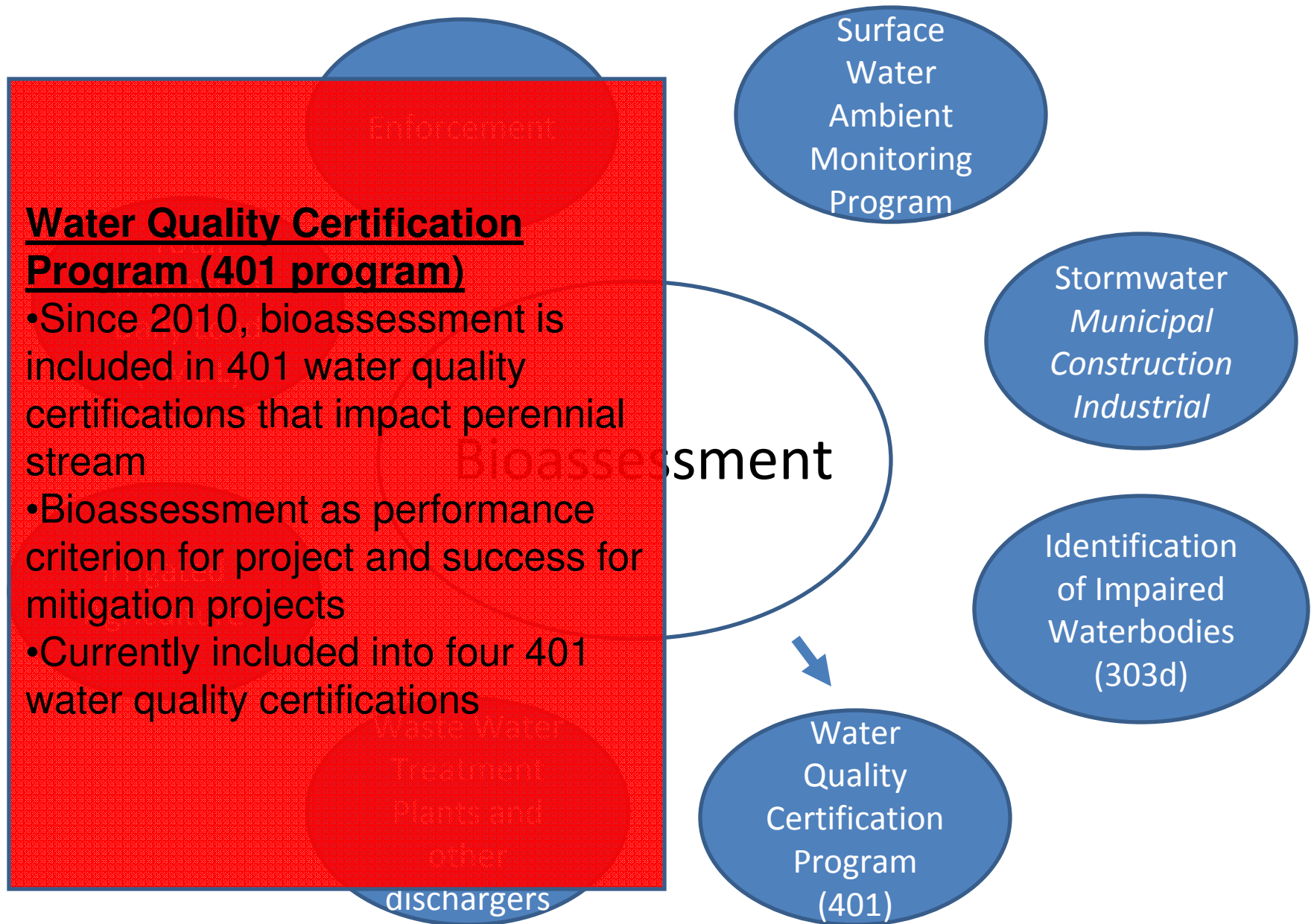
Identification  
of Impaired  
Waterbodies  
(303d)

Water  
Quality  
Certification  
Program  
(401)

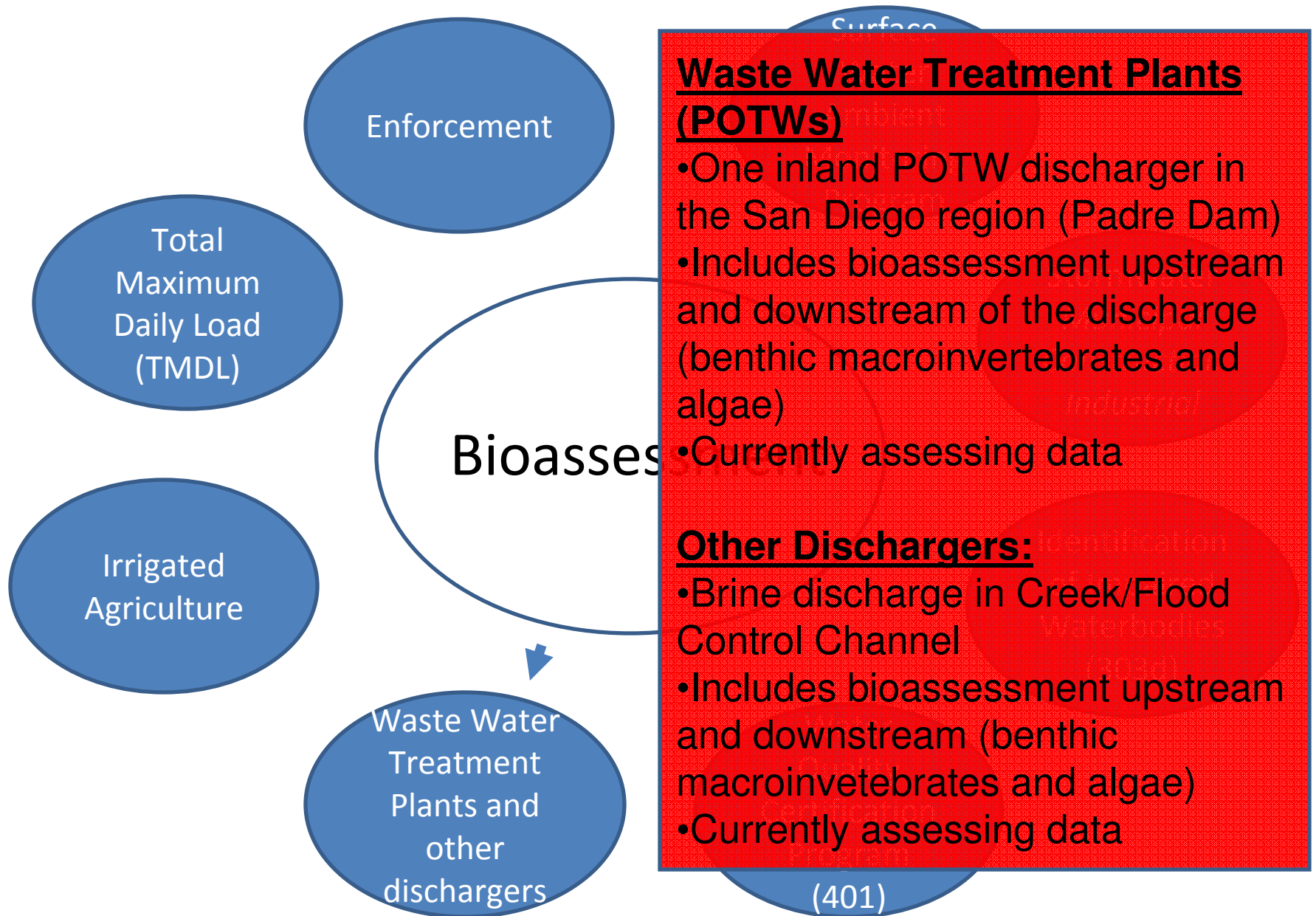
# San Diego Water Quality Programs



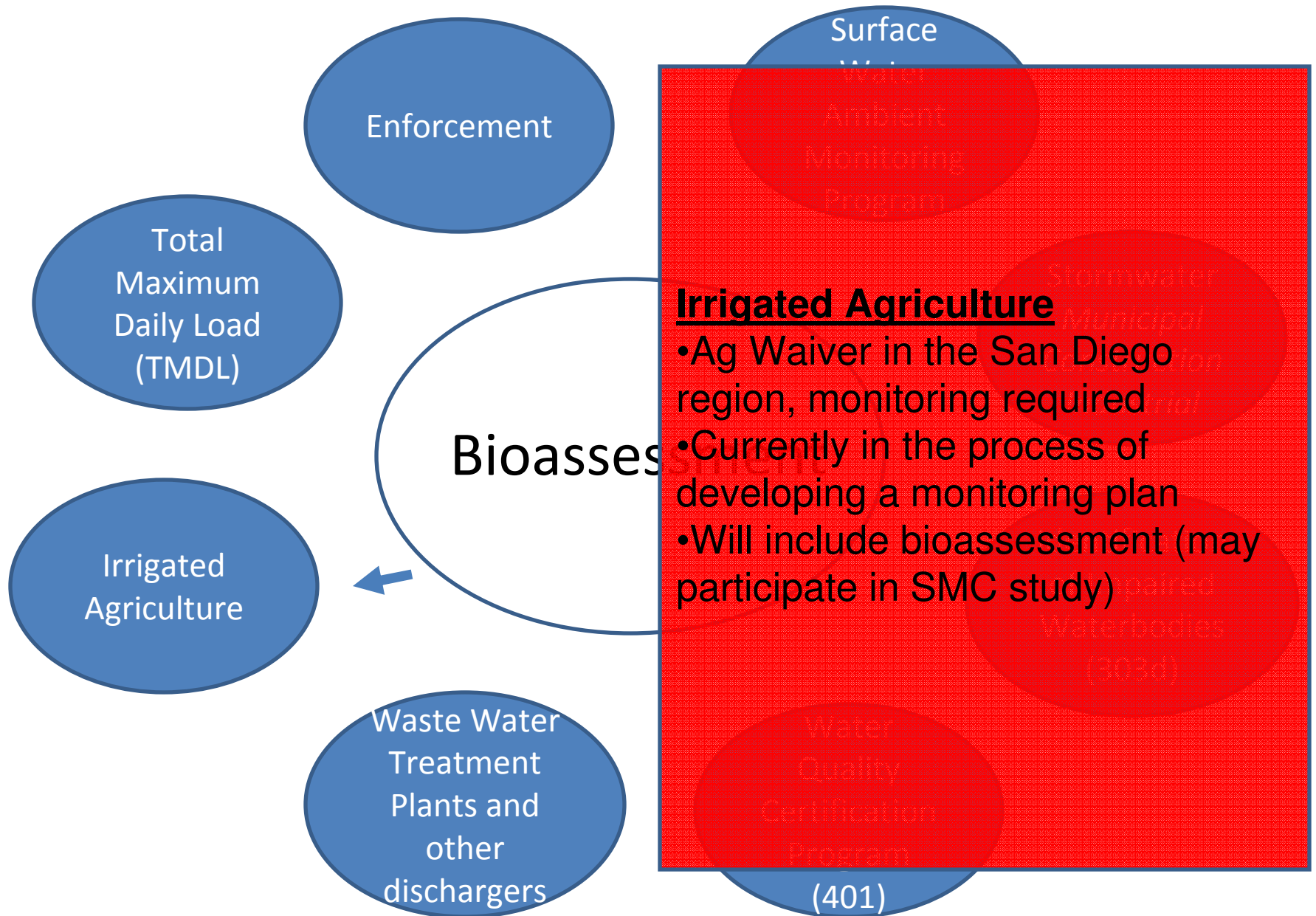
# San Diego Water Quality Programs



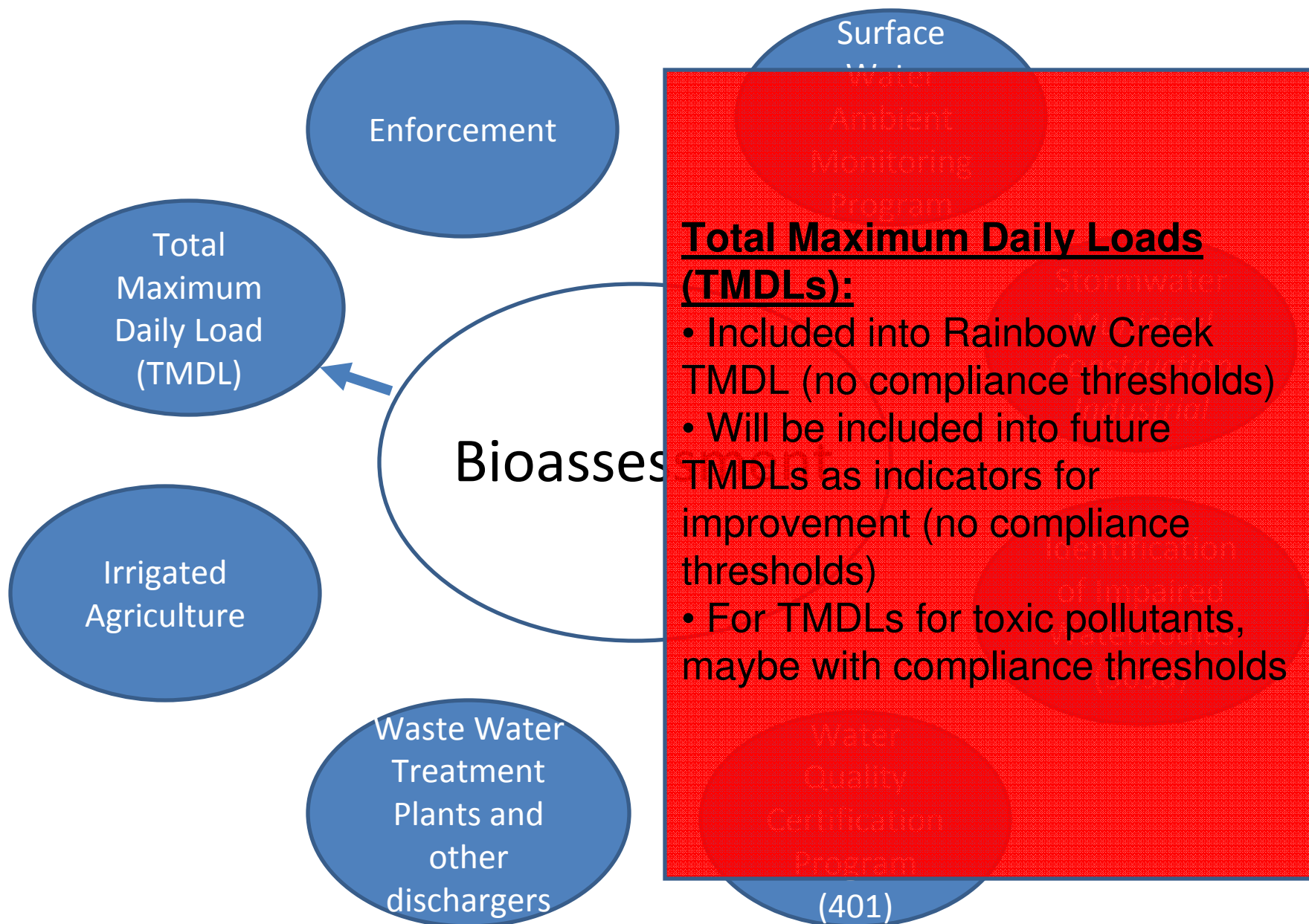
# San Diego Water Quality Programs



# San Diego Water Quality Programs

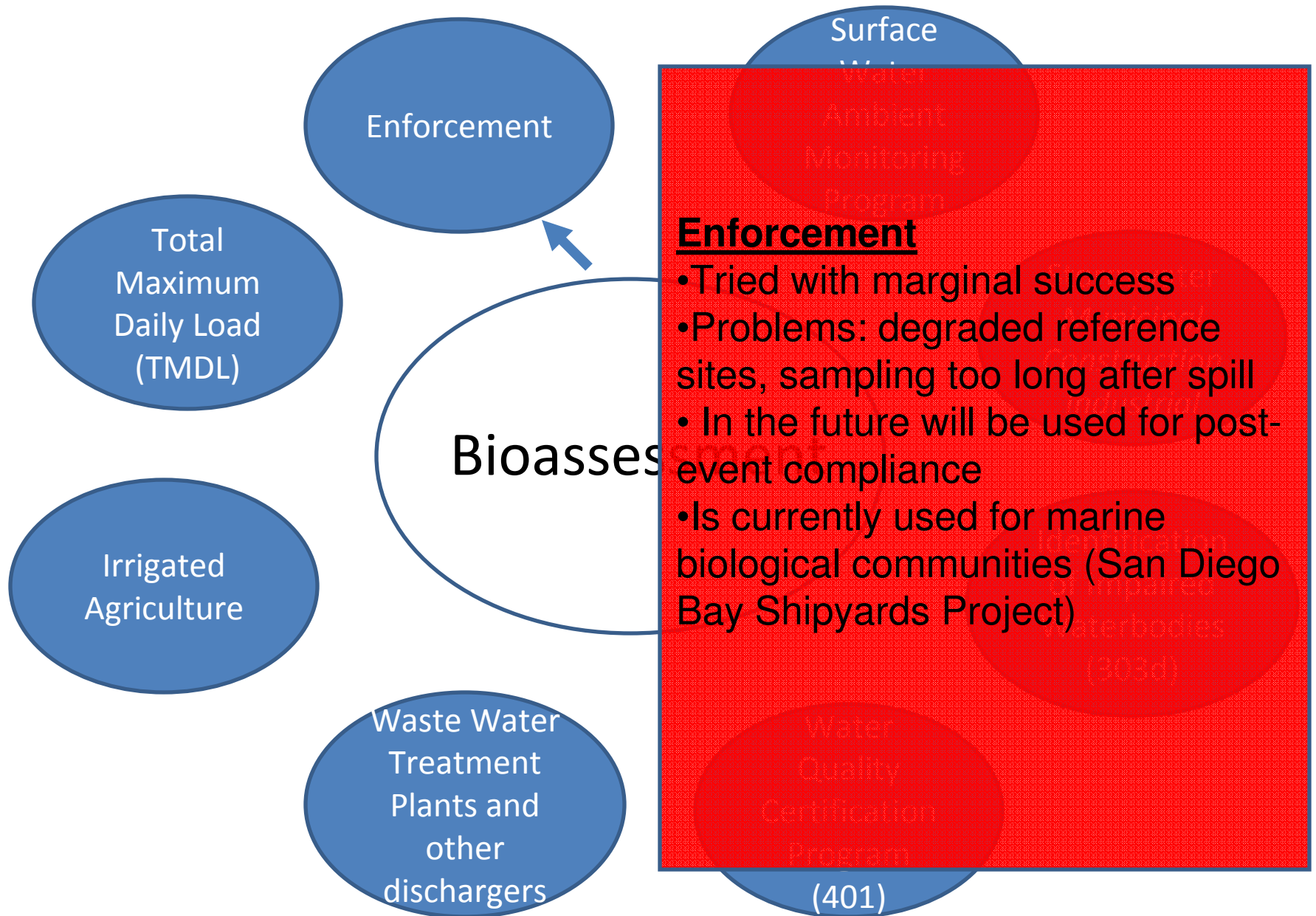


# San Diego Water Quality Programs





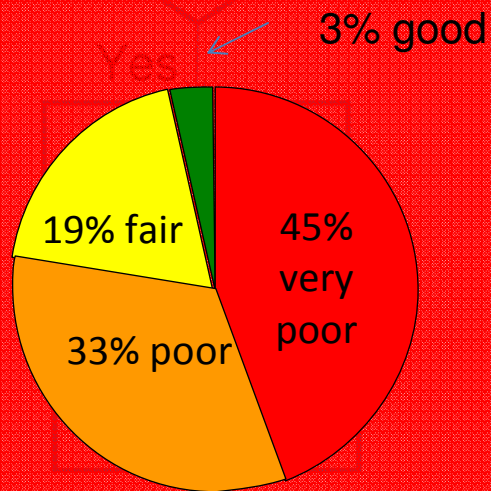
# San Diego Water Quality Programs



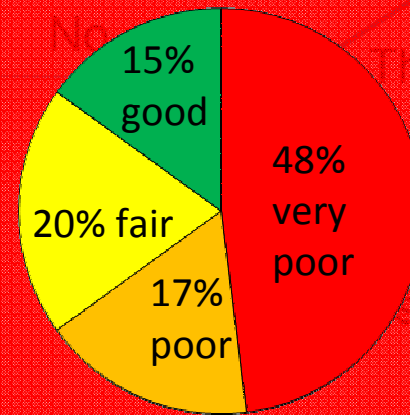
# Bioassessment Data in the San Diego Region

Assess  
Conditions  
through  
Bioassessment

Targeted Design  
(2001-2008)



Probabilistic Design  
(2009)





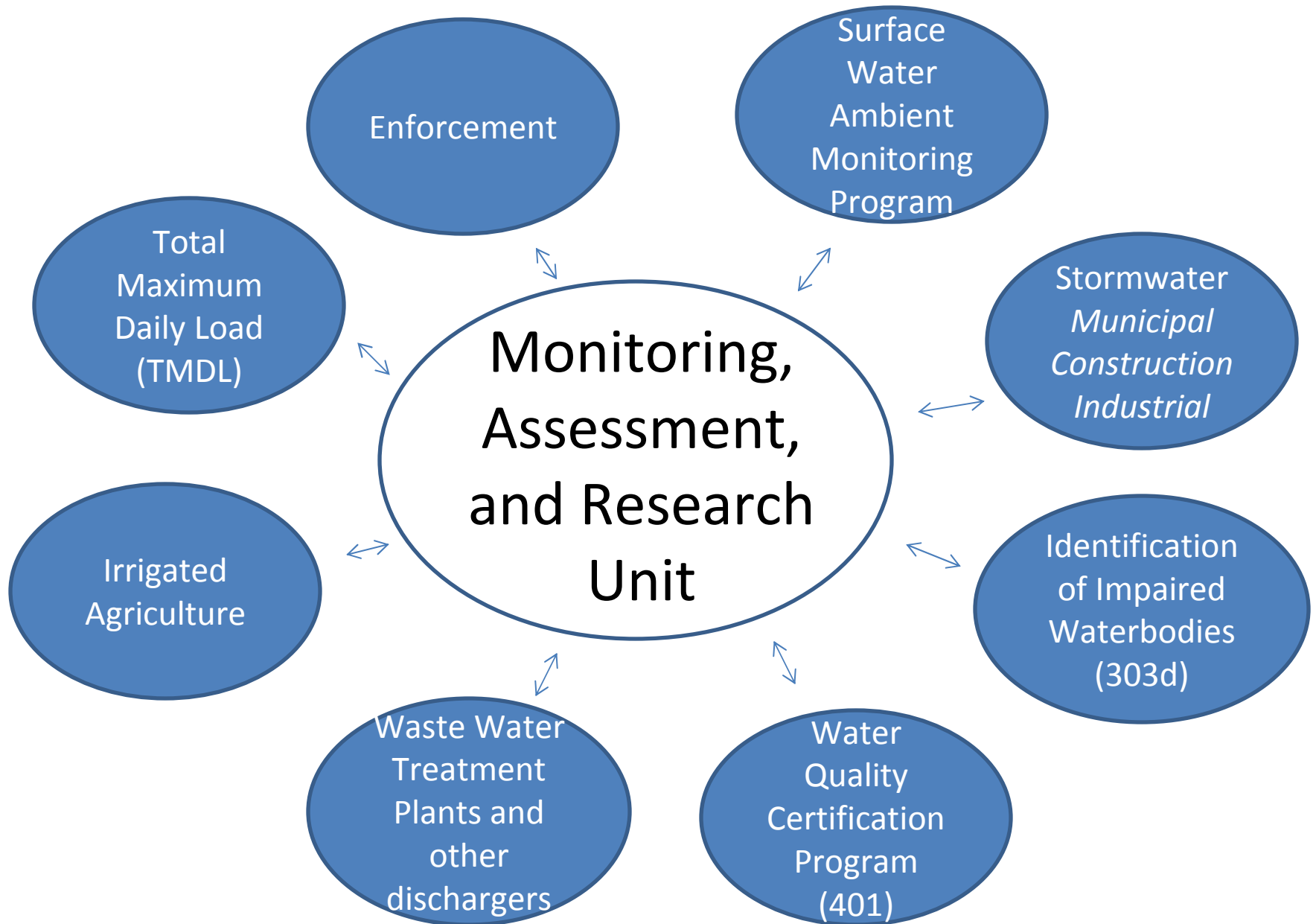
## Areas that need to be addressed

- Development of Biological Objectives
- Bioassessment in Non-Perennial Streams
- Climate Change and the Use of Current IBI
- Use of Multiple Assemblages (ALGAE!)
- Stressor Identification

## Take Home Messages

1. San Diego Water Board will move forward with biological objectives
2. San Diego Water Board will focus on stressor identification in new regional stormwater permit
3. San Diego Water Board will encourage (if necessary with investigative orders...) regional monitoring program

# Monitoring, Assessment, and Research Unit



# Questions?

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