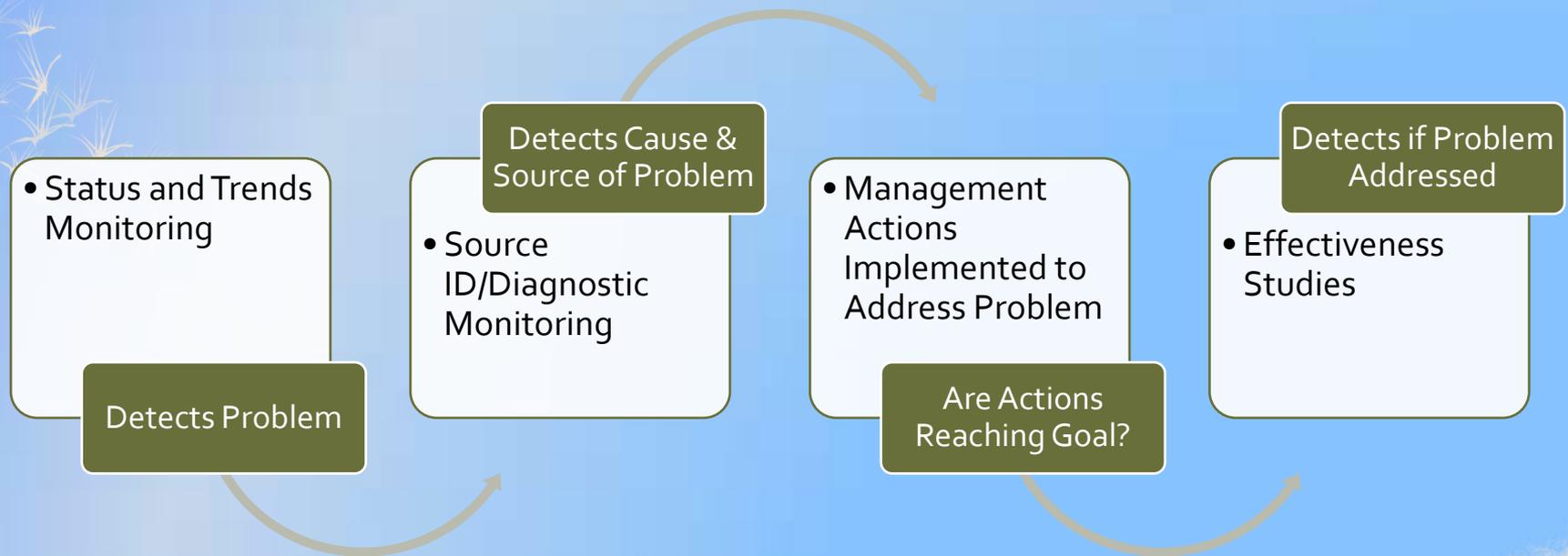


# **Stormwater Effectiveness Monitoring: Key Recommendations**

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# The Role of Effectiveness Monitoring



# Key Recommendations

## Effectiveness Monitoring Topic Areas:

- ❖ Test effectiveness of Low Impact Development and redevelopment techniques
- ❖ Test effectiveness of retrofitting techniques in decreasing impacts from the built environment
- ❖ Test effectiveness of program actions, behavioral, and non-structural approaches
- ❖ Evaluate new technologies, such as reduction of fecal coliform and metals
- ❖ Fill key data gaps on existing technologies used in stormwater management

# Key Recommendations

## Initial Focus of Effectiveness Monitoring

- ✿ **Urban stormwater management activities:**
  - ✿ Provisions of the Municipal NPDES Stormwater Permits
  - ✿ Low Impact Development techniques for new and redeveloped areas
  - ✿ Retrofits in built environment
- ✿ **Agricultural Best Management Practices**



# Scientific Framework Key Recommendations for Effectiveness Monitoring

- ❖ Effectiveness monitoring will occur at multiple scales: site, basin, and regional.
- ❖ Studies will be designed to answer specific questions with clear hypotheses.
- ❖ Costs should be quantified so that cost-effectiveness can be evaluated.
- ❖ Future studies needed to address other land use management approaches.

# Key Recommendations for Implementation of Effectiveness Monitoring

- ✱ **Conduct a literature review and review of current monitoring in Puget Sound ASAP to avoid redundancy.**
- ✱ **Continue the Technology Assessment Protocol-Ecology (TAP-E) Program to evaluate new technologies.**
- ✱ **Further develop assessments for agricultural impacts.**

# Recommendation of Process to Evaluate Effectiveness Monitoring Proposals

- ✿ **Develop an open and transparent process to evaluate proposals**
- ✿ **Considerations:**
  - ✿ **Funding: Permittees vs. Non-Permittees**
  - ✿ **Who will conduct process**
  - ✿ **First round conducted by Fall 2011 to meet the needs of the municipal NPDES permit cycle**

# Recommended Criteria for Identification of Future Effectiveness Studies

- ❖ Has well-defined hypotheses
- ❖ Addresses important stressors
- ❖ Improves beneficial uses
- ❖ Studies address a range of priority topics
- ❖ Informs cost-effectiveness
- ❖ Generates results in two years
- ❖ Strongly linked to Puget Sound Action Agenda



# Effectiveness Monitoring Discussion Topics:

- ✿ The criteria to identify future effectiveness studies
- ✿ The proposed initial focus areas: Municipal NPDES Permits, LID, retrofits and agricultural BMPs
- ✿ The five major topic areas of effectiveness monitoring: new development, existing development, non-structural, emerging technologies, and key data gaps

