

Biological Objectives Policy Update

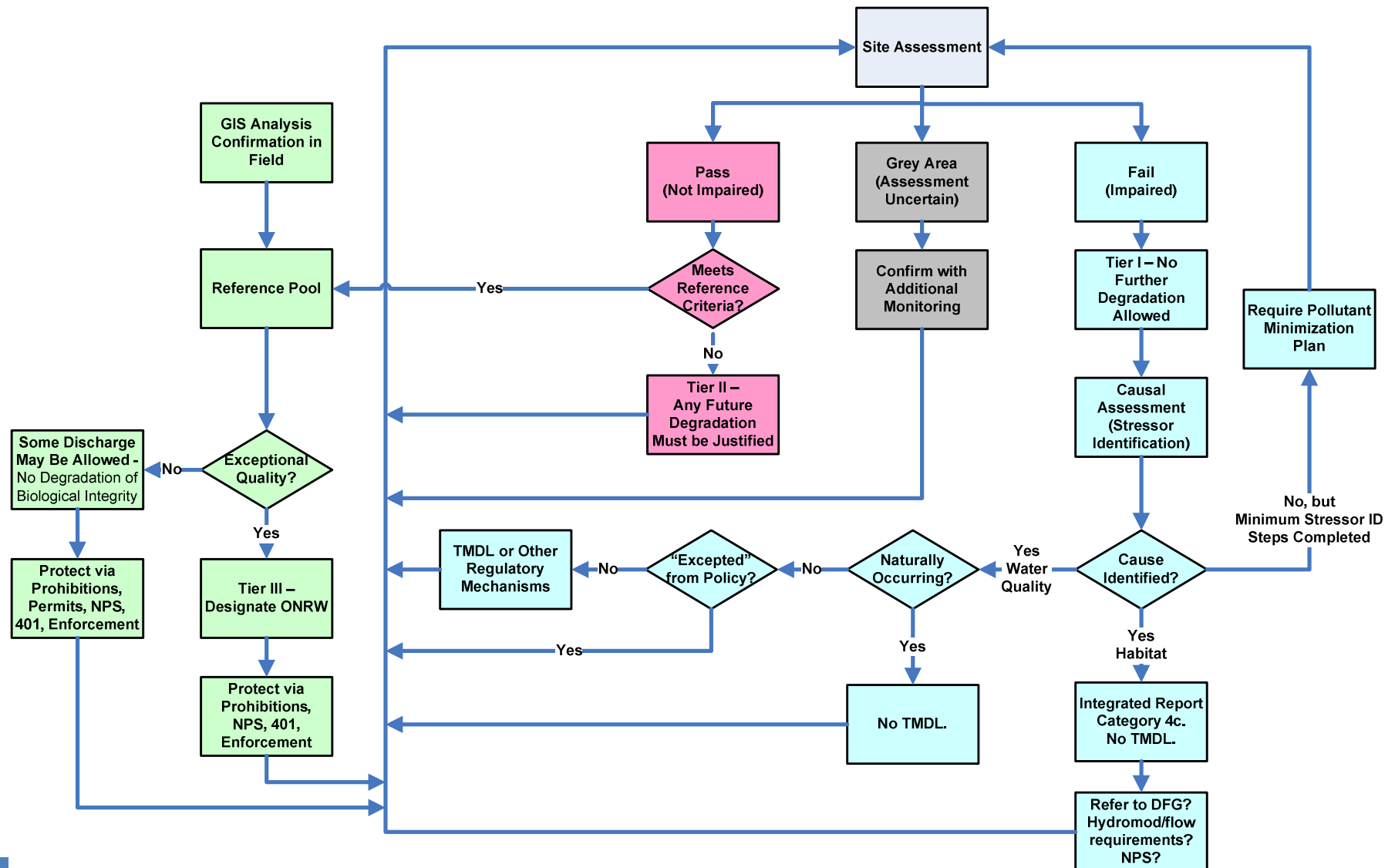
Science Advisory Group Meeting

17 October 2012

Agenda

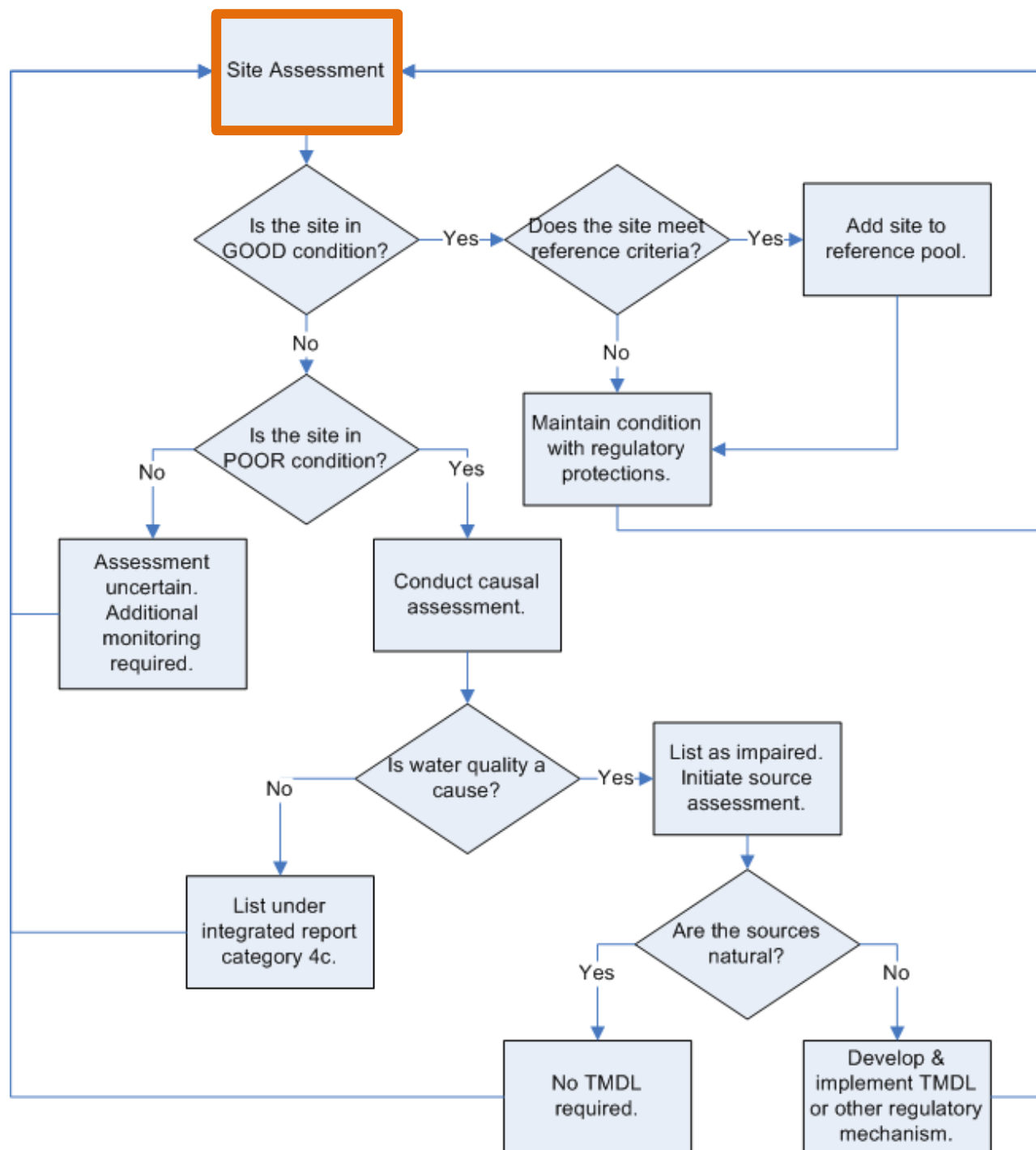
- Overview of assessment framework (simplified version)
- Review implementation issues & options
- Summarize outcome from October 11th meeting

Complicated Framework



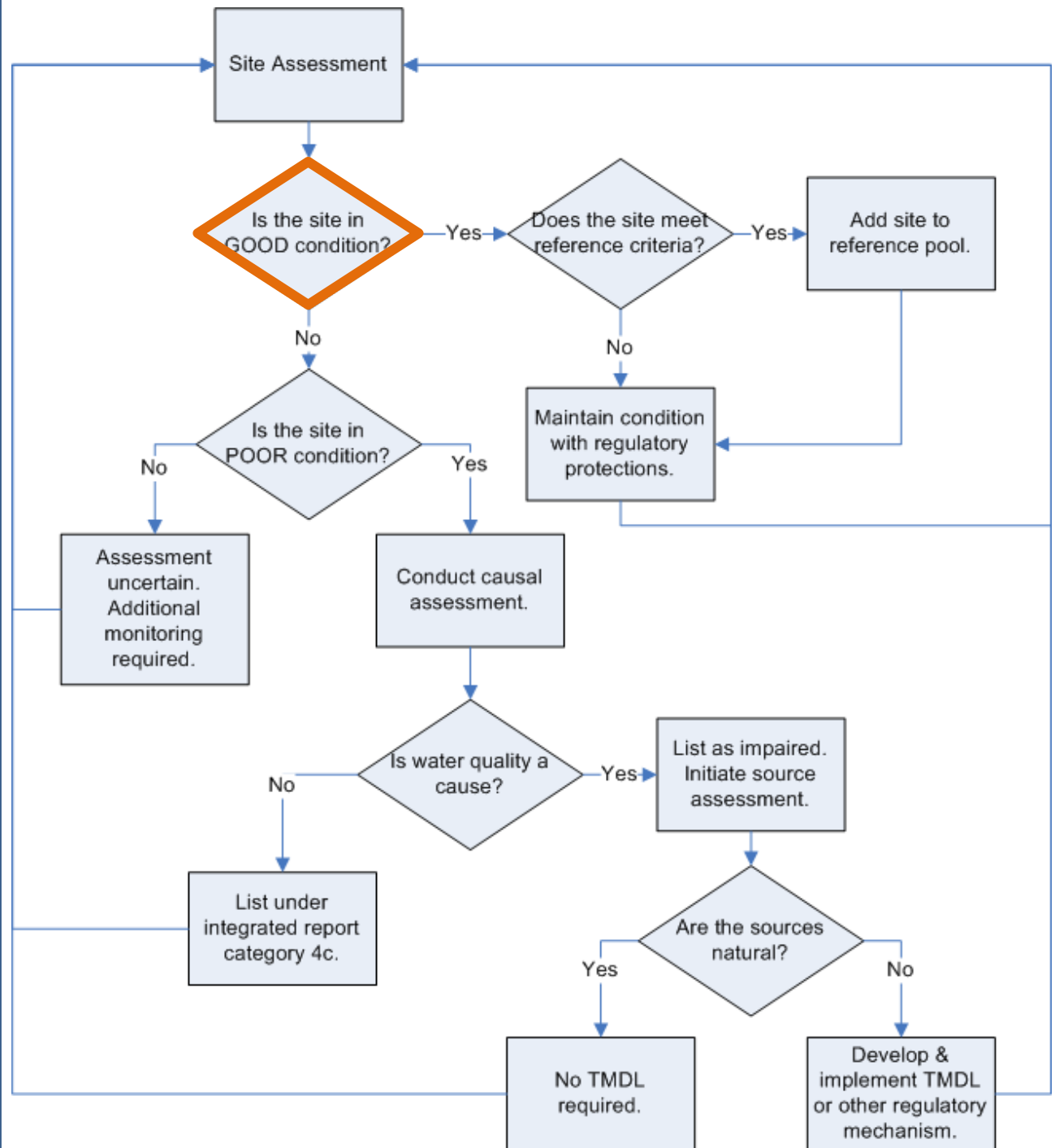
Site Assessment

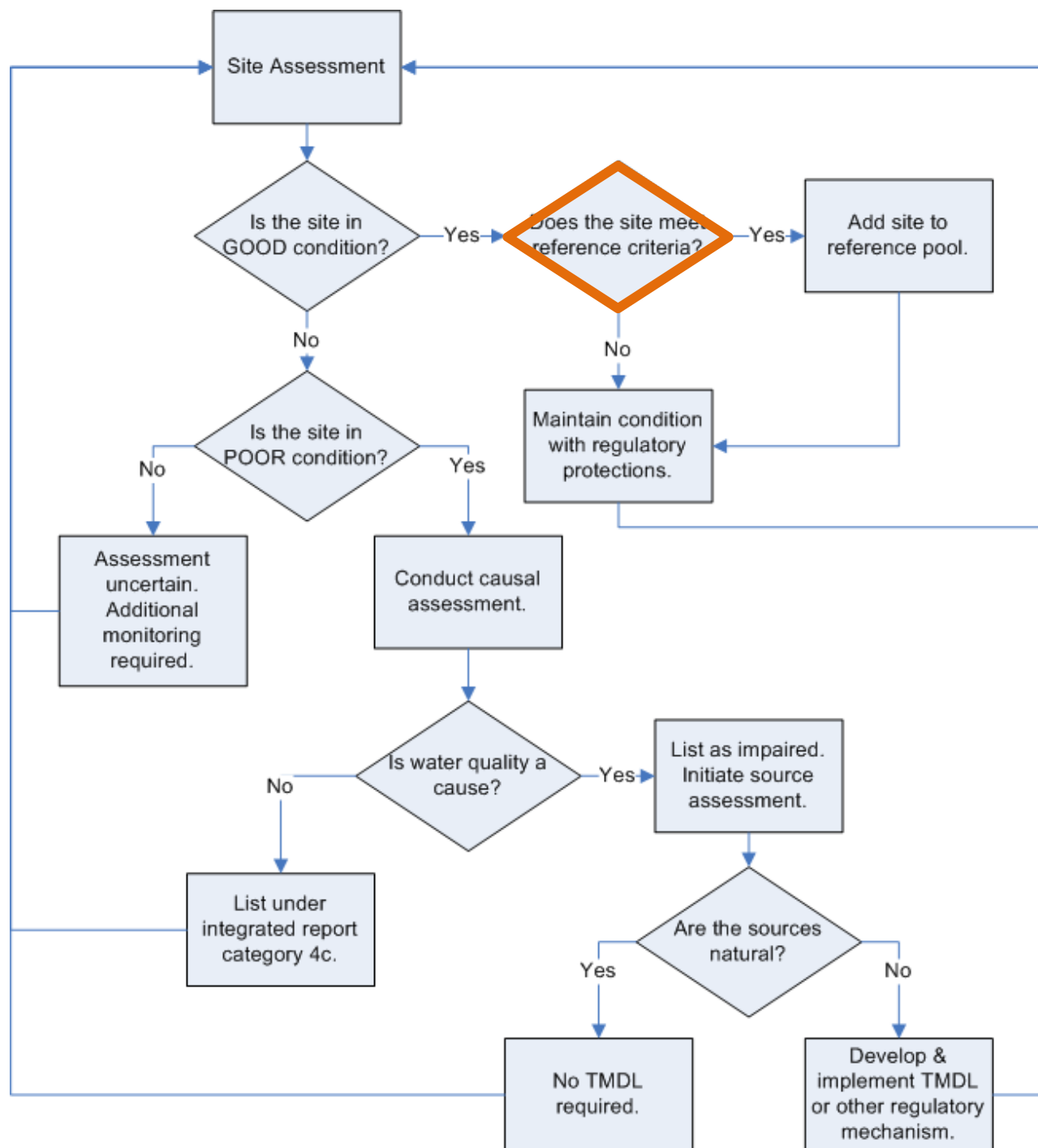
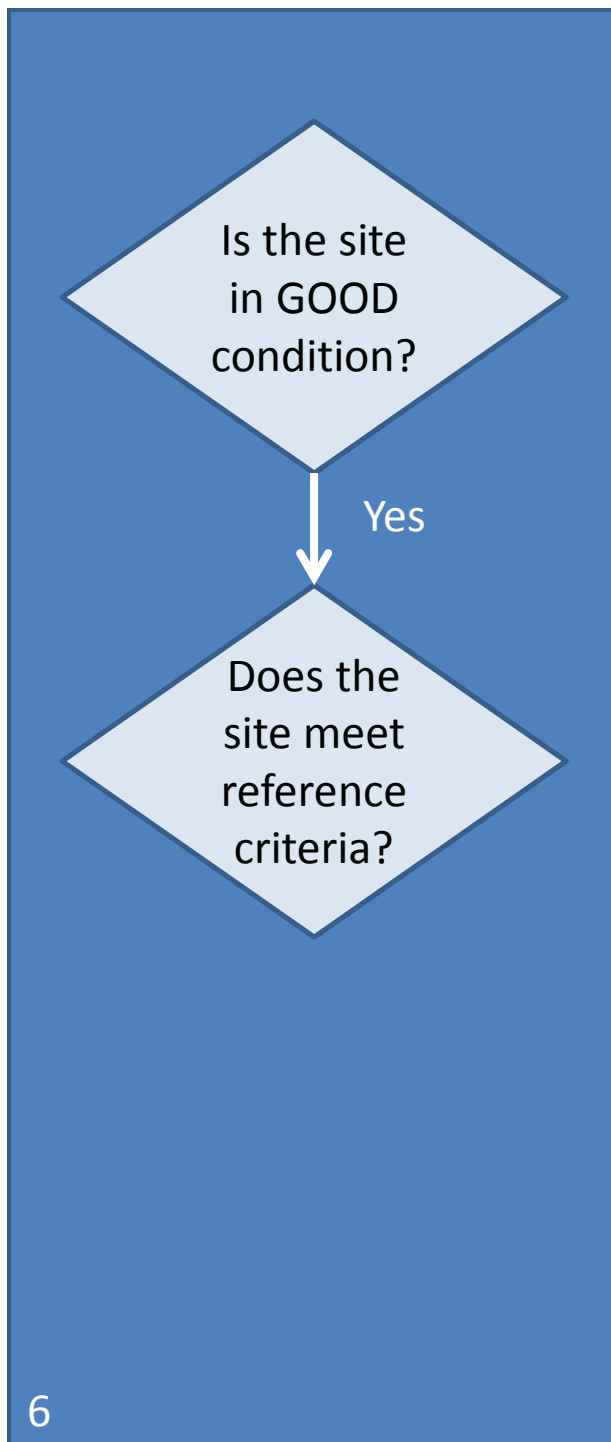
- SWAMP
- Southern CA Stormwater Monitoring Coalition
- Bay Area Macroinvertebrate Bioassessment Indicator Network
- SF Bay Regional Stormwater Monitoring Program
- Other



Is the site
in GOOD
condition?

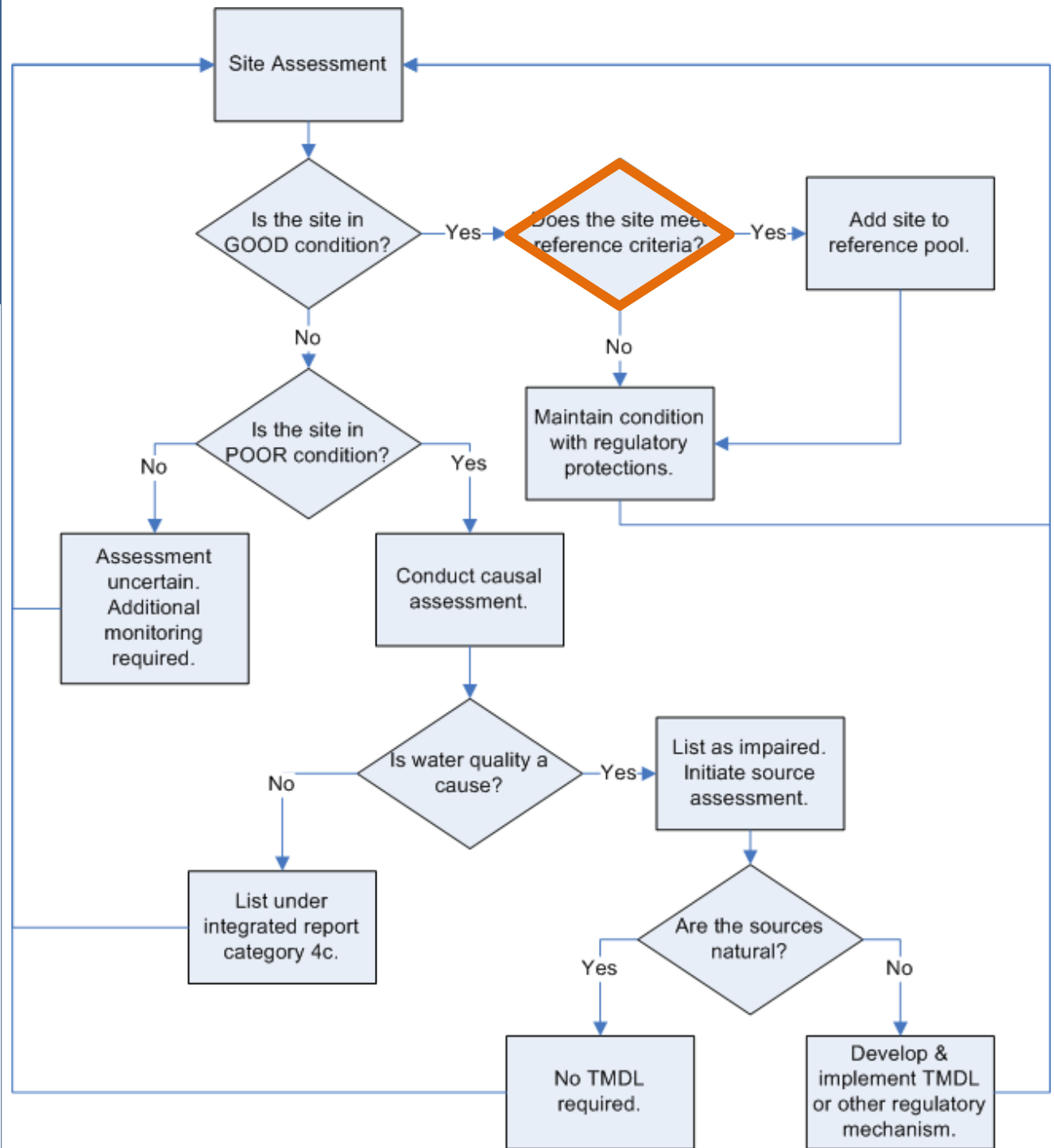
- All sites in reference pool
- Sites that are “like” reference biologically

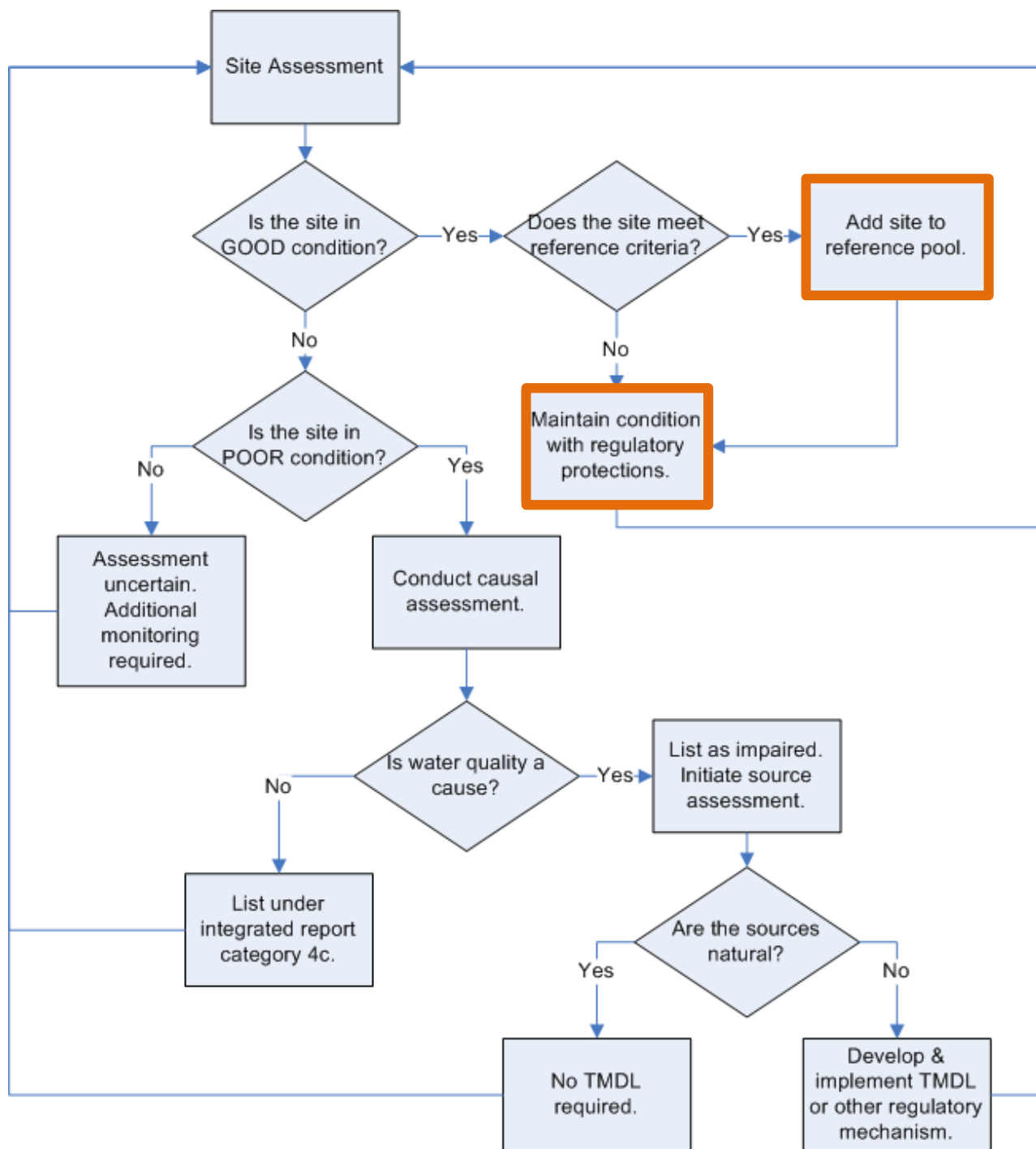
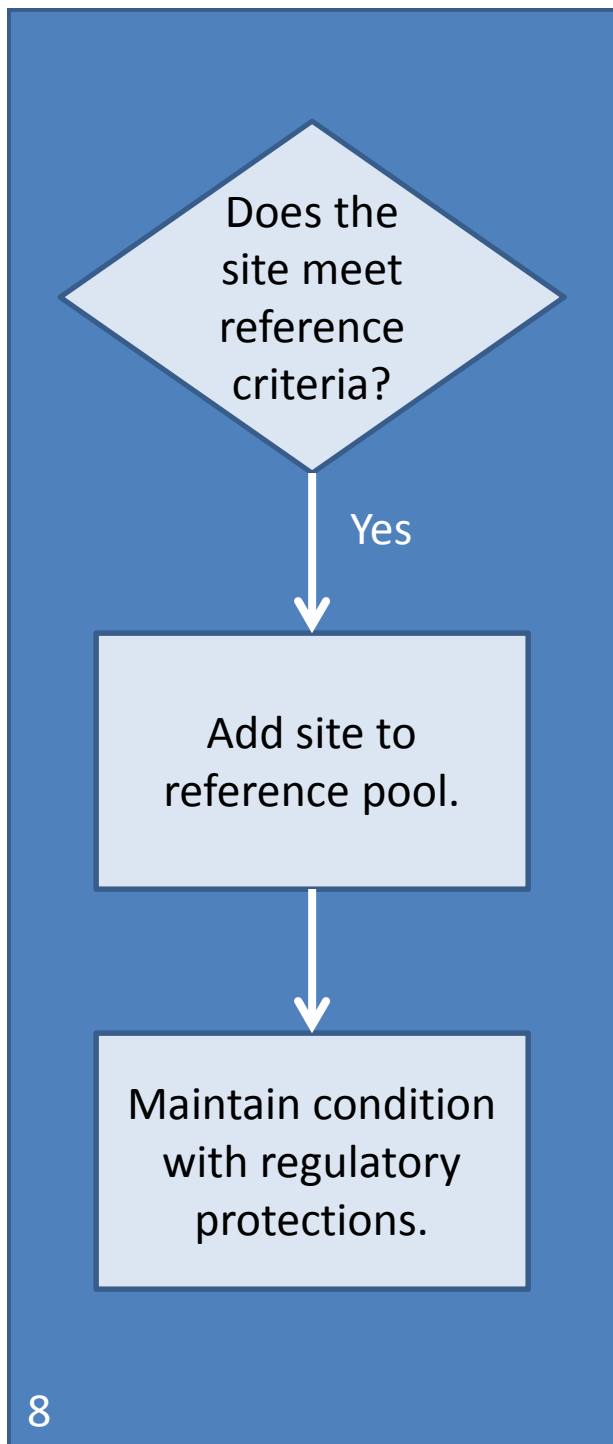


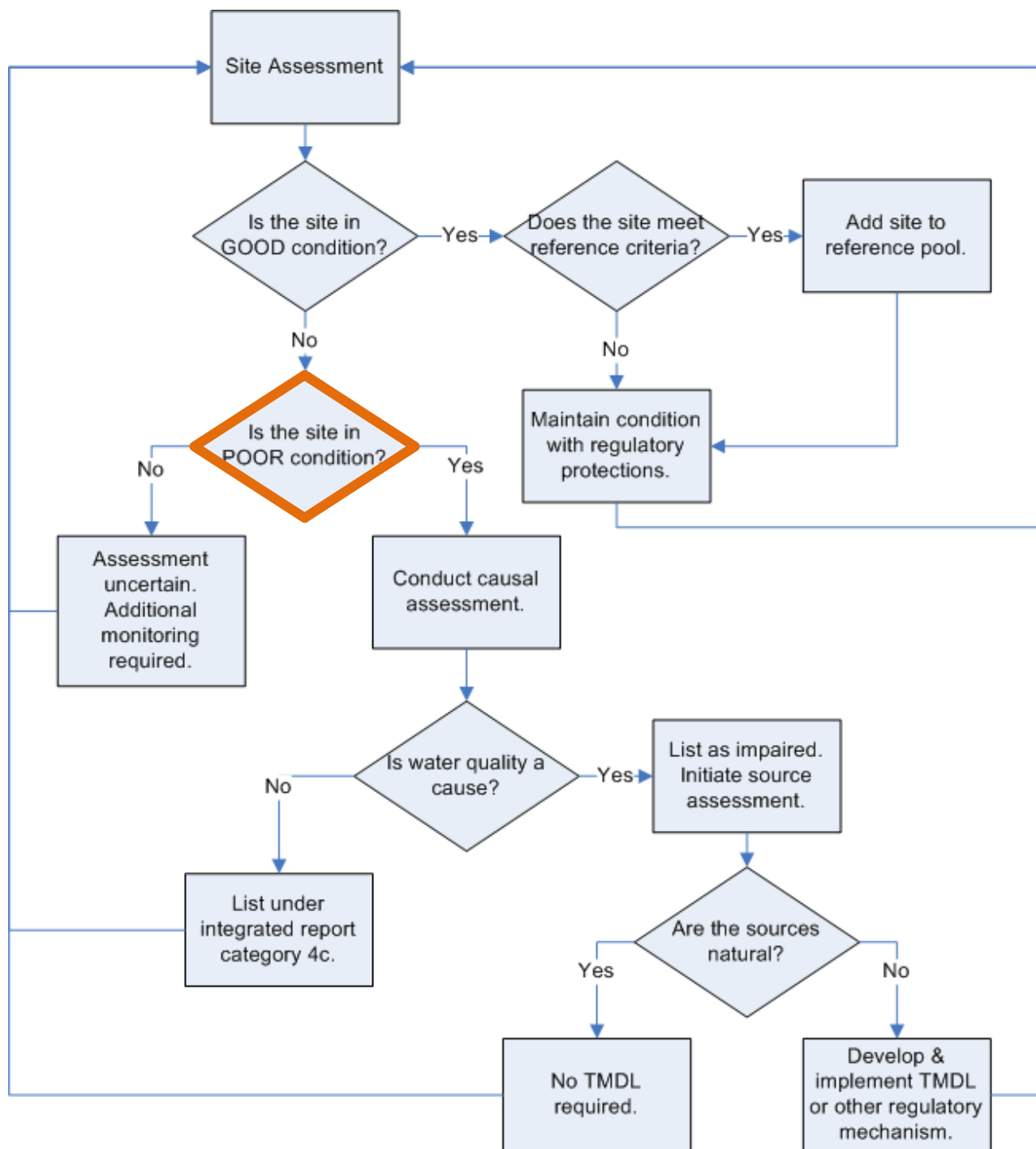
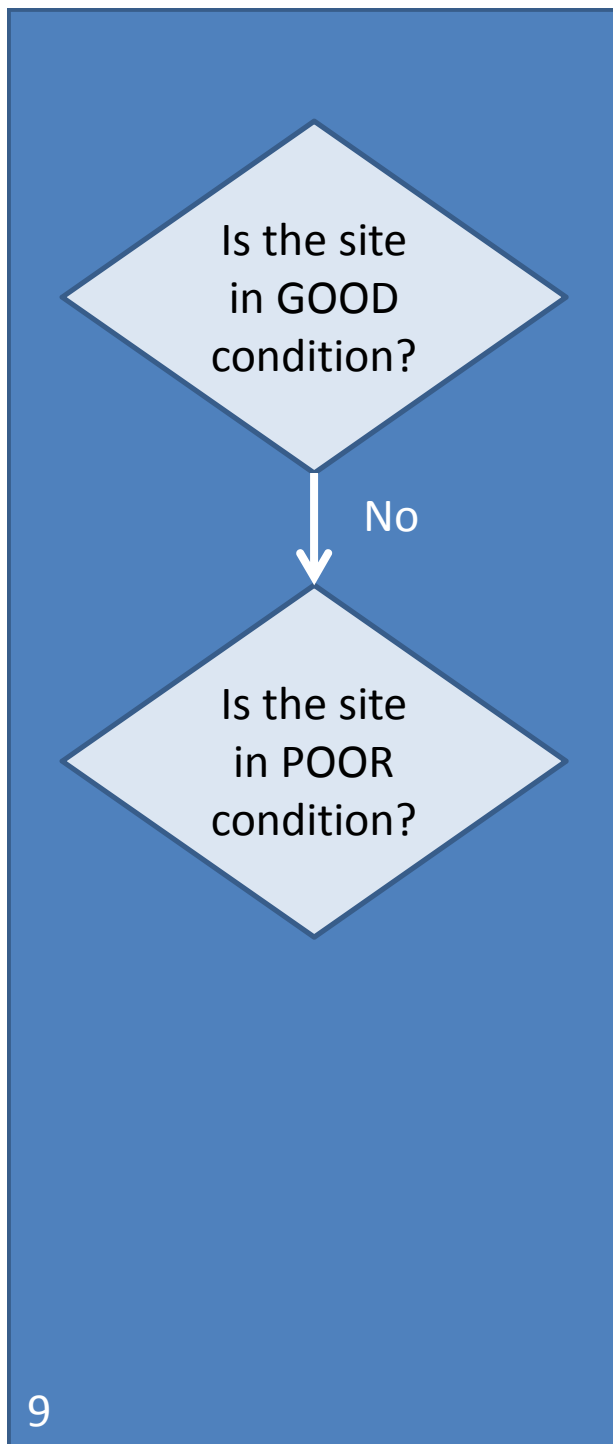


Does the site meet reference criteria?

Metric	Threshold
Local disturbance	1.5
% Agriculture	3/3/10
% Urban	3/3/10
%Ag+Urban	5/5/10
Road Density (km/km ²)	1.5
Paved Road Crossings (#/WS)	5/10/50
Nearest Dams	>10 km
Active Mines	0 (5k)
% Canals & Pipelines	10
Gravel Mines Density	0.1
Conductivity	<2000 μ S





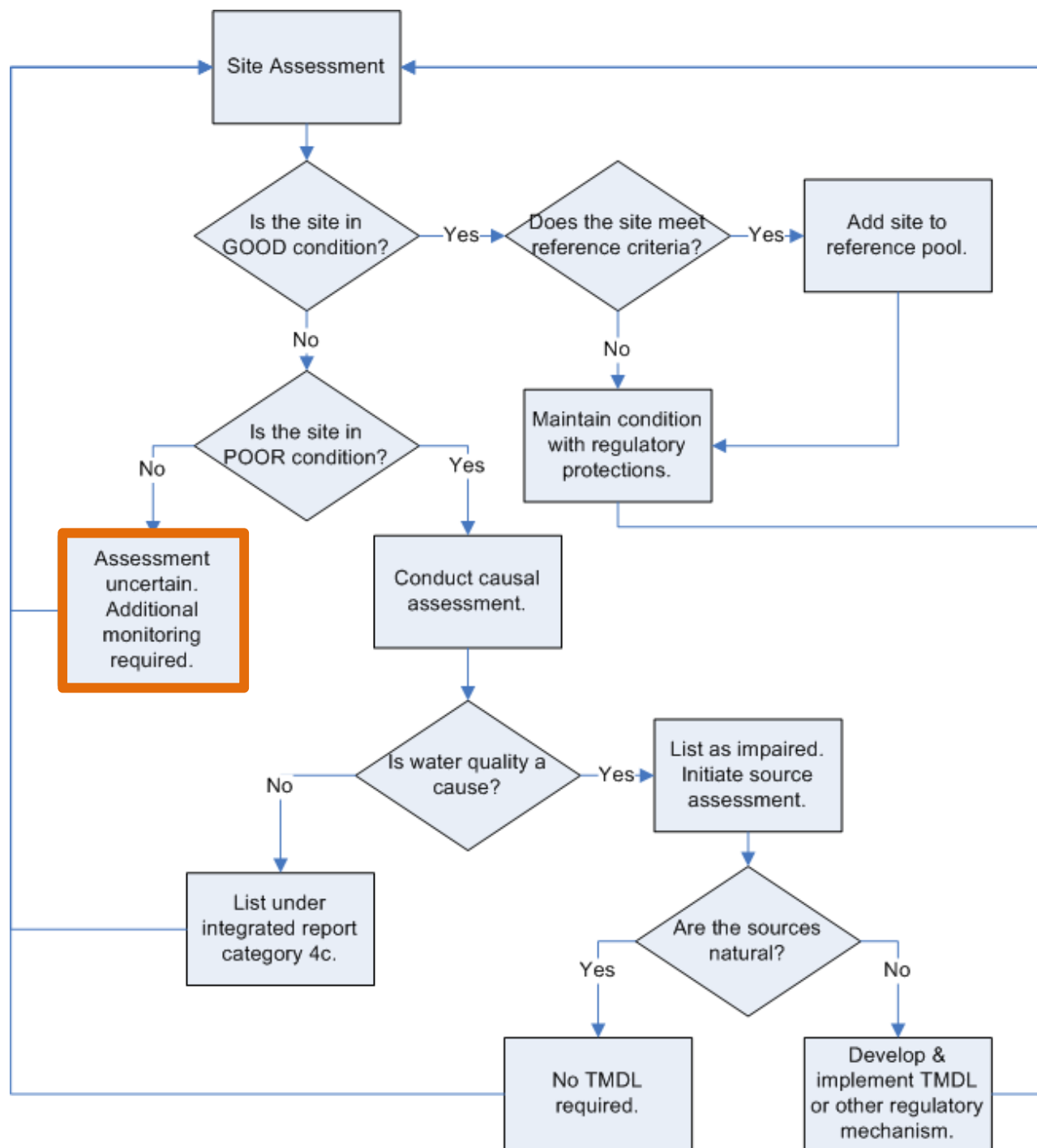




No

Assessment uncertain. Additional monitoring required.

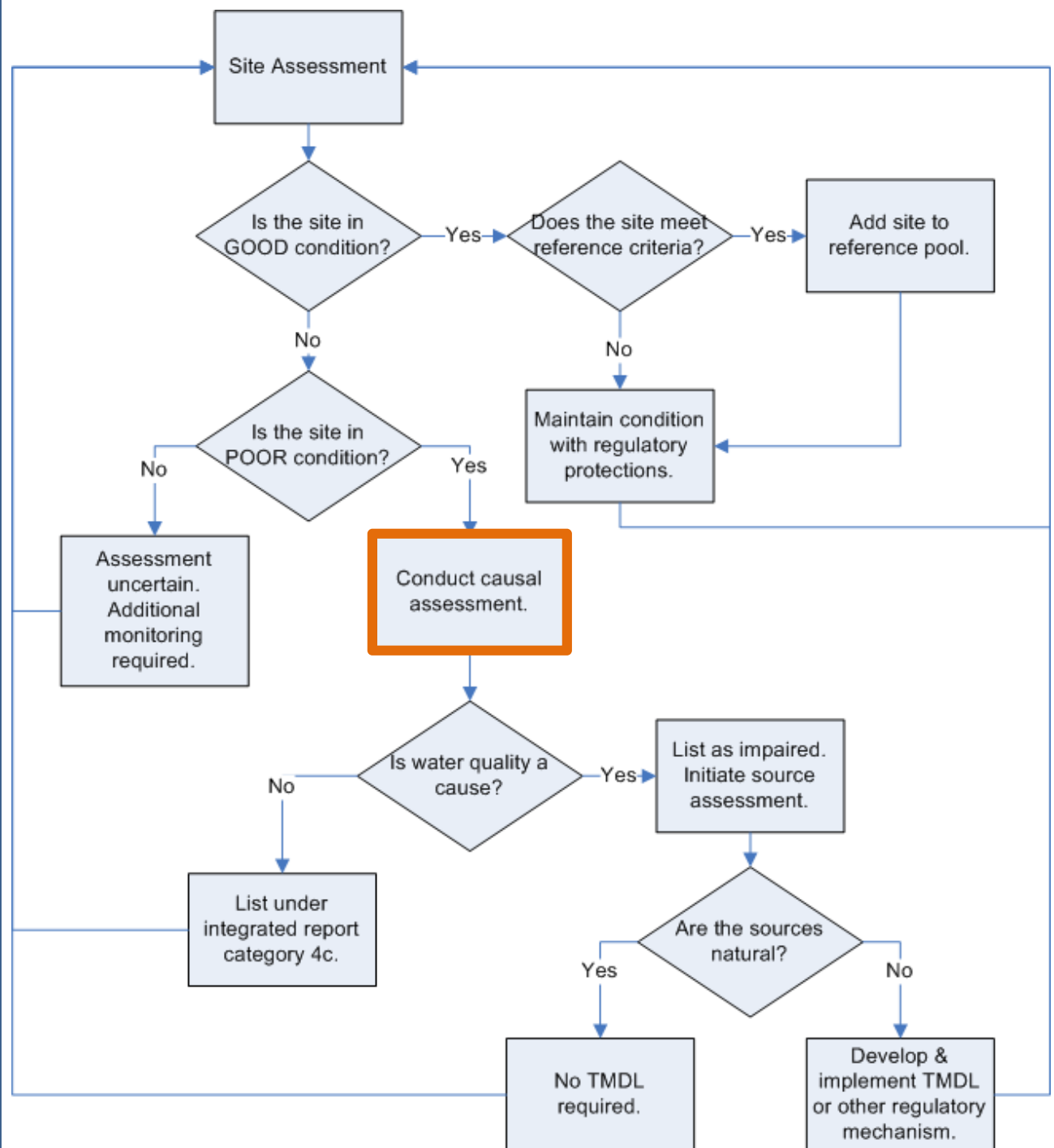
- Gray area





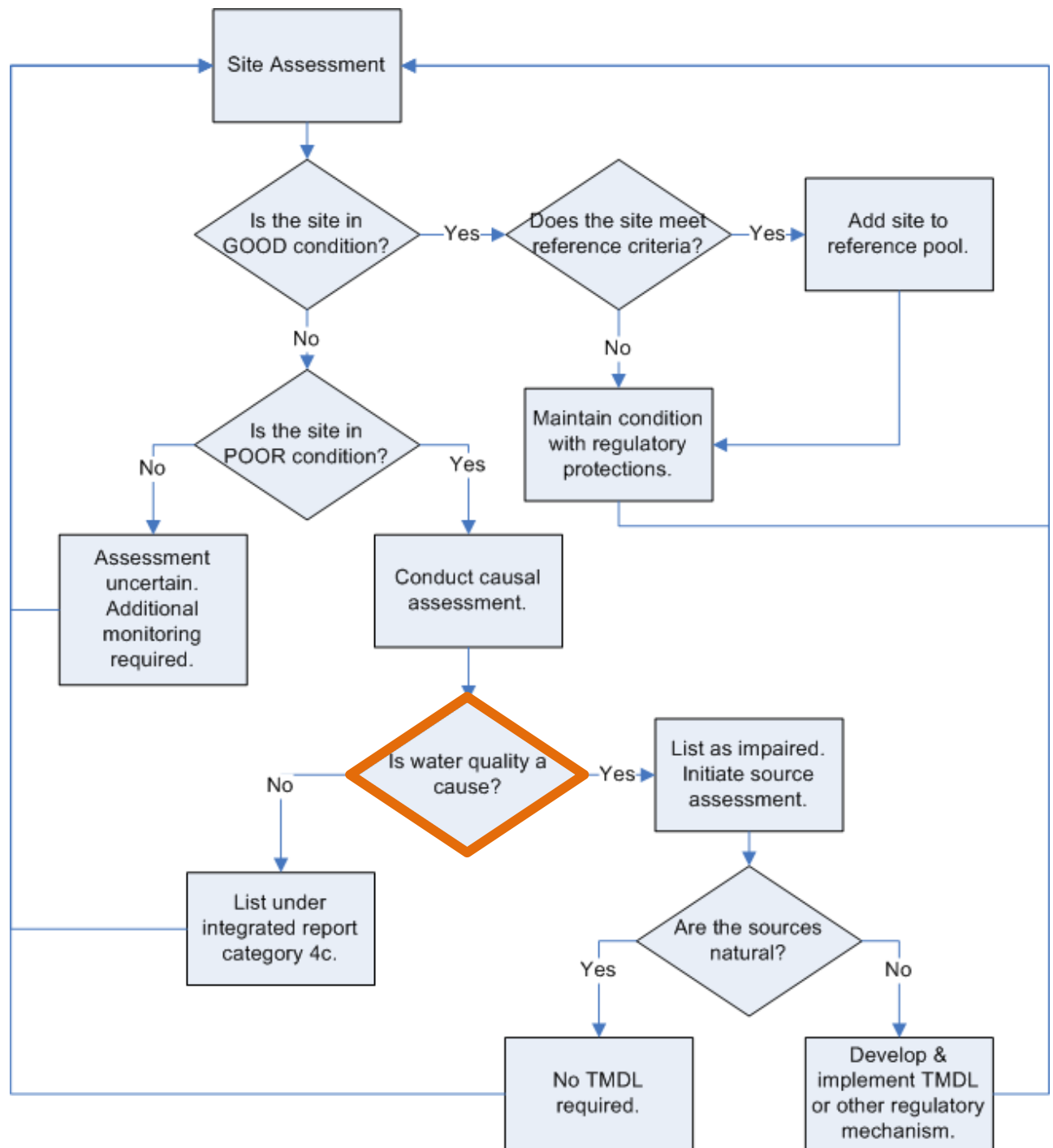
Yes

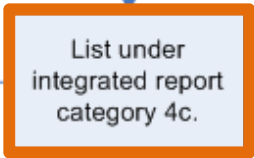
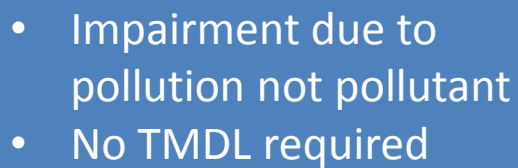
Conduct causal assessment.

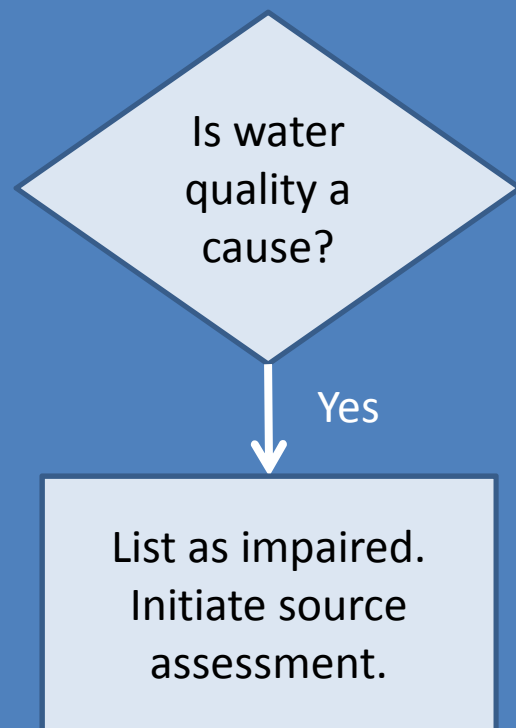


Is water
quality a
cause?

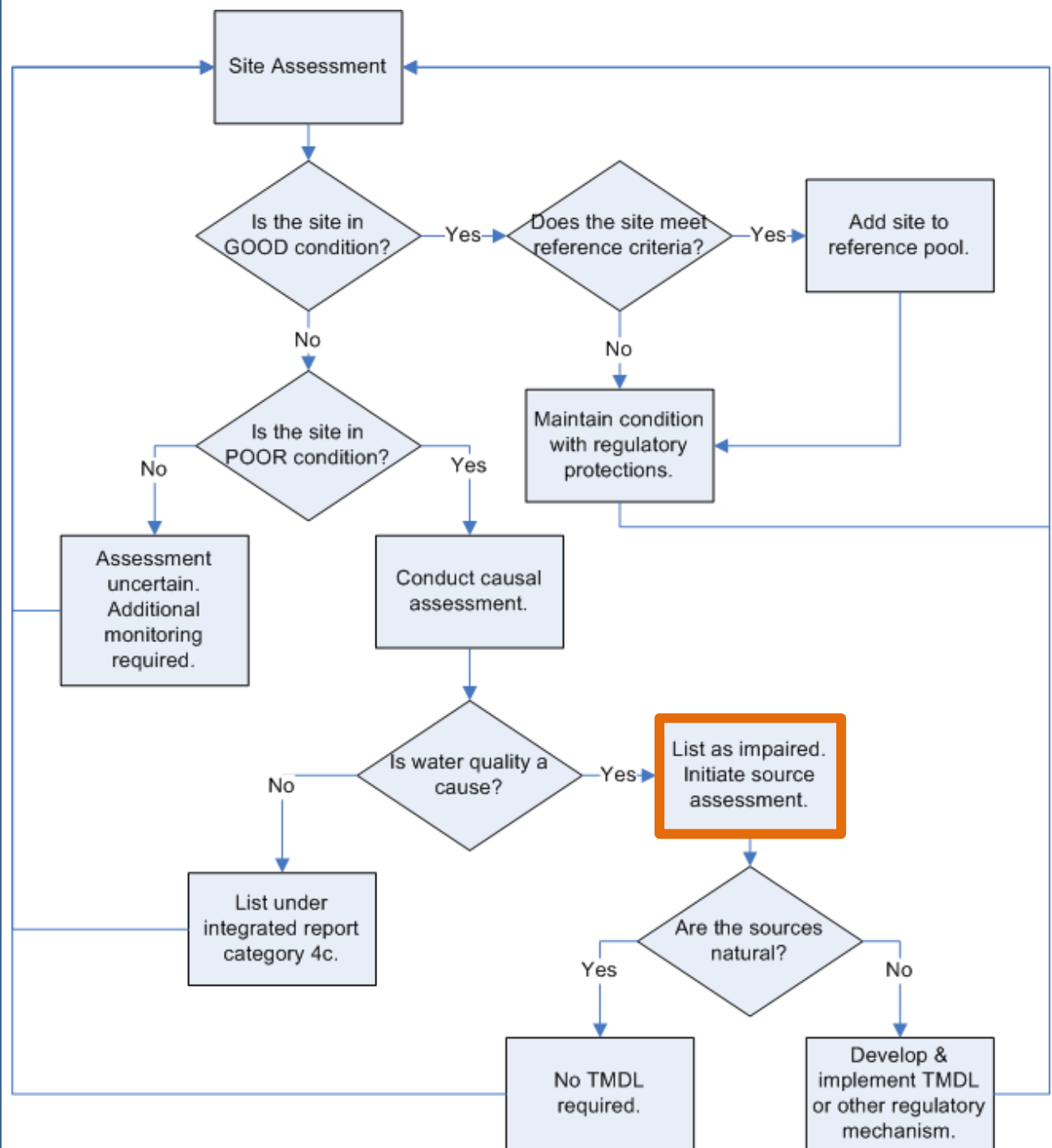
- Assumes causal assessment was successful

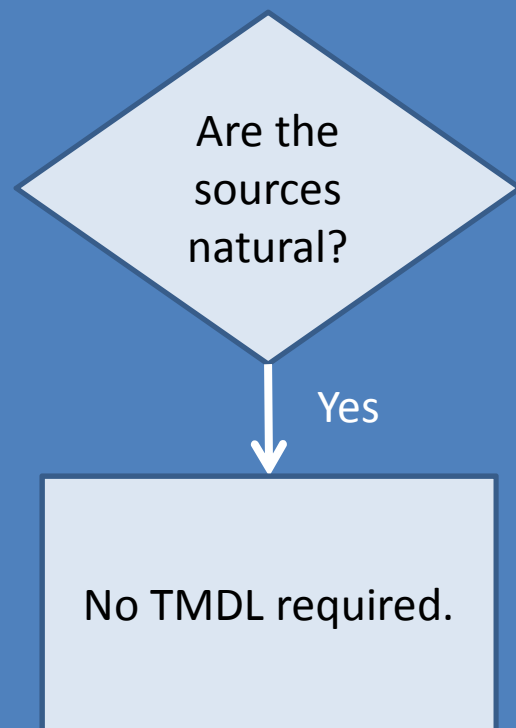






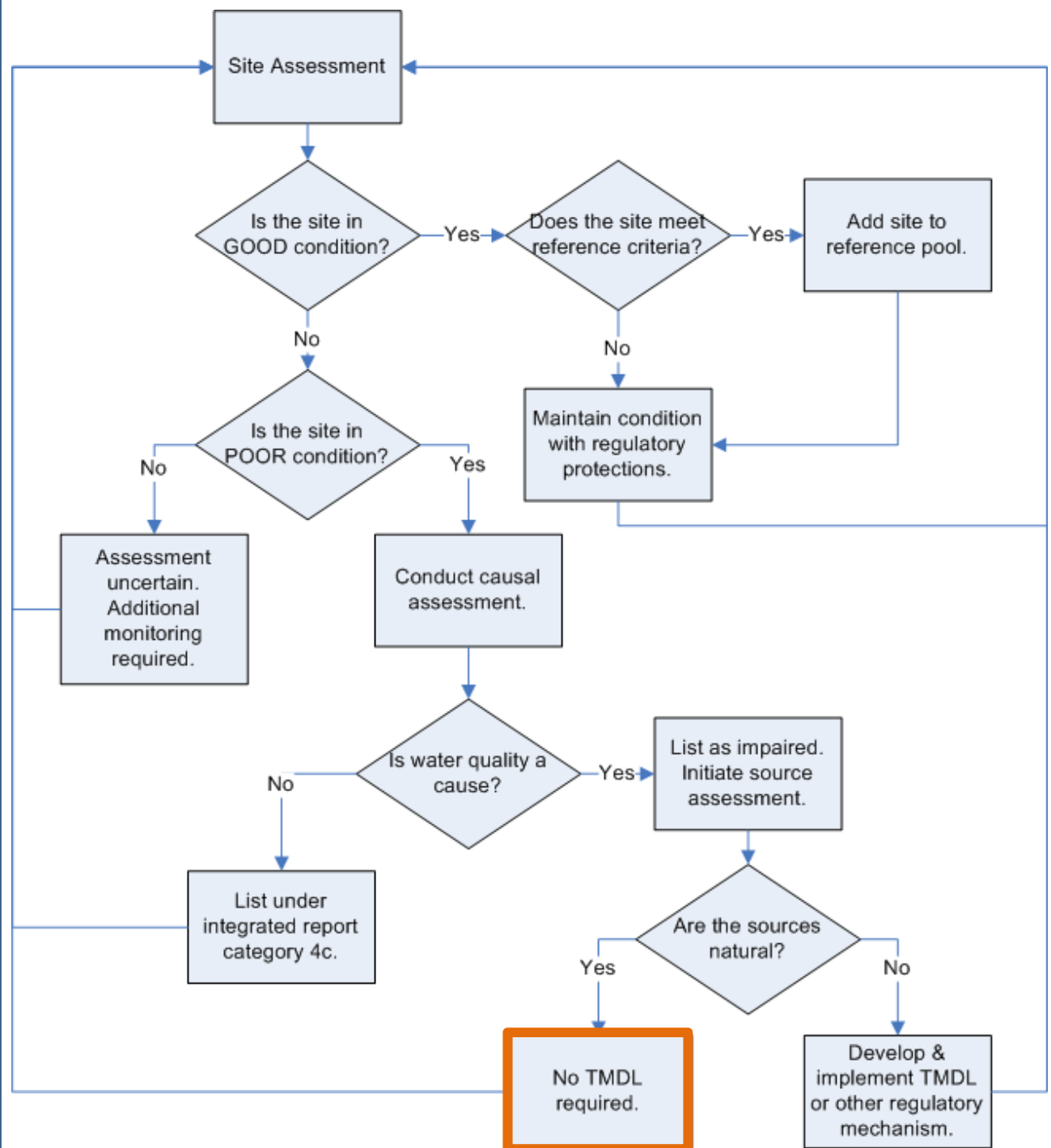
- Source assessment conducted in early TMDL development

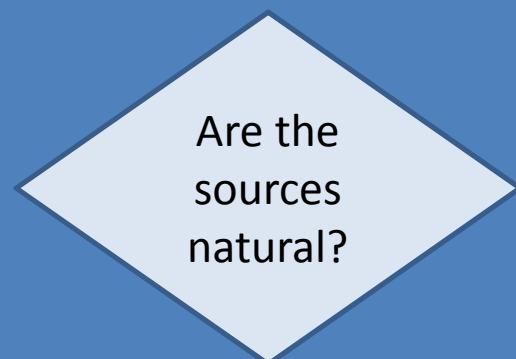




Example Natural Sources:

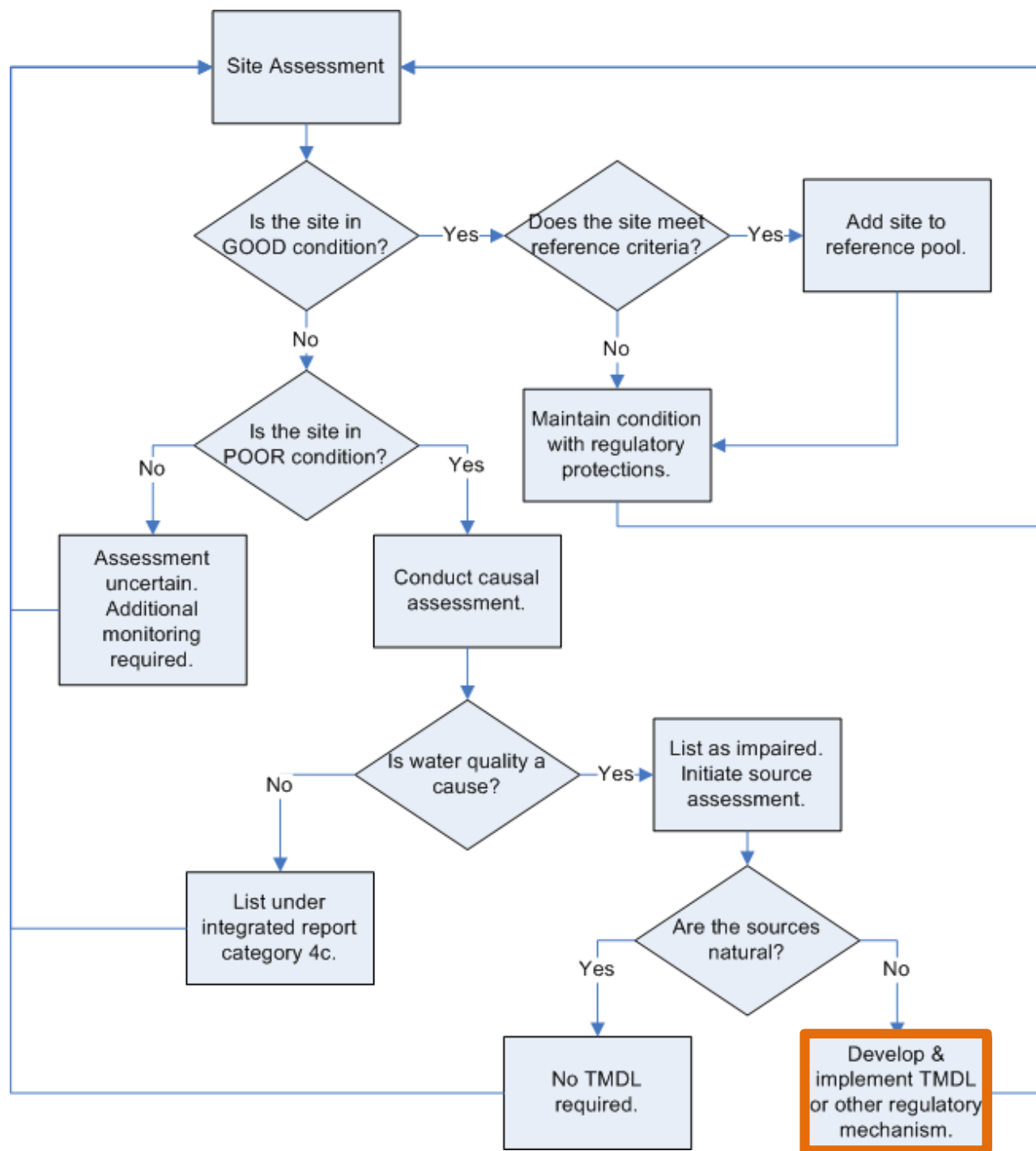
- Geologic sources of constituents
- Wildfires
- Extreme weather events





No

Develop & implement TMDL or other regulatory mechanism.



Implementation Issues

Monitoring
Requirements

Thresholds

Independent
Applicability

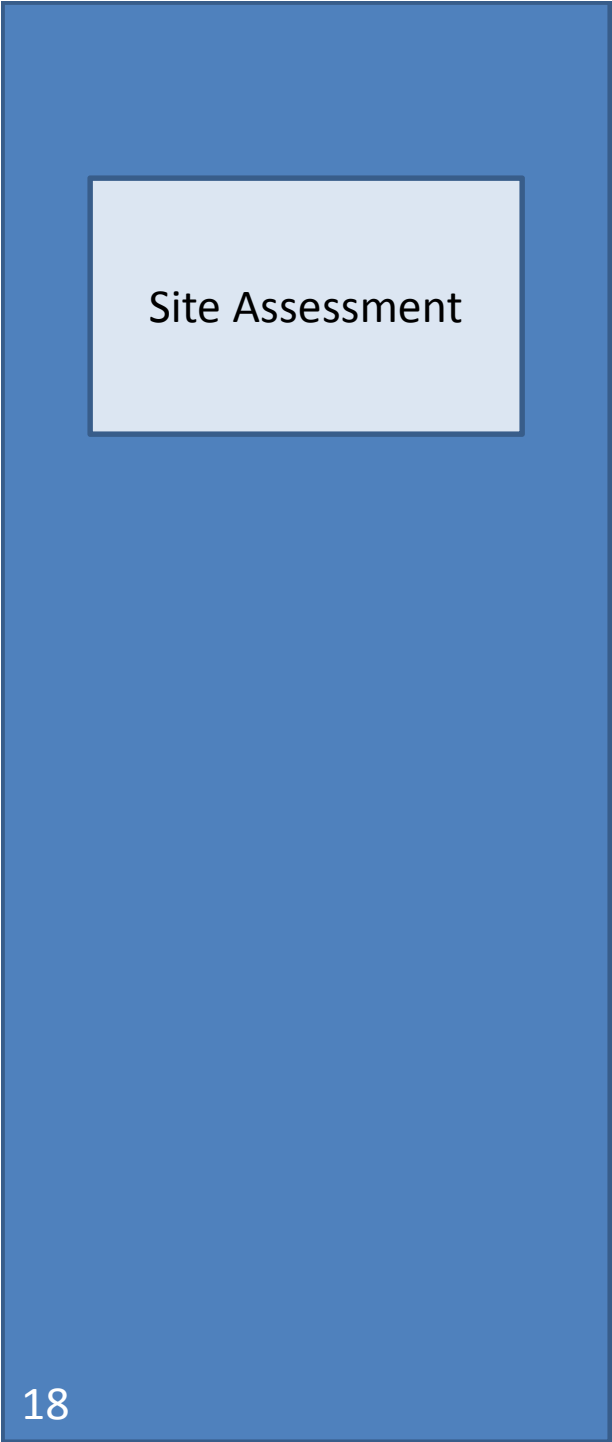
Exceptions for
Modified
Streams

Causal
Assessments

Impairment
Listing

Habitat
Restoration

Flow



Site Assessment

Monitoring Requirement Options

- Should bioassessment monitoring be required in all Water Board programs?
- Should monitoring requirements be left to the discretion of the Regional Boards?
- Should the biological objectives policy be framed to provide incentives for or require participation in a regional monitoring program?

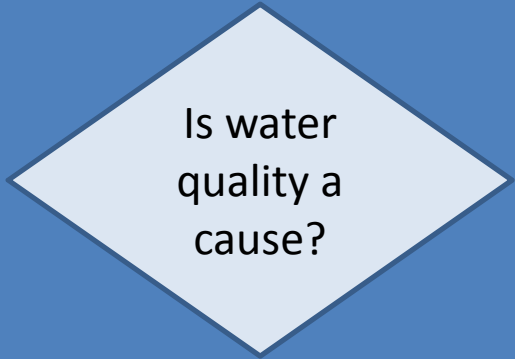
Thresholds Options

- Should thresholds:
 - be based on statistical benchmarks (i.e., standard deviation or percentiles)?
 - be selected to represent acceptable species loss?
 - be based on a combination of O/E and multi-metric indices?
- Should a safety factor be incorporated? How?
- How should multiple samples from the same site be evaluated?

Is the site
in GOOD
condition?

Is the site
in POOR
condition?

Assessment
uncertain. Additional
monitoring required.



Is water
quality a
cause?

Independent Applicability Options

- Should biology “trump” other assessments?
- Should GOOD biology be used to relax other requirements or de-list?
- Should biology be used as a screen that triggers other monitoring under a causal assessment?



Is the site
in POOR
condition?

Options for Exceptions for Modified Streams

- What are exception classes?
- How are exception classes defined?
- When & how should exceptions be granted?
- What expectations should apply?
- Should the policy apply to modified streams?
- Who should decide whether an exception is granted?

Conduct causal
assessment.

Options for Causal Assessments

- Who is responsible for conducting and paying for causal assessments?
- How would costs be shared?
- Would causal assessment be done as part of initial TMDL development?
- What happens if the causal assessment is inconclusive?

List as impaired.
Initiate source
assessment.

Impairment Listing Options

- How do sites get listed as impaired?
- Would a site be listed before or after causal assessment?
- At what scale would the listing apply?

List under integrated
report category 4c.

Options for Habitat Restoration

- Will restoration be required?
- Will off-site compensatory mitigation be considered or required?
- How will responsibility for restoration be allocated among responsible parties?

List under integrated
report category 4c.

Options for Flow

- Should biological assessments be used in developing flow criteria?
- Should biological objectives be used in making water rights decisions?

October 11th Meeting Outcomes

- No additional categories were identified
- Discussed top 2 priority issues:
 - Monitoring Requirements/Site Assessment
 - Exceptions for Modified Streams
- Next Steps
 - Organize input on priority issues
 - Solicit input on other 6 issues offline
 - Discuss other 6 issues at December 3rd meeting
 - Continue joint Stakeholder and Regulatory Advisory Group meetings

Questions for Science Panel

- How should we define “perennial”?
- How should we define “wadeable” and when (index period)?
- What scale does a site assessment represent (site, reach size, watershed)?
- For “excepted” activities (i.e., intentional poisoning for invasive spp. eradication), how long should we allow for recovery before the biological objectives are applied again?
- If causal assessment and subsequent control measures are successful, what is the likelihood and expected timeframe of biological response?