

# Biological Objectives Assessment Framework & Implementation Issues

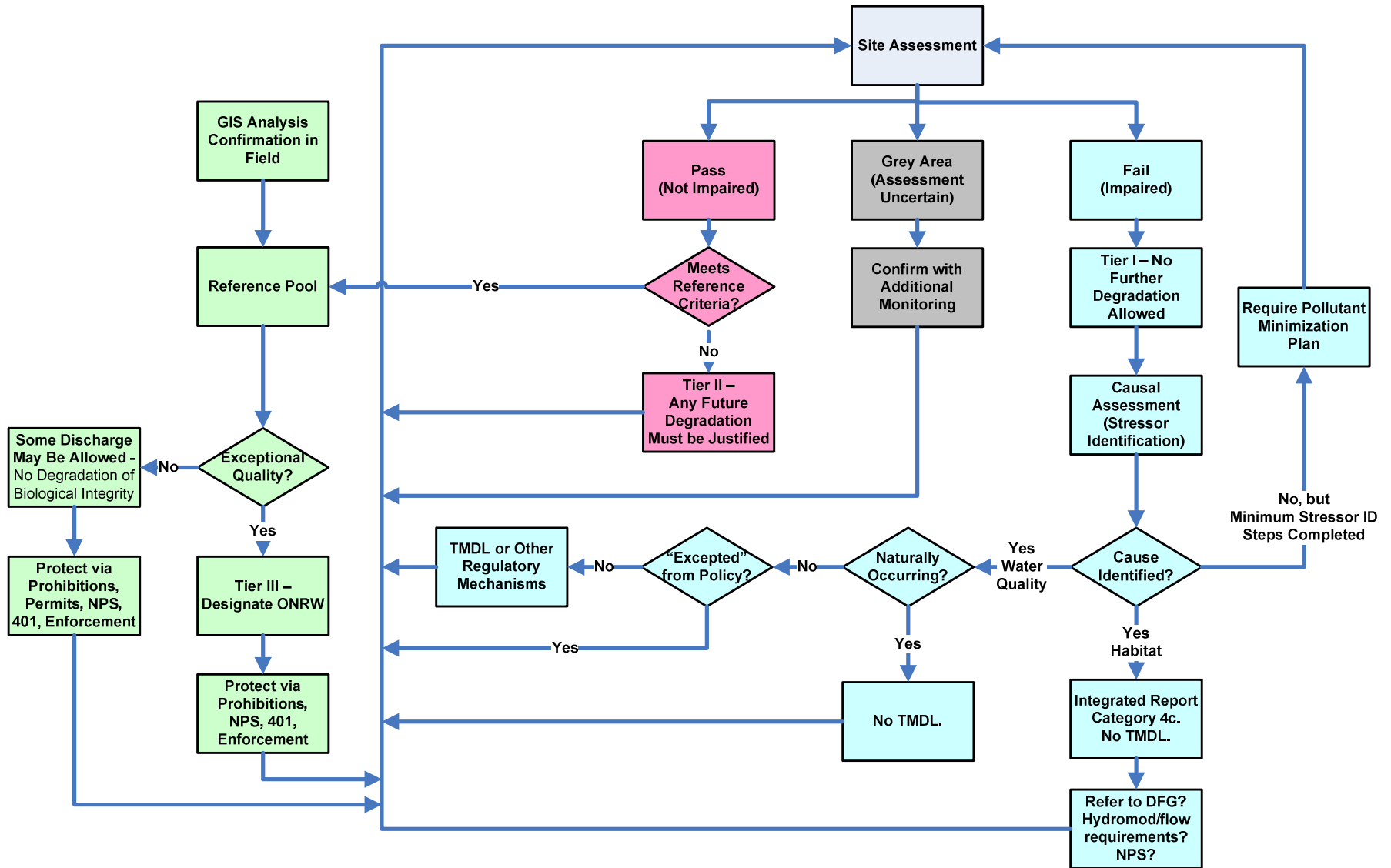
Joint Stakeholder & Regulatory  
Advisory Group Meeting

11 October 2012

# Agenda

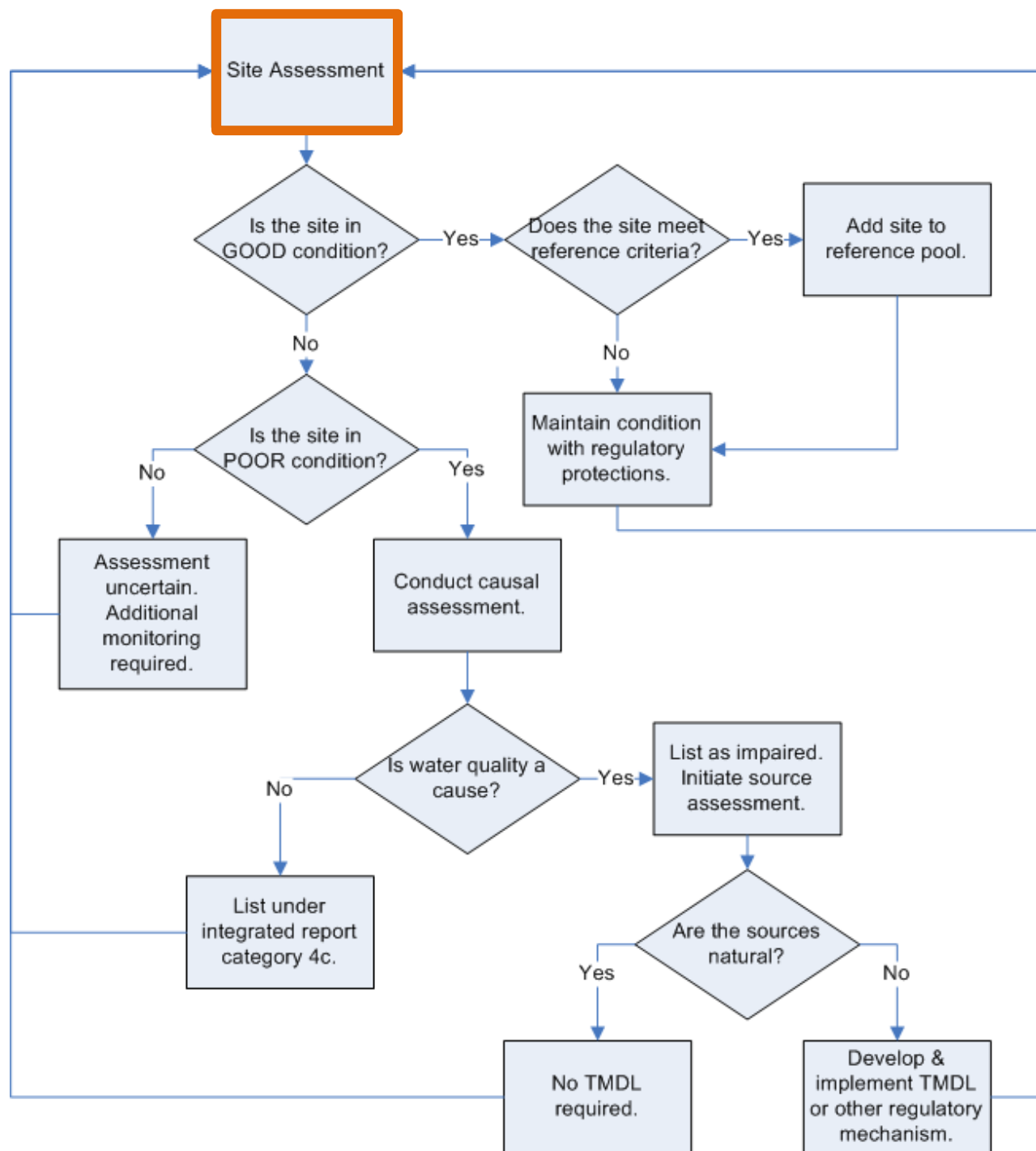
- Overview of assessment framework (simplified version)
- Review implementation issues & options

# Complicated Framework



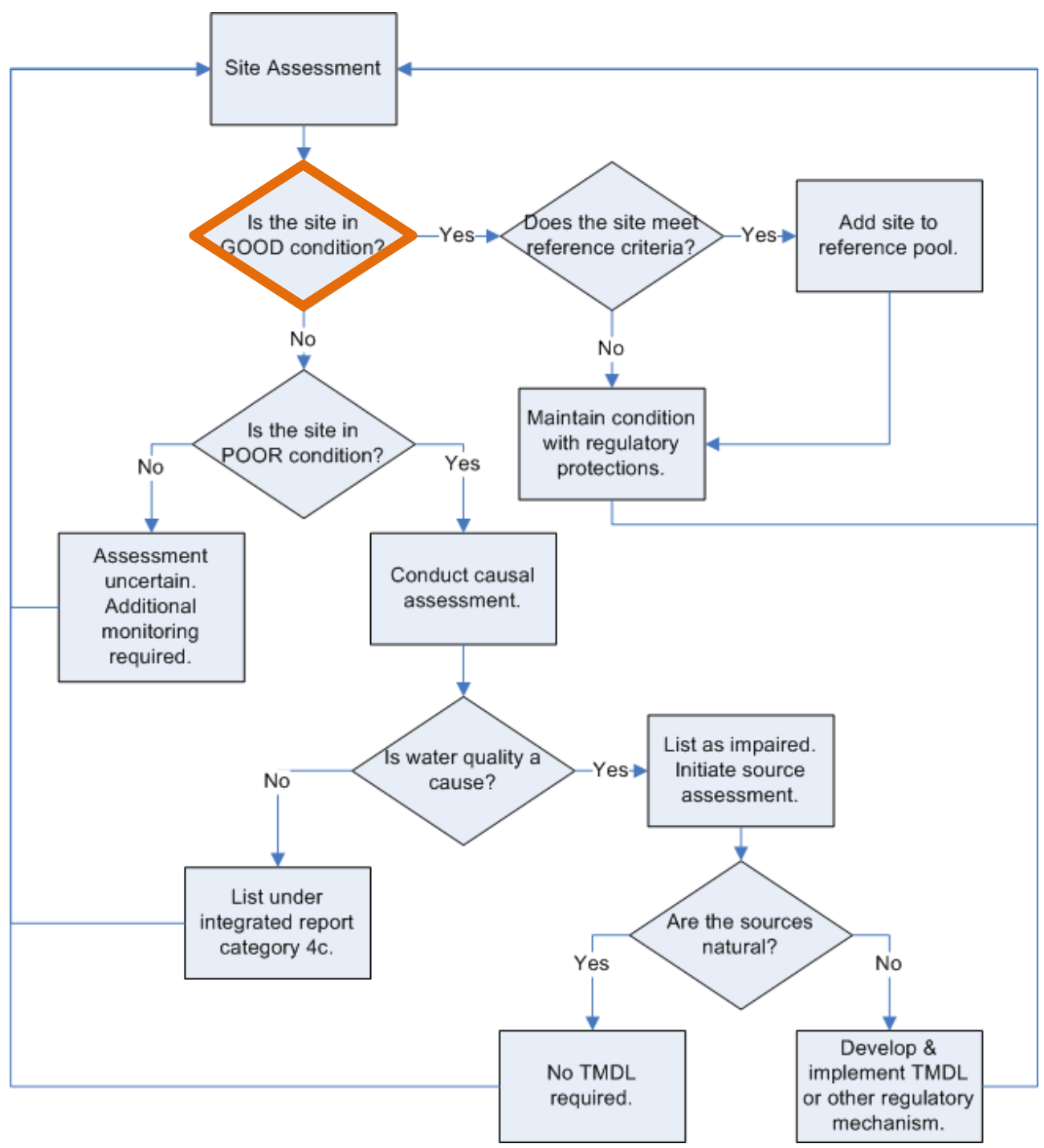
## Site Assessment

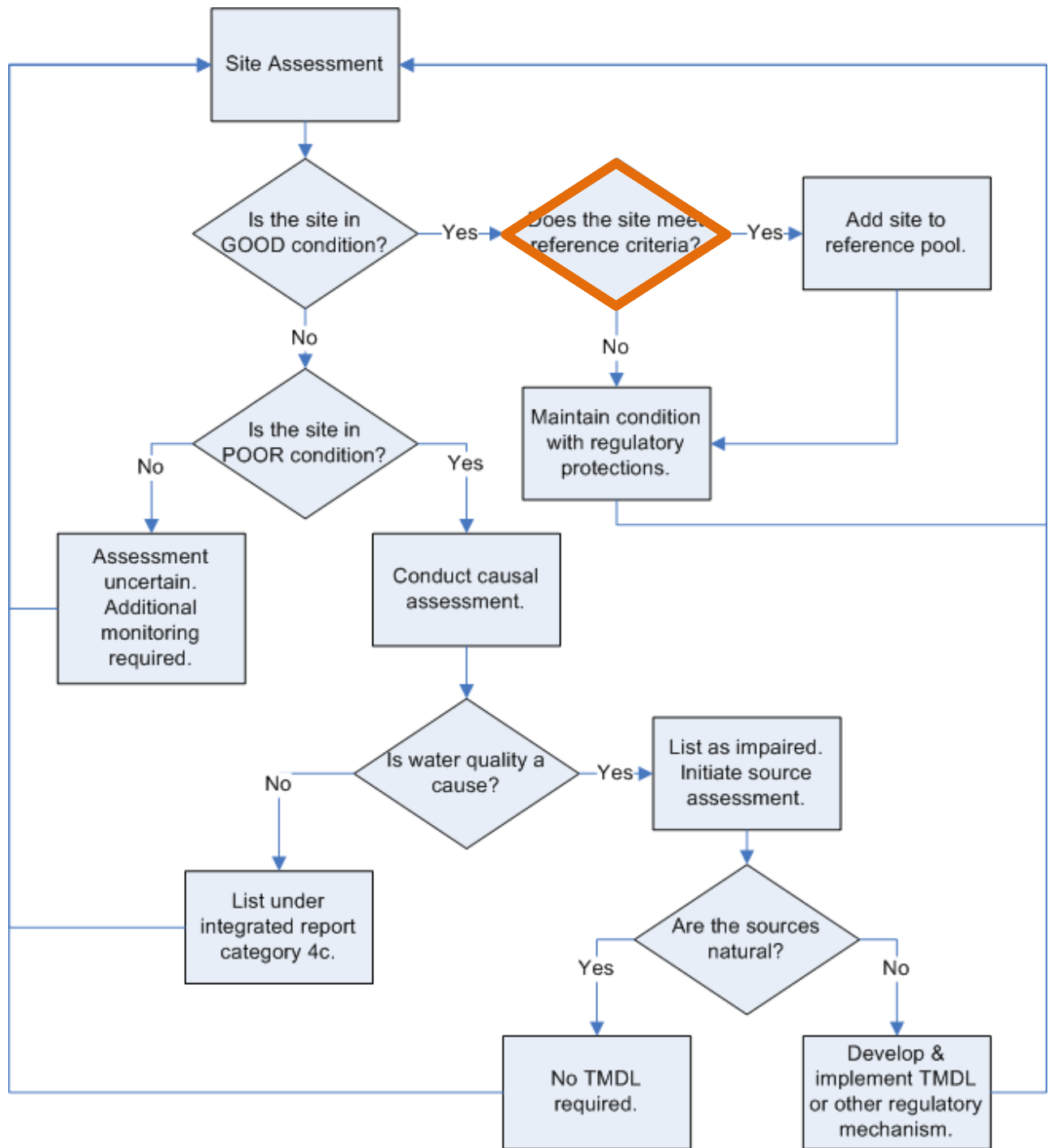
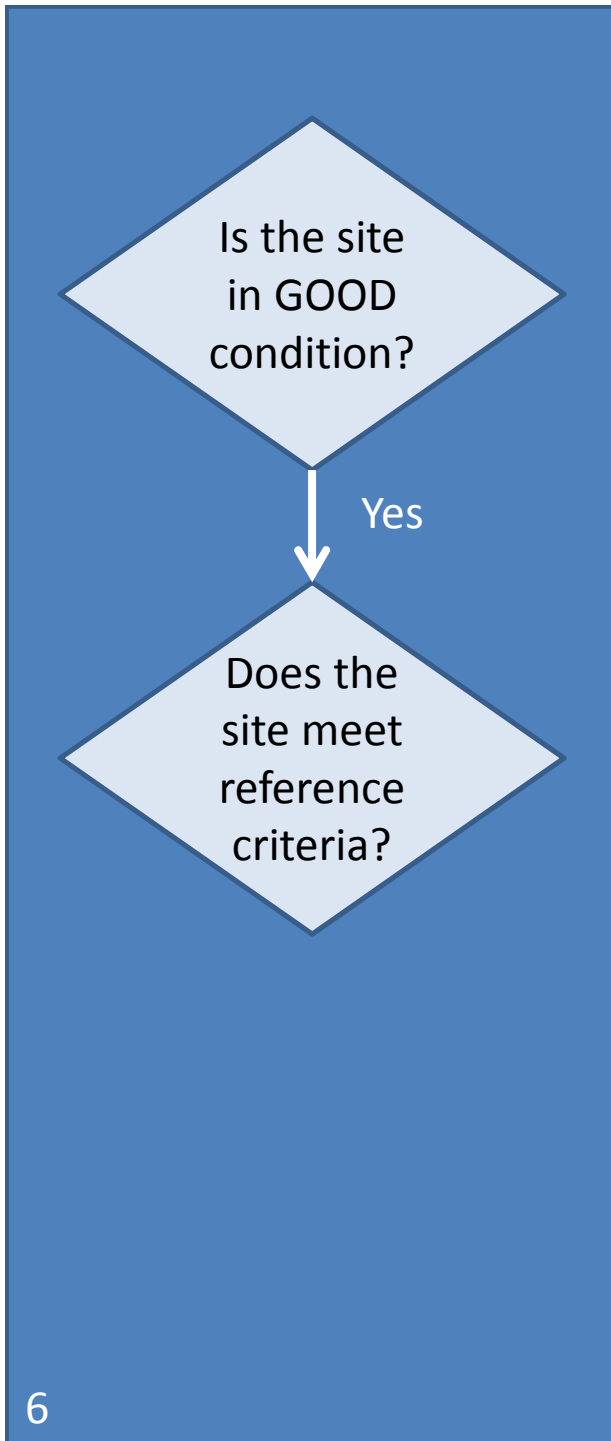
- SWAMP
- Southern CA Stormwater Monitoring Coalition
- Bay Area Macroinvertebrate Bioassessment Indicator Network
- SF Bay Regional Stormwater Monitoring Program
- Other

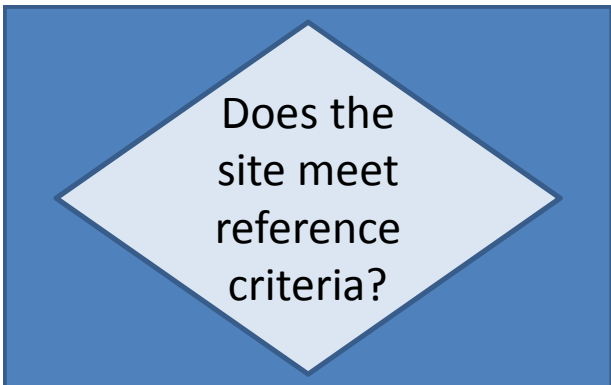


Is the site in GOOD condition?

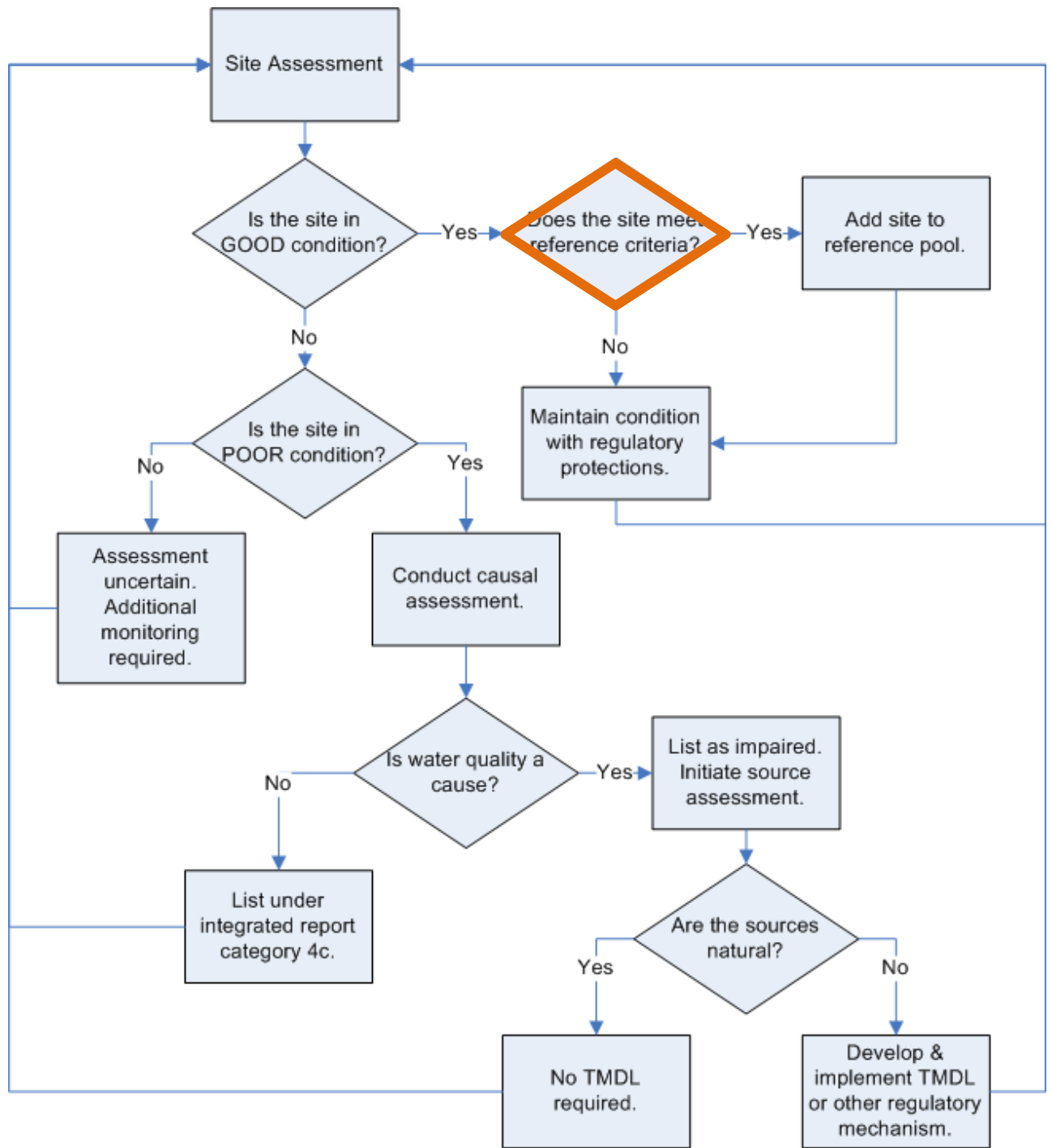
- All sites in reference pool
- Sites that are “like” reference biologically

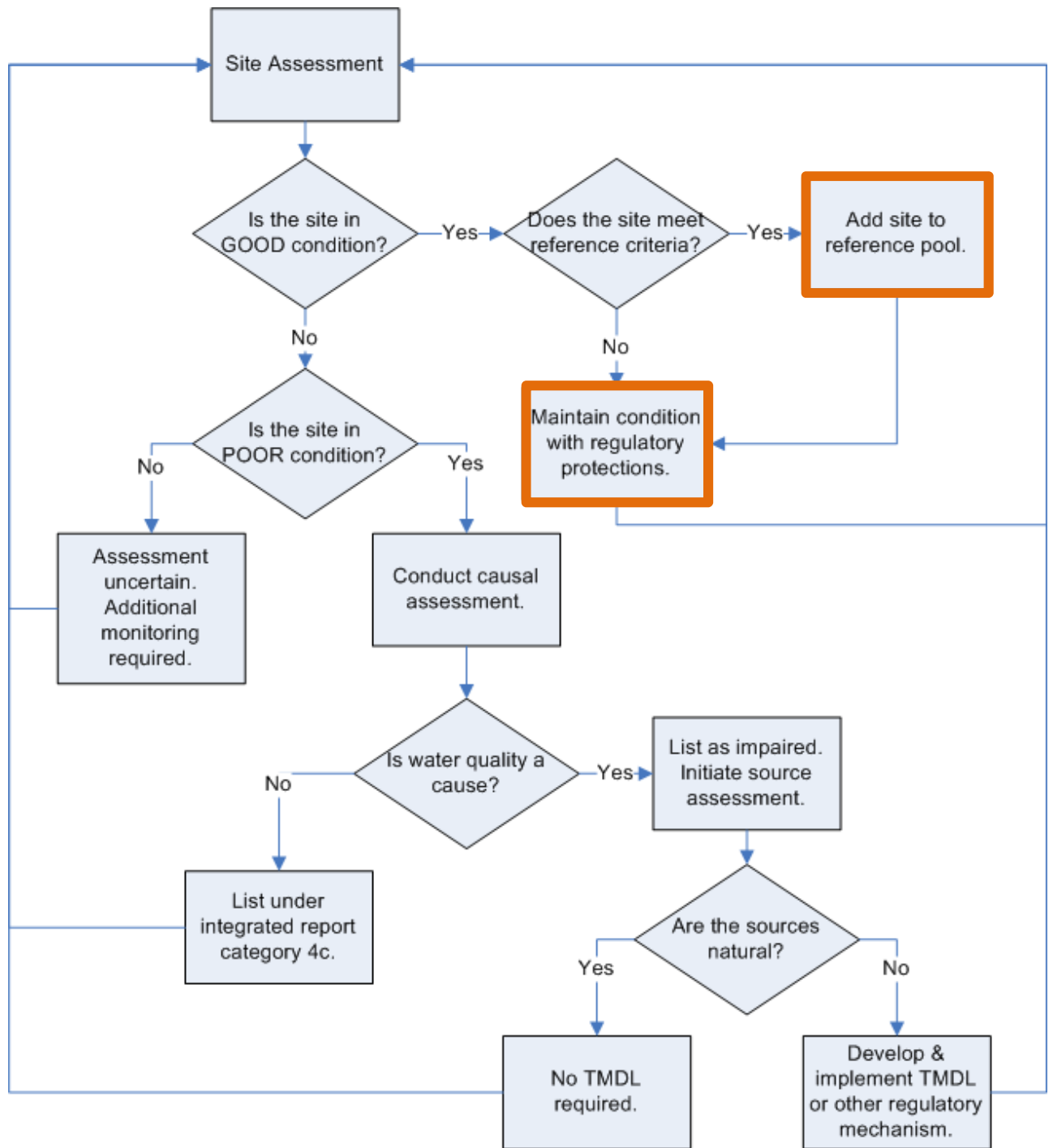
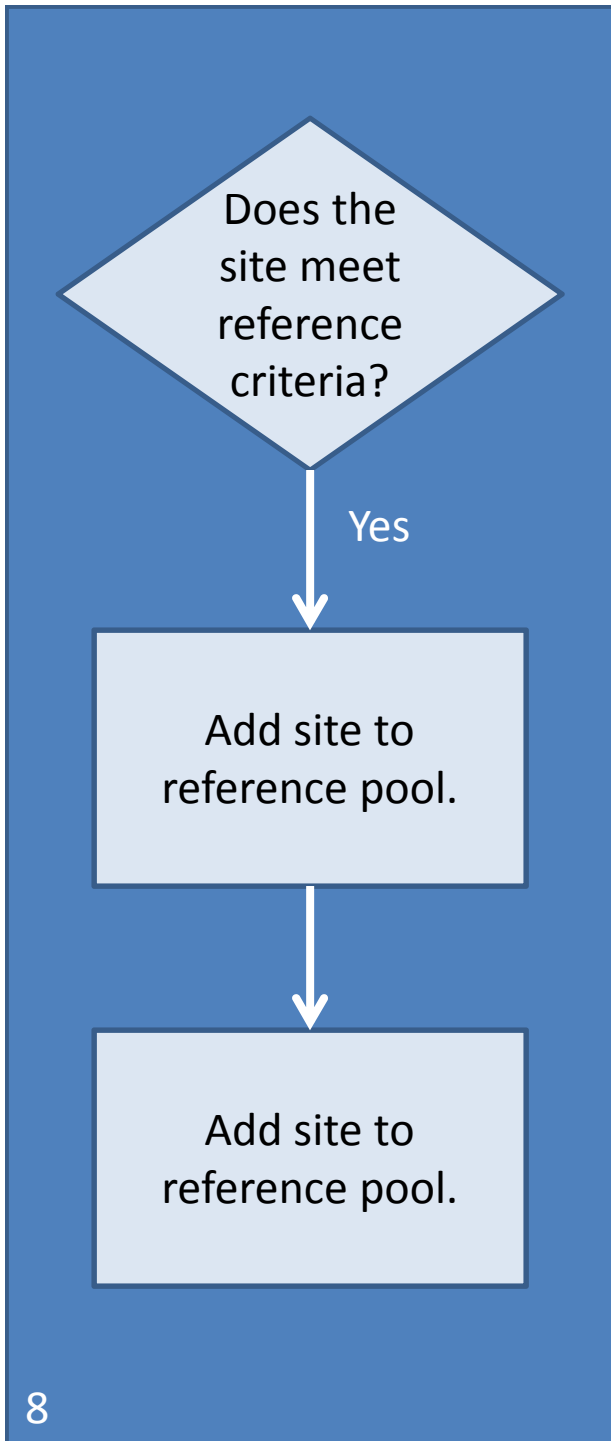




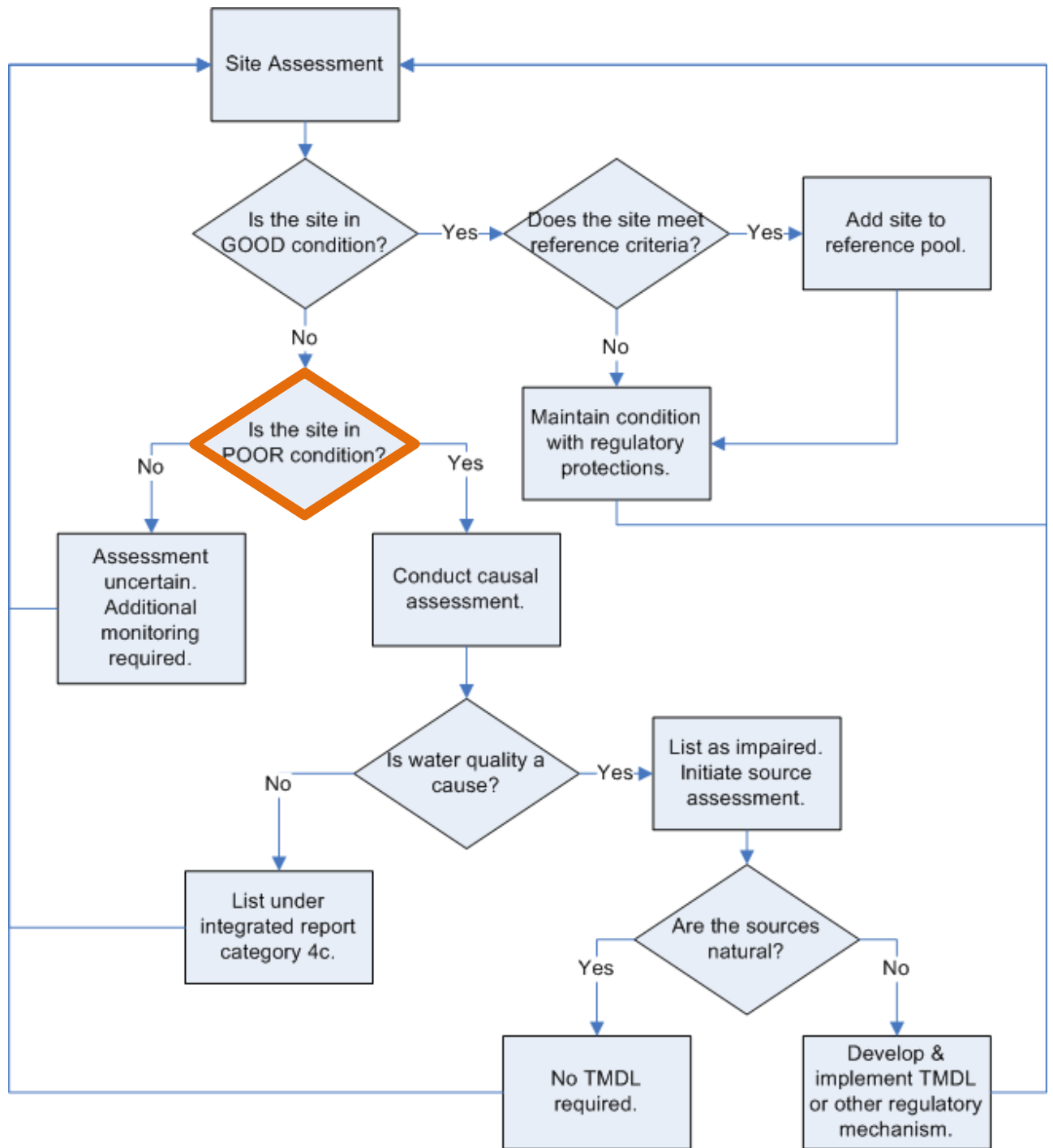
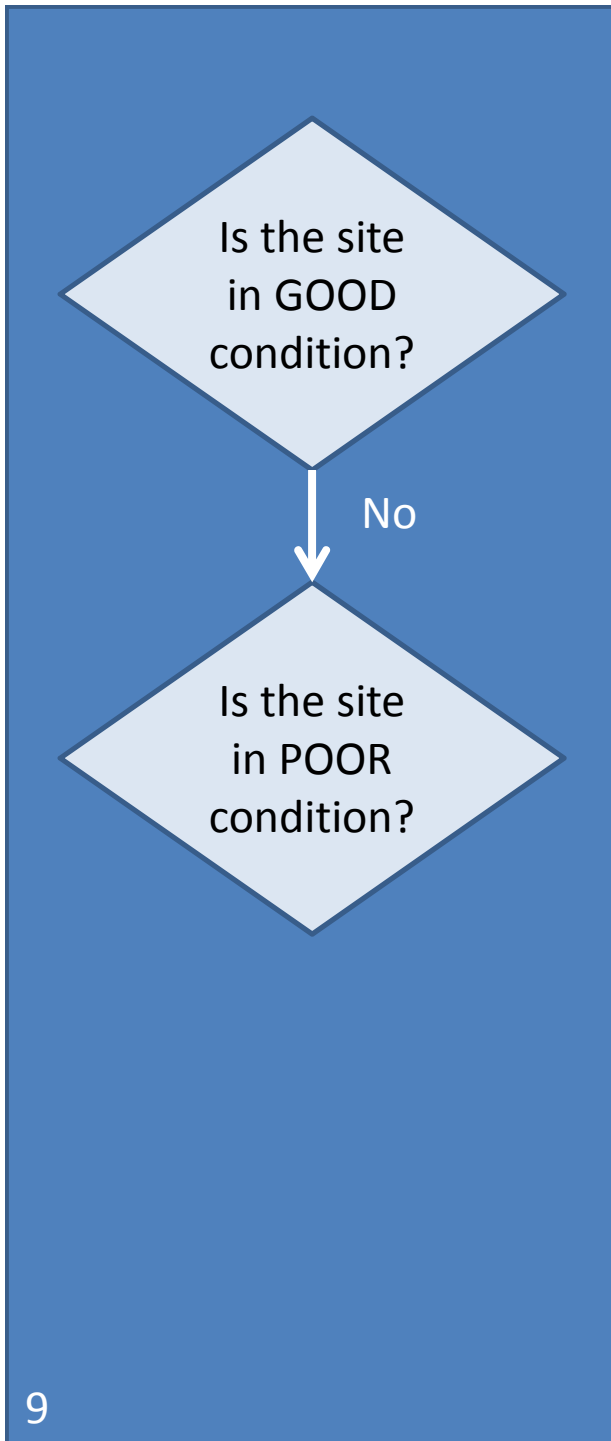


Metric	Threshold
Local disturbance	1.5
% Agriculture	3/3/10
% Urban	3/3/10
%Ag+Urban	5/5/10
Road Density (km/km <sup>2</sup> )	1.5
Paved Road Crossings (#/WS)	5/10/50
Nearest Dams	>10 km
Active Mines	0 (5k)
% Canals & Pipelines	10
Gravel Mines Density	0.1
Conductivity	<2000 μS









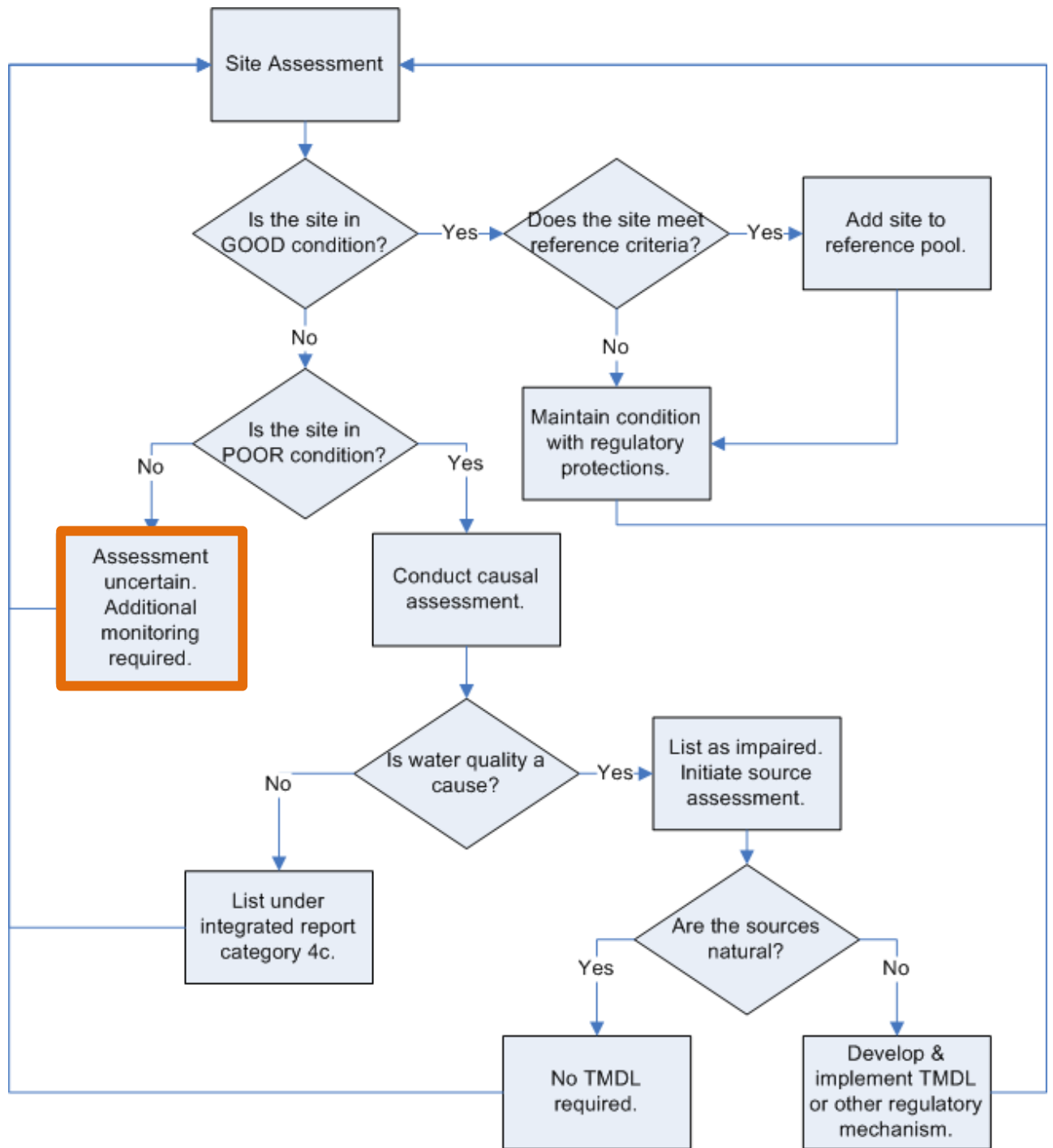
Is the site in POOR condition?

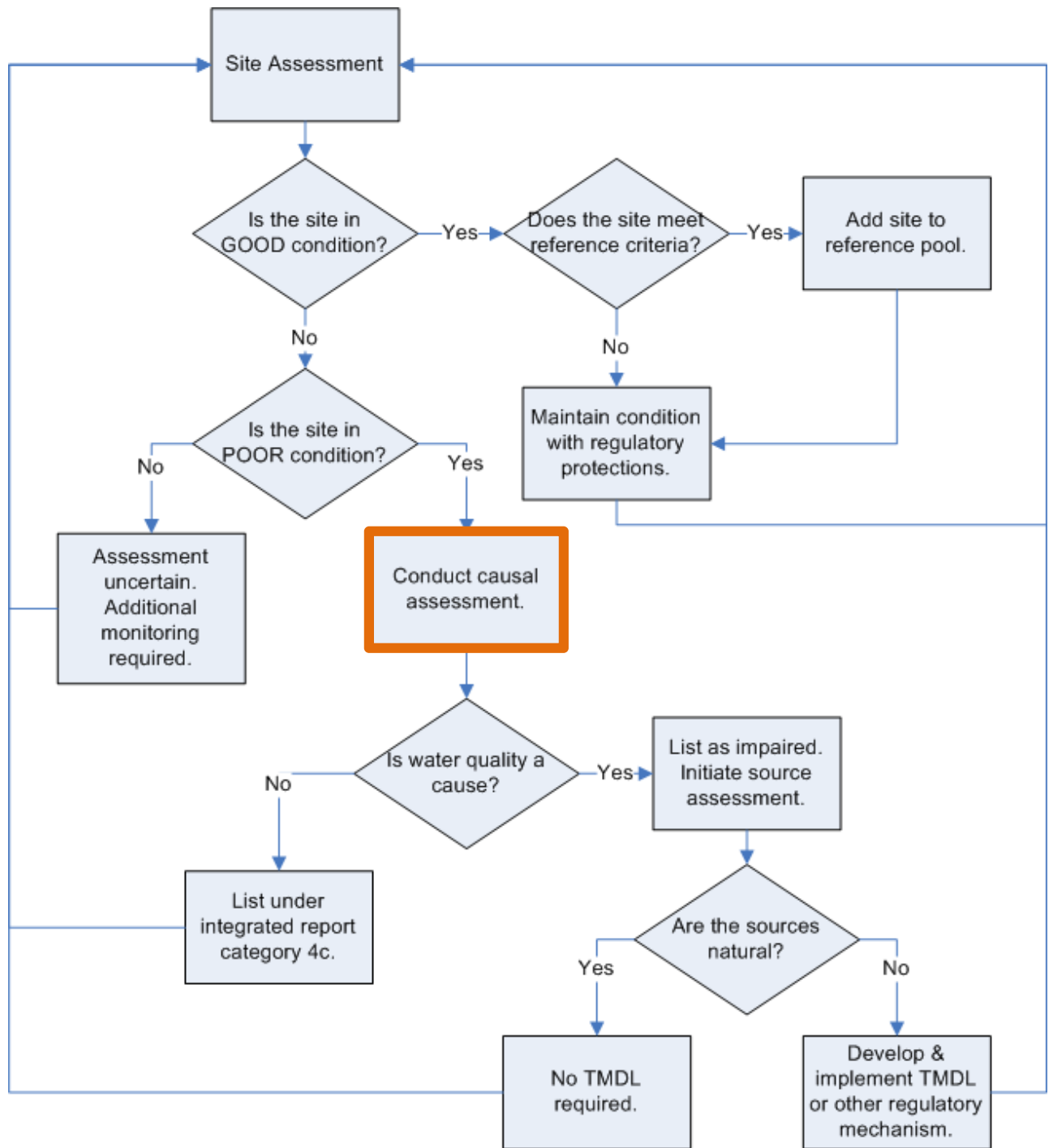
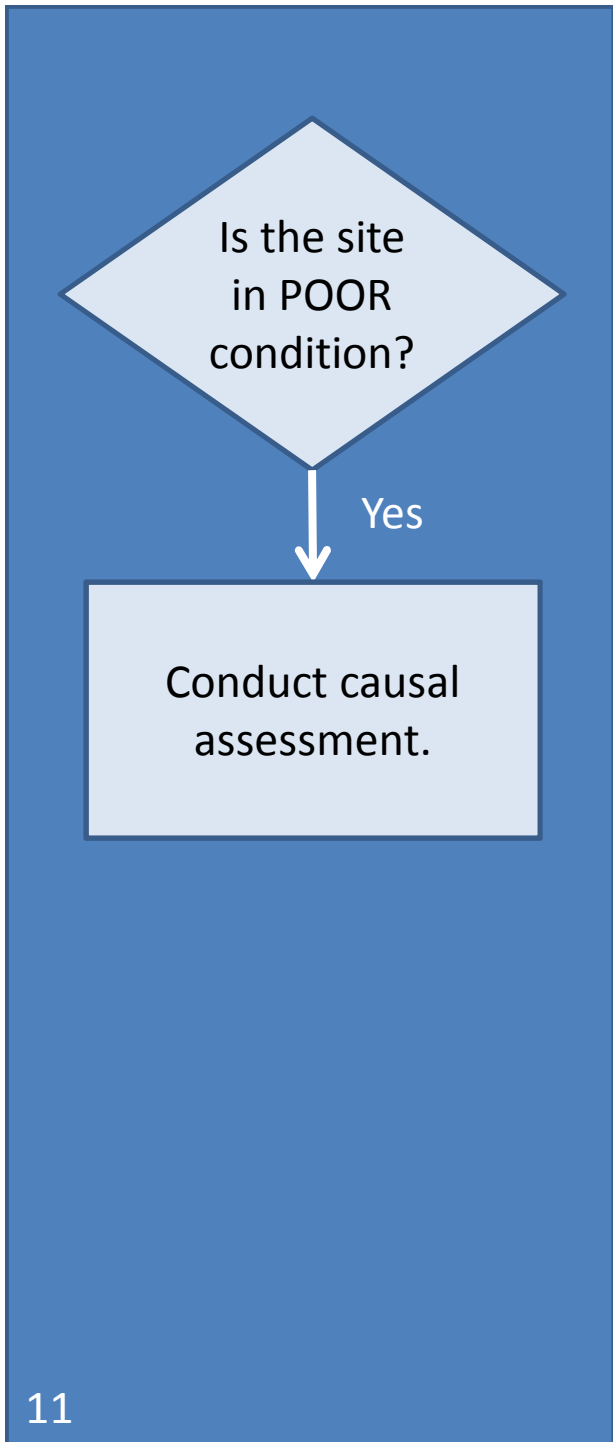
No

Assessment uncertain. Additional monitoring required.

- Gray area

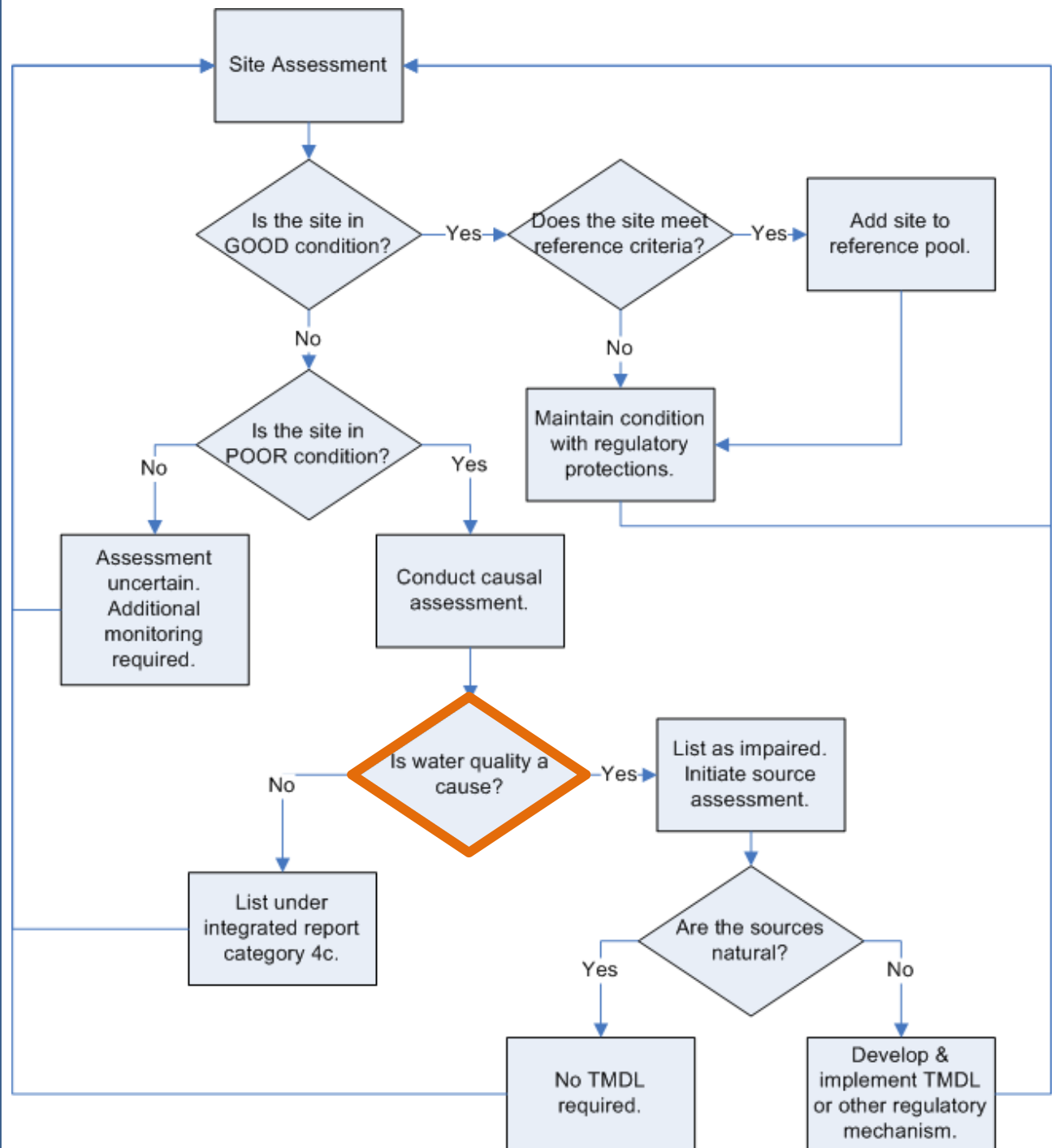
10

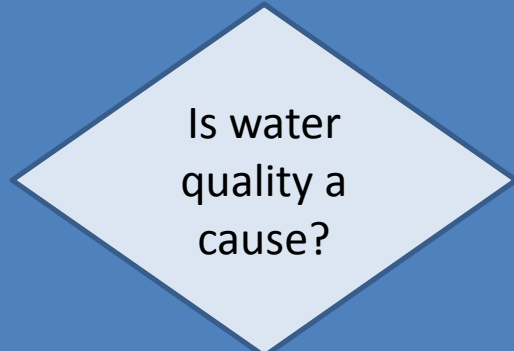




Is water quality a cause?

- Assumes causal assessment was successful

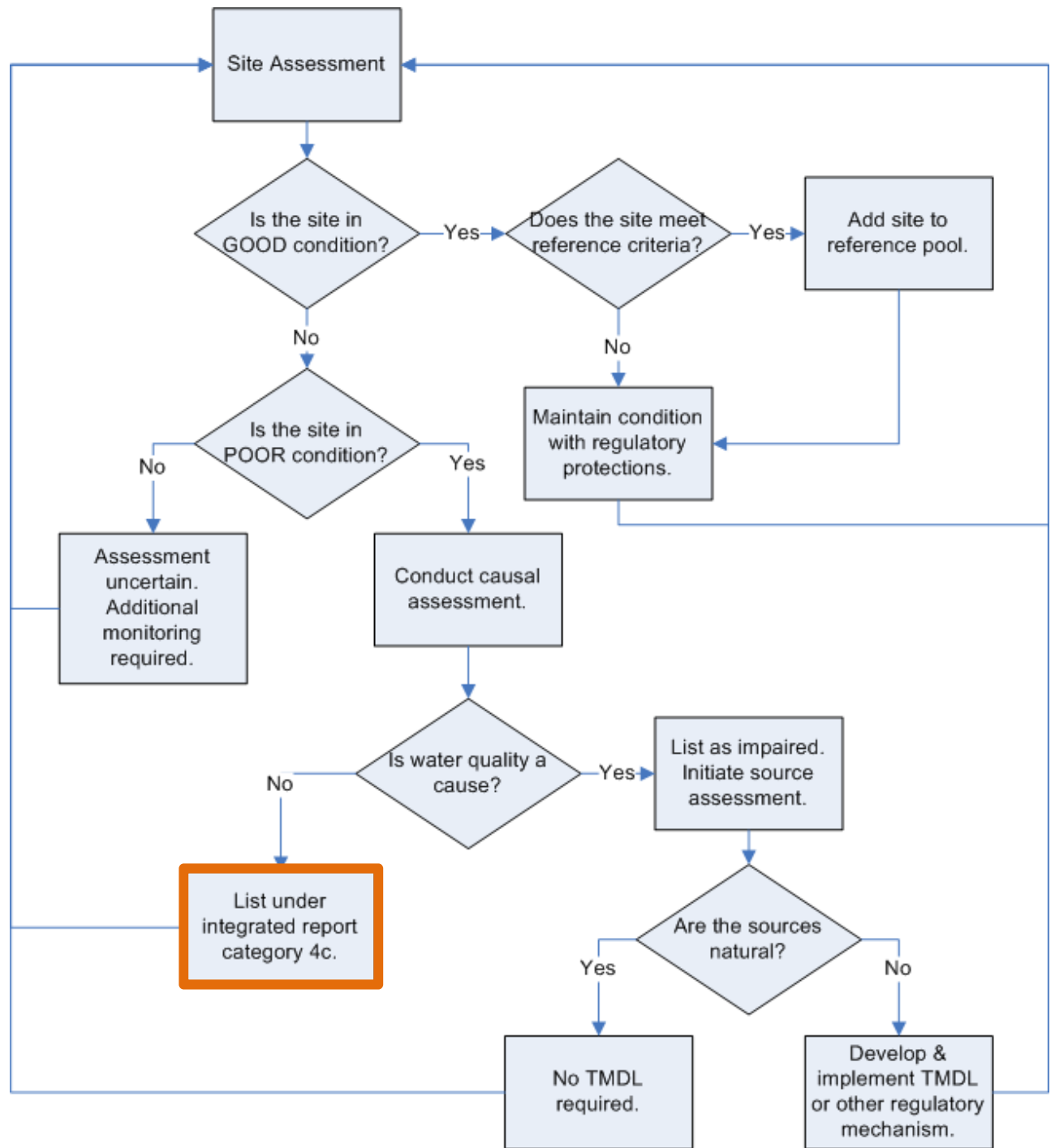


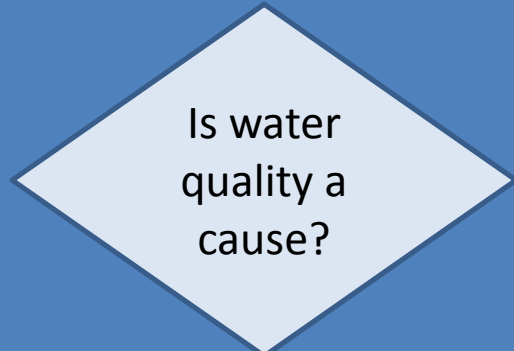


No

List under integrated report category 4c.

- Impairment due to pollution not pollutant
- No TMDL required

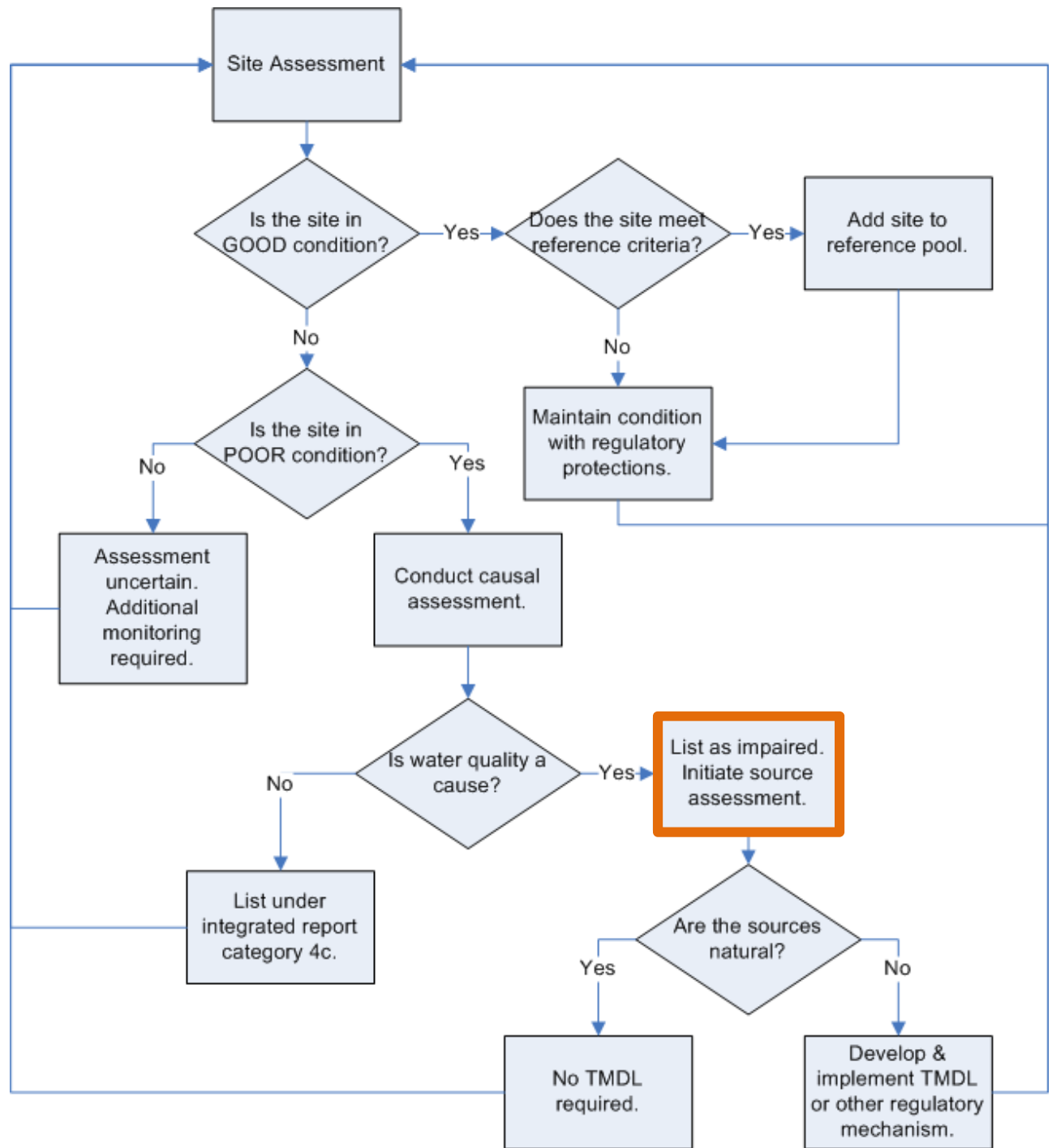


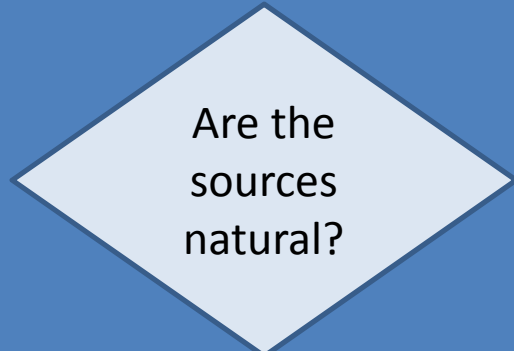


Yes

List as impaired.  
Initiate source assessment.

- Source assessment conducted in early TMDL development



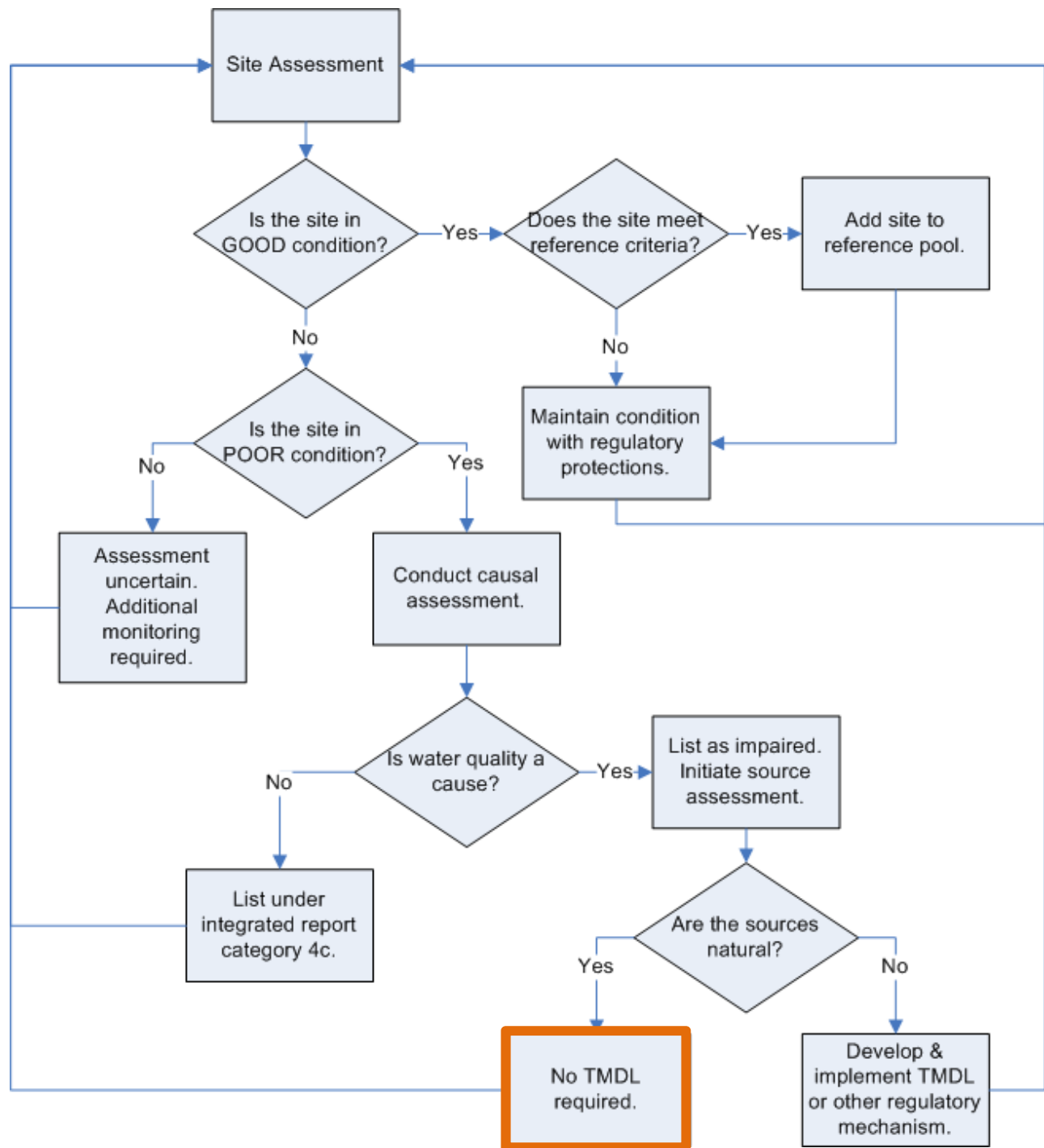


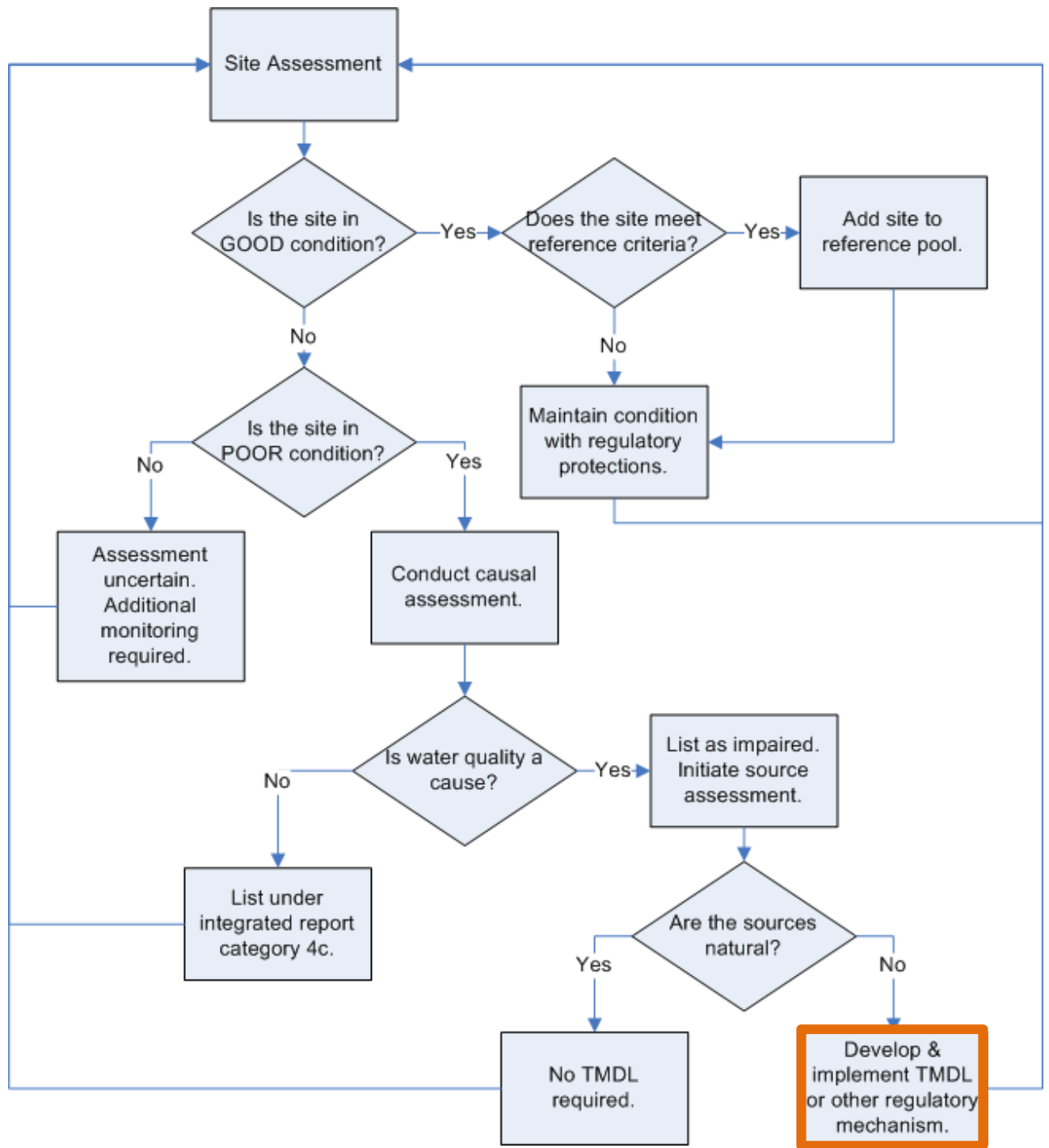
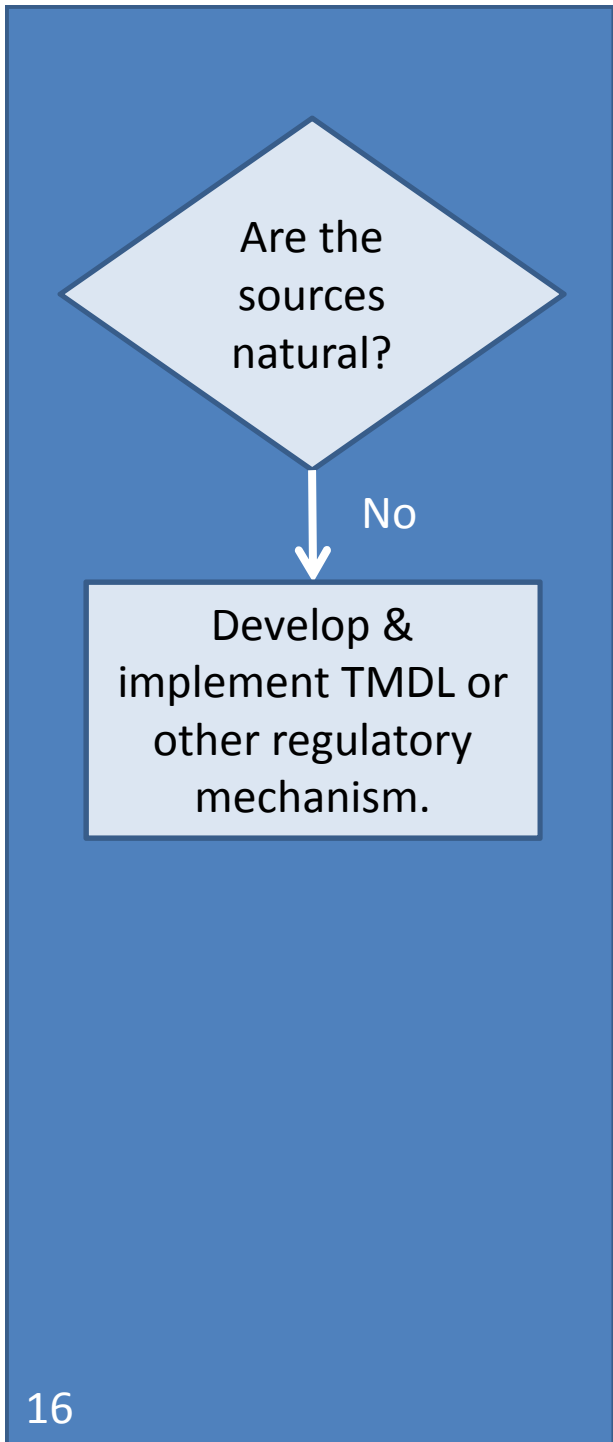
Yes

No TMDL required.

Example Natural Sources:

- Geologic sources of constituents
- Wildfires
- Extreme weather events







# 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?

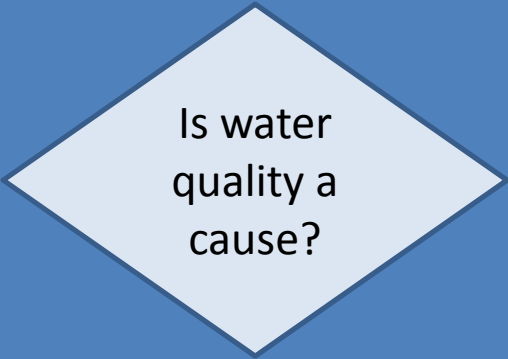
# Thresholds Options

- 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?

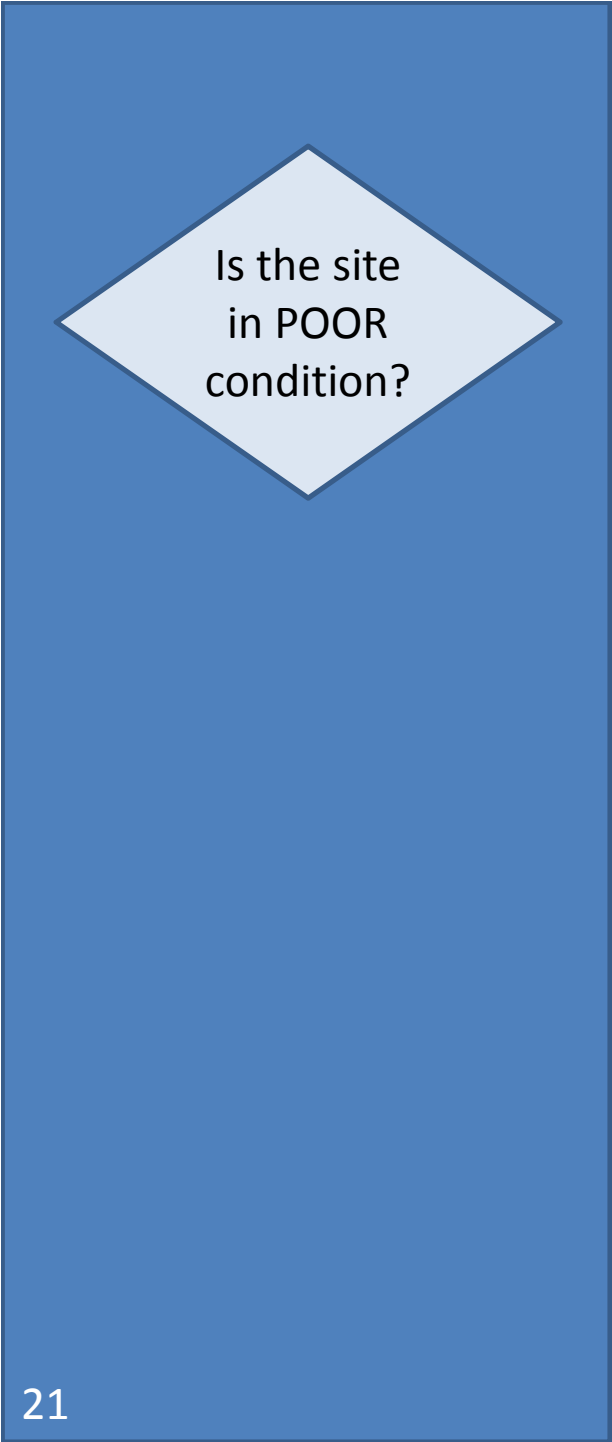
Assessment  
uncertain. Additional  
monitoring required.



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?

# 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?