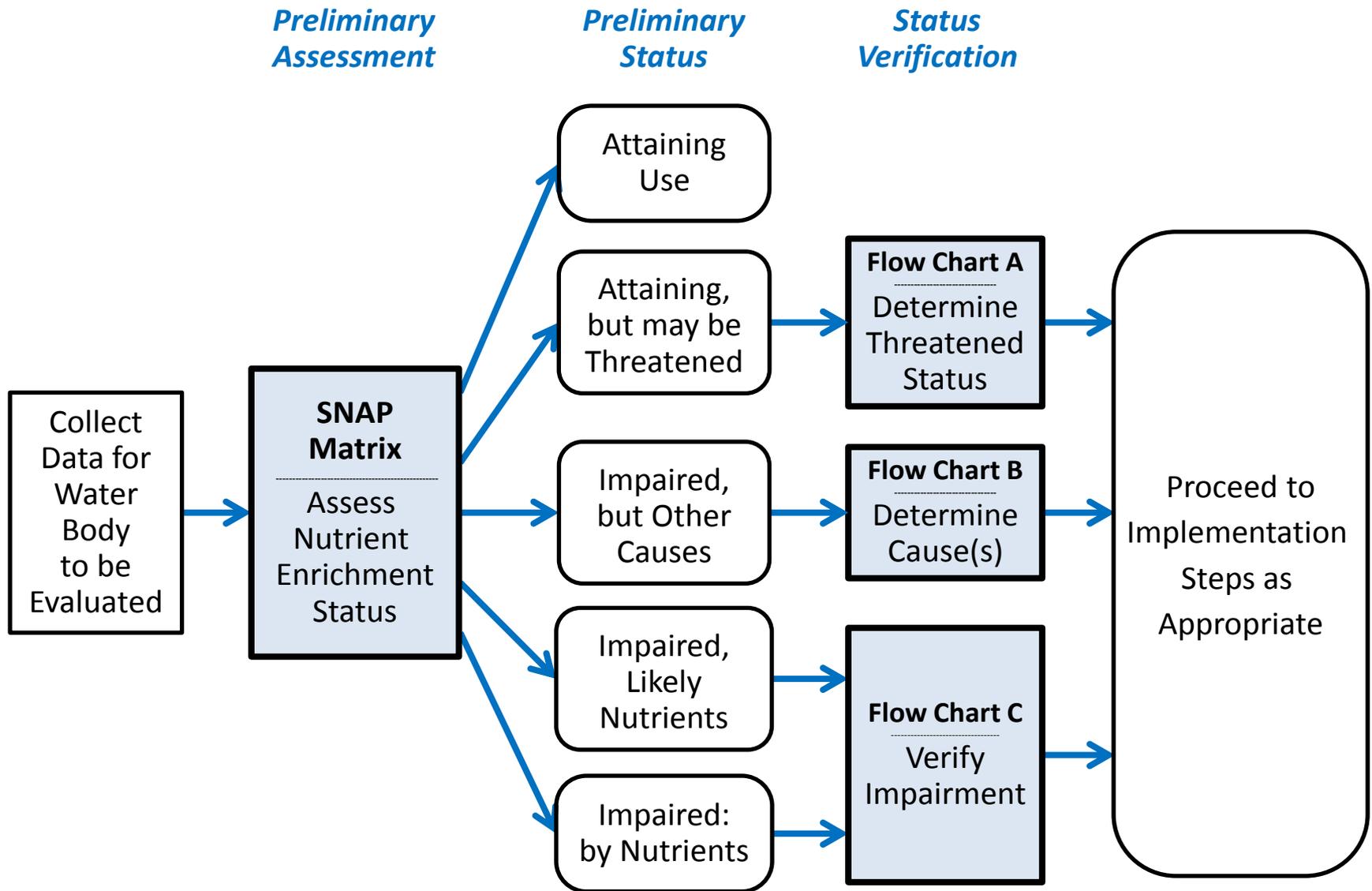


Stream Nutrient Assessment Procedure (SNAP)



Proposed Stream Nutrient Assessment Procedure (SNAP)

1	2	3	4	
Biological Criteria	DO Swing	Benthic Chlorophyll	Trophic Condition Status	
All indices attaining or non-significant departure	Normal or low swings (≤ 6.5 mg/l)	Low to moderate (≤ 320 mg/m ²)	Attaining use / not threatened	
		High (> 320 mg/m ²)	Attaining use, but may be threatened	See Flow Chart A
	Wide swings (> 6.5 mg/l)	Low (≤ 182 mg/m ²)		
		Moderate to high (> 182 mg/m ²)		
Non-attaining (one or more indices below non-significant departure)	Normal or low swings (≤ 6.5 mg/l)	Low to moderate (≤ 320 mg/m ²)	Impaired, but cause(s) other than nutrients	See Flow Chart B
		High (> 320 mg/m ²)	Impaired / likely nutrient enriched	See Flow Chart C
	Wide swings (> 6.5 mg/l)	Low (≤ 182 mg/m ²)		
		Moderate to high (> 182 mg/m ²)	Impaired / Nutrient enriched	

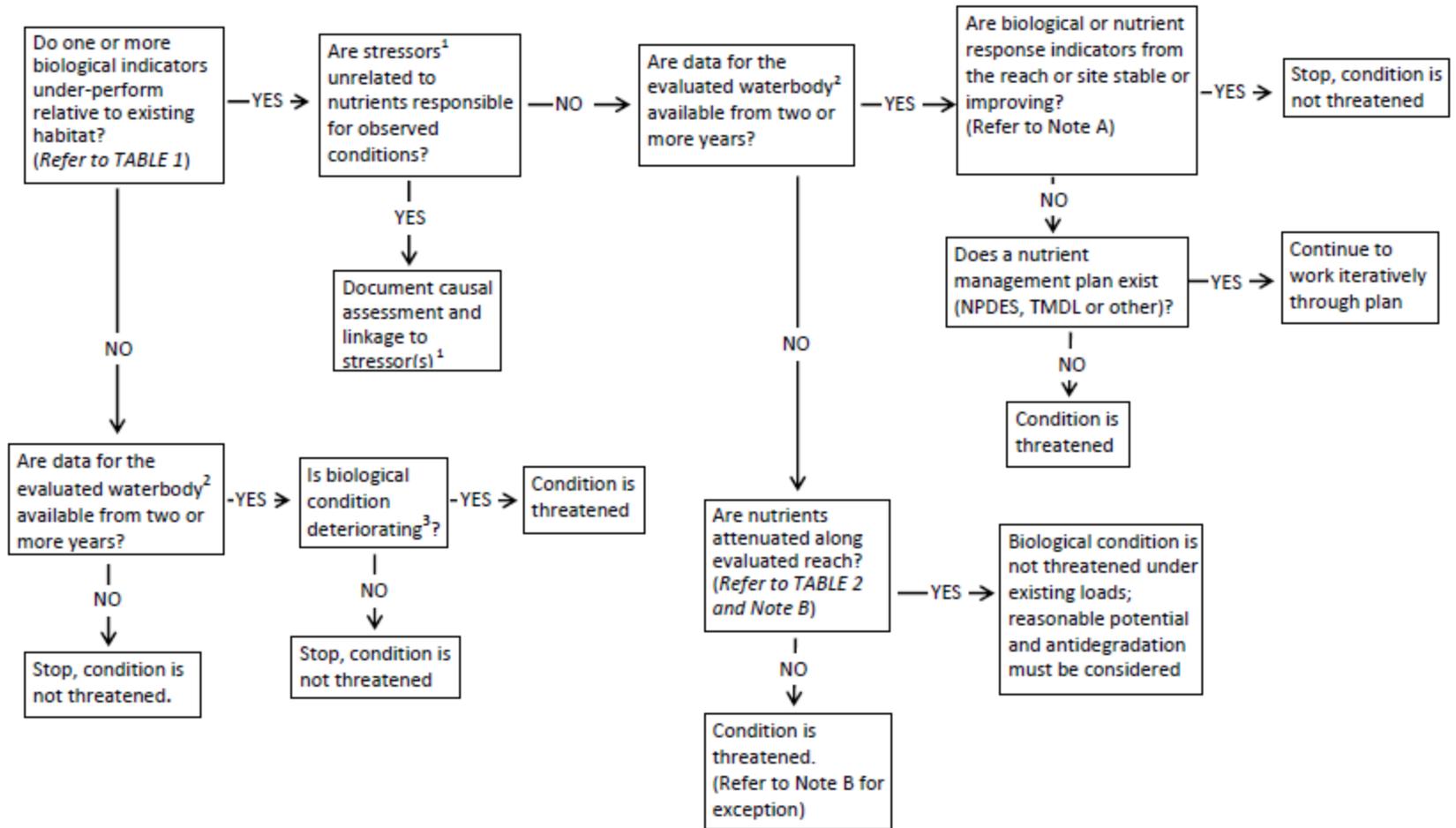
FLOW CHART A.

Decision matrix for determining when biologically attaining condition status is threatened

- For application when biological criteria are attaining
but
- One or both nutrient response indicators (DO swing or benthic chlorophyll) are elevated

FLOW CHART A.

Decision matrix for determining when biologically attaining condition status is threatened



FLOW CHART A.

Decision matrix for determining when biologically attaining condition status is threatened

Key Questions:

- Do one or more biological indicators under-perform relative to existing habitat? → *TABLE 1*
 - ↘ Are stressors unrelated to nutrients responsible for observed conditions?
 - ↘ Are data available from two or more years?
 - ↘ If *No*, are nutrients from a defined source attenuated along elevated reach? → *TABLE 2 and NOTE B*
 - ↘ Is the reach or site stable or improving? → *NOTE A*
 - ↘ If *No*, does a nutrient management plan exist?
- ↘ Are data available from two or more years?
 - ↘ Is biological condition deteriorating?

FLOW CHART B.

Decision matrix for determining when biological impairment is caused by stressors other than nutrients

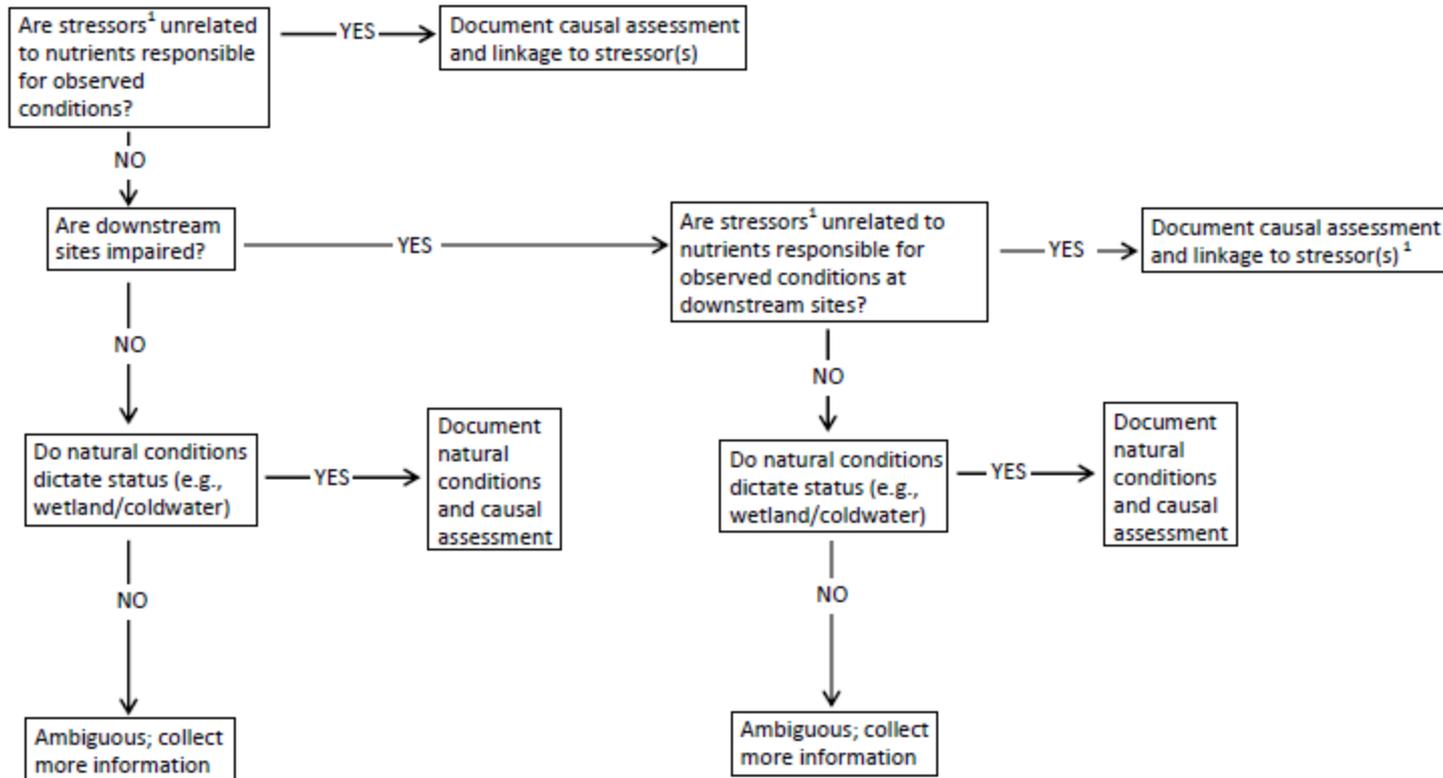
- For application when one or more biological criteria are non-attaining

but

- No nutrient response indicators (DO swing or benthic chlorophyll) are elevated

FLOW CHART B.

Decision tree for determining biological impairment caused by stressors other than nutrients



FLOW CHART B.

Decision matrix for determining when biological impairment is caused by stressors other than nutrients

Key Questions:

→ Are stressors unrelated to nutrients responsible for observed conditions?

↘ If *No*, are downstream sites impaired?

↘ Are stressors unrelated to nutrients responsible for observed conditions at downstream sites?

↘ If *No*, do natural conditions dictate status (e.g., wetland, coldwater)?



↘ If *No*, do natural conditions dictate status (e.g., wetland, coldwater)?

FLOW CHART C.

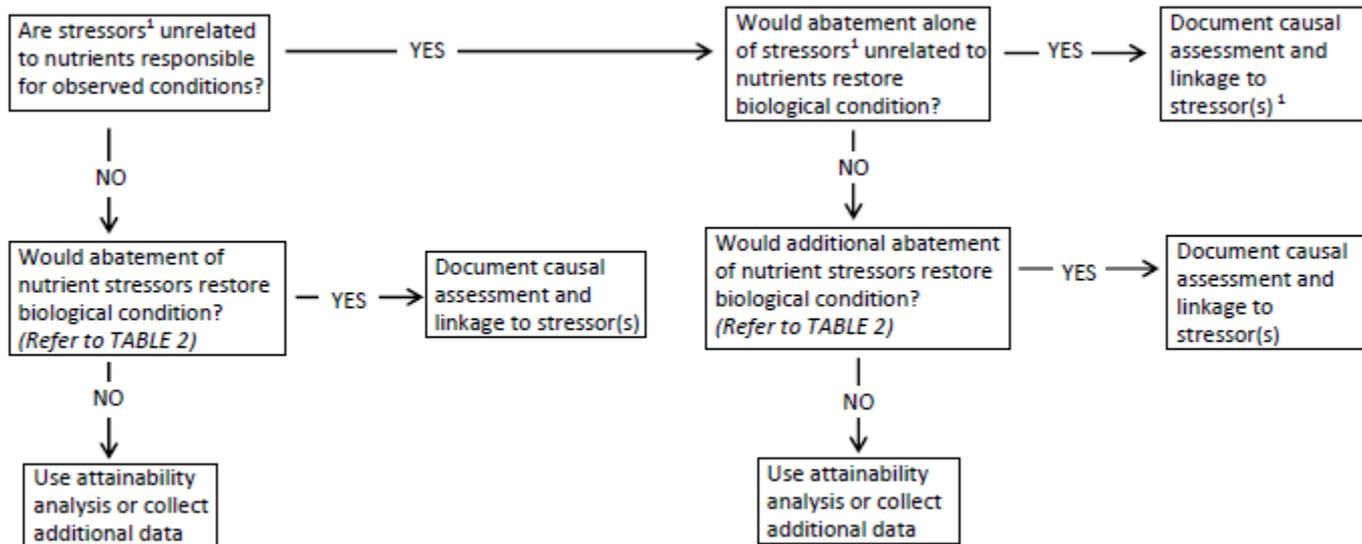
Decision matrix for confirming whether biological impairment is caused by nutrients

- For application when one or more biological criteria are non-attaining

and
- Either nutrient response indicator (DO swing or benthic chlorophyll) is elevated

FLOW CHART C.

Decision tree for confirming biological impairment caused by nutrients



FLOW CHART C.

Decision matrix for confirming whether biological impairment is caused by nutrients

Key Questions:

- Are stressors unrelated to nutrients responsible for observed conditions?
 - ↘ Would abatement alone of stressors unrelated to nutrients restore biological condition?
 - ↘ If *No*, would additional abatement of nutrient stressors restore biological condition? → *TABLE 2*
- ↘ If *No*, would abatement of nutrient stressors restore biological condition? → *TABLE 2*