

# HRL Uses & Goals

*A QUICK REVIEW*

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# Review of Designated Uses in HRL

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# HRL Classifications

YADKIN RIVER

Swearing  
Creek

Abbotts Creek

Town  
Creek

## Legend

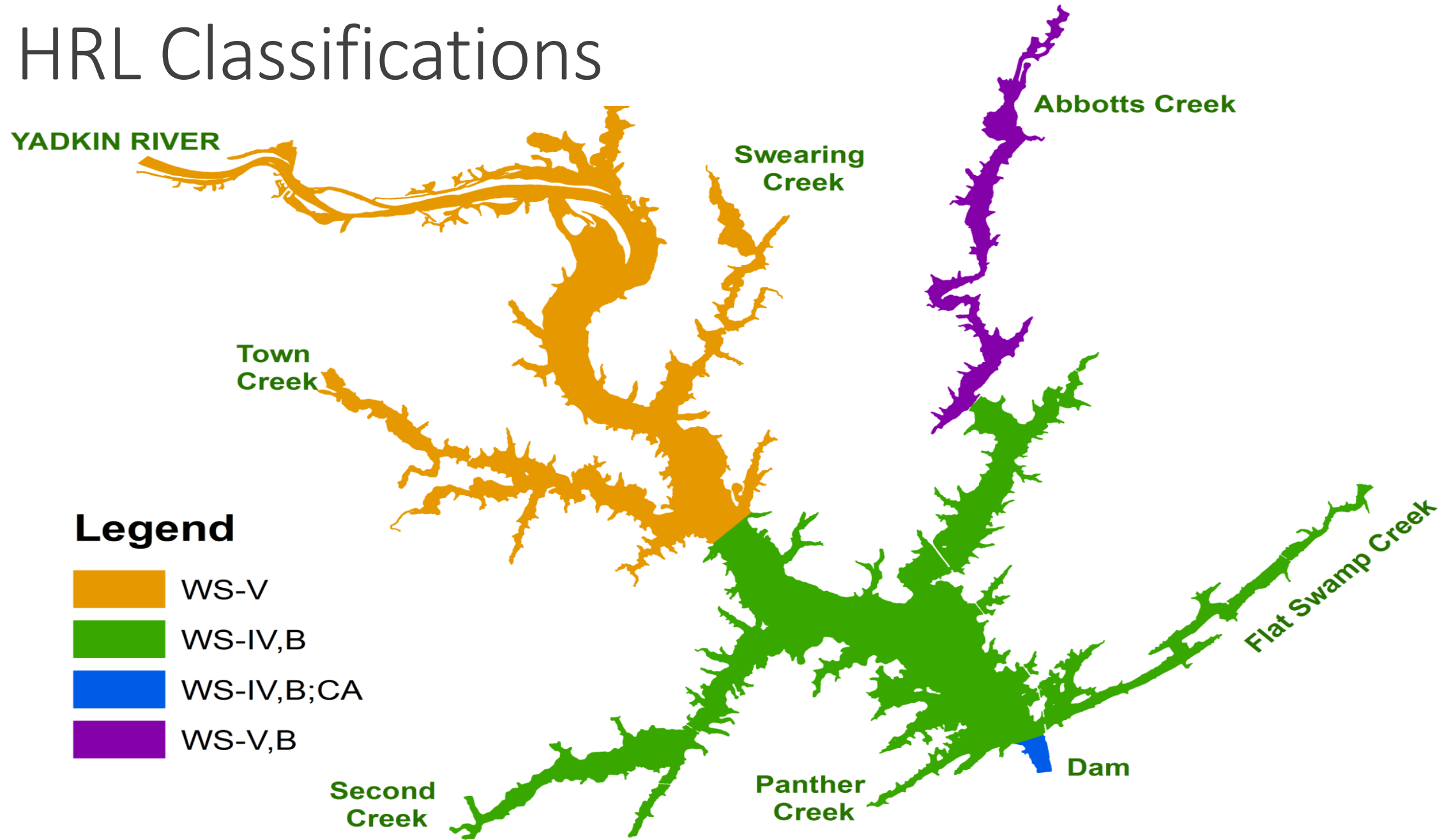
- WS-V
- WS-IV,B
- WS-IV,B;CA
- WS-V,B

Second  
Creek

Panther  
Creek

Dam

Flat Swamp Creek



# Aquatic Life Use (Class C)

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*Aquatic life propagation [and survival] and maintenance of biological integrity*

Biological integrity (defined in rule)

The ability of an aquatic ecosystem to support and maintain a balanced and indigenous community of organisms having species composition, diversity, population densities and functional organization similar to that of reference conditions.

# Class C Uses Continued

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## Wildlife:

*No definition in rule, but included in “Best Usage” of Waters language for Class C waters*

## Agriculture:

*Agricultural uses include the use of waters for stock watering, irrigation, and other farm purposes*

## Fishing:

*Fishing means the taking of fish by sport or commercial methods as well as the consumption of fish or shellfish or the propagation of fish and such other aquatic life as is necessary to provide a suitable environment for fish.*

## Secondary Recreation Use (Class C)

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*Wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner.*

## Primary Recreation Use (Class B)

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*Swimming, skin diving, water skiing, and similar uses involving human body contact with water where such activities take place in an organized manner or on a frequent basis.*

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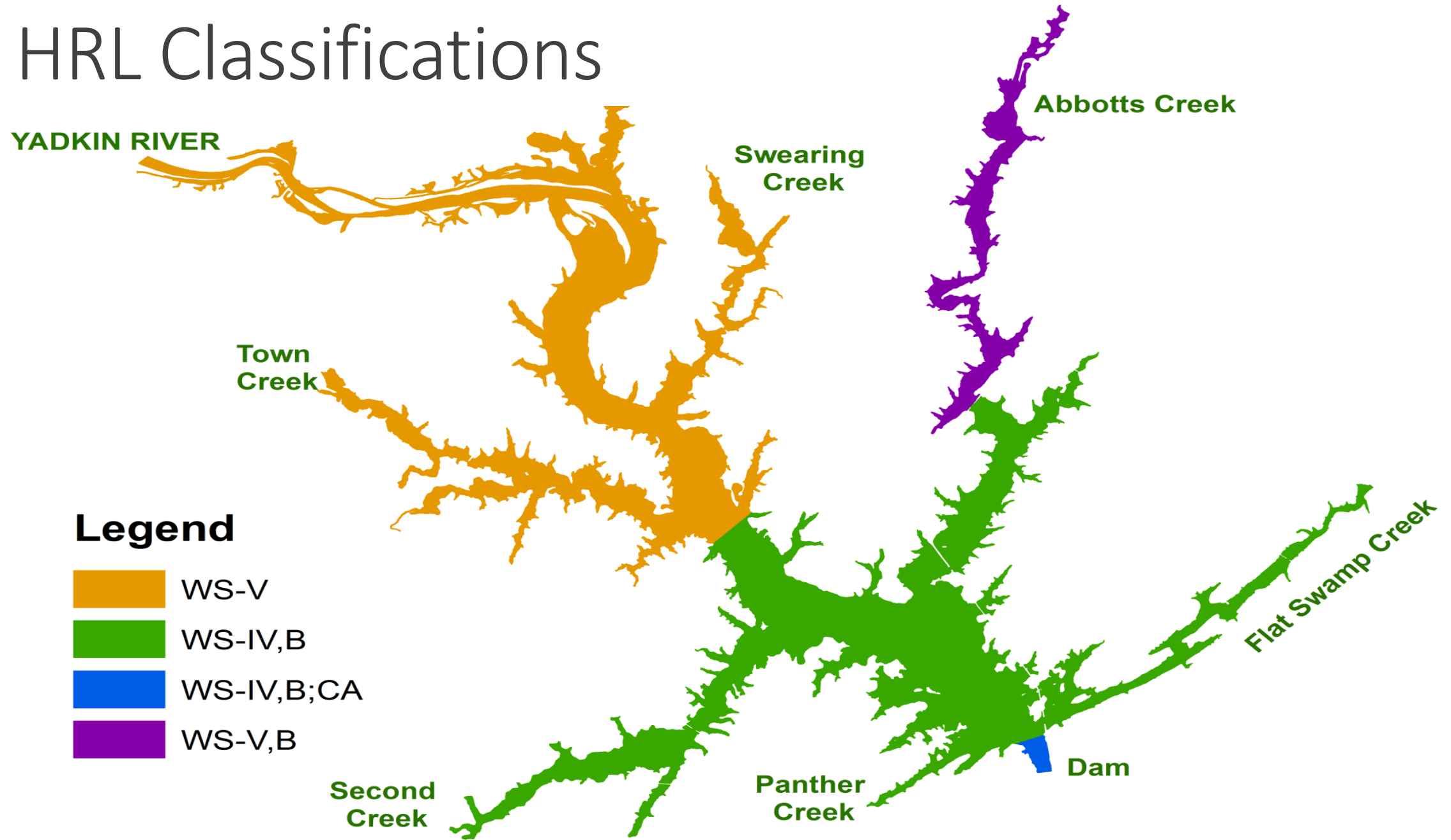
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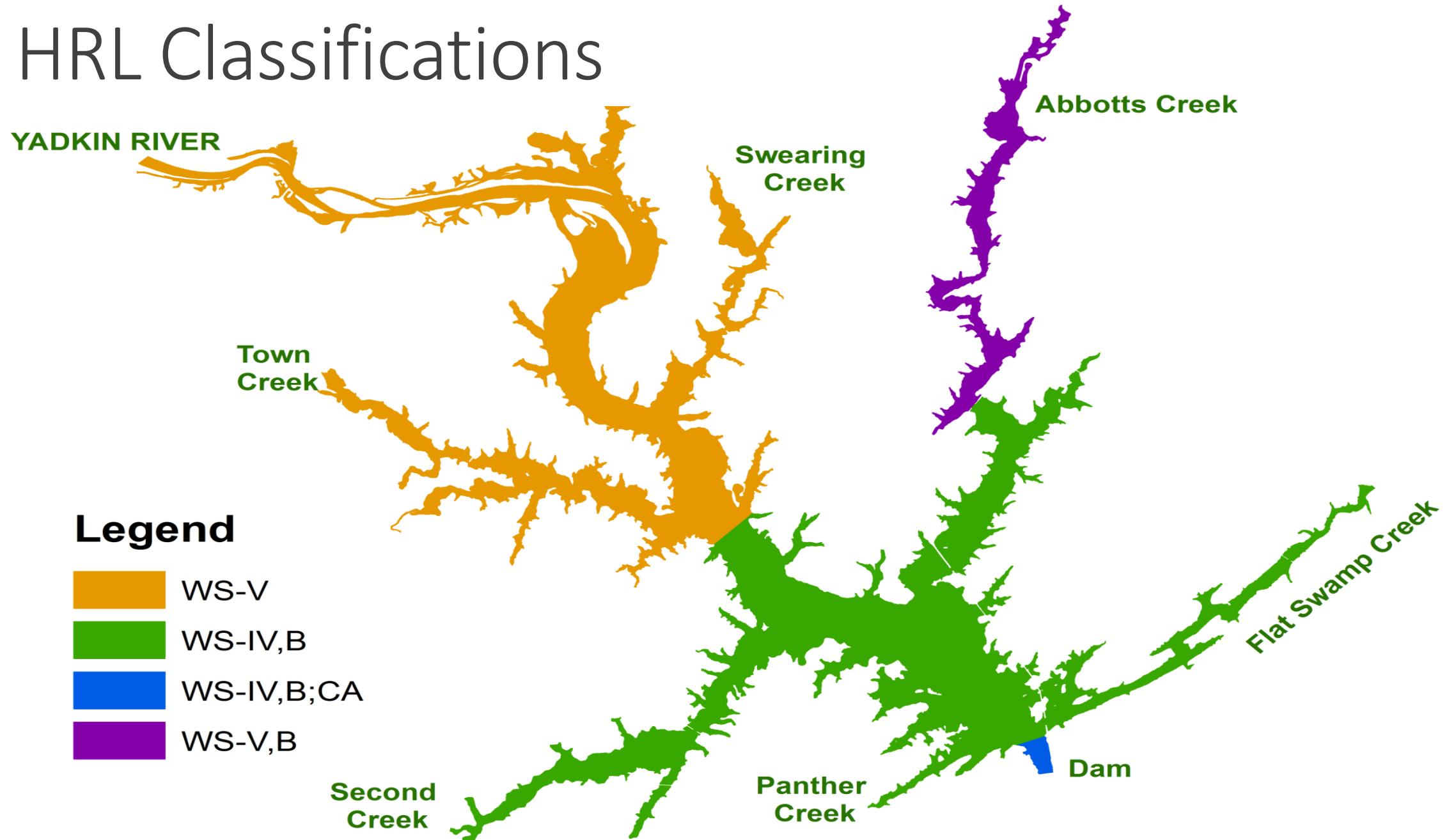


# Water Supply Use (Class WS)

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*Waters used as sources of water supply for drinking, culinary, or food processing purposes. These waters are also protected for Class C uses.*

# HRL Classifications



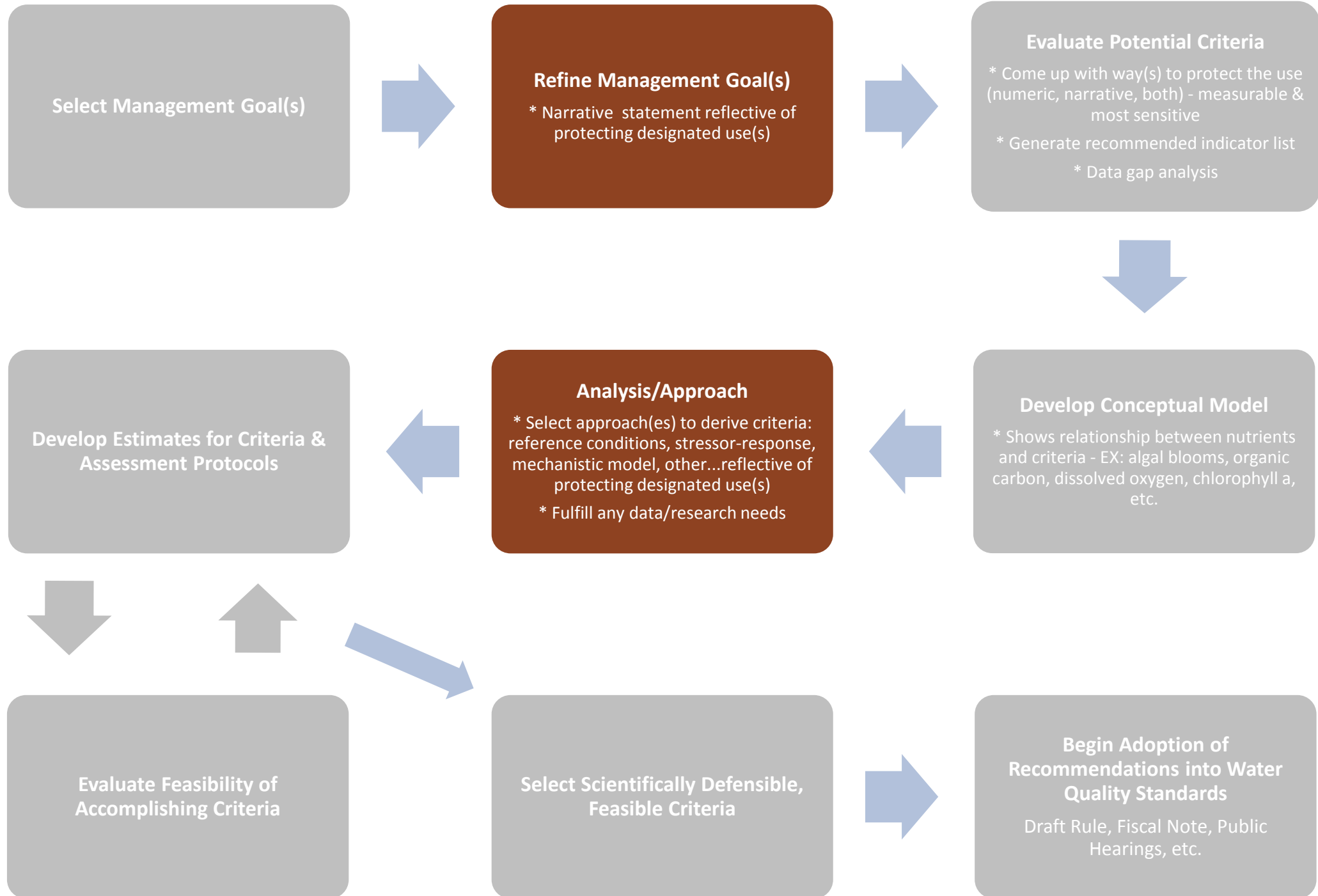
# Downstream Uses

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*Water quality standards and best usage of all downstream waters are protected per 15A NCAC 02B .0203*

# Management Goals

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# HRL Water Quality Goal As Established by the SAC (August 2015)

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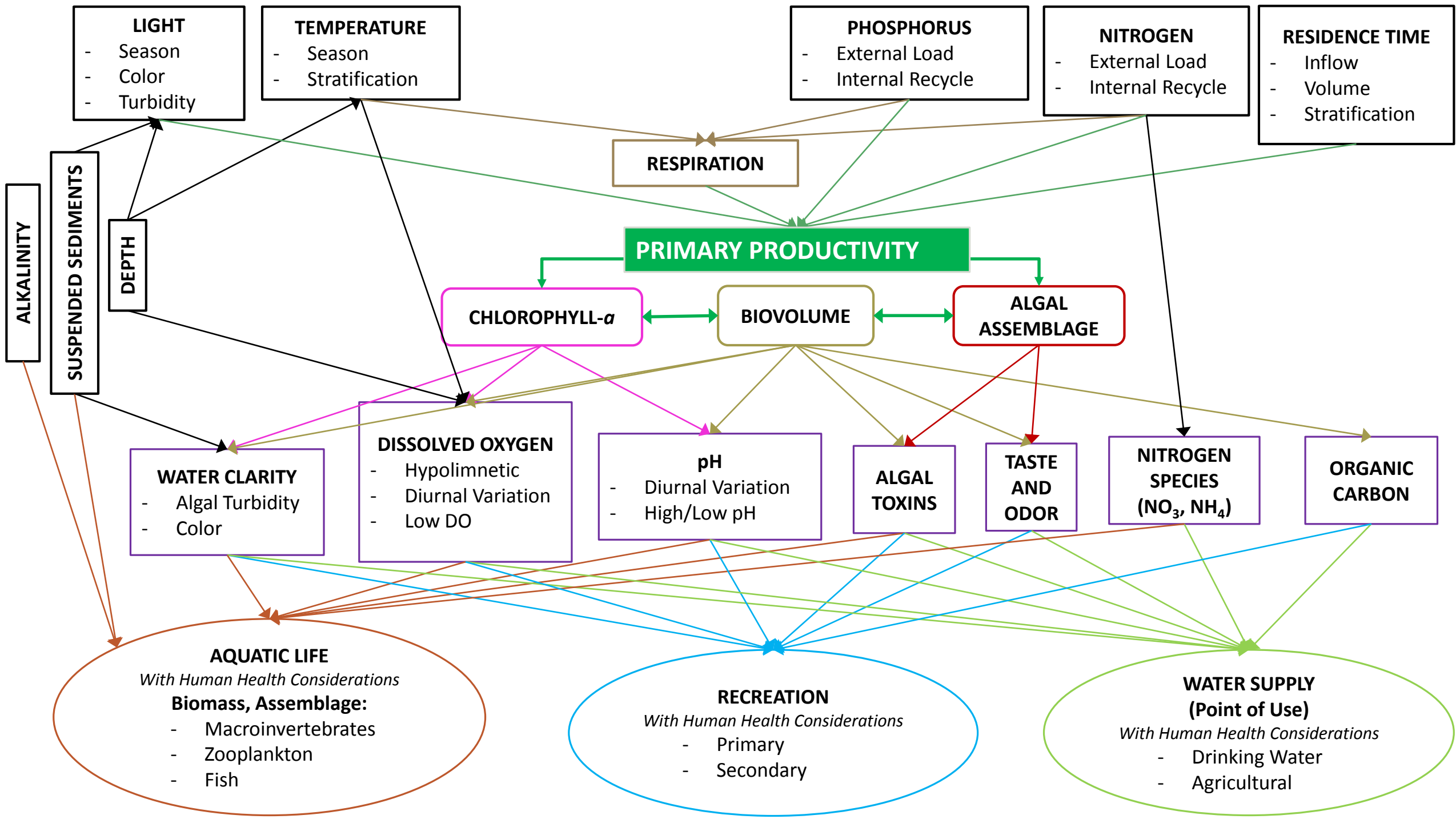
*To provide for the protection of designated uses in the HRL reservoir by defining and proposing the appropriate level of algal related indicators for each of the following:*

- *Aquatic Life*
- *Fishing*
- *Fish Consumption*
- *Wildlife*
- *Secondary Recreation (e.g. wading, boating)*
- *Agricultural Uses (e.g. irrigation)*
- *Water Supply*
- *Lower Lake: Primary Recreation – full human body contact (i.e. swimming, water skiing)*

# An example...

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- SAC currently discussing pH criteria to protect the aquatic life use based on the managed sports fish species in HRL.
- But how do you define aquatic life for HRL?
  - Just fish? Other organisms (mussels, zooplankton)?
  - Are the sports fish species the most sensitive?
  - Are they an appropriate indicator for other species?
- Clearly defining the goals for meeting the aquatic life use can help to focus discussions, avoid confusion, and make sure that all options are considered.





## Designated Use Management Goals & Criteria Development Approaches for HRL

Designated Use	SW Class	Definition (where defined in rule)	SAC Management Goal	Criteria Development Approaches by Use & Indicator								
				DO	pH	Turbidity	Chlorophyll-a	Cyanotoxins	Clarity	TN	TP	
Secondary Recreation	C	Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner.	<u>Example:</u> Prevent algal surface scums.	NA	NA	Maintain current standard						
Fishing	C	Fishing means the taking of fish by sport or commercial methods as well as the consumption of fish or shellfish or the propagation of fish and such other aquatic life as is necessary to provide a suitable environment for fish.		Maintain current standard	Literature review	Maintain current standard						
Fish Consumption	C	Fishing means the taking of fish by sport or commercial methods as well as the consumption of fish or shellfish or the propagation of fish and such other aquatic life as is necessary to provide a suitable environment for fish.	<u>Example:</u> Prevent taste & odor issues in fish tissue.	NA	NA	NA						
Wildlife	C	Best Usage of Waters: aquatic life propagation and maintenance of biological integrity (including fishing and fish), wildlife, secondary recreation, agriculture, and any other usage except for primary recreation or as a source of water supply for drinking, culinary, or food processing purposes;		NA	NA	NA						
Aquatic Life including propagation, survival and maintenance of biological integrity	C	Biological integrity means the ability of an aquatic ecosystem to support and maintain a balanced and indigenous community of organisms having species composition, diversity, population densities and functional organization similar to that of reference conditions.	<u>Example:</u> Ensure that water quality is such that all aquatic, and aquatic-dependent, life that can reasonably be considered to inhabit HRL are able to maintain self-sustaining populations both with and downstream of HRL.	Maintain current standard	Literature review	Maintain current standard						
Agriculture	C	Agricultural uses include the use of waters for stock watering, irrigation, and other farm purposes		NA	NA	NA						
Primary Recreation	B	Primary recreational activities include swimming, skin diving, water skiing, and similar uses involving human body contact with water where such activities take place in an organized manner or on a frequent basis.	<u>Example:</u> Prevent algal surface scums. Prevent potentially harmful algal blooms.	NA	NA	Maintain current standard						
Water Supply IV	WS-IV	Waters used as sources of water supply for drinking, culinary, or food processing purposes where a WS-I, II or III classification is not feasible. These waters are also protected for Class C uses. WS-IV waters are generally in moderately to highly developed watersheds or Protected Areas.		NA	NA	NA						
Water Supply V	WS-V	Waters protected as water supplies which are generally upstream and draining to Class WS-IV waters or waters used by industry to supply their employees with drinking water or as waters formerly used as water supply. These waters are also protected for Class C uses.		NA	NA	NA						

# Questions/Comments?

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