

Synthesizing Data from Multiple Test Sites



Integrating Test Site Data

- We assessing the length of San Diego Creek from Jeffery to Culver avenues
 - Multiple sites from different years
- There are multiple ways to synthesize these data points so that they can be evaluated
 - Mean
 - Population estimates
 - Frequency of all data

Synthesis - Mean

- Use the mean value of all test sites
- Conduct and score all lines of evidence on the mean value
 - Pluses
 - Fewer iterations
 - Minuses
 - Can lose sample-sample variance

Synthesis – Mean



Proximate Stressor	Component	Test Site	Value	Comparator Site	Value
Burial of Fauna	% Sands and Fines	SMCR8_180	23	SMC14211	65
		SMC01923	98		
		SMC13187	75		
		801RB8418	80		
		SMCR8_418-1	82		
		SMCR8_418-2	81		

Proximate Stressor	Component	Test Site	Value	Comparator Site	Value	Difference	Score
Burial of Fauna	% Sands and Fines	Average	73.2	SMC14211	65	8.2	0

Synthesis – Population

- Use the minimum, maximum, and median values of the test site samples
- Conduct and score all lines of evidence for the min, max, and median values
- Synthesize with the most frequent score among the three values
 - Pluses
 - Captures the variance among samples
 - Minuses
 - Additional computations
 - Synoptically collected data get split apart

Synthesis - Population



Proximate Stressor	Component	Test Site	Value	Comparator Site	Value
Burial of Fauna	% Sands and Fines	SMCR8_180	23	SMC14211	65
		SMC01923	98		
		SMC13187	75		
		801RB8418	80		
		SMCR8_418-1	82		
		SMCR8_418-2	81		

Proximate Stressor	Component	Test Site	Value	Comparator Site	Value	Difference	Score	SynthScore
Burial of Fauna	% Sands and Fines	Min	23	SMC14211	65	-42	---	+
		Median	80.5			15.5	+	
		Max	98			33	+	

Synthesis – Frequency

- Keep the data as discrete points
- Conduct and score all lines of evidence for each data point
- Synthesize with the most frequent score among the values
 - Pluses
 - Captures the variance among samples
 - Keeps synoptic data together
 - Minuses
 - Additional computations

Synthesis - Frequency



Proximate Stressor	Component	Test Site	Value	Comparator Site	Value
Burial of Fauna	% Sands and Fines	SMCR8_180	23	SMC14211	65
		SMC01923	98		
		SMC13187	75		
		801RB8418	80		
		SMCR8_418-1	82		
		SMCR8_418-2	81		

Proximate Stressor	Component	Test Site	Value	Comparator Site	Value	Difference	Score	SynthScore
Burial of Fauna	% Sands and Fines	SMCR8_180	23	SMC14211	65	-42	---	+
		SMC01923	98			33	+	
		SMC13187	75			10	0	
		801RB8418	80			15	+	
		SMCR8_418-1	82			17	+	
		SMCR8_418-2	81			16	+	

Integrating Test Site Data

- There are multiple ways to synthesize these data points so that they can be evaluated
 - Mean
 - Population estimates
 - Frequency of all data
- We need to make a choice of approach
 - I would suggest the frequency approach

