

```
CROSSTABS
  /TABLES=Temperatue Turbidity Length River_Depth Velocity Dischage Area Dissolved_Oxygen
    Total_Nitrate Total_Phosphate pH_Level Distance Conductivity Width BY Stream
  /FORMAT=AVALUE TABLES
  /STATISTICS=CHISQ CORR
  /CELLS=COUNT BPROP
  /COUNT ROUND CELL.
```

Crosstabs

Notes		
Output Created		30-JUN-2024 04:09:23
Comments		
Input	Data	D:\Hunter\Data Works\Godiva\Data Model.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	3
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.

## Notes

Syntax	CROSSTABS /TABLES=Temperature Turbidity Length River_Depth Velocity Discharge Area Dissolved_Oxygen Total_Nitrate Total_Phosphate pH_Level Distance Conductivity Width BY Stream /FORMAT=AVALUE TABLES /STATISTICS=CHISQ CORR /CELLS=COUNT BPROP...	
Resources	Processor Time	00:00:00.06
	Elapsed Time	00:00:00.06
	Dimensions Requested	2
	Cells Available	524245

## Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Temperature * Stream	3	100.0%	0	0.0%	3	100.0%
Turbidity * Stream	3	100.0%	0	0.0%	3	100.0%
Length * Stream	3	100.0%	0	0.0%	3	100.0%
River Depth * Stream	3	100.0%	0	0.0%	3	100.0%
Velocity * Stream	3	100.0%	0	0.0%	3	100.0%
Discharge * Stream	3	100.0%	0	0.0%	3	100.0%
Area * Stream	3	100.0%	0	0.0%	3	100.0%
Dissolved Oxygen * Stream	3	100.0%	0	0.0%	3	100.0%
Total Nitrates * Stream	3	100.0%	0	0.0%	3	100.0%
Total Phosphates * Stream	3	100.0%	0	0.0%	3	100.0%
pH Level * Stream	3	100.0%	0	0.0%	3	100.0%
Distance * Stream	3	100.0%	0	0.0%	3	100.0%
Conductivity * Stream	3	100.0%	0	0.0%	3	100.0%
Width * Stream	3	100.0%	0	0.0%	3	100.0%

## Temperature \* Stream

### Crosstab

Count

		Stream			Total
		UPSTREAM	MIDSTREAM	DOWNSTREAM	
Temperature	29.067	0a	1a	0a	1
	31.267	0a	0a	1a	1
	31.700	1a	0a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	.047	1	.828
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-.153	.399	-.155	.902 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-.500	.612	-.577	.667 <sup>c</sup>
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

## Turbidity \* Stream

### Crosstab

Count

		Stream			
		UPSTREAM	MIDSTREAM	DOWNSTREAM	Total
Turbidity	12.050	0a	0a	1a	1
	34.150	0a	1a	0a	1
	55.950	1a	0a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	2.000	1	.157
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-1.000	.000	-253.457	.003 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-1.000	.000 <sup>c</sup>		
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Length \* Stream

### Crosstab

Count

		Stream			
		UPSTREAM	MIDSTREAM	DOWNSTREAM	Total
Length	5.470	0a	0a	1a	1
	43.590	0a	1a	0a	1
	55.600	1a	0a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	1.834	1	.176
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-.958	.034	-3.325	.186 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-1.000	.000 <sup>c</sup>		
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### River Depth \* Stream

### Crosstab

Count

		Stream			
		UPSTREAM	MIDSTREAM	DOWNSTREAM	Total
River Depth	.627	0a	1a	0a	1
	2.700	1a	0a	0a	1
	3.910	0a	0a	1a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	.266	1	.606
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	.364	.354	.391	.763 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	.500	.612	.577	.667 <sup>c</sup>
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Velocity \* Stream

### Crosstab

Count

		Stream			Total
		UPSTREAM	MIDSTREAM	DOWNSTREAM	
Velocity	.0400	0a	0a	1a	1
	.3630	0a	1a	0a	1
	.4312	1a	0a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	1.752	1	.186
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-.936	.051	-2.659	.229 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-1.000	.000 <sup>c</sup>		
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Discharge \* Stream

### Crosstab

Count

		Stream			Total
		UPSTREAM	MIDSTREAM	DOWNSTREAM	
Discharge	1.060	0a	0a	1a	1
	85.129	0a	1a	0a	1
	151.549	1a	0a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	1.991	1	.158
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-.998	.002	-14.769	.043 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-1.000	.000 <sup>c</sup>		
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Area \* Stream**



### Crosstab

Count

		Stream			
		UPSTREAM	MIDSTREAM	DOWNSTREAM	Total
Area	27.0800	0a	0a	1a	1
	234.5140	0a	1a	0a	1
	351.9480	1a	0a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	1.950	1	.163
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-.987	.010	-6.252	.101 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-1.000	.000 <sup>c</sup>		
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Dissolved Oxygen \* Stream

### Crosstab

Count

		Stream			
		UPSTREAM	MIDSTREAM	DOWNSTREAM	Total
Dissolved Oxygen	26.5	0a	0a	1a	1
	95.7	0a	1a	0a	1
	99.3	1a	0a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	1.574	1	.210
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-.887	.087	-1.922	.305 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-1.000	.000 <sup>c</sup>		
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Total Nitrates \* Stream

### Crosstab

Count

		Stream			Total
		UPSTREAM	MIDSTREAM	DOWNSTREAM	
Total Nitrates	.9	0a	0a	1a	1
	1.0	1a	0a	0a	1
	1.1	0a	1a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	.500	1	.480
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-.500	.306	-.577	.667 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-.500	.612	-.577	.667 <sup>c</sup>
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Total Phosphates \* Stream

### Crosstab

Count

		Stream			Total
		UPSTREAM	MIDSTREAM	DOWNSTREAM	
Total Phosphates	.85	0a	1a	0a	1
	2.05	1a	0a	0a	1
	2.50	0a	0a	1a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	.139	1	.709
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	.264	.380	.273	.830 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	.500	.612	.577	.667 <sup>c</sup>
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### pH Level \* Stream

### Crosstab

Count

		Stream			
		UPSTREAM	MIDSTREAM	DOWNSTREAM	Total
pH Level	7.70	0a	1a	0a	1
	7.80	1a	0a	0a	1
	7.94	0a	0a	1a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	.674	1	.412
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	.581	.271	.713	.606 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	.500	.612	.577	.667 <sup>c</sup>
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Distance \* Stream

### Crosstab

Count

		Stream			
		UPSTREAM	MIDSTREAM	DOWNSTREAM	Total
Distance	1.460	0a	0a	1a	1
	20.813	1a	0a	0a	1
	46.100	0a	1a	0a	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	.374	1	.541
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	-.432	.332	-.479	.715 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-.500	.612	-.577	.667 <sup>c</sup>
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Conductivity \* Stream

### Crosstab

Count

		Stream			Total
		UPSTREAM	MIDSTREAM	DOWNSTREAM	
Conductivity	172.30	1 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	1
	193.50	0 <sup>a</sup>	1 <sup>a</sup>	0 <sup>a</sup>	1
	248.00	0 <sup>a</sup>	0 <sup>a</sup>	1 <sup>a</sup>	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	1.879	1	.170
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	.969	.025	3.937	.158 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	1.000	.000 <sup>c</sup>		
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Width \* Stream

### Crosstab

Count

		Stream			
		UPSTREAM	MIDSTREAM	DOWNSTREAM	Total
Width	.500	1 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	1
	4.950	0 <sup>a</sup>	0 <sup>a</sup>	1 <sup>a</sup>	1
	5.380	0 <sup>a</sup>	1 <sup>a</sup>	0 <sup>a</sup>	1
Total		1	1	1	3

Each subscript letter denotes a subset of Stream categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.000 <sup>a</sup>	4	.199
Likelihood Ratio	6.592	4	.159
Linear-by-Linear Association	1.356	1	.244
N of Valid Cases	3		

a. 9 cells (100.0%) have expected count less than 5. The minimum expected count is .33.

### Symmetric Measures

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Interval by Interval	Pearson's R	.823	.131	1.452	.384 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	.500	.612	.577	.667 <sup>c</sup>
N of Valid Cases		3			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.