

Colorado Department of Public Health and Environment

Water Quality Control Division

Benthic Macroinvertebrate Bioassessment Report

StationID:	Blue 1	Sample Date:	10/25/2021		
Waterbody Name:	Blue River				
Location:	at Blue 1				
Latitude:	39.74336	Reference Status:	Not Reference or Degraded		
Longitude:	-106.13196	BenSampID:	1	RepNum:	1
Site Classification:	2	Summer Temp:	13.26	JulianDay:	297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 63.5

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	16	65.3
Non-Insect, percent individuals:	3.9	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	48.9	61.6
Coleoptera, percent individuals:	1.9	0
Intolerant, percent taxa *:	57.1	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	12	60
Predator + Shredder taxa:	13	0
Total taxa:	28	66.7
Intolerant taxa:	16	76.2
Increasers, Mountain Trn, percent individuals:	34.7	48
Predator taxa:	8	61.5
Scraper, percent individuals:	30.2	68.4
Non-Insect, percent taxa:	14.3	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	311	LARGE

* = score (not value) adjusted by Summer temperature or Julian day

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Water Quality Control Division

Benthic Macroinvertebrate Bioassessment Report

StationID: UBR	Sample Date: 10/25/2021
Waterbody Name: Blue River	
Location: upper Blue River	
Latitude: 39.56651	Reference Status: Not Reference or Degraded
Longitude: -106.04884	BenSampID: 10 RepNum: 1
Site Classification: 2	Summer Temp: 11.55 JulianDay: 297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 54.6

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	11	44.9
Non-Insect, percent individuals:	14.1	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	51.9	65.4
Coleoptera, percent individuals:	11.5	0
Intolerant, percent taxa *:	57.9	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	9	45
Predator + Shredder taxa:	6	0
Total taxa:	19	45.2
Intolerant taxa:	11	52.4
Increasers, Mountain Trn, percent individuals:	50	69.2
Predator taxa:	5	38.5
Scraper, percent individuals:	33.7	76.3
Non-Insect, percent taxa:	15.8	0
Sprawler taxa *:	2	0
Increasers, plains, percent individuals:	0	0
Total individuals:	270	ok

* = score (not value) adjusted by Summer temperature or Julian day

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Benthic Macroinvertebrate Bioassessment Report

StationID:	Blue 2	Sample Date:	10/25/2021		
Waterbody Name:	Blue River				
Location:	at Blue 2				
Latitude:	39.72713	Reference Status:	Not Reference or Degraded		
Longitude:	-106.1321	BenSampID:	2	RepNum:	1
Site Classification:	2	Summer Temp:	12.4	JulianDay:	297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 63.1

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	15	61.2
Non-Insect, percent individuals:	2.7	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	41.8	52.7
Coleoptera, percent individuals:	5.5	0
Intolerant, percent taxa *:	57.1	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	14	70
Predator + Shredder taxa:	11	0
Total taxa:	28	66.7
Intolerant taxa:	16	76.2
Increasers, Mountain Trn, percent individuals:	35.3	48.8
Predator taxa:	9	69.2
Scraper, percent individuals:	26.4	59.7
Non-Insect, percent taxa:	10.7	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	292	ok

* = score (not value) adjusted by Summer temperature or Julian day

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Benthic Macroinvertebrate Bioassessment Report

StationID:	Blue 3	Sample Date:	10/25/2021		
Waterbody Name:	Blue River				
Location:	at Blue 3				
Latitude:	39.65595	Reference Status:	Not Reference or Degraded		
Longitude:	-106.07685	BenSampID:	3	RepNum:	1
Site Classification:	2	Summer Temp:	10.23	JulianDay:	297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 35.5

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	10	40.8
Non-Insect, percent individuals:	5.5	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	31.9	40.2
Coleoptera, percent individuals:	8.8	0
Intolerant, percent taxa *:	55	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	10	50
Predator + Shredder taxa:	5	0
Total taxa:	20	47.6
Intolerant taxa:	11	52.4
Increasers, Mountain Trn, percent individuals:	12.8	17.7
Predator taxa:	4	30.8
Scraper, percent individuals:	1.8	4.1
Non-Insect, percent taxa:	10	0
Sprawler taxa *:	2	0
Increasers, plains, percent individuals:	0	0
Total individuals:	273	ok

* = score (not value) adjusted by Summer temperature or Julian day

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Benthic Macroinvertebrate Bioassessment Report

StationID:	Blue 5	Sample Date:	10/25/2021		
Waterbody Name:	Blue River				
Location:	below Dillon res				
Latitude:	39.62601	Reference Status:	Not Reference or Degraded		
Longitude:	-106.06658	BenSampID:	4	RepNum:	1
Site Classification:	2	Summer Temp:	11.4	JulianDay:	297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 15.8

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	4	16.3
Non-Insect, percent individuals:	9.6	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	0.7	0.8
Coleoptera, percent individuals:	0.3	0
Intolerant, percent taxa *:	31.2	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	4	20
Predator + Shredder taxa:	3	0
Total taxa:	16	38.1
Intolerant taxa:	5	23.8
Increasers, Mountain Trn, percent individuals:	0.7	0.9
Predator taxa:	3	23.1
Scraper, percent individuals:	1.3	3
Non-Insect, percent taxa:	25	0
Sprawler taxa *:	3	0
Increasers, plains, percent individuals:	0	0
Total individuals:	302	LARGE

* = score (not value) adjusted by Summer temperature or Julian day

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Benthic Macroinvertebrate Bioassessment Report

StationID:	BRaFG	Sample Date:	10/25/2021		
Waterbody Name:	Blue River				
Location:	above French Gulch				
Latitude:	39.49379	Reference Status:	Not Reference or Degraded		
Longitude:	-106.04548	BenSampID:	5	RepNum:	1
Site Classification:	2	Summer Temp:	11.53	JulianDay:	297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 36.3

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	9	36.7
Non-Insect, percent individuals:	23.4	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	37.3	47.1
Coleoptera, percent individuals:	6.7	0
Intolerant, percent taxa *:	37.5	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	7	35
Predator + Shredder taxa:	7	0
Total taxa:	24	57.1
Intolerant taxa:	9	42.9
Increasers, Mountain Trn, percent individuals:	14.5	20
Predator taxa:	5	38.5
Scraper, percent individuals:	5.8	13.2
Non-Insect, percent taxa:	25	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	359	LARGE

* = score (not value) adjusted by Summer temperature or Julian day

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Benthic Macroinvertebrate Bioassessment Report

StationID:	BRC	Sample Date:	10/25/2021		
Waterbody Name:	Blue River				
Location:	below Brush Cr				
Latitude:	39.8217	Reference Status:	Not Reference or Degraded		
Longitude:	-106.20584	BenSampID:	6	RepNum:	1
Site Classification:	1	Summer Temp:	12.52	JulianDay:	297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 73.7

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	17	70.8
Non-Insect, percent individuals:	0.7	98.5
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	55.1	75.6
Coleoptera, percent individuals:	4.7	12.4
Intolerant, percent taxa *:	57.1	93.7
Increasers, Mid-Elevation, percent individuals:	0	100
Clinger taxa *:	17	81.7
Predator + Shredder taxa:	8	57.1
Total taxa:	28	0
Intolerant taxa:	16	0
Increasers, Mountain Trn, percent individuals:	17.9	0
Predator taxa:	7	0
Scraper, percent individuals:	29.6	0
Non-Insect, percent taxa:	3.6	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	274	ok

* = score (not value) adjusted by Summer temperature or Julian day

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Benthic Macroinvertebrate Bioassessment Report

StationID: D 5	Sample Date: 10/25/2021
Waterbody Name: Blue River	
Location: at D 5	
Latitude: 39.70545	Reference Status: Not Reference or Degraded
Longitude: -106.11062	BenSampID: 7 RepNum: 1
Site Classification: 2	Summer Temp: 11.7 JulianDay: 297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 41.0

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	11	44.9
Non-Insect, percent individuals:	7	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	30.4	38.3
Coleoptera, percent individuals:	10.6	0
Intolerant, percent taxa *:	56.5	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	9	45
Predator + Shredder taxa:	7	0
Total taxa:	23	54.8
Intolerant taxa:	13	61.9
Increasers, Mountain Trn, percent individuals:	20.7	28.6
Predator taxa:	4	30.8
Scraper, percent individuals:	10.3	23.4
Non-Insect, percent taxa:	13	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	329	LARGE

* = score (not value) adjusted by Summer temperature or Julian day

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Benthic Macroinvertebrate Bioassessment Report

StationID: DRD	Sample Date: 10/25/2021
Waterbody Name: Blue River	
Location: near DRD office	
Latitude: 39.63651	Reference Status: Not Reference or Degraded
Longitude: -106.07419	BenSampID: 8 RepNum: 1
Site Classification: 2	Summer Temp: 10.37 JulianDay: 297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 16.8

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	5	20.4
Non-Insect, percent individuals:	11.3	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	3.8	4.7
Coleoptera, percent individuals:	1.9	0
Intolerant, percent taxa *:	37.5	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	3	15
Predator + Shredder taxa:	3	0
Total taxa:	16	38.1
Intolerant taxa:	6	28.6
Increasers, Mountain Trn, percent individuals:	4.7	6.5
Predator taxa:	2	15.4
Scraper, percent individuals:	2.3	5.3
Non-Insect, percent taxa:	12.5	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	213	ok

* = score (not value) adjusted by Summer temperature or Julian day

Colorado Department of Public Health and Environment

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Benthic Macroinvertebrate Bioassessment Report

StationID: SCR	Sample Date: 10/25/2021
Waterbody Name: Blue River	
Location: at Slate Creek Ranch	
Latitude: 39.78217	Reference Status: Not Reference or Degraded
Longitude: -106.16035	BenSampID: 9 RepNum: 1
Site Classification: 2	Summer Temp: 12.03 JulianDay: 297

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 72.8

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	16	65.3
Non-Insect, percent individuals:	4.3	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	72.7	91.6
Coleoptera, percent individuals:	2.7	0
Intolerant, percent taxa *:	52.9	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	15	75
Predator + Shredder taxa:	14	0
Total taxa:	34	81
Intolerant taxa:	18	85.7
Increasers, Mountain Trn, percent individuals:	24.7	34.1
Predator taxa:	11	84.6
Scraper, percent individuals:	28.7	64.9
Non-Insect, percent taxa:	14.7	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	300	ok

* = score (not value) adjusted by Summer temperature or Julian day