

Colorado Department of Public Health and Environment

Water Quality Control Division

Benthic Macroinvertebrate Bioassessment Report

StationID:	Blue 1	Sample Date:	4/24/2021		
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:	113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 66.2

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	12	86.2
Non-Insect, percent individuals:	0.9	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	52.6	66.3
Coleoptera, percent individuals:	0.6	0
Intolerant, percent taxa *:	57.1	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	10	50
Predator + Shredder taxa:	8	0
Total taxa:	21	50
Intolerant taxa:	12	57.1
Increasers, Mountain Trn, percent individuals:	47.7	66
Predator taxa:	7	53.8
Scraper, percent individuals:	45.2	100
Non-Insect, percent taxa:	9.5	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	325	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:	4/24/2021		
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:	113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 60.8

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	12	86.2
Non-Insect, percent individuals:	4.4	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	55.8	70.4
Coleoptera, percent individuals:	2.2	0
Intolerant, percent taxa *:	50	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	10	50
Predator + Shredder taxa:	7	0
Total taxa:	24	57.1
Intolerant taxa:	12	57.1
Increasers, Mountain Trn, percent individuals:	39.5	54.6
Predator taxa:	5	38.5
Scraper, percent individuals:	32	72.3
Non-Insect, percent taxa:	12.5	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	319	LARGE

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

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Benthic Macroinvertebrate Bioassessment Report

StationID: Blue 2	Sample Date: 4/24/2021
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: 113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 59.7

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	12	86.2
Non-Insect, percent individuals:	2.4	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	46.2	58.3
Coleoptera, percent individuals:	0.3	0
Intolerant, percent taxa *:	48.1	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	12	60
Predator + Shredder taxa:	10	0
Total taxa:	27	64.3
Intolerant taxa:	13	61.9
Increasers, Mountain Trn, percent individuals:	24.6	34.1
Predator taxa:	9	69.2
Scraper, percent individuals:	19.2	43.5
Non-Insect, percent taxa:	11.1	0
Sprawler taxa *:	6	0
Increasers, plains, percent individuals:	0	0
Total individuals:	333	LARGE

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

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Benthic Macroinvertebrate Bioassessment Report

StationID:	Blue 3	Sample Date:	4/24/2021		
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:	113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 35.1

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	9	64.7
Non-Insect, percent individuals:	1.2	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	18.9	23.8
Coleoptera, percent individuals:	0.9	0
Intolerant, percent taxa *:	50	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	7	35
Predator + Shredder taxa:	5	0
Total taxa:	18	42.9
Intolerant taxa:	9	42.9
Increasers, Mountain Trn, percent individuals:	17.6	24.4
Predator taxa:	3	23.1
Scraper, percent individuals:	10.5	23.8
Non-Insect, percent taxa:	16.7	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	323	LARGE

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

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Benthic Macroinvertebrate Bioassessment Report

StationID: Blue 5	Sample Date: 4/24/2021
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: 113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 14.9

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	3	21.6
Non-Insect, percent individuals:	5.2	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	2.1	2.6
Coleoptera, percent individuals:	0	0
Intolerant, percent taxa *:	33.3	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	1	5
Predator + Shredder taxa:	4	0
Total taxa:	12	28.6
Intolerant taxa:	4	19
Increasers, Mountain Trn, percent individuals:	1.7	2.4
Predator taxa:	4	30.8
Scraper, percent individuals:	4.2	9.4
Non-Insect, percent taxa:	33.3	0
Sprawler taxa *:	3	0
Increasers, plains, percent individuals:	0	0
Total individuals:	288	ok

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Benthic Macroinvertebrate Bioassessment Report

StationID:	BRaFG	Sample Date:	4/24/2021		
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:	113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 32.7

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	8	57.5
Non-Insect, percent individuals:	44.8	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	36.5	46
Coleoptera, percent individuals:	1.7	0
Intolerant, percent taxa *:	44.4	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	6	30
Predator + Shredder taxa:	7	0
Total taxa:	18	42.9
Intolerant taxa:	8	38.1
Increasers, Mountain Trn, percent individuals:	4.6	6.4
Predator taxa:	5	38.5
Scraper, percent individuals:	0.9	2
Non-Insect, percent taxa:	22.2	0
Sprawler taxa *:	4	0
Increasers, plains, percent individuals:	0	0
Total individuals:	348	LARGE

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

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Benthic Macroinvertebrate Bioassessment Report

StationID: BRC	Sample Date: 4/24/2021
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: 113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 72.3

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	15	62.5
Non-Insect, percent individuals:	6.1	87.3
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	68.7	94.3
Coleoptera, percent individuals:	5.2	13.4
Intolerant, percent taxa *:	38.2	62.7
Increasers, Mid-Elevation, percent individuals:	2.3	90.6
Clinger taxa *:	17	81.7
Predator + Shredder taxa:	12	85.7
Total taxa:	34	0
Intolerant taxa:	13	0
Increasers, Mountain Trn, percent individuals:	52.3	0
Predator taxa:	10	0
Scraper, percent individuals:	34.5	0
Non-Insect, percent taxa:	8.8	0
Sprawler taxa *:	7	0
Increasers, plains, percent individuals:	0	0
Total individuals:	310	LARGE

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

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Benthic Macroinvertebrate Bioassessment Report

StationID: D 5	Sample Date: 4/24/2021
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: 113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 46.1

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	11	79
Non-Insect, percent individuals:	0.6	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	34	42.8
Coleoptera, percent individuals:	0.6	0
Intolerant, percent taxa *:	54.5	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	9	45
Predator + Shredder taxa:	7	0
Total taxa:	22	52.4
Intolerant taxa:	12	57.1
Increasers, Mountain Trn, percent individuals:	19	26.3
Predator taxa:	5	38.5
Scraper, percent individuals:	12.1	27.5
Non-Insect, percent taxa:	9.1	0
Sprawler taxa *:	5	0
Increasers, plains, percent individuals:	0	0
Total individuals:	321	LARGE

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

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Benthic Macroinvertebrate Bioassessment Report

StationID:	DRD	Sample Date:	4/24/2021		
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:	113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 20.4

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	4	28.7
Non-Insect, percent individuals:	1.3	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	7	8.8
Coleoptera, percent individuals:	0	0
Intolerant, percent taxa *:	35.7	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	2	10
Predator + Shredder taxa:	5	0
Total taxa:	14	33.3
Intolerant taxa:	5	23.8
Increasers, Mountain Trn, percent individuals:	7	9.7
Predator taxa:	5	38.5
Scraper, percent individuals:	4.4	10.1
Non-Insect, percent taxa:	21.4	0
Sprawler taxa *:	5	0
Increasers, plains, percent individuals:	0	0
Total individuals:	315	LARGE

* = 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: 4/24/2021
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: 113

Predictive Model Results

O/E (p>half):

Model Test:

Multimetric Index Model Results

MMI: 70.2

Metric Name	Metric Value	Metric Score
Ephemeroptera + Plecoptera + Trichoptera taxa *:	15	100
Non-Insect, percent individuals:	2.5	0
Ephemeroptera + Plecoptera + Trichoptera, no Baetidae, percent individuals:	62.2	78.5
Coleoptera, percent individuals:	1.2	0
Intolerant, percent taxa *:	48.4	0
Increasers, Mid-Elevation, percent individuals:	0	0
Clinger taxa *:	15	75
Predator + Shredder taxa:	10	0
Total taxa:	31	73.8
Intolerant taxa:	15	71.4
Increasers, Mountain Trn, percent individuals:	32.8	45.4
Predator taxa:	7	53.8
Scraper, percent individuals:	28.2	63.7
Non-Insect, percent taxa:	6.5	0
Sprawler taxa *:	7	0
Increasers, plains, percent individuals:	0	0
Total individuals:	323	LARGE

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