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General

Spring Name_____ Springs Online ID#_____ [1]Spring Type Primary _____Second_____

Country____ State_____ County_____ [2]Sensitivity _____

[3]Land Unit_____ Land Unit Detail_____

Quad_____ HUC_____

Site Description

Access Directions

Georef

[4]Georef Source_____ Device_____ Datum_____

UTM Zone_____ UTM East_____ UTM North_____

Lat_____Long_____ Elev_____ ft or m

EPE_____ ft or m Declination _____ Comment _____

SPF

Sunrise: D_____ J_____ N_____ F_____ O_____ M_____ S_____ A_____ A_____ M_____ J_____ J_____

Sunset: D_____ J_____ N_____ F_____ O_____ M_____ S_____ A_____ A_____ M_____ J_____ J_____

Latitude checked?

Survey

Date_____ Begin Time_____ End Time_____

Surveyors_____

_____Project_____

Site Condition

Microhabitats

Description	Area (m^2)	[5]Surf Type	[6]Sub-Type	[7]Slope Var	Aspect T/M____	Slope Deg	[8]Soil moist	Water dpth(cm)	Water %	[9]Substrate % 1	2	3	4	5	6	7	8	Org	Oth	Prec %	Litter %	Wood %	Litter (cm)
A																							
B																							
C																							
D																							
E																							
F																							
G																							

Images

Whose Camera Used_____

Sketch Map Location_____

Photo #	Description (caption)

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1 Discharge Sphere (Spring Type)
- Anthropogenic
- Cave
- Exposure
- Fountain
- Geyser
- Gushet
- Hanging Garden
- Helocrene
- Hillslope
- Hypocrene
- Limnocrene
- Mound-form
- Rheocrene

2 Sensitivity
- None
- Location
- Survey
- Both

3 Land Unit
- BLM
- DOE
- NPS
- Private
- State
- Tribal
- USFS
- Other

4 Georeference Source
- GPS
- Map
- Other

5 Surface Type
- BW Backwall
- C Cave/Tunnel
- CH Channel
- CS Colluvial slope
- HGC High Grad. Cienega
- LGC Low Grad Cienega
- Mad Madiculous Flow
- P Pool
- PM Pool Margin
- SB Sloping Bedrock
- SZ Spray Zone
- SM Spring Mound
- TE Terrace
- Oth Other/anthropogenic

6 Surface Subtype
- CH Riffle, Run, Margin, Eph
- CS Wet, Dry
- SB Wet, Dry
- TE LRZ, MRZ, URZ, HRZ UPL,LRZMRZ,LRZURZ, MRZURZ, HRZMRZ
- All Anthro (human influence)

7 Slope Variability
Low, Medium, High

8 Soil Moisture
- 0 - Dry
- 1 - Dry-Moist
- 2- Moist-Dry
- 3 - Wet-Dry
- 4- Moist
- 5 - Saturated-Dry
- 6 - Wet
- 7 - Saturated-Moist
- 8 - Wet-Saturated
- 9 - Saturated
- 10 - Inundated

9 Substrate
- 1 clay
- 2 silt
- 3 sand (0.1-1mm)
- 4 fine (pea) gravel (1-10 mm)
- 5 coarse gravel (1-10 cm)
- 6 cobble /small boulders(10-100 cm)
- 7 large boulders (>1 m)
- 8 bedrock
- Organic Soil, including peat
- Other (usually anthropogenic)

10 Lifestage
- Adult
- Egg
- Exuviae
- Immature
- Larvae
- Mixed
- Other
- Pupae
- Shell

11 Habitat
- AQ - Aquatic
- T - Terrestrial

12 Method (Invertebrates)
- Spot
- Benthic

13 Detection Type (Vertebrates)
- Call
- Observed
- Sign
- Reported (by others)
- Other

14 Cover Codes
- GC Ground Cover
- SC Shrub Cover
- MC Midcanopy Cover
- TC Tall Canopy Cover
- AQ Aquatic Cover
- NV Nonvascular (moss, etc)
- BC Basal Cover

15 Emergence Environ/Detail
- Cave
- Subaerial
- Subglacial
- Subaqueous-lentic freshwater
- Subaqueous-lotic freshwater
- Subaqueous-estuarine
- Subaqueous-marine

16 Source Geomorphology
- Contact Spring
- Fracture Spring
- Seepage or filtration
- Tubular Spring

17 Flow Force Mechanism
- Anthropogenic
- Artesian
- Geothermal
- Gravity
- Other

18/19 Parent Rock Type/Subtype
- Igneous
  - andesite
  - basalt
  - dacite
  - diorite
  - gabbro
  - grandodiorite
  - granite
  - peridotite
  - rhyolite
- Metamorphic
  - gneiss
  - marble
  - quartzite
  - slate
  - schist
- Sedimentary
  - coal
  - conglomerate
  - dolomite
  - evaporates
  - limestone
  - mudstone
  - sandstone
  - shale
  - siltstone
  - Unconsolidated

20 Channel Dynamics
- Mixed runoff/spring dominated
- Runoff dominated
- Spring dominated
- Subaqueous

21 Flow Consistency
- Dry intermittent
- Erratic intermittent
- Perennial
- Regular intermittent

22 Measurement Technique
- Current meter
- Weir
- Flume
- Other

Spring Name___________________________ Page ______ of __________ OBS_____________

Invertebrates

Species Name	Qty	[10]Stage	[11]Hab-itat	[12]Meth-od	Rep #	Comments

Benthic Rep

Rep #	Location	Velocity m/sec	Depth cm	Substrate	Area Sq M	Time Sec	Comments

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Vertebrates

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Species Name	No. Ind	[13]Detection Type	Comments

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Flora

Flora notes

Species Name	^{14}Str	A	B	C	D	E	F	G	H	Comments	Verified?

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Flora

Flora notes

Species Name	^{14}Str	A	B	C	D	E	F	G	H	Comments	Verified?

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Geomorphology

[15]Emerg Env_____ [17]Mechanism_____ Geologic Layer_____

[15]Detail_____ [18]Rock Type_____ [20]Channel Dynamics_____

[16]Source Geomorphology_____ [19]Rock Subtype_____

Polygon	[1]Discharge Sphere	[1]Secondary Discharge	Comments

Flow

[21]Flow Consistency_____ [22]Measurement Technique_____ Flow Rate (Mean)_____

Location of Measurements_____Total Site % Captured_____

Discharge Comments_____

Reason if flow not measured (circle) diffuse outflow little outflow no outflow spring is dry hazard other _____

Current Meter l/s m/s other_____

Cell	Distance	Width	Depth	Reading

Flume l/s m/s other_____

Point	Flume Size	Measurements					Avg Stage	% Flow

Volume

Container Size/Units_____

Point	Seconds	Liters	% Flow

Weir l/s m/s other_____

Point	Weir Size	Measurements				% Flow

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Water Quality

Device 1 _____ Date Last Calibrated_____

Device 2 _____ Date Last Calibrated_____

Device 3 _____ Date Last Calibrated_____

Weather

Air Temp _____C or F

Select one

___No current/recent precipitation
___Rain during survey
___Recent rain
___Snow on ground
___Snow, hail, or sleet during survey

Sampling Locations (circle) (circle)

1	source down-gradient stream exiting wetland pool hole well other _____	standing water flowing water
	comments	
2	source down-gradient stream exiting wetland pool hole well other _____	standing water flowing water
	comments	
3	source down-gradient stream exiting wetland pool hole well other _____	standing water flowing water
	comments	

Field Measurements

Location #	pH	EC	SC	Water Temp (°C)	Turbidity ntu	Dissolved O^2 %	mg/L	Alkalinity mg/L	Salinity ppt	Other	Device

Collected for Analysis

Sample Type	Sample Taken?	DuplicateTaken?	Container	Filtered (Y/N)	Treatment	
Anions						
Cations						
Nutrients						
^{2}H and ^{18}O Isotopes						

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SEAP

Spring Name _____ Date _____ Page ____ of ____Obs_____

Information Source _____

Aquifer/WQ	Cond	Risk
Spring dewatered (Y/N)		
Aquifer functionality		
Spring discharge		
Flow naturalness		
Flow persistance		
Water quality		
Algal and periphyton cover		
Geomorphology		
Site obliterated (Y/N)		
Geomorphic functionality		
Runout channel Geometry		
Soil integrity		
Geomorphic diversity		
Natural physical disturbance		

Habitat	Cond	Risk
Isolation		
Habitat patch size		
Microhabitat quality		
Native plant ecological role		
Trophic dynamics		
Score		
Biotic Integrity		
Native plant richness/diversity		
Native faunal diversity		
Sensitive plant richness		
Sensitive faunal richness		
Nonnative plant rarity		
Nonnative faunal rarity		
Native plant demography		
Native faunal demography		

Human Influence	Cond	Risk
Surface water quality		
Flow regulation		
Road/trail/railroad		
Fencing		
Construction		
Herbivory		
Recreational		
Adjacent conditions		
Fire influence		

Administrative Context	Cond	Risk
Information quality/quantity		
Cultural significance		
Historical significance		
Recreational significance		
Economic value		
Conformance to mgmt plan		
Scientific/educational value		
Environmental compliance		
Legal status		

Notes:

_____

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_____

Recommendations:

_____

_____

_____

_____

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