

General	Spring Name _____ Springs Online ID# _____ ¹ Spring Type Primary _____ Secondary _____																																																																																																																																																																																								
	Country _____ State _____ County _____ ² Sensitivity _____																																																																																																																																																																																								
Georef	³ Land Unit _____ Land Unit Detail _____																																																																																																																																																																																								
	⁴ Georef: _____ Device _____ Datum _____																																																																																																																																																																																								
	UTM Zone _____ Easting _____ Northing _____																																																																																																																																																																																								
	Latitude _____ Longitude _____ Elev _____ ft / m																																																																																																																																																																																								
Description	EPE _____ ft or m Comment _____																																																																																																																																																																																								
	Site Description <i>Seepage/ flow emerges from...</i>																																																																																																																																																																																								
Survey	Date _____ Begin Time _____ End Time _____																																																																																																																																																																																								
	Project _____ Protocol: Lev 1 / Lev 2 / Oth _____																																																																																																																																																																																								
Survey Notes	Surveyors _____																																																																																																																																																																																								
	Weather _____ Recent rain _____ _____ No current/ recent precip. _____ Snow on ground _____ _____ Rain during survey _____ Snow/ hail/ sleet during survey _____																																																																																																																																																																																								
Microhabitats	Site Condition (<i>amount of water present, grazing impacts, status of infrastructure</i>)																																																																																																																																																																																								
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Images	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Name and Description</th> <th rowspan="2">Area (m²)</th> <th rowspan="2">⁵Surf Type</th> <th rowspan="2">⁶Surf Subtype</th> <th rowspan="2">⁷Slope Var</th> <th rowspan="2">Aspect True/ Mag</th> <th rowspan="2">Slope Deg</th> <th rowspan="2">⁸Soil Moist</th> <th colspan="2">Water</th> <th colspan="10">⁹Substrate %</th> <th rowspan="2">Prec %</th> <th rowspan="2">Litter %</th> <th rowspan="2">Wood %</th> <th rowspan="2">Litter (cm)</th> </tr> <tr> <th>Max depth (cm)</th> <th>Open %</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>Org</th> <th>Oth</th> </tr> </thead> <tbody> <tr><td>A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>C</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>D</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>														Name and Description	Area (m ²)	⁵ Surf Type	⁶ Surf Subtype	⁷ Slope Var	Aspect True/ Mag	Slope Deg	⁸ Soil Moist	Water		⁹ Substrate %										Prec %	Litter %	Wood %	Litter (cm)	Max depth (cm)	Open %	1	2	3	4	5	6	7	8	Org	Oth	A																											B																											C																											D																											E																										
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- 1 Spring Type**
 Anthropogenic
 Cave
 Exposure
 Fountain
 Geyser
 Gushet
 Hanging Garden
 Helocrene
 Hillslope
 Hypocrene
 Limnocrene
 Mound-form
 Rheocrene
- 2 Sensitivity**
 None - Spring Online users with Land Unit and Project permissions can see all data
 Location - Users need extra permissions to see spring location
 Survey - Users need extra permissions to see survey data
 Both - Users need extra permissions to see spring location and survey data
- 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 (>16°)
 LGC- Low Grad. Cienega(<16°)
 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 (optional)**
 BW: Wet, Dry
 CH: Riffle, Run, Margin, Eph
 CS: Wet, Dry
 PO: 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, no soil moisture
 1 – Soil mostly dry, few slightly moist patches
 2 – Soil mostly slightly moist. few dry patches
3 – Soil moist, with little moisture
 4 – Soil mostly moist, with few wetter patches where soil easily sticks together
 5 – Soil mostly wet with soil easily sticking together, few drier patches
6 – Soil wet, soil easily sticks together
 7 - Some wet patches of soil (easily sticking together) and some saturated soil patches
8 – Soil saturated, added water does not soak up, but there is little to no standing or flowing water
 9 - Substantial standing or flowing water, but less than 100% of microhabitat is inundated
10 – Inundated, 100% standing or flowing water, with no emergent vegetation or rocks
- 9 Substrate**
 1- clay
 2- silt
 3- sand (0.1-1mm)
 4- fine 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. Not including litter.
 Other/anthropogenic
- 10 Lifestage**
 Adult
 Egg
 Exuvia
 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 Str (Vegetation Cover Codes)**
 NV- Nonvascular (moss, liverworts, lichen)
 GC- Ground Cover (all non-aquatic herbaceous veg, including grasses and forbs)
For woody shrubs and trees:
 SC- Shrub Cover (all cover in 0-4 m strata)
 MC- Midcanopy (all cover in 4-10 m strata)
 TC- Tall Canopy Cover (>10 m)
 BC- Basal Cover (record if >1% of cover)
- 15 Emergence Environ/Detail**
 Cave (Subterranean)
 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**
 *only a selection of subtypes is listed
Igneous
 andesite
 basalt
 dacite
 gabbro
 granite
 peridotite
 rhyolite
Metamorphic
 gneiss
 marble
 quartzite
 slate
 schist
Sedimentary
 conglomerate
 dolomite
 evaporates
 limestone
 mudstone
 sandstone
 shale
 siltstone
Unconsolidated
 alluvium
 ash/ loess mixture
 talus deposit
Combination
- 20 Channel Dynamics**
 Mixed runoff/spring dominated
 Runoff dominated
 Spring dominated
 N/A
- 21 Flow Consistency**
 Perennial
 Ephemeral (GDE Intermittent)
 Unknown
- 22 Flow Measurement Technique**
 Volumetric (timed volume capture)
 Current meter
 Weir
 Flume
 Other

Spring Name _____

Str (Vegetation Cover Codes) For herbaceous plants: NV- Nonvascular (moss, liverworts, lichen, algae) GC- Ground Cover (all terrestrial and aquatic herbaceous veg, incl. forbs, grasses, graminoids)	For woody shrubs and trees: SC- Shrub Cover (0-4 m stratum) MC- Midcanopy (4-10 m stratum) TC- Tall Canopy Cover (>10m stratum) BC- Basal Cover (record if >1% of cover)
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Flora Notes

Flora

Collect?	Species Name	¹⁴ Str	A	B	C	D	E	Comments
1								
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Spring Name _____

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Flora Notes

Collect?	Species Name	¹⁴ Str	A	B	C	D	E	Comments
27								
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39								
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Flora

Geomorphology	15 Emergence Env <i>Cave / Subaerial / Subglacial / Subaqueous Lentic freshwater / Subaqueous Lotic freshwater / Subaqueous Estuarine / Subaqueous Marine</i>	18 Rock Type <i>Igneous / Metamorphic / Sedimentary / Unconsolidated / Comb</i>
	16 Source Geomorph. <i>Contact / Fault / Fracture / Seepage or Filtration / Tubular or Conduit</i>	19 Rock Subtype _____
	17 Flow Force Mechanism <i>Anth. / Artesian / Geothermal / Gravity / Other</i>	Geologic Layer _____
	20 Channel Dynamic <i>Spring Dom. / Runoff Dom. / Mixed / N/A</i>	

SPF	Sunrise: D _____ J _____ N _____ F _____ O _____ M _____ S _____ A _____ A _____ M _____ J _____ J _____	Latitude checked? _____
	Sunset: D _____ J _____ N _____ F _____ O _____ M _____ S _____ A _____ A _____ M _____ J _____ J _____	

Flow Consistency: <input type="checkbox"/> <i>Perennial</i> <input type="checkbox"/> <i>Ephemeral</i> <input type="checkbox"/> <i>Unknown</i>	Occurrence of Surface Water: <input type="checkbox"/> <i>Dry</i> <input type="checkbox"/> <i>Saturated soil, no open water</i> <input type="checkbox"/> <i>Patches of standing or flowing water</i>	Did Surveyors Measure Flow? <input type="checkbox"/> <i>Extensive standing water</i> <input type="checkbox"/> <i>Flowing water in developed channel</i> <input type="checkbox"/> <i>Extensive standing AND flowing water</i> <input type="checkbox"/> <i>Yes</i> <input type="checkbox"/> <i>No</i>
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Flow	If Flow was measured...		If Flow was NOT measured...	
	22 Measurement Technique <i>Volumetric / Weir / Flume / Other</i> Site % Capture _____		Calculated Flow _____	
	Flow Measurement Location:		Visual Estimate of Flow _____	
			Reason flow was not measured: <input type="checkbox"/> <i>Diffuse outflow</i> <input type="checkbox"/> <i>Little outflow</i> <input type="checkbox"/> <i>No outflow (standing water only)</i> <input type="checkbox"/> <i>Spring is dry</i> <input type="checkbox"/> <i>Hazard</i> Other _____	

Weir or Flume		Weir/ Flume Size _____			
Point	Stage	% Flow	Flow Rate <i>(include units)</i>	Convert to L/s	Adjust for % Flow
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Volumetric Units: mL / L			
Point	Time (sec)	Volume	% Flow
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Device 1 _____ Date Last Calibrated _____

Device 2 _____ Date Last Calibrated _____ **Time** of WQ Measurement _____

Device 3 _____ Date Last Calibrated _____

Water Quality 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 #	Air Temp (°C)	pH	SC (µS/cm)	Water Temp (°C)	Tot. Dissolved Solids (ppm)	Dissolved O ₂ %	Dissolved O ₂ mg/L	Alkalinity (mg/L)	Device/ Comments
									<i>handheld therm</i>

Were samples collected for laboratory analysis? _____ How many? _____ Were they filtered? _____

Which analyses will be conducted, and at which lab? _____

Who is the responsible for delivering the results? _____

Water Quality

State _____ Country _____ County _____ Land Unit _____ Land Unit Detail _____ Date _____ Page _____ of _____

Spring Name _____ ID# _____ Start time _____ End time _____ Scale | _____ m

Observers and Roles:

- Remember:**
- Scale
 - North Arrow
 - Loc. Of GPS Point
 - WQ Location
 - SPF Location
 - Flow Measurement Loc.
 - Flow Direction Arrows
 - Label Microhabitats
 - Photo Points, Direction
 - Area of Microhabitats

Spring Name _____

Date _____

Page _____

of _____

OBS _____

SEAP

Aquifer/ Groundwater

Cond Risk

Spring dewatered (Y/N)	<input type="checkbox"/>	
Aquifer functionality	<input type="checkbox"/>	<input type="checkbox"/>
Spring discharge	<input type="checkbox"/>	<input type="checkbox"/>
Flow naturalness	<input type="checkbox"/>	<input type="checkbox"/>
Flow persistence	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater quality	<input type="checkbox"/>	<input type="checkbox"/>
Algal and periphyton cover	<input type="checkbox"/>	<input type="checkbox"/>

Geomorphology

Cond Risk

Site obliterated (Y/N)	<input type="checkbox"/>	
Geomorphic functionality	<input type="checkbox"/>	<input type="checkbox"/>
Runout channel geometry	<input type="checkbox"/>	<input type="checkbox"/>
Soil integrity	<input type="checkbox"/>	<input type="checkbox"/>
Geomorphic diversity	<input type="checkbox"/>	<input type="checkbox"/>
Natural physical disturbance	<input type="checkbox"/>	<input type="checkbox"/>

Habitat

Cond Risk

Isolation	<input type="checkbox"/>	<input type="checkbox"/>
Habitat patch size	<input type="checkbox"/>	<input type="checkbox"/>
Microhabitat quality	<input type="checkbox"/>	<input type="checkbox"/>
Native plant ecological role	<input type="checkbox"/>	<input type="checkbox"/>
Trophic dynamics	<input type="checkbox"/>	<input type="checkbox"/>

Biotic Integrity

Cond Risk

Native plant richness/ diversity	<input type="checkbox"/>	<input type="checkbox"/>
Native faunal diversity	<input type="checkbox"/>	<input type="checkbox"/>
Sensitive plant richness	<input type="checkbox"/>	<input type="checkbox"/>
Sensitive faunal richness	<input type="checkbox"/>	<input type="checkbox"/>
Nonnative plant rarity	<input type="checkbox"/>	<input type="checkbox"/>
Nonnative faunal rarity	<input type="checkbox"/>	<input type="checkbox"/>
Native plant demography	<input type="checkbox"/>	<input type="checkbox"/>
Native faunal demography	<input type="checkbox"/>	<input type="checkbox"/>

Human Influence

Cond Risk

Surface water quality	<input type="checkbox"/>	<input type="checkbox"/>
Flow regulation	<input type="checkbox"/>	<input type="checkbox"/>
Road/ trail/ railroad	<input type="checkbox"/>	<input type="checkbox"/>
Fencing	<input type="checkbox"/>	<input type="checkbox"/>
Construction	<input type="checkbox"/>	<input type="checkbox"/>
Herbivory	<input type="checkbox"/>	<input type="checkbox"/>
Recreational	<input type="checkbox"/>	<input type="checkbox"/>
Adjacent conditions	<input type="checkbox"/>	<input type="checkbox"/>
Fire influence	<input type="checkbox"/>	<input type="checkbox"/>

Administrative Context

Cond Risk

Information quality/ quantity	<input type="checkbox"/>	<input type="checkbox"/>
Cultural significance	<input type="checkbox"/>	<input type="checkbox"/>
Historical significance	<input type="checkbox"/>	<input type="checkbox"/>
Recreational significance	<input type="checkbox"/>	<input type="checkbox"/>
Economic value	<input type="checkbox"/>	<input type="checkbox"/>
Conformance to mgmt. plan	<input type="checkbox"/>	<input type="checkbox"/>
Scientific/ educational value	<input type="checkbox"/>	<input type="checkbox"/>
Environmental compliance	<input type="checkbox"/>	<input type="checkbox"/>
Legal status	<input type="checkbox"/>	<input type="checkbox"/>

Condition: Rank 0 to 6

0 Obliterated
1 Very Poor
2 Poor
3 Moderate
4 Good
5 Very Good
6 Pristine

Risk: Rank 0 to 6

0 No risk to site
1 Negligible risk to site
2 Low risk to site
3 Moderate risk to site
4 Serious risk to site
5 Very great risk to site
6 Extreme risk to site

See the SEAP Scoring Criteria for more details about each category

Number of Blank Condition Scores ____ of 34

Number of Blank Risk Scores ____ of 34

Management Recommendations:

Additional Site Description Notes:

Additional Site Condition Notes: