A scenic view of a desert canyon with red rock walls and green vegetation. The canyon walls are made of smooth, reddish-brown sandstone. The valley floor is covered with sparse green shrubs and small trees. In the distance, a dirt road winds through the landscape under a cloudy sky.

BLM UTAH TECHNICAL SUPPORT, DATA, TOOLS,
TRAINING AND ADVISEMENT TO IMPROVE
DECISION-MAKING FOR SPRINGS AND
SPRINGS-DEPENDENT SPECIES MANAGEMENT,
GRAND STAIRCASE ESCALANTE
NATIONAL MONUMENT, UTAH

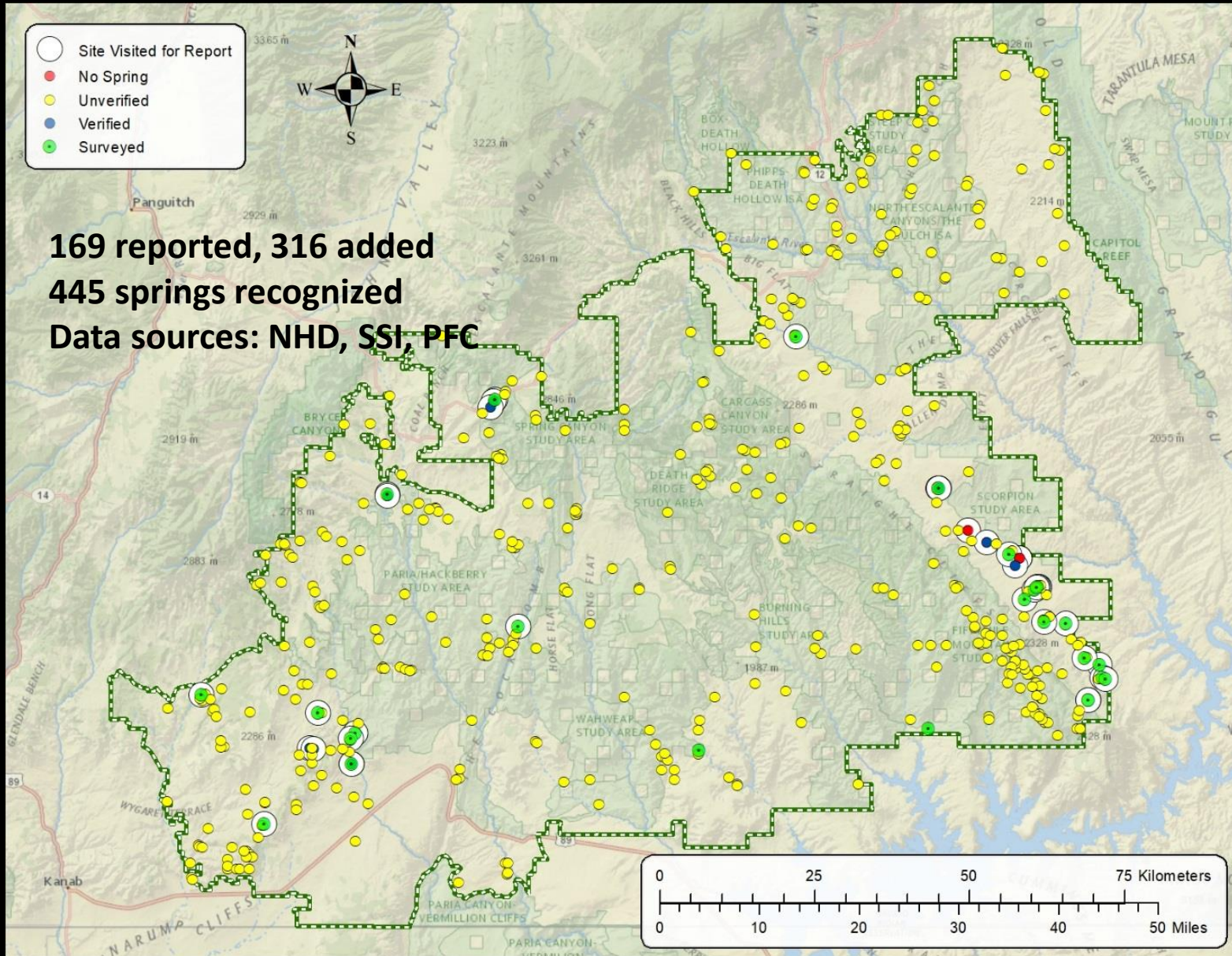
Larry Stevens SSI Staff

Museum of Northern Arizona Springs Stewardship Institute

Project Tasks

1. Compile, QA/QC GSENM springs into Springs Online
2. Provide technical support and training for inventory and assessment to support habitat restoration planning
3. Conduct springs inventory and assessment of high priority springs (Springs Online; geodatabase).
4. Provide online technical support and advisement to develop a prioritized list of sites for management and rehabilitation

Reported, Verified, 2019 Inventoried GSENM Springs



3. Inventory and Provide Data

Inventory high priority springs (areas not well-inventoried)

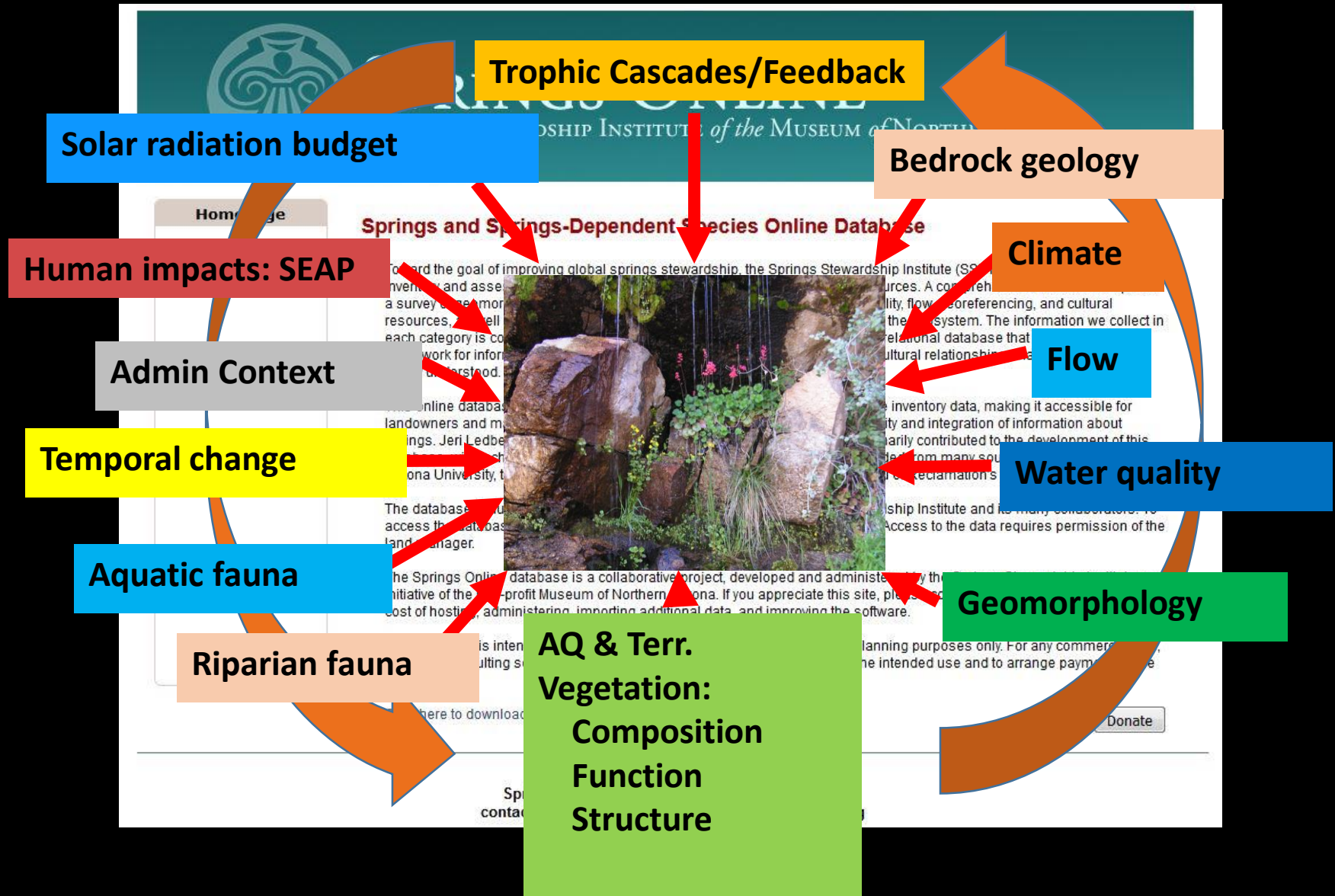
- 43 PFC “downward trend”
- 48 selected for potential site visits, \leq 2km of a road
- 33 visited, Level 2 inventories on 24 springs

Protocols: SSI (SpringStewardshipInstitute.org)

- Inventories 19 May 14-19, August 3-4, Oct 4
- 11 categories of physical, biological, human influences
- Springs Ecosystem Assessment Protocol used
- Report synthesizes these data

Data in Springs Online, geodatabase provided to BLM

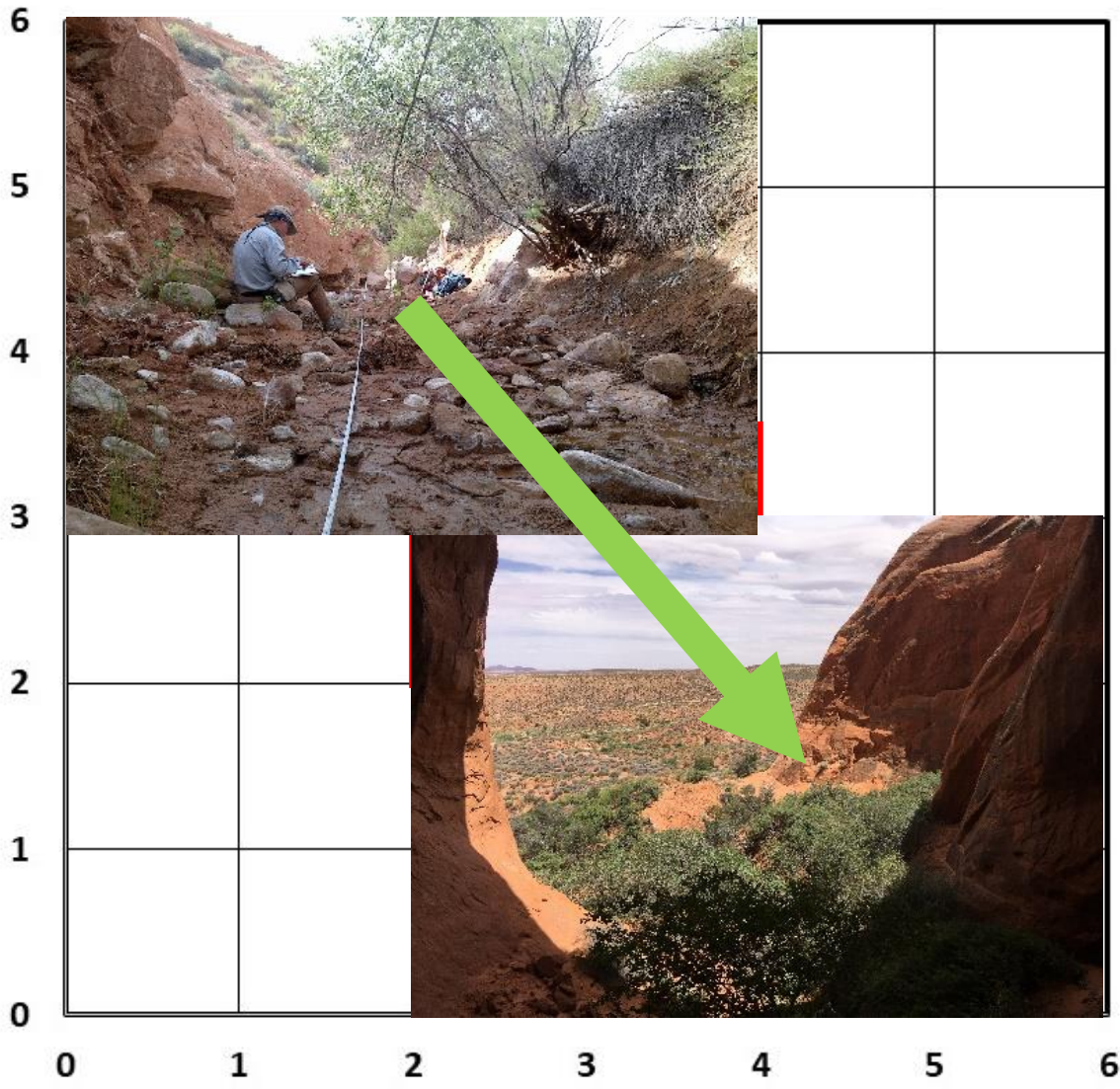
Springs Online (SpringsData.org)



Selected Results

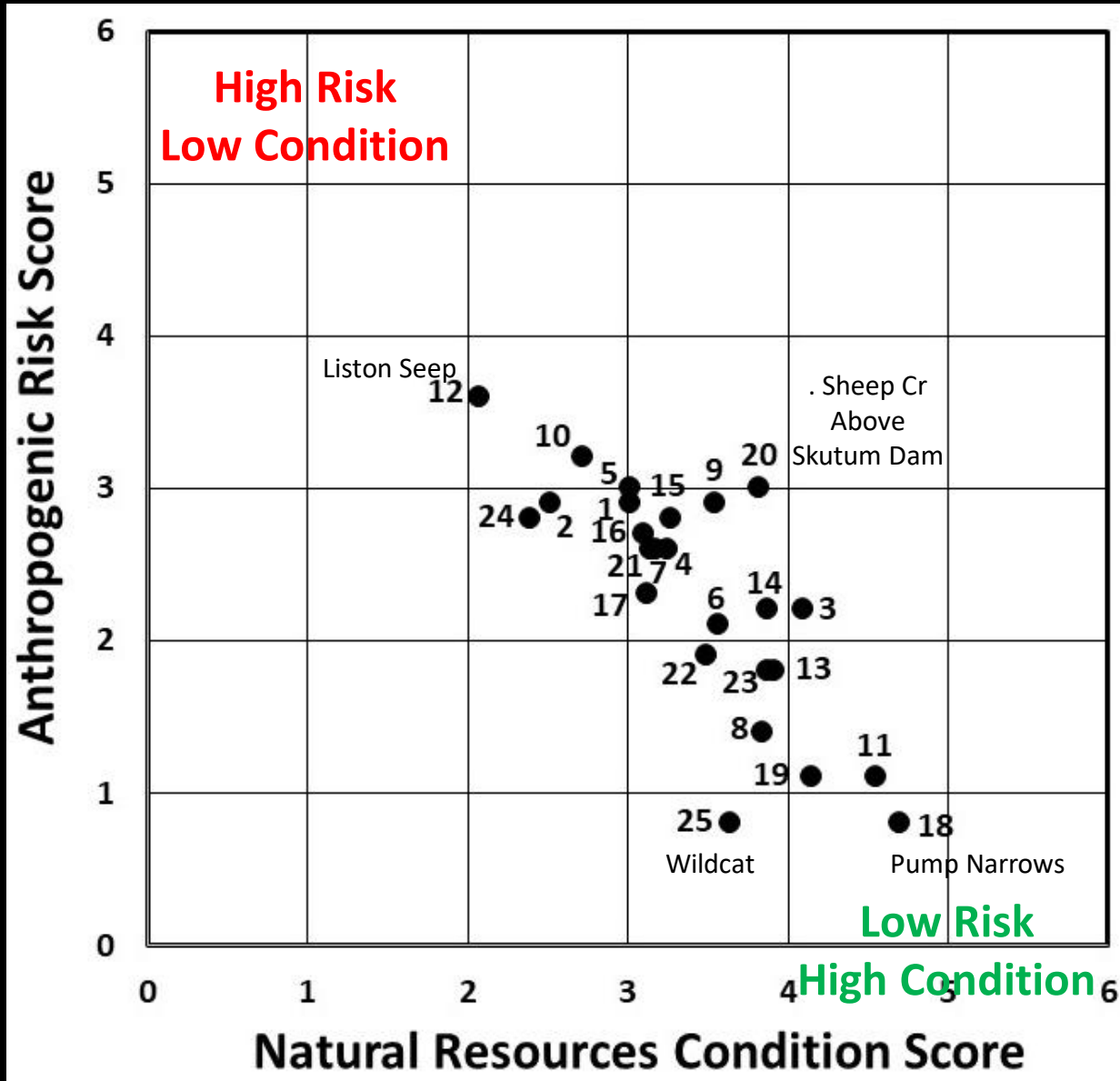
- Springs Types:
Rheocrene > Hanging Garden > Hillslope = Helocrene >
Anthropogenic > Exposure = Hypocrene
- 14 springs with measurable flow: 0.002 L/sec (Little Red Rock Spring) to 2.6 L/sec (Highway 12 Ciénega Spring)
- 22 sites sampled: T_w 10.4° to 27.5°; SC 301 to 7900 $\mu\text{S}/\text{cm}$; TDS 0.201 to 1.542 ppt; pH 6.7 to 8.7; DO 0.09 to 8.71 mg/L
- 171 vascular plant taxa, mixed aquatic, wetland, riparian, upland taxa, variation in composition and structure among springs types
- 10 orders of aquatic invertebrates
- 22 vertebrate species detected, much livestock and impact

Anthropogenic Risk Score



Natural Resources Condition Score

Springs Ecosystem Assessment Graph



2020 SSI Springs Inventories in Grand Staircase-Escalante National Monument

26 springs or NHD points visited in 2020
18 (69.2%) of which are or were springs
23 springs visited in 2019

Mean Q = 0.05 L/s (15.9 gpm), 1 sd = 0.07 L/s
(highly variable)

63 vertebrate species detected: cows and Scrub Jays at 61% of sites

Data on vegetation, invertebrates, WQ
still being entered

Preliminary data, reporting in progress

