



SPRINGS STEWARDSHIP INSTITUTE

a GLOBAL INITIATIVE of the MUSEUM of NORTHERN ARIZONA

LOCATION:

The Durango Public Library
1900 E. 3rd Ave.
Durango, CO 81301
(970) 375-3380

WHEN:

Starts: July 29th, at 1:00pm
Ends: July 31st, at 12:00pm

COST:

\$295 - early bird (by June 26, 2015)
\$350 - regular price
\$139 - student price (with proof of enrollment)

Covers cost of workshop materials and field trip transportation

REGISTRATION & PAYMENT:

Register Online at

springstewardshipinstitute.org/workshops

Pay by Credit Card online, following the link on the Registration Form
or

mail a check to:

Springs Stewardship Institute
3100 N. Fort Valley Rd.
Flagstaff AZ, 86001

SPRINGS ASSESSMENT AND CLIMATE ADAPTATION WORKSHOP

Presented by the Researchers of the
Springs Stewardship Institute &
Mountain Studies Institute

DESCRIPTION:

This workshop is designed to improve stewardship of springs by educating the public, educators and students, governmental agencies, NGOs, and Tribes. Participants will deepen their understanding of springs ecosystems, ecological integrity, natural and cultural resources, stewardship, restoration, monitoring, field data collection, and information management. The workshop consists of classroom presentations and discussions, as well as hands-on field inventory and assessment training each day.

Presentations by our experienced staff:

Larry Stevens, PhD, Director, SSI
Jeri Ledbetter, MGIS, Program Director, SSI
Marcie Bidwell, MLA, Executive Director, Mountain Studies Inst.
Molly Joyce, BA, Data Technician, SSI

MUST REGISTER BY JULY 24, 2015

Space is Limited to 30 participants. Please register *early* if registering a group.

Contact Us with any Questions:

Phone: (928) 774-5211 Ext. 231
E-Mail: jeri@springstewardship.org



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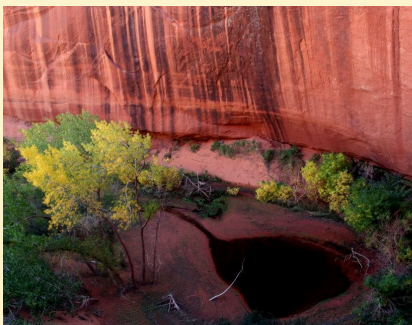
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SPRINGS ASSESSMENT and CLIMATE ADAPTATION WORKSHOP

July 29-31 — Durango, CO

The Springs Stewardship Institute (SSI) and the Mountain Studies Institute (MSI) have teamed up to host this multi-day workshop to advance springs stewardship in the upper Colorado Plateau

This workshop is designed to further participants' understanding of spring ecosystems and to provide a monitoring methodology that can be used to improve spring stewardship by land management agencies, academic researchers, watershed stakeholder groups, educators, or anyone with an interest in spring ecosystems. Spring stewardship is inter-disciplinary, so workshop topics will include elements of ecology, hydrology, water quality, entomology, botany, ornithology, climate science, geology, and information management. The workshop will consist of classroom presentations and discussions, as well as hands-on field inventory and assessment at nearby springs.



Springs Stewardship Institute (SSI) works to improve communication among land managers, to survey, rehabilitate, and steward springs systems across the southwestern United States. SSI is developing a repository of literature and protocols to advance springs stewardship. As part of this initiative, SSI developed Springs Online ©, a publicly available and ever-growing database relating geological, physical, biological, and socio-cultural information on springs throughout the world. SSI is directed by Dr. Larry Stevens, who was the ecologist for Grand Canyon National Park from 1989 to 1994 and whose research in springs ecology is widely published in peer-reviewed journals.

Despite being among the most biologically and culturally important ecosystems on Earth, springs are poorly studied and often inadequately protected. A surprising number of plant and animal species are dependent on springs, including many that are locally endemic and/or globally endangered. Springs are highly threatened by groundwater extraction and inappropriate land management practices. In addition, springs are sensitive indicators of global climate change.



Mountain Studies Institute (MSI) is an independent not-for-profit mountain research and education center that develops science that people can use to address environmental issues facing the San Juan Mountains. We connect scientists and stakeholders across the San Juan Mountain region to go beyond scientific inquiry to the meaningful application of knowledge that makes a difference for the quality of the environment and our communities. MSI is leading the San Juan Climate Initiative to access existing and potential impacts caused by climate variability and develop strategies to plan for, adapt to, and reduce the effects of climate change on our ecosystems and society.

DRAFT AGENDA
SPRINGS INVENTORY AND ASSESSMENT AND
CLIMATE ADAPTATION WORKSHOP

Presented by the Springs Stewardship Institute and Mountain Studies Institute

Durango Public Library
1900 E. 3rd Avenue, Durango, CO 81301
July 29 - 31, 2015

DAY 1, JULY 29 - 1:00 PM

Welcome and Introductions - 10-15 minutes

I. Overview

1. Springs distribution
2. Springs hydrogeology
3. Springs as habitats for biota
4. Climate adaptation
5. Springs as socio-cultural features
6. Legal and administrative contexts

II. Introduction to inventory

1. Inventory variables and methods
2. Level 1 - Purpose and methods: basic information
3. Level 2 - Purpose and methods: resource inventory status
4. Level 3 - Purpose and methods: monitoring, stewardship and restoration

Close by 5:30 pm

DAY 2, JULY 30 - 8:00 A.M.

III. Meet, then head to nearby spring to practice methods

Return by 11:30 am - break for lunch

IV. Springs-Dependent Species (SDS)

V. Springs ecosystem assessment (SEAP)

VI. Information management and protection

1. Introduction to Springs Online database - springsdata.org
2. Data entry, editing, and reporting demonstration
3. Information use, data sharing vs. security

VII. Climate adaptation, springs as refugia

Close by 5:30 pm

DAY 3, JULY 31 - 8:00 A.M.

VIII. Discussion

1. How to improve springs stewardship
2. Looking forward: climate adaptation

IX. Head to nearby spring for practice Level 2 inventory and assessment - brown bag lunch

Close by 2:30 pm

Questions? Contact:

Larry Stevens, Curator of Ecology and Conservation, Museum of Northern Arizona
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