LAVA HOT SPRINGS
GEOTHERMAL ENERGY TEAM

STRATEGIC PLAN

Lava Hot Springs, Idaho
Geothermal Resources

Prepared by Lava Hot Springs Geothermal Energy Team
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Mission Statement

The mission of the Lava Hot Springs Geothermal Energy Team is:

“To develop a long-range plan for utilization of the geothermal resources to benefit the community”

The Lava Hot Springs Geothermal Energy Team has a strong guiding principle that local geothermal resources should be used to benefit the community as a whole. The geothermal resource has a huge economic value. The local economy is in good shape in part through the individual businesses that use the geothermal resource to bring in tourist visitation.

Future planning for the utilization of the resources for community-wide benefits is critical for successful management and use of the resource. Long-range planning must be based on a solid understanding of the physical environment of the geothermal resource and the impacts that might occur if changes happen to the current system.

History and Background

The City of Lava Hot Springs is located in Bannock County approximately 30 miles southeast of Pocatello. One of Idaho’s truly historic resort areas, Lava Hot Springs centers around the renowned geothermal soaking pools that were used for centuries by Native Americans and which were deeded to the state in 1902 as a health and recreation facility. The State of Idaho, through the Lava Hot Springs Foundation, owns and operates the springs. These soaking pools, along with the geothermally-heated Olympic swimming pool complex (also operated by the Lava Hot Springs Foundation), are the basis for the town’s resort status. A geothermal source located between the soaking pools and the Olympic pool complex supplies geothermal water to heat exchangers that are used to heat the Olympic and lap pools. The water is discharged into the Portneuf River after it is used.

Local businesses, primarily hotels and motels, divert geothermal water from hot springs, and from one deep and several shallow (less than 100 feet) wells for space heating and for soaking tubs and pools for their guests. The majority of these sites are located within approximately 200 feet of the Portneuf River.

At one time, the City of Lava Hot Springs piped geothermal water from the Chicken Soup Springs located east of the city on the banks of the Portneuf River. The springs discharge from the riverbank with an estimated flow of 1.5 cfs (673 gpm). The temperature of the water was 47° C in August, 2002. The hydrogeology of the geothermal system in the Lava Hot Springs area has not been studied in detail and is poorly understood. Research indicates that the geothermal water moves along north-south trending faults (Summarized from St. Marie et al, 2002.)
Needs and Barriers

The Lava Hot Springs Geothermal Energy Team identified various needs and barriers facing development and use of geothermal resources. These are:

- Need for better scientific understanding of the resource
- Quantify the resource for protection against over-development
- Protection of existing water rights
- Unclear status of ownership and water right status
- Availability of funding for research and project development
- Availability of technology
- Need for education
- Regulatory restrictions hindering development
- Potential Native American issues

Strategic Objectives and Action Plans

The Lava Hot Springs Geothermal Energy Team developed a framework of strategic objectives and actions. Some are attainable if the needs or barriers can be overcome. Other objectives and actions are based on ideas that would benefit the community but may far exceed practical reality. In combination, these objectives and actions illustrate the forward-thinking visions of the community. They provide a framework for future activities when funds are available from internal or external sources or opportunities arise to implement the objectives.

Strategic Objective 1

**Increase technical knowledge of the geothermal resource**

Lava Hot Springs is economically dependent on the geothermal resources currently in use. Injury or damage to the existing resource uses would harm the local community. A better understanding of the geothermal resource, the subsurface environment, and the limits of the resources are the keys to the planning for future development.

**Actions:**

a. Work with Idaho State University
b. Obtain grants to fund research and investigations
Strategic Objective 2

Improve quality of life for citizens of Lava Hot Springs through the use of geothermal resources
The geothermal resources in the Lava Hot Springs area can be used for the benefit of the community by planning infrastructure changes.

*Actions:*  
- a. Heating sidewalks  
- b. Heating a local medical clinic  
- c. Facilitate low-income housing using geothermal heat  
- d. Home heating accessibility for all citizens

Strategic Objective 3

Expand economic vitality of Lava Hot Springs using geothermal resources
The geothermal resources could be used for expanded tourist facilities or business opportunities.

*Actions:*  
- a. Construct botanical gardens  
- b. Expand commercial facilities

Strategic Objective 4

Increase community understanding of potential uses for geothermal resources
Citizens in the community need more information about the geothermal resource and its value and opportunities for the community

*Actions:*  
- a. Develop public information materials  
- b. Compile lists and links for information, grants, loans  
- c. Develop network of resources and information for citizens and businesses

Strategic Objective 5

Take steps to reactivate public use of Chicken Soup Springs
The loss of hydraulic head in Chicken Soup Springs eliminated several economic and community benefits: melting snow on city sidewalks and district space heating. Recovering the use of Chicken Soup Springs would help improve the downtown as a more user-friendly environment during the winter and possibly save money through district heating.

*Actions:*  
- a. Conduct feasibility study, examine technology, alternatives  
- b. Prepare engineering design  
- c. Obtain Funding
Strategic Objective 6
Promote policies, rules and laws that support and encourage development of geothermal resources
The policies, rules and laws that regulate the use of water in the Lava Hot Springs area are confusing to some and restrictive to others.

*Actions:*  
a. Work with the Idaho Department of Water Resources and other regulatory agencies to develop a beneficial environment for developing geothermal resources

**Summary**

There are two primary barriers to future development and use of the geothermal resources in Lava Hot Springs. The first is the lack of knowledge about the resource itself. A geologic investigation should be undertaken to fully understand the characteristics, availability, and limits of the geothermal resource. The second barrier is a lack of available funds to support research or, once the research is done, to use that knowledge for future development.

Some ideas discussed in this plan may not currently meet the test of cost-benefit analyses or be feasible at this time. However, changes in energy costs, economy, and public attitudes may alter the analyses in the future.
APPENDIX 1 – Lava Hot Springs Geothermal Energy Team
Membership

Mayor Raymond Bailey
City of Lava Hot Springs
208-776-5820
www.lavahotsprings.org/government

Canda Dimick
City Clerk, City of Lava Hot Springs
208-776-5820
www.lavahotsprings.org/government

Dan Dimick, local citizen

Scott Gerwe, local citizen

Evelee Hill, local citizen

George W. Katsilometes, local citizen

Janie Linford
City Council member
City of Lava Hot Springs
www.lavahotsprings.org/government

Mark Lowe
Executive Director, Lava Hot Springs Foundation
430 E. Main St., PO Box 669
Lava Hot Springs, Id 83246
208-776-5221
mlowe@lhs.idaho.gov
APPENDIX 2 – Links and Contacts

Information/Education

Idaho Department of Water Resources
Idaho Energy Division
PO Box 83720
Boise, ID 83720-0098
208-287-4800 or 1-800-344-SAVE (7283)
www.energy.idaho.gov
Geothermal Energy Program
www.idahogeothermal.org
E-mail: geothermalinfo@idwr.state.id.us

US Department of Energy
Energy Efficiency and Renewable Energy Network
Geothermal Energy Program
www.eere.energy.gov/geothermal
GeoPowering the West
www.eere.energy.gov/geopoweringthewest

Geothermal Education Office
664 Hilary Drive
Tiburon, CA 94920
415-435-4574 or 1-800-866-4436
www.geothermal.marin.org
E-mail: geo@marin.org

Geo-Heat Center
Oregon Institute of Technology
3201 Campus Drive
Klamath Falls, OR 97601-8801
541-885-1750
www.geoheat.oit.edu

Technical/Science Support

Idaho National Engineering and Environmental Laboratory
Energy Efficiency and Renewable Energy Network
Dr. Bob Neilson, Jr.
PO Box 1625 MS 3830
Idaho Falls, ID 83415
208-526-8274
http://geothermal.id.doe.gov
E-mail: rmn@inel.gov
Idaho State University
Dr. Jay Kunze
Campus Box 8080
Pocatello, ID 83209
208-282-2902

Idaho Geological Survey
Dr. John Welhan
Idaho State University
Campus Box 8072
Pocatello, ID 83209-8071
208-282-4254 or 208-282-3365
E-mail: welhjohn@isu.edu

Boise State University
Center for Geophysical Investigation of the Shallow Subsurface (CGISS)
Dr. John Bradford
Dr. Mitchell Lyle
1910 University Drive
Boise, ID 83726
208-426-1011

Geo-Heat Center
Oregon Institute of Technology
Dr. John Lund, P.E.
3201 Campus Drive
Klamath Falls, OR 97601-8801
541-885-1750
www.geoheat.oit.edu

Financial Assistance

US Department of Energy
Energy Efficiency and Renewable Energy Network
Geothermal Energy Program
www.eere.energy.gov/geothermal
GeoPowering the West
www.eere.energy.gov/geopoweringthewest

US Department of Agriculture
Rural Business-Cooperative Service (RBS)
Dale Lish, Rural Energy Coordinator
725 Jensen Grove Drive, Suite 1
Blackfoot, Idaho 83221
208-785-5840, ext. 118
dale.lish@id.usda.gov
Idaho Energy Division
Low Interest Energy Loan Program
PO Box 83720
Boise, Idaho 83720-0098
208 287-4800 or
Idaho Energy Hotline 1-800-334-SAVE (7283)
www.energy.idaho.gov/loans

Other Contacts

Idaho Department of Water Resources

- Gerry Galinato, Principal Energy Specialist
  208-287-4897
  gerry.galinato@idwr.idaho.gov

- K. T. Hanna, Energy Division
  208-287-4898
  k.t.hanna@idwr.idaho.gov

- Ken Neely, Hydrology Section
  208-287-4852
  ken.neely@idwr.idaho.gov

- Helen Harrington
  208-287-4848
  helen.harrington@idwr.idaho.gov

- Eastern Regional Office (water rights)
  208-525-7161

Dr. Jim Nelson, Professor
College of Agricultural and Life Sciences, Agricultural Economics and Rural Sociology
University of Idaho
Moscow, ID 83844-2334
208-885-2083
jnelson@uidaho.edu
APPENDIX 3 – Documents and Reports

