

# Geothermal heating considered at Timberline

by SCOTT NEWTON

A geothermal feasibility study indicates that Timberline and Wy East Lodges could be heated from steam provided by Mt. Hood.

"The resource is there," said Dick Kohnstamm, manager at Timberline Lodge. "Maybe in better times we can get to it. We're kind of in a hold position because of high interest rates."

About \$880,000 would be needed to complete the project. It was hoped that money would be available from the federal Department of Energy.

The Timberline geothermal feasibility study, which was produced at a cost of \$10,000, was one of 14 projects to be selected by a citizens review board out of 454 available projects.

"This was a popular program. There was a lot of interest," said Sam Sadler, state program manager for Oregon Appropriate Technology, a private firm in Eugene.

OAT, through a competitive bid process, received the job of administering \$300,000 from the state DOE.

Last year was the third year of the program. "It was eliminated this year, along with about everything else," Sadler said.

Thirty-six reviewers, with varying degrees of technical knowledge, reviewed the 454 projects.

According to Sadler, federal funds for almost all renewable energy sources is gone, including geothermal, solar, wind, biomass and hydroelectric.

Dick Bowen, president of Wy East Exploration and Development Company and the head of the engineering study team, also had hoped money might be available from Bonneville Power Company. However, Bonneville's projects reportedly must directly replace electricity, while this project would replace the use of oil.

"For the moment, we've run out of funding sources," said Bowen. "For us to continue the program is not practical."

Bowen and Kohnstamm both said that with 17 to 18 percent interest rates, the payback period would be extended enough that it would not be feasible at this time.

Not considering interest rates or an increase in the price of oil, it is expected that the project could pay for itself within 12 years. If it is assumed that the price of oil increases 15 percent per year, the payback period is reduced to seven or eight years, according to the study.

The total displacement of oil would be approximately 111,000 gallons per year, or 67 percent of the annual usage.

The value of this displaced oil at today's energy prices (81 cents per gallon) is \$89,900 per year.

An annual operating cost of \$16,500 per year to operate the production well pump offsets the payback period.

To utilize the volcano's steam, a production well would have to be drilled. An injection well to return the water already exists.

The hot water would be extracted from a 4,000-foot-deep well, which

would be located near the base of Pucci chair lift (elevation: 5,940).

The water would be transported through a steel-jacketed pipe. Approximately 3,700 feet of jacketed pipe, and 800 feet of unjacketed pipe for the return, would be necessary.

Flow rates are estimated to be about 150 gallons per minute with a maximum of 300 gallons per minute. The water temperature would be from 170 to 180 degrees Fahrenheit.

Fluid pressure at the top of the extraction well is estimated to be approximately 440 pounds per square

inch when the well is pumping at 300 gallons per minute.

According to the study preliminary water chemistry tests indicate the water is somewhat corrosive, although further analysis is called for.

Though the day lodge was designed for the use of geothermal fluids, it was found that better use of the fluids on an annual basis could be made at the main lodge. The swimming pool and domestic water heating provide an opportunity to use geothermal on a continuous basis. The seasonal day

lodge loads are smaller and would use less total energy, according to the study. Also, the main lodge has insufficient boiler capacity to handle the loads at peak times of the year. By using geothermal fluids, the boiler load would be reduced to the point where sufficient capacity would be available.

The report concludes: "There are no apparent unsolvable technical problems that would discourage the use of geothermal fluids at the Timberline Lodge complex. However, it is recommended that a

more detailed study and possibly a design development phase with contractor estimates be the next step. The more detailed study effort should include field testing and measurements to provide an information base for engineering decisions."

Firms contributing to the report include C.W. Timmer Associates Inc., responsible for mechanical engineering, R.A. Wright Engineering Inc., civil engineering, and Perkins Engineering Inc., for electrical engineering.

## Old Mt. Hood plan background reading

by MICHAEL P. JONES  
Post Correspondent

The 1976 Mt. Hood Community Plan, which was the result of 10 years of sometimes painful citizen participation, is no longer in effect.

Rather, the lengthy document has been replaced by Clackamas County officials with a 10-page document which, in addition, contains three maps.

The new document, officially titled, "Proposed Mount Hood Community Plan," was prepared by the planning staff after the county's comprehensive plan pertaining to the area came under fire by the state Land Conservation and Development Commission in December.

Due to objections by 1000 Friends of Oregon, representing the Environmental Committee on Suitability, the county was ordered to review three aspects of the comprehensive plan as it pertains to the Mt. Hood corridor.

They are to identify wetlands, both within and outside of the boundaries of the Hoodland Service District. After that they are to show, the wetlands on a map and determine whether they are to be protected and, if so, how.

The county is also required to identify any exceptions to LCDC's land use goals related to agriculture and forest lands outside of the sewer district's boundaries.

If such lands have already been developed, they are to be identified as such.

Or, if they have not been developed but are "irrevocably committed or needed for other uses," the county has to show why these specific sites are no longer suitable for agriculture or forest uses.

The county has also been required to update its maps so that property owners will know the current zoning, or re-zoning, of their property.

After much work and consideration of the existing problems in the Mt.

Hood area, the planning staff prepared a revised document, which now takes precedent over the 1976 plan. The old community plan is now considered background reading.

Also, the 1976 Mt. Hood Planning Unit Draft Environmental Statement, which was a cooperative venture between a number of state, county and federal agencies, including the U.S. Forest Service, the Department of Fish and Wildlife, the Bureau of Land Management and Clackamas and Hood River Counties, is also considered a background report.

One of the major changes apparent in the proposed plan is the elimination of the eight individual villages of the corridor. Only three "villages" are now recognized.

The county is proposing to recognize only Government Camp, Rhododendron, and Wemme/Welches as "distinct villages," each with their own "separate character and individual environment."

Areas no longer recognized include Brightwood, Sleepy Hollow, Wildwood, Zigzag-Lolo Pass and Alder Creek.

When the county first unveiled its draft of the area's revised plan it found itself under fire by the area's citizen planning organizations, who claim they did not have enough input into the process, nor were they allowed enough time to provide adequate input.

Recently, a new citizen's group, which goes by the name Sane Economic Development Association (SEDA), was formed to combat some of the proposed changes.

SEDA has retained land use attorney Diane Spies of Portland to assist them in getting an extension of time from the county to conduct a study on each parcel of property in the corridor in an attempt to assess what potential economic impact the proposed plan would have.

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Dean Barker plays the saxophone for the SUHS pep band during an awards assembly last week. Barker received the Louis Armstrong Award during that assembly.

## Pluses, minuses go with \$122,000 engine

by MICHAEL P. JONES  
Post Correspondent

Hoodland Rural Fire District's new \$122,000 engine is currently operational, giving the department a faster response time and a greater pumping capacity, not to mention increased safety for firefighters.

Fire Chief Don Armintrout said that the new engine has a 1000-gallon water tank with a 1,250 gallon per minute pumping capacity.

He said the diesel-fueled engine can accomplish this feat because it is equipped with a "deluge gun," a two-foot high by four-foot long piece of equipment that sits on top of the engine. The gun is specially designed for fighting large fires.

Firefighters now have the ability to get water on a fire within 30 seconds (once the engine gets to the site) as compared with the four minutes it took previously.

The new engine has an automatic

transmission and, according to Armintrout, "is nearly twice as fast" as the department's old 1968 Ford FMC engine.

The new engine can go about 47 miles per hour compared to the 22 miles per hour of the old engine.

The new engine is designed for mountain travel and can make the trip to Government Camp in 10 minutes. It took an average of 22 minutes in the old engine.

Armintrout said the 1982 engine is 30 feet long as compared with the 25-foot 1968 engine.

It is also 88 inches wide, just four inches more than the old engine.

Armintrout said with the increased size in the new engine that no longer do firefighters have ride on the tailboard. Rather, five firefighters ride inside the engine, which provides greater safety for personnel as well as allowing them to have their

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## Corvette takes plunge on Timberline Road

A 1969 Chevrolet Corvette plunged over a cliff on Timberline Road Sunday, injuring two people.

Rescue personnel from the Hoodland Fire Department responded to the call of a vehicle over an embankment between mile posts three and four at 4:22 p.m., according to Fire Chief Don Armintrout.

Injured in the crash was the driver, 46-year-old David Lee Hawke, 1460 S.E. Woodland Way, Milwaukie.

Armintrout said Hawke was transported by Alpine Ambulance and suffered miscellaneous lacerations and abrasions, and a possible fractured femur.

Also injured in the mishap was the passenger, 30-year-old Pamela Lois

Sprout, 250 S. Locus Street, Canby.

Sprout was also transported to Gresham Community Hospital for abrasions, lacerations and a possible dislocated right shoulder, said Armintrout.

According to an Oregon State Police spokesperson, Hawke's vehicle was headed south down Timberline Road toward Highway 26 when it failed to make a curve and plunged 40 feet down into a wooded, rocky area.

Hawke, who was driving with a suspended license, was cited at the scene.

The wrecked vehicle was removed Monday by Alpine Towing of Rhododendron.

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