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IDAHO CHAPTER
THE WILDLIFE SOCIETY

May 18, 1979

Mr. David M. Jay
Forest Supervisor
Targhee National Forest
420 N. Bridge Street
St. Anthony, Idaho 83445

Dear Mr. Jay,

Dean Carrier, President of the Idaho Chapter, The Wildlife Society asked the committee listed below to review the Draft Environmental Statement of the Island Park Geothermal Area. Comments on this Draft are enclosed.

I trust our comments will be helpful and fully considered as you prepare the final E.I.S. Thank you for the opportunity to review this document.

Sincerely,

A handwritten signature in black ink that reads "James F. Gore". The signature is written in a cursive, flowing style.

James F. Gore, Chairman
Environmental Issues Committee
10658 Winterhawk
Boise, Idaho 83705

Review Committee:

Joe Rose
Roy Heberger
Joyce Gebhardt
Rich Howard
James Gore

Enclosure

Review of Draft Environmental Statement for
Island Park Geothermal Area Targhee National Forest,
Idaho, Montana and Wyoming (ER-79/322)

General Comments

The geothermal resources and potentials for development in the IPGA are essentially unknown at the present. For that reason, partially, the draft EIS lacks the detail required for an in-depth and comprehensive evaluation of potential impacts adverse to present fish, wildlife, and habitat values. The section concerning potential impacts to the various resources of the project area would be easier to understand with a complete narrative description of impacts. Presently, it is difficult to quickly locate a specific item of concern; once located, the description of impacts is too general and sometimes too vague.

Formal consultation for threatened or endangered species should be reinitiated as testing and development become site specific, because the present biological opinion addresses only the early phases or general effects of resource development.

Specific Comments

Summary, page iii, item III. Environmental effects - Under the heading, "Potential Effects" certain items are listed which are difficult to classify as effects or impacts on the natural environment. The list follows:

1. Increased employment relative to the extent of discovery and development;
2. Additional energy for electricity, space heating and other industrial/agricultural uses;
3. Royalty payments and rent to Federal Government;
4. Increased tax base for effected counties; and
5. Social and economic stress from increased population.

We urge that these be listed under a separate major summary heading (i.e. IV) as Socio-economic impacts/effects. At least, arrange the "Potential Effects" with more concern for effects/impacts on the natural environment. "Increased employment..." is presently the first item and "Modification of wildlife habitat" is presently the last item.

Page xiv and List of Maps page 22 Water Resources. A map should be inserted showing the major flowing waters in the IPGA specifically including those water courses listed in Table 6, Page 29 and Table 19, Page 58. The exact location of these water courses is germane to a discussion of site-specific impacts and general areas which should be classified as "no lease" areas. Several of the streams listed are Class I Streams (Ref: 1978 Stream Evaluation Map, State of Idaho).

Page 6, Paragraph 4, line 2 and picture caption page 7. An apparent contradiction exists between the text and the picture caption:

"In some cases a drill rig...." vs "... large drill rigs are used...."

Are larger drill rigs used frequently or infrequently?

Page 10, Landtypes and soils, Paragraph 1, lines 5-6.

"... no surface water network is found in this area.."

To where, specifically in the IPGA does this statement refer? To our knowledge, the IPGA is a network of flowing surface waters.

The last two sentences on this page are the same.

Pictures throughout the DEIS - some have captions, others do not. Consistency is lacking.

Page 22, Paragraph 4, last line, and Map 4 - If a substantial geothermal resource is located near an area where seismic disturbances are highly probable, eventual development would include careful evaluation of construction with seismicity in mind.

Page 31, last paragraph - The sample size for measurement of turbidity appears small.

Page 32, last paragraph - The last three words should be deleted. Animals are not primary producers and as such do not consume nutrients such as nitrogen and phosphorous directly. Nitrogen and phosphorous are very likely in a metabolic pool with phosphorous being the limiting nutrient to plant life. If nitrogen becomes limiting before phosphorous, then nitrogen fixing blue-green may appear. Certain blue-green algae are unique to oilgotrophic waters and are not indicators of enrichment.

Page 33, Paragraph 5, last line - Although pesticide or herbicide residues were not detected in select streams in the IPGA, residues would very likely be detectible in aquatic organisms known for their ability to concentrate toxic substances.

Page 42, Paragraph 1, lines 1-2 - Wildlife communities do not "...result from" ... vegetation patterns. They may be distributed relative to vegetative patterns and other factors.

Vegetative patterns (not "designs") in IPGA do not appear homogeneous. They are very likely heterogeneous as are most patterns of floral and faunal distribution.

Page 44, Paragraph 1, line 1 - Insert "behavioral" before the word "adaptability."

Page 45, Table 16 - We suggest the word "known" be inserted above the word "harvest."

Page 55, Paragraph 4, line 2 - The phrase "...but none nested..." re: Peregrine falcons is somewhat over confident. We suggest "...but no nesting was observed or reported..." The IPGA is a vast area, and falcon distribution is very likely super-dispersed.

Page 55, Paragraph 5 - The southern and northern races of bald eagles are no longer separated on the federal list of threatened and endangered species. The word "Northern" should be omitted from the reference to bald eagle.

Page 59, Paragraph 2, line 1 - Insert the word "major" before the word "streams."

Page 60 text and Table 20 - The methodology for sampling benthic macro-invertebrates in select flowing waters of the IPGA is not clearly stated. Methodology, sampling, design, and degree of macroinvertebrate identification are important when diversity indices or a treatment/control approach are used. Examples follow:

1. A treatment/control sampling design requires that upstream and downstream stations are similar with respect to substrate, flow, temperature, morphometry, enrichment, and percent shading.
2. Sample size should be adequate to detect change or difference and should be indicated in the text.
3. The kind of diversity index calculated should be so named in the text, and actual diversity index values should be included in Table 20.
4. Computations of diversity indices are strongly influenced by the degree of effort that goes into the identification of benthic macroinvertebrates. Some indication of taxonomic levels to which organisms were identified should be included in the text, and tabular data on their estimated densities should be included in Table 20 or another table.

5. The subjective criteria used to determine the arbitrary classifications of excellent, good, and fair, with respect to evaluating calculated diversity indices, should be clearly stated in the text.
6. Actual values of diversity indices should be used in Table 20.
7. Actual biomass determinations should be used in Table 20.

Page 67-Transportation - Posted road closures will require enforcement in order to be effective.

Page 72, Table 28 - Units (i.e. number of persons) should be inserted at the top of the table or in the table caption (eg. See Table 29).

Page 74 - Public Issues and Attitudes - The sample size of interviewees needs to be more clearly stated. Presently it is unclear as to whether the 11 people were the interviewers or interviewees. The value of an "estimated response" is unclear because information about the panel of "5 knowledgeable people" who estimated theoretical responses is lacking. The type of information needed about the panel members should include the interest groups represented (public, private, professional, lay, etc.) and personal profiles.

Pages 77 to 86 - Alternatives - While alternative 1 would be least damaging to habitat and the biota of the IPGA, we concur that implementation of exploration and development on private lands would likely occur, resulting in less efficient resource use than if development were to occur on public lands. Alternative 6 is as unrealistic as alternative 1.

While alternative 2 provides a buffer strip along both side of Henrys' Fork of the Snake River, portions of other high quality streams are not so protected. Examples include Buffalo River, Moose Creek, Madison River, Warm River, Robinson Creek, and Snow Creek. Under this alternative the areas where leasing for geothermal exploration and development would be allowed, overlap with habitat of the grizzly bear (Moose Creek Plateau and Fish Creek Road areas), the sandhill crane (north of Gerrit, Idaho, and west of Eccles, Idaho), trumpeter swan (Buffalo River, south of Eccles, Idaho, and Madison River), and sage grouse (west and southwest portions of the IPGA).

With these riparian and wildlife habitat overlaps in mind, we reviewed proposed alternative 3. This alternative took into consideration wildlife habitat at the cost of wide buffer strips along Henrys' Fork, of the alternatives listed, this is our preferred choice.

However, we suggest another alternative which combines attributes of proposed alternatives 2 and 3 with fish, wildlife, habitat, and visual resource values referred to earlier in the text of the DEIS. Our suggested alternative listed below, would accomplish the following resource objectives:

1. Retention of the wide buffer strip along Henrys' Fork;
2. Deferred activity along the Madison River, and portions of Snow Creek and the Robinson River.
3. Protection of additional grizzly habitat in northeastern and southeastern portions of the IPGA;
4. Protection or deferment of activity in habitat used by elk, moose, trumpeter swan, sandhill crane, and sage grouse;
5. Deferred activity on deer and elk migration routes in western and southeastern portions of the IPGA;
6. Retention of areas of high visual quality; and
7. Prevention or determent of activity on several areas with high probability for geologic hazards.

Page 99, Table 33 - The definition of impacts to threatened and endangered species is too vague to be of much value. An explicit description of the effects to these species should be presented here.

Page 55 indicates that the bald eagle, peregrine falcon, gray wolf, and grizzly bear are known to occur in the IPGA. However, the Forest Service has consulted only on the grizzly bear under Section 7 of the Endangered Species Act of 1973. Section 402.04 (a)(1) of the Interagency Cooperation Regulations (50 CFR 402/43 FR 870) states that "it is the responsibility of each Federal agency to review its activities or programs and to identify any such activity or program that may affect listed species or their habitat." If a "may affect" determination is made, formal consultation should be initiated. If a "no affect" determination is made, no consultation is required unless requested by the Fish and Wildlife Service. The DEIS does not make a statement indicating that a may affect or no effect determination has been made by the Forest Service for the listed species. The Forest Service determination should be documented in the DEIS with a presentation of the data and rationale used to support the may affect or no effect decision. It is our understanding that the Forest Service has determined that the bald eagle, peregrine falcon, and gray wolf will not be affected based on the Forest Service's decision not to lease lands in the IPGA that would lead to impacts on these species.

If this statement or a similar one cannot be made in the DEIS or information exists which indicates that additional endangered or threatened species may be affected, formal consultation should be initiated.

The bald eagle and peregrine falcon may be adversely impacted by toxic effluents if a blow-out affected the feeding areas. The geothermal resource is of the "hot water" nature, which has the potential to chemically or thermally pollute the watershed in the event of a blow-out. Either eliminating the fish-food source or directly poisoning these raptors through the food chain will adversely affect these sensitive species. A discussion of these threats should be included in this section.

The above adverse effects may also apply to the trumpeter swan, a sensitive resident of the IPGA. Potential impacts to this species should be identified clearly.

Page 112, Table 36 - "Endangered" is twice misspelled. This should be corrected.