PARKLAND PROSPECTING

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President Kennedy's billion-dollar recreation wilderness land bill* would put on a national level what several states have already so wisely begun on their own. The two actions should be complementary; and, because they aim for the same goal, should get the utmost in general cooperation. Unfortunately, many stones remain in the road, and more shall be rolled in before the end is accomplished.

This situation concerns everyone because to live we must have some free breathing space for outdoor recreation—from reading in a rocker or lawn strollin, to skiing or cougar hunting. The U. S. Bureau of Census statistics assure us that our domestic population is exploding at the rate of 1.7 percent per year. This rate means (nuclear holocaust aside) that just thirty-nine years from now when the millennium arrives, our present population will have *doubled*.

Before industry, highways, and housing developments make a sea of cement for facilities for all these people, the legislation in question hopes to set aside now a tidy portion of good land so that trees, beaches, lakes, meadows, or other open lands will not become legendary things of the past. How to accomplish this task without having to pay tribute to profiteering real-estate speculators or without litigation against special interests is a problem. Keeping federal and state site selections compatible is another. Coordinating recreation with projected water-supply demands for personal and industrial needs is a third; but foremost is the problem of correct and accurate selection of recreation areas. Not all lands are good for park or wilderness areas. How can the authorities tell which is good and which not, without arousing the scalpers?

For instance, consider a problem in New York State, where in 1960 voters nodded "Yes" to a $75,000,000 bond issue solely for *acquisition* of parkland and in 1962 voted an additional $25,000,000 for this purpose. The state was fortunate in having acquired, as a gift from the U. S. Defense Department, the abandoned Sampson Air Force Base, a 1,265-acre "garden spot" on Seneca Lake. Some believed it ideal for immediate conversion for public pleasure; others held that it had poor park possibilities and should be traded to private interests for a more suitable tract elsewhere. How can recreation experts acquire adequate, substantiated data upon which to base a valid decision?

A major way to learn, quickly, positively, and economically, if land is right for recreation, is by proper interpretation of good aerial photographs. The U-2 incident alone points out that today's cameras, film, filters, and stabilizing devices are so good that some military reconnaissance requirements specify the detection of a two-foot-square object from pictures made at one one-hundreth of a second, nineteen miles up! Parkland prospecting photos require only the general commercial, 15,000- to 30,000-foot altitudes and a reasonable acuity. The trick is in the expert analysis of a skilled photo interpreter. By this technique, large parcels (up to hundreds of thousand acres) can be studied rapidly and efficiently for aesthetic values, engineering aspects, natural resources, location of transport routes, drainage, and possibilities for public education in the natural sciences.

A typical project of this nature was accomplished a short while ago in the Pacific Northwest. For purposes here, the area shall be called Gar Lake. This easily accessible watershed area, about thirty miles southeast of the nearest central point, was considered as a proposed park area. It comprises some two thousand acres with an additional twenty-five hundred acres along the access route. Another fifty-five hundred acres of primitive wilderness contiguous to the park site were also examined.

The problem was to determine whether this area was suitable for recreation use or not and, if so, what were some possibilities for the planners. The report of International Resources and Geotechnics, Inc., whose Outdoor Recreation Resources Department handled this study, gives a general appreciation of the geology, topography, drainage, soils and vegetation of the park site. To aid in evaluating the recreation potential, the report includes a preliminary summary of recreation advantages versus drawbacks and some development suggestions indicated from airphoto interpretation.

Vertical aerial photography of the site was viewed in the office by a stereoscope not too different from grandma's little parlor gem that gave us our first 3-D glimpse of Niagara Falls. Limitations imposed on this sort of study might possibly stem from small-scale photography or lack of published information about the geology, physiography, and biology of the site. However, considering the project, such limitations are not likely to have a significant effect on this investigation.

Topography. A vertical relief map (*Figure 1*), made from the airphoto, shows about a two thousand-foot altitude difference between high and low points. This is extremely rugged mountain terrain abruptly punctuated with narrow divides and steep slopes. Looking again at *Figure 1* , about half the slopes within the study area are very steep, greater than a hundred percent, or one foot up for one foot ahead. Nearly a quarter are steep (about forty to a hundred percent). In lesser quantities, slopes are a moderate fifteen to forty percent, and moderately flat (up to ten percent grade); while only two in every hundred acres are flat. *(These figures are used only to illustrate relief and are not intended to be a basis for computation or measurement.)*

Drainage. Surface water evaportes or soaks into the ground. Groundwater moves in coarse-textured soil layers (aquifers) of the main valleys and through bedrock fractures. For this park study, the drainage pattern developed in *Figure 2* is medium textured. The main stream of the accessible watershed occupies a "V"-shaped valley. Rudely formed glacial cirques complicate the upper slopes, thereby creating waterfalls as snowfed brooks follow fractures down the granite bedrock.

Gar Lake itself drains to the south through a chain of bead-like, small paternoster lakes connected by a spectacular series of waterfalls. The watershed proposed for development drains northward through a narrow steep-walled structure which conceivably could be an ideal damsite.

General Geology, Landforms, Soils. Spectacular avalanche scars can be seen extending down the steep valley walls, which may account for a lack of vegetation at those locations. Bedrock here is well exposed in cliffs on the base upper slopes and in landslide scars shown in *Figure 3*.

Fluvial and colluvial landforms are also present. *Figure 3* shows about half the area to be base rock. The lower valley sides are mantled with talus, slope wash, and landslide debris. Huge blocks of fallen rock dot the lowlands. Several fluvial fans occur where mountain streams reach their local base level. The wide-access valley outside the park area has many glacial terraces, doubtlessly composed of sand and gravel. The deposited soils appear coarse textured, rocky, free draining and trafficable.

Available Construction Materials. Rock, soil, and timber are abundant and accessible. Riprap and stone blocks can be gotten from the talus; sand and gravel from the terraces; and general soil fill from fluvial fans or from the main access valley. Considering all the foregoing facts and applying ground rules, experience, and common sense; two cases evolve, one for a park and one against.

Disadvantages for recreation use of Gar Lake are:

Small summer carrying capacity of the available land, mainly because the valley is V-shaped rather than U-shaped as is Yosemite Valley, with not enough flat land.

Access roads would have to be built for construction but then they would remain as the route to the park.

Rugged terrain leaves few possibilities for easy hikes or drives, thus diminishing suitability for family-group users.

Avalanches and landslides are a threat as evidenced by the many swaths in the vegetation. Snowfall is heavy as is rain.

Cold water from streams fed mostly by snow-melt combined with the short sun period on the lake and slow convection due to the depth make the lake water too cold for swimming most of the year.

On the other hand, the case *for* the park lies in some specific advantages:

Climate appears to be well suited for recreation use. Snowfall is heavy but the winters are not cold.. Both summers and winters lack extreme temperatures.

Foundation conditions and materials for building and road construction are good. The soil is free draining and trafficable. All materials are plentiful and accessible. Building low-cost access roads is possible with this natural subgrade. The terraced stream valleys that form the access route require only a small amount of grading.

Potential as-is is good for recreation use. There is magnificent scenery, steep slopes with rewarding vistas, many geological features with opportunities for horseback riding, hunting, fishing, and all winter sports. Such a park might seem best suited for nature lovers, geologists, campers, and winter sportsmen. Possibilities for trails leading to panoramic overlooks, grand waterfalls, and woodland lore.

However, where are the swimming, boating, summer sports, and family or group area? If Gar Lake is not good in these respects, then we should go back to the report for more facts. The answer can easily be seen from looking in turn at *Figures 1, 2 and 3* and relating them to each other. The relief may, the drainage patterns, the geology, and the site photo itself, when correlated, all indicate a natural damsite well suited for construction of a reservoir. This would provide water supply and a shallow, warmer lake for summer-winter recreation. It would also serve to shift the center of activity to the flatter area and change the entire concept of the development.

For this purpose a forty-foot-high dam would be adequate. A hundred-foot dam could be built without appreciable increase in its length. Below the dam there is a possible effective head of thirty to forty feet so that some power might be develop for local use. Even with a forty-foot dam, there is a possibility for future sale of power to logging companies planning nearby development. Materials for dam construction are available close to the site; foundation and abutment conditions appear to be excellent. Moreover, a natural site for an emergency spillway exists.

Development possibilities beyond those already mentioned can be fitted to the natural surroundings with a minimum of disturbance to the wilderness character. The possible plan evolved by completely bepassing the obvious land features, could only be accomplished by expert airphoto interpretation combined with adequate ground control, a truly space-age technology helping to lead us back to natural breathing room.

FIG. 1 RELIEF MAP

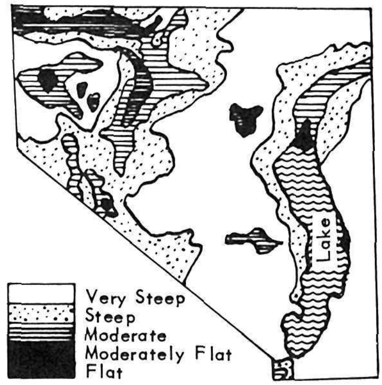


FIG. 2 DRAINAGE

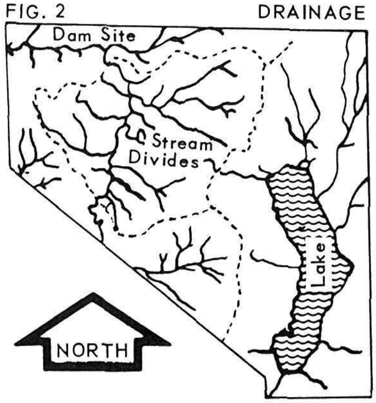
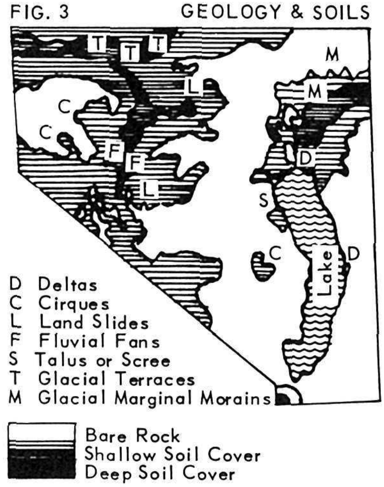


FIG. 3 GEOLOGY & SOILS



* The bill *(S174)* proposed a national wilderness system which would preserve seven million acres as wilderness. The bill was passed by the Senate during the First Session of the 87th Congress but late in the Second Session the House Committee on Interior and Insular Affairs reported the bill with numerous amendments under a rule which would not permit debate or further amendments on the House floor. The speaker of the House denied this request and subsequently the committee called two meetings to discuss this and other conservation bills but could not obtain a quorum. Therefore, the bill did not receive further consideration. It has been reintroduced in the 88th Congress. *(S4-HR295)*.

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