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be used in every city. A new recycling technology is needed. We should stop throwing metals away!

URBANIZATION OF THE NATION'S FLOOD PLAINS

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Should urbanization continue in an unregulated manner on the flood plains of the United States? Flood plains appear to be inferior places for urbanization for a number of compelling reasons. They are subject to flooding from the stream and from interior drainage. The alluvium in flood plains are water saturated and frequently contain soils of poor bearing properties. The high water table makes these areas unsuitable for many kinds of waste disposal. During earthquakes, water saturated alluvial soils may become fluidized causing building failure. Flood plains (especially bottoms) frequently are air pollution basins. Inversions have longer duration in valleys. Cold air moves downslope carrying pollutants. Cross winds can cause fumigations. What are the societal effects of living in an undesirable environment? The more affluent tend to move to a better location, leaving the poor to occupy the flood plains. The taxpayer subsidizes the occupancy of flood plains through protective works, lost taxes, disaster relief, and welfare payments. There is a need for a national land use conscience.

EXPLORATION AND DEVELOPMENT OF GEOTHERMAL RESOURCES IN CENTRAL AMERICA

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Geothermal prospects in El Salvador and Nicaragua are in the process of being developed for generation of electric power. Producing steam wells have been drilled in El Salvador but the Nicaraguan prospect has not passed the exploratory drilling stage.

The Ahuachapan geothermal area is located within the central graben of El Salvador; the areas explored in Nicaragua lie within the Nicaraguan Depression. These two structures constitute the dominant structural features of Central America. The Nicaraguan Depression contains a chain of Pleistocene and Recent volcanoes and many surface geothermal manifestations near the geothermal prospects. The Ahuachapan area is within a deeply eroded, partially filled caldera and has only small surface indications of geothermal activity.

Exploration involved geology, geophysics, geochemistry, and drilling of temperature-gradient wells. Geologic exploration included reconnaissance mapping, surface and water temperature measurements, and detailed mapping of geothermal prospect areas. Magnetic, gravity, and resistivity surveys in conjunction with the geochemistry of gases and water from hot springs and fumaroles aided in delineating the most favorable areas for drilling temperature-gradient wells. Shallow temperature-gradient wells were used as a guide for locating deeper wells from which the base temperature of the geothermal reservoir could be measured.

Disposal of waste water from the projects may be best accomplished by re-injection wells. High boron content makes surface disposal difficult in agricultural regions.

ROCKY MOUNTAIN SECTION

THE QUATERNARY ROCK GLACIER STRATIGRAPHY BEARING ON PINEDALE-NEOGLACIAL DEPOSITS

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Sopris, a granodiorite stock, and other Quaternary rock-glacier deposits. The Pinedale and younger ages are virtually based mainly on the following:

Age	%Lichens	Stone size
Gannett Pk.	< 5	angular
intermed.	10-36	ang. to
Temple Lk.	30-61	"
Pinedale	> 50	subang.

Lichen size and succession also help in dating deposits. Bull Lake and pre-Bull Lake rock glaciers are active. Rock glaciers are active and inactive. On some active and lichen-covered taluses point to the present downvalley movement history of movement is complex and does not reflect regional ice glacier advance and retreat.

Reconnaissance in the Rocky Mountains trapped as Temple Lake, including the thermal, because the boulders are covered by rinds. Hence, late Pinedale has higher altitude cirques than previously.

PRE-HERMAN STRANGLINES IN SOUTHERN NORTH DAKOTA

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The Herman Beach has long been known as an extensive level of Lake Agassiz. However, it is found in southeastern North Dakota at a lower Herman level. Most of the newly-mapped adjacent areas of wave-washed till, but with faulted and contorted bedding are found in the area, which covers about 1000 sq. miles where it is level-bedded, or on hills where it is commonly faulted and contorted. This level that flooded a widespread area of the northern plains melted, resulted in the disturbed bedding found elsewhere in North Dakota. The collapsed lake deposits associated with the lake sediment formed while Lake Agassiz was in the process of draining when the glacier still filled much of the northern plains. The lake drained the lake plain below the Herman Beach.