

**GOAL VII**

**AREAS SUBJECT TO NATURAL  
DISASTERS AND HAZARDS**

**BAKER COUNTY**

**COMPREHENSIVE PLAN**

**GOAL VII**  
**AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS**

**NATURAL DISASTERS and HAZARDS GOAL:** To protect life and property from natural disasters and hazards.

**I. TYPES OF NATURAL DISASTERS AND HAZARDS**

**A. Earthquakes** (See Plates #7 & #8 of Appendix I)

Baker County is situated in a physiographic area which, historically, has had minimal earthquake activity. Baker County, as well as the entire State of Oregon, is in Zone 2 on a 0-5 zone scale with 5 being most severe. Significantly, any of the origins (foci or hypocenters) of such quakes have occurred along the eastern boundary near the Snake River Canyon. Plate #7 shows origins as epicenters. An epicenter is an area on the surface of the earth's crust directly above the hypocenter or origin of an earthquake.

North Powder Earthquake: The North Powder Earthquake occurred August 14, 1969 at 7:37 a.m. This earthquake is the largest to have occurred in the recorded history of this area. The magnitude was 3.6 on the Richter Scale. Magnitudes of 8+ have been recorded for the most destructive quakes in other parts of the continent.

The Earthquake Information Center has been shifted from Department of Geology and Mineral Industries to U.S. Geological Survey.

**B. Surface Flooding**

1. Factors:

- a. Heavy snow pack combined with spring rain and fast melting of snow.
- b. Ice and debris jamming stream flow.
- c. Alluvial deposition of silt and gravel in stream beds.

2. Flood prone areas in Baker County have been surveyed and mapped on the Flood Hazard Boundary Map, Department of Housing and Urban Development, Federal Insurance Administrations. The effective date of the map was February 28, 1978.

C. **Ground Water** (See Plates #1 & #9 of Appendix I)

Condensation and precipitation (rain and snow) provide the water supply for both surface runoff and subsurface water pools and tables.

The mountains, as a result of precipitation, infiltration and percolation, are collectors for both the surface and subsurface waters. Mountains then, are the recharge areas for water supplies while the valleys, with their streams, lakes and swamps, are the discharge areas. Between the recharge areas and the discharge areas, depending upon variable soil compositions, will be a subsurface water table or reservoir of water.

The State Water Resources Department has primary responsibility for regulating subsurface water resources.

D. **Landslides**

Landslides and snowslides have occurred in the county in the past. However, such slides have happened on the mountain slopes away from settled areas.

An inventory of slides and obvious potential slides has been made. Primarily these areas are along the Snake River Road and at the south side of the confluence of the Powder and Snake Rivers. Those areas have been removed from development zoning.

Faults in the earth's crust, although existing, have not been mapped in detail on a county wide basis, nor has the potential for shifting or movement been established.

E. **Extreme Winds**

According to "Extreme Winds - 100 Year Recurrence Interval," a map from Bonneville Power Administration, U.S. Department of Interior, Baker County has wind velocities of 60 to 80 mph.

No tie down requirements in Baker County exist according to Mobile Home Tie Down Requirements Map, published by the Oregon Department of Commerce, Building Codes Division, Salem, 1979.

F. **Forest and Range Fires**

Protection from the Oregon State Forestry Department is available on state-owned lands

and on inventoried private range and forest lands, pursuant to ORS 526 and ORS 273.

**G. Noise Emission**

DEQ has primary responsibility for regulating noise emissions. Insofar as possible, Baker County attempts to reduce incompatible uses by inventorying as follows, known sites where noise levels are higher than ambient levels:

1. Baker Municipal Airport
2. Baker Redi-Mix
3. Oregon Portland Cement

**F. Sources of Information**

1. Uniform Building Code, Building Codes Division, Department of Commerce, Salem, 1979
2. Chris L. Wheeler, State Engineer, Thirty-Fifth Biennial Report July 1, 1972 to June 30, 1974
3. Baker Office, Department of Geology and Mineral Industries
4. LaGrande Office, Department of Forestry, Oregon State, Personal communication.

**II. GOAL VII NATURAL DISASTERS and HAZARDS FINDINGS and POLICIES**

**A. Goal VII Natural Disasters and Hazards Findings**

Based upon the above information, the county governing body finds that:

1. "Areas of natural disasters and hazards" are areas that are subject to natural events that are known to result in death or endanger the works of man, such as stream flooding, groundwater, erosion and deposition, landslides, earthquakes, weak foundation soils and other hazards unique to local or regional areas.
2. Stream flooding occurs periodically when heavy mountainous snow packs are combined with rapid and prolonged increases in temperature. Such flooding is potentially more hazardous when associated with spring rains and ice jamming, or other debris jamming of stream channels.

The Federal Insurance Administration (FIA), pursuant to the National Flood Insurance Act (NFIA), has primary responsibility to provide the county with maps and other data

to support local level flood plain management regulations. Such maps and data include a Flood Insurance Rate Map and potential flood elevation data.

An adopted Flood Plain Ordinance exists in Baker County. Its implementation will not await receipt of flood elevation data from FIA flood prone areas, as identified on the FIA preliminary maps, are so noted on septic tank and building permit requests, on requests for administrative action, and in staff reports for Planning Commission land use decisions. Judgments of flood hazard are based upon staff and Commissioners' knowledge of local flooding patterns and frequency, newspaper accounts of past flooding, information available from Baker Valley Irrigation District, and when and where available, flood elevation data from FEMA.

The Department of Environmental Quality administers regulations for construction of subsurface septic systems in known areas of high groundwater and in areas known to be subject to surface flooding. Identification of these conditions is noted on DEQ applications by the Planning Director in accordance with the Federal Insurance Administration Maps.

The State Uniform Building Code, as administered by the Department of Commerce, provides for minimum standards of construction in earthquake zone two which is throughout Oregon; for floodproofing in flood prone areas (Chapter 56); for foundation construction in various soils. Flood plain designations are a function of zoning sign-offs in Baker County for DOC applications.

3. Erosion and deposition, as occurs naturally, is associated with high stream levels during spring runoff and summer freshets. The flood control function of multiple use reservoirs would contribute to the control of erosion and deposition of stream channels.
4. Land areas along the slack waters of the Powder River and along the west shore of the Snake River that are particularly vulnerable to landslides and/or flashfloods have been inventoried by Baker County and have been removed from the recreational residential (RR-1) Zone.
5. Forest and range fires, whether initiated by a natural event or by man are potentially a threat to man and his works. The magnitude of any loss of life or works would be more dependent upon the location and density of dwellings and other works than upon other factors. In any event, proposed dwelling unit densities of more than one dwelling per acre of rural land should be evaluated as to the availability of fire suppression facilities and access ways for ingress and egress.

The State Department of Forestry has authority and levies assessments for fire suppression on private range and forest lands, excluding buildings and other structures.

Such department has authority to establish and maintain cooperative agreements, for fire suppression on forest and range lands, with other districts and agencies.

To supplement the above, Baker County finds that tree farming to reduce natural fuels in forested areas and the construction of forest buildings with fire-retardant materials will reduce the threat of wildfire to structures, reduce the spread of structural fires to forest and range lands, and generally aid in the suppression of wildfire.

6. Hazardous soils and soil conditions have been inventoried for all Exceptions areas of the County. A program to restrict the building of structures on the inventoried hazardous soils shall be implemented.

**B. Goal VII Natural Disasters and Hazards Policies**

The county governing body declares that:

1. Such areas involved in this land use goal have been inventoried. However, it is recognized that in some instances a more detailed and conclusive inventory should be done. In particular, regulations currently adopted and implemented will be enhanced at periodic updates of this plan as further information becomes available.
2. Developments subject to damage or that could result in loss of life shall not be planned or located in known areas of natural disasters and hazards without appropriate safeguards.