



# **CITY OF PHOENIX**

## **Comprehensive Land Use Plan**

### **NATURAL RESOURCES**

**August 20, 1984**  
**Salem**

**As Amended**

**August 20, 1984 (Ordinance No. 576)**

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SECTION V.  
NATURAL RESOURCES  
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## SECTION V.

### NATURAL RESOURCES

#### INTRODUCTION

This section of the Comprehensive Plan is intended to address all major natural resources in the Phoenix area, establish related policies, and to satisfy the requirements of statewide planning goals #5 and #6.

#### GOAL #5 SUMMARY

Statewide Planning Goal #5 is:

*“To conserve open space and protect natural and scenic resources.”*

The City is required to provide programs that will (1) insure open space, (2) protect scenic and historic areas and natural resources for future generations, and (3) promote healthy and visually attractive environments in harmony with the natural landscape character. The City is also required to inventory the location, quality and quantity of all major resources found in the area. These resources are to be managed in a manner that will protect their original character. Where conflicting uses have been identified the economic, social, environmental and energy consequences of the conflicting uses shall be determined and programs developed to achieve the goal. Toward the end of this section is an assessment of these “ESEE consequences”.

The following definitions are important to this section of the Plan:

CULTURAL AREA – An area characterized by evidence of an ethnic, religious, or social group with distinctive traits, beliefs, and social forms.

HISTORIC AREAS - Lands with sites, structures and objects that have local, regional, statewide or national historical significance.

NATURAL AREA – Land and water that has substantially retained its natural character and land and water that, although altered in character, is important as habitats for plant, animal or marine life, for the study of its natural historical, scientific or paleontological features, or for the appreciation of its natural features.

OPEN SPACE – Lands used for agricultural or forest uses, and any land area that would, if preserved and continued in its present use:

- (a) Conserve and enhance natural or scenic resources;
- (b) Protect air or streams or water supply;
- (c) Promote conservation of soils, wetlands, beaches or tidal marshes;
- (d) Conserve landscaped areas that reduce air pollution and enhance the value of abutting or neighboring property;

- (e) Enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or sanctuaries, or other space;
- (f) Promote orderly urban development.

SCENIC AREAS – Lands that are valued for their aesthetic appearance.

WILDERNESS AREAS – Areas where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. It is an area of undeveloped land retaining its primeval habitation, which is protected and managed so as to preserve its natural conditions, etc...

### GOAL #6 SUMMARY

Statewide Planning Goal #6 is:

*“To maintain and improve the quality of the air, water and land resources of the state.”*

The Goal #6 guidelines go on to state that “all waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. With respect to the air, water and land resources of the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards, and implementation plan, such discharges shall not (1) exceed the carrying capacity of such resources, considering long-range needs; (2) degrade such resources; or (3) threaten the availability of such resources.

### PHYSICAL SETTING

The city of Phoenix is located along Bear Creek, on the valley floor of the bowl-shaped Bear Creek Basin. The elevation is approximately 1,500 feet with a hill rising to about 1,690 feet. With the exception of this hill, the topography of the community is relatively flat, but slopes gradually toward the northeast and Bear Creek.

### SOILS & LAND QUALITY

Soils in the Phoenix area range from fine-textured and fairly well-drained loams to rocky hillsides. The best quality soils (for agriculture) are located on the valley floor. These soils have, to a great extent, washed down from higher elevations or have been deposited by floods along Bear Creek. Although this is the best soil for agriculture, it is also the best location for urban development and much of the land within the urban growth boundary is committed to the latter.

The following is a summary of the soil types found in the Phoenix area, as mapped by Jackson County:

**Figure 1**  
**Phoenix Area Soils**

Soil Type	Slope	Agri. Class Irr/Nirr	Comments
1A Newberg Fine Sandy Loam	0-3%	IV/II	Typically wet soil with high water table and found in Bear Creek flood plain.
3A Evans Loam	0-3%	IV/II	Wet with high water table. Bear Creek flood plain area.
4A Medford Silty Clay Loam	0-3%	IV/I	Small amount along both sides of freeway.
75A Camas-Newberg-Evans Complex	0-3%	VI/IV	Low and wet soils found in vicinity of Bear Creek and within the Greenway area.
18D Brader-Debenger Loam 20D Brader-Debenger Loam	7-20%	VI-IV	Shallow soil to sedimentary rock. Found only on hill in southeast portion of UGB. Rock outcroppings. Used for limited grazing and partially covered with hardwoods and brush.
70B Manita Loam	2-7%	IV/II	Small area east of the freeway, partly in orchard use.
55B Ruch Silt Loam	2.-7%	IV/II	Much of the western urbanizable area consists of this soil and is in use as small hobby farms and home sites.
71B Selmac Variant Silty Clay Loam	3-7%	IV/III	Seasonally wet in spots. High shrink-swell clay substratum that will affect stability where exposed. Temporarily perched groundwater may need drainage. Found on hill at south City limits. North side of hill has been developed for low-density residential use.

Although there are existing agricultural uses within the present Urban Growth Boundary, these uses are marginal at best and all areas within the UGB have been determined to be needed for the City's future growth. Agricultural

Soils are adversely impacted by the effects of past development, by high ground water that has formed marshes and wet areas, and by urban encroachment. The few orchards that have survived are not expected to last long. They are older orchards and their economic feasibility is declining. Newer replacement orchards are being planted in better locations, often on hillsides that have better soil drainage and lower frost damage.

The soils in the Phoenix UGB are suitable for urban development. Even the hillside areas are fairly stable, according to the County's soil scientist, are suitable for low-density residential development of the type proposed in this Comprehensive Plan.

### MINERAL & AGGREGATE RESOURCES

The only area having a significant potential for the mining of mineral resources or the extraction of aggregate is the floodplain of Bear Creek. This area is publicly owned and is within the Bear Creek Greenway, an area currently being developed by Jackson County and affected communities for recreation and natural preservation. Bear Creek has a history of mining and prospecting and these activities are continuing in accordance with state and federal regulations. The City of Phoenix has developed a BCG, Bear Creek Greenway, zoning district to include this area and to provide for mining and aggregate resource extraction, but in a manner that will have minimal adverse impacts on the natural environment.

### FISH & WILDLIFE HABITATS

The Bear Creek Greenway corridor passes through the center of the Phoenix urban growth boundary area, paralleling Highway 99 and the Interstate 5 Freeway. This corridor is mostly wooded, not easily accessible in most areas, and is the only significant area of natural habitat that remains in the area. The City's BCG zone and the County's Bear Creek Greenway Plan are consistent in their efforts to manage this fragile area in a manner that will ensure the preservation of the natural environment for generations to come. These preservation efforts will also help to ensure the protection of existing wildlife habitats.

Large wildlife, such as deer, elk or bear, are not generally found in the Phoenix area, although it is not uncommon for black-tailed deer to venture into the area and wander through the Greenway area. Bear tracks have been found along Bear Creek in the Talent area, but this is very rare and there are no known bear habitats in the Phoenix area.

Upland game and waterfowl are prevalent in the Phoenix area, including the ringneck pheasant, valley quail, morning dove and ducks. Their habitats include the Bear Creek Greenway area and other brushy areas along Coleman and Anderson Creeks, other tributaries, and farm or orchard lands. Some of these species have been known to cause considerable damage to agricultural crops, as well as home gardens.

Water areas, particularly along Bear, Anderson and Coleman Creeks are the homes of such fur-bearing animals as the river otter, mink, muskrat, beaver and

raccoon. Small animals associated with the agricultural areas and wooded hillsides include skunks, foxes, coyote, weasel and an occasional bobcat. These types of animals are probably in the greatest danger of urban encroachment and will be forced to move further to the east into the most distant hills as urban development occurs. These are not considered endangered species and, in most cases, are also not compatible with the human habitat. Beaver cause considerable damage to streams and irrigation canals with their dams, which can block the normal flows and result in flooding. Beaver also destroy fruit and ornamental trees that are placed near these waterways for purposes other than dams. Skunks and raccoons often visit domestic gardens and lawns and prey on fowl. Muskrats sometimes tunnel into the banks of irrigation canals, damage yard areas and dams for private ponds. These and other animals, such as moles, gophers, etc., will not be significantly threatened by the gradual expansion of Phoenix. They will have to place to live within the Bear Creek Greenway and, if that isn't sufficient, there are miles of open agricultural and natural areas surrounding the community.

The Bear Creek Valley is considered a significant stop-over area along the north-south flyway of many bird species. The Bear Creek Greenway area is especially attractive as a place to stop, rest and feed and is an ideal habitat for many song birds. In addition to these, some Northern Bald Eagles, which are on the Oregon Threatened Species List, have made Bear Creek their home, although it is not known if any eagle habitats are specifically located in the Phoenix area.

According to the Bear Creek Greenway Plan, the suitability of any stream for fish production is dependent on (1) accessibility to adult fish, (2) spawning success, (3) food supply, (4) cover, (5) rearing areas, and (6) water quality. Bear Creek is sufficient in size and environmental quality to have all of these features and, therefore, also has fish, including a resident trout population. However, irrigation drawdown during the summer months makes trout habitation in the lower portions of the creek virtually impossible. To correct this problem, various affected agencies have been working together on policies and procedures related to minimum stream flows in attempts to stabilize the flows to ensure an improved fish habitat. Bear Creek and some tributaries support runs of Winter Steelhead, Fall Chinook and Coho Salmon, in addition to trout. However, these runs have declined. Fish are particularly sensitive to the quantity and quality of water. The fish habitats have been adversely affected over the past few decades by such activities as over-appropriation of water for irrigation, unregulated gravel removal, channel alterations, removal of damage to stream bank vegetation, sedimentation and erosion, and the use of pesticides and other chemicals. Also, as urbanization continues along Bear Creek, urban runoff increases and carries all sorts of contaminants into the creek, from chemicals to gasoline and oil from parking lots and streets.

The City has a long list of the many mammals, birds, wildlife, and fish that inhabit the area. This list is not included in the Plan because of its length, but is available for review at City Hall. According to the Bear Creek Greenway Plan document, Bear Creek and its riparian habitats include seventeen species of amphibians, eleven species of game fish, seven species of non-game fish, eighteen species of reptiles, seventy species of mammals, and at least 168 species of birds. By far the majority of these reside within the Bear Creek Greenway, which makes this environmental corridor the primary focus of attention for protection and preservation in the Phoenix area.

**Figure 2**

HYPOTHETICAL LIST OF  
MAMMALS, REPTILES AND AMPHIBIANS  
FOUND ALONG BEAR CREEK

Possibly Present

Likely to be Present

MAMMALS		REPTILES
<input checked="" type="checkbox"/> Shrew Mole	<input checked="" type="checkbox"/> Botta Picket Gopher	<input checked="" type="checkbox"/> Western Pond Turtle
<input checked="" type="checkbox"/> Broad-footed Mole	<input type="checkbox"/> Pacific Jumping Mouse	<input checked="" type="checkbox"/> Western Fence Lizard
<input type="checkbox"/> Townsend Mole	<input checked="" type="checkbox"/> House Mouse	<input type="checkbox"/> Sagebrush Alligator Lizard
<input checked="" type="checkbox"/> Throwbridge Shrew	<input checked="" type="checkbox"/> Black Rat	<input checked="" type="checkbox"/> Southern Alligator Lizard
<input checked="" type="checkbox"/> Wandering Shrew	<input checked="" type="checkbox"/> Norway Rat	<input type="checkbox"/> Northern Alligator Lizard
<input checked="" type="checkbox"/> Pallid Bat	<input type="checkbox"/> Ringtail or Miner's Cat	<input checked="" type="checkbox"/> Western Skink
<input checked="" type="checkbox"/> Big Brown Bat	<input checked="" type="checkbox"/> Coyote	<input checked="" type="checkbox"/> Rubber Snake
<input type="checkbox"/> Silver-haired Bat	<input checked="" type="checkbox"/> Mountain Lion or Cougar	<input checked="" type="checkbox"/> Common Garter Snake
<input checked="" type="checkbox"/> Red Bat	<input checked="" type="checkbox"/> Bobcat	<input type="checkbox"/> Western Terrestrial Garter Snake
<input checked="" type="checkbox"/> Hoary Bat	<input checked="" type="checkbox"/> Long-tailed Weasel	<input checked="" type="checkbox"/> Western Aquatic Garter Snake
<input checked="" type="checkbox"/> California Myotis	<input checked="" type="checkbox"/> Mink	<input checked="" type="checkbox"/> Western Aquatic Garter Snake
<input checked="" type="checkbox"/> Long-eared Myotis	<input checked="" type="checkbox"/> River Otter	<input type="checkbox"/> Northwestern Garter Snake
<input checked="" type="checkbox"/> Fringed Myotis	<input checked="" type="checkbox"/> Raccoon	<input checked="" type="checkbox"/> Ring-necked Snake
<input checked="" type="checkbox"/> Long-legged Myotis	<input checked="" type="checkbox"/> Spotted Skunk/Civet Cat	<input checked="" type="checkbox"/> Sharp-tailed Snake
<input checked="" type="checkbox"/> Little Brown Myotis	<input checked="" type="checkbox"/> Striped Skunk	<input type="checkbox"/> Striped Whipsnake
<input checked="" type="checkbox"/> Yuma Myotis	<input checked="" type="checkbox"/> Black Bear	<input checked="" type="checkbox"/> Racer
<input type="checkbox"/> Townsend Big-eared Bat	<input type="checkbox"/> Red Fox	<input checked="" type="checkbox"/> Gopher Snake
<input checked="" type="checkbox"/> Mexican Free-tailed Bat	<input checked="" type="checkbox"/> Grey Fox	<input checked="" type="checkbox"/> Common King Snake
<input checked="" type="checkbox"/> Black-tailed Hare	<input checked="" type="checkbox"/> Black-tailed Deer	<input checked="" type="checkbox"/> Mountain King Snake
<input checked="" type="checkbox"/> Brush Rabbit		<input checked="" type="checkbox"/> Western Rattlesnake
<input type="checkbox"/> Mountain Beaver		
<input checked="" type="checkbox"/> Beaver		
<input checked="" type="checkbox"/> Porcupine		<b>AMPHIBIANS</b>
<input type="checkbox"/> Yellow-pine Chipmunk		<input checked="" type="checkbox"/> Western Toad
<input type="checkbox"/> Townsend Chipmunk		<input checked="" type="checkbox"/> Pacific Tree Frog
<input checked="" type="checkbox"/> Northern Flying Squirrel		<input checked="" type="checkbox"/> Yellow-legged Frog
<input checked="" type="checkbox"/> Western Gray Squirrel		<input type="checkbox"/> Red-legged Frog
<input checked="" type="checkbox"/> Muskrat		<input checked="" type="checkbox"/> Bullfrog
<input type="checkbox"/> Calif. Red-backed Vole		<input checked="" type="checkbox"/> Long-toed Salamander
<input checked="" type="checkbox"/> Oregon/Creeping Vole		<input type="checkbox"/> Pacific Giant Salamander
<input checked="" type="checkbox"/> Calif. Meadow Vole		<input checked="" type="checkbox"/> Rough-skinned Newt
<input type="checkbox"/> Townsend Vole		<input type="checkbox"/> Del Norte Salamander
<input checked="" type="checkbox"/> Dusky-footed Woodrat		<input type="checkbox"/> Ensatina
<input type="checkbox"/> Bushy-tailed Woodrat		
<input checked="" type="checkbox"/> Harvest Mouse		
<input checked="" type="checkbox"/> Deer Mouse		
<input checked="" type="checkbox"/> Pinon Mouse		
<input checked="" type="checkbox"/> Beechy Ground Squirrel		

Source: Stephen P. Cross

## WATER AREAS

The Phoenix area does not include any lakes or other major water areas. The only natural water areas are Bear Creek, Coleman Creek, Anderson Creek and other minor tributaries. Bear Creek is discussed in several sections of this Plan and is considered the most significant water resource and environmental area within the UGB. Further discussion of the quality of water is contained later in this section.

## ENERGY SOURCES

The Phoenix area does not contain any known quantities of fossil fuels such as coal, nor is the wind frequent or strong enough to make wind power feasible. Bear Creek runs fairly flat through Phoenix and the potential for hydroelectric generation is not considered feasible at this time. The only major energy source readily available to Phoenix residents is solar. The potential for solar usage is discussed in Section IX (Energy Conservation) of this Plan.

## NATURAL AREAS

The Bear Creek Greenway is considered a natural environmental corridor of local and regional significance and passes through the center of the Phoenix urban growth boundary area. As discussed in other sections, the County has developed and adopted a master plan for the preservation and recreational use of the Greenway and the City has prepared a zoning district for local protection and management consistent with the County's plan. Further discussion of the recreational aspects of this area is included in Section XII (Recreation) of this Plan.

## SCENIC VIEWS

Being located on the floor of the valley, Phoenix residents and visitors enjoy views of the surrounding mountains. Within the community itself, there are no particular views or vistas that are significant enough to warrant protection through City ordinances or visual easements of any kind. The City encourages the planting of landscaping and trees, which often block views of surrounding mountain views, which are readily available by walking a short distance in most cases anyway. There are no designated or potential scenic highways in the Phoenix area.

## CULTURAL AREAS & HISTORIC SITES

Although it is known that Indians once frequented areas of the valley floor, especially along the Bear Creek corridor, no known Indian sites or other archeological sites exist in the Phoenix area. The City does have a number of historical buildings, which are described in Section VI (Historic Resources) of this Plan. Related policies are also included in that section of the Plan.

## OPEN SPACE NEEDS

Section XII (Recreation) outlines the City's policies regarding the future provision of lands for open space and recreational needs. The only significant area proposed to remain in its natural state as protected open space is the Bear Creek Greenway. Since this natural corridor will pass through the center of Phoenix, it will provide a visual relief from the urban environment in a very centralized and effective location. Rural agricultural lands, hills and mountain surround the community and will provide additional open space opportunities for pleasure walking, bicycling, jogging, sightseeing and other activities of Phoenix residents who may desire to be in that type of rural "open space" environment. Parks, school fields and playgrounds, and other urban open areas will also be available within easy reach of all residents.

## CLIMATE

The climate should be considered a very important natural resource of Phoenix and the entire Rouge Valley. This part of Southern Oregon enjoys a moderate but distinctive climate with marked seasonal characteristics. Late fall, winter and early spring months are generally damp, cloudy, and cool and under the influence of marine air from the west. Late spring, summer and early fall are generally warm, dry and sunny and make this area exceptionally attractive to tourists, as well as local residents who enjoy camping, hiking, boating, and the many other outdoor recreational activities that are available.

The rain shadow of the Siskiyou Mountains and Coast Range results in a relatively light annual rainfall, most of which falls during the winter season. Occasional light summer rainfall is brought by thunderstorm activity which primarily affects the mountain areas (and is often the cause of lightning caused fires). Snowfall is quite heavy in the surrounding mountains during the winter months, providing an adequate water supply for summer irrigation and domestic use during the dry summer months. Snowfall on the valley floor is very infrequent lasting only a few hours in most cases.

Annual precipitation throughout Jackson County ranges from a low of about 18 inches to a high in the mountainous areas of the Cascades of over 60 inches. The Phoenix area averages between 20 and 25 inches per year.

The temperature range is also moderate in the valley. Winter average daily minimum temperatures are slightly below freezing in December and January. Summer average temperatures are slightly below 90 degrees with occasional days of 100+ degrees. High temperatures are always accompanied by low humidity, and hot days in summer generally give way to cool nights as cooler air drains down the mountain slopes into the valley. This ensures fairly comfortable weather.

Winds are generally light in the valley and prevail from the south during the winter and from the north during the summer. The light winds, along with the surrounding mountains, contribute to the valley's air pollution problem, which will be discussed later.

## WATER QUALITY

Water follows a never-ending hydrologic cycle of precipitation, evaporation, transpiration, and runoff. Water is used and re-used and changes its form, but continues through the cycle. Man uses water for both “consumptive” and “nonconsumptive” uses. Consumptive uses are those that take water for domestic use, irrigation, municipal or industrial uses and do not return it to the source. Nonconsumptive uses result in minimal damage to water resources, such as for hydroelectric power generation, fish ladders, water recreation, etc.

An important “consumptive” use of water has been the use of wells for domestic water and irrigation. Wells tap the groundwater that fills the open spaces in the soils and rocks beneath the surface, but is an unknown quantity and could be depleted. Groundwater is also adversely affected by human usage and polluting activities. This has been demonstrated throughout the County by many wells either going dry or being contaminated in various ways.

Water can become contaminated at any point in the hydrologic cycle. Acid rain is not yet a local problem, but is a good example of how the water cycle can be affected by pollutants in the air, or transmitted to the air through evaporation or other means. Pesticides, herbicides and other poisons that are commonly spread over the land for various reasons also affect the quality of water, particularly groundwater. These are often washed into drainage ditches, creeks, river, lakes, or percolate into the ground with rain water. Eventually they find their way into the groundwater system where they can remain for years, depending on the characteristics of the chemicals involved. As additional chemicals are used over the years, they too seep into the ground, compounding the problem underground where it is least visible but very damaging. A source of groundwater contamination that is most prevalent in the Phoenix area is that of failing septic systems and other methods of improperly disposing of wastes. Also, storm drain systems that are designed to carry rain water runoff into the nearby creeks are sometimes used for the dumping of waste liquids. They also carry urban runoff from streets and parking areas that often contains gasoline, oil, and other materials.

Water quality problems are usually classified as “point” or “nonpoint” sources. A “point” source is defined as a discharge into a stream, river, etc., by way of direct conveyance such as pipe, ditch, channel, or sewage treatment plant. A “nonpoint” source is less specific and includes discharges from timber and agricultural activities, construction, mining activities, urban storm drains, and other sources that cannot easily be pinpointed. Therefore, nonpoint sources of pollution are widespread and much more difficult to control than point sources.

The Department of Environmental Quality (DEQ) is the lead agency with the primary responsibility for managing water quality in the State under the authority of applicable federal and state statutes, rules, and standards. This includes long-range planning, current planning, permit procedures, regulation of waste discharges and other activities. The DEQ has established plans and objectives aimed at water quality, and programs for the prevention and control pollution.

Nonpoint sources of water pollution have been regulated by the DEQ under the authority of the Federal 208 Program in the past. Locally, the Rogue Valley Council of Governments is the agency responsible for the development and implementation of local programs. RVCOG has a water quality coordinator on its staff to develop and implement these plans and programs. Studies and related activities and local coordination have produced the “Agricultural Water Quality Management Plan for Jackson County”, which is the basis for improvement activities in the valley. In addition, this effort has continually monitored various creeks, tracked down pollution “point” sources, corrected those problems, and has worked toward general water quality improvement throughout the valley. Procedures have also been established to coordinate area emergency teams to deal with “spills” that occasionally occur and threaten waterways or groundwater.

Although the RVCOG water quality program has been federally funded, to a large extent, in the past, grant funds have dwindled and the continuation of this program will depend largely on local funding in the future. The Clean Water Act is currently being reviewed and modified. It is possible that this area could receive some federal funds in the future to continue this program, but there is no guarantee at the present time. Water quality is dealt with most effectively at the regional level and, in most cases, small cities such as Phoenix have neither the staff expertise nor the budget to deal effectively with such regional issues.

The quality and quantity of Phoenix’ domestic water supply is adequate to accommodate the needs of future development, as outlined in this Plan. More detail on the water supply is provided in Section VIII (Public Facilities and Services). The quality of the groundwater and water in local creeks is less safe from pollution and deterioration. The City’s efforts to cooperate with Jackson County in the implementation of the Bear Creek Greenway Plan will help to ensure the quality of Bear Creek and its natural vegetation and habitats. The extension of City sewer lines to provide for new and newly-annexed development will help to eliminate existing septic systems. Extension of water lines will reduce the area’s reliance of the groundwater supply and may allow it to gradually build back up. There are also other activities that the City can undertake, promote, or require of City residents that will also have positive effects on water quality and quantity. These are included in the policies at the end of this section.

## AIR QUALITY

As previously discussed, Phoenix is centrally located within a natural basin surrounded by mountains which tend to restrict air circulation and the dispersal of contaminants that are generated within the valley.

A nationwide Environmental Protection Agency (EPA) survey of air pollution potential identified southern Oregon interior valleys as having one of the highest potentials for pollutant buildup in the United States. This is due to a combination of low wind speed, frequent inversions that limit vertical air circulation, and the topography of the valley. Problems in the forms of winter fog and summer “smog” result when contaminants cannot be dispersed and accumulate near the valley floor.

Vehicle emissions, industrial exhaust, wood and waste burning and soil disruption associated with urbanization all add to the air pollution problem. Several contaminants including carbon monoxide (CO), hydrocarbons (HC), and particulates are serious problems in the Bear Creek Valley. Another problem is “smog”, measured now as ozone, which results when sunlight reacts with HC and oxides of nitrogen (NOx). As a result of serious violations of State and Federal standards, the Bear Creek Valley has been designated an Air Quality Maintenance Area (AQMA) by the EPA, which has also directed that local steps be taken to reduce air pollution and to plan future growth in a manner that will not cause further deterioration of the air quality.

Air quality analyses are performed by Jackson County and the Department of Environmental Quality. A March 1980 update of the document entitled Background Information on Air Quality summarized the air quality of this area, listed adopted Federal, State and local standards and the degree of violation for each pollutant. Because of the locations of the air quality monitoring devices, a detailed analysis of the air quality in the Phoenix vicinity is not possible at this time. However, based on the data in the Air Quality report, the following conclusions pertain to the Phoenix area as well a other areas within the AQMA:

1. The Medford-Ashland AQMA has a high potential for air stagnation and the accumulation of air pollutants. Visibility reduction is a frequent and severe problem.
2. Total suspended particulate matter exceeds the State and Federal standards in the Medford, Central Point and White City areas, but not the Phoenix area. The primary sources of these particulates are industry, paved road dust, and residential wood burning.
3. All communities within the AQMA are affected by ozone. The primary sources are industry and motor vehicles, which are sources of nitrogen oxides and volatile organic compounds, which react in the presence of sunlight to form ozone.
4. The responsibility for controlling air pollution is shared by the local, state and federal governments. Jackson County is responsible for controlling mobile sources in County areas and the DEQ enforces all industrial pollution control rules in the County. The Federal government sets nationwide air quality standards and regulations; however, the states and local governments may adopt more stringent standards and regulations if they wish.
5. Air quality sampling is performed daily at locations within the AQMA. Additional air monitoring stations are needed to provide further information regarding the levels of air pollution, the transportation of air pollutants, and the effectiveness of air pollution control measures, including those at the local level.
6. Phoenix does not have the serious CO violations that re found in the downtown area of Medford. However, the standards are being exceeded occasionally in Phoenix also.

7. About 80 percent of CO is distributed by motor vehicles. It is anticipated that any increase in traffic associated with anticipated population or industrial growth will aggravate the existing CO levels.
8. Since we have no control over the weather, temperature inversions and resulting air stagnation will continue to occur in this valley.

Although it would be impossible to clean the air of all contaminants, a more practical goal of the community might be “to ensure the maintenance of existing air quality while striving to achieve federal, state and local air quality standards.” A number of air quality related policies are included in the policies of this Plan section.

It is expected that the implementation of air quality maintenance measures will involve primarily motor vehicle, burning, and industrial sources. Jackson County recently prepared an Inspection & Maintenance (I&M) Program for the inspection of automobiles. This program was submitted for voter approval and failed by a nearly 3 to 1 margin. Because of the failure on the part of local government in this area to effectively deal with air quality, the EPA may soon mandate certain actions and/or implement economic sanctions as a penalty for noncompliance. Motor vehicles will continue to be a target for new programs.

Industrial sources of pollution require evaluation and permits from the Department of Environmental Quality. In addition, the Jackson County Environmental Quality Commission adopted the Medford-Ashland Offset Rule in 1979. This rule requires a new source of emissions to provide and demonstrate proportional reductions in existing pollution in the air shed. Major increases in existing sources are also included and the rule applies to sources that have the potential to emit five tons per year, 50 pounds per day, or ten pounds per hour of particulate matter. The offset rule applies to sources that have the potential to emit 20 tons per year or 200 pounds per day volatile organic compounds as well. Phoenix may be able to make use of this system also, to ensure that new industries that may wish to locate here are either relatively emission-free or that they provide air quality improvements in proportion to anticipated increases by that new industry. The DEQ would approve such plans.

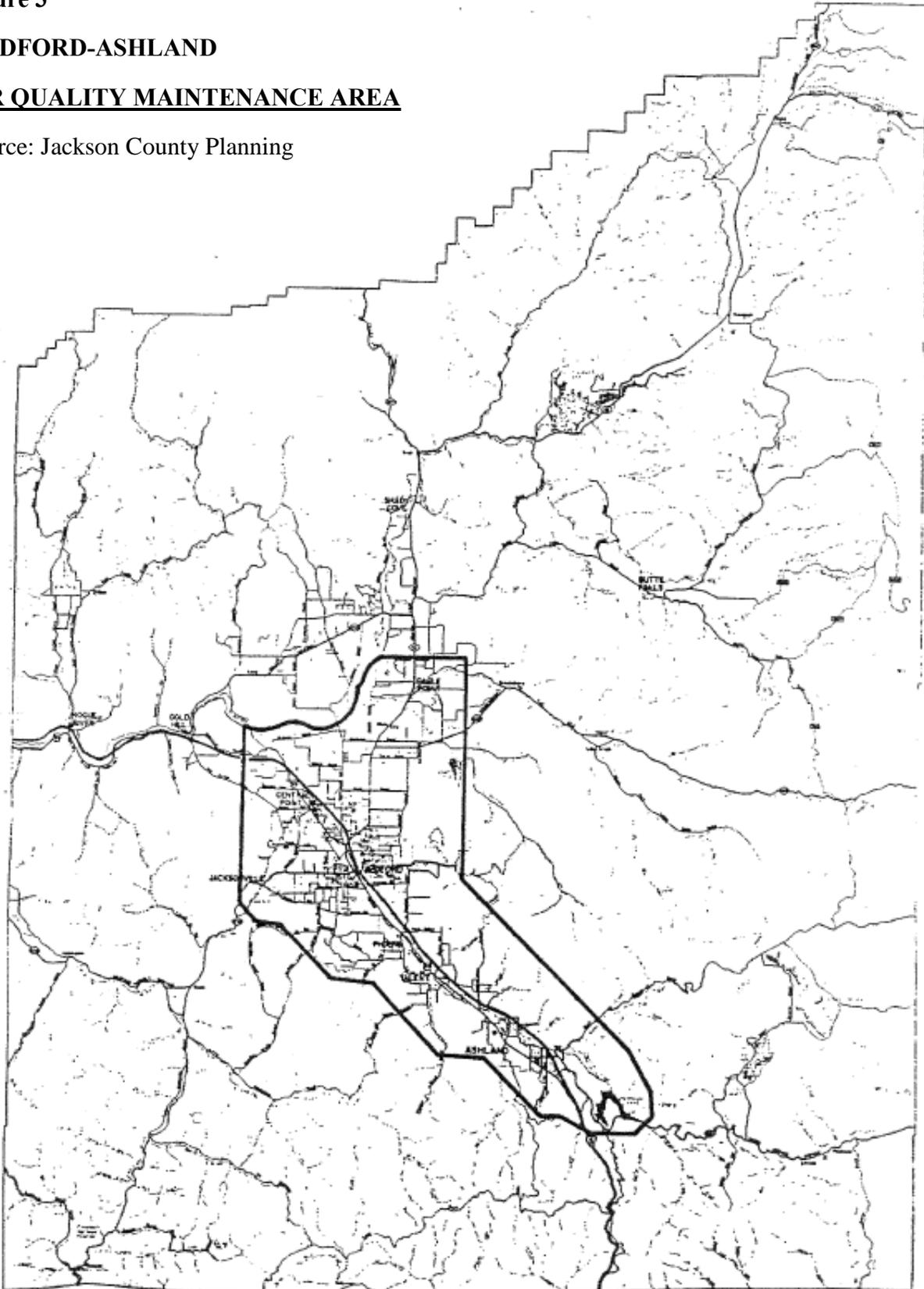
In conclusion, air quality improvements in the Phoenix area will require cooperative efforts between the City, County, DEQ, and possibly the EPA in order to make progress toward established standards. Since urban growth will have a long-range impact on our air-quality, the City’s land use planning decisions related to the types and densities of growth are very important, especially as they pertain to motor vehicle transportation. The City has designed the Comprehensive Plan to include an efficient circulation system of streets and highways, and has included the highest densities of residential development in loose proximity to mass transit (bus) routes and shopping areas. These and many other considerations will help to reduce the reliance on the private automobile, will increase mobility, and will result in the coordinated and efficient growth of the community.

**Figure 3**

**MEDFORD-ASHLAND**

**AIR QUALITY MAINTENANCE AREA**

Source: Jackson County Planning



## ESEE CONSIDERATIONS

This section of the Plan has identified and described all the significant natural resources in the Phoenix area. In accordance with the requirements of statewide planning goal #5, the City must also identify any conflicting uses that may affect the management of these natural resources. Where conflicts are identified, the City is required to determine the economic, social, environmental and energy (ESEE) consequences of the conflicts and to develop programs that will achieve the goal. The following is this ESEE assessment.

### CULTURAL AREAS

No specific areas characterized by evidence of an ethnic, religious, or social group with distinctive traits, beliefs, or social forms are known to exist in the Phoenix planning area.

### HISTORIC AREAS

Section VI (Historic Resources) of this Comprehensive Plan includes the City's inventory and assessment of historic buildings and sites. Potential ESEE consequences are as follow:

Economic: There may be conflicts between the cultural or community value of a building or site and the economic value of that site for some other use, as proposed by the owner or potential developer. The City's intention is not to take away the economic potential of private property, but to ensure that all options are carefully considered prior to any action, including opportunities for preservation or relocation of the structure.

Environmental: No environmental conflicts noted.

Social: The importance of an historic building or site to the community, as a whole, might be considered a social conflict, if that structure is being threatened in some way. Historical ties are important to the social fabric of the community but are not vital to health and safety or other current considerations. It will not be known exactly how strongly the community feels about any one site or structure until that structure is threatened. The City is establishing the framework now to ensure that procedures exist when such actions take place.

Energy: In its efforts to weatherize and ensure energy-efficient construction, the City must be careful to make exceptions for some historical structures, when weatherization may affect the basic design or character of the structure. This is not a problem, considering the small number of affected structures in the community, and it will be at the discretion of the owner whether or not to weatherize.

### NATURAL AREAS

The only significant natural area in the Phoenix UGB is the Bear Creek Greenway corridor which passes through the center of the area from southeast to northwest, parallel to Highway 99 and I-5 Freeway. As stated in this section, County has developed a Bear Creek Greenway Plan for the long-range protection and recreational develop-

ment of this corridor, and the City has developed a BCG, Bear Creek Greenway, zoning district which is consistent with the County's Plan. The Greenway is now well protected, but the following ESEE conflicts must be addressed:

Economic: All the land within the Greenway is owned (or being negotiated) by public agencies, primarily the County or State and these lands are designated for environmental preservation with minimal development. The protection and proper development of the Greenway could greatly improve the image of Phoenix and its recreational opportunities, and could result in economic benefits to the community. There are no apparent economic conflicts.

Social: The Greenway, and natural environmental areas in general, are important to the image of the community and also to the peace and mental health of its residents. It will provide an environment in which urbanites can "commune with nature", relax, or exercise, and do it within the community, within easy reach of all residents. There are no known social conflicts with the Greenway Plan.

Environmental: The Greenway is a natural environment and is proposed for preservation. There are no conflicts with property owners or other interests, although mining and aggregate removal will have to be closely monitored to prevent unnecessary damage.

Energy: No Conflicts.

#### OPEN SPACE

Open space includes a wide variety of uses throughout the Phoenix UGB. Within the UGB, agricultural lands and hillsides are the most obvious open spaces. Through implementation of the Comprehensive Plan, these areas will be needed for urban development and much of the "open space" character will disappear.

Economic: The transition from agricultural or undeveloped lands to urban development will be to the economic advantage of the land owner and to the City. Agricultural lands are currently marginal or unproductive and are poorly located in areas more suitable for urban development. The importance for urban uses far outweighs the importance for continued agricultural or "open space" land uses.

Social: Urbanization of open spaces within the UGB is planned and is needed to provide for urban opportunities, such as housing, commercial, jobs, schools, etc. These social benefits outweigh the loss of these open spaces.

Environmental: The City and UGB of Phoenix are surrounded by agricultural and open space lands with views of the surrounding mountains. The loss of agricultural open space within the UGB will have a very minimal impact and is not considered significant. Urban open space, in the form of school facilities, parks, etc., will provide for local open space needs in accordance with City standards.

Energy: The energy implications of urban centered growth are much more desirable than is the retention of those areas in open space rather than energy-efficient urban areas, as planned. There are no apparent energy-related conflicts pertaining to open space.

## SCENIC AREAS

All lands that are of significant value for their scenic qualities lie outside the Phoenix UGB, with the exception of the Bear Creek Greenway, which has been discussed previously. There are no apparent ESEE conflicts pertaining to scenic areas.

## WILDERNESS AREAS

The Bear Creek Greenway comes closest to the definition of wilderness area. The Greenway's development and protection plans are aimed at the preservation of its natural qualities, including animal, fish, and bird habitats and natural vegetation. As discussed under the heading of "Natural Areas", and ESEE conflicts are very minimal and already accommodated in the Greenway Plan and City zoning district.

## WATER QUALITY

As discussed in the Water Quality portion of this section of the Plan, programs aimed at maintaining or improving water quality are most appropriately carried out at the County or regional level. The valley's groundwater and creek waters were identified as the most important targets of action and various programs are already under way to accomplish related objectives. At the local level, clean water is extremely important to the social and environmental interests of the community, and related activities should be higher priority than private economic interests.

Economic: It sometimes costs money to ensure clean water. Residents may be required to install sewer lines instead of septic systems, and storm drains, and water lines to replace wells. These will help to clean up the water, but will be costly. These requirements, however, have already been determined to be necessary and programs are in effect to mandate these types of improvements in efforts to ensure the highest possible quality of water.

Social: Clean water is vital to the public health and safety and is also important to future community growth. Efforts to clean the water sources will benefit society as a whole with few social conflicts.

Environmental: The quality of water in the local creeks is very important to the fish habitats, vegetation, and general quality of these waterways. Efforts to clean the water will benefit the environment considerably. No significant conflicts are expected.

Energy: There are no apparent energy conflicts related to water quality in the Phoenix area. An indirect benefit may result when farmers apply better management practices to irrigation procedures that prove to be more energy-efficient and cost-effective.

## AIR QUALITY

As discussed, Phoenix is located within the Medford-Ashland AQMA and will be affected by future actions to reduce the levels of air pollutants. The City's land use plan is based, in part, on energy efficiency and reducing the reliance on the automobile, which will also help reduce the air pollution levels. There may be ESEE consequences of actions taken by the City or other entities in efforts to improve the air quality, as follow:

Economic: Clean air will mean economic costs to many, possibly including major industries and the owners of motor vehicles. Industries will be required to have expensive filters or other types of air cleaning systems. Programs such as “Inspection and Maintenance” (I/M) will force individuals to keep their cars tuned and properly maintained, which will cost them money but may also prolong the life of their automobiles. Another consideration is that some major industries may be prohibited from locating in this valley because they cannot meet air quality requirements. This could be considered an economic loss in terms of dollars and jobs, but is overshadowed by the importance of clean air to the health of the populace. No programs are necessary at this time in Phoenix to counteract any adverse economic consequences of actions to clean up the air.

Social: Although poor air quality could slow the rate of growth in this valley, there appear to be no significant social impacts related to air quality efforts.

Environmental: Poor air quality affects humans and the general environment in which we live, making the area less healthy than it could (or should) be. There are no apparent aspects of the air quality improvements efforts that would conflict in any way with the local or regional environment (natural). Clean air will benefit the natural environment and retention and improvement of the environment will, in turn, help to filter and clean the air.

Energy: Because of the topography and climate of this valley, it will probably take additional energy to clean the air and maintain its cleanliness. Industrial filters will require energy to operate; debris that might have previously been burned will have to be hauled to a landfill; dusty dirt roads will be paved to reduce particulates; and other efforts will require additional energy, at least over a short term. The expenditures of this energy is considered worthwhile if it accomplishes the objectives, since clean air is one of the highest priorities of this valley.

## NOISE CONSIDERATIONS

As a community grows in size and density, it will also feel the gradually increasing effects of noise. Increasing numbers of people, motor vehicles, construction activity, and other characteristics of the urban environment tend to increase noise. Today, noise is one of the Country's major pollution problems and, if not controlled, can jeopardize the health and well-being of those affected. Although noise has not been a major problem in Phoenix (with one or two exceptions), it will become increasingly important in planning and development decisions as the City continues to grow.

Statewide Planning Goal #6 requires that the City address noise in its Comprehensive Plan. Since there are several major generators of noise in and around Phoenix, these sources of potential "noise pollution" will be discussed so that the City will be aware of the possible effects in the future. The primary intent of this section is to provide an informational discussion of noise and its impacts so that future land use and development decisions can be made in an appropriate and knowledgeable manner.

## NOISE CHARACTERISTICS & MEASUREMENT

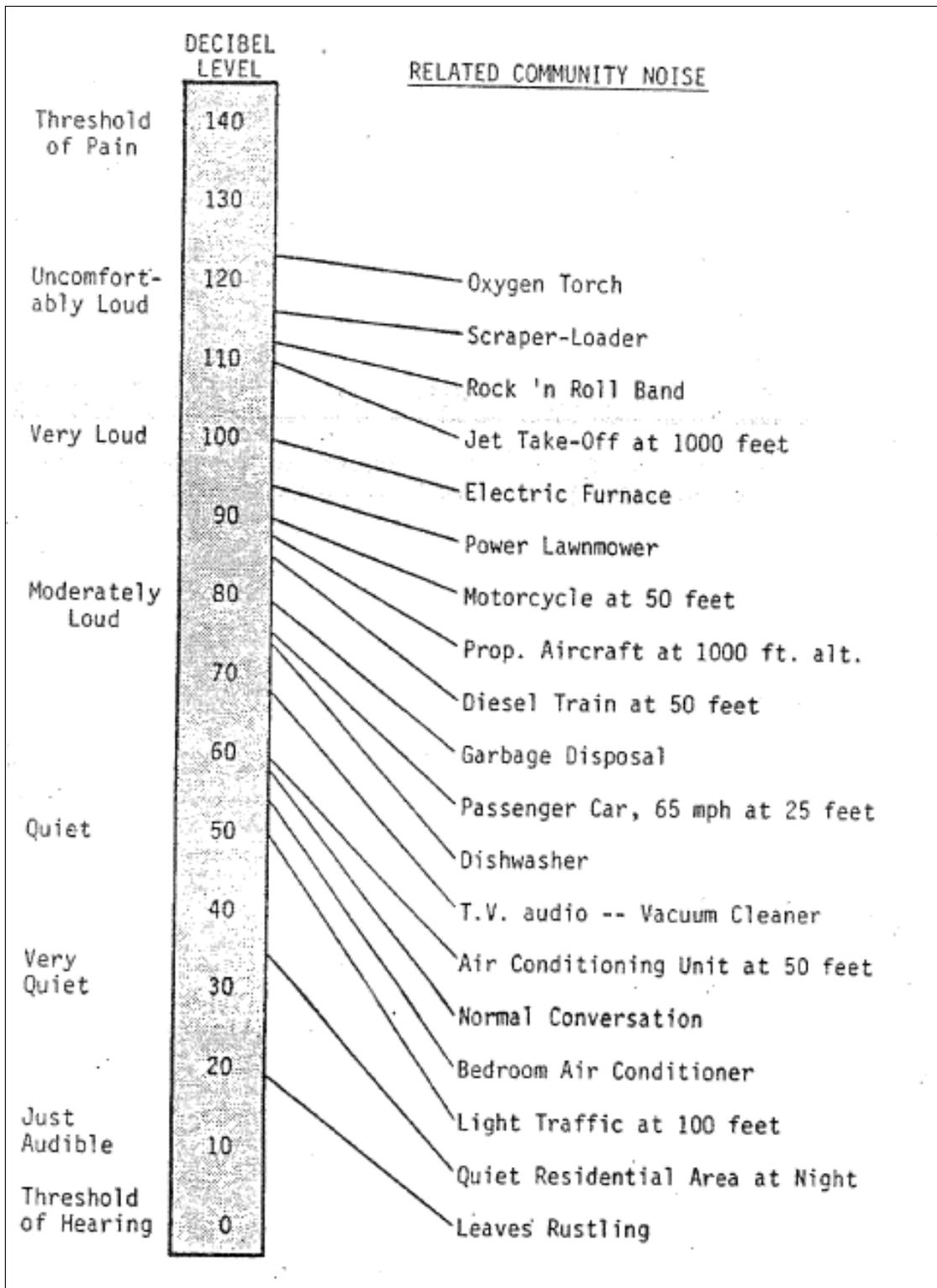
"Noise" might be generally defined as "undesirable sound" and is often a matter of taste or preference, which makes regulation difficult at times. For example, a loudly-amplified music recording that is very entertaining for one person, may be annoying to his neighbor. In efforts to deal with such problems, various agencies have developed standards for monitoring noise and have also expanded local ordinances to include noise restrictions.

Noise is measured with meters that come in various scales. Probably the scale used most often is the Community Noise Equivalent Level (CNEL) which is based on the noise measurement (decibel) as designated by the symbol "dB", and adjusted for the human ear. This is known as "A-weighting" (dBA), through which the acoustical signal is detected by the microphone and then filtered to heavily weight those portions of the noise which are most annoying to the human ear.

Typical noise levels in Phoenix generally range from a low of about 30 dBA (very low) to 100 dBA (very high) and occasionally higher. The Table of Sound Levels (Fig. 4) on the following page lists the decibel ranges and examples of the types of sources that might create each noise situation in a typical urban environment.

In contrast to the obvious noises with known sources, there is a large class of intermediate sounds, usually referred to as "ambient" or "background" noise. These sounds are not always noticed, but are usually present. Since ambient noise is a large mixture of individual noises from many sources, it is impossible to control effectively and often increases as the size and density of the community increases.

Sounds that exceed the ambient background noise levels are called



**Figure 4**  
**Table of Sound Levels**

Source: U.S. Environmental Protection Agency

“intrusive” sounds. These intrude through the ambient levels and are usually easily to identify. Examples might include automobile horns, squealing tires, loudspeakers, construction equipment, a train going through a town, a police siren, etc. Although some of these sounds may already be prohibited in Phoenix by City or traffic codes, they are very difficult to control because of their temporary nature or lack of stationery source.

**NOISE IMPACT**

Noise is capable of causing detrimental physical and psychological effect and discomfort. Noise levels above 85 dBA can contribute to hearing loss when experienced for long durations. In 1972, Congress enacted the Noise Control Act which authorized the Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of noise “requisite to protect the public health and welfare with an adequate margin of safety.” These “annoyance levels” are as follow:

**Figure 5**

<b>MAXIMUM NOISE LEVELS FOR PROTECTION OF HEALTH AND WELFARE</b>	
<b>Effect</b>	<b>Level</b>
Hearing Loss (health)	70 dB*
Outdoor Activity Interference and Annoyance	55 dB**
Indoor Activity Interference and Annoyance	45 dB**
* Averaged over a 24-hour period.	
** Averaged over a 24-hour period with a nighttime weighting of 10 dB (10 PM to 7 AM)	

The EPA has stated that millions of people are significantly impacted by noise and many are exposed to levels of noise that can damage their hearing or health. The World Health Organization estimated that more than \$4 billion is spent by United States industry each year for noise-related absenteeism, reduced efficiency, workman’s compensation claims, and mental illness. Obviously, noise levels in the workplace can be very important to the health of the worker as well as the economics of the company and its productivity.

Studies of sound have also determined that sound can affect body muscles and other organs. It has been found that sounds of short duration over 70 dB may cause changes in the muscles and glands which can affect the rate of heartbeat, constrict peripheral blood vessels, alter breathing, and affect digestion. Exceptionally intense noise levels (130 dB and greater) can result in vertigo and cardiovascular disorders and may also produce changes in the function of the brain, adrenal glands, and reproductive organs. Such noise levels are rarely reached in Phoenix.

More relevant to Phoenix are the problems related to sleep or speech interference, especially as they affect the young. Constant noise often adversely affects the development of speech patterns in children and may seriously hamper school programs. Therefore, it is especially important to ensure a noise-free environment around public schools, libraries, and other public facilities where people meet and communicate.

### NOISE STANDARDS

Standards and guidelines for the control of noise have been developed by several State and Federal agencies, including the Federal Highway Administration (FHWA) and Department of Housing and Urban Development (HUD). In many cases, countries and individual communities have adopted noise ordinances that are more closely related to their specific environment and problems.

To aid in the evaluation of noise issues, the noise ranges included in the following table (Figure 6) are considered to be maximum acceptable for each of the various land uses. Although these are HUD standards, the City of Phoenix may determine that more restrictive levels should be placed on certain types of land uses, or that walls, fences, or other buffers be installed to “attenuate” the noise that results from a particular source.

### MAJOR NOISE SOURCES IN THE PHOENIX AREA

#### Interstate 5 Freeway

The I-5 Freeway passes through the center of the urban growth boundary and parallels the east side of Bear Creek. The freeway is a very important transportation asset to the community, but it also generates noise, with a potential for increasing noise levels as traffic volumes continue to increase over the years.

The Federal Highway Administration has established “design noise levels” as a basis for determining noise impact along freeways. The FHWA design noise level for residences, motels, schools, parks, churches, hospitals, and recreation areas, is an hourly noise level of  $L_{eq}$  67 dBA, which is an average or “equivalent continuous level”. Noise contours, based on this noise level, were plotted on aerial photographs and it was found that more than 4,000 residential dwellings are subjected to noise above the FHWA design levels along Oregon freeways.

Proper community land use planning can greatly reduce the number of noise conflicts. It will be to the benefit of Phoenix to ensure that land use planning takes into consideration the impacts of noise and to ensure that all new development in noise impact areas is properly noise insulated.

At the present time, the only residential development that may be impacted by freeway noise is Bear Lake Mobile Home Park. The Comprehensive Plan includes provisions for the future expansion of this development. When such expansion is proposed, the City should ensure that the development is designed in such a manner that freeway noise will have minimal impact and that any dwellings that may be within the present or future noise impact area are appropriately insulated for noise attenuation. The same provisions should apply when other residential lands are developed along the east side of the freeway, as proposed on the Comprehensive Plan map.

To a lesser extent, Holiday R.V. Park may be affected by freeway noise but is not as serious as permanent residential neighborhood. Also, the Pear Tree Truck Stop on the east side of the interchange may be within a noise contour-oriented facility and not adversely affected by noise.

#### SOUTHERN PACIFIC RAILWAY

The SPRR rail line passes through a portion of Phoenix, paralleling Colver Road. This line serves local industry and provides only freight service to the valley. The impact of railroad noise on the community has not been determined. However, freight traffic is generally light and the City has received very few complaints about train noise. Noise levels and resulting contour lines depend on a number of factors, including the number of trains per day, their average lengths and speeds, the gradient of the tracks, etc.

The Southern Pacific Railway Company has expressed a concern about the deficiency of suitable industrial sites in the valley that could use rail facilities. Much of the land along the railroad in Phoenix is planned and zoned for industrial use and most of that land is presently in various industrial uses. If additional industrial development occurs in Phoenix along the rail line, it is possible that railroad noise could increase somewhat over present levels. It may also be possible that the railroad could add passenger service through the valley at some time in the future, which could also result in more trains and higher noise levels.

The City of Phoenix realizes that railroad noise is unavoidable and that future development, especially residential, will have to be designed with noise attenuation in mind when within the critical noise contours of the SPRR line. Some existing residential neighborhoods may already be impacted by railroad noise to some extent, although it is not considered a serious problem at this time.

#### RECREATIONAL NOISE

Another source of community noise, especially during daytime hours, emanates from recreational sources, such as ball fields, school playgrounds, active parks and other facilities throughout the community.

Fortunately, the activities that take place in these areas are usually confined to daylight hours and do not often cause major problems. Recreational noise is usually not very irritating to most people, although some forms can produce a considerable amount of noise and can be very intrusive, such as off-road vehicles, gas-powered model airplanes, motorcycles, etc.

#### COMMERCIAL & INDUSTRIAL NOISE

Noise is often a part of the day-to-day operation of many commercial and industrial businesses and any restrictions on noise should take into consideration the characteristics of each particular use and be related to appropriate standards for that use.

During the early planning and design stages of new commercial and industrial developments, appropriate noise attenuation devices should be considered as an integral part of the design, especially if the facility could have a noise impact on residential or other noise-sensitive land uses nearby. The addition of a berm, wall, or other attenuator could result in greatly reduced noise levels as well as a more attractive development.

#### RESIDENTIAL NOISE

Typical residential noise might include power lawnmowers and other small power tools, air-conditioning units, excessively loud human voices, barking dogs, amplified music equipment, and motor vehicles. Large barriers or walls are generally not appropriate within residential neighborhoods to reduce noise. Probably the most effective way to deal with the residential noise problem is through the cooperation of the residents themselves and their consideration of their neighbors' rights to quiet and privacy. When this fails, a "noise regulation ordinance" or other appropriate codes are available to deal with the problem as a nuisance. Residential neighborhoods are generally the most quiet areas of the community and it should be the policy of the City to ensure that neighborhoods are not adversely impacted by noise from outside sources such as nearby commercial or industrial areas or major transportation facilities. The Land Use Plan for Phoenix was designed with noise impacts in mind and various procedures are included in the Plan for reducing adverse impacts of conflicting land uses, including buffering.

#### CONCLUSIONS

The City of Phoenix has several major sources of potential noise problems, as discussed above. However, noise is not currently a major issue and, with some specific exceptions, has not been a problem. As the community continues to grow, it can expect new noise-related problems brought on by higher densities, close proximity of conflicting uses, heavier traffic, and other factors. The City's Comprehensive Plan attempts to minimize these problems through good land use planning and overall balance of land uses in appropriate locations. The following policies are intended to further minimize noise problems and ensure a peaceful and healthy community.

## NATURAL RESOURCES POLICIES

### General Policy

1. The City of Phoenix shall require all new developments and land uses to comply with State and Federal environmental quality statutes, rules, and regulations.

### Cultural Areas

1. The City shall maintain an awareness of any newly-discovered cultural or archeological sites of significance within the City and urbanizable area and shall notify the appropriate affected agency or organizations upon discovery to determine the value and to arrange for study or preservation.

### Historical Areas

- Historic preservation policies are contained in Section VI, Historic Resources, of this Plan document.

### Natural Areas

1. The City shall cooperate with Jackson County in efforts to preserve the natural environment of the Bear Creek Greenway
2. The City shall study the feasibility of developing recreational facilities related to the Greenway, or bicycle routes providing a linkage to the regional bikeway, in accordance with the Greenway Plan and with the policies of Section XII, Recreation.
3. The City shall complete the development and adoption of the BCG, Bear Creek Greenway zoning district to provide for the protection of the Greenway and to control those types of uses that will be permitted within the Greenway.
4. The City, through its Site Review process, shall continue to require the retention of trees, natural vegetation, and the general environmental preservation of areas along Coleman and Anderson Creeks, as appropriate.

### Open Space & Scenic Areas

1. The City shall continue to provide for future public open space and recreation facilities, in accordance with the guidelines and standards contained in Section XII, Recreation
2. The City's UGB is designed to accommodate future "urban" growth and it is not the City's intention to preserve farmland or other non-urban lands within the UGB for open space purposes.

3. The Bear Creek Greenway is recognized as the City's most obvious and significant open space corridor and the City shall ensure that its open space potential or visual impact is not adversely affected by poorly-designed or inappropriate growth and development on adjacent lands.
4. The City shall continue to maintain all public lands within its jurisdiction in an attractive manner that will enhance the image and appearance of the community.

#### Water Quality

1. The City shall cooperate with the Bear Creek Valley Sanitary Authority (BCVSA) in its efforts to extend sewer service to health hazard areas of failing septic systems.
2. The City shall support the expansion of the Medford Regional Sewage Treatment Plant's capacity, as necessary to meet increasing flows from the increasing growth and development of the valley.
3. The City shall be selective in its choice of future industrial development and discourage those having unusually toxic effluent, unless such industries provide pretreatment prior to discharge into the sewer lines, as required by the Regional Treatment Plant.
4. The City will continue to monitor the condition of its existing sewer lines and strive to replace those sections that are badly deteriorated or leaking to prevent contamination of the groundwater.
5. The City shall support the efforts of the Rogue Valley Council of Governments to reduce nonpoint water pollution sources, including those aimed at the quality of Bear Creek and its tributaries.
6. The City shall support Jackson County and the State Department of Geology and Mineral Industries in their efforts to control pollution from mining, quarry operations, and aggregate removal activities, particularly within the Bear Creek Greenway
7. The City shall require the retention of the natural creek channels and vegetation along Coleman and Anderson Creek as a method of natural filtering of the water before it gets to Bear Creek.

#### Air Quality

1. The City shall consider further restrictions on open burning of debris within the City limits, particularly during seasons of higher than normal pollution levels.
2. The City shall enforce existing bans on illegal open burning of construction and agricultural wastes.
3. The City shall continue to encourage the use of efficient wood burning stoves, and shall discourage the use of open fireplaces and the burning of wet wood as a source of heat.

4. The City shall encourage the weatherization of homes to the highest level feasible to reduce overall heating requirements and to promote energy efficiency.
5. Since approximately one-third of suspended particulates originate from the tracking of dirt and mud onto public streets, the City shall require all new City streets to be paved and shall develop any necessary ordinances to reduce “track-out” from construction sites and agricultural areas onto public streets.
6. The City shall encourage efforts aimed at the production of solar applications for home heating as an alternative or supplement to the burning of fossil fuels or wood.
7. The City shall continue to encourage alternative modes of transportation including bus travel (RVTD), walking, bicycling, and car-pooling, and shall seek available grant funds for the development of related facilities.
8. To reduce the amount of parking lot area and to encourage the use of smaller cars, the City shall develop “compact car parking space standards” which may be included in the design of new parking lots.
9. The City will continue to support the Rogue Valley Transit District (RVTD) in its efforts to provide economical bus transportation within the valley, while reducing automobile trips and their related air pollution contributions.
10. The City will continue to monitor the AQMA pollution levels and be open to suggestions or newer programs dealing with the valley’s air quality.

#### Community Noise

1. The City will require all new residential or other “noise sensitive” developments to meet State and Federal noise standards through site design or orientation, noise insulation, barriers, or other measures.
2. The City will consider the noise impact of all proposals for new or expanded development and will require mitigation measures to minimize noise impacts, as appropriate.
3. The City will encourage RVTD bus usage, bicycling, walking, and other “alternatives” to the automobile that will reduce traffic noise.
4. The City will continue to utilize State and Federal noise standards and regulations, and the City’s nuisance ordinance until such time as a more specific local noise ordinance is needed and can be developed in accordance with the City’s ability to enforce it.

\* \* \*

Note: *A “Natural Resources” locational map is not included in this section of the Plan. All major significant natural resources are located along Bear Creek within the Greenway area and, to a lesser extent, along the corridors of Coleman and Anderson Creeks. See the “Open Space” map in Section XII (Recreation) of this document.*