General Plan 2012-2030 Update

Community Resources Element

(Open-Space and Conservation Elements)

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Community Resources Element *(Open Space and Conservation Elements Combined)*

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General Plan 2012-2030 Update

Community Resources Element

The City of Bradbury Community Resources Element consists of the combination of the State required Open Space Element and Conservation Element. The required General Plan Elements have been combined because they are closely related and for clarity and to eliminate redundancy.

Open Space Chapter

Purpose

The Open Space Chapter of the Community Resources Element fulfills the requirements of Section 65560 to 65570 of the California Government Code regarding the preparation of a general plan open space element for the City.

Open space, for purposes of this Chapter, is defined by Section 65560(b) of the Government Code and it refers to land or water which is essentially unimproved and devoted to the preservation of natural resources for outdoor enjoyment and recreation; it is recognized that the land designated as "Open Space, Privately Owned Undeveloped" has potential for development and this Chapter is in no way meant to be interpreted as a prohibition against development in accordance with the existing zoning regulations for such property. The 4.06-acre privately owned parcel located near Sharon Hill Lane has been dedicated as permanent open-space however it is not accessible or available for public use. This 4.06-acre permanent natural open space is maintained and enjoyed by the four dwelling units which were part of the land division.

As further described by Section 65560 of the Government Code open space includes habitat for wildlife; streams and other bodies of water; land used for agricultural purposes; groundwater recharge areas; areas with mineral deposits; hiking and equestrian trails; public and privately owned parks and outdoor recreation areas; utility easements; and scenic highway corridors. Open space lands may also include areas requiring the regulation of hazardous conditions such as earthquake fault zones, unstable soils, flood plains, and watersheds

The Bradbury General Plan Open Space Element establishes long-range goals and objectives for the preservation and maintenance of open space areas.

Open Space Element Objective

The preservation of open space is essential to the community. The low density agricultural/residential character of the City does not provide the economic resources needed to acquire and maintain an elaborate system of public parks and recreation areas. The City does not contain any commercial or industrially zoned or developed property that would generate

revenue to acquire and maintain such public facilities. The exclusive single-family residential zoning only permits detached dwelling units, many of which are located on large agriculturally zoned parcels of land.

The hillside topography limits development opportunities. The City's zoning regulates lot coverage based on the average slope of the parcel under consideration. The steeper the slope the more area must remain in its natural condition. Allowable grading and lot coverage is significantly reduced on the steeper hillside lots. Open Space is considered a premium asset in the community. City development standards and regulations are based on the objective of creating the maximum feasible amount of natural open space. Community residents have often expressed their desire to retain the rural character of the community and to maximize the existing open space resources.

Relationship to other General Plan Elements

The Open Space Element responds to detailed State statutory requirements and it has a broad scope. Open Space issues overlap those of several general plan elements. This element is commonly combined with other elements such as the Land Use Element, the Conservation Element and the Safety Element. Goals, objectives and policies contained in the Open Space Chapter of the Community Resources Element are consistent with those set forth in the aforementioned elements of this General Plan.

Overview of Open Space Issues

Open Space for the Preservation of Natural Resources. The City of Bradbury is located in the foothills of the San Gabriel Mountains. This 1.9 square mile (1,216-aces) community is developed exclusively with single-family detached residential dwellings. The majority of this hillside community is zoned and subdivided into 1, 2 and 5-acre parcels. These large parcels are zoned for agricultural/residential purposes. In the 1950's and 60's the City contained numerous ranches and commercial citrus orchards. Old farms and orchards have been sold and the new owners have constructed large personal estate type dwellings. Commercial farming and ranching has declined, although many residents use the large agriculturally zone parcels to house their personal livestock which consists primarily of horses.

Agricultural Areas. The early residents of Bradbury discovered that the unique characteristics of the soil, water, subtropical climate, and protection provided by the San Gabriel Mountains created an ideal setting for agriculture. The San Gabriel River provided excellent quality and inexpensive water for crop production. These residents planted citrus and avocados that rapidly gave claim to some of the best crops worldwide. Important varieties included Meyer lemon, Fuertes and Bacon avocados, and Improved Washington Navel oranges, as well as ornamental plant production of hibiscus, cycads (*Cycadaceae*) and deodar (Cedrus deodara).

Over the past few decades the development trend in the City has included the removal of citrus and avocado orchards. Large estate type dwellings and accessory structures have replaced the once quaint ranch houses. A few small farms and ranches remain. The water purveyor has made recent changes to abandon the agricultural water irrigation system that once served the community. The cost of water once used to irrigate orchards has rapidly increased and has put many of the existing farm operations in jeopardy. The success of agriculture is dependent on large lots served by affordable irrigation water. During times of drought when water is scarce,

limitations are frequently placed on agricultural irrigation, which leads to the decay and removal of groves and a severe reduction of production.

The City Council acknowledged the benefit, of protecting the existing groves and orchards as well as significant heritage trees. Chapter 9.06.090 of the Bradbury Development Code "Tree Preservation and Protection" provides regulations governing the removal, replacement, and maintenance of trees. Permits are required to remove prominent, native, and orchard trees.

Estate dwelling units cover between 10 and 20 percent of their individual lot area which range in size from one to ten acres. The resulting natural and ornamental open-space can range between 60,000 and 200,000 square feet depending upon the size of the individual parcel of land. The privately owned open-spaces are developed with personal recreational facilities.

Sensitive Hillside Areas. Of special note are the 302-acres of undeveloped property located in the northern portion of the City adjacent to the City of Monrovia and the Angeles National Forest. The 302-acre site is subdivided into eight (8) privately owned undeveloped parcels of land. The area contains steep hillsides, prominent ridgelines, and three seasonal Blueline streams (Bliss Canyon, Bradbury Canyon and Spinks Canyon). Abundant wildlife either reside in this area or transverse the area in search of food and shelter. The City's zoning and development standards recognize the importance of maintaining as much of this area in its natural state as possible. Environmental constraints may be so severe that development of some of this area may not be realistic, but that is a determination to be made based on future study and analysis of an actual development proposal. Because of the steep average slope of the existing hillsides, this area is subject to the Hillside Development Standards set forth in the City's Development Code. The property in question has a general plan land use designation of Open Space, Privately Owned Undeveloped and has been zoned A-5 SP (Agricultural/Residential 5-acre minimum, Specific Plan). Therefore, development of the property is subject to the approval of a specific plan prepared in accordance with State law and local regulations. Moving from south to north the City's topography becomes steeper and the required minimum size of new subdivided parcels becomes larger. The average slope of each parcel governs the amount of natural open-space that must be maintained. As the average slope increases the amount of the parcel that can be graded decreases. The community's desire to maintain open space is served by these hillside development standards.

Many of the developed agricultural/residential parcels are feeding grounds for local deer and black bears. Residents have often observed bears frolicking in their yards, trees and swimming pools. The migratory patterns of these large animals are uninhibited by the type and extent of development that is permitted in the City.

Open-space areas include those areas that are apparently difficult for development due in part to environmental factors that include steep slopes or unstable ground conditions. Other open-space areas remain undeveloped in order to comply with existing land use controls. These include public pedestrian/equestrian trails, building setback areas, utility easements, water reservoirs, drainage debris basins and the school's open-space field.

Historic Preservation. Cultural resource management and historic preservation require the cooperation of many government agencies. Bradbury alone, however, has the ability to preserve and enhance many of the City's cultural resources. Furthermore, it is the City's desire to establish facilities and programs which will inspire appreciation for the City's past and that will

encourage participation in a wide range of educational and social activities. Protection of cultural resources is afforded through the California Environmental Quality Act, which requires that a project be considered "significant" in terms of impact if it will disrupt or adversely affect a site of archaeological or historical significance. Protection of these resources during construction activities generally involves the salvage of materials discovered at the site. Future development within the planning area and surrounding region may result in the discovery of new sites. Any proposed project that involves a significant amount of grading should have an archaeological survey conducted prior to construction. In addition, archaeological resources may be discovered in the course of construction and appropriate measures must be taken to ensure that artifacts are recorded and salvaged. The City of Bradbury will seek to avoid damaging archaeological resources whenever feasible.

Historically Significant Buildings and Structures. Places having local historic significance include the following sites: *(see Exhibit CR Open-Space No. 1)*

- 1775 Royal Oaks Drive, North. This property contains an old stone milk house, and cistern.
- 5 Bradbury Hills Road. This property contains a single-story prairie style home that was designed by the Frank Lloyd Wright studio.
- 555 Deodar Lane. This site contains an old building referred to as the stone carriage house.
- 2001 Gardi Street. This site is the location of an 1890's two-story Queen Ann Farm House.

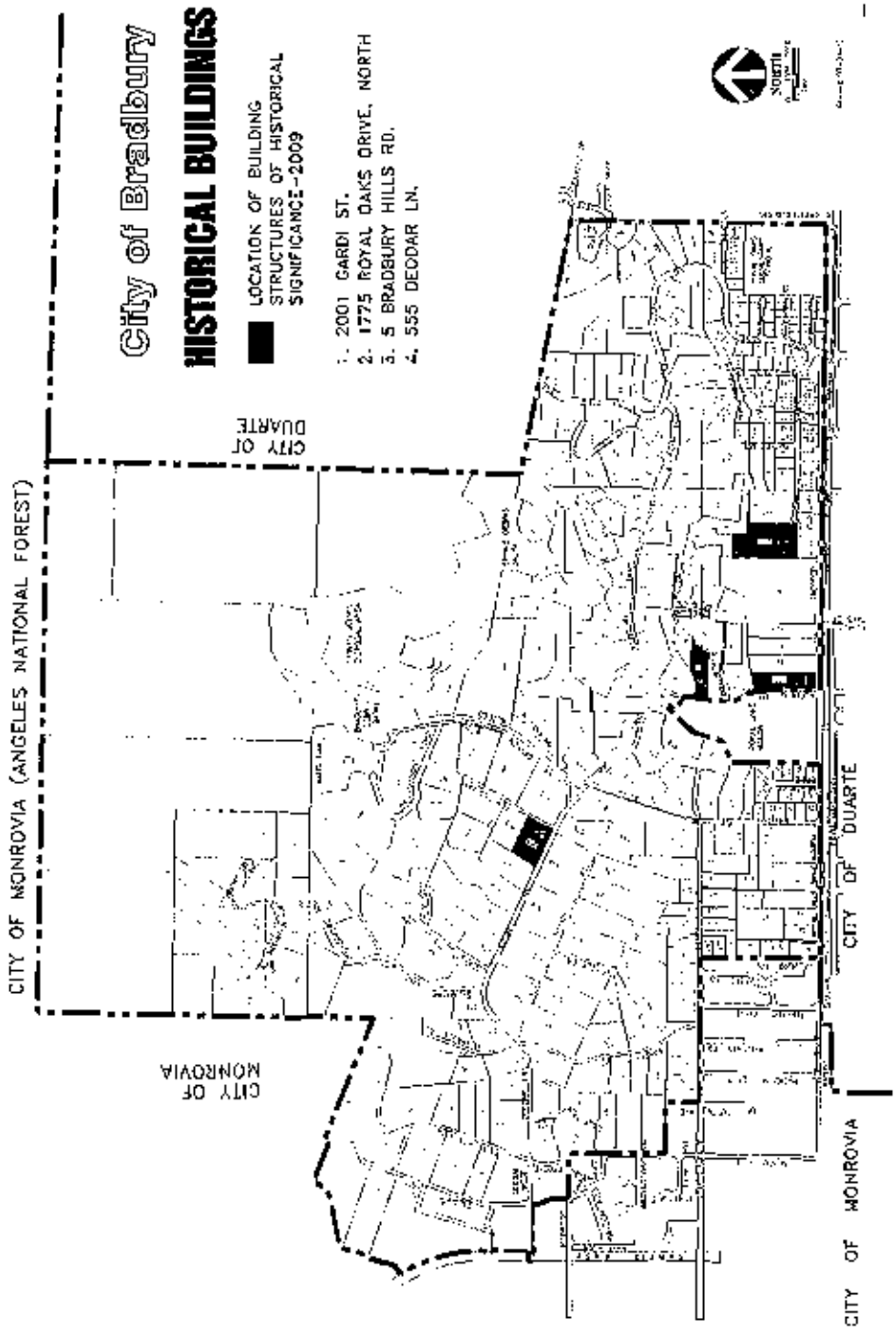


Exhibit CR Open-Space No. 1

SITES OF LOCAL HISTORICAL SIGNIFICANCE

Existing Recreational Resources

Bradbury residents enjoy personally owned private recreational facilities. There is little demand or expressed desire to create public parks or gathering facilities other than pedestrian/equestrian trails. Recent reconstruction of the Bradbury Civic Center created a small 1,200 square foot community center that is available for public and private gatherings. Public pedestrian/equestrian and bicycle trails have recently been constructed to encourage alternative mobility and movement within the City. The Royal Oaks Elementary School offers an open play field for active recreation and organized ball games. The need for public recreation facilities is minimal since there are so many private facilities within Bradbury and an abundance of public active and passive recreation facilities within close proximity to Bradbury.

Additional, public facilities for active recreation such as organized sports (baseball, football, soccer, competitive swimming, golf etc.) are readily available within adjacent communities. Listed below are public parks within the surrounding area:

- Recreation Park, 620 S. Shamrock Avenue, Monrovia
- Duarte Sports Park and Pool, 1401 Central Avenue, Duarte, CA
- Third Street Park, 1634 Third Street, Duarte
- Rancho Duarte Golf Course, 1000 Las Lomas Road Duarte,
- Norm S. Johnson Pool, 405 S. Santa Anita Avenue, Arcadia
- El Monte Aquatic Center, 11001 Mildred Street, El Monte
- Arcadia High School Public Pool, 180 Compass Drive, Arcadia,

The City and County of Los Angeles have numerous parks, theaters, and concert halls within reasonable commuting distance to Bradbury. Passive Recreation, such as hiking, bird watching, rural camping, is available within the Angeles National Forest.

Pedestrian/Equestrian and Bicycle Trails. The Royal Oaks Trail, located along the old Pacific Electric Railroad right-of-way provides a connection for bicyclists, hikers, and equestrians to the San Gabriel River Trail. City residents can enjoy the regional San Gabriel River Trail that extends approximately 38 miles from the Ranger Station at the base of the San Gabriel Mountains to the Pacific Ocean at the City of Seal Beach.

The Royal Oaks Drive North/Lemon Avenue trail provides pedestrian and equestrian safe access to the Royal Oaks Drive Trails. The Mount Olive Drive pedestrian/equestrian and bicycle trail also connects with the Royal Oaks Trail. The private gate guarded neighborhood, Bradbury Estates has a street system design to accommodate pedestrian and equestrian use. Access to trails and County maintained fire roads afford the residents the ability to travel into the Angeles National Forest.

Open Space for Managed Protection of Resources. The City of Bradbury is located at the foot of the San Gabriel Mountain range most of which is managed by the Angeles National Forest Service. The Angeles National Forest was established by Executive Order in December 1892. It covers over 650,000 acres. The Angeles National Forest manages the watersheds within its boundaries to provide valuable water to southern California and to protect surrounding

communities from catastrophic floods. The Angeles National Park offers hiking, biking, and rural backpacking and camping facilities.

Bradbury's northern boundary is shared with the City of Monrovia, the City of Duarte and the Angeles National Forest. Mountain peaks range from 1,200 feet to 10,064 feet. To the north of Bradbury, Bliss Mountain rises 5,500 feet. Much of the national forest is covered with dense chaparral however, it changes to pine and fir tree covered slopes at the higher elevations.

The San Gabriel Wilderness Area covers over 36,118-acres that have been set aside to preserve the wilderness character of extremely rugged and scenic terrain. Additional open space is located within the Bradbury Debris Basin and the Spinks Debris Basin. The County of Los Angeles prepared a 1604 Streambed Alteration Agreement for the maintenance of debris basins. The County conducted a comprehensive evaluation of the presence or absence of special status or sensitive species and critical habitat. The value of open space land is based on three primary elements: quality, quantity, and connectivity. Open space adjacent to or within National Forests or other protected areas ranked higher than open-space currently used as parkland or golf courses or otherwise hindered in their long-term value for plants and wildlife. Each basin was assessed based on the following three elements: 1) having very high quality (including the type of vegetation and the type of vegetative community); 2) quantity of vegetation; and 3) area size, and connectivity to other open space areas. Areas rated as the most desirable received a high ranking of 3.0 and the least desirable at a ranking of 0.0. Overall, Bradbury Debris Basin was rated at a 2.20 and Spinks Debris Disposal Area at a 2.18.

Open Space Plan

Because the City of Bradbury is virtually built-out the opportunity to acquire and develop public park space is not achievable. Community residents have not expressed interest in the development of public park space. However, the community is supportive of the development and maintenance of pedestrian/equestrian and bicycle trails. The City Council has been committed to researching funding opportunities that can be used to acquire, design and build an improved trail system that will meet community expectations and needs.

Public transit systems are supported and made available to transport residents to parks and recreational facilities located in the surrounding region.

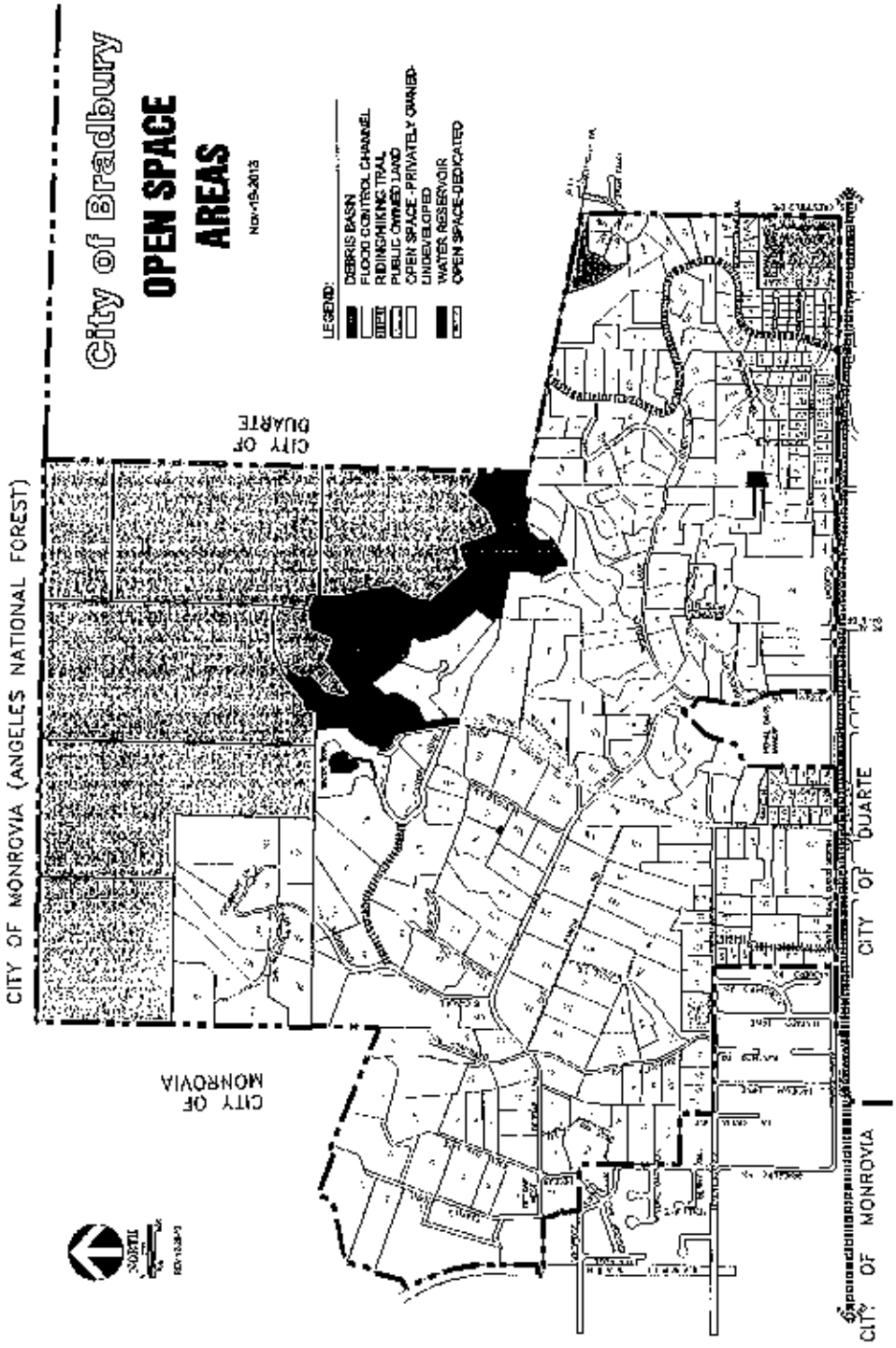


Exhibit No. CR Open-Space No. 2

OPEN SPACE AREAS

Key Open-Space Goals, Objectives, Policies and Action Programs

Open-Space Goals:

Open-Space Goal No. 1:	Protect and enhance Bradbury's Open-Space.
Open-Space Goal No. 2:	To develop sufficient open-space and park-trail acreage to meet the needs of the community residents.
Open-Space Goal No. 3:	To provide open-space and recreational opportunities to the greatest extent possible.

Open-Space Objectives:

Open-Space Objective No. 1.	Make open-space resources available to existing and future residents.
Open-Space Objective No. 2.	Make open-space resources accessible without the need to use motorized transportation.

Open-Space Policies:

Open-Space Policy No. 1.	Protect and preserve oak woodlands and mandate replacement planting of native oaks where oak woodlands are proposed for alteration.
Open-Space Policy No. 2.	Protect water quality.
Open-Space Policy No. 3.	Mandatory replacement planting of native trees and oaks.
Open-Space Policy No. 4.	Protect existing Blueline Streams.
Open-Space Policy No. 5.	Prevention of soil erosion.
Open-Space Policy No. 6.	Preservation of historically or culturally significant sites.
Open-Space Policy No. 7.	Protect wildlife and their habitats, including rare and endangered species.
Open-Space Policy No. 8.	Protection of rare and endangered plants.
Open-Space Policy No. 9.	Promote development and management of public and private parks, trails and recreational areas.
Open-Space Policy No. 10	Protect areas of outstanding scenic beauty.

Open Space Action Programs:

Open-Space Action No. 1.	Protect water quality.
Open-Space Action No. 2.	Avoid drainage run-off where possible.
Open-Space Action No. 3.	Promote landscaping efforts that comply with State water efficient standards, fire department standards, and protection of plant and wildlife communities.
Open-Space Action No. 4.	Prevent soil erosion.
Open-Space Action No. 5.	Promote agricultural uses by the use of large-lot zones and overlay zones for hazard areas.
Open-Space Action No. 6.	Promote public acquisition of open-space land by non-profit land trusts or conservation organizations.
Open-Space Action No. 7.	Use Specific Plans to set aside open-space areas as part of development proposals .
Open-Space Action No. 8.	Explore the use of transferring development rights to create and preserve open-space.
Open-Space Action No. 9.	Explore grant financing opportunities to acquire and development pedestrian and equestrian trails.

Conservation Chapter

Purpose

The Conservation Chapter of the Community Resources Element emphasizes the conservation, development and utilization of natural resources located within the City of Bradbury. The Conservation Element is designed to protect and maintain the City's natural and cultural resources, and to prevent their exploitation and destruction. Issues regarding natural resources must be addressed in the City's conservation element, as mandated in Government Code Section 65302(d). The General Plan shall include a conservation element for the conservation, development, and utilization of natural resources, including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources.

Conservation Element Objective

The conservation element provides direction regarding the conservation, development and utilization of natural resources. The major goal of the Conservation Element is the maintenance and protection of the quality of the physical environment, through the conservation of natural resources to include: water courses, soils, and native plant and animal life. Conservation of natural resources should be a significant element in determining development types and density, as well as the preservation of open-space.

Relationship to Other General Plan Elements

California law requires that all elements of the general plan to be internally consistent. While all of the general plan elements are independent, they are also interrelated, some more so than others. The Conservation Chapter overlaps and supports policies found in the City's Land Use, Health and Safety, and Circulation Elements and the Open Space Chapter of this Element. Buildings and structures of local historical significance shall be identified and considered as part of the City's development review process.

Overview of Conservation Issues

The natural resources in the City of Bradbury include soils, water; biotic resources; cultural resources; and energy.

Soil Resources. The City of Bradbury terrain is underlain by three soil types:

(1) The Vista-Amargosa Association, located in the northern-third of the City;
(2) The Ramona-Placentia Association, located in the central-third of the City; and
(3) The Hanford Association, located in the southern-third of the City.

Vista-Amargosa Association. The Vista-Amargosa Association soils consist of three categories (Vista, Vista Amargosa and Amargosa) and they occur in steep mountainous areas at elevations ranging from 1,300 to 3,900 feet above mean sea level (amsl).

Vista soils occur in the northern one-third of the City in steep mountainous areas. They are 28 to 38 inches deep, are well drained, and have moderately rapid subsoil permeability. They have a brown, slightly acid, coarse sandy loam surface layer about 16 inches thick. The subsoil is brown, neutral, sandy loam about 12 inches thick and contains 2 or 3 percent more clay than the surface layer. Below is yellowish-brown slightly acid gravelly sandy loam layer, containing gravel about 20 percent by volume, and resting on hard granitic rock of about 14 to 20 inches. Erosion has been moderate on these soils, removing from 25 to 40 percent of the original surface soil. Rocky outcrops cover from two to ten percent of the surface and many areas are cut by shallow gullies. Available water-holding capacity is 1.0 to 1.5 inches for 14 to 20 inches of soil depth. Inherent fertility is very low. These soils are used for range, wildlife and watershed.

***Vista-Amargosa* soils** also occur in the northern one-third portion of the City, in steep mountainous areas at elevations ranging from 1,300 to 3,900 feet amsl. Natural vegetation consists of mainly annual grasses and forbs and some California Juniper and Manzanita. The soil is 28 to 38 inches deep, well-drained, and has moderately rapid subsoil permeability. They have a brown, slightly acidic, coarse sandy loam surface layer about 16-inches thick. The subsoil is a brown, neutral, sandy loam about 12-inches think containing two or three percent more clay than the surface layer. Below is a yellowish-brown, neutral, coarse sandy loam on hard granite rock. Available water-holding capacity is 2.5 to 3.5 inches for 28 to 38 inches of soil depth. Inherent fertility is low. These soils are used for range, wildlife and watershed.

***Amargosa* soils** also occur in the northern one-third portion of the City and are 14 to 20 inches deep, excessively drained, and have moderate to rapid subsoil permeability. They have a brown and yellowish-brown, slightly acidic coarse sandy loam surface layer that is about 13-inches thick. Below is a yellowish-brown slightly acidic gravelly sandy loam layer containing about 20 percent by volume gravel, and resting on hard, granite rock of about 14 to 20 inches. Erosion has been moderate on these soils, removing from 25 to 40 percent of the original surface soil. Rocky outcrops cover from two to ten percent of the surface and many areas are cut by shallow gullies. Available water-holding capacity is 1.0 to 1.5 inches for 14 to 20 inches of soil depth. Inherent fertility is very low. These soils are used for range, wildlife, and watershed.

Ramona-Placentia Association occurs in the central one-third of the City and on sloping and rolling terraces between elevations of near sea level to 3,900 feet above mean sea level. Natural vegetation consists mainly of annual grasses and forbs with occasional junipers. Ramona and Placentia soils of this association occur on steeper slopes and are eroded. Gullies are common and about 50 percent of the original surface soil has been removed by erosion. The available water-holding capacity of Ramona soils is about 7.0 to 9.0 percent for 60 inches of rooting depth. Inherent fertility is low. The available water-hold capacity of Placentia sols is about 1.0 to1.5 for 9 inches of soil. These soils are used for residential purposes and for irrigated orchards.

Hanford Association soils are located in the lower one-third portion of the City and are on gently alluvial fans between elevations of near sea level to 3,500 feet above mean sea level. Natural vegetation consists of mainly annual grasses and forbs and occasionally junipers. Hanford soils are over 60 inches deep, well-drained, and have moderately rapid subsoil permeability. They have a pale-brown coarse sandy loam surface layer about eight-inches thick underlain by light yellowish-brown coarse sandy loam and gravelly loamy coarse sand substratum. Typically, they are slightly acidic to mildly alkaline throughout, but occasionally are calcareous in the lower part. Thin layers of coarser material may occur below 40-inches. Available water-holding capacity is 5.0 to 7.5 inches for 60 inches of soil depth. Inherent fertility is moderate. Hanford soils make up about 85 percent of the Association, and 10 percent Yolo soils and 5 percent Hesperia soils. In the Los Angeles basin, these soils are used almost exclusively for residential and industrial purposes. These soils will also support irrigated crops such as alfalfa, small sugar beets, potatoes, and fruit and nut trees.

Wildlife and Biological Resources.

The City of Bradbury is located at the foot of the San Gabriel Mountains, which are vegetated with natural trees and shrubs. The native vegetation and wildlife are typical of steep, hilly chaparral and sage-scrub. The majority of the vegetation in the northern portion of the City is undisturbed. The southern portion of the community has been disturbed by previous farming and residential development activities. There are no commercial forests located within the City. The types of natural vegetation that can be expected in the area include coastal scrub and, chaparral. Mature oak trees are located throughout the City on developed agricultural/residential parcels.

Coastal Scrub. Characteristic plants of the coastal scrub community include California Wormwood or Sagebrush, White Sage, Black Sage, Encelia, Yerba Santa, Eriophyllum, California buckwheat, Lemonade berry, Prickly Pears, and Our Lord's Candle.

Chaparral. Chaparral's dense cover of evergreen shrubs includes a diversity of shrubs fifteen feet in height including Chemise, Scrub Oak, Foothill Ash, Hard Tack, wild lilacs, Holly-leaf Cherry, Bear Brush, Manzanita's, Tryon and Sugar bush.

Oak Woodland. Southern Oak or Foothill Woodlands contain trees 15-75 feet high with scattered shrubs and grassland. Characteristic plants of this community include Big-cone Spruce, Digger Pine Juniper, Black Walnut, Coast Life Oak, Engelmann Oak, and Interior Life Oak. Shrubs associated with this community include Gooseberry, Sugar Bush, Wild Oats, and Wild Mountain Sunflower.

Riparian Woodland. The riparian plant community includes plant material such as Spruce, White Alder, Big leaf Maple, Western Sycamore, Black Cottonwood and willows. Various ruderal or weedy plant species are found in disturbed areas. While this vegetation is of little aesthetic value and not considered to be biologically unique, it serves as a food source for seed-eating birds and mammals.

Wildlife. Animal species known to occur in the locale include a variety of mammals, birds, reptiles and invertebrates. Most prevalent among the mammals are deer, bear, coyote, bobcats, raccoon, skunk, rabbits, mice, rats, opossums and squirrels. Typical birds include

varieties of Scrub Jay, Hummingbird, Warbler, Wren and Sparrow. Typical reptiles found in hillside areas include lizards, rattlesnakes and garter snakes.

Sensitive Biological Resources. Sensitive biological resources are defined as species under study for classification as threatened, endangered, or rare, or having low population densities or a highly restricted range. Sensitive species known to occur along the southern face of the San Gabriel Mountains include Brauton's milk vetch (Astragalus brauntonii), San Gabriel bedstraw (Galium grande) and lily (Brodiaea filifolis). As of this date no sensitive biological resources have been identified within the City. However, an extensive analysis of the 302-acres of privately owned steep hillside undeveloped property has not been conducted.

For planning purposes, three sensitivity categories have been developed to identify the planning area's sensitivity for the presence of special plants and animals. The sensitivity rating is described as follows:

Low Sensitivity: Areas with no significant natural habitats are included in this classification. Past development in the urbanized areas is likely to have destroyed or significantly altered native plant communities and animal habitats. This designation is not intended to undervalue the importance of introduced or existing vegetation in the developed areas.

Moderate Sensitivity: A number of areas in the City have been developed at densities sufficiently low so that remnants of environmentally significant habitats remain. In addition, some development is located adjacent to ecologically significant zones, which could be adversely impacted by any increase in density or intensity of development.

High Sensitivity: The steep hillside areas are considered ecologically significant due to their vacant state and the presence of native vegetation. These areas have a high sensitivity for the presence of important biological resources. Measures should be observed to prevent disturbance or destruction of existing habitats. Development proposals within areas with a high sensitivity rating as shown on Exhibit CR Conservation No. 1"Resource Management Areas" will be reviewed to determine the extent of significant ecological resources on the property and the potential impacts new development will have on these resources. The following guidelines shall be followed:

Field, surveys to identify potential resources must be undertaken prior to any development or significant alteration of these areas.

- Any fuel modification landscaping related to fire prevention, must be evaluated by knowledgeable professionals to ensure appropriate mitigation is followed.
- All new development in these areas must undergo appropriate environmental review pursuant to the California Environmental Quality Act (CEQA)
- Trustee agencies including the California Department of Fish and Wildlife and local environmental organizations such as the Audubon Society must be notified of large scale development proposals as part of the environmental review process.
- When threatened or endangered species are encountered, the directives of the Department of Interior and the State of California Department of Fish and Wildlife will be considered. In order to protect native plant and animal species in the area, the City shall require that a survey of on-site vegetation be conducted for all projects subject to development review procedures. The survey shall identify existing mature and specimen

trees and other significant vegetation. Where such landscape is identified, City staff will work with the developer to determine the means by which such landscape may be integrated with the proposed project and preserved. A variance from the site development standards may be considered to preserve the vegetation, if any adverse impacts of such a variance can be mitigated. Projects that would affect sensitive habitats and animal species or wetland areas shall be made to comply with the regulations of the State Department of Fish and Wildlife and the U.S Army Corps of Engineers. Cultural and natural resources in the City shall be preserved to the maximum feasible extent possible. The City will establish and maintain a register of any significant historical, architectural, and cultural resources that are discovered. As part of the City's planning process, guidelines will be implemented for the protection and preservation of any archaeological resources. For new developments, an archaeological survey may be required either prior to or during any earth moving activities, as dictated by the specific project site conditions.

Rivers, Creeks, Streams and Reservoirs. The significant natural waterway resources include the nearby San Gabriel River and the following intermittent seasonal streams within canyons located in the steep hillside areas: Sawpit Canyon, Bliss Canyon, Bradbury Canyon and Spinks Canyon. The steep terrain and the City's Hillside Development Standards regulate development in these identified Resource Management Areas. (see Exhibit CR Conservation No. 1).

Resource Management Areas

The City of Bradbury recognizes several areas within the community as potential sensitive habitat. The 302-acres of privately owned undeveloped open space located in the northern portion of the City adjacent to the Angeles National Forest and the City of Monrovia is reported to have average slopes that range from 24% to over 50%. This area also contains many significant or prominent ridgelines and three Blueline seasonal streams. Development of this area may be physically and economically difficult due to site constraints, density yield and compliance with the City's environmental and Hillside Development regulations as set forth in the Development Code. However, the determination of feasibility will be made, in part by the private property owner(s), based on his, her or their future design and environmental plans and studies.

Adjacent to this area are the Spinks and Bradbury Drainage Debris Basins which comprise approximately 50-acres. Both of these facilities are owned, managed and maintained by the Los Angeles County Flood Control District. Additionally, a 4.06-acre parcel of privately owned dedicated open-space parcel was created as part of the development project at Sharon Hill Lane. Development rights for this open-space parcel have been dedicated in perpetuity. The City of Bradbury contains 1,216-acres of land area. Approximately 356-acres or 29% of the City's land area either restricts development or development is considered to be very difficult. Exhibit CR Conservation No. 1 locates the land Resource Management Areas. Exhibit CR Conservation No. 2 locates the identified environmental resources which include significant prominent ridgelines, Blueline streams, as shown on the USGS Azusa Quadrangle Map, and flood control debris basins. Exhibit CR Conservation No. 2-A is a photograph of a portion of the northern part of the City of Bradbury which includes the Resource Management Areas.

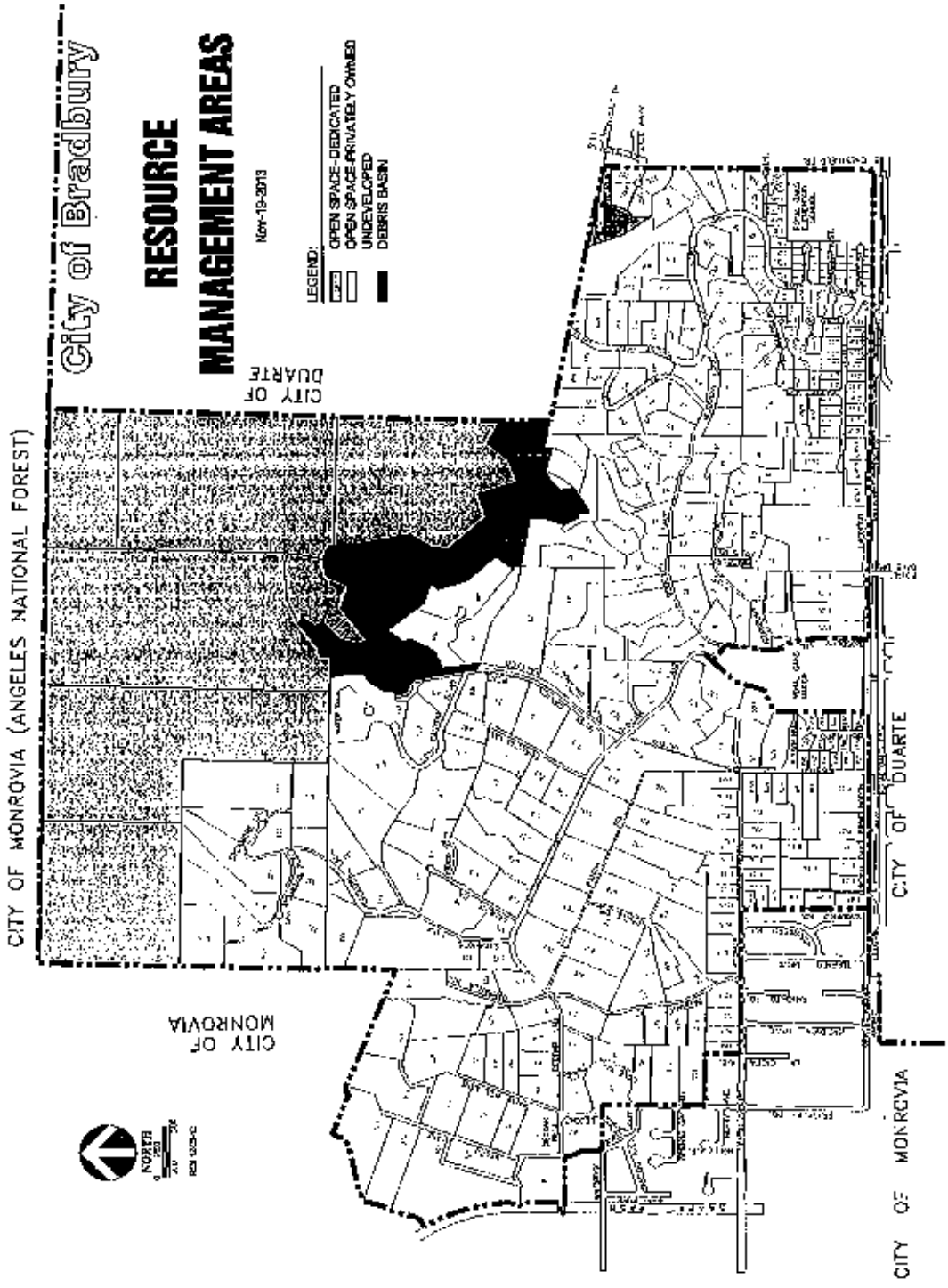


Exhibit CR Conservation No. 1

RESOURCE MANAGEMENT AREAS

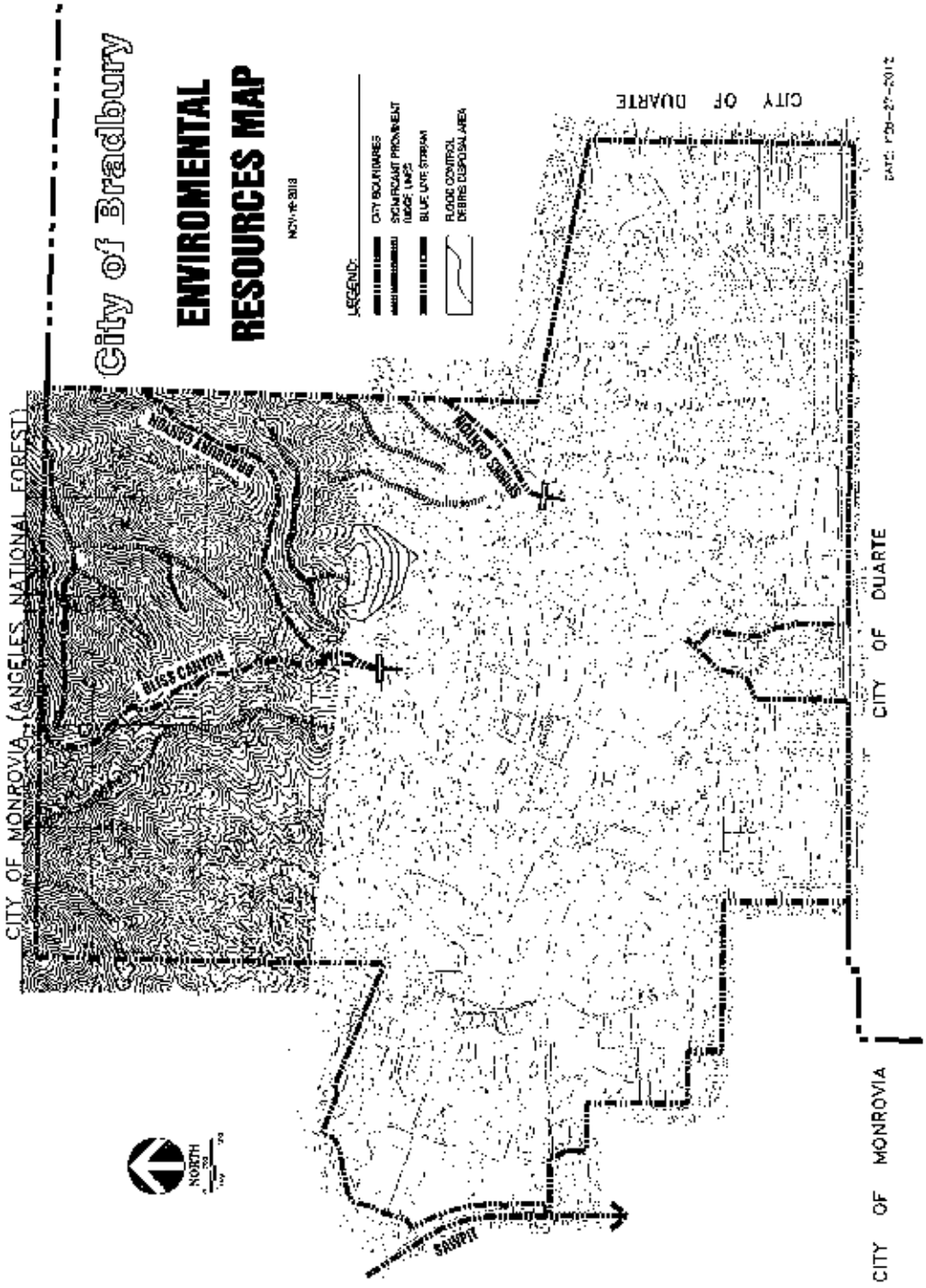


Exhibit CR Conservation No. 2

ENVIRONMENTAL RESOURCES MAP

Exhibit CR Conservation No. 2-A

ENVIRONMENTAL RESOURCES AREA PHOTOGRAPH

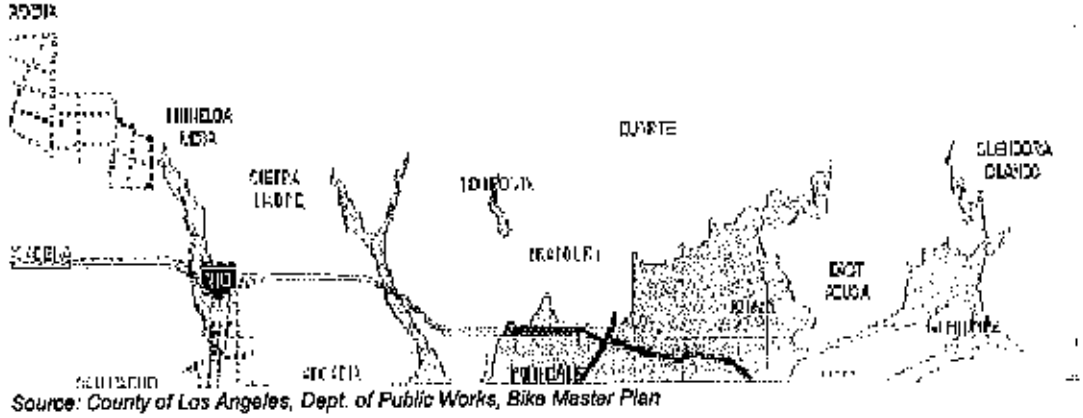
Mineral Resources

The Surface Mining and Reclamation Act of 1975 (SMARA) provides for the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. The SMARA also encourages the production, conservation, and protection of the State's mineral resources. The SMARA also mandates the classification of lands with valuable mineral resources so that land use decisions that may affect mineral-bearing lands will be made with the knowledge of these resources.

The State Mining and Geology Board, (SMGB) has classified land in California based on the availability of mineral resources. Four mineral resource zone (MRZ) designations have been established for the classification of sand, gravel, and crushed rock resources:

- MRZ-1: Adequate information indicates that no significant mineral deposits are present or likely to be present.
- MRZ-2: Adequate information indicates that significant mineral deposits are present or there is a high likelihood for their presence, and development should be controlled.
- MRZ-3: The significance of mineral deposits cannot be determined from the available data.
- MRZ-4: There is insufficient data to assign any other MRZ designation.

There are no MRZ zones in the City of Bradbury. MRZ zones are noted in brown on the map below, Exhibit CR Conservation No. 3.



Source: County of Los Angeles, Dept. of Public Works, Bike Master Plan

Exhibit CR Conservation No. 3

MINERAL RESOURCE ZONES

Air Quality.

The City of Bradbury is located within the South Coast Air Basin of California, a 6,745 square-mile area encompassing Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The basin is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east.

The U.S. Environmental Protection Agency (USEPA) is responsible for establishing the national ambient air quality standards and enforcing the Federal Clean Air Act. The California Air Resource Board (CARB) became part of the California Environmental Protection Agency (Cal EPA) in 1991. This agency is responsible for ensuring implementation of the California Clean Air Act, meeting state requirements of the Federal Clean Air Act, and establishing state ambient air quality standards.

Because Southern California has one of the worst air quality problems in the nation, the Air Quality Management District (AQMD) was created by the 1977 Lewis Air Quality Management Act. Four county air pollution control agencies were merged into one regional district to better address the issue of improving air quality in Southern California.

Under the act, revised and renamed the Lewis-Presley Air Quality Management Act in 1988, the South Coast Air Quality Management District (SCAQMD) was created and it is the agency principally responsible for comprehensive air pollution control in the South Coast basin. Specifically, the SCAQMD is responsible for monitoring air quality and planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. The SCAQMD enforces air quality rules and regulations through a variety of means, including inspections, educational and training programs.

Setting. The South Coast basin is surrounded by mountain, which tend to restrict air flow and concentrate pollutants in the valleys or "basins". The South Coast basin is almost entirely urban, and its pollution is typically related to dense population and associated area sources, such as mobile sources that include high volumes of vehicular traffic and stationary sources that are related to commercial and industrial activity. A high-pressure cell over the Pacific Ocean primarily controls the climate of the South Coast basin. The counties in the South Coast Air Basin continue to receive an "F" grade for ozone and dust particulate (PM) levels. The climate within the South Coast air basin is one of moderate winters, warm summers, infrequent rainfall, daytime onshore breezes and moderate humidity.

Along with this Mediterranean style climate the coastal winds affect the air quality. During the day the onshore winds reach inland across the Los Angeles Coastal Plain while at nighttime, surface radiation cools the air surrounding the mountains and the hills. The air then flows into the valleys and meanders toward the coast, producing a gentle land breeze. Bradbury's proximity to the mountains creates cooler periods due to cool mountain air flowing down the slopes to the lower elevations.

The predominant daytime wind patterns are from the west and southwest. At night, the direction of the local offshore flow is generally out of the northeast and east. The predominant patterns for Bradbury are occasionally impacted by winter storms and Santa Ana winds. The Santa Ana winds are strong north and northeasterly breezes originating in the desert of the Great Basin.

The Santa Ana winds occur from September through March. Usually warm, always very dry, and often full of dust, these winds are particularly strong in mountain passes and canyons. On average, Santa Ana winds occur five to ten times a year, each lasting up to a few days.

Emissions of Concern. Air pollutants regulated by the Federal Clean Air Act and the California Clean Air Act or other laws are placed in three categories:

- Criteria air pollutants,
- Toxic air contaminants (TAC),
- Global warming and ozone-depleting gases.

Pollutants in each of these categories are monitored and regulated differently. Criteria air pollutants are measured by sampling concentrations in the ambient air. Toxic air contaminants are measured at the source and in the general atmosphere; and, global warming and ozone-depleting gases are not monitored but are subject to federal and regional policies that call for their reduction and eventual elimination.

The United States Environmental Protection Agency (USEPA) established ambient air quality standards for the following air pollutants:

- Ozone (O3)
- Nitrogen dioxide (NO2)
- Carbon monoxide (CO)
- Sulfur dioxide (SO2)
- Lead (Pub)
- Particulate matter (PM10 and PM2.5)

The California Air Resources Board (CARB) has also established ambient air quality standards for the six pollutants regulated by the USEPA. Some of the California ambient air quality standards are more stringent than the National Ambient Air Quality Standards (NAAQS). In addition, California has established ambient air quality standards for the following pollutants or air quality conditions:

- Hydrogen sulfide
- Sulfates
- Vinyl chloride
- Visibility

State and Federal law requires that this area meet existing clean air standards by the year 2015 for annual PM 2.5 and by 2023 for the 8-hour average ozone standard. However, tougher federal air quality standards for particulates and ozone issued in 2006 and 2008 will require reductions above and beyond those already planned. AQMD estimates it will take until at least 2020 to meet the new 24-hour average particulate standard and until 2030 to meet the new ozone standard.

The South Coast Air Quality Management District (SCAQMD) conducts 40 monitoring stations throughout the basin. There are three monitoring stations that provide information on air quality for Bradbury. These monitoring stations are located in the City of Pasadena northwest quadrant

of the intersection of Interstate I-210 and State Route SR-39 in the City of Azusa; and in the City of Glendora. (Exhibit CR Conservation No. 4)

According to the lung association, key pollution sources contributing to regional pollution are:

- Mobile sources including on- and off-road diesel fueled vehicles, cars, trucks, buses, and locomotives.
- Ports and goods movements,
- Stationary sources including oil refineries and power plants,
- Area sources including residential wood burning.

Although air quality in the Los Angeles basin has significantly improved over the past three decades, the area still has a long way to go to meet State and Federal standards. The area's average number of high ozone days dropped from 189.5 days per year for the years 1996-1998 to 141.8 per year for the years 2006-2008.
Continued high levels of ozone and particulate matter (PMs) in the Los Angeles basin continues to impact Bradbury. Due to its location against the foothills and the meteorological conditions, the Bradbury area incurs high levels of ozone concentrations that exceed State and Federal levels.

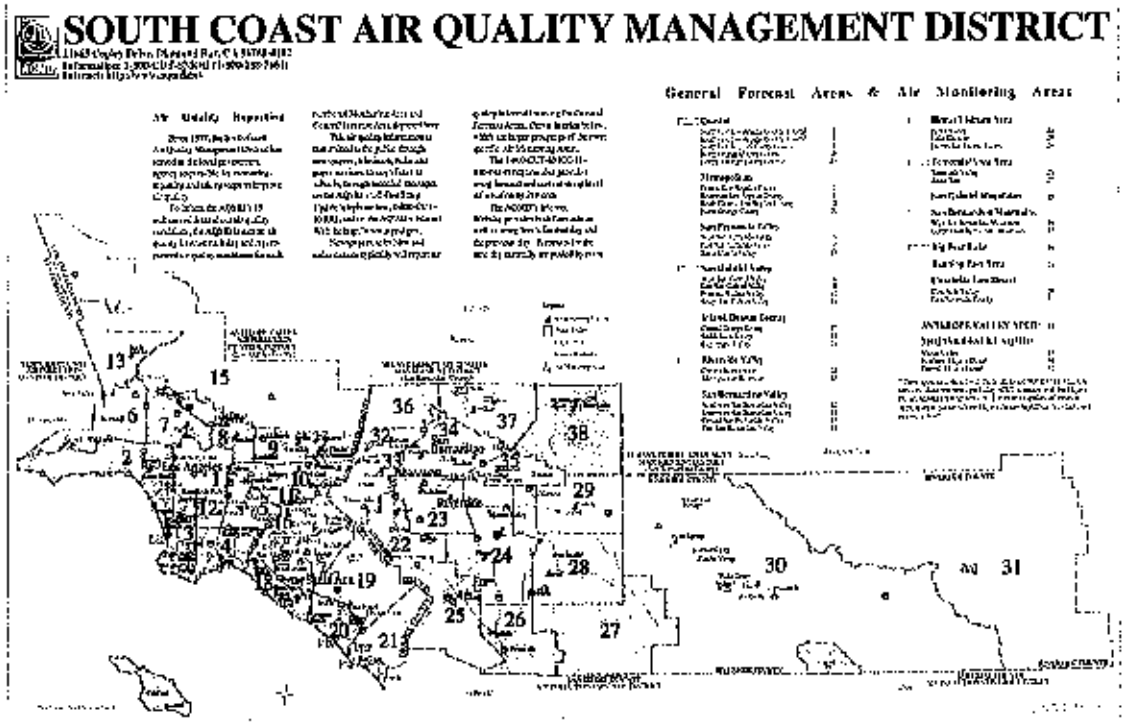


Exhibit CR Conservation No. 4

AIR QUALITY MANAGEMENT DISTRICTS

Regional Air Quality Management Plan.

The AQMD has the authority to reduce emissions from stationary sources and certain indirect sources. The AQMD is the lead agency charged with the responsibility for the development of the Air Quality Management Plan (AQMP). Input into the creation of the AQMP is provided by the Southern California Association of Governments (SCAG) and the California Air Resources Board (CARB). The AQMP is a comprehensive plan that includes control strategies for stationary and areas sources, as well as for mobile sources. SCAG provides growth projections and the creation of transportation control measures. CARB in coordination with Federal agencies provides the control element for mobile sources.

Visual Resources.

Bradbury is a low density, single-family residential community. There are no commercial, industrial, or multi-family development existing or planned. Approximately one-third of the streets are privately owned and maintained. Two estate type neighborhoods have controlled access for residents. These private neighborhoods contain narrow winding tree-lined streets with beautifully landscaped front yards that include native and ornamental plants and trees.

The hillside terrain provides opportunities to capitalize on the majestic views of the San Gabriel Valley and metropolitan Los Angeles. Many home sites have spectacular panoramic views of the surrounding valley. The City's Design Guidelines protect the views from existing or future dwellings. The Design Guidelines also contain standards for grading, architectural design, and hillside protection to maintain the natural beauty.

The majority of the City is developed. There are twenty-four (24) vacant parcels that could be developed for residential purposes. Five (5) underutilized parcels have the potential for constructing additional dwelling units. Three hundred and two (302) acres have development potential for sixteen (16) units and may have additional potential for residential development at a density greater than the existing parcels permit through a subdivision process. Development of this high sensitivity area, designated as a Resource Management Area, would require a specific plan review and further studies.

The configuration and character of the City has been established and the residents have expressed their desire to maintain the community as it was initially conceived and subsequently developed. The community exists in harmony with the terrain and the native wildlife. The rural character of the community has been expressed as a desirable asset.

Energy Resources.

While there is no known energy producing resource located in the City, existing land uses and residents consume energy in a variety of ways. Energy consumption includes the use of natural resources for transportation, space heating and cooling, water heating, and lighting. Less obvious, but equally important, is the natural energy resources needed to process foods and materials consumed by City residents. All traditional energy resources consumed by land uses

of the City are imported from facilities located in surrounding communities. There are no wells producing oil or natural gas, coal deposits, generating stations, refineries or processing facilities within the City of Bradbury. Natural gas is imported by the Southern California Gas Company ("Gas Company"), from its interstate system. Electrical energy is accessed by transmission and distribution lines from substations owned and operated by the Southern California Edison Company (SCE).

It should be noted that the City of Bradbury is committed to the search for and the use of renewable energy resources.

Cultural and Historical Natural Resources.

Cultural resources can be regarded as symbols of a people and their civilization, and can represent human activity in pre-history, as well as the present. Cultural resources can provide a sense of place, history, and pride of residents for a region. The Los Angeles Basin has a rich cultural history that dates back to the early settlement by American Indians. The Gabrielino Indians, also known as the Tongva, occupied an extensive region stretching from the San Gabriel Mountains to the Pacific Ocean.

Water was the natural resources that attracted the first settlers and succeeding generations to the Arroyo Seco. The Arroyo Seco, meaning "dry stream" in Spanish, is a 25-mile long seasonal river and canyon located in Los Angeles County. The Arroyo Seco has been called the most celebrated canyon in Southern California. While the Spaniards dubbed the watershed Arroyo Seco or "dry riverbed," the Gabrielino/Tongva Native American Indians referred to the region between the Los Angeles and San Gabriel Rivers as Hahamongna, "the land of flowing waters, and fruitful valley." They settled on bluffs overlooking the stream that linked the San Gabriel Mountains to the Los Angeles River. Gabrielino/Tongva villages extended as far east as the City of San Bernardino.

The City of Bradbury lies within the northern part of the historic Rancho Azusa de Duarte, which extended from the San Gabriel River on the east, to Monrovia on the west. The Rancho Azusa de Duarte was a 6,596-acre Mexican land grant given in 1841 by Governor Juan Alvarado to Andres Duarte, a former Mexican army corporal. The rancho was developed and subdivided in the late 1800's by various notable large land owners ranging from Alexander Wiell to William Wolfskill. These individuals planted the first commercial citrus and avocado groves in California. Other land owners included: the Bradbury, Meyers, John Scott, Fowler, Spinks, and Fitzgerald families to name a few of the prominent early residents. It is known that they all shared a love of the area's beauty and that they planned to maintain it as a rural community of ranches and large homesteads, free from the usual small-lot developments that lined many of the hillsides in the Los Angeles Metropolitan Area. Cities established on the land of the original Rancho include Arcadia, Bradbury, Duarte, and portions of Monrovia, Irwindale, Azusa, and Baldwin Park.

Louis Leonard Bradbury, a wealthy financier, purchased land from the Weil family estate. Mr. Bradbury constructed a home north of Oak and Royal Oaks Drive. The Bradbury home was later removed and replaced with an assisted living facility for senior citizens known as Be Royal Oaks. This facility is located in an unincorporated County island adjacent to the City of Bradbury. At the corner of Winston Avenue and Royal Oaks Drive North was the Woolline family estate, built in 1889. Subsequently the property was subdivided into several two to three acre parcels and the large house was split into two single-family dwellings.

The City of Bradbury was incorporated July 26, 1957. The first Bradbury City Council members included: Rollin Eckis, who was Executive Vice President of Richfield Oil Company, Jack Martin Roth, Arthur W. Beaucaire, Cliff Poindexter, and E. M. Mazzei. Mr. Eckis became the City's first Mayor. Mayor Eckis published the most comprehensive analyses of the area's geology and groundwater. This technical document remains today as the most definitive reference for this region.

Water Resources

The importance of water as a resource must be approached in terms of its quality and quantity, sources of supply, uses and demands, and the potential for its depletion or contamination, as well as its sustainability. Local groundwater resources in the City are not utilized for domestic consumption. The California-American Water Company provides potable (drinking) water to the City of Bradbury through groundwater wells located in the City of Duarte. Pipe sizes and types vary widely from 4-inch to 12-inch and include asphalt concrete (AC), PVC, and Steel. The reservoirs that serve the City are indicated in Table CR Conservation No. 1.

In 2012, there were 416 water customers which include public private and agricultural users in the City of Bradbury. Average day demand is approximately 1,530 gallons per account per day, which equates to 1.73 acre-feet per customer per year. Maximum daily demand is estimated to be 3,121 gallons per customer. This is equal to the average maximum daily demand of 2,433 gallons per customer. The peak hour factor is assumed to be 1.75.

Table CR Conservation No. 1
California-American Water Reservoirs

Name	Capacity (gallons)	Elevation (msl)
Bliss Canyon	300,000	1040
Fair Oaks	450,000	873.5
Lemon potable	1,500,000	590
Lemon Irrigation	4,000,000	590
High Mesa	280,000	1200

Source: California-American Water

The Federal Safe Drinking Water Act of 1974 and its amendments are intended to ensure the quality of our water supplies. The Federal Government, through the U.S. Environmental Protection Agency (EPA), set standards and monitoring requirements for water utilities. The California Department of Public Health (CDPH) has the primary responsibility of overseeing the implementation and enforcement of the EPA's drinking water regulations.

CDPH has the option of either adopting the EPA's federal standards or setting more stringent ones. These standards are set after considerable research and data gathering, as well as analysis by health experts. California's Health and Safety Code requires CDPH to review its

Maximum Contaminant Levels (MCLs) once every five years. In this review, CDPH's MCLs cannot be less stringent than federal MCLs, and must be as close as is technically and economically feasible to the public health goals (PHGs) established by the Office of Environmental Health Hazard Assessment (OEHHA). Consistent with those criteria, CDPH is to amend any standard if any of the following occur: (1) Changes in technology or treatment techniques that permit a materially greater protection of public health or attainment of the PHG, or (2) New scientific evidence indicates that the substance may present a materially different risk to public health than was previously determined. Each year, by March 1, CDPH is to identify each MCL it intends to review that year. There are currently over >100 primary MCLs in California for constituents of concern that may be found in drinking water and more are expected to be drafted over the next several years.

Testing of the domestic water supply is performed by the California-American Water for various regulated constituents. Analyses for Synthetic Organic Chemicals, Inorganic Chemicals, Volatile Organic Chemicals, Radionuclide, bacteria, disinfection by-products, and all other regulated contaminants are monitored at the frequencies prescribed by federal and state regulations. The results of this testing are reported to CDPH on a monthly, quarterly, and annual basis, in accordance with the regulations. By July 1st of each calendar year, California American Water provides a complete annual summary of the analytical results of the testing to every customer in the form of a report known as the Consumer Confidence Report (CCR). A review of the past annual CCRs indicate that water quality consistently meets all state and federal drinking water standards.

California Water Code Section 10644(a) requires urban water suppliers to file with the Department of Water Resources, the California State Library, and any city or county within which the supplier provides water supplies, a copy of its Urban Water Management Plan (UWMP), no later than 30 days after adoption. California American Water's UWMP will serve as a long-range planning document for water supply, a source of data for development of a regional water plan and a source document for cities and counties as they prepare their general plans.

California Government Code Section 65352 and Section 65958 requires that planning agencies adopting or amending a General Plan shall refer the proposed action, not only to agencies previously designated, but also to public water systems with 3,000 or more service connections. It also provides a standardized process for determining the adequacy of existing and planned future water supplies to meet existing and planned future demands so that projects resulting in increased demands on water supplies can be accommodated.

Native American Indians

California Government Code § 65352.3 requires that prior to adoption of any General Plan, the local jurisdiction shall consult with the California Native American tribes that are on the contact list maintained by the Native American Heritage Commission for the purpose of preserving or mitigating impacts to places, features, and objects of historical significance as described in Sections 5097.9 and 5097.993 of the Public Resources Code. No significant archeological or historic resources have been found in the City. Yet, due to the documentation of early settlers in the region, the activity associated with new development may lead to the discovery of cultural resources. Investigation of site-specific developments for possible cultural resources would occur prior to clearing or grading.

The California Environmental Quality Act (CEQA) requires that investigation be conducted if there is a possibility of uncovering archaeological, paleontological, or historical resources. Protection of these resources during construction activities typically involves some method of salvaging materials discovered on site.

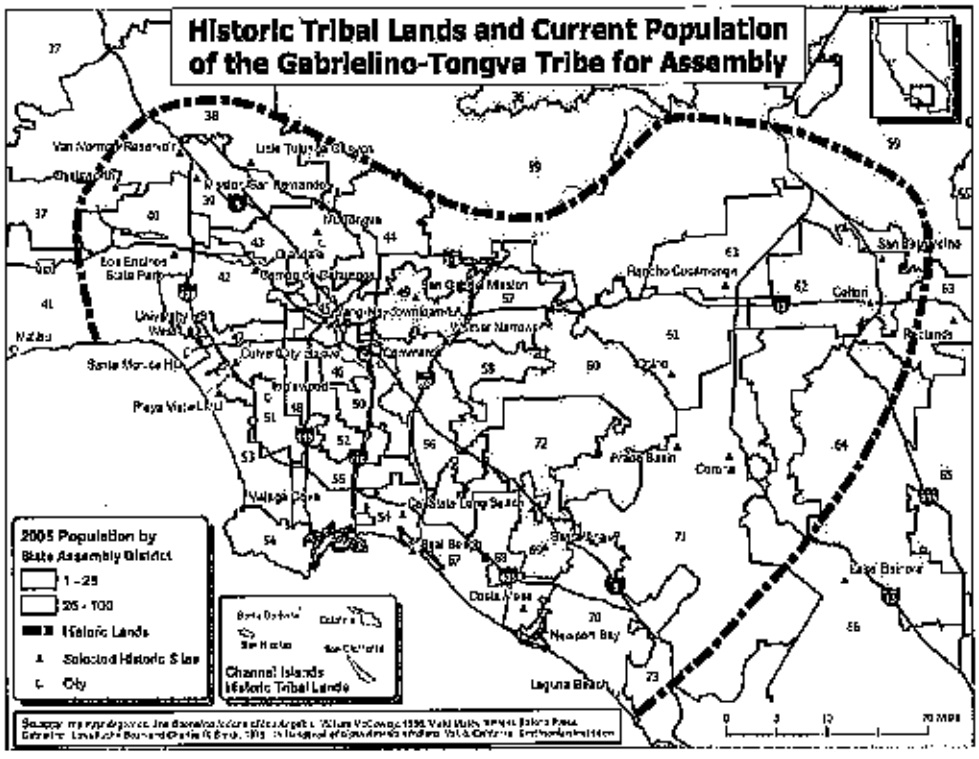


Exhibit CR Conservation No. 5

HISTORIC TRIBAL LANDS

Waste Management.

The City requires all properties to have trash collection services. The City has an exclusive franchise agreement with Burrtec Waste Industries, Inc. to provide collections and recycling services. No other haulers are authorized with the exception of construction projects that elect to file a Waste Management Plan with the City. Working with the waste hauler the City provides the following collection services to residents:

- Trash
- Commingled recyclables
- Green and organic yard waste
- Manure recycling
- E-waste

- Household Sharps
- Used Oil
- Construction and Demolition

Residents pay rates based on the size and number of barrels or bins and the number of times serviced per week. Also included in the contract are two community wide clean-up days and three bulky item pick-ups per year with no additional charge. Burrtec does its own billing and provides customer service relations. City staff serves as a liaison between the service provider and residents.

The majority of Bradbury's refuse is transported to Puente Hills Landfill facility. Curbside Recyclables are delivered to the Allan Company; whereas Green Waste is delivered to the Burrtec West Valley Material Recovery Facility (MRF) located in Fontana. Farm animal manure is delivered to local nurseries. The Puente Hills Landfill is the nation's largest landfill and it is nearing its maximum capacity. The current operating permit expired on November 1, 2013 and the Los Angeles County Sanitation District is actively seeking alternatives for the disposal of this waste stream. It is expected that urban waste disposal cost will rise significantly in the coming years.

Recycling – (AB 939 and AB 1016).

The California Integrated Waste Management Act of 1989 (AB 939) requires each jurisdiction to divert 50 percent of its solid waste from being disposed in landfills. On January 1, 2009 a new per capita disposal measurement system (SB 1016, Wiggins, Chapter 343, Statutes of 2008) became effective. This legislation builds on AB 939 compliance requirements by implementing a simplified measure of local jurisdictions' performance. SB 1016 accomplishes this by changing to a disposal-based indicator where the per capita disposal rate, which uses only two factors: a jurisdiction's population and its disposal weight as reported by disposal facilities. It creates a clearer picture of where the City ranks in its waste reduction efforts, but most importantly, SB 1016 makes it easier to see where improvements are needed, and it frees up resources to address those areas. The City of Bradbury has included these requirements into its contract with the contract urban waste removal purveyor.

The City is also a member of the Los Angeles Regional Agency (LARA) along with seventeen other Southern California cities, including the City of Los Angeles. This agency provides the forum for its members to work cooperatively to increase diversion rates to the maximum extent possible. Public recycling containers are made available at the Civic Center. City staff provides recycling information and outreach through various communication tools such as handouts, brochures, City newsletter and information located on the City's website. City of Bradbury waste diversion rates are currently in compliance with current requirements.

Household Hazardous Waste.

Bradbury residents are provided with opportunities to safely dispose of common household items that are not allowed to be disposed of in the traditional waste stream. Items such as light bulbs, batteries, used oil and electronic waste and certain solvents and cleaners are considered to be hazardous waste that are prohibited from being deposited in the landfills. Special periodic collection events are scheduled to collect household hazardous waste for proper disposal. The City works closely with the County of Los Angeles to create and maintain programs to collect

and safely dispose of such waste. At least once-a-year the City co-hosts a County of Los Angeles sponsored Household Hazardous Waste Round-Up. The City partners with its franchise trash hauler to provide approved containers for the proper disposal of sharp items such as needles, syringes, lancets, etc. Information is made available regarding the location of facilities that will accept these hazardous items for disposal.

National Pollutant Discharge Elimination System (NPDES)

In 1948, the Federal Water Pollution Control Act was passed and then in 1972 it was significantly expanded. In 1977 it became known as the Federal Clean Water Act. It was then that municipalities were required to obtain a National Pollutant Discharge Elimination System (NPDES) permit if any discharges into the storm drain system were directly related to surface run-off waters.

In 1969, the State of California enacted the Porter-Cologne Water Quality Control Act establishing the State Water Quality Board (State Board) and through its Regional Boards, it is responsible for enforcing the requirements of the Federal Clean Water Act. At the local level, the Flood Control District and municipalities must obtain National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit coverage from the State Water Quality Regional Board. Under the respective NPDES permits, municipalities are responsible for cleaning up polluted (impaired) waters within their jurisdictions.

In 1972, the Clean Water Act first established the NPDES permit program and most efforts at improving water quality were focused on regulating pollutant discharges from known end-of-pipe "point sources," such as factories and sanitary sewer treatment plants. However, the 1987 amendments to the Clean Water Act extended the NPDES program to also encompass the complex and difficult to control "non-point source" pollution found in stormwater and urban runoff. Since their establishment in 1990 by the Federal EPA, stormwater regulations under the NPDES, permit programs have been significantly revised and expanded.

The City is now accountable for complying with regulations that are contained in the most recent NPDES permit which was adopted November 8, 2012. The City is now responsible for eliminating identified pollutants within its jurisdiction that may reach both the San Gabriel River and the Los Angeles River.

The Federal Clean Water Act requires that each State identify pollutants and the acceptable maximum amount that can be tolerated by each watershed or body of water and retain its required daily acceptable level of water quality. The "Total Maximum Daily Load" (TMDL) must be established for each identified pollutant (e.g. trash, bacteria, metal, etc.).The goal is to reduce pollutants deposited in impaired bodies of water to a level that is in compliance with the established water quality standards. TMDLs are developed for pollutants from all sources, including non-point sources. If the testing of a body of water determines that it is not achieving required water quality standards, the body of water is labeled as "Impaired".

The City is currently regulated by 12 TMDLs – they include the Los Angeles River Trash TMDL, the Los Angeles River Bacteria TMDL, the Los Angeles River Metals TMDL, the Los Angeles River Estuary Bacteria TMDL, the Los Angeles River Harbor's Toxic TMDL, the Peck Park Road Lake Trash TMDL, the Peck Park Road Lake Chlordane TMDL, the Peck Park Road Lake DDT

TMDL, the Peck Park Road Lake Dieldrum TMDL, the Peck Park Road Lake PCBs, the Peck Park Road Lake Nutrients TMDL and the San Gabriel River Metals TMDLs.

The City works collaboratively with surrounding watershed cities in order to meet the requirements of the TMDL's. Additional TMDLs may be assigned to the watershed or sub-watershed in the future. The City may be required to perform additional monitoring, additional reporting, install small and large equipment, conduct scientific studies, create implementation plans and other such activities that could prove to be very difficult to implement because of funding limitations.

Educational Programs required under the National Pollutant Discharge Elimination System (NPDES) permit include making the general public aware of the importance of reducing or eliminating the discharge of pollutants into the public waterways. The City of Bradbury typically meets information compliance requirements by participating with other communities in joint advertising campaigns.

Impact of Development on Natural Resources

Sewer System. The City of Bradbury contains 400 single-family dwelling units. The majority of the dwelling units provide privately owned and maintained septic systems to process effluent generated on-site. A relatively small portion of the City has access to public sewer services. The public mainline sewer system is maintained by the Los Angeles County Sewer Maintenance District. The City of Bradbury is nearing a built-out condition. There are thirty-two vacant lots and five underutilized parcels of land. If development were to occur the City could expect to add ninety-one (91) additional dwellings (primary and second dwelling units). Although many of the new dwelling units will not have access to a public sewer system, the existing public sewer system has the capacity to accommodate the projected additional number of dwelling units. The City will utilize its resources to extend the existing public sewer system in order to provide service to as many residents as possible.

Water Supply. Domestic and fire flow water is provided by a private water purveyor, California American Water Company. The water company at one time provided affordable irrigation water to the larger agriculturally zoned and working farms and ranches. The water company has abandoned the irrigation water supply system for a variety of economic reasons. The domestic and fire flow system have been improved and it is maintained in adequate condition to meet existing and future demand.

Regulation of Development near Stream Channels. The existing seasonal Blueline streams are located in a steep hillside area that is recognized as a resource management area that is privately owned undeveloped open space. The City's Hillside Development regulations and environmental standards seek to maintain the prominent ridgelines and the Blueline streams substantially in their natural state to the greatest extent feasible. Existing regulations strive to protect the stream channels from being unnecessarily impacted by development activities.

Flood Management. The City of Bradbury is not located in a Flood Hazard Zone. The foothill location is sufficiently higher than the San Gabriel and Los Angeles Rivers and their tributaries. A system of improved drainage channels maintained by the Los Angeles County Flood Control District surround the City and they accept and direct surface runoff to the major rivers that eventually discharge their contents into the Pacific Ocean. The City is protected from damage

from upstream water shed by a system of flood control and check dams maintained by the County Flood Control District. Current grading regulations require development to retain all surface runoff on-site. The existing flood management system has been successfully operated for the past 55 years since the City incorporated in 1957.

Urban and Built-Up Land. The City of Bradbury is exclusively zoned and developed with single-family detached residential dwelling units. The City has 32 vacant developable parcels of land. No viable development proposals or applications have been filed with the City in the past 56 years concerning the 32 vacant undeveloped parcels of land. The existing 400 dwellings units and a population of 1,048 are expected to remain relatively stable for the foreseeable future. However over 100 years ago it was thought highly unlikely that man would walk on the moon and that data retrieving robots woud be landed on Mars. Thus, the City has considered a maximum dwelling unit buildout of 497 and a potential population of 1,541. Primary development activity is more likely anticipated to be reinvestment in already developed parcels. Ninety percent (90%) or 1,096-acres of the City are zoned for agricultural purposes. Residents have continually voiced their opinion that the character of the community should not change. The City Council has expressed its position that the will of the residents is a driving factor in the creation and implementation of the design and development regulations for the City of Bradbury. It is anticipated that the future Bradbury will be very similar in appearance to the City as it exists today.

Energy Conservation

Energy conservation is important in preserving non-renewable energy resources to ensure that these resources are available to future generations. There are a number of benefits associated with energy conservation, such as improved air quality, reduction of energy costs, waste stream reduction, and water conservation. Non-renewable sources of energy are extremely limited. Sprawling urban development, which necessitates extensive automobile use, consumes vast quantities of oil and gasoline. Structures with large areas of exposed glass require elaborate air conditioning in the summer and heating in the winter.

The Southern California Gas Company annually implements conservation programs that address the needs of this residential community. Residential rebate programs have been offered to property owners for the purchase of energy efficient appliances, and for the installation of insulation, weather-stripping, and duct insulation.

The Southern California Edison Company also offers residential conservation programs. The residential rebate program is for dwelling units heated by electricity only. Incentive programs provide rebates for the purchase of energy efficient refrigerators and clothes washers. Rebates are also available for the replacement of existing electric heating/cooling units with more efficient models and for pre-approved, specific heat pumps, air conditioners, and water heaters. The City will provide information regarding the conservation programs offered by the Gas Company and the Southern California Edison Company.

The City will cooperate with Southern California Edison Company and the Gas Company to initiate and facilitate programs for energy audits of existing structures. The audits will define the current levels of use, compare these to current standards for similar types of structures, and prescribe corrective methods to improve energy conservation.

The City will incorporate, at a minimum, the adoption of the State Building Codes and Green Building Codes which include requirements and techniques to conserve energy consumption and reduce the use of nonrenewable energy resources.

Key Conservation Goals, Objectives, Policies and Action Programs

The City has established the following goals, objectives and policies for the conservation of local natural resources to the greatest extent feasible.

Conservation Goals:

Conservation Goal 1.	Maintain a healthy and clean city.
Conservation Goal 2.	Ensure adequate and cost effective trash collection for Bradbury residents.
Conservation Goal 3.	Protect the valuable watershed and natural habitat areas.
Conservation Goal 4.	Protect and maintain the local water supply to ensure that the City's growing demand for water is properly accommodated.
Conservation Goal 5.	Protect Bradbury's environment through the use of renewable energy resources.
Conservation Goal 6.	Prolong the life and safety of landfills and find an environmentally safe alternative means for the disposal of solid waste.
Conservation Goal 7.	Regulate future surface streets to minimize impacting natural open-space areas.
Conservation Goal 8.	Ensure that development in the steep foothill area is sensitive to the local environment.
Conservation Goal 9.	Maintain Land Use policies that have minimal impact on existing air quality.
Conservation Goal 10.	Maximize efforts to reduce air pollution from mobile sources.
Conservation Goal 11.	Strive to achieve ambient levels of particulate matter to meet State and Federal clean air standards.

Conservation Objectives:

Conservation Objective 1.	Continue to improve the waste diversion and recycling programs already in place.

Conservation Objective 2.	Provide adequate waste disposal systems and increase the use of compatible renewable energy resources.
Conservation Objective 3	When markets for new types of recyclables open up, the City should begin implementing new programs with the trash hauler.
Conservation Objective 4.	Require that toxic and hazardous waste be disposed of properly.
Conservation Objective 5.	Continue to develop a comprehensive NPDES plan that meets State standards.

Conservation Policies:

Conservation Policy 1.	Protect water bodies, watersheds and courses from development impacts.
Conservation Policy 2.	Assist residents in developing compatible renewable resources and identifying funding sources.
Conservation Policy 3.	Protect surface water resources from contamination.
Conservation Policy 4.	Support water purveyor in efforts to provide domestic and agricultural water.
Conservation Policy 5.	Conserve water supplies (ground and surface).
Conservation Policy 6.	Conserve riparian vegetation.
Conservation Policy 7.	Conserve wildlife habitat and assist residents in living with wildlife.
Conservation Policy 8.	Conserve oak woodlands.
Conservation Policy 9.	Minimize conflict between agricultural and urban land uses.
Conservation Policy 10.	Control and prevent erosion.
Conservation Policy 11.	Enforce preservation landscape design programs.
Conservation Policy 12.	Protect sensitive plant species and their habitats.
Conservation Policy 13.	Protect rare, threatened, or endangered species.
Conservation Policy 14.	Explore the use of Habitat Conservation Plans and Natural Communities Conservation Programs.
Conservation Policy 15.	Eliminate identified water pollution sources.

Conservation Policy 16.	Improve major sewer, water, and storm drainage systems.
Conservation Policy 17.	Control hazardous materials in areas where water pollution is possible.
Conservation Policy 18.	Implement and maintain flood management facilities.
Conservation Policy 19.	Protect natural resources.
Conservation Policy 20.	Protect and improve air quality through coordinated efforts with other public agencies and jurisdictions.
Conservation Policy 21.	Protect archaeological, historical and paleontological resources

Conservation Action Programs:

The Conservation Action Plan for Bradbury establishes standards to ensure the protection of natural and cultural resources. These include water conservation measures, biological resource protection, cultural resource preservation, and energy conservation practices.

Conservation Action 1.	Maintain a contract with a waste hauler to provide services to residences for trash and recycling collection.
Conservation Action 2.	Continue to provide opportunities for the disposal of large household items.
Conservation Action 3.	Require the waste collection purveyor to provide recycling containers to all customers.
Conservation Action 4.	Continue to implement the Collection, Disposal and Recycling program.
Conservation Action 5.	Purchase and use post-consumer and recycled products as much as possible.
Conservation Action 6.	Promote green waste and recycling programs such as "green and clean" which increases the usage of green waste for compost and reduces the amount of green waste exported.
Conservation Action 7.	Continue to partner with the County of Los Angeles on hazardous waste pick-up at least once a year.
Conservation Action 8.	Continue to provide information to community members regarding various options for safe hazardous waste disposal.

Conservation Action 9.	Continue with regular street sweeping.
Conservation Action 10.	Create and maintain renewable energy guidelines for residents
Conservation Action 11.	Plan and schedule implementation for additional TMDL's.
Conservation Action 12.	Plan for measures to control pollutants in surface run off.
Conservation Action 13.	Develop public education and outreach programs with regard to surface runoff, catch basin and storm drainage system maintenance.
Conservation Action 14.	Implement procedures to detect and eliminate illegal discharges and illicit disposal practices.
Conservation Action 15.	Promote, publicize and facilitate public reporting of illegal dumping activities.
Conservation Action 16.	Continue city-wide catch basin stenciling program.
Conservation Action 17.	Provide community residents with information as to how to peacefully coexist with the natural wildlife inhabiting the area.
Conservation Action 18	Adopt ordinances that require new development to utilize techniques and equipment that reduce consumption of non-renewable resources.