

## 5.0 CONSERVATION/OPEN SPACE ELEMENT

### 5.1 Introduction

California law requires the preparation of a Conservation/Open Space Element in a City's General Plan. California Government Code Section 65302 requires that the conservation element address the identification, conservation, development, and use of natural resources. These include, but are not limited to, development of farmland, flood control, water pollution, erosion, and endangered species. The open space element is simply the plan for "the comprehensive and long-range preservation and conservation of open-space land" (Government Code 65563). In addition, the open space element must also include a plan of action which outlines the means by which open space will be managed and acquired in the future.

The City of Calexico is located in a predominantly flat agricultural area with few natural features. The New River and the Imperial Irrigation District ("IID") canals are the only variations in the otherwise expansive plain that surrounds the City. This element will focus on the important resources that the City must conserve, including, soil, surface and ground water, agricultural land, and open space.

### 5.2 Conservation Resource Assessment

#### 5.2.1 Agriculture

The City of Calexico is located in Imperial County which is within the 7,500 square mile Colorado Desert. Approximately half of the County's acreage is undeveloped and under ownership of the federal government. One fifth of the County's acreage is used for agricultural purposes and is located in the Imperial Valley. The Valley relies completely on the importation of water from the Colorado River for both potable drinking water and for crop irrigation. Due to a combination of a climate, fertile soils, and readily available water, the Imperial Valley is one of the most productive agricultural areas in the world. In 2003, the Imperial Valley had an overall agricultural production output of over \$1 billion, and for every \$1,000 of total gross produced value, \$392 of personal income is generated for agriculture-related employment<sup>1</sup>.

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<sup>1</sup> 2003 Crop and Livestock Report, Imperial County.  
<http://www.co.imperial.ca.us/ag/Crop%20Report%202003.pdf>

### **5.2.3 Water Supply and Quality**

In modern history, water has been plentiful in the Imperial Valley. However, as populations in the southwest continue to grow, the competition for limited water supplies will escalate. The Imperial Irrigation District, which supplies water to Calexico, has initiated an agreement to divert some of its water allocation to other urbanized areas of southern California. Therefore, water is a precious commodity and conserving it in the Valley is an important step towards ensuring the long-term viability of the region.

### **5.2.4 Soils**

Long before the Colorado River was used as a source of water in the Imperial Valley, the River shaped what the Valley would become. After the great inland sea that once covered much of the Imperial Valley receded, the Colorado River meandered across its delta, which was once in the Imperial Valley, until it reached the Gulf of California. As it did, it left silt deposits throughout the Valley (as deep as 2,000 feet), which accounts for the rich soil that remains. The soil in the Imperial Valley is a precious resource and must be conserved.

### **5.2.5 Open Space and the New River**

Currently the only designated open space lands within the City of Calexico, besides parkland, school properties, and agricultural land, are the major water aqueducts or canals (All American and Central Main) which bisect the City, and the area immediately adjacent to the north side of the Calexico International Airport. This area north of the airport is the lowlands through which the New River flows. Because of the high level of pollutants in the New River (referred to as the most polluted river in North America in a study by CRWQCB<sup>2</sup>), this area is also hazardous to public health. Flowing north from Mexico, the New River is imbued with industrial waste and raw sewage backflow from Mexicali. The New River is simultaneously one of the areas with the greatest potential for recreational uses associated with open space as well as the worst environmental hazard in the City.

Because the New River crosses international jurisdictions, the City has less direct control over its clean-up. However, the U.S. Environmental Protection Agency ("EPA") has recently announced the Border 2012 Program which is a bi-national environmental agreement between the U.S. and Mexico. The Program, among other things, contributes \$13 million (USD) to Mexicali II wastewater treatment project which could eliminate

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<sup>2</sup> *New River Pollution in Mexico*. California Regional Water Quality Control Board, 1998, ix.

up to 20 million gallons of raw sewage per day from the New River. Currently within the City, there is a local effort toward New River cleanup by the Calexico New River Committee. The group has, among other things, developed a local vision and has sought and received federal and other funding sources aimed at implementing the New River Improvement Project. The purpose of the New River Improvement Project is to provide a regional vision and strategic plan to transform the New Rivers in, and downstream from, the City of Calexico from its current highly polluted condition into a resource with significantly improved water quality that minimizes threats to public health and improves the condition of water flowing into the Salton Sea. At the present time, the following describes the vision for the New River Improvement Project. This project, as described below, is not considered a part of the General Plan for purposes of California Environmental Quality Act (CEQA) compliance. The New River Improvement Project will require separate review and compliance with the California Environmental Quality Act and the National Environmental Protection Act, as applicable.

The main New River Improvement Project components (e.g. trash screen, river encasement, and natural treatment wetlands) have evolved from sanitation concepts most recently advanced by the City of Calexico, the City of Calexico New River Committee and the Citizens Congressional Task Force on the New River. The New River Improvement Project (“Project”) is envisioned to be developed and implemented in six phases, as generally described below:

Phase 1 – Project Development and Planning: This phase provides a road map to complete the Project in a reasonable and environmentally sound manner. Its major components are preliminary site assessments (e.g., hydro-geological investigations and surveying/mapping) and preparation of supporting environmental studies required under NEPA and CEQA; engineering plans and specifications; and Project permits.

Phase 2 (Option 1) – Project Headworks: This phase consists of the construction of and installation of headworks for the proposed river encasements. These will be constructed near the Border where the New River enters the United States, and will protect the integrity of the box culvert, as well as track hydraulic and baseline water quality conditions of the river as it crosses the border.

Phase 2 (Option 2) – Project Headworks and Disinfection Facilities: In addition to including items and features identified in Option 1, Option 2 would assist in ensuring that discharges of wastes from Mexico do not violate USEPA approved Pathogen Total Maximum Daily Load (TMDL) for the New River, and it includes two other major components:

- The necessary flow diversion facilities to capture the average flows from international Drain and route them to the existing Calexico Wastewater Treatment Plant (WWTP); and
- Construction of disinfection facilities to capture the average flows from International Drain flows prior to discharge to the New River.

Phase 3 – Project Box Culvert: This is the main construction phase of the Project, in which a double culvert (i.e., two enclosed parallel canals) would be constructed to contain and reroute the New River from the International Boundary, through the developed areas of Calexico and to a point immediately downstream of Highway 98.

Phase 4 – Project Wastewater Polishing System: This phase includes construction of a waste wastewater polishing system at the end of the box culverts, just north of Highway 98, to provide treatment of residual pollution from Mexico.

Phase 5 – Project Wetlands: This phase includes continued construction of wetlands downstream from the improvements described in phase 4, above, to address overall New River pollution.

Phase 6 – Project Community Greenbelts and Habitat Restoration: This phase consists of the reclamation of open space for community facilities such as walking and running trails and soccer/baseball field, and preservation/restoration of natural habitat in the area along the existing river channel in the Calexico area and between Seeley and Brawley. Other appropriate mitigation measures that are identified during Phase 1 of the Project should be incorporated in this Phase.

### **5.2.6 Ecological and Biological Resources**

Imperial County has numerous plants and animals listed for protection by the U.S. Fish and Wildlife Service (“USFWS”) and/or the California Department of Fish & Game (“CDFG”). In the area surrounding Calexico, agricultural activities or urban development, have long ago destroyed native plant and wildlife habitat. As such, there are no officially listed “rare”, “threatened”, or “endangered” plants or mammals by USFWS or CDFG in proximity to Calexico. However, there may be the existence of listed fish, amphibians, and reptiles in or around local freshwater habitats created by irrigation and drainage canals. As well, as many as 10 protected birds use the flyway corridors throughout the County.

### **5.2.7 Landform Features and Scenic Resources**

One of the most striking and inextricable features that defines the context of the City of Calexico is the vast agricultural lands that surround it. Vistas of expansive, flat, contiguous, irrigated cropland set against distant mountains give the City an attractive and decidedly rural feel. These aesthetic resources should be preserved in order for Calexico to retain a significant portion of its character and sense of place.

### **5.3 Establishing a Vision**

The *Vision* for the conservation of natural resources and the preservation and management of open space will allow for the balanced growth and development of the City while protecting the fundamental resources that represent the essence of the City and also enhance the quality of life for its residents. The Conservation/Open Space Element is responsive to the City's *Vision* because it:

- a. Protects the resources that future generations will need to prosper; both in terms of life quality and economic issues.
- b. Conserves of the area's natural resources allows the City to retain its character and heritage.
- c. Enhances the overall quality of the City and therefore increases the City's desirability as a place to invest, possibly strengthening the local economy.
- d. Ensures that development is conducted in an orderly manner that recognizes the intrinsic value of natural resources and open spaces.
- e. The preserved open spaces could become a source of community pride.
- f. Contributes to the overall balance of land uses within our community.
- g. Demonstrates the City's commitment towards preserving its resources.

## **5.4 Goals, Objectives, and Policies**

### **5.4.1 Conservation Goal**

To balance development with the preservation and management of natural and human-built open space resources, thus ensuring the long-term viability of the City.

#### **5.4.1.1 Water Supply and Quality**

##### **Objective 1**

Water supply and water quality should be maintained by implementing domestic conservation measures and protecting surface waters.

##### **Policy 1**

- a. All residential developments shall require low-volume toilets, showers, and faucets.
- b. New development projects should install water-conserving appliances (washing machines, dishwashers).
- c. The City shall continue to require the use of primarily drought-tolerant and/ or native plants in new development through the review and approval process by City staff. The use of turf grass for lawns should be limited.
- d. Residential projects having common green areas and all commercial, manufacturing, and public projects shall be required to install automatic irrigation systems. New commercial, industrial, and housing projects that contain common green belts should use reclaimed "grey" water for irrigation.
- e. Promote water conservation, reduce urban runoff, and prevent groundwater contamination within development projects, property maintenance, City operations, and all other related activities requiring City discretionary approval.
- f. Adopt and enforce regulations and engage in educational efforts to eliminate pollution from runoff.
- g. Participate in any pertinent local, regional, state, and federal programs to protect and enhance water quality.
- h. Support efforts to improve the water quality of the New River or other proposals aimed at improving the area surrounding the River, such as the development and implementation of an integrated regional water quality management plan that meets the goals and objectives of the Colorado River Basin Regional Water Quality Control Board (Region 7) for the New River.

- i. The usage of drip irrigation shall be required where feasible.
- j. Alternative water conservation systems such as grey water usage in residences shall be examined and initiated, if feasible.
- k. New residential construction shall be preplumbed for reclaimed water through a dual on-site distribution system. Anticipated non-potable uses include landscaping, lawn maintenance and crop irrigation. All reclaimed water systems will be in compliance with the State of California Regional Water Quality board guidelines and basin objectives as well as CEQA and NEPA guidelines.
- l. Residential units connected to the community sewage collection system shall not use salt-based water softeners.

#### **5.4.1.2 Soil Management**

##### **Objective 2**

The City shall continue using soil management techniques that minimize soil related problems, including erosion, shrink-swell behavior, and septic tank failure.

##### **Policy 2**

- a. In order to reduce or eliminate soil erosion and pollution, the City shall ensure that construction activity is in compliance with the State's General Permit for Construction Activities administered by the California Regional Water Quality Control Board, located in Palm Desert (Region 7). One condition of this permit is the development and implementation of a site-specific Storm Water Pollution Prevention Plan ("SWPPP") that identifies Best Management Practices ("BMPs") to reduce/eliminate erosion and sedimentation associated with construction.
- b. All development requiring City discretionary approval shall provide a geotechnical investigation by a registered geotechnical engineer that discusses, at least, liquefaction, subsidence, shrink/swell potential, soil strength, landslide potential, distance to known fault rupture zones. All geotechnical studies shall be submitted to the City of Calexico Building and Safety Department for review and approval.
- c. Soils with moderate or high permeability capacity should be left in undeveloped (perhaps used as open space where appropriate) to reduce runoff and facilitate groundwater recharge.
- d. Agricultural areas should not be disturbed to the extent that erosion will occur without the initiation of proper soil management measures.

### **5.4.1.3 Ecological and Biological Resources**

#### **Objective 3**

Identify, protect, and improve significant ecological and biological resources in and around the City of Calexico.

#### **Policy 3**

- a. Support regional and sub-regional efforts to conserve ecological and biological resources in the City and surrounding areas.
- b. Support efforts to integrate natural wetlands treatment systems as part of the New River Improvement Project described in Section 5.2.5.
- c. Projects of one acre or more involving alteration or development of undisturbed land shall be required to submit a biological survey conducted by a qualified biologist to the City of Calexico. A focused biological study may be required if habitat that could potentially support a listed or threatened species exists on the site.

### **5.4.1.4 Landform Features and Scenic Resources**

#### **Objective 4**

The rural character and scenic features provided by local agricultural juxtaposed with the natural desert environment should be preserved in and around the City.

#### **Policy 4**

- a. In the development of the outlying land use in Calexico provisions shall be made in the development plans for large lot rural residential housing.
- b. Development on the outlying areas of the City shall occur in an orderly and contiguous manner in order to preserve the urban/rural edge.
- c. Encourage high-quality architectural and landscaping designs that complement the City's visual character.

### **5.4.2 Open Space Goal**

To identify, acquire, and preserve new open space opportunities while adequately maintaining those that currently exist in and around the City. The preservation of open space will be in accordance with the need to conserve significant resources of public interest and benefit.

### 5.4.2.1 Land Use

#### Objective 5

The City should act to preserve open space through land use policies that value the importance of open space to the overall betterment of the City.

#### Policy 5

- a. Noncontiguous or “leapfrog” development should be discouraged to retain open space at the urban edge.
- b. Every land use change should consider the City’s need to preserve open space.
- c. Where possible, encourage infill development as a means to preserve outlying open space and to conserve resources.

### 5.4.2.2 Agricultural Land

#### Objective 6

The preservation of agricultural lands as community open space has many inherent benefits such as those related to economics, aesthetic beauty, and maintenance of the City’s rural character. The City recognizes that need and shall therefore act to preserve agricultural land wherever possible and minimize conflicts between agricultural and residential land uses.

#### Policy 6

- a. The City should preserve Prime Farmland by focusing development on land with lesser-quality soils and maintaining a compact urban form. (See Figure C/OS-1.) Land designations used on the following map are as follows:

*P= Prime Farmland: Land with the best combination of physical and chemical features to sustain long-term agricultural production.*

*S= Farmland of Statewide Importance: Similar to Prime except with minor shortcomings such as slopes or less ability to store soil moisture.*

*L= Farmland of Local Importance: Land deemed to be of importance to the local economy by the County Board of Supervisors.*

*X= Other Land: Land that does not meet the criteria for any other category. Typically includes low-density rural development, heavily forested land, mined land, or government land with use restrictions.*

*D= Urban or Built Up Land: Land occupied by structures by a density of at least 1 unit per 1.5 acres.*

- b. Encourage the use of Williamson Act contracts on active agricultural lands within the City’s sphere of influence.
- c. Minimize the conflicts between agricultural and residential land uses by requiring the use of buffer zones, roads, and other physical boundaries between uses.

- d. Support public relations and educational workshops between the agricultural industry and non-agricultural businesses, developers, and residents.
- e. The City should consider adopting a right-to-farm ordinance or the use of other regulatory tools such as zoning or subdivision review to reduce agriculture and non-agriculture land use conflicts.
- f. The City should work with the County of Imperial and other surrounding cities, as well as state and local agricultural entities to establish programs related to the conservation of viable agricultural lands.



Source: State of California, Department of Conservation  
 Division of Land Resource Protection, 2002  
 Farmland Mapping and Monitoring Program

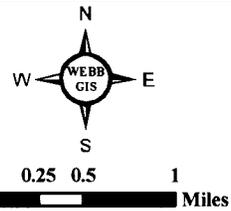


Figure COS-1

### Farmland Designation

City of Calexico General Plan



### 5.5 Conservation/Open Space Implementation Program

This implementation program provides actions to implement the adopted policies and plans identified in the Conservation/Open Space Element. Table C/OS-A describes the responsible department within the City of Calexico and other agencies, funding source(s), time frame to complete the action, and related policies within the Conservation/Open Space and other Elements of the General Plan.

**TABLE C/OS-A:  
CONSERVATION/OPEN SPACE ELEMENT**

<b>Objective</b>	<b>Policy Summary</b>	<b>Responsible Agency/ Department</b>	<b>Funding Source</b>	<b>Time Frame</b>	<b>Related Policies</b>
Objective 1  Water supply and water quality should be maintained by implementing domestic conservation measures and protecting surface waters.	1a. Require low flow toilets, showers and faucets	Building	General Fund for staff and public projects Private Funds Grants from state, federal or local water agency sources	Ongoing	Conservation/Open Space: 1a – 1g
	1b. Drought tolerant plants	Planning Engineering	General Fund for staff and public projects Private Funds Grants from state, federal or local water agency sources	Ongoing	Conservation/Open Space: 1a – 1g
	1c. Use of gray water for irrigation	Planning Engineering Public Works	General Fund for staff and public projects Private Funds Grants from state or federal		

Objective	Policy Summary	Responsible Agency/ Department	Funding Source	Time Frame	Related Policies
			sources		
	1d. Promote water conservation throughout City	City Manager's Ofc. Building Planning Engineering Public Works Public Facilities	General Fund	Ongoing	Conservation/Open Space: 1a – 1g
	1e. Enforce regulations and educate to eliminate polluted runoff	Building Imperial Irrigation District ("IID") Regional Water Quality Control Board ("RWQCB") Calexico Unified School District	General Fund Educational Grants	Within 2 years	Conservation/Open Space: 1a – 1g
	1f. Participate in programs to protect & enhance water quality	City Manager's Ofc. IID RWQCB	General Fund	Ongoing	Conservation/Open Space: 1a – 1g
	1g. Improve New River	City Manager's Office Planning Public Works IID RWQCB New River Commission	General Fund Grant Funds Federal State	Ongoing	Conservation/Open Space: 1a – 1g Public Facilities: 2a – 2g and 4a – d
Objective 2  The City shall continue using soil management techniques that minimize soil related problems, including erosion, shrink-swell behavior, and septic tank failure.	2a. Reduce/eliminate erosion and sedimentation associated with construction	Building & Safety Planning RWQCB	General Fund Private Funds Federal State Grants	Ongoing	Conservation/Open Space: 2 a – c  Safety: 1c
	2b. Geotechnical studies	Building & Safety Planning	General Fund for	Ongoing	Conservation/Open Space: 2 a – c

Objective	Policy Summary	Responsible Agency/ Department	Funding Source	Time Frame	Related Policies
	shall be submitted		Staff Private Funds		Safety: 1c
	2c. Permeability capacity considered to reduce runoff and facilitate groundwater recharge	Planning RWQCB	General Fund for Staff Private Funds	Ongoing	Conservation/Open Space: 2 a – c  Safety: 1c
Objective 3  Identify, protect, and improve significant ecological and biological resources in and around the City of Calexico.	3a. Conserve ecological and biological resources	Planning CDFG U.S. Fish & Wildlife Service County of Imperial	General Fund Private Funds Federal State Grants	Ongoing	Conservation/Open Space: 3a – b
	3b. Required to submit a biological survey	Planning	General Fund Private Funds	Ongoing	Conservation/Open Space: 3a – b
Objective 4  The rural character and scenic features provided by local agriculture juxtaposed with the natural desert environment should be preserved in and around the City.	4a. Outlying land consider large lot rural residential housing	Planning	General Fund Development Review Fees	Ongoing	Conservation/Open Space: 4a – c and 5a
	4b. Outlying areas consider orderly and continuous development	Planning	General Fund Development Review Fees	Ongoing	Conservation/Open Space: 4a – c and 5a

Objective	Policy Summary	Responsible Agency/ Department	Funding Source	Time Frame	Related Policies
	4c. Encourage high-quality architectural and landscaping designs	Planning Building & Safety	General Fund Development Review Fees	Ongoing	Conservation/Open Space: 4a – c and 5a
<p>Objective 5</p> <p>The City should act to preserve open space through land use policies that value the importance of open space to the overall betterment of the City.</p>	5a. “Leapfrog” development should be discouraged	Planning City Council	General Fund	Ongoing	<p>Conservation/Open Space: 5c – by 2010; 5a – c; 6a – e; 3a – b</p> <p>Safety: 4c</p>
	5b. Consider the City’s need to preserve open space in all its forms	Planning City Council	General Fund	Ongoing	<p>Conservation/Open Space: 5c – by 2010; 5a – c; 6a – e; 3a – b</p> <p>Safety: 4c</p>
	5c. Encourage infill development to preserve open space and conserve resources. The City should develop an infill ordinance with incentives (e.g., reduction of fees) if project meets “infill” definition established	Planning City Council	General Fund	Ongoing	<p>Conservation/Open Space: 5c – by 2010; 5a – c; 6a – e; 3a – b</p> <p>Safety: 4c</p>

Objective	Policy Summary	Responsible Agency/ Department	Funding Source	Time Frame	Related Policies
<p>Objective 6</p> <p>The preservation of agricultural lands as community open space has many inherent benefits such as those related to economics, aesthetic beauty, and maintenance of the City's rural character. The City recognizes that need and shall therefore act to preserve agricultural land wherever possible and minimize conflicts between agricultural and residential land uses.</p>	<p>6a. Preserve Prime Farmland</p>	<p>City Planning County Agricultural Commissioner County Planning City Council</p>	<p>General Fund</p>	<p>Ongoing</p>	<p>Conservation/Open Space: 6a – e</p>
	<p>6b. Encourage use of Williamson Act contracts</p>	<p>City Planning City Council County Planning County Board of Supervisors</p>	<p>General Fund</p>	<p>Ongoing</p>	<p>Conservation/Open Space: 6a – e</p>
	<p>6c. Minimize the conflicts between agricultural and residential land</p>	<p>City Planning County Planning County Board of Supervisors</p>	<p>General Fund</p>	<p>Ongoing</p>	<p>Conservation/Open Space: 6a – e</p>

Objective	Policy Summary	Responsible Agency/ Department	Funding Source	Time Frame	Related Policies
	6d. Public relations and education between agricultural industry and non-agricultural uses	City Manager's Ofc. City Planning County Planning County Board of Supervisors	General Fund	Ongoing	Conservation/Open Space: 6a – e
	6e. Adopt ordinance or consider regulatory tools to reduce agricultural & non-agricultural land use conflicts	City Manager's Ofc. City Planning City Council County Planning County Board of Supervisors	General Fund	To be completed 2010	Conservation/Open Space: 6a – e