



# Mohave County, Arizona General Plan



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Revised by Mohave County, December 2005 and November 2010.

ORIGINAL ADOPTION:  
March 10, 1995

REVISED:  
December 5, 2005  
November 15, 2010

## MOHAVE COUNTY GENERAL PLAN

### OUTLINE

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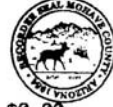
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OF MOHAVE COUNTY  
CAROL MEIER,  
COUNTY RECORDER



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**RESOLUTION NO. 2010-235**

**A RESOLUTION SETTING FORTH THE ACCEPTANCE OF THE REVIEW AND UPDATE OF THE MOHAVE COUNTY GENERAL PLAN AND TO READOPT, AS AMENDED PER GENERAL PLAN SECTION IX.F.2 AND ARS §11-824.B., INCLUDING MODIFICATIONS TO GOALS, POLICIES, AND IMPLEMENTATION MEASURES, AS WELL AS BASELINE DATA AND APPENDICES.**

**WHEREAS**, at the regular meeting of the Mohave County Board of Supervisors held on November 15, 2010, a public hearing was conducted to determine whether approval should be granted for the re-adoption of the Mohave County General Plan, as amended by the Technical Advisory Committee, and

**WHEREAS**, under Arizona Revised Statutes (ARS) §11-802, ARS §11-806, ARS §11-821 and ARS §11-824 the Board of Supervisors of a County are required to plan for future growth and improvements for the area under their jurisdiction. Under Section IX.F.2 of the Mohave County General Plan, the County will perform a five-year review of the General Plan to summarize development activity, describe public actions taken to implement the Plan, report obstacles to Plan implementation, recommend modifications to the Plan, and to suggest priority implementation strategies for the next five years. Goals, policies, and implementation strategies, as well as baseline data, have been added, revised or removed to reflect new state laws, statutory authorities given to counties to plan, and the re-alignment of county priorities ensuing from the temporal nature of the national, state, and local political-economies, and

**WHEREAS**, these updates and revisions occur at least every 10 years per Growing Smarter Plus (ARS §11-824). In May 2000, Arizona adopted the Growing Smarter Act "to more effectively plan for the impacts of population growth by creating a more meaningful and predictable land planning process, to increase citizen involvement in the land planning process, to directly acquire and preserve additional open space areas within this state through necessary reforms to the master planning and open space conservation programs of the state land department and to establish a growth planning analysis process to consider and address various statewide growth management issues so that the future development of land in this state will occur in a more rational, efficient, and environmentally sensitive manner, that furthers the best interests of the state's citizens by promoting the protection of its natural heritage, without unduly burdening its competitive economy," and

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**WHEREAS**, the first Mohave County General Plan was adopted by the Board of Supervisors on September 7, 1965, and amended on March 10, 1995, with the guidance of a consultant, and

**WHEREAS**, in 2004, the Board of Supervisors retained a consultant to facilitate the public meetings for the first 10-year update of the Mohave County General Plan. The General Plan was re-adopted in December of 2005, and

**WHEREAS**, in 2010, the Development Services Department retained a consultant to facilitate the public meetings for the five-year review and update of the Mohave County General Plan, and

**WHEREAS**, to begin the current update process, an 18-member Technical Advisory Committee (TAC) was selected by the County Manager representing members from the community, each with a specialized knowledge of the planning process. The first TAC meeting occurred in January, 2010, where the task of updating the General Plan was described by staff and a staff-prepared draft, including suggested changes to goal and policy wording, was distributed to each TAC member. Ensuing meetings discussed the approach to update the Plan, the synthesizing of public comments into goal and policy statements, and providing input to staff relevant to recent changes in the local economy, and

**WHEREAS**, public outreach began with a set of community meetings at the four locations throughout the County in late winter and early spring of 2010, as follows:

- Lake Havasu Area at the Aquatic Center
- Kingman Area at the Board of Supervisors Hearing Room, Administration Building
- Littlefield/Beaver Dam Area at the Littlefield/Beaver Dam Junior High School
- Mohave Valley/Bullhead City Area at the Mohave Community College, Bullhead City Campus

**WHEREAS**, each meeting was conducted with the aid of the facilitator, where participants were asked to write down their questions and concerns regarding the General Plan. Questions and comments from the public were grouped by the elements of the General Plan to which they pertained. After a brief staff presentation, customized to each venue, questions and comments were discussed to see if: 1) the concern related to the General Plan, 2) the problem could be resolved with information provided by another agency; and 3) the issue could be addressed by the General Plan. All comments were recorded and presented to the TAC. The TAC reviewed the comment cards at their final meeting in May, and

**WHEREAS**, with a working draft approved by the TAC in May of 2010, the Committee directed staff to distribute the Draft for a 60-day review and hearing by the Planning and Zoning Commission in September, 2010, and

**WHEREAS**, the following described Findings of Fact are for the above-captioned item:

- a. All notices have been advertised and posted according to regulations.
- b. The proposed action and effect complies with Arizona Revised Statutes.

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- c. Staff has received several dozen comments on the draft from various members of the public during the review. Staff has prepared responses to comments from the public workshops and from those comments submitted independent of the public workshops.

**WHEREAS**, at the public hearing before the Mohave County Planning and Zoning Commission on September 8, 2010, the Commission, in a 5-4 vote, recommended APPROVAL of the READOPTION of the Mohave General Plan, as amended, and subject to the following:

1. The Historic Preservation Section VI.A.2 be re-instated, with modifications, as shown in Exhibit "A."

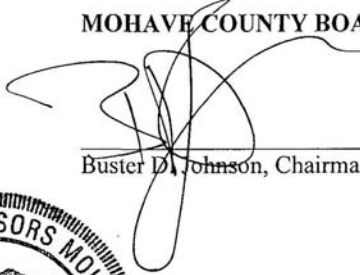
**WHEREAS**, the notice of hearing was published in The Kingman Daily Miner, a newspaper of general circulation in Kingman, Mohave County, Arizona, October 31, 2010 and posted October 29, 2010, as required by Arizona Revised Statutes and the Mohave County Zoning Regulations.

**NOW THEREFORE BE IT RESOLVED**, that the Board of Supervisors, at their regular meeting on Monday, November 15, 2010, APPROVED this READOPTION of the Mohave General Plan, as amended, as recommended by the Mohave County Planning and Zoning Commission and outlined herein.

MOHAVE COUNTY BOARD OF SUPERVISORS

ATTEST

  
Barbara Bracken, Clerk

  
Buster D. Johnson, Chairman



MICROFILMED



2005139500 BK 6003 PG 308  
OFFICIAL RECORDS OF MOHAVE COUNTY  
JOAN MC CALL, MOHAVE COUNTY RECORDER  
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MOHAVE COUNTY BOARD OF SUPERVISORS  
RECORDING FEE 0.00

**RESOLUTION NO. 2005-606**

**A RESOLUTION SETTING FORTH THE READOPTION OF THE MOHAVE COUNTY GENERAL PLAN, AS AMENDED, PER ARS §11-824.B, INCLUDING MODIFICATIONS TO GOALS, POLICIES AND IMPLEMENTATION MEASURES AS WELL AS BASELINE DATA, LAND USE DIAGRAMS AND APPENDICES.**

**WHEREAS**, at the regular meeting of the Mohave County Board of Supervisors held on November 21, 2005, a public hearing was conducted to determine whether approval should be granted for the re-adoption of the Mohave County General Plan, as amended, and

**WHEREAS**, under Arizona Revised Statutes (ARS) §11-802, ARS §11-806, ARS §11-821 and ARS §11-824 the Board of Supervisors of a County are required to plan for future growth and improvements for the area under their jurisdiction, and

**WHEREAS**, these updates and revisions occur at least every 10 years per Growing Smarter Plus (ARS §11-824). In May 2000, Arizona adopted the Growing Smarter Act "to more effectively plan for the impacts of population growth by creating a more meaningful and predictable land planning process, to increase citizen involvement in the land planning process, to directly acquire and preserve additional open space areas within this state through necessary reforms to the master planning and open space conservation programs of the state land department and to establish a growth planning analysis process to consider and address various statewide growth management issues so that the future development of land in this state will occur in a more rational, efficient and environmentally sensitive manner that furthers the best interests of the state's citizens by promoting the protection of its natural heritage without unduly burdening its competitive economy," and

**WHEREAS**, the first Mohave County General Plan was adopted by the Board of Supervisors on September 7, 1965, and amended on March 10, 1995, with the guidance of a consultant, and

**WHEREAS**, in 2004, the Board of Supervisors retained a consultant to facilitate the public meetings for the update and re-draft of the Mohave County General Plan, and

**WHEREAS**, public participation began by asking each member of the Board of Supervisors to appoint four citizens from his district to serve on the 2005 General Plan Update Committee. The first Update Committee meeting occurred in October, 2004, where the task of updating the General Plan was described. Ensuing meetings discussed the approach to update the plan, the synthesis of public comments into goal and policy statements, and developing strategies to enhance public outreach, and

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**WHEREAS**, subsequent public outreach began with a set of public meetings at the eight following locations throughout the County in late fall, 2004.

- Kingman Area at the Board of Supervisors Hearing Room in the Negus Building
- Dolan Springs/Meadview Area at the Dolan Springs Community Center
- Golden Valley/Yucca Area at the Black Mountain Elementary School
- Lake Havasu Area at the Aquatic Center
- Mohave Valley/Bullhead City Area at the Junior High School (Boundary Cone)
- Wikieup Area at the Owens Whitney School
- Colorado City/Centennial Park Area at Mohave Community College
- Littlefield/Beaver Dam Area at the Littlefield/Beaver Dam School, and

**WHEREAS**, each meeting was conducted with the aid of the facilitator where participants were asked to write down their questions and concerns regarding the General Plan. Questions and comments from the public were grouped by the elements of the General Plan to which they pertained. After a brief staff presentation, customized to each venue, questions and comments were discussed to see if: 1) the concern related to the General Plan; 2) the problem could be resolved with information provided by another agency; and 3) the issue could be crafted into a goal and/or policy statement in the General Plan. All comments were recorded and placed into an evaluation matrix. From this primary research, existing goals and policies were reevaluated with new language drafted by staff and the Update Committee at their regular monthly meetings, and

**WHEREAS**, with a working draft approved by the Update Committee in early spring, 2005, the second set of public meetings were held at the same locations throughout the County to show: 1) how questions and concerns raised during the fall 2004 outreach sessions had been addressed, and 2) how the General Plan's goals and policies were modified to address the issues. The Update Committee held a final meeting in June to consider public comments. After integrating comments on population growth and expanded commercial land uses along highways, the Update Committee directed staff to distribute the Draft for a 60-day review and hearing by the Planning and Zoning Commission in September, 2005, and

**WHEREAS**, the following described Findings of Fact are for the above-captioned item:

- a. All notices have been advertised and posted according to regulations.
- b. The proposed action and effect complies with Arizona Revised Statutes.

**WHEREAS**, at the public hearing before the Mohave County Planning and Zoning Commission on September 21, 2005, the Commission recommended READoption of the Mohave General Plan, as amended.

**WHEREAS**, the notice of hearing was published in The Kingman Daily Miner, a newspaper of general circulation in Kingman, Mohave County, Arizona, November 6, 2005, and posted November 4, 2005, as required by Arizona Revised Statutes and the Mohave County Zoning Regulations.

**RESOLUTION NO. 2005-606**


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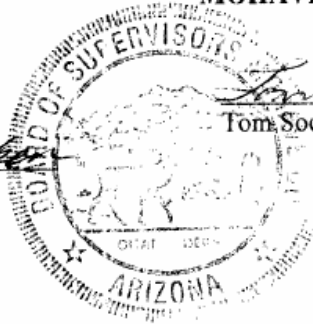
**WHEREAS**, upon taking testimony at their November 21, 2005 meeting, the Board of Supervisors continued the General Plan readoption, as amended, to the Board of Supervisors December 5, 2005 meeting.

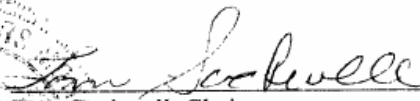
**NOW THEREFORE BE IT RESOLVED**, that the Board of Supervisors, at their regular meeting on Monday, December 5, 2005, APPROVED the READOPTION of the Mohave General Plan, as amended as recommended by the Mohave County Planning and Zoning Commission and the 2005 General Plan Update Committee and outlined herein.

**MOHAVE COUNTY BOARD OF SUPERVISORS**

**ATTEST:**

  
Barbara Bracken, Clerk



  
Tom Sockwell, Chairman

JS



MICROFILMED

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#95- 14410 8K 2542 PG 14  
OFFICIAL RECORDS OF MOHAVE COUNTY AZ.  
\*JUAN McCALL, MOHAVE COUNTY RECORDER\*  
03/22/95 1:30 P.M. PAGE 1 OF 3  
MOHAVE COUNTY BOARD OF SUPERVISORS  
RECORDING FEE 0.00 NC

#### RESOLUTION NO. 95-110

**A RESOLUTION CONSIDERING THE PLANNING AND ZONING COMMISSION'S COMMENTS TO THE BOARD OF SUPERVISORS AMENDMENTS TO THE PLANNING AND ZONING COMMISSION'S RECOMMENDATIONS TO AMEND THE MOHAVE COUNTY GENERAL PLANS AND AMENDING THE MOHAVE COUNTY GENERAL PLAN.**

**WHEREAS**, on September 14, 1994, the Planning and Zoning Commission recommended a major amendment to the Mohave County General Plan; and

**WHEREAS**, on January 4, 1995, the Board of Supervisors held a public hearing on the Planning and Zoning Commission's recommended amendment to the General Plan; and

**WHEREAS**, the Board of Supervisors adopted BOS Resolution No. 95-24 accepting the Planning and Zoning Commission's recommendations except for those areas amended by the Board of Supervisors; and

**WHEREAS**, the amended areas and areas needing clarification were referred to the Planning and Zoning Commission for their comments; and

**WHEREAS**, at a special meeting on February 9, 1995, the Planning and Zoning Commission made the following comments on the items referred by the Board:

1. The Board of Supervisors amended Page 128, Policy 36.7 to read: "Mohave County has formed **directed the formation** of the Mohave County Economic Development Authority as the initial welcoming agent of the County for prospective new industries considering location in Mohave County. The Authority shall assist industries by providing information, identifying potential sites and serving as an ombudsman to the public and private entities." *The Planning and Zoning Commission concurs with the Board of Supervisors amendment.*
2. Page 129, Policy 38.4 be amended to read: "**The County should cooperate with private and quasi-public entities such as the Mohave County Economic Development Authority, the Chambers of Commerce, Department of Economic Security and other economic development organizations and the Mohave County administrators of the American Disability Act, to encourage creation of employment opportunities for minorities, disadvantaged and disabled persons.**" The policy in the September 1994 Draft of the Mohave



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BK 2542 PG 147 (FEE#95-14410)

County General Plan would be struck. This comment is in response to the Board of Supervisors request for clarification of the policy.

3. The Board of Supervisors amended Page 133, the second paragraph under **Public Infrastructure Provision**, the third sentence to read: "The infrastructure to provide for these needs is operated by numerous public and private sources. The County maintains an extensive street network throughout its unincorporated areas that is linked with the State and Federal highway networks. ~~The County provides water systems to some areas through special districts.~~ **Special districts provide water service to some areas in the county.**" *The Planning and Zoning Commission concurs with this amendment.*

4. The Board of Supervisors amended Page 142, Policy 43.7 to read: "Mohave County shall require developers to provide for **potable** water, treatment storage, distribution/transmission and supply acquisition needed to serve proposed development." *The Planning and Zoning Commission concurs with this amendment.*

5. The Board of Supervisors amended Page 147, Policy 46.4 to read: "Mohave County shall require developers to provide wastewater collection and treatment capacity needed to serve development, **if on-site treatment systems are not acceptable.**" *The Planning and Zoning Commission did not concur with this amendment.* The Commission believes that Policy 46.2 clarifies when waste-water collections systems will be required.

6. The Board of Supervisors amended Page 152, Policy 50.4 to read: "The County ~~should~~ **shall** require that flood control/drainage facilities be designed and constructed to minimize the intrusion of pollutants and excess sediments into sensitive areas." *The Planning and Zoning Commission concurs with this amendment.*

7. The Board of Supervisors amended the General Land Use Diagram, Exhibit VI.8 for Golden Valley. *The Planning and Zoning Commission did not concur with this amendment and recommends that Exhibit VI.8 remain as proposed by the Commission in the September 1994 Draft of the Mohave County General Plan.*

8. The Board of Supervisors also amended all Land Use Diagrams and the Preferred Alternative (Exhibit VI.1) to comply with changes in the Land Use Diagrams. *The Planning and Zoning Commission did not concur with amendments to the Land Use Diagrams because Exhibit VI.8 was not amended. However, the Commission did agree that the Preferred Alternative (Exhibit VI.1) be amended to match the Countywide Land Use Diagram (Exhibit VI.4). The Commission also recommends amending Page 56, second paragraph to read: "Following analysis of these issues by the consultant and staff, Mohave County held a series of public meetings to gather public comments about the advantages and disadvantages of these alternatives. After a significant amount of public input and discussion, the County Planning and Zoning Commission recommended a General Plan Alternative to the Board of Supervisors. The Board adopted this*

RESOLUTION NO. 95-110

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alternative on March 30, 1992. **The alternative was amended on January 4, 1995 after additional public input.** Exhibit VI.1 shows the Adopted General Plan Alternative.

Major land use concepts included in this adopted alternative are:

- the identification of areas appropriate for urban, suburban and rural development;
- ~~the ability to designate Joint Development Planning Areas (JDPAs) adjacent to Bullhead City, Kingman and Lake Havasu City and other incorporated areas and selected urbanizing areas as each JDPAs is approved; and~~
- the assignment of typical residential densities for urban, suburban and rural development areas."

**WHEREAS**, notice of hearing was published in the Kingman Daily Miner, a newspaper of general circulation in Kingman, Mohave County, Arizona, February 19, 1995, and posted on February 17, 1995, as required by Arizona Revised Statutes;

**NOW THEREFORE BE IT RESOLVED**, that the Board of Supervisors, at their regular meeting on Friday, March 10, 1995, **ACCEPTED** the Planning and Zoning Commission comments and recommendations outlined herein and **AMENDED** the Mohave County General Plan accordingly for all text changes and for corrections to the Preferred Alternative.

**BE IT FURTHER RESOLVED**, that the Board of Supervisors retained the alternative Golden Valley Land Use Diagram that the Board accepted on January 4, 1995, and that the Board accepts the Plan Adoption description.

**MOHAVE COUNTY BOARD OF SUPERVISORS**

ATTEST:



Joan C. Ward  
Joan C. Ward, Chairman

MICROFILMED

INDEXED



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OFFICIAL RECORDS OF MOHAVE COUNTY, AZ  
JOAN MCCALL, MOHAVE COUNTY RECORDER  
07/31/95 12:16P PAGE 1 OF 2  
MOHAVE COUNTY BOARD OF SUPERVISORS  
RECORDING FEE 0.00

**RESOLUTION NO. 95-24**

**A RESOLUTION AMENDING THE SEPTEMBER 7, 1965, MOHAVE COUNTY GENERAL PLAN AS RECOMMENDED BY THE PLANNING AND ZONING COMMISSION.**

**WHEREAS**, at a special meeting of the Mohave County Board of Supervisors held in the Board of Supervisors Hearing Room, 809 E. Beale St., Kingman, Arizona, on January 4, 1995, a public hearing was held and the Amendment to the Mohave County General Plan was discussed, and

**WHEREAS**, under the laws of the State of Arizona (ARS 11-802 and ARS 11-806), the Board of Supervisors of a County is required to plan for future growth and improvements for the area under their jurisdiction, and

**WHEREAS**, the first Mohave County General Plan was adopted by the Board of Supervisors on September 7, 1965, and

**WHEREAS**, the Board of Supervisors retained a consultant to develop a draft general plan for the County, and the consultant delivered a Draft General Plan dated August 10, 1992, and

**WHEREAS**, under the laws of the State of Arizona (ARS 11-806), the Planning and Zoning Commission is required to prepare and recommend to the Board of Supervisors a comprehensive plan for the unincorporated county for the purpose of bringing about coordinated physical development in accordance with the present and future needs of the county, and

**WHEREAS**, the Planning and Zoning Commission appointed an Ad Hoc Committee to review that draft and the Committee transmitted their comments to the Planning and Zoning Commission on February 8, 1993, and

**WHEREAS**, the Planning and Zoning Commission held workshops between August 6, 1993, and November 11, 1993, and developed the May, 1994, draft of the General Plan, and

**WHEREAS**, eight area meetings were held to present the May 1994, draft of the General Plan to the public, and

**WHEREAS**, the Planning and Zoning Commission held three public hearings as follows: 1) Mohave Community College, Mohave Valley Campus on July 21, 1994; 2) Mohave Community College, Lake Havasu City Campus on July 28, 1994; and 3) Kingman High School, 4182 N. Bank St. on August 4, 1994, and

**RESOLUTION NO. 95-24**

Page 2

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**WHEREAS**, the hearing dates were published in the Kingman Daily Miner, a newspaper of general circulation published in the County seat; the Today Daily News, a newspaper published in Lake Havasu City; the Mohave Valley News, a newspaper published in Bullhead City; and The Daily Spectrum, a newspaper published in St. George, Utah with circulation throughout the Arizona Strip on July 7, 1994, July 10, 1994, and July 17, 1994, and

**WHEREAS**, the hearing dates were posted in 21 places throughout Mohave County, and copies of the plan were made available in at least six places in Mohave County, and

**WHEREAS**, at their regular meeting on September 14, 1994, the Mohave County Planning and Zoning Commission recommended to the Board of Supervisors that the May 1994, draft of the Mohave County General Plan, as amended, be adopted as an amendment to the Mohave County General Plan dated September 7, 1965, and

**WHEREAS**, the September 1994, draft of the Mohave County General Plan includes the May 1994, draft as amended by the Planning and Zoning Commission, and

**WHEREAS**, at their regular meeting on December 5, 1994, the Mohave County Board of Supervisors set January 4, 1995, for a public hearing on the September 1994, draft of the Mohave County General Plan, and

**WHEREAS**, the hearing date was published on December 18, 1994, in the Kingman Daily Miner, a newspaper of general circulation in the County seat; the Today Daily News, a newspaper published in Lake Havasu City; the Mohave Valley News, a newspaper published in Bullhead City; and The Daily Spectrum, a newspaper published in St. George, Utah with circulation throughout the Arizona Strip, and

**WHEREAS**, the hearing date was posted in 21 places throughout Mohave County, and copies of the plan were made available in the Planning and Zoning Department, in the office of the Clerk of the Board of Supervisors and in the Mohave County Libraries, and

**NOW THEREFORE BE IT RESOLVED**, that the Board of Supervisors amends the Mohave County General Plan adopted September 7, 1965, as recommended by the Planning and Zoning Commission as follows:

1. By striking Pages ii-iv and Pages 1-16 of the Mohave County General Plan adopted on September 7, 1965, and



2. Adding the September 1994, draft of the Mohave County General Plan as recommended by the Planning and Zoning Commission.

**MOHAVE COUNTY BOARD OF SUPERVISORS**

*Juan C. Ward*  
\_\_\_\_\_  
Juan C. Ward, Chairman

**P&ZC RESOLUTION NO. 94-3**

**WHEREAS**, at the regular meeting of the Mohave County Planning and Zoning Commission, held in the Board of Supervisors Hearing Room, 809 E. Beale St., Kingman, Arizona, on August 10, 1994, the Amendment to the Mohave County General Plan was discussed, and

**WHEREAS**, under the laws of the State of Arizona (ARS 11-802 and ARS 11-806), the Board of Supervisors of a County is required to plan for future growth and improvements for the area under their jurisdiction, and

**WHEREAS**, under the laws of the State of Arizona (ARS 11-806), the Planning and Zoning Commission is required to prepare and recommend to the Board of Supervisors a comprehensive plan for the unincorporated county for the purpose of bringing about coordinated physical development in accordance with the present and future needs of the county, and

**WHEREAS**, the first Mohave County General Plan was adopted by the Board of Supervisors on September 7, 1965, and

**WHEREAS**, the Board of Supervisors retained a consultant to develop a draft general plan for the county, and

**WHEREAS**, the consultant delivered a Draft General Plan dated August 10, 1992, and

**WHEREAS**, the Planning and Zoning Commission appointed an Ad Hoc Committee to review that draft and the Committee transmitted their comments to the Planning and Zoning Commission on February 8, 1993, and

**WHEREAS**, during workshops from August 6, 1993, to November 11, 1993, the Planning and Zoning Commission considered the Ad Hoc Committee's comments as well as other comments, and

**WHEREAS**, the May, 1994, Draft General Plan was developed from discussions held during those workshops, and

**WHEREAS**, eight area meetings were held to inform the public of the contents of the May, 1994, Draft General Plan, and

WHEREAS, three public hearings were held as follows: 1) Mohave Community College, Mohave Valley Campus on July 21, 1994, at 6:30 p.m.; 2) Mohave Community College, Lake Havasu City Campus on July 28, 1994, at 6:30 p.m.; and 3) Kingman High School, 4182 N. Bank St. on August 4, 1994, at 6:30 p.m., and

WHEREAS, the hearing dates were published in the Kingman Daily Miner, a newspaper of general circulation published in the County Seat; the Today Daily News, a newspaper published in Lake Havasu City; the Mohave Valley News, a newspaper published in Bullhead City; and The Daily Spectrum, a newspaper published in St. George, Utah with circulation throughout the Arizona Strip on July 7, 1994, July 10, 1994, and July 17, 1994, and

WHEREAS, the hearing dates were posted in 21 places throughout Mohave County, and copies of the plan were made available in at least six places in Mohave County, and

WHEREAS, the August 10, 1994, meeting of the Planning and Zoning Commission was published in the Kingman Daily Miner, the Mohave Valley News, the Today Daily News, and The Daily Spectrum on July 24, 1994, and was posted in 21 places throughout the county, and

WHEREAS, the item was continued from the August 10, 1994, meeting to a special meeting held August 25, 1994, and was continued at that meeting to the regular Planning and Zoning Commission meeting of September 14, 1994, and

NOW THEREFORE BE IT RESOLVED, that the Planning and Zoning Commission, at their September 14, 1994, meeting approved for adoption the May, 1994 draft of the Mohave County General Plan as amended, and

NOW THEREFORE BE IT FURTHER RESOLVED, that the Planning and Zoning Commission recommends to the Board of Supervisors that the May, 1994 draft of the Mohave County General Plan, as amended by the Commission, be adopted as an amendment to the Mohave County General Plan adopted on September 7, 1965, as amended, as follows:

1. By striking Pages ii-iv and Pages 1-16 of the Mohave County General Plan adopted on September 7, 1965, and
2. Adding the May, 1994, draft of the Mohave County General Plan, as amended.

Mohave County Planning & Zoning  
Commission

Attest:

Christine Ballard  
Christine Ballard, Director  
Planning & Zoning Department

Larry Lively  
Larry Lively, Chairman

## ***ACKNOWLEDGMENTS***

### **Board of Supervisors**

Buster Johnson, Supervisor District III, Chairman  
Gary Watson, Supervisor District I, V. Chair  
Tom Sockwell, Supervisor District II

### **County Manager**

Ron Walker

### **Deputy County Manager**

Michael Hendrix, P.E.

### **Planning and Zoning Commission**

Carl Flusche, Chairman, District III  
Bill Abbott, District I  
Rick Sherwood, District I  
Joseph Morabito, District II  
Mehdi Azarmi, District II, V. Chair  
Kristal Gibson, District II  
Kenneth White, District III  
Sue Donahue, District III  
Jack Pozenel, District I

### **Technical Advisory Committee**

Mehdi Azarmi, Chairman  
Chuck Dewald, Vice Chairman  
Carl Flusche  
Rob Grumbles  
Lisa McCabe  
Kevin Murphy  
Bob Riley  
Paul Selberg  
Mel Sorenson  
Kathy Tackett-Hicks  
John Gall  
Earl Hamlyn  
William Miller  
Janice Paul  
Steve Pebley  
Peter Proffit

### **Development Services Department**

Nicholas S. Hont, P.E., Director  
Christine Ballard, Planning and Zoning Divisional Manager  
Karl Taylor, Planning Manager  
Kevin Davidson, Planner II  
Sylvia Shaffer, Planner II  
John Montgomery, Planner II  
Rosevelt Arellano, Planner I  
Jon Ortman, Office Specialist

### **Public Works Department**

Steven Latoski, P.E., Director  
Tim Walsh, P.E.  
Greg Vandevier, Engineering Technician Sr.

### **Environmental Health**

Rachel Patterson, Manager

# I. Introduction

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*Purpose*  
*Content and Organization*  
*Effect*





## **I. INTRODUCTION**

### **A. PURPOSE**

This General Plan provides a basis to guide decision-makers. It is a statement of community values, ideals and aspirations about the best management of the natural and built environments. In addition to defining the County's view of its future, the General Plan describes actions to take to achieve the desired future. The Plan uses text and diagrams to establish policies and programs to address the many issues facing the County. The Plan is thus a tool for managing community change to achieve the desired quality of life. The current document represents a revision of the original plan adopted in 1995, as revised, and as updated in 2005 and 2010, and has reaffirmed, and in some cases reassessed, the values, ideals and aspirations of the community.

### **B. CONTENT AND ORGANIZATION**

The General Plan includes ten major sections. They introduce the Plan; define the County's vision for its future; summarize past, existing and anticipated conditions affecting the County; describe the process used to prepare this Plan; establish goals, policies and implementation measures for six functional plan elements; establish policies for preparing Area Plans; describe key implementation tools; and provide background information.

The first four sections of the General Plan provide useful background for the reader of this document. This section introduces the Plan, describing its purpose and organization. Section II defines the County's vision of what it should be in the year 2020. Section III summarizes existing conditions and trends that are examined in greater detail in the General Plan Baseline Analysis. Section IV provides an overview of the process used to prepare this plan, one with the involvement of a broad cross-section of the County's population.

Sections V, VI and VII are the backbone of the Plan. They contain six functional Plan Elements establishing goals, policies and implementation measures that will guide County actions relating to:

Natural Resources  
Land Use  
Housing  
Economic Development  
Public Infrastructure and  
Public Facilities

Each Plan Element begins with a statement summarizing the most important information gleaned from the base study research, workshops and other sources. Next, the key planning issues relating to the topic are described. These issues have been identified based on public and Mohave County staff input; they are also influenced by the baseline study and alternatives analysis prepared for this General Plan. These two sections give the reader an understanding of the basis for goals and policies. Following the statement of issues, the County's goals, policies and implementation measures are listed. The goals and policies are the most important part of the General Plan. They state the policies the County will use in making decisions on development approvals, public infrastructure financing and other issues. The implementation measures are suggested strategies for achieving the County's adopted goals and policies.

Section VIII lists goals and policies for the adoption of Area Plans, plans that focus on the special needs of new, large or complex developments and Rural Planning Areas. This section includes sub-sections reserved for future planning documents -- Area Plans.

Section IX provides a brief overview of the key tools that Mohave County can use to implement this plan. This section is intended to give citizens and officials a single reference source for information about the tools available to the County in carrying out its Plan.

Section X is the General Plan appendix. It includes a glossary of the key terms used throughout the Plan and an annotated list of support documents generated during the planning process.

### **C. EFFECT**

Planning is an ever changing process -- not the adoption of a particular document. Rather, it is an ongoing process involving the actions by the County, the private sector, other public and quasi-public agencies, and the community-at-large. As conditions change, the County's Plan should be amended to take advantage of new opportunities and respond to new needs. Thus, the General Plan is not intended to be a static document; it is intended to be a dynamic guide to help citizens shape the County's future. To ensure that planning documents are relevant, Arizona has adopted "Growing Smarter" legislation, per Arizona Revised Statutes, as amended, that requires cities and counties to update their general plans every ten years or more often.

Standard definitions of goals, policies and implementation measures are used in all elements of the General Plan. Goals describe a desired state of affairs in the future. They are the broad public purposes toward which policies and programs are directed. They need not be fixed in time or quantity. Since goals are general statements, more than one set of actions could be taken to achieve each goal. In this General Plan, goals are phrased to express the desired results of the Plan; they complete the sentence "Our goal is ..."

Policies are statements of government intent against which individual actions and decisions are evaluated. Policies are phrased as sentences, with the agency responsible for implementing the policy clearly identified. The wording of policies conveys the intended level of commitment to action. Policies which use the word "shall" are mandatory directives, while those using the word "should" are statements to be followed unless there are compelling reasons to do otherwise, or unless other goals and policies outweigh in another direction. The word "should" also assumes that the County has the ability or budget to do the things specified. The term "support" means encouragement or assistance, typically of a non-monetary nature. "Encourage" means to be in conceptual agreement with a program or process, and to seek its furtherance. "Cooperate" or "work with", unless otherwise defined by law, means to act in concert with another agency or entity, toward a common goal or result, or make progress thereof, and to provide moral support only, unless additional support is deemed appropriate by county management or specifically directed by the Board of Supervisors. "Ensure" means to provide or offer, within the County's abilities to do so, but does not mean to guarantee. Unless specifically stated so, the County does not offer or commit to funding others through its General Plan goals, policies, or implementation measures, despite intent to support, encourage, promote, or facilitate programs. Other terms, such as "reasonable" or "appropriate" are assumed to be at the interpretation of the Board of Supervisors, who are authorized to make such determinations.

Implementation measures are the actual actions, methods or mechanisms recommended to carry out the policies. They aren't the only possible actions which would achieve these goals. They are intended to set an initial agenda for implementation of the Plan.

The County will select measures for implementation in the next few years by considering the cost, urgency and benefit of each suggested measure. As a result, some projects may begin shortly after Plan adoption, while others may not begin for five or more years.

Including a program or project on the list of implementation measures does not automatically create that program. The County will need to adopt budgets, consider new ordinances and provide staff resources before new programs begin. Each of these implementation decisions will require public input and specific Board action.

## II. Vision for the Future

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## II. VISION FOR THE FUTURE

What should Mohave County be like in the future? Collectively, the following major planning concepts define a vision for Mohave County's future -- a future on which the goals of each individual Plan Elements are based. This ideal future is one that reflects economic growth and development, as well as a high quality of life for all residents. It is a future in which Mohave County retains its environmental quality and capitalizes on its wealth of natural, built and human resources.

- ❖ **Promote Beneficial Economic Growth, Development and Renewal.** Mohave County should strive to create a supportive climate for business in its governmental operations and reach its full economic potential without sacrificing the character of its communities and natural resources that attract this growth.
- ❖ **Ensure Sound and Integrated Planning County-wide with Consistency of Implementing Ordinances, Regulation and Development Approvals.** Regardless of how well each plans independently, neither the County, its incorporated cities, communities, tribal reservations, federal and state land agencies, nor the myriad of other regional and quasi-public agencies will effectively shape the future until each entity receives the cooperation of the others and all move toward common goals. The County's General Plan is a statement of its goals for coordinated planning and goal implementation.
- ❖ **Focus County Resources in the County's Urban Areas.** Mohave County needs to focus more effort toward making urban areas more attractive for growth, not only to protect and maintain the enormous investment in public services that has already been made in these areas, but also to help relieve the pressures of growth on environmental and fiscal resources in suburban and rural areas.
- ❖ **Provide Adequate Public Services at a Minimum Cost.** Mohave County should, to the extent practical, encourage the timing and sequencing of public services with growth so that the capacities of streets, public and private water systems, public and private sewage systems and other facilities are maintained as the County continues to grow, and support the concept that the costs be covered by those creating the growth. Some mechanisms that may be used in this regard include, but are not limited to, special improvement districts, partnerships with other governmental agencies and private developers, community development grants and other tools that may be available by law, in addition to developmental regulations that require developers to provide their share of required improvements resulting from the projects they propose.
- ❖ **Promote Adequate Housing at a Reasonable Cost.** Mohave County should focus on helping to achieve a balance of housing while striving, within its ability, to control non-market related housing costs, including developer fees.
- ❖ **Protect the Environment.** Mohave County should recognize the enormous economic value of its natural environment - the unspoiled beauty of the County that attracts new growth and sustains communities. The County should encourage the growth of communities that maintain the health and integrity of its valuable environmental features.
- ❖ **Conserve the County's Natural Resources.** Mohave County should, within its authorities, protect wetlands, washes, aquifer recharge areas, areas of unique flora and fauna, and areas with scenic, historic, cultural and recreational value, and capitalize on these resources for the long-term benefit of all residents.
- ❖ **Preserve and Enhance Historic, Cultural, Open Space, and Recreational Lands and Structures.** Mohave County should strive to ensure that the built environment incorporates natural and historic treasures into the everyday lives of residents.
- ❖ **Assist the Cities' Economic Development Efforts.** Mohave County and the incorporated areas therein should mutually assist each other in the promotion of Economic Development.

### III. Context for Planning

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*Introduction*  
*Community History*  
*Mohave County Today*  
*Development Trends*  
*Projections for Growth*



### **III. CONTEXT FOR PLANNING**

#### **A. INTRODUCTION**

This General Plan defines what Mohave County hopes to be in the year 2020. The Plan also describes policies and actions needed to build on the existing high quality of life and fully realize the community's vision for the future. The recommendations in this Plan result from both this vision for the future and the County's existing condition -- the natural environment; the characteristics of the County's population, facilities and services; historical and recent development trends; and its anticipated population growth.

This section of the General Plan summarizes the background information that helped shape the Plan's goals, policies and implementation measures. It highlights the history of modern settlements that shape the character of the County. Recent trends in the number of people, the characteristics of those people, and the local economy are identified. Finally, this section includes projections for the anticipated growth in Mohave County's population between the present and the year 2020. Overviews of natural resources and public facilities information are provided in Sections V and VII of this General Plan. A discussion of this background information is found in the report, Mohave County, Arizona General Plan Baseline Analysis, available at the County Development Services Department. New information from the US Census Bureau, the Arizona Department of Commerce and the Arizona Department of Economic Security has been integrated directly into the General Plan.

#### **B. COMMUNITY HISTORY**

Mohave County is named after the Mojave Indians, one of several tribes of Native Americans who have resided in the County. Land within the Kaibab, Hualapai and Fort Mojave Indian Reservations are still under tribal jurisdiction. While early Spanish explorers, such as Coronado and Cordero, explored parts of the County, the first western settlements were founded in the mid to late 1800's. Fort Mojave was a military outpost founded in the Bullhead City area in 1859. Littlefield and Kingman are the oldest communities in the County today, having been founded in 1864 and 1882, respectively. The railroad and mining brought early settlers to the southern part of the County. Oatman, Chloride and Hackberry are a few of the existing communities that began as mining towns. Many other mining settlements were abandoned long ago. Pursuit of religious freedom played an important role in the development of the Arizona Strip, as Colorado City, Littlefield, Cane Beds and Mocassin were settled by Mormons. While there are numerous communities scattered throughout the County, only Bullhead City, Colorado City, Kingman and Lake Havasu City are incorporated cities. Kingman, the County Seat, was incorporated in 1952 and remained the only incorporated city in the County until Lake Havasu City incorporated in 1978. Kingman was named for the railroad surveyor who founded the original townsite. Railroad and highway routes passing through this town supported its early growth. This growth was given a boost during the 1930's, with the construction of the Hoover Dam, and through the 1940's, with the establishment of a major U.S. airfield. Kingman remains a regional trade, service and distribution center for northwestern Arizona and the southwestern United States. Tourism and manufacturing also are important to the local economy.

Lake Havasu City was established in 1963 by McCulloch Properties as a planned community. Manufacturing and tourism are the primary enterprises that have contributed to this City's rapid growth. Tourists are attracted to the waters of Lake Havasu and the London Bridge, which was relocated in Lake Havasu City in 1971.

There have been several settlements in the Bullhead City area, including Hardyville, which was founded in 1864 and briefly served as the County Seat. Bullhead City, which was named for a now submerged rock formation in the Colorado River, was incorporated in 1984. The boom of the gaming industry across the Colorado River in Laughlin, Nevada has fueled extremely rapid growth in the resident and tourist populations of Bullhead City. This growth has spilled over into the Golden and Mohave Valleys and, to some extent, the Kingman area.

Colorado City (called Short Creek until 1958) was homesteaded by Roy Johnson near the turn of the century. Ranching plays a major role in the town's early economy, but manufacturing, mining and construction have become increasingly important to the local economy. Colorado City incorporated in 1985.

## C. MOHAVE COUNTY TODAY

The characteristics of Mohave County's population will have significant impacts on the County's needs and priorities. The rate of change, age and household characteristics of the population in communities throughout the County will affect the type, location and timing of service needs.

Mohave County was Arizona's fastest growing county from 1990 to 2000 at a rate of 65.8% from 93,497 people to 155,032. This was an increase of 61,535 people. Department of Economic Security (DES) population estimates placed Mohave County's total population (including the incorporated areas) at 205,862 in 2008, however actual population figures, and a breakdown of current demographic data, will not be known until the conclusion of the 2010 Census, in early 2011, after this General Plan review is completed. As shown in Exhibit III.1, the cities and the unincorporated areas of the County have been sharing in this rapid growth. The 1990 and 2000 figures are from the US Census. 2008 figures are from the DES.

**Exhibit III.1: Population Growth by Area**

Area	Population		
	1990	2000	2008
Bullhead City	21,951	33,769	41,187
Colorado City	2,426	3,334	4,042
City of Kingman	13,208	20,069	28,823
Lake Havasu City	24,363	41,938	55,429
Unincorporated	31,519	61,535	76,381
Total	93,497	155,032	205,862

Between 1990 and 2000, the County's median age increased from 40.7 years to 42.9, perhaps reflecting the increase in retirees and winter visitors who claim Arizona as home. The median age in Mohave County is 8.7 years older than the State average, and 7.6 years older than the United States as a whole.

As Exhibit III.2 shows, the median age varies widely from one area to another within the County, ranging from 14.3 in Colorado City, to 56.7 in Dolan Springs. The age of residents will continue to impact the types of services demanded by residents. Older residents are likely to demand additional transportation services and health care facilities. Increases in the numbers of young people with school-age children will continue to put a strain on school facilities, and make it difficult for schools to provide expected services.

**Exhibit III.2: Median Ages – 2000**

<b>Place</b>	<b>Median Age</b>
United States	35.3
Arizona	34.2
Mohave County	42.9
Mohave County Incorporated Areas	
Bullhead City	41.8
Colorado City	14.3
City of Kingman	39.6
Lake Havasu City	47.5
Mohave County Census Designated Places	
Desert Hills	52.0
Dolan Springs	56.7
Golden Valley	45.7
Mohave Valley	41.1
New Kingman/Butler	39.7
Peach Springs	24.4
Willow Valley	56.1

Source: U.S. Bureau of Census Decennial Census

Household characteristics in Mohave County reflect two significant national trends -- the average household size decreased slightly from 2.47 to 2.45 in the 1990s, and the percentage of single parent households increased, with nearly 24 percent of all children now living with a single parent. The effect of retiree migration to Mohave County, and the trend toward smaller household sizes, means that more dwelling units will be needed to house Mohave County's residents, including more affordable housing types. The increases in single-parent households, combined with an increase in the number of households in which both parents work, create greater demands for child care services.

Housing purchase and rental costs increased during the 1990s, with median home values increasing 26 percent (from \$75,600 to \$95,300), and median monthly rents increasing nearly 50 percent to from \$375 to \$559. While the 99 percent increase in median household income more than offsets the increased housing costs at the Countywide level, housing affordability varies from one community to another. As illustrated in Exhibit III.3, housing is much less affordable in the western part of the County, particularly near Bullhead City. Because of this, many people who work in the Bullhead City area live in Golden Valley or Kingman.



**Exhibit III.3: 2000 to 2009 Housing Costs**

City/Census Place	Median Home Value			Median Monthly Rent		
	2000	2007	2009	2000	2007	2009
Bullhead City	\$102,500	\$260,985	\$139,000	\$591	\$676	\$746
Colorado City	\$99,200	NA	NA	\$345	NA	NA
Lake Havasu City	\$98,500	\$249,000	\$155,000	\$609	\$676	\$746
City of Kingman	\$87,500	\$204,000	\$104,000	\$510	\$676	\$746

Source: U.S. Bureau of Census Decennial Census and Arizona Department of Housing, *2009 Housing Market at a Glance*.

The County's seasonal population has a significant impact on the supply of housing, particularly along the Colorado River. Western Mohave County is a popular destination for "snowbirds," people migrating from colder climates during the winter months. Nearly 13 percent (9,956) of the County's housing units were listed as seasonal or recreational in the 2000 census. Bullhead City (2,448 units), Lake Havasu City (3,971 units), Mohave Valley (716 units), Desert Hills (376 units) and Willow Valley (51 units) account for 75 percent of the seasonal housing units in the County. Between 10.7 and 32.5 percent of the housing units in each of these communities were reported by the Census Bureau to be seasonal or recreational.

The late 1980's brought some important changes to the County's labor force. Construction, trade, finance and real estate, and services sectors became more significant as their shares of the County labor force's employment increased. As Exhibit III.4 shows, these sectors grew from 46 to 54 percent of total County employment between 1986 and 1991. Jobs in these sectors accounted for 48 percent of the labor force in 2000 even with the decrease attributed to use of two different data sets. With health and social services included with all services and miscellaneous, these four sectors accounted for just over 57 percent of all jobs in 2000. The percentage of the labor force employed in manufacturing, mining, transportation, utilities, and government sectors decreased.<sup>1</sup> The construction trade and service sectors made particularly strong gains due to increased tourism, the rapid growth of employment in the casinos of Laughlin, Nevada, and the increasing popularity of Mohave County as a place for retirement and seasonal housing. Employment opportunities in Laughlin have promoted population growth in Bullhead City, Mohave Valley and Golden Valley. This growth has fueled demand for new construction and increased real estate activity in those areas.

The Statewide Economic Strategy published by the Arizona Department of Commerce in 2002 noted that "employment shares were at least 40 percent above the national average in 2000 in four occupational groups in Mohave County – protective services, food preparation and serving, construction and extraction, and installation, maintenance and repair – all moderate-to-low-paying categories. Mohave County's share was more than 40 percent below the national average in seven groups, six of which are higher-paying categories. The shares in farming and in life, physical and social sciences were the lowest in the state, with low shares reported in business and financial operations; computer and mathematical; architecture and engineering; life, physical, and social sciences; and arts, design, entertainment, sports, and media."

Much of the recent growth in Mohave County can be attributed to increased tourism. The seasonal migration of seniors during the winter months creates a demand for RV parking and other temporary lodging. The lakes along the Colorado River draw water enthusiasts throughout the year, but particularly in the summer months. Gaming in Laughlin is a magnet for tourists throughout the year. While tourism has increased employment, a more balanced economic base could improve residents' job opportunities and the stability of the local economy. The Las Vegas Convention and Visitors Authority, which also keeps tourist and gambling

<sup>1</sup>While employment in the government, transportation and utilities sectors increased, it did not increase as rapidly as other sectors. Consequently, these represent a lower percentage of the total.

information for Laughlin, Nevada, estimates that in 2009/2010 approximately 2.5 million people come to Laughlin annually for recreation-related reasons (tourists and retirees). Because of their close proximity to Laughlin, the economies of Bullhead City and surrounding areas are also impacted by these visitors, some of whom decide to stay.

### Exhibit III.4: Mohave County Labor Force Employment

Employment Sector	1986 Employ	% of Total	1991 Employ	% of Total	2000 Employ	% of Total	2008 Employ	% of Total
Total Wage and Salary	19,375	75.46%	28,025	76.99%	60,517	100.00%	52,900	100.00%
Manufacturing	2,700	10.52%	2,525	6.94%	4,266	7.05%	3,400	6.43%
Mining and Quarrying	325	1.27%	50	0.14%	140	0.23%	**	**
Construction	1,350	5.26%	2,750	7.55%	5,849	9.67%	5,200	9.83%
Transport & Utilities	1,125	4.38%	1,350	3.71%	3,476	5.74%	**	**
Trade	5,425	21.13%	8,375	23.01%	9,636	15.92%	11,700	22.12%
Finance, Ins., Real Est.	875	3.41%	1,425	3.91%	2,770	4.58%	2,700	5.10%
Services and Miscel	4,150	16.16%	7,000	19.23%	10,931	18.06%	2,700	5.10%
Government	3,425	13.34%	4,550	12.50%	2,737	4.52%	8,700	16.45%
Agricult/Forest/Fishng	*	*	*	*	462	0.76%	NA	NA
Prof/Mng/Tech/Info	*	*	*	*	2,430	4.02%	5,000	9.45%
Admn Sup/Waste Mng	*	*	*	*	1,681	2.78%	**	**
Educational	*	*	*	*	3,723	6.15%	7,400	13.99%
Health & Social Svcs	*	*	*	*	5,347	8.84%	**	**
Arts, Entertain & Rec	*	*	*	*	7,069	11.68%	6,200	11.72%

\* Not disaggregated in 1986 or 1991.

\*\* Combined with adjoining sector

Note: "Health and Social Services" includes medical services employees

## D. DEVELOPMENT TRENDS

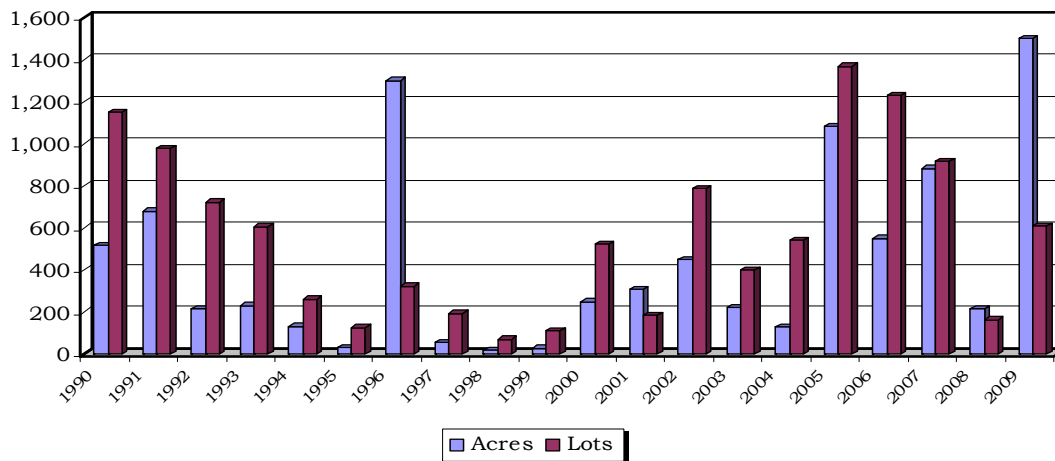
Development trends indicate the timing and location of future demands for facilities and services. Subdivision and building permit activity provide useful measures of long-term and short-term development trends. Subdivision activity reflects developer expectations of future demands for residential or non-residential lots. Building permit activity reflects expectations of short-term demands for specific types of structures on lots.

The subdivision of land into lots and streets is one of the first stages of the development process. Subdivision plats indicate anticipated development patterns, designating areas for buildings, utilities, drainage and roads. Development patterns established through the subdivision process generally do not change much during the later phases of the development process, thus they directly impact long-term demands and design alternatives for public facilities.

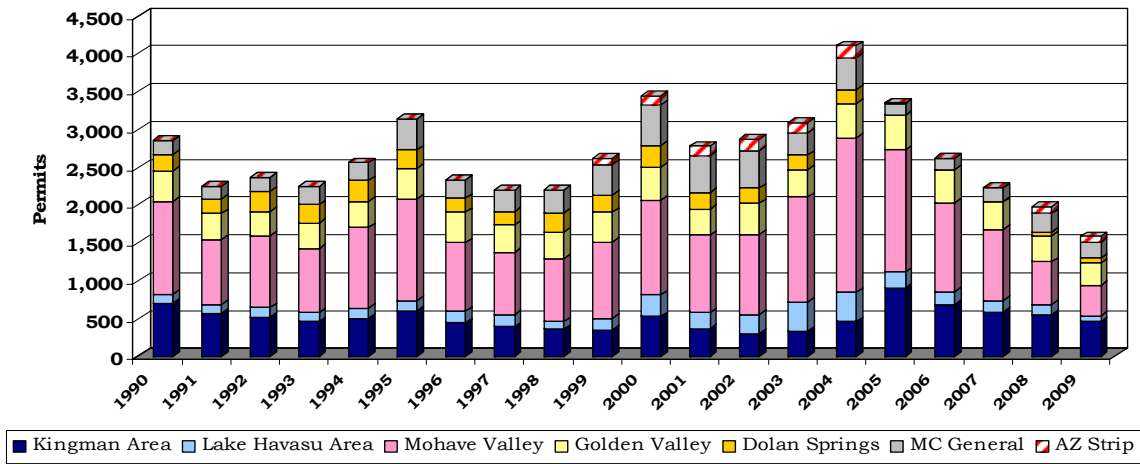
From 1990 through 2009, 11,237 lots were platted in unincorporated Mohave County.<sup>2</sup> These lots accounted for 8,809 acres of land, yielding an average density of 1.29 lots per acre. Cumulatively, these lots reflect the increasing demands for services and facilities facing Mohave County.

Mohave County has experienced a rapid increase in proposed subdivision activity in recent years. Exhibit III.5 illustrates the number of lots and the acreage platted from 1990 through 2009.

<sup>2</sup>The data in this paragraph do not include subdivision in incorporated areas, lot splits, or "unsubdivided developments" of parcels of 36 acres or more.

**Exhibit III.5: Recorded Subdivisions**

Mohave County issues permits for new construction throughout the unincorporated areas.<sup>3</sup> These permits are a good measure of current development activity, showing the type, amount, and location of growth. The number of permits has fluctuated between 1990 and 2009, with a generally upward trend. The annual total number of permits issued for new construction between 1990 and 2009 is illustrated in Exhibit III.6.

**Exhibit III.6: Permits for New Construction by Unincorporated Area**

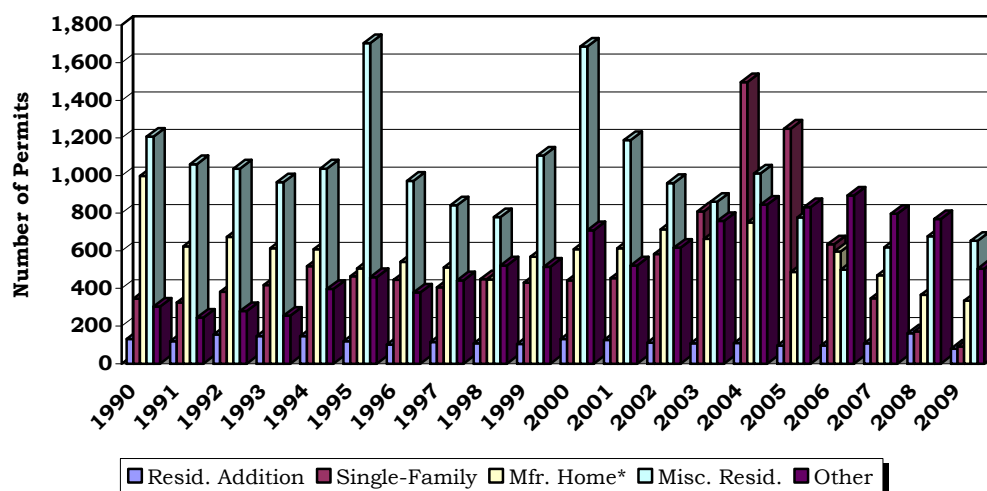
Until 2005, the number of permits issued steadily increased in most of the six areas monitored by the County. These areas include Mohave Valley, New Kingman/Butler, Lake Havasu, Golden Valley, Dolan Springs and Mohave General (the remainder of the County). Permit activity has consistently been highest in the Mohave Valley, Kingman, Golden Valley and the General areas. As Exhibit III.7 shows, these areas have accounted for over 80 percent of the permits issued by the County for new construction since 1990.

<sup>3</sup>These permits include building permits, which are issued in urban overlay zone areas, and zoning permits, which are issued in other unincorporated areas.

**Exhibit III.7: Permits for New Construction by Unincorporated Area**

Year	Kingman Area	Lake Havasu Area	Mohave Valley	Golden Valley	Dolan Springs	MC General	AZ Strip	Total
2009	460	80	395	299	66	210	75	1,585
2008	553	133	567	337	60	236	96	1,982
2007	590	149	939	364	8	175	9	2,234
2006	690	170	1,171	435	2	150	7	2,625
2005	908	208	1,613	455	6	155	3	3,348
2004	463	383	2,041	451	193	420	153	4,104
2003	340	384	1,386	353	198	298	134	3,093
2002	305	247	1,061	411	199	499	151	2,873
2001	368	212	1,023	343	218	487	128	2,779
2000	527	285	1,252	433	286	542	121	3,446
1999	351	148	1,013	391	229	400	90	2,622
1998	363	99	830	348	257	301	0	2,198
1997	391	160	822	363	177	290	0	2,203
1996	446	147	911	401	185	249	0	2,339
1995	602	140	1,344	396	248	405	0	3,135
1994	506	132	1,069	338	280	235	0	2,560
1993	461	115	856	336	239	243	0	2,250
1992	517	130	943	326	265	191	0	2,372
1991	568	116	858	348	191	174	0	2,255
1990	704	122	1,219	408	213	189	0	2,855
Total	10,113	3,560	21,313	7,536	3,520	5,849	967	52,858

Historically, over 97 percent of the County's building permit activity has been attributable to single-family dwellings, residential additions and mobile or manufactured homes. By 2009, this percentage had lowered to 73 percent. Exhibit III.8 shows that the number of permits issued for mobile or manufactured homes decreased in 1991, then remained fairly constant to 2002 with a rise during the peak of the housing market and then decline afterward. As shown in the chart below, building permit activity is cyclical.

**Exhibit III.8: Building Permits by Type**

## E. PROJECTIONS FOR GROWTH

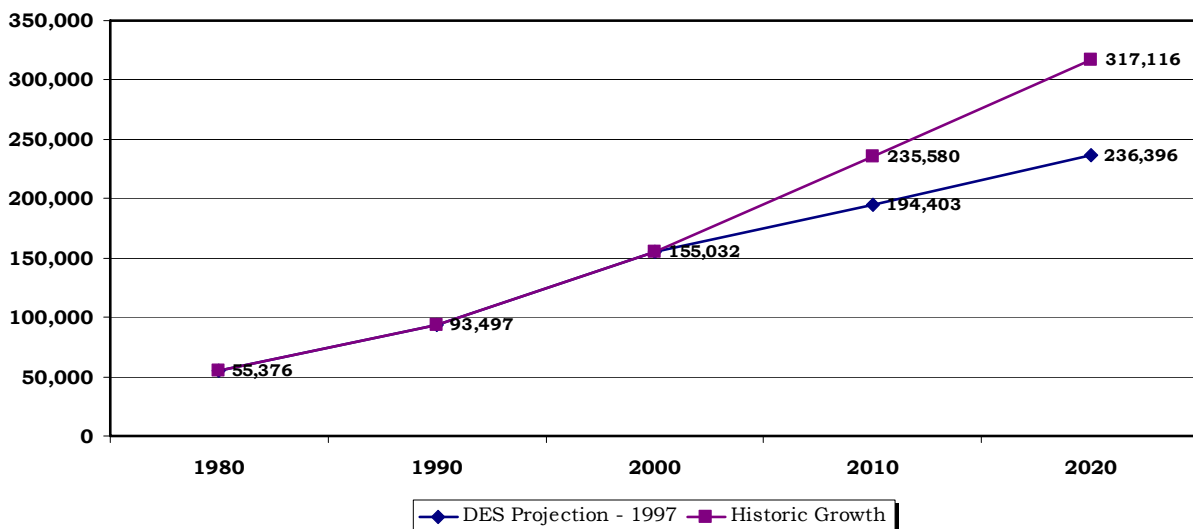
The population of Mohave County has increased at an extraordinary rate. In the last twenty years, the population has multiplied 2.8 times, from 55,376 in 1980 to 155,032 in 2000. In 2011, the results of the 2010 Census will show the growth during the past decade. However, continued growth at past rates is likely to level off. As shown in Exhibit III.9, the rate of growth has declined in each of the last four decades. This trend toward a declining rate of growth is likely to continue, but many variables will impact the County's actual growth and keep it robust. Mohave County's growth has relied heavily on the rapid growth in gaming in Laughlin. Any changes in Laughlin's gaming industry will directly affect Mohave County's local economy and population growth. Laughlin's rate of growth is likely to be slowed somewhat by increased competition in the gaming industry. Laughlin and Mohave County can be expected to keep growing, but future growth rates are difficult to project. Business recruitment efforts, seasonal and full-time in-migration of seniors, relocations from California, growth of existing businesses and changes in the national economy and energy policy, which advocates the construction of alternative energy generating facilities, are just a few of the other variables that will affect the County's growth.

**Exhibit III.9: Mohave County Population Growth**

Year	Population	Increase	Percent Increase
1960	7,736	--	--
1970	24,796	17,060	220.53
1980	55,376	30,580	123.33
1990	93,497	38,121	68.84
2000	155,032	61,535	65.81
2008	205,862	50,830	32.79

Exhibit III.10 illustrates high and low population growth curves for the County and an historic "blend" based on historic population growth and the 1997 DES projection.

**Exhibit III.10 High/Low Population Growth Curves**



What do these projections mean to the County? The County should ensure that long-range land use and facilities plans can accommodate the projected future population. This does not mean that the County should be rezoned immediately to accommodate the anticipated 2020 population, nor does it mean that the County should immediately program capital improvements for an additional 80,000 to 190,000 people. Instead, the County's long-range plans should anticipate new development, utility systems expansions and additional traffic demands.

## **IV. The Planning Process**

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*Introduction*  
*2001 General Plan Update*  
*2005 General Plan Update*  
*2010 General Plan Update*



## **IV. THE PLANNING PROCESS**

### **A. INTRODUCTION**

Mohave County's General Plan is the product of an extensive planning process. This project, the latest in the County's planning program, began through the efforts of the Board of Supervisors to anticipate growth, and coordinate the public facility construction and other public actions needed to support rapid growth. It should be viewed as a continuation of the process begun in 1964 with the adoption of the County's original General Plan. The planning process described below included research and analysis as well as input by citizens and community groups, the County's elected and appointed officials and representatives of other public entities in Mohave County.

Adoption of this update of the General Plan is not the end of the planning process. The General Plan is a guide for future County actions to achieve the goals of the County and its citizens. Plan implementation is the next stage of the process. Over time, the County will continue its responsive planning efforts by considering updates and revisions to the Plan. These updates and revisions should occur at least every 10 years per Growing Smarter Plus (A.R.S. 11-805). In 2000, Arizona adopted smart growth laws “to more effectively plan for the impacts of population growth by creating a more meaningful and predictable land planning process, to increase citizen involvement in the land planning process, to directly acquire and preserve additional open space areas within this state through necessary reforms to the master planning and open space conservation programs of the state land department and to establish a growth planning analysis process to consider and address various statewide growth management issues so that the future development of land in this state will occur in a more rational, efficient and environmentally sensitive manner that furthers the best interests of the state’s citizens by promoting the protection of its natural heritage without unduly burdening its competitive economy.”<sup>4</sup> In this way, the General Plan will remain a current statement of County policies and directions and an effective guide to public actions to achieve County goals.

New information from the 2000 Census and the 1997 Economic Census has been added to the 2005 update. When updated information from the 2010 Census becomes available, it may be added to this document during a subsequent review.

### **B. 2001 GENERAL PLAN UPDATE<sup>5</sup>**

Growing Smarter and Growing Smarter Plus legislation, focusing on Smart Growth principles, such as promoting a compact and contiguous urban form, was adopted by Arizona in 2000, Mohave County’s 2000 population qualified the jurisdiction for many of the new requirements. In 2001, the General Plan was updated to reflect changes in state law.

### **C. 2005 GENERAL PLAN UPDATE**

The Baseline Analysis information used in the 2005 General Plan Update has been augmented with new information from the 2000 Census and the 1997 Economic Census. Additional information has been taken from the Arizona Department of Commerce, the Arizona Corporation Commission, the Arizona Department of Water Resources, and several other agencies and woven directly into the General Plan.

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<sup>4</sup>Excerpt from Growing Smarter Act, May 2000.

<sup>5</sup>Section B – F, describing the original 1992-1995 planning effort, has been moved to Appendix J. The current update follows a similar methodology.



## **D. 2010 GENERAL PLAN REVIEW**

The 2010 General Plan review focused on bringing the plan current with applicable Arizona Revised Statutes, to more realistically reflect actual statutory authorities, provide for more attainable goals, and to develop a more business-friendly environment suitable to the current economic conditions. Updates to baseline data were made as information was available, from traditional sources such as, but not limited to, the Arizona Department of Commerce. Information from the 2010 U.S. Census was not available at the time of this review. Land use designations did not change with this review.

The 2010 review followed a citizen's participation plan approved by the Board of Supervisors. A Technical Advisory Committee drafted recommended revisions, which took into consideration public input gathered via a variety of methods including assistance from a private facilitator, through four county-wide public workshops in Kingman, Lake Havasu City, Bullhead City, and Beaver Dam, as well as through web site links that were used to collect public comments. Following a recommendation of approval from the Planning and Zoning Commission, the Board of Supervisors approved the 2010 review revisions on November 15, 2010.

## V. Resource Conservation

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*Natural Resources Element*



## V. RESOURCE CONSERVATION

### A. NATURAL RESOURCES ELEMENT

The Natural Resources Element addresses issues relating to Mohave County's environment. The element includes sections on air quality, the quantity and quality of surface and ground water, natural resources, energy, noise and scenic resources. Each section includes:

- ◆ a brief overview of existing conditions and trends;
- ◆ a list of key issues that the County should address;
- ◆ goals and policies that should guide the County's approach to resolving the key issues; and
- ◆ implementation measures, which are suggested actions that will help the County achieve these goals and policies.

#### 1. Air Quality

The Arizona Department of Environmental Quality (ADEQ) has authority over air quality considerations affecting Mohave County. Scenic vistas are an important element of Mohave County's quality of life. Clear, clean air attracts tourists and new residents to the County, but these new residents and tourists lead to increased traffic, construction, power generation and other human activities that can reduce air quality.

Airborne particulates are a primary cause of reduced visibility. The particulates of concern are small breathable matter that can be suspended in the atmosphere. These can be generated by construction activities, motor vehicles, industry, agricultural activities and wind blown dust. Once airborne, particulates can be carried great distances before they are washed or settled out of the air. At high concentrations these particulates can pose health problems. Even at acceptable levels, they diffuse light and cause visibility-reducing haze.

#### Key Air Quality Issues

***Monitoring.*** Currently, Mohave County has no air quality monitoring program of its own, however it may work with ADEQ in their implementation of air quality requirements. If and when PM10 violations in Mohave County have been documented by the EPA or ADEQ, the county may increase development standards to avoid citations.

***Dirt Roads.*** There are many miles of dirt roads throughout the County where vehicle traffic tends to create dust. Paving of roads may be considered in cases where reduction of dust is desired.

***Maintaining Air Quality.*** Agriculture, mining and construction activities all produce dust and particulates. As a result, these activities contribute air-borne particulates that reduce visibility in the County. By encouraging techniques to reduce dust from these operations, the County can lessen the effect of such activities on air quality. In recent years, industrial development has accelerated in Mohave County with the construction of Griffith Energy, a 640 megawatt electric generating facility, and other industrial uses along the I-40 corridor and near the major cities. Industrial development in some cases may have the undesired effect of increasing air pollution.

## **Air Quality Goals and Policies**

### **Goal 1: The County should support efforts to maintain or improve air quality.**

- Policy 1.1 The Arizona Department of Environmental Quality (ADEQ) may initiate air quality monitoring within the County's boundaries.
- Policy 1.2 The County may work with ADEQ to encourage the use of techniques that minimize the amount of air-borne dust resulting from agricultural activities.
- Policy 1.3 The County may encourage the siting of new industries that do not require a "major source" pollution permit from ADEQ.<sup>6</sup>

### **Goal 2: To establish construction and development standards that maintain or improve existing air quality.**

- Policy 2.1 Applicants for County approvals and/or permits will be required to obtain all approvals and permits required by jurisdictional State and Federal agencies for the development they propose.
- Policy 2.2 The County may consider adopting and enforcing mass grading standards, and requiring grading permits for applicable projects, prior to the actual grading or construction of those projects.
- Policy 2.3 Mohave County supports the current "Class 2" air shed designation for the Hualapai Reservation.

## **Implementation Measures - Air Quality (AQ)**

- AQ1: Work with ADEQ to initiate air quality monitoring at sites throughout the County.
- AQ2: Adopt construction and surfacing standards for public roads. Roadway and hard surfacing reduces dust occurrence on the traveled way. Roadways serving or forecast to serve 400 vehicles per day necessitate the consideration of hard surfacing.
- AQ3: Adopt zoning standards, and develop locational and operational guidelines for mining and gravel production operations, consistent with Arizona law, to minimize the generation of air-borne dust and its impact on adjacent properties.

## **2. Water Quantity and Quality**

In addition to Federal laws and regulations, surface water and groundwater use are regulated by State law. In accordance with A.R.S. Chapter 45, the Director of the Arizona Department of Water Resources (ADWR) may investigate works, plans or proposals pertaining to surface water and groundwater, including management of watersheds, and acquire, preserve, publish and disseminate related information which the Director deems advisable. Mohave County intends to implement the technical definitions and interpretations made by the ADWR.

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<sup>6</sup>A "Major" source, as defined by the A.A.C. Title 18, Chapter 2, Article 101(64), is any source that has the potential to emit 100 tons per year of any criteria air pollutant. A source is also considered major if it has the potential to emit 10 tons per year of any single Hazardous Air Pollutant or 25 tons per year of any combination of Hazardous Air Pollutants.

Water quality laws and regulations are administered by Federal agencies and the Arizona Department of Environmental Quality (ADEQ).

The quantity and quality of surface water and groundwater have a significant impact on the growth potential and quality of life in Mohave County. In addition to their valuable recreational and aesthetic contributions, water resources are essential for domestic use, irrigation and economic development. The availability of water along with other critical factors, such as energy and industry are vital to the interest of Mohave County residents. The weight to be given each factor in connection with a land use change is a legislative decision which should be carefully considered.

In addition to the Colorado River, the US Geological Survey (USGS) monitors seventeen perennial streams and ephemeral washes within Mohave County. The Colorado River is and will continue to be the County's main source of water for urban and agricultural use.

Use of Colorado River water is strictly regulated by the U.S. Bureau of Reclamation. The County's share of this water currently is pumped from the alluvial soils near the river. This groundwater is constantly recharged by the water in the lakes along the Colorado River. In addition to recharging local aquifers, the waters of Lakes Mead, Mohave and Havasu are valuable aesthetic and recreational resources for residents and tourists.

Legislation adopted by the Arizona State Legislature allows the creation of a County Water Authority in Mohave County. Municipalities that have a contract for the delivery of Colorado River Water may form a County Water Authority. The Authority facilitates the distribution of that water to municipalities which need it the most or can use it most efficiently. In 1994, the City of Kingman, Lake Havasu City and Bullhead City approved the formation of the Mohave County Water Authority. The Mohave Valley Irrigation and Drainage District (other districts may exist or be formed in the future) is one example of a water accounting district, which receives its allotment from the Bureau of Reclamation, and which in turn allocates water to development within its district boundaries.

Mohave County has a vital interest in the quality of the Colorado River's water because the river is a primary source of water and a major tourist attraction. The length of the river, the upstream use of its water and the geology along the river contribute to the river's high sediment content and increasing salinity. This sediment loading will directly affect the life of the lakes and will increase costs for treatment for water drawn directly from the river. While salinity is not a current concern in Mohave County, it is an increasing problem downstream -- one that has caused the United States to construct and operate a desalinization plant at its border with Mexico, which is partially operational for testing now. Mohave County should encourage efforts to maintain and enhance Colorado River water quality to protect its drinking water supply and to ensure that the County's lakes continue to attract the tourists that play such an important role in the local economy.

The quantity of groundwater available in the County is not well defined. Considering the groundwater resources in the County, the development of water budgets for the Mohave County aquifers would assist land developers, ADWR and the County to assess the effect of existing and proposed groundwater use.

Several groundwater studies in this regard have been performed in the past, some by ADWR and some by private developers, but the findings of those studies were limited to the area studied and were only as accurate as the assumptions used in the studies considering aquifer characteristics, rock stratigraphy and subsurface soil properties. Typically, large-scale geotechnical and geophysical subsurface investigations, groundwater age testing, groundwater depth monitoring and comprehensive pump testing involving the entire study area or aquifer are required to build reasonably accurate hydrologic models (such as MODFLOW). The investigation data and hydrologic models may be used in engineering or geologic studies to assess the aquifer and to develop a reliable water budget. The completion of such comprehensive hydrologic or hydrogeologic investigations and studies for the Mohave County aquifers are anticipated to take several years or decades to accomplish.

## Mohave County General Plan

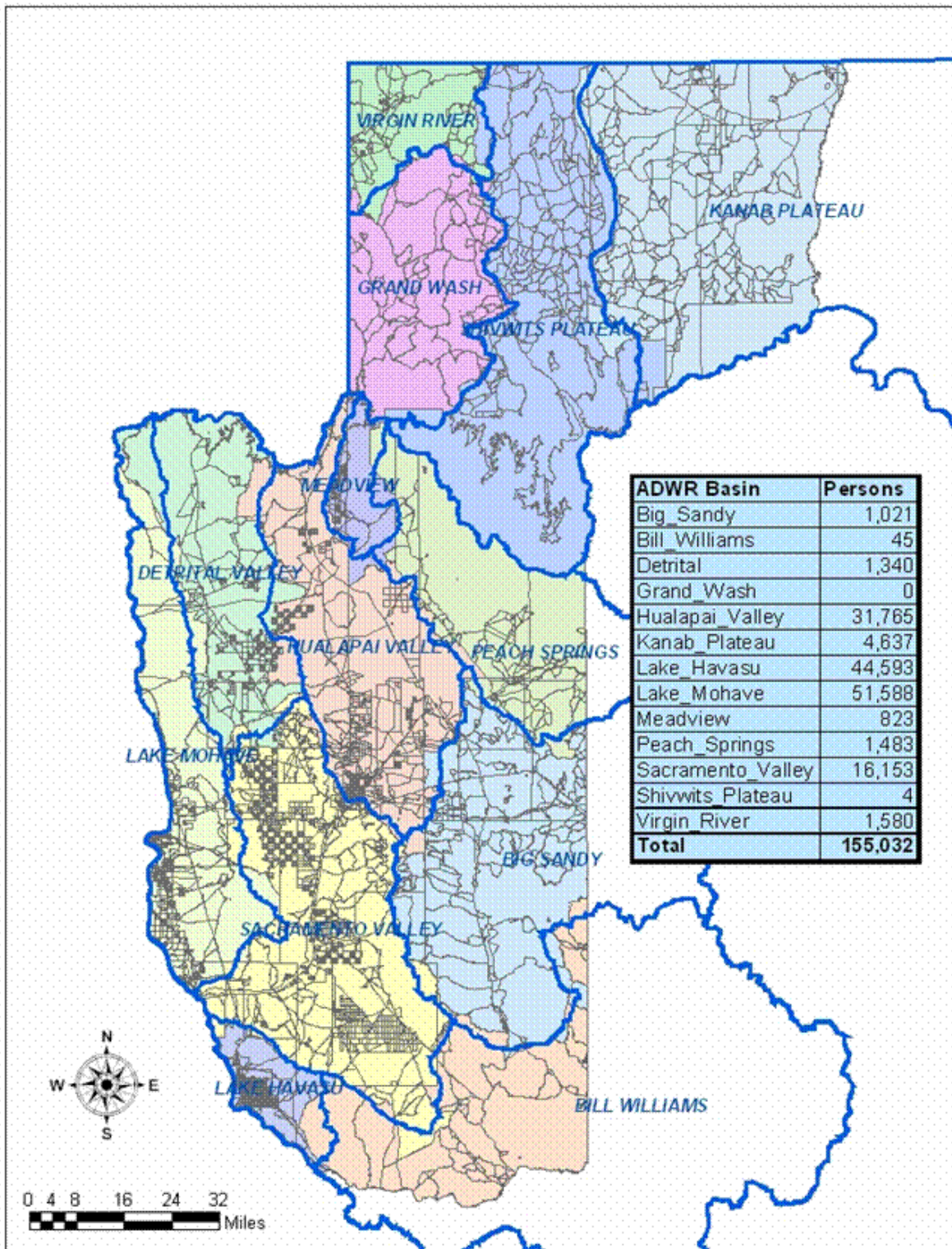
The Sacramento, Hualapai and Detrital aquifers are being studied by the ADWR and USGS, but following several years of investigations, financial funding problems were encountered. When completed, Mohave County will recognize the findings of those studies as a foundation for the preparation of an eventual water budget for each specific aquifer. Mohave County has contributed to the funding of those studies and the County Board of Supervisors may authorize additional funding for future studies when funding sources become available.

The General Plan appendices include references to the best available information from existing ADWR and USGS studies, which themselves cite additional sources of water information, upon which those studies were based.

In relation to waste water and its impact on water quality, Mohave County is a state-designated planning agency, and has updated its Water Quality Management Plan (Section 208 of the Clean Water Act). The Plan includes a description of the planning area, a surface and groundwater quality assessment, and a description of point source discharges and waste management, non-point source management, drinking water systems, and the County continuing planning process.

**Exhibit V.1: Groundwater Basins**

**ADWR Drainage Basins and 2000 Census Block Overlay**



## Key Water Issues

***Colorado River Water.*** The quality of water in Lakes Mead, Mohave and Havasu should be maintained to continue attracting tourists to the County. While many other jurisdictions have an impact on the Colorado River, Mohave County's economy and water supplies are so directly linked to the lakes and river that the County has a vital interest in preventing their contamination.

***Groundwater Quality.*** To ensure the viability of its continued use, the quality of area groundwater may be monitored by a State agency or private well owners. Recharge areas should be protected from development activities that degrade water quality. The effects of urban runoff and septic systems effluent on groundwater quality should be minimized. Mohave County's updated Areawide Water Quality Management Plan ("208" Plan) is a tool to maintain watershed health.

***Water Availability.*** Information on the use and availability of water should be monitored. Long term water planning throughout the County will require better information than is currently available. The County will recognize studies prepared by the ADWR and USGS regarding water availability.

## Water Quantity and Quality Goals and Policies

**Goal 3: To consider the quantity and quality of water resources throughout the County.**

- Policy 3.1 Mohave County should cooperate with ADEQ, ADWR, and utility providers, and recognize studies prepared by the USGS, concerning the availability of water resources.
- Policy 3.2 The County may support State and Federal programs to monitor groundwater quality and well levels.
- Policy 3.3 When the ADWR determines that the aquifer is being threatened by depletion or subsidence, Mohave County will not approve land use rezoning for projects that may cause aquifer depletion or land subsidence, unless the applicant offers effective mitigation measures and provides adequate engineering documentation for implementation.

## Implementation Measures - Water Quantity/Quality (WQ)

- WQ1: The County may support efforts by utility providers, ADEQ, ADWR, USGS, and USBOR to prepare and maintain a water budget for Mohave County and for individual drainage basins.
- WQ2: If the ADWR determines that an aquifer is becoming depleted, or unable to sustain existing or proposed development, reliant upon that aquifer, the County will request input from ADWR, to implement measures to address the shortfall.

## 3. Natural Resources

Mohave County's vast public and private lands are rich in natural resources that contribute to the County's environmental health, economic welfare and less tangible elements of the quality of life. The County's general topography, including the mountains and cliffs in the plateau region of the County, are shown in Exhibit V.2.



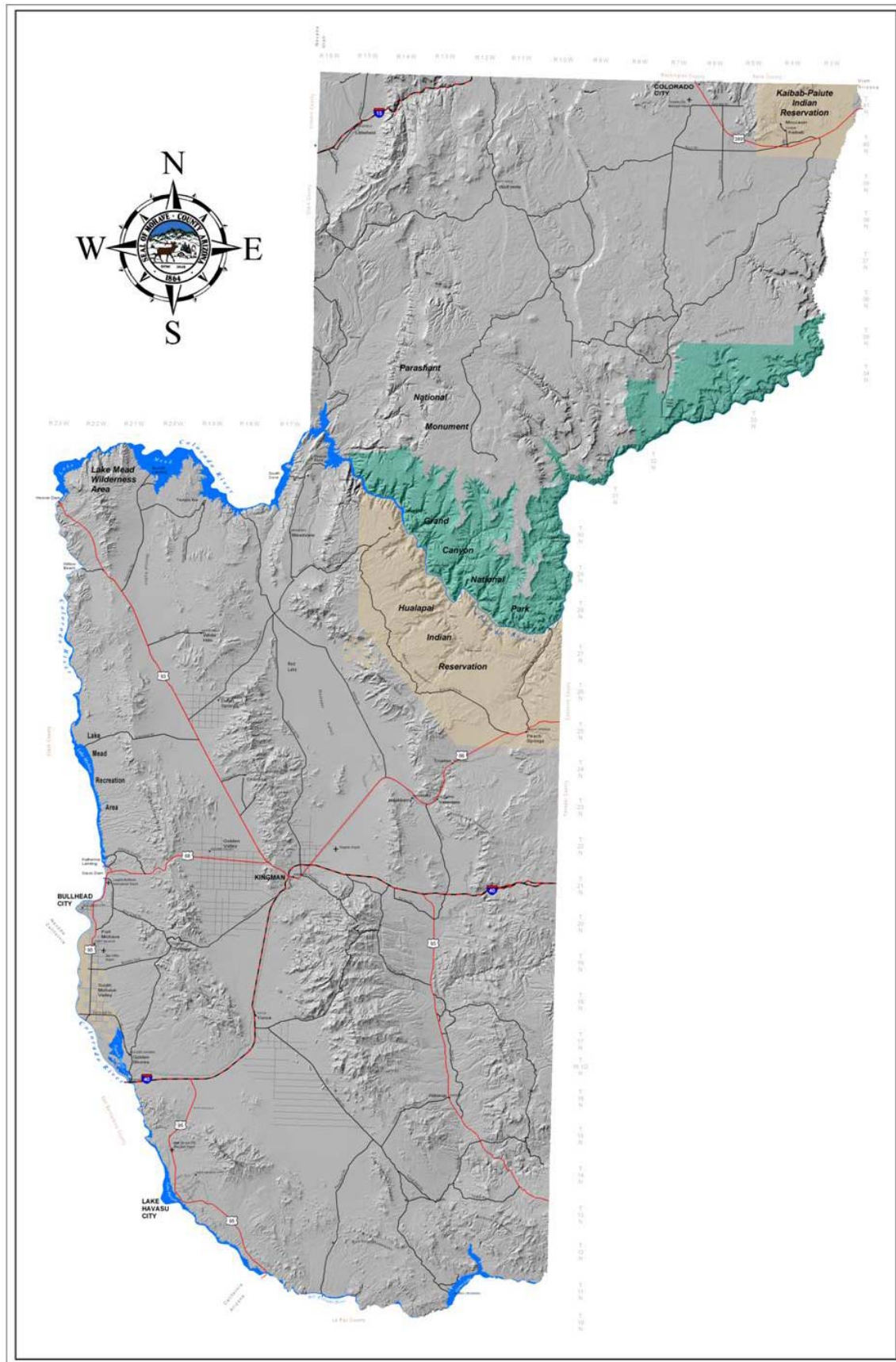
Panoramic views of pristine mountains can be seen throughout the County. These views, the Colorado River, its tributaries and wetlands scattered throughout the County are resources that attract tourists throughout the year. In addition to attracting people, the County's unique environments provide habitat for a variety of species, including the species of special status listed in Exhibit V.3. Continuing growth in Mohave County will benefit from actions to maintain the attractiveness of the County's natural environment.

The hillsides of Mohave County serve important aesthetic and environmental roles. Their aesthetic appeal contributes to the quality of life that entices people to live in or visit the County. Hillsides also provide habitat for a wealth of plant and animal species, some of which are rare, threatened or endangered. The mountains receive most of the County's precipitation. Runoff from this precipitation is absorbed by the alluvial soils in the washes leading out of the mountains, providing most of the groundwater for the County's interior groundwater basins. The interface between mountain slope and valley floor provides prime recharge areas.

In spite of the arid climate of Mohave County, there are wetland areas that are subject to Federal protection. These wetlands play important roles in providing habitat, filtering surface water and recharging groundwater. Known wetlands include Topock Marsh, and some areas adjacent to the County's rivers that have been identified in the BLM's Resource Management Plans. Development in wetlands is regulated by the U.S. Army Corps of Engineers and EPA.

Because the County is home to several endangered species, their habitat is subject to the provisions of the Federal Endangered Species Act. Jurisdictions nationwide have initiated habitat conservation plans to clearly identify land that should be set aside for species preservation and land that may be developed under the Act. In the absence of such a plan, the U.S. Fish & Wildlife Service can review development proposals on a site-specific basis to determine if they are subject to the Endangered Species Act.

**Exhibit V.2: Topographical Features**



**Exhibit V.3: Special Status Species**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>
<b>Plant Species</b>		
Arizona Cliffrose	<i>Purshia subintegra</i>	E
Roaring Springs Prickle Poppy	<i>Argemone arizonica</i>	C-2
Freckled Milk Vetch	<i>Astragalus lentiginosus</i> var. <i>ambiguus</i>	C-2
Holmgren Milk vetch	<i>Astragalus holmgreniorum</i>	E
Fickeisen Navajo Cactus	<i>Pediocactus peeblesianus</i> var. <i>fickeiseni</i>	C-1
Frazier's Wild Buckwheat	<i>Eriogonum ripleyi</i>	C-2
Wiggin's Cholla	<i>Opuntia wigginsii</i>	C-2
White-margined Penstemon	<i>Penstemon albomarginatus</i>	C-2
Cerbat Beard-tongue	<i>Penstemon bicolor</i> subsp. <i>Roseus</i>	C-2
Welsh Phacelia	<i>Phacelia welshii</i>	C-2
Broom Rape	<i>Drobanche uniflora</i> ssp. <i>Occidentalis</i>	SS
Indian Paintbrush	<i>Castilleja stenantha</i>	SS
Roundleaf Rabbitbrush	<i>Chrysothamnus teretifolius</i>	SS
Simpson's Pediocactus	<i>Pediocactus simpsonii</i>	SS
Mohave Cottonthorn	<i>Tetradymia stenolepis</i>	SS
Arivaipa Wood Fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	SS
Striped Cotton-thorn	<i>Tetradymia argyraea</i>	SS
Siler Pincushion Cactus	<i>Pediocactus sileri</i>	T
Jones Cycladenia	<i>Cycladenia jonesii</i>	T
<b>Animal Species</b>		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	E(E)
California Condor	<i>Gymnogyps californianus</i>	E, EXPN
Peregrine Falcon	<i>Falco peregrinus</i>	E(C)
Hualapai Mexican Vole	<i>Microtus mexicanus hualpaiensis</i>	E(E)
Desert Tortoise	<i>Gopherus agassizi</i>	E(E)
California Black Rail	<i>Laterallus jamaicensis coturniculus</i>	C-1
Yuma Clapper Rail	<i>Rallus longirostris yumanensis</i>	E
Arizona Southwest Toad	<i>Bufo microscapho microscaphus</i>	C-2
Yavapai Leopard Frog	<i>Rana yavapaiensis</i>	C-2
Relict Leopard Frog	<i>Rana onca</i>	C
Mexican Garter Snake	<i>Thamnophis eques</i>	C-2
White-Faced Ibis	<i>Plegadis chihi</i>	C-2

# Mohave County General Plan

Ferruginous Hawk	<i>Buteo regalis</i>	C-2(T)
Mountain Plover	<i>Charadrius montanus</i>	C-2
Long-billed Curlew	<i>Mumenius americanus</i>	C-2
Mexican Spotted Owl	<i>Strix occidentalis</i>	C-2(T)
Southwestern Willow Flycatcher	<i>Empidonax trailii extimus</i>	C-2
Mexican Long-tongued Bat	<i>Choenycteris mexicana</i>	C-2
California Leaf Nose Bat	<i>Myotis lucifugus</i>	C-2
Occult Little Brown Bat	<i>Myotis lucifugus occultus</i>	C-2
Southwestern Cave Myotis	<i>Myotis velifer brevis</i>	C-2
Spotted Bat	<i>Euderma maculatum</i>	C-2
Greater Western Mastiff-bat	<i>Eumops perotis californicus</i>	C-2
Hualapai Pocket Gopher	<i>Thomomys umbrinus hualpaiensis</i>	C-2
Yavapai Arizona Pocket Mouse	<i>Perognathus amplus amplus</i>	C-2
MacNeill Sooty Wing Skipper	<i>Hesperopsis graciellae</i>	C-2
Wandering Skipper	<i>Pseudocopaeodes eunus eunus</i>	C-2
Kingman Springsnail	<i>Pyrgulopsis conica</i>	C-2
Common Black-hawk	<i>Buteo anthracinus anthracinus</i>	(C)
Osprey	<i>Pandion haliaetus carolinensis</i>	(T)
Colorado River Roundtail Chub	<i>Gila robusta robusta</i>	(E)
Bonytail Chub	<i>Gila elegans</i>	E
Humpback Chub	<i>Gila cypha</i>	E
Virgin River Chub	<i>Gila seminude robusta</i>	E
Great Egret	<i>Casmerodius albus</i>	(E)
Razorback sucker	<i>Xyrauchen texanus</i>	E
Woundfin	<i>Plagopterus argentissimus</i>	E, EXPN
Snowy Egret	<i>Egretta thula</i>	(T)
Northern Goshawk	<i>Accipiter gentiles</i>	(C)
Clark's Grebe	<i>Aechmophorus clarkia</i>	(C)
Western Yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	C-1 (T)

Environmental Impact Statement, November 1990.

Source: U.S. Department of Interior, Bureau of Land Management. Draft Kingman Resource Area Resource Management Plan and US Fish and Wildlife Service, Region II, 2004

E Federally Endangered

(E) State Endangered

(T) State Threatened

SS BLM Recommended Sensitive Species from the Arizona Natural Heritage Program plant list

EXPN Experimental

C-1 Category 1 Candidate

C-2 Category 2 Candidate

(C) State Candidate

Although many of the County's most sensitive lands are publicly owned, this does not mean there will be no development of these areas. As shown in Exhibit V.4, Mohave County has an abundance of publicly owned land. Nearly three-quarters of the land in Mohave County is owned by the Federal Government or the State of Arizona. In addition to owning large tracts of land in mountainous areas, the State and Bureau of Land Management own as much as fifty percent of the land in some of the County's major valleys. Federal lands under the control of the Bureau of Land Management (BLM) are used for recreation, grazing, mining and landfills. Arizona State Trust Lands are administered to produce revenue for the trust's beneficiaries, thus the State reviews development opportunities for their land on a regular basis.

**Exhibit V.4: Major Public Land Holdings**

Owner	Acreage	Percent of County
U.S. Bureau of Land Management	4,912,853	56.95
Lake Mead National Rec. Area	668,743	7.75
Grand Canyon National Park	477,836	5.54
Havas National Wildlife Refuge	36,278	1.24
Kaibab National Forest	4,694	0.05
Military Reservation	634	0.01
U.S. Bureau of Reclamation	19,857	0.23
Arizona State Trust	566,090	6.67
State Parks and Recreation	23,727	0.28
Hualapai Reservation	438,306	5.08
Kaibab Reservation	107,118	1.24
Fort Mojave Reservation	23,727	0.27
Private Land	1,335,512	15.48
Total	8,615,375	100.00

Source: BLM, Kingman Field Office, 2003.

### Key Natural Resource Issues

**Hillside Protection.** The mountain ranges of Mohave County have tremendous value. Thus the County should establish standards for appropriate hillside development in regard to health, safety and welfare.

**Wetlands Protection.** When in good condition, wetlands filter surface water, recharge groundwater and provide valuable wildlife habitat. Wetlands are protected by the Federal government. Clear identification of wetlands would enable the County to work cooperatively with the U.S. Army Corps of Engineers to protect valuable wetlands.

**Habitat Preservation.** The County is home to numerous rare, threatened or endangered species. Much of the most valuable habitat is owned by the BLM, but development of privately owned land in the eastern portions of Mohave Valley and in the Hualapai Mountains could encroach on some sensitive habitat. To further these preservation goals, the BLM has completed the Hualapai Mountain and Cane

Springs Land Exchanges which provided nearly 90,000 acres of public lands in the Hualapai Mountains. Because habitat conservation plans have not been adopted for species protected by the Endangered Species Act, development that disturbs habitat of endangered species can be declared as a "taking" of the species by the U.S. Fish and Wildlife Service, resulting in project delays or mitigation requirements.

## **Natural Resource Goals and Policies**

### **Goal 4: To manage hillside development densities, location and project designs to minimize impacts on the County's natural resources.**

Policy 4.1 The County may use its zoning and subdivision regulations to limit the densities of development located on moderate and steep slopes.

Policy 4.2 The County may:

- a.) limit the development on moderate to steep slopes such that the capacity of the hillside is not exceeded and the surrounding areas are not negatively impacted; and
- b.) encourage the use of clustering and other design alternatives that minimize the environmental and public safety impacts of proposed hillside developments.

Policy 4.3 The County may establish standards for areas with steep slopes (over 20 percent) that:

- a.) minimize grading needed for construction of buildings, roads and utilities;
- b.) minimize on-site and off-site runoff and flooding;
- c.) minimize erosion;
- d.) minimize impact on slope stability;
- e.) minimize fire hazards, including wildfire; and
- f.) provide for adequate access.

### **Goal 5: To protect Mohave County's environmental amenities and sensitive areas in recognition of their importance to the County's quality of life.**

Policy 5.1 Mohave County should consider determinations made by the State Land Department, the BLM and other Federal agencies to identify and protect sensitive lands (wetlands, sensitive habitats and other valuable natural resources) as may be determined by the County.

Policy 5.2 The County may limit development impacts on environmentally sensitive areas.

Policy 5.3 The County should consider development proposals that preserve or enhance identified wildlife sensitive areas.

Policy 5.4 Mohave County should cooperate with the State and Federal governments to protect the integrity of State Trust Lands and public lands, and ensure that land exchanges and disposals be considered in accordance with the General Plan goals and policies, and in accordance with State and Federal laws.

## Implementation Measures - Natural Resources (NR)

- NR1: Mohave County should consider cooperating with the State Land Department, the BLM and other Federal agencies that identify wetlands, sensitive habitats and other natural resources meriting special protection. Maps developed by these agencies should be used in reviews of General Plan amendments, subdivision proposals, zoning requests and other development proposals to ensure that Mohave County's natural resources are protected.
- NR2: Consider coordinating with the U.S. Fish & Wildlife Service and other interested parties to identify habitat areas that must be protected under the Endangered Species Act and habitat areas that may be developed.
- NR3: Adopt regulations and guidelines for development in hillside areas that:
- a.) specify maximum densities for suburban and urban development on moderate and steep slopes.
  - b.) encourage the use of clustering and other design alternatives that will minimize the need for grading, environmental impacts and public safety risks.
- NR4: Adopt design regulations and guidelines for development on moderate and steep slopes that:
- a.) specify maximum grade changes, minimize slope stabilization requirements for construction of buildings, roads and utilities; and
  - b.) minimize the impacts of development on the natural drainage system.

## 4. Energy

Adequate and affordable energy is critical to the overall quality of life and economic growth of Mohave County. Clean, renewable hydroelectric power from the Colorado River is fully committed. This energy is supplemented by fossil fuel power plants and direct consumer use of natural gas. Wind, solar, and other alternative energy projects have become a viable and popular means of supplementing energy production. The appendices show the location and type of various renewable energy proposals in Mohave County. Collectively, those projects have a combined capacity of approximately one gigawatt of electric production. Energy sources are used for transportation, lighting, space heating and cooling, and the operation of machinery and appliances. Energy policies relate to energy supply, as well as the amount and type of energy that County residents and businesses consume. Other than providing land use opportunities, the County's ability to directly affect the energy supply is limited. In 2001, the Arizona Corporation Commission (ACC) adopted the Environmental Portfolio Standard (EPS) to further the development of renewable resources in producing electricity for Arizona consumers. The goal is to generate 1.1 percent of total retail energy sales from solar or other environmentally friendly resources by 2007. The ACC is currently considering revising the EPS upward to 5 percent by 2015 and 15 percent by 2025, with 25 percent coming from distributed generation. Geothermal and bio-fuel production may also be incorporated in the EPS as a "qualifying technology."

### Key Energy Issues

***Efficient Use of Energy.*** Continued growth in energy demand creates the need for additional power generation and distribution capacity; air pollution and utility rates also may increase. The ACC estimates that Arizona's annual kilowatt hour consumption will increase from 38.5 billion in 2005 to 69.5 billion in 2025. Managing energy consumption and ensuring the availability of economically and environmentally sound energy supplies will require cooperation between the County, its residents and utility companies, and the Arizona Corporation Commission.

*Use of Alternative Energy Sources.* The sun and wind provide renewable, non-polluting energy sources with great potential in Mohave County. Initial cost and public awareness are two of the greatest obstacles to more widespread use of these largely untapped resources.

## **Energy Goals and Policies**

### **Goal 6: To encourage the efficient use of alternative energy sources by residential and non-residential users.**

- Policy 6.1 The County should support the voluntary use of alternative energy through its subdivision, zoning and building regulations.
- Policy 6.2 The County should support the use of alternative energy.
- Policy 6.3 The County should work with local utilities to explore opportunities to encourage the use of alternative energy.
- Policy 6.4 The County should encourage the development of beneficial alternative energy production facilities in conducive locations, that are consistent with any existing adjacent development, and the community in which the facilities will locate.
  - a.) The County should encourage alternative energy applicants to hold one or more information meetings with the public and stakeholders, and to invite jurisdictional agencies to those meetings.
  - b.) The County should support projects that utilize a sustainable source, efficient technology, and make efforts to minimize and mitigate any adverse impacts of the project, while providing the greatest possible overall economic development and employment benefits to Mohave County.
  - c.) The County should encourage the use of isolated or remote energy generation facilities, which stand alone in support of development not able to connect to the established electrical “grid”.
  - d.) Alternative energy projects may be considered compatible with all planning area types (except the Urban Development Areas, as noted below) if they are consistent with existing adjacent development. In the UDA areas, lower impact alternative energy projects, such as (but not limited to) photovoltaic solar systems, sized and designed to fit the neighborhood, may be allowed, and will be considered on a case by case basis.
  - e.) The County should follow Federal Aviation Administration (FAA) requirements for location of wind energy projects in the vicinity of airports.

### **Goal 7: To encourage energy conservation through more efficient design, materials, equipment and practices.**

- Policy 7.1 The County may consider adopting an established energy code for new buildings.



- Policy 7.2 Through the evaluation of development proposals, the county may advise applicants of potential energy conservation techniques.
- Policy 7.3 The County's subdivision regulations should encourage protection of solar access and lot patterns that provide for the use of solar energy in compliance with State and Federal laws.
- Policy 7.4 The County should incorporate energy efficient design and materials into new County facilities. (As of 2010, two of Mohave County's newest office buildings are Leadership in Energy and Environmental Design (L.E.E.D.) certified).

## **Implementation Measures - Energy (E)**

E1: Consider the adoption of the International Energy Conservation Code.

## **5. Noise**

Noises can play a significant role in shaping the quality of life in an area. Noise is an unavoidable aspect of urban areas and many rural areas in the County, but its negative impacts can be reduced. Coordinated land use planning and project design standards are two key elements of noise mitigation.

### **Effects of Noise**

Excessive noise levels can have adverse effects on the physical and mental health of people, as well as their enjoyment of the environment and their pursuit of work and leisure activities. Some of these effects are difficult to measure because individuals vary widely in their sensitivity to noise. Still, these effects are very real and significant. Excessive noise can lead to permanent deterioration in hearing ability; stress-related physiological changes in the body (such as vascular) constriction and blood pressure elevation; sleep disturbance; and fatigue.

In addition to the health costs, unabated noises can directly affect the local economy by reducing property values, tax revenues and the ability to attract certain development

Through the Board of Supervisors' adoption of land use plans, careful coordination of land uses may be a tool for minimizing the impacts of noises. The impacts of noise can be reduced through a variety of design techniques, such as sound walls, noise source muffling, buffering techniques and good site design.

Protecting the noise receptor is often more efficient than muffling the noise source, particularly for existing sources of noise. Adequate insulation and building/window orientation can significantly reduce the impacts of external noises on internal spaces.

### **Key Noise Issues**

*Separation of Noise-Sensitive Land Uses and Noise Generators.* Careful consideration of land uses by the Board of Supervisors may be a tool for minimizing the impacts of noise. Zoning may be a valuable tool for moderating the impacts of noise by separating incompatible land uses. Land uses sensitive to noises include residences, schools, hospitals and some recreational uses. Mohave County's primary noise generators are the airports, major roads, construction, mining, and some industrial activities.

***Mitigation of Off-Site Noise Impacts.*** In addition to separating noise generators from noise sensitive land uses, the impacts of noises may be reduced through a variety of design techniques. Noise from existing roadways may be mitigated through the use of structural or earthen sound barriers or added insulation in the walls of nearby structures.

## **Noise Goals and Policies**

**Goal 8: To minimize noise levels throughout the County and, wherever possible, mitigate the effects of noise to provide a safe and healthy environment.**

Policy 8.1 The County may establish standards for noise and land use compatibility based on Exhibit V.5.

Policy 8.2 The Board of Supervisors may use the General Plan and Zoning Ordinance to separate noise sensitive land uses.

## **Implementation Measures - Noise (N)**

N1: Consider adoption of standards for maximum permissible noise levels by land use category.

N2: If the Board adopts such standards, enforce compliance.

**Exhibit V.5: Maximum Noise Levels for Various Land Uses**

Land Use Category	Community Noise Exposure dBA					
	55	60	65	70	75	80
Residential						
Transient Lodging, Motels, Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Professional						
Industrial, Manufacturing, Utilities, Agriculture						


**Normally Acceptable**

Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.


**Conditionally Acceptable**

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.


**Normally Unacceptable**

New construction or development should be discouraged. If it does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.


**Clearly Unacceptable**

New construction or development generally should not be undertaken.

Source: Adapted from California Office of Planning and Research. November, 1990.

## 6. Scenic Resources

Mohave County is renowned for scenic routes, such as Highway 93 across the Hoover Dam, and the historic Route 66, and for its scenic vistas, such as the Grand Canyon and Lake Mead. Less well known scenic routes and vistas can be found in the Black, Cerbat and Hualapai Mountains, as well as throughout the Arizona Strip. Many of these routes and vistas could be affected by inappropriate buildings, signs or utility construction.<sup>7</sup> This section focuses on maximizing the use, enjoyment and protection of the County's scenic resources.

### Key Scenic Resource Issues

***Identification of Scenic Routes and Vistas.*** Identification of high priority vistas and scenic routes is the first step in protecting their value. Valuable scenic routes and vistas provide aesthetically pleasing views of natural or manmade settings. The Grand Canyon and Hoover Dam/Lake Mead are important vistas under Federal control. Mohave County may choose to identify other important vistas and encourage their preservation. These may include views of natural settings, as well as attractive views of the built environment, such as dams, lakes and historic areas.

***Design of Scenic Routes and Vistas.*** The promotion, development and preservation of scenic routes and vistas can ensure that future visitors and residents will enjoy the same aesthetic experiences that are available today. Promoting public enjoyment of scenic routes and vistas, and developing them to enhance their appeal and accessibility, can increase public awareness of their aesthetic and economic value.

### Scenic Resources Goals and Policies

**Goal 9: To preserve, protect and enhance scenic routes and vistas that characterize the rural beauty of Mohave County.**

- Policy 9.1 The County Engineer may establish a scenic routes signing policy.
- Policy 9.2 The County may preserve and enhance designated scenic routes that provide attractive natural and man-made vistas through available grants and possible cooperation with other agencies
- Policy 9.3 The County may coordinate with the State and cities to develop criteria for designating additional scenic corridors based on historic, scenic or aesthetic characteristics.

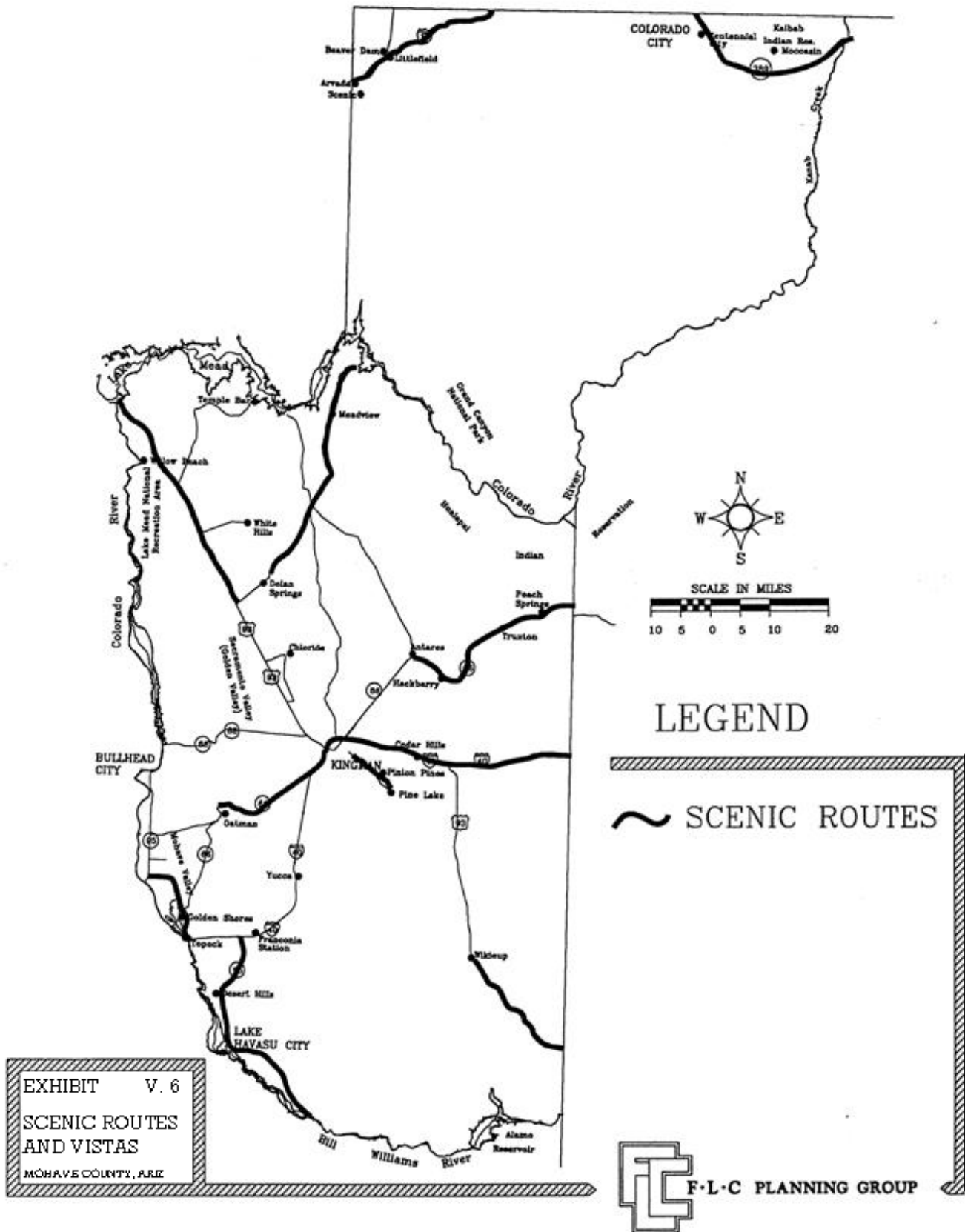
### Implementation Measures - Scenic Resources (SR)

- SR1: The Board of Supervisors may choose to support the efforts of the cities, civic groups, including the Route 66 Advisory Committee, and the State to develop criteria for identifying additional scenic resources in the County.
- SR2: The Board of Supervisors may choose to use zoning and other development regulations to protect valuable views from inappropriate land uses.
- SR3: Encourage efforts by State and local tourism agencies to promote the enjoyment of the County's scenic routes and vistas.
- SR4: The Board of Supervisors may choose to work with civic groups, to encourage communities along Route 66 to apply for designations of National Heritage.

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<sup>7</sup>Reductions in air quality also could degrade the value of all of the County's scenic routes and vistas. Measures addressing air quality are included in the air quality section of the Natural Resources Element.

Exhibit V.6: Scenic Routes and Vistas



## VI. Community Development

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*Land Use Element*  
*Housing Element*  
*Economic Development Element*



## **VI. COMMUNITY DEVELOPMENT**

The Community Development section of the Mohave County General Plan contains the County's policies that describe the desired location and character of development within unincorporated parts of this county. It includes three topical elements -- Land Use, Housing and Economic Development. Each of these elements emphasizes an important aspect of the County and its communities. These goals and policies explain the approach Mohave County will take in planning, development review and service provision. Through implementation of the General Plan and adopted development codes Mohave County may encourage and support both existing and proposed communities within its borders.

### **A. LAND USE ELEMENT**

The Land Use Element includes two chapters. The first, Land Use, describes the County's approach to planning land uses and coordinating development with service provision. This chapter includes goals, policies and diagrams that depict areas planned for future urban, suburban and rural development and address design issues for these areas. It includes policies that coordinate capital improvements planning with the planned land uses. It also describes the relationships between the General Plan and the County's zoning and development approvals.

The second Land Use chapter addresses Hazards Management. The County's natural features create some potential hazards to future development. The County's goals emphasize development design to minimize risks from flooding and wildfire. Hazardous materials and hazardous wastes are also addressed in this chapter of the Land Use Element. Instances of illegal dumping have increased as more people move into the country-side. These dump sites pollute surface flow and have potential adverse effects on groundwater supplies.

#### **1. Land Use**

The pattern of land uses -- their location, mix and density -- is a critical component of any community's character. Past development patterns contribute to the attractiveness of an area. Future development patterns can support or retain the community's desired character or can change that character dramatically.

In addition to its effects on community character, the location of development also has a significant impact on the demands for public facilities and services, the costs of infrastructure construction and the cost-effectiveness of public service provision. A sprawling, low density development pattern is more costly to serve than is a compact pattern. Development within areas that are already adequately served reduces the need for expensive extensions of facilities to new areas. For these reasons, the land use plan for a community has important implications for the quality and cost of public services available to its residents.

The actual development of a residential subdivision, a commercial center or an industrial park is determined by the property's private owners. Although the public sector does not construct these projects, land use planning plays an important role in establishing a pattern for their future location. However, these developments affect the community's desired character and its ability to address public health and welfare concerns. The County's General Plan is intended to give everyone -- current and future residents, property owners and developers, elected officials and staff -- a clear understanding of the development patterns the community has found to be most appropriate. As such, it sets forth the policies that will guide the County's review of individual development proposals. It establishes a consistent basis for review and action, and relates these development decisions to other public actions to provide community services, extend water or sewer lines, or attract economic development.

Since much of the land in Mohave County is owned by state or federal agencies, the plans of these governmental organizations are also important in shaping the pattern of development within the County. Plans, such as the BLM's Resource Management Plan,<sup>8</sup> establish land use patterns and define resource management objectives for some properties in the County. Mohave County should coordinate its planning efforts with those of state and federal agencies in order to set and carry out compatible planning and development policies. The Land Use Element of the General Plan is the central statement of these policies regarding the pattern of development desired by Mohave County. The set of Land Use Diagrams depict the types and locations planned for development. Its goals and policies interpret this diagram, and provide additional explanation of the County's desired development patterns.

The Land Use Element lists the basic goals and policies Mohave County will use to review individual development proposals, plan capital facilities and services and establish design standards. It includes both written goal and policy statements and a graphic depiction of the type, intensity and location of planned land uses. This graphic depiction is called a "Land Use Diagram," to indicate that it shows the proposed general distribution of land uses, but is not a precisely surveyed map of development or a zoning district map.

### **Background Information**

As part of the background analysis for this General Plan, existing development trends, ownership patterns, environmental constraints and infrastructure availability were analyzed. This analysis revealed the high rates of growth in the Mohave Valley, Golden Valley and the areas immediately surrounding Bullhead City, Kingman and Lake Havasu City. With the exception of the Hualapai Mountains and some major washes, there are few areas where environmental constraints directly affect existing development trend areas. Much of the most environmentally-sensitive land is public owned.

In fact, four-fifths of the land in the County is owned by Federal, State or local governments.<sup>9</sup> Because of the vast size of the County, the extensive public lands generally do not constrain growth, except where public ownership of alternating sections increases development costs. The availability of adequate public facilities (particularly water and sewer) is a primary constraint to future growth. For example, the allocation of Colorado River water to the River Cities will become an increasingly important factor, considering Mohave County's growth. This Land Use Element reflects the constraints and opportunities identified through this background analysis.

### **Approved General Plan Alternative**

In developing this General Plan, Mohave County evaluated four possible Development Policy Alternatives. Each of these alternatives was designed to reflect different locations for future growth, different fiscal and regulatory environments and varying population levels. This Alternatives Analysis process is described in greater detail in Section IV of this General Plan; which includes a review of environmental factors, indicators of community character, public facility availability, regulatory factors and other fiscal and jurisdictional issues.

Following analysis of these issues by the consultant and staff, Mohave County held a series of public meetings to gather public comments about the advantages and disadvantages of these alternatives. After a significant amount of public input and discussion, the County Planning and Zoning Commission recommended a General Plan Alternative to the Board of Supervisors. The Board adopted this alternative on March 30, 1992. The alternative was amended on January 4, 1995, after additional public input. Exhibit VI.1 shows the Adopted General Plan Alternative.

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<sup>8</sup>U.S. Department of the Interior, Bureau of Land Management, Kingman Resource Area: Proposed Resource Management Plan and Final Environmental Impact Statement, September, 1993.

<sup>9</sup>Most public land is not expected to develop with high intensity urban uses. However, there are circumstances when public land is developed for a variety of uses, including urban development. The General Plan's goals and policies reflect this potential.



Major land use concepts included in this adopted alternative are:

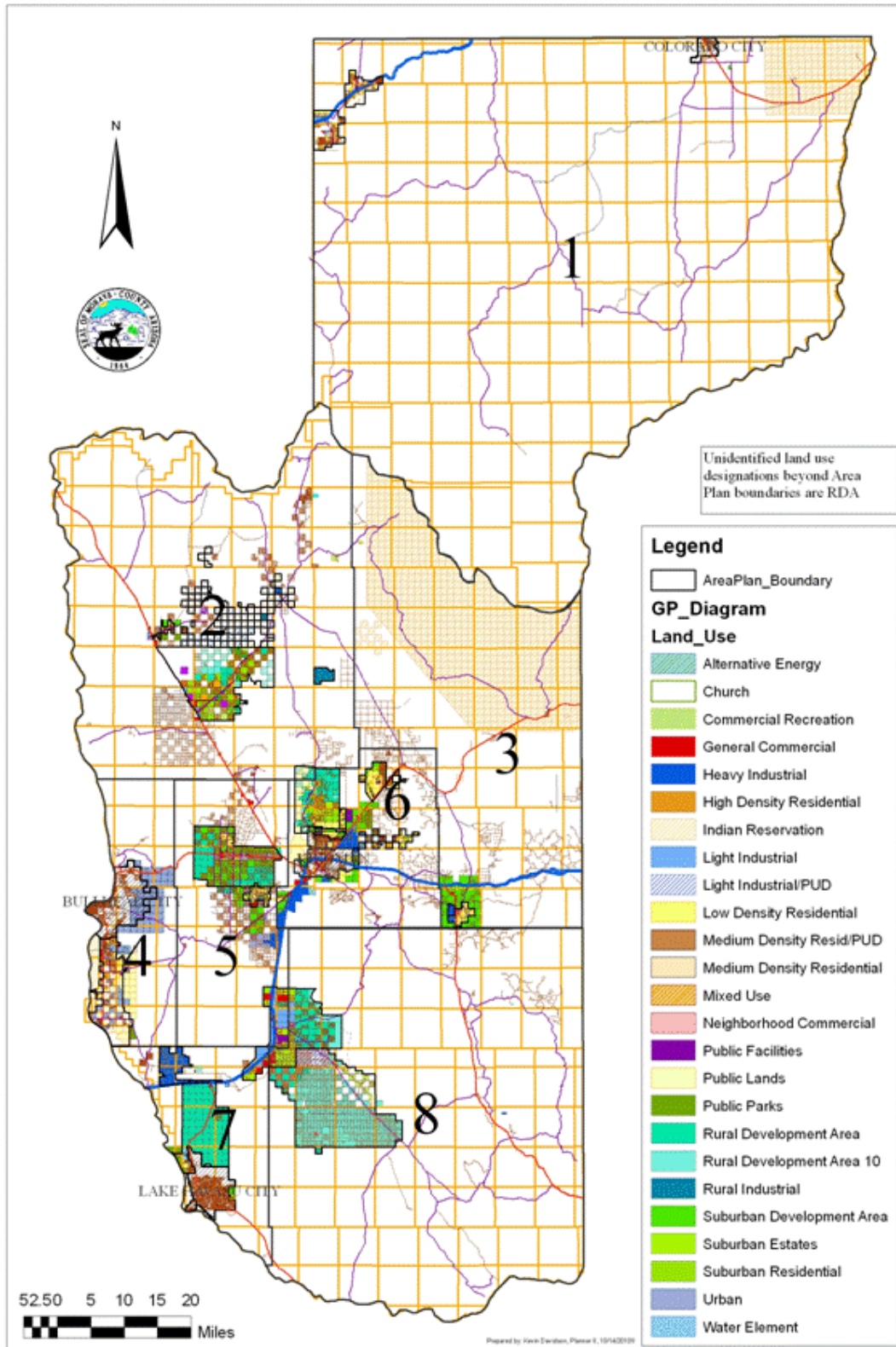
- ◆ the identification of areas appropriate for urban, suburban and rural development; and
- ◆ the assignment of typical residential densities for urban, suburban and rural development areas.

Urban development is planned for areas that have already experienced or have been planned for intensive development. Urban development areas include land adjacent to incorporated cities, land within outlying communities and the more intensely developing areas of Golden Valley and Mohave Valley. The urban areas in outlying communities are shown conceptually, with the intent being to permit these areas to continue current patterns of development. The areas appropriate for suburban development primarily are located on the fringes of the urban development areas. The remainder of the unincorporated areas in the County is planned for rural development.

The 2010 General Plan update did not revise or alter land use designations on any diagrams in the plan. Amendments approved by the Board of Supervisors since the 2005 update, up to December 31, 2009, are however included in the exhibits.

Exhibit VI.1: Approved General Plan Alternative with Sub-Areas 1 - 8

# Exhibit VI.1 Countywide Land Use Diagram and Sub-Areas



## Key Land Use Issues

***Planning of Expected Future Growth.*** The Land Use Element establishes a planned pattern for development for the next twenty years, and beyond. It reflects the County's historical development patterns and the new development occurring today. It plans land for more residential development than would be needed to accommodate population growth projected through the year 2020; it also provides significant areas for future commercial and industrial development. In this way, the County is anticipating continued growth and is planning development areas, public services and facilities to support it.

***Distinctive Community Character.*** The goals and policies of the General Plan provide for different types of communities within the unincorporated parts of Mohave County. This plan provides areas for urban, suburban and rural development so future residents can select the living environment they prefer. It provides for growth and flexibility while retaining the rural character of much of the County. The Plan focuses most of the County's growth in urban and suburban development areas, preserving the character of rural development areas and the sparse development patterns in remote areas.

The Land Use Element also supports the efficient use of public and private resources by promoting urban growth in areas where infrastructure is already in place or in close proximity. Infill development -- the development of vacant or under-developed parcels in existing developed areas -- reduces overall capital expenditures by reducing the need for new facilities.

***Land Use Compatibility.*** The pattern of development described by the Land Use Diagram reduces the potential for locating incompatible land uses adjacent to one another. The goals, policies and implementation measures of the plan provide additional guidance for ensuring compatibility between dissimilar land uses.

***Development Guidance and Flexibility.*** The Land Use Element serves as a guide for informed decision-making in development matters. It provides direction for developing individual properties according to the County's vision for its future. As a result, these individual developments should fit into the overall development pattern described in this Plan.

At the same time, this General Plan is designed to provide flexibility in the application of its policies. Performance standards, particularly those related to the availability of public services, give a property owner flexibility in designing development proposals that meet the County's goals.

***Cost-effective Provision of Adequate Infrastructure.*** Adequate infrastructure should support the development patterns described in the Land Use Diagram. The goals and policies in this and other elements provide a basis for implementation programs to stage and time the construction of public facilities needed to adequately serve new and existing residents.

The County will not be constructing all public facilities, just coordinating the construction of public facilities. Developers will provide sufficient infrastructure, including fire protection, for their individual projects to ensure they can “stand-alone” if not connected to regional facilities.

Facilities and services should be extended in an orderly manner to make the most efficient use of public resources. Both the timing and location of new infrastructure directly impact construction and maintenance costs. Generally, compact development patterns that build on existing infrastructure are more cost-effective than scattered development.

***Growth Monitoring.*** Mohave County's planning and investment decisions should be based on current growth trends. Monitoring development activity (subdivisions and building permits) and demographic trends, as well as the fiscal and economic trends that drive growth, will improve the County's ability to anticipate where, when and how much growth will occur.

As conditions change, the County should evaluate its policies and modify them to respond to new opportunities. The Land Use Element describes the process for modifying planned land uses, and the factors the County will consider in responding to proposals for change.

## **Planning Terms**

This General Plan is designed to provide the direction for future development in a County with over 13,000 square miles of territory, dramatically varied natural characteristics, four incorporated cities, other existing communities with distinctive development patterns, and a rapidly growing population. It should address all of these factors in a way that is consistent, complete and understandable as a statement of County policy. In order to achieve these objectives, a number of special planning terms are used in this General Plan. They allow the citizens and officials of the County and its communities to use a common set of terms to describe parts of the County, groups of land uses (see Exhibits VI.2 and VI.13), and areas where certain policies apply. These terms are described in this part of the Land Use Element; they are then used throughout the goals and policies that follow.

## **Planning Areas.**

As noted, Mohave County has a wide variety of existing communities and development patterns. This General Plan groups these distinctive geographic parts of the County into four (4) broad planning area types. This allows similar policies and programs to be used in similar areas, while distinguishing different areas and using special policies to address their growth. Exhibit VI.2 lists these planning area types and summarizes the intent for each of these areas. It describes the density of residential development expected in each of these areas, whether rural, suburban or urban. It also indicates the types of non-residential development expected in each area and the services required for development.

**Exhibit VI.2: Planning Area Types for Unincorporated Mohave County**

Area Type	Intent	Residential Densities	Other Land Uses	Service Provision
Rural Development Area (RDA)	Maintain the opportunity for a rural lifestyle	Density is 0.2 DU/A or less.  Lot sizes are 5 acres or larger.	Commercial uses serve local and highway needs. Rural employment centers may be planned in the future.	No urban or suburban services or facilities will be provided.
Suburban Development Area (SDA)	Provide for large lot, suburban development	Density is between 1 DU/A and 0.2 DU/A.  Lot sizes are between 1 and 5 acres.	All non-residential land uses may develop here, if they are in appropriate locations and have adequate services.	Typical suburban services include paved streets, septic, and public water supply. In some areas, urban services may be required.
Urban Development Area (UDA)	Provide for more intense, urban development in free-standing communities and outside cities.	The average density in urban areas is 2 to 5 DU/A.  Individual areas may have densities up to 25 DU/A.	All non-residential land uses may develop here, if they are in appropriate locations.	Urban services and facilities are required for development in these areas.
Outlying Communities	Allow these distinct communities to continue developing according to their current growth patterns.	Densities may be urban, suburban or rural.	Most non-residential land uses may develop here, if they are in appropriate locations and have adequate services.	Local community standards will apply within these communities (no change in existing services is anticipated).

- ❖ **Rural Development Area (RDA).** This is an area where residents presently enjoy a rural lifestyle, wide open spaces and few neighbors. Most of the land in Mohave County is included in this area type. Properties in these areas are generally at least five (5) acres in size, and many are much larger than this. A significant amount of land within this area type is owned by the Federal or State governments, or is include in an Indian reservation.
- ❖ **Suburban Development Area (SDA).** This is an area intended for development of lower density residential neighborhoods with many of the amenities of urban areas. Suburban lot sizes range from one to five acres in size with a typical lot size of 2.5 acres. Commercial uses will be permitted at appropriate locations where they are compatible with adjacent uses and infrastructure.
- ❖ **Urban Development Area (UDA).** This area is intended to provide for more intense residential and non-residential development near cities and in outlying communities. While residential densities typically will range from two to five dwellings per acre, high density development of up to 25 units per acre may be permitted. Urban services and facilities will be required for both residential and non-residential development in this area.
- ❖ **Outlying Communities.** The varied character of Mohave County's unincorporated outlying communities requires special consideration. Development within designated communities may be urban, suburban or rural in character. This Plan permits the continuation of existing development patterns, including both residential and non-residential development. Depending on the character of the community and proposed development, urban, suburban or rural standards may apply.

Exhibit VI.3 lists the locations where each of these area types is used.

**Exhibit VI.3: Planning Area Locations in Unincorporated Mohave County**

Area Type	Locations																								
Rural Development Area (RDA)	All areas of Mohave County not designated for more intensive development. See Exhibits VI.4 through VI.12.																								
Suburban Development Area (SDA)	North Kingman Area South Kingman Area Parts of Golden Valley Parts of the Arizona Strip Parts of Mohave Valley Areas north and east of Lake Havasu City Area west of White Hills Highway 93 and Interstate 40 See Exhibits VI.7 to VI.10 for general locations, and Exhibits VI.15 to VI.19 for detailed land uses.																								
Urban Development Area (UDA)	Hualapai Ranch South Kingman/ McConnico Parts of Golden Valley Parts of the Arizona Strip Parts of Mohave Valley Areas east of Bullhead City Area north of Lake Havasu City Valle Vista North Kingman/Butler Area west of White Hills See Exhibits VI.4 to VI.12 for general locations, and Exhibits VI.16 to VI.19 for detailed land uses.																								
Outlying Communities	<table border="0"> <tr> <td>Meadview</td><td>Fredonia vicinity</td></tr> <tr> <td>Chloride</td><td>Truxton</td></tr> <tr> <td>Peach Springs</td><td>Wikieup</td></tr> <tr> <td>Topock</td><td>Oatman</td></tr> <tr> <td>Hualapai Mtn. Subdivision</td><td>Peacock</td></tr> <tr> <td>Hackberry</td><td>Cedar Hills</td></tr> <tr> <td>Pinion Pines</td><td>White Hills</td></tr> <tr> <td>Golden Shores</td><td>Scenic</td></tr> <tr> <td>Mocassin</td><td>Centennial</td></tr> <tr> <td>Arvada</td><td>Valentine</td></tr> <tr> <td>Cane Beds</td><td></td></tr> <tr> <td>Beaver Dam/Littlefield</td><td></td></tr> </table> <p>See Exhibits VI.4 through VI.12.</p>	Meadview	Fredonia vicinity	Chloride	Truxton	Peach Springs	Wikieup	Topock	Oatman	Hualapai Mtn. Subdivision	Peacock	Hackberry	Cedar Hills	Pinion Pines	White Hills	Golden Shores	Scenic	Mocassin	Centennial	Arvada	Valentine	Cane Beds		Beaver Dam/Littlefield	
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Golden Shores	Scenic																								
Mocassin	Centennial																								
Arvada	Valentine																								
Cane Beds																									
Beaver Dam/Littlefield																									

## Land Use Diagram

The Land Use Diagram, found in Exhibits VI.4-VI.12 and VI.16-VI.19, shows the planned land uses for most areas of the County. The Diagram also identifies the boundaries of urban, suburban and rural development areas. Planned land uses are not designated for the areas within Bullhead City, Colorado City, Lake Havasu City and Kingman. The Land Use Diagram is not intended to designate land uses within any incorporated area.

The Land Use Diagram has been divided into a number of exhibits to make it a more effective tool for identifying planned land use categories. Exhibit VI.4 illustrates the sub areas into which the County has been divided and provides a Countywide view of planned development. Exhibits VI.5 through VI.12 illustrate the type of land use (urban, suburban, or rural) appropriate in each of eight County sub areas. Exhibits VI.16 through VI.19 illustrate more detailed land use categories applicable to the County's major unincorporated growth areas.

Area Plans have been prepared for developed or developing unincorporated areas of the County for which more detailed land use planning is needed. Each of the Area Plans includes a Land Use Diagram that illustrates land uses at an appropriate level of detail.

Policies that refer to a "Land Use Diagram" apply to all of the diagrams adopted by the County. The County's official copy of the Land Use Diagram is available at the Mohave County Development Services Department. It provides reference for use in determining the general boundaries of each land use area. The Land Use Diagram, together with the goals and policies contained in the General Plan text, establishes the County's policy direction and acts as a guide for decisions affecting the County's future development.

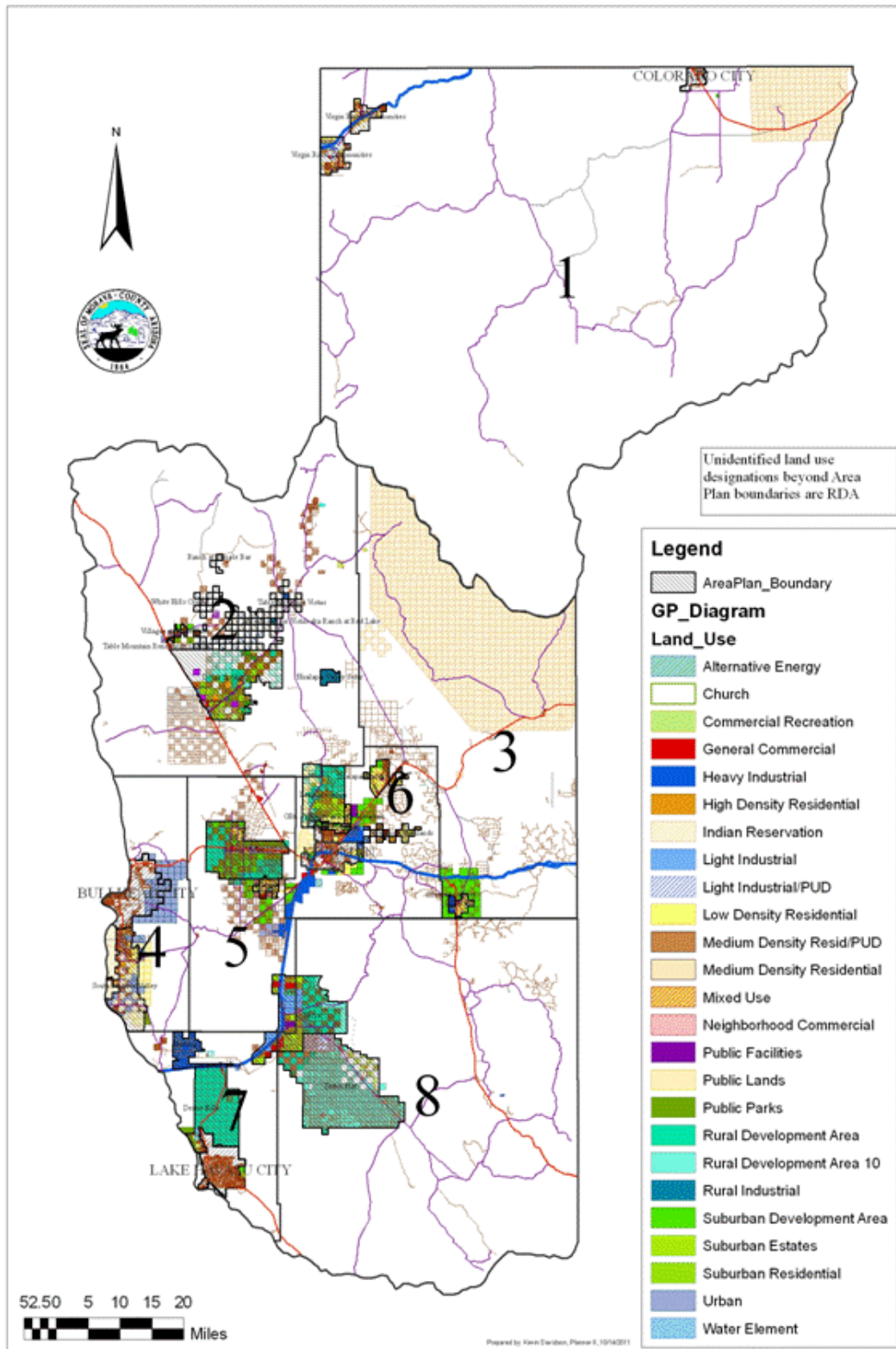
**The Land Use Diagram is not the County's zoning map.**<sup>10</sup> It is a guide to future land use patterns. Zoning and area plan designations may be more restrictive than the land use categories of the Land Use Diagram.

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<sup>10</sup>Zoning is part of the property owner's "bundle of rights" and is based on an adopted ordinance which prescribes a set of discrete uses and activities while the land use diagram shows the idealized or highest and best use of the property based on contemporary planning theory and public input.

**Exhibit VI.4: Countywide Land Use Diagram**

# Exhibit VI.4 Countywide Land Use Diagram and Area Plans







**Exhibit VI.6: Land Use Diagram – Sub Area 2, White Hills/Dolan Springs**

# Exhibit VI.6

## Countywide Land Use Diagram - Sub Area 2

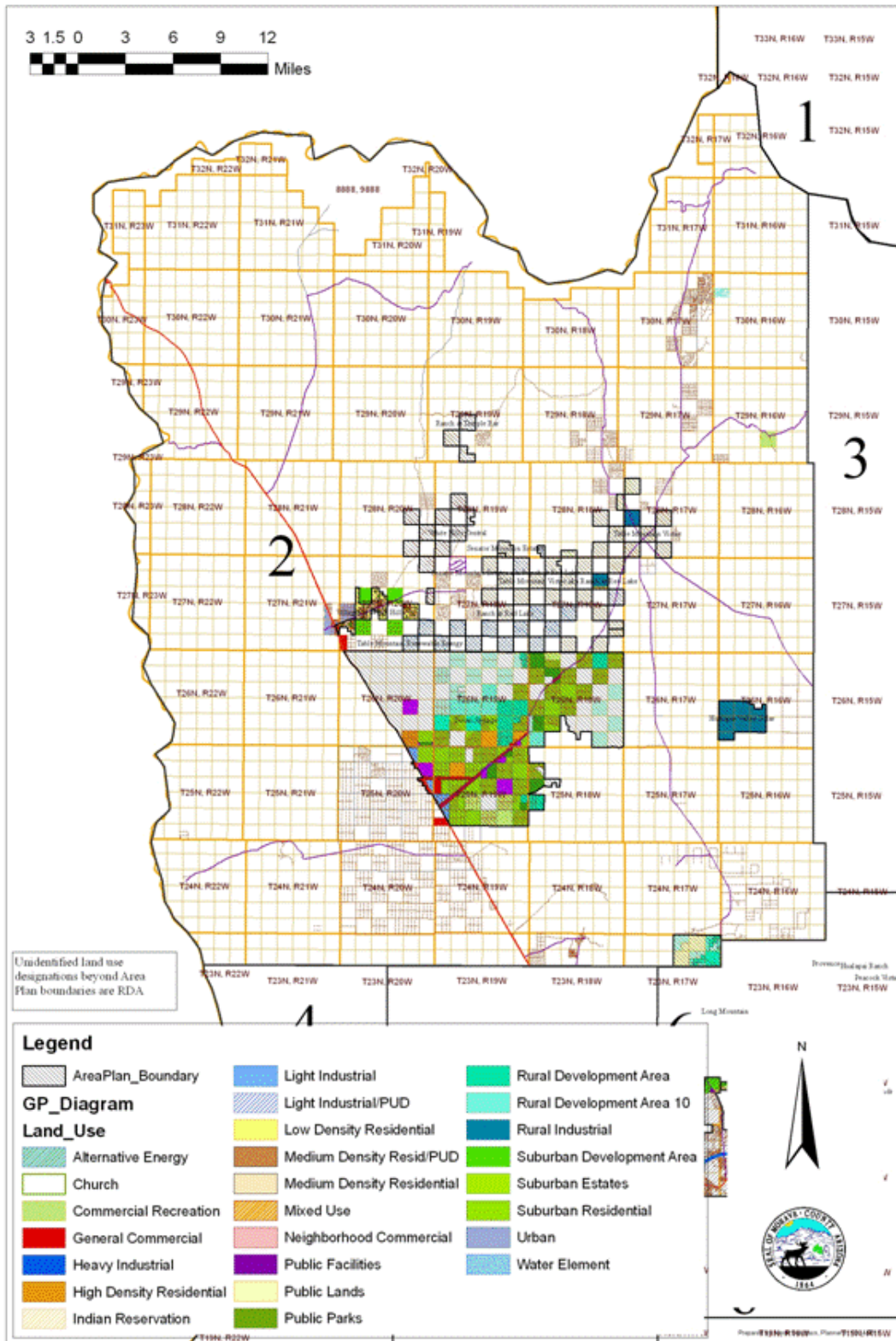
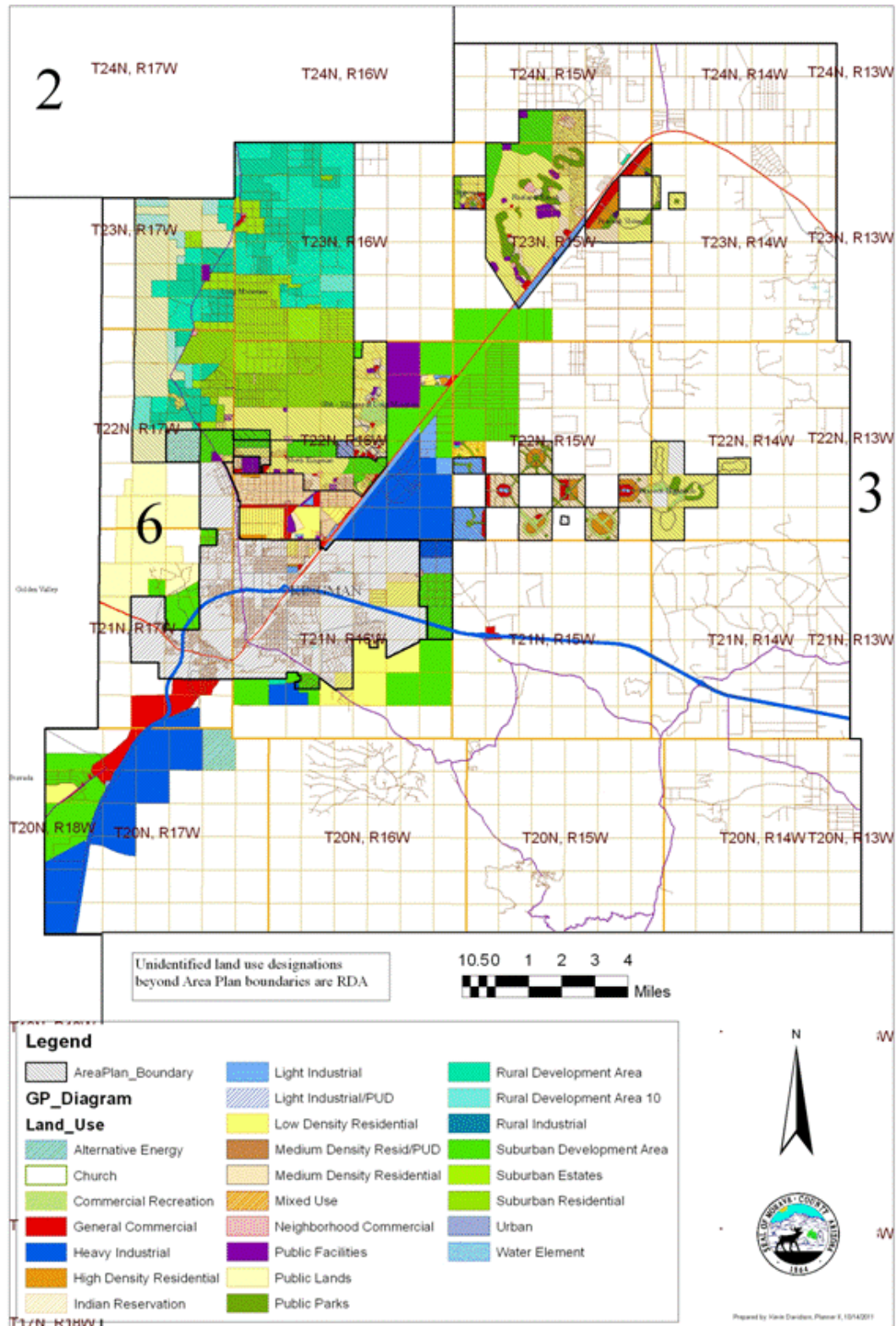




Exhibit VI.7: General Land Use Diagram – Sub Area 6, Kingman Area

# Exhibit VI.7

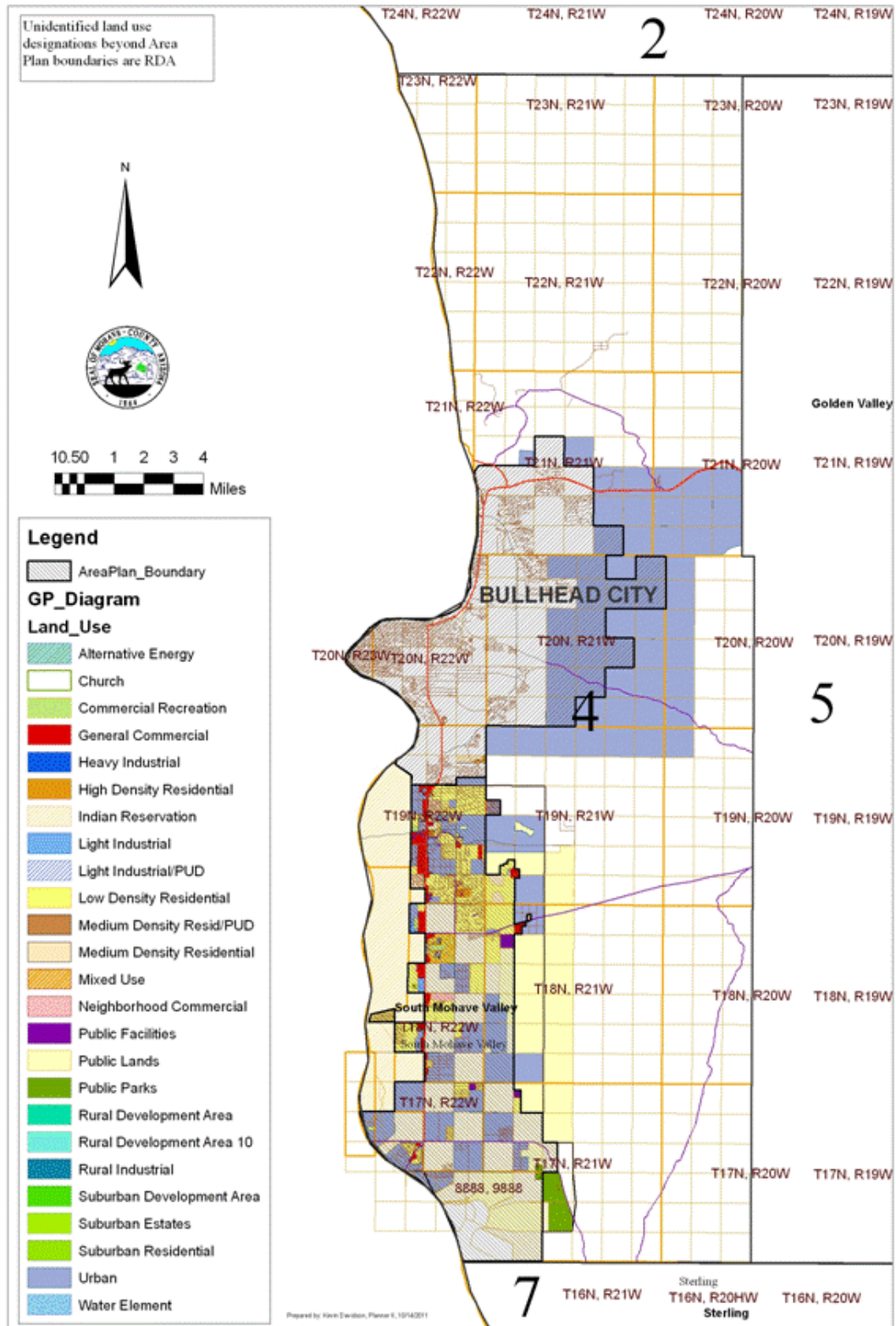
## Countywide Land Use Diagram - Sub Area 6





**Exhibit VI.9: General Land Use Diagram – Sub Area 4, Bullhead City Area**

## Exhibit VI.9 Countywide Land Use Diagram - Sub Area 4





**Exhibit VI.10: General Land Use Diagram – Sub Area 7, Lake Havasu City Area**

# Exhibit VI.10 Countywide Land Use Diagram - Sub Area 7

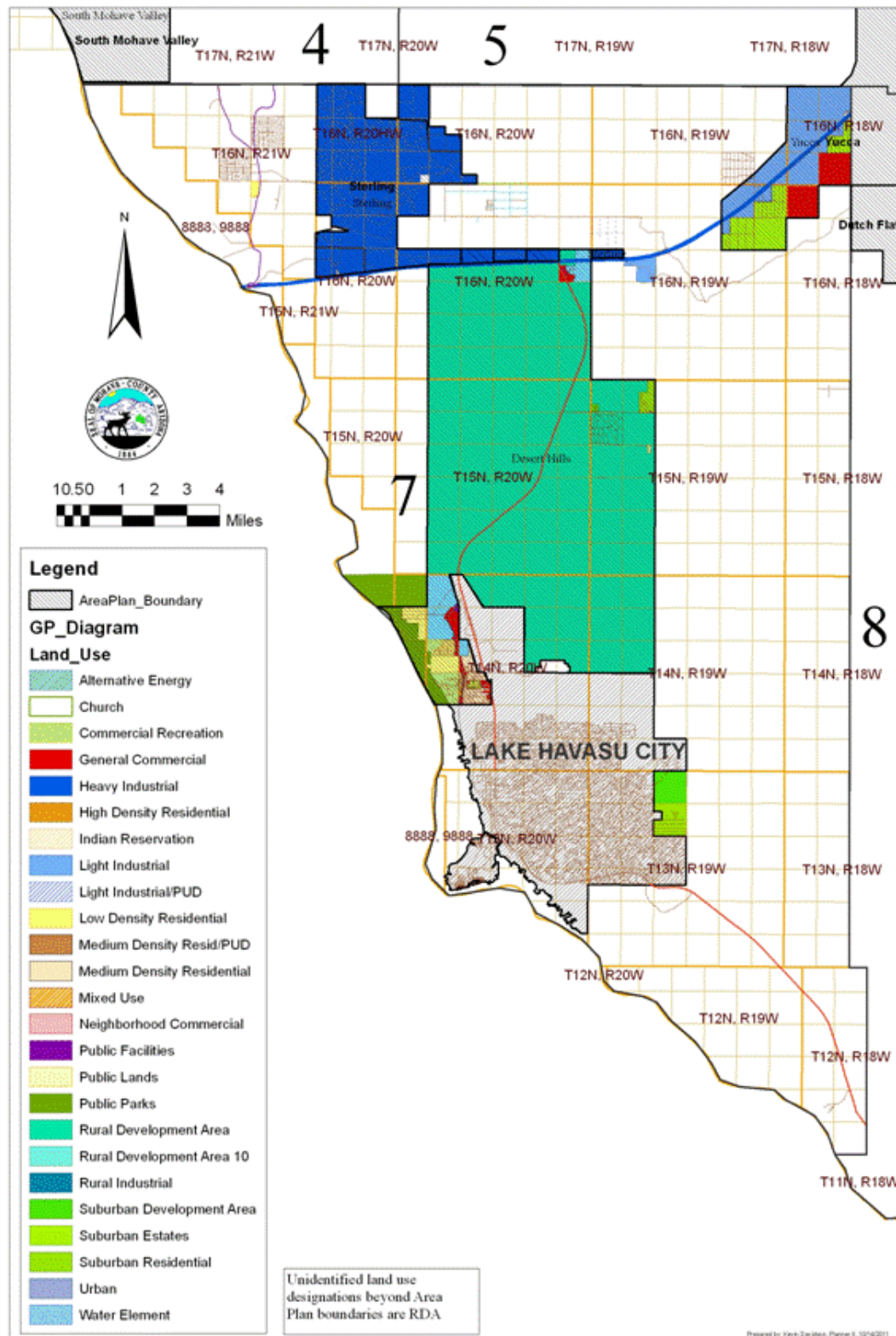
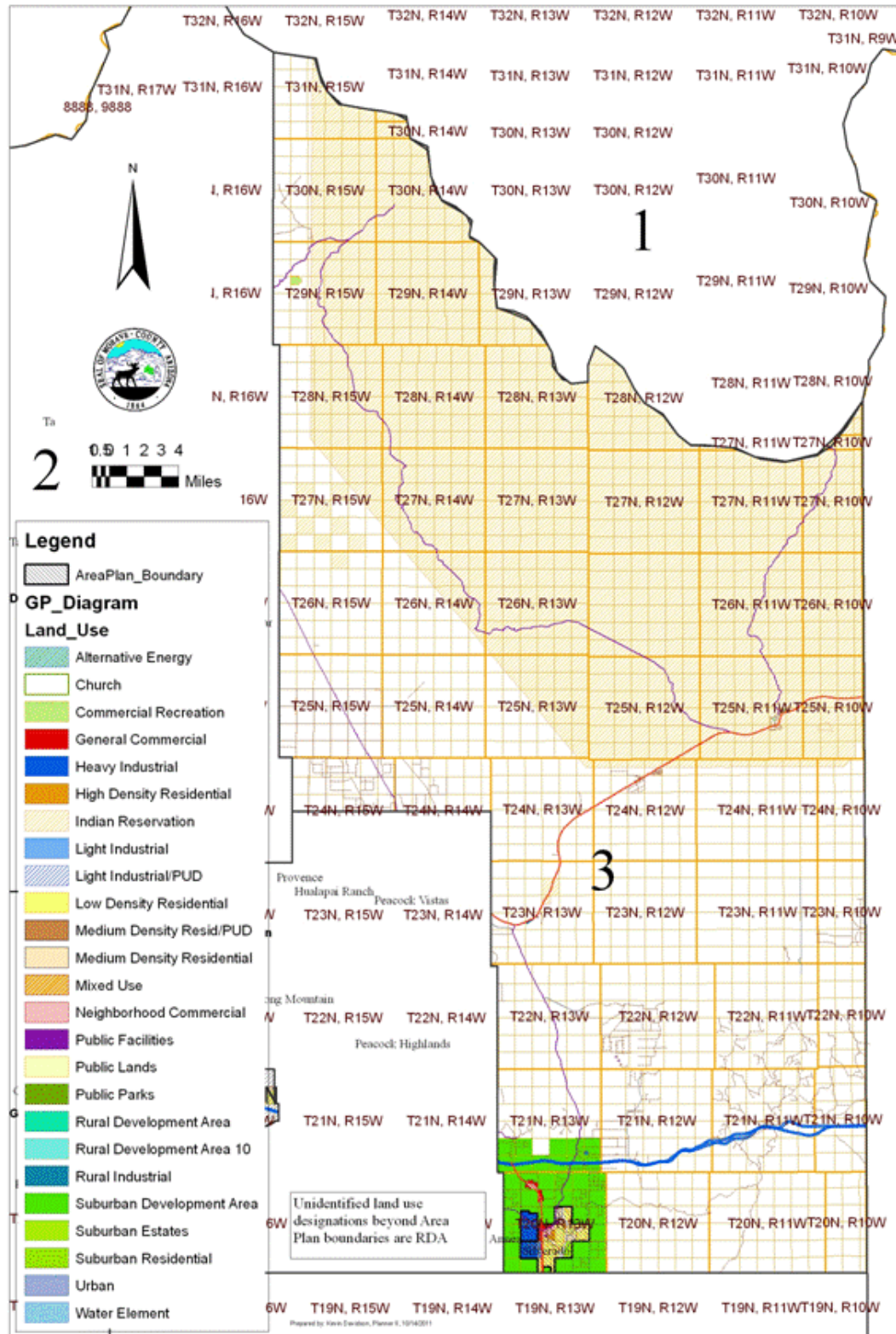


Exhibit VI.11: Land Use Diagram – Sub Area 3, East Central Area

# Exhibit VI.11

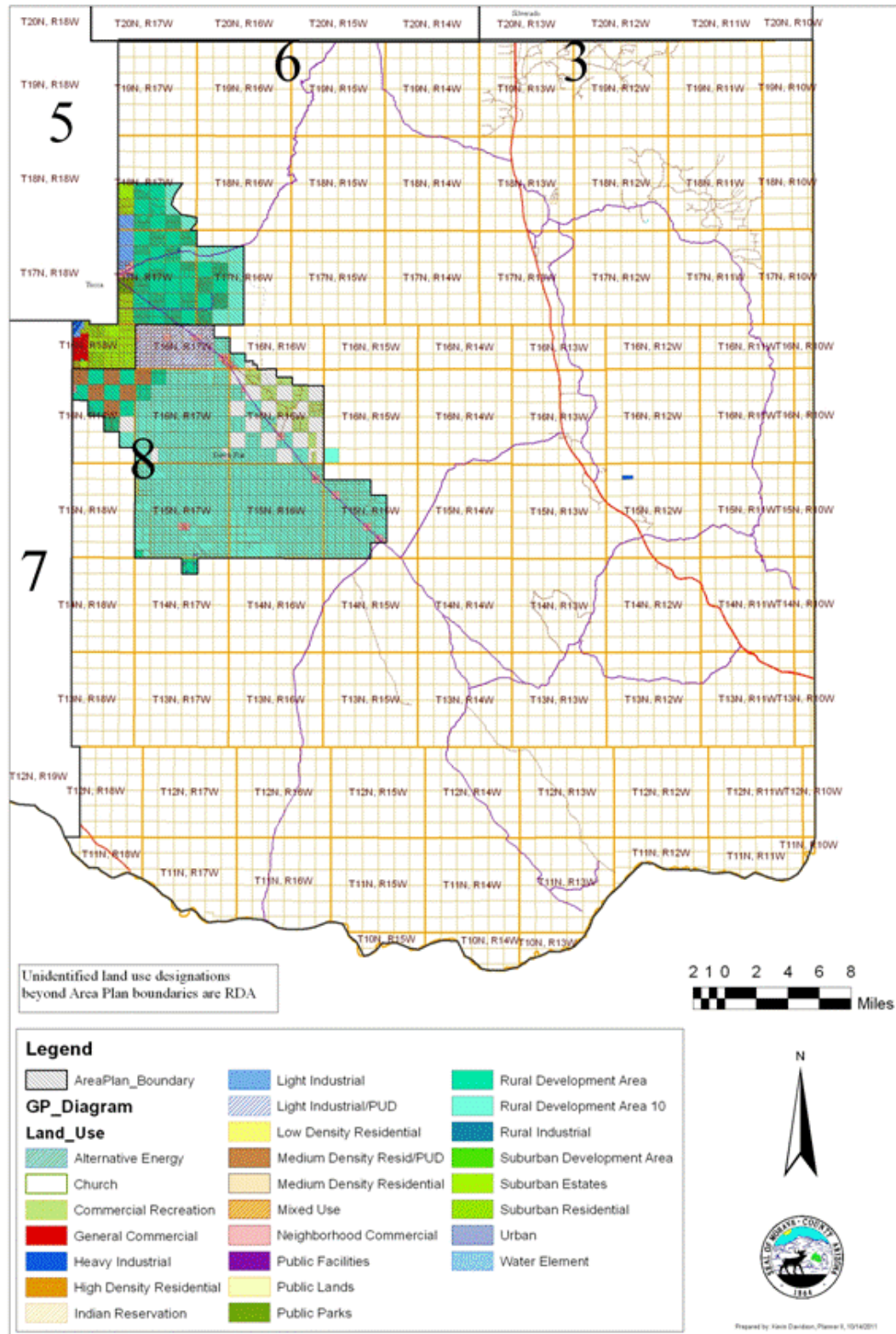
## Countywide Land Use Diagram - Sub Area 3





**Exhibit VI.12: Land Use Diagram – Sub Area 8, Southeast Area**

# Exhibit VI.12 Countywide Land Use Diagram - Sub Area 8





## Land Use Categories

A consistent set of land use categories is used in all Land Use Diagrams to describe the type and intensity of use anticipated. Exhibit VI.13 shows the relationship between planning area types and land use categories. Exhibit VI.14 lists these categories and briefly summarizes their policy intent. Each category is described in more detail in the following section of this Element. In each case, the exhibit gives a name and abbreviation for the land use category.

For residential uses, the exhibit shows the range of densities consistent with each category. Density is expressed as the number of Dwelling Units per Acre (DU/A).<sup>11</sup> For example, the category "Medium Density Residential" includes development at densities ranging from five to twelve dwelling units per acre. The method for calculating a development project's density is described in Exhibit VI.15. The goals and policies of the Land Use Element define this method and other factors to be considered in evaluating a project's consistency with the Land Use Diagram.

In addition to the residential density range, Exhibit VI.14 also indicates the typical uses found in each land use category. This list is not comprehensive, and does not address the accessory uses that a zoning district might permit. It simply describes the primary uses typically found in this category, so residents and property owners can understand the County's general policy intent for a certain area.

The Land Use Diagram uses eighteen categories to describe the future land uses in Mohave County. Land use categories are meant to be more general than zoning districts -- there may be several zoning districts that could be consistent with a particular land use category. In some cases, the land uses found in an Area Plan are also more specific than these land use categories. These categories, which are listed in Exhibit VI.13, are described in more detail below. Included in the following general descriptions of each category is a statement of whether land uses within the category are intended to be rural, suburban or urban in character.

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<sup>11</sup> For planning purposes, these densities are expressed in terms of gross land area.

**Exhibit VI.13: Land Use Categories in Planning Areas**

Land Use Categories	RDA	SDA	UDA	Outlying Communities
<b>Residential Uses</b>				
Rural Residential (RR)	Y	M	M	Y
Suburban Estates (SE)	N	Y	M	M
Suburban Residential (SR)	N	Y	M	M
Low Density Residential (LR)	N	N	Y	M
Medium Density Residential (MR)	N	N	Y	M
High Density Residential (HR)	N	N	Y	N
<b>Non-Residential Uses</b>				
Neighborhood Commercial (NC)	M	M	Y	Y
General Commercial (GC)	M	M	Y	M
Commercial Recreation (CR)	M	M	Y	M
Rural Industrial (RI)	Y	NA	NA	M
Light Industrial (LI)	M	M	Y	M
Heavy Industrial (HI)	M	M	Y	N
Airport Industrial (AI)	M	M	M	N
Alternative Energy (AE)	M	M	M	M
Mixed Use (MU)	N	M	M	M
<b>Public Lands</b>				
Public Facilities & Institutions (PF)	M	Y	Y	Y
Public Parks (PP)	Y	Y	Y	Y
Public Lands (PL)	Y	Y	Y	Y

Y = Land use category is consistent with this planning area.

M = Land use category may be consistent with this planning area, depending on the location, natural features and surrounding uses.

N = Land use category is not typically consistent with this planning area.

NA = Not Applicable

**Exhibit VI.14: Detailed Land Use Categories for Unincorporated in Planning Areas**

Code	Designation	Typical(1) Density/Intensity	Maximum Density	Policy Intent(2)
	<b>Residential</b>			
RR	Rural Residential		0.2 DU/A	Single family dwellings on large parcels in rural/agricult or environmentally constrained setting
SE	Suburban Estates	0.4 DU/A	0.5 DU/A	Single family dwellings on large semi-rural parcels
SR	Suburban Residential	1.0 DU/A	1.0 DU/A	Single family dwellings at low density
LR	Low Density Residential	3.5 DU/A	5 DU/A	Single family dwellings on standard to large urban lots
MR	Medium Density Residential	8 DU/A	12 DU/A	Predominantly low density apartments, duplexes, cluster developments and mobile home parks
HR	High Density Residential	16 DU/A	25 DU/A	Apartments and condominiums
	<b>Non-Residential</b>			
NC	Neighborhood Commercial	NA	NA	Small scale retail and service establishments meeting the needs of residents within a neighborhood
GC	General Commercial	NA	NA	Retail, office and service uses meeting community or regional needs
CR	Commercial Recreation	NA	NA	Privately-owned facilities providing outdoor recreational opportunities
RI	Rural Industrial	NA	NA	Includes a variety of industrial activities located in rural areas, although primarily along arterial roadways
LI	Light Industrial	NA	NA	Includes low intensity manufacturing and warehousing with limited outdoor activity
HI	Heavy Industrial	NA	NA	Includes uses such as construction yards, heavy manufacturing, factories and operations involving significant outside production or transfer of goods
AI	Airport Industrial	NA	NA	Includes uses that are compatible with, and benefit from airport adjacency
AE	Alternative Energy	NA	NA	Energy producing facilities other than fossil fuel and nuclear
MU	Mixed Use	2.0 DU/A	25 DU/A	Compatible, coordinated residential and non-residential uses
	<b>Public Land</b>			
PF	Public Facilities & Institutions	NA	NA	Includes schools, fire stations, libraries, hospitals and other public buildings
PP	Public Parks	NA	NA	Publicly-owned parks and open space
PL	Public Lands	NA	NA	Publicly-owned lands that are not designated for park or open space uses

Notes NA:

(1) Not Applicable

(2) Typical - Those densities which are likely to be achieved through normal development.

(2) This chart highlights primary uses anticipated in each category; the detailed descriptions of land use categories on this page provide detailed explanations.

**Exhibit VI.15: Calculation of Residential Development Density**

Residential Density Measured as Dwelling Units per Acre (DU/A):		
DU/A =	$\frac{\text{Number of Dwelling Units}}{\text{Number of Gross Acres in Site}}$	
For Example:		
DU/A =	$\frac{100 \text{ Dwelling Units}}{50 \text{ Gross Acres}} =$	2 DU/A

**Residential Land Uses**

Residential land use categories are used to identify places where the principal planned land use is for residential purposes.<sup>12</sup> There are six residential land use categories. The rural residential category applies to most land within Rural Development Areas (RDA's). The two suburban residential land use categories (Suburban Residential and Suburban Estate) have higher densities, and will generally have higher service requirements than rural development. However, suburban residential development in UDA's may be required to provide urban levels of service. Three of the residential categories (Low Density Residential, Medium Density Residential & High Density Residential) reflect urban residential developments such as single-family residences, multi-family projects, and mixed use development. Urban residential development means that lots are smaller than one acre in size and that urban services (i.e., paved roads, centralized water and sewer, etc.) should be provided to serve the development. Urban residential uses are planned only within identified Urban Development Areas; a plan amendment will be required to establish urban development in rural or suburban development areas.

***Rural Residential (RR).*** All RDA's are designated Rural Residential, permitting single family development on lots of five (5) or more acres. Larger lot sizes may be appropriate to address environmental concerns (such as steep slopes, flood hazard zones, etc.) and infrastructure deficits (such as unimproved and un-maintained roads). The existing rural/agricultural character of these areas should be maintained. Residents in these areas are able to keep their own livestock. Land use may be served by septic systems, wells, and other services planned at rural levels. Non-residential land uses may be permitted in rural residential areas through the rezoning process. Outlying Communities, typically found within these rural parts of the county, will be permitted to continue growing at existing intensities, with uses which are consistent with, or will complement, the existing character of the community.

***Suburban Estates (SE).*** This suburban land use is characterized by single-family lots ranging from two (2) to five (5) acres. It is a category used in the Suburban Development Areas (SDA's). Non-residential land uses are not the primary uses in a Suburban Estate area. Septic systems will be the primary means of wastewater disposal. Many lots will use well water, but this will vary based on groundwater conditions and proximity to existing organized water systems.

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<sup>12</sup>Zoning district regulations determine what additional uses may be allowed within a primarily residential area. These land uses typically include public facilities, parks and supporting commercial.

***Suburban Residential (SR).*** This is the highest density non-urban land use category, with densities ranging from greater than one-half (0.5) dwelling unit per acre to a maximum density of one (1) dwelling unit per acre. These densities result in lot sizes of one to two acres. While Suburban Residential areas will be mostly single-family, some commercial development will be permitted as part of a planned development. Suburban service requirements generally will be lower than in urban areas, but will vary as dictated by site conditions. Septic tanks will generally be permitted, but soil conditions, groundwater quality concerns, proximity to existing utilities and other factors may create the need for urban sewer systems. Minimum road or water system improvement requirements may also vary from one site to the next.

***Low Density Residential (LR).*** This is the lowest density residential development planned within urban areas. It is designed to reflect development between one (1) and five (5) units per acre. This category is used only in Urban Development Areas (UDA's). Since the lot sizes are less than one acre, community sewer or ADEQ approved on-site sewage disposal and water systems are needed, as are other urban services.<sup>13</sup>

***Medium Density Residential (MR).*** This urban land use category is used to show areas with five (5) or more dwelling units per acre, but less than twelve (12) dwellings per acre. Typical residential uses in these areas are patio and zero lot line homes, mobile home parks, mobile home subdivisions, duplexes, some multi-family projects, and, where specifically approved as part of a planned development, neighborhood commercial development. Full urban services are required for medium density residential development.

***High Density Residential (HR).*** This urban residential category is used to show the highest density planned in Mohave County. Development could range from twelve (12) to a maximum of twenty-five (25) dwelling units per acre. Higher density areas provide opportunities to develop uses such as townhomes, apartments or condominiums. Mixed use developments incorporating office, retail, commercial, and residential space may be approved in HR areas through the planned development process. High Density Residential uses can serve as an effective buffer between non-residential development and lower density residential neighborhoods. Full urban services are required for HR development.

## **Non-Residential Land Uses**

Non-residential land use categories are used to identify places where the principal uses are for non-residential purposes, such as office, retail, resorts, manufacturing, alternative energy generation, and others. There are eight non-residential land use categories. All will be permitted within urban areas depending upon urban setting and availability of services. The categories are listed in Exhibits VI.13 and VI.14 and are described in more detail below. Exhibit VI.14 describes the typical uses expected in each of these categories. The uses shown here are intended to describe the general character of development. Zoning districts, consistent with these general categories, will establish the specific uses and development standards for a particular non-residential property.

***Neighborhood Commercial (NC).*** Neighborhood commercial uses are those that meet the needs of residents in the adjacent neighborhood. Small scale retail and service establishments, as well as small office buildings, will be permitted in this land use category.

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<sup>13</sup>New subdivisions approved by the County with lots less than in one-acre size should be connected to a community sewer system.

**General Commercial (GC).** This land use category is used to indicate locations for retail, service and office uses that serve an entire community or region. Major retail centers, fast food restaurants, service stations, multi-story office buildings and other intensive commercial uses should be located in areas designated for general commercial uses.

**Commercial Recreation (CR).** This land use category encompasses a broad range of privately-owned or leased facilities for active recreation, where the primary activity occurs outside of buildings. Uses include golf courses, equestrian centers, small and large scale amusement parks, as well as recreational vehicle parks and campgrounds providing sites for temporary habitation.

**Rural Industrial (RI).** This land use category provides for industrial activities in rural areas. Uses found in Sections 11 and 21 of the North American Industrial Classification System (NAICS), such as sand and gravel mining are considered rural industrial. Rural Industrial is also an appropriate land use for renewable power generation (NAICS Section 221119).

**Light Industrial (LI).** This land use category is intended for a variety of lighter industrial uses. These uses typically involve fewer impacts on the surrounding areas, in terms of noise, fumes, nuisances and hazards, than do the uses described under Heavy Industrial. This category includes such uses as warehousing, wholesale sales and distribution, and light manufacturing. Some related office uses also occur in this category. Most activities associated with uses in this category take place within buildings. Certain construction and manufacturing activities found in Sections 23, 31, 32 and 33 of the NAICS are allowed in this land use category.

**Heavy Industrial (HI).** This land use category allows for a relatively wide range of industrial uses, including heavy manufacturing, construction yards and support retail commercial. These uses may have safety, nuisance or environmental effects which make them undesirable neighbors to residential areas. They should be located near or adjacent to major transportation facilities (such as rail lines, airports or freeways). Design standards focus on minimizing the effects of these uses on surrounding development. Power generation, construction and manufacturing activities found in Sections 22, 23, 31, 32 and 33 of the NAICS are allowed in this land use category.

**Airport Industrial (AI).** This land use category is intended for industrial development that is compatible with adjacent airport use and development that benefits from proximity to airport facilities. Such uses include certain manufacturers, transport service providers, wholesalers and warehouse facilities.

**Alternative Energy (AE).** This land use category includes alternative energy production facilities, such as solar and wind, and other renewable sources other than fossil fuel and nuclear.

**Mixed Use (MU).** This land use category is intended to provide for mixed residential, commercial and industrial projects developed as Planned Area Development (PAD), Specific Zoning Plan (SZP) and mixed use zoning classifications. The layout and mixture of uses approved in a PAD or SZP will be mirrored in the General Plan. Changes made within a PAD or SZP that are deemed minor under the provisions of the PAD or SZP will also be automatically incorporated as a part of the General Plan upon approval and will not require a separate amendment to the General Plan. Changes made within a PAD or SZP that are not deemed minor may require an amendment to the General Plan if the changes substantially alter the effect on property outside the PAD or SZP.

## Public Land Uses

Public land use categories are used to identify land that is owned by the Federal, State or local government. Public land may be used for facilities ranging from libraries to wastewater treatment plants, for parks and open space, or for other public purposes. On occasion, public lands are sold or exchanged to consolidate blocks of developable land and preserve natural resource areas. All publicly owned lands fall into one of the three broad categories described below.

***Public Facilities (PF).*** This category includes such public and quasi-public institutional uses as schools, colleges, fire stations, libraries, government buildings and hospitals.

***Public Parks (PP).*** Local, State and National parks that are publicly owned and managed for the benefit of the general public are included in this category.

***Public Lands (PL).*** This category is used to indicate land in rural areas that is owned by a public agency, but is not primarily devoted to parks and recreational use. Lands owned and managed by the BLM, BoR and Arizona State Lands Department are included in this category. The Land Use Element contains special policies for the County's involvement in more intense development of these properties. Certain public lands under the administration of the BLM have also been designated for renewable energy production.

## Countywide Land Use Goals and Policies

### Community Balance

**Goal 10: To retain the beauty, the natural setting and resources, and the rural character of the County while providing opportunities for coordinated growth and development.**

- Policy 10.1 Mohave County shall establish and maintain its land use plans to provide areas for different types of future land uses and intensities, and should plan for public services and facilities appropriate to the planned land uses.
- Policy 10.2 Mohave County should plan for urban, suburban and rural development areas.
- Policy 10.3 Mohave County should identify sufficient locations for residential and non-residential development to accommodate growth anticipated through the year 2020, with provision of additional land use capacity for market choice and flexibility.
- Policy 10.4 Locations for commercial and industrial uses should be identified to support the County's economic development objectives, including diversification of the economic base.
- Policy 10.5 Mohave County should use its planning and development regulations to protect residential neighborhoods from encroachment of incompatible activities or land uses which may have a negative impact on the residential living environment.
- Policy 10.6 Proposed non-residential structures adjacent to residential neighborhoods should be designed and located to protect the privacy of residences.

## Mohave County General Plan

- Policy 10.7 Development adjacent to a park or public open space should be designed to facilitate public access to, and use of, the park while minimizing potential conflicts between park users and residents of the development.
- Policy 10.8 In reviewing development proposals, Mohave County should consider issues of community character, compatibility of use, environmental impact, resident security and safety, and efficient service provision.
- Policy 10.9 Mohave County should require phased commercial and industrial projects to be designed so a project is able to function effectively as each phase is completed.
- Policy 10.10 The County should encourage future patterns of development and land use that reduce infrastructure construction costs and make efficient use of existing and planned public facilities.
- Policy 10.11 Mohave County should give first priority to development of vacant or under-utilized land, and second priority to development that expands the community.

### **Designation of Planning and Land Use Areas**

#### **Goal 11: To use the General Plan Land Use Diagram to graphically depict the County's desired community form and character.**

- Policy 11.1 The Mohave County General Plan Land Use Diagrams depict planned land use in the unincorporated areas of Mohave County. These diagrams are Exhibits VI.4 through VI.12 and Exhibits VI.16 through VI.19. These diagrams should establish the general pattern of future land use appropriate to achieve the County's goals.
- Policy 11.2 The official copies of the Land Use Diagrams are on file at the Mohave County Development Services Department. The boundaries of land use categories, as depicted on these official diagrams, should be used to determine the appropriate land use category for areas that are not clearly delineated on the Land Use Diagrams contained in the General Plan document. Due to their size, the Land Use Diagrams reproduced in the General Plan document may not completely reflect the official copy.
- Policy 11.3 Exhibit VI.3 lists the general planning area types used in planning for future development in Mohave County. Mohave County should use these planning area types to describe the general policies appropriate to particular parts of the unincorporated County.
- Policy 11.4 Exhibit VI.4 is the Countywide Land Use Diagram. It shows the location of areas planned for urban, suburban or rural development; it also shows the outlying communities subject to special planning policies. Exhibits VI.5 through VI.12 show these planning areas for each part of Mohave County. Mohave County should use these exhibits and the policies in this Land Use Element to establish the general pattern of development in the County's unincorporated areas. Zoning of individual parcels may be more restrictive than the land use categories shown on the Land Use Diagram. Existing conditions, such as environmental or public facility constraints, may prevent the realization of the maximum development potential permitted in the designated land use category.



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- Policy 11.5 Exhibits VI.13 and VI.14 provide the general description of the land use categories used in the County's Detailed Land Use Diagrams. These exhibits, along with the descriptions of these categories found in the Land Use Element text, explain the purpose and intent of the land use categories shown on the Detailed Land Use Diagrams.
- Policy 11.6 Exhibits VI.16 through VI.19 are the Detailed Land Use Diagrams for areas of the unincorporated County with substantial amounts of planned urban or suburban development. Mohave County should use these exhibits and the policies in this Land Use Element to establish the pattern of land uses and residential densities in the County's unincorporated areas.
- Policy 11.7 Mohave County shall only approve requests for rezoning, special permits, the division of land, other new development proposals or public projects that are consistent with these Land Use Diagrams, the policies contained in this Land Use Element and the other Elements of this General Plan, as further set forth in the County's Development Regulations.
- Policy 11.8 A residential proposal's density should be considered consistent with the applicable Land Use Diagram if the average gross density of the entire project is within the range of the land use category for the property. Mohave County may approve projects at any density within this range, if consistent with zoning regulations; the category does not ensure approval at the maximum density. The actual density approved will take into consideration the policies found in the other elements of the General Plan. Appropriate infrastructure should either exist or be provided by the developer to fulfill the goals and policies within the Public Infrastructure Element. Land within a floodway should be excluded from density calculations. Floodway fringe lands may be included in the calculation if development can be appropriately engineered.

Exhibit VI.16: Detailed Land Use Diagram - Kingman Area

# Exhibit VI.16 Kingman Area Detailed Land Use Diagram

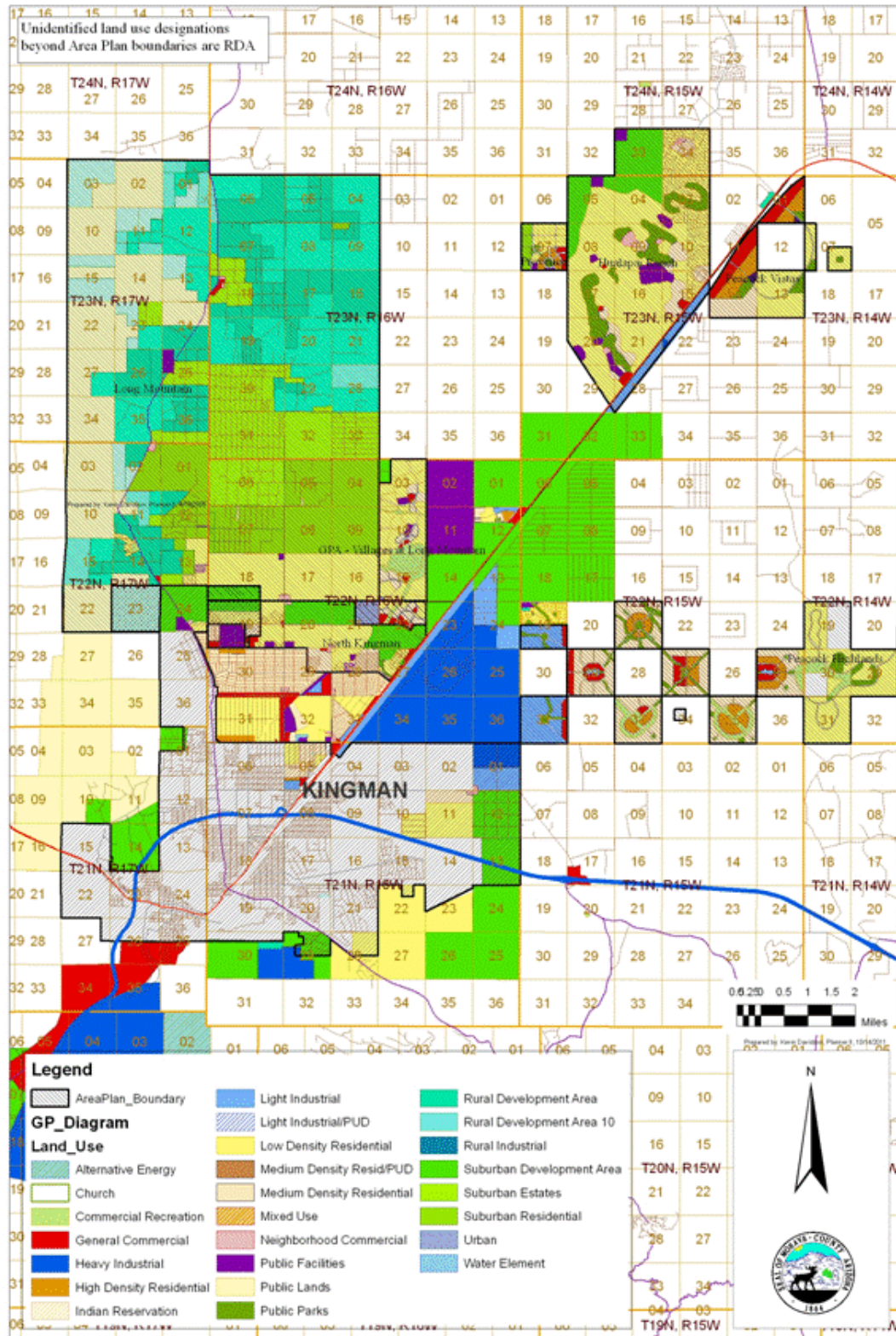
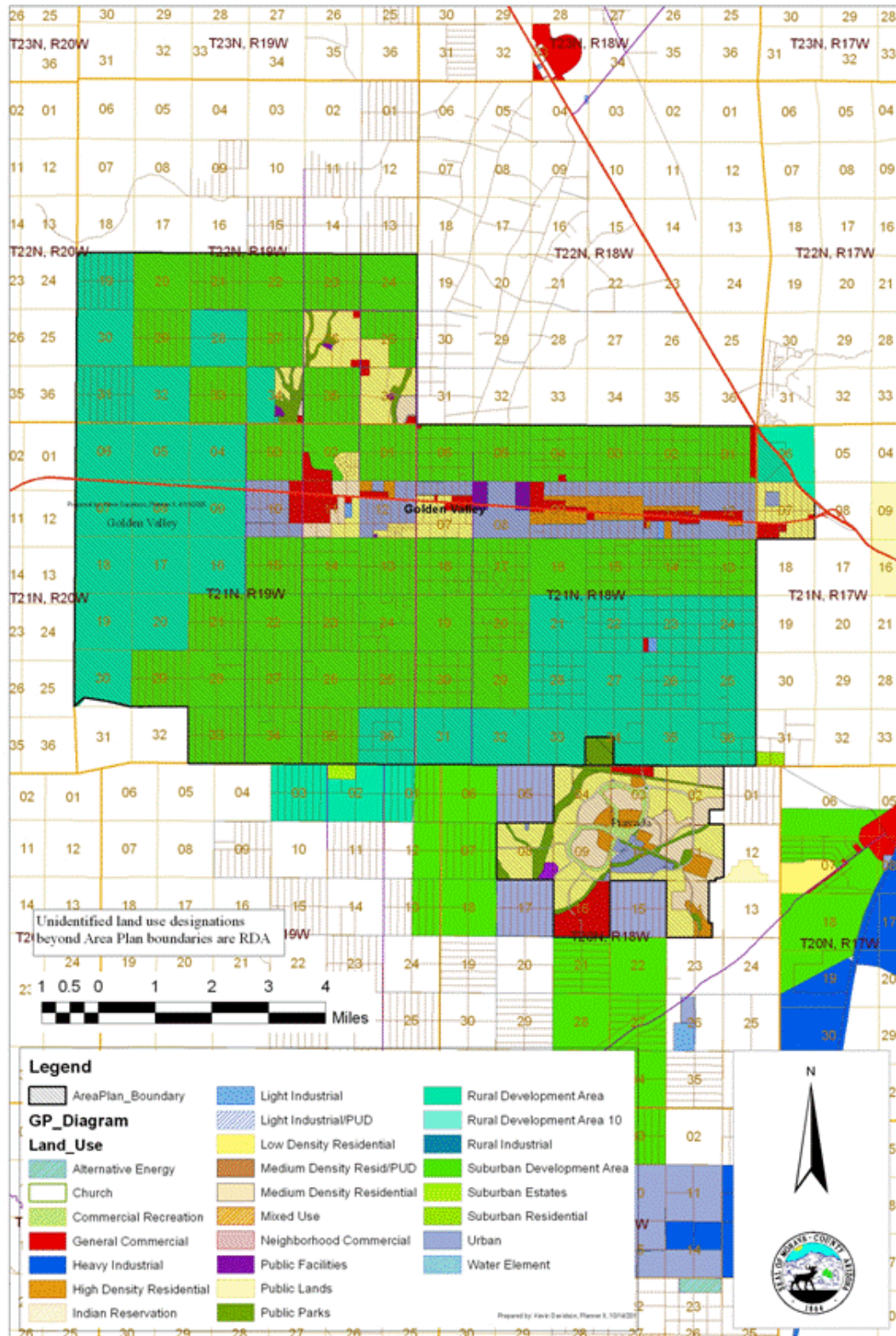




Exhibit VI.17: Detailed Land Use Diagram - Golden Valley

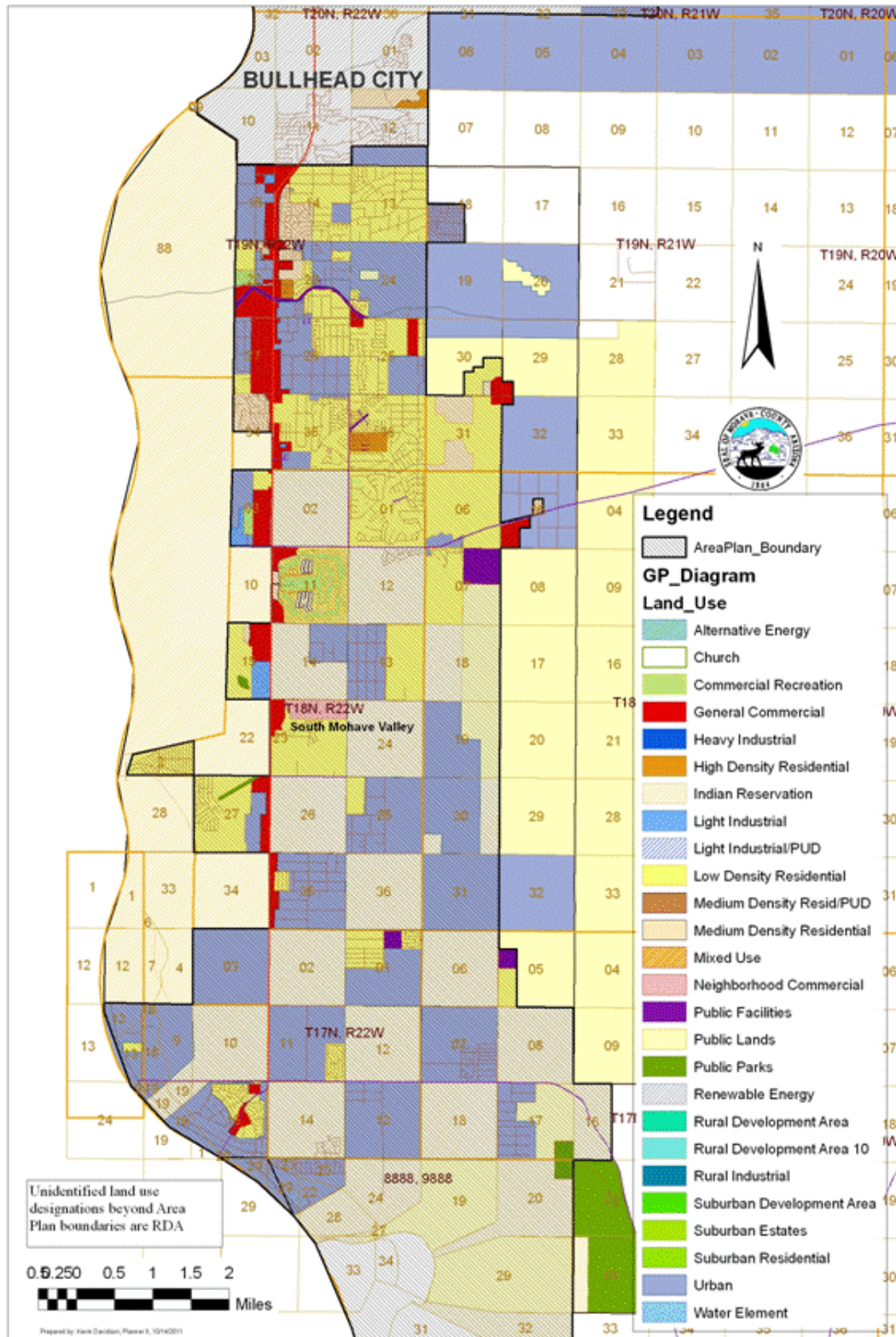
# Exhibit VI.17

## Golden Valley Detailed Land Use Diagram



**Exhibit VI.18: Detailed Land Use Diagram - Mohave Valley**

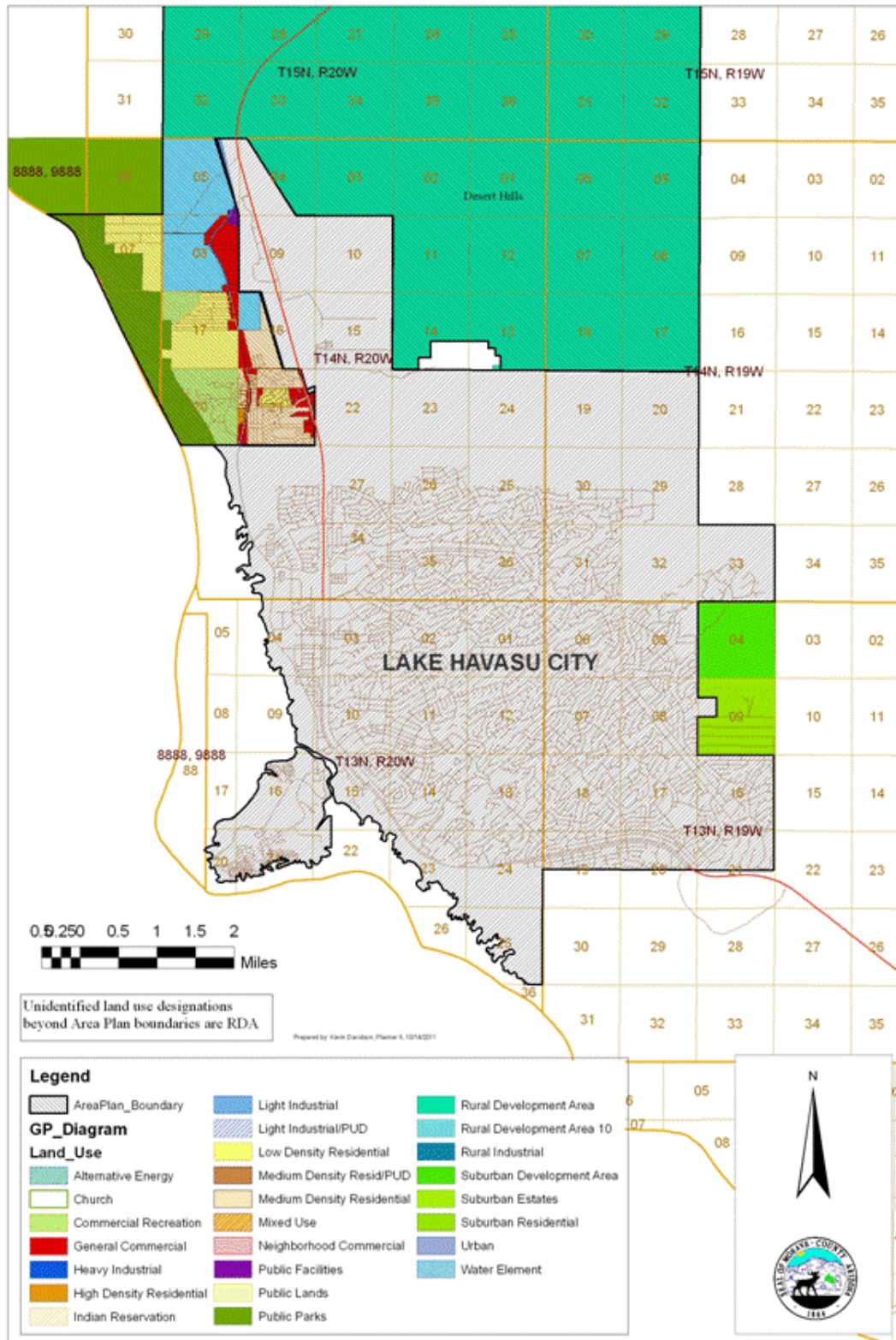
## Exhibit VI.18 Mohave Valley Detailed Land Use Diagram





**Exhibit VI.19: Detailed Land Use Diagram - Lake Havasu**

# Exhibit VI.19 Lake Havasu Detailed Land Use Diagram



- Policy 11.9 Within a residential land use category's density range, the following factors should be considered in reviewing and approving individual development proposals. These factors should be incorporated and applied through the County's Development Regulations:
- a.) presence of moderate slopes, steep slopes or floodplains;
  - b.) retention of the site's natural topography and vegetation;
  - c.) location in a high fire hazard area;
  - d.) the need to provide setbacks, access and traffic circulation according to established standards;
  - e.) outstanding project design;
  - f.) inclusion of amenities or designs that complement the community's desired character;
  - g.) design supportive of alternative energy use;
  - h.) effect on the County's ability to achieve other General Plan goals and policies, including the creation a safe and efficient roadway network;
  - i.) ability to meet established levels of service and follow facility design requirements, as further defined in the Development Code; and
  - j.) provisions for sufficient areas to place a home site, well head, and septic system outside of the FEMA 100- year flood hazard area.
- Policy 11.10 Non-residential development proposals should be evaluated according to the types of uses proposed, their compatibility with surrounding uses and the ability of existing or planned infrastructure to provide adequate service to the uses. These factors should be incorporated and applied through the County's Development Regulations. Non-residential development proposals should be considered consistent with the General Plan's land use categories if the uses are comparable to those described in this Land Use Element for such categories.
- Policy 11.11 Proposals to allow alternative uses should be considered by Mohave County through the General Plan amendment process defined under Goal 27.
- Policy 11.12 In instances where land uses or densities have been established or approved under prior development regulations, but which would not be consistent with the land use category shown on the Land Use Diagram for the site, the General Plan should not be interpreted to prevent development or continuation of such uses.

## **Development of Public Lands and State Trust Lands**

### **Goal 12: To provide procedures and policies for County consideration of changes in the use of land in public ownership.**

- Policy 12.1 Mohave County should work with those public agencies charged with managing properties in the public ownership, in order to achieve the goals of the County and these other agencies. These agencies include, but are not limited to, the Bureau of Land Management (BLM), the Bureau of Reclamation (BoR) and the Arizona State Land Department.
- Policy 12.2 Mohave County should utilize the land use category "Public Lands" to identify those publicly-owned properties which are not used in the provision of local services or intensive recreational activities and which are not presently anticipated to be considered for urban or suburban levels of development.

Policy 12.3 If publicly-owned properties are anticipated to be considered for urban or suburban levels of development, Mohave County should depict these areas on the General Land Use Diagrams according to the appropriate planning area type. The County should use the appropriate land use categories to depict appropriate future uses on Detailed Land Use Diagrams.

Policy 12.4 Mohave County should consider proposals for alternative use of public lands where appropriate. The County should consider the same factors in evaluating a public proposal for a change in land use as it would for comparable private proposals.

Policy 12.5 Mohave County will consider the highest and best use of Arizona State Trust Lands in accordance with the Arizona State Constitution.

## **Rural Development Goals and Policies**

### **Rural Development Areas**

**Goal 13: To establish Rural Development Areas (RDA's) in Mohave County to provide opportunities for rural development with appropriate land uses and services.**

Policy 13.1 Mohave County shall designate certain areas of the County as Rural Development Areas (RDA's). The policies listed here apply to all RDA's.

Policy 13.2 Rural Development Areas are those where development has not occurred, has occurred at rural intensities, or is planned at rural intensities. New development in these areas may be approved by Mohave County if it is consistent with the land uses shown on the Land Use Diagram, is expected given the existing pattern of development and if other policies of the General Plan have been met, as further defined in the Development Regulations.

Policy 13.3 Except as provided by State law, General Plan policies or development regulations, land use in RDA's shall be limited to rural residential development, highway commercial, and rural industrial projects that the Board of Supervisors finds to be of benefit to Mohave County. The County should encourage preparation of area plans for new areas that meet the criteria of the General Plan. These area plans may also be created under the auspices of Rural Planning Areas (See Goal 63).

Policy 13.4 When determining the maximum density of rural development, the County should consider the availability of services, access to the properties, natural resources and environmental constraints on the property, and the cumulative impacts of development within the RDA. Properties with few services, limited access, and with natural resource and environmental constraints may not achieve maximum density.

Policy 13.5 Appropriate service levels are defined in the Public Infrastructure and Facilities Elements of this General Plan, in adopted Area Plans for outlying communities and in the County's development regulations.

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- Policy 13.6 Mohave County should consider neighborhood commercial developments in RDA's through the rezoning and design review processes. Neighborhood commercial development may be appropriate in RDA's if:
- a.) the proposed uses are intended to serve local residents from the surrounding rural area;
  - b.) the site is located on a major arterial or collector street;
  - c.) adequate facilities and services are available or will be provided as part of the development; and
  - d.) the proposed development will be compatible with surrounding land uses.
- Policy 13.7 Mohave County may consider non-residential uses associated with agricultural production in RDA's.
- Policy 13.8 Mohave County should consider proposals for rural industrial uses, if such proposed uses provide employment opportunities for County residents, do not require the extension of public urban services, and do not require a "major source" pollution permit from ADEQ (A.A.C. Title 18, Chapter 2, Article 101(64)). The County should consider such proposals when appropriate.
- Policy 13.9 General Commercial development that is of benefit to remote areas, or serves highway needs may be considered.

## Outlying Communities

**Goal 14: To identify the unincorporated communities of Mohave County and plan for their continuing development as distinct communities, with appropriate land uses and services.**

- Policy 14.1 The Land Use Diagrams identify certain outlying communities in Mohave County's unincorporated areas. New development in these communities should be considered by Mohave County if it is consistent with the existing character of the community and if services are available or will be provided at the appropriate levels.
- Policy 14.2 Non-residential development within an outlying community may include neighborhood commercial, public, recreational or agricultural uses. The Board of Supervisors may consider approving General Commercial uses that benefit a community, and do not appear to adversely impact the community's characteristics.
- Policy 14.3 Mohave County should plan for services to outlying communities at applicable service levels. These service levels are defined in the Public Infrastructure and Facilities Elements of this General Plan, in the adopted Area Plan for a particular outlying community, if complete, and in the County's development regulations.



## **Transition to Suburban or Urban Development**

### **Goal 15: To provide a process to consider changes in the County's plans for Rural Development Areas.**

- Policy 15.1 In areas identified as RDA's, proposals for urban or suburban land uses shall be considered through the General Plan Review and Amendment processes. Mohave County should consider the following factors in evaluating these proposals for change to urban or suburban land uses:
- a.) effect on the character of the community or neighborhoods surrounding the proposal site;
  - b.) compatibility with adjacent land uses;
  - c.) capacity of planned services and facilities, including roadway improvements, to accommodate the proposed use in addition to previously-planned development; and
  - d.) consistency with other goals and policies of the General Plan.
- Policy 15.2 Rezoning or other development approvals for urban or suburban land uses, except prior established or approved uses, shall not be considered until the General Plan has been amended to provide for such land uses.

## **Suburban Development Goals and Policies**

### **Suburban Development Areas**

#### **Goal 16: To establish Suburban Development Areas (SDA's) in Mohave County for suburban development with appropriate land uses and services.**

- Policy 16.1 Mohave County shall designate certain areas of the County as Suburban Development Areas (SDA's) that are adjacent to urbanizing areas, in outlying communities and in other appropriate areas consistent with the General Plan policies.
- Policy 16.2 Suburban Development Areas are those where development of a suburban character exists or is developing. New development in these areas may be approved by Mohave County if it is consistent with the land uses shown on the Land Use Diagram, if services are available at the appropriate suburban levels and if other policies of the Area Plan and General Plan have been met, as further defined in the Development Regulations.
- Policy 16.3 Suburban development, for the purposes of this General Plan, should include the residential land use categories of "Suburban Estates" and "Suburban Residential." These are residential categories with lot sizes from one to five acres. Suburban development may also include commercial, light industrial, public and recreational uses, in accordance with the General Plan policies and development regulations. Exhibit VI.13 indicates the land use designations that may be considered in an SDA; Exhibit VI.14 describes the individual land use categories.
- Policy 16.4 Mohave County should consider proposals for rural residential development (for uses authorized under the Rural Residential land use category) in SDA's.

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- Policy 16.5 Mohave County should consider commercial developments in SDA's through the rezoning and design review processes. Commercial developments may be appropriate in SDA's if:
- a.) the proposed uses are intended to serve local residents from the surrounding rural area;
  - b.) adequate facilities and services are available or will be provided as part of the development; and
  - c.) the proposed development will be compatible with surrounding land uses.
- Policy 16.6 Mohave County should review the design of all non-residential projects to provide future residents of Suburban Development Areas with a safe and functional living environment, while maximizing project compatibility with surrounding uses, existing and planned. The design review process should address issues including, but not limited to, site design, circulation and access, landscaping, energy conservation, grading and lighting, as may be set forth in the Development Regulations.
- Policy 16.7 Mohave County should plan for services and facilities to SDA's at established adequate service levels. In some SDA's, urban service levels may be required because of site conditions or availability of centralized facilities. Appropriate service levels are defined in the Public Infrastructure and Facilities Elements of this General Plan, in adopted Area Plans for particular suburban areas, and in the County's development regulations.

### Suburban Area Plans

**Goal 17: To recognize the distinct character of individual suburban communities and encourage land uses consistent with the community's own objectives.**

- Policy 17.1 The policies in approved Area Plans shall apply in addition to the policies contained in other sections of the General Plan. The more specific policies should apply.
- Policy 17.2 The General Plan Land Use Diagram contained in the General Plan shall establish the range of land use categories appropriate within a suburban Area Plan. The Detailed Land Use Diagram contained in the Area Plan shall be consistent with this General Land Use Diagram, and should be interpreted according to the policies set forth in this Land Use Element.

### Suburban Facility Provision

**Goal 18: To provide for organized planning, funding, construction and maintenance of suburban infrastructure, at locations consistent with planned suburban land uses and with capacities that are adequate to meet the needs of these planned land uses.**

- Policy 18.1 Mohave County should require that adequate levels of service are provided to serve planned suburban development. These service levels are defined in the Public Infrastructure and Facilities Elements of this General Plan, in adopted Area Plans, and in the County's development regulations.
- Policy 18.2 Mohave County may consult with utility providers when reviewing development proposals.

## **Transition to Urban Development**

### **Goal 19: To provide a process to consider changes in the County's plans for Suburban Development Areas.**

- Policy 19.1 In areas identified as SDA's, proposals for urban land uses shall be considered through the General Plan Review and Amendment processes. Mohave County should consider the following factors in evaluating these proposals for change to urban land uses:
- a.) effect on the character of the community or neighborhoods surrounding the proposal site;
  - b.) compatibility with adjacent land uses, existing and planned;
  - c.) capacity of planned services and facilities to accommodate the proposed use in addition to previously-planned development;
  - d.) the ability of urban infrastructure to be extended to serve the area;
  - e.) the need for additional areas of urban development to meet the needs of anticipated Countywide growth; and
  - f.) consistency with other goals and policies of the General Plan
- Policy 19.2 Rezonings or other development approvals for urban land uses, except prior established or approved uses, shall not be considered until the General Plan has been amended to provide for such land uses.
- Policy 19.3 The General Plan Review process is described in Goal 27 of this Land Use Element. The procedures for this review are established in the county's zoning regulations.

## **Urban Development Goals and Policies**

### **Urban Development Areas**

#### **Goal 20: To establish particular locations in Mohave County for development as distinct urban areas, with appropriate land uses, public facilities and services.**

- Policy 20.1 Mohave County shall designate certain areas of the County as Urban Development Areas (UDA's). The policies listed here apply to all UDA's.
- Policy 20.2 Urban Development Areas are those where development of an urban character exists or is developing. New development in these areas may be approved by Mohave County if it is consistent with the land uses shown on the Land Use Diagram, if services are available at the appropriate urban levels and if other policies of the Area Plan and General Plan have been met, as further defined in the County's development regulations.
- Policy 20.3 Urban Development, for the purposes of this General Plan, should include the residential land use categories of "Low Density Residential", "Medium Density Residential" and "High Density Residential." These are residential categories with lot sizes less than one acre. Urban development also includes commercial, industrial, mixed use developments, and public and recreational uses, in accordance with the General Plan policies and development regulations. Exhibit VI.13 indicates the land use designations that may be considered in an UDA; Exhibit VI.14 describes the individual land use categories.

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- Policy 20.4 Mohave County may consider proposals for rural or suburban residential development (for uses authorized under the Rural Residential, Suburban Estates or Suburban Residential land use categories) in UDA's. Urban development facilities and services should be required as needed to avoid infrastructure gaps.
- Policy 20.5 Mohave County may evaluate development proposals on the basis of whether they provide a balance of land uses, including sufficient commercial area to meet the needs of community residents for neighborhood commercial uses.
- Policy 20.6 Within Urban Development Areas, Mohave County should plan locations for High Density Residential uses along major collector or arterial streets, adjacent to non-residential uses, and adjacent to other residential areas where site configuration and project design can provide compatibility between such uses.
- Policy 20.7 Mohave County should review the design of all multi-family residential projects to provide future residents with a safe and functional living environment, while maximizing project compatibility with surrounding uses, existing and planned. The design review process should address issues including, but not limited to, site design, circulation and access, landscaping, energy conservation, grading and lighting, as incorporated in the Development Regulations.
- Policy 20.8 Mohave County should provide for the use of flexible design techniques within Urban Development Areas. Techniques such as planned developments and clustering should be considered when site design or neighborhood compatibility concerns can best be addressed by a project with a mix of uses or densities.
- Policy 20.9 Mohave County should plan for services to UDA's at established urban service levels. These service levels are defined in the Public Infrastructure and Facilities Elements of this General Plan, in the adopted Area Plan for a particular urban community, and in the County's development regulations.

**Goal 21: To identify particular areas in Mohave County for commercial and industrial development, consistent with the County's economic development goals.**

- Policy 21.1 Mohave County should encourage the design of new commercial developments as integrated centers, or compatible infill.
- Policy 21.2 Mohave County may use design standards and guidelines to ensure that neighborhood commercial centers, which are located adjacent to residential land, include appropriate setbacks, parking and loading facilities, screening and landscaping to minimize impacts on the surrounding neighborhood, as set forth in the Development Regulations.
- Policy 21.3 Mohave County should use design standards and guidelines to ensure that commercial centers, located adjacent to residential land, take access from collectors, arterials or expressways, not local residential streets, as set forth in the Development Regulations. Development along expressways and limited access highways will be in accordance with the adopted access management plan, as occurs.

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- Policy 21.4 Mohave County may establish design standards and guidelines for development in areas planned for Neighborhood Commercial, General Commercial and Light Industrial uses, to ensure that these areas develop with high quality, compatible design. Standards and guidelines should address elements including, but not limited to, minimum lot sizes, building scale, setbacks, lighting, landscaping, screening and fencing, signage, internal circulation and building materials, as set forth in the Development Regulations.
- Policy 21.5 Mohave County should promote increased industrial development in the vicinity of the airports in Kingman, Lake Havasu City, Bullhead City and Colorado City, the Interstate 40 Industrial Corridor, and other appropriate areas that may be identified by the County Board of Supervisors.
- Policy 21.6 Mohave County should use design standards and guidelines for development in areas planned for Heavy Industrial use, to ensure compatibility with surrounding uses and to provide effective circulation and service provision within industrial areas, as set forth in the Development Regulations.
- Policy 21.7 Mohave County should protect industrially-designated areas from encroachment by incompatible uses and from the effects of incompatible uses in adjacent areas.

## Urban Area Plans

**Goal 22: To recognize the distinct character of individual communities and encourage land uses consistent with a community's own objectives.**

- Policy 22.1 Mohave County may use Area Plans to establish the special goals and policies necessary to reflect and complement the character of specific areas. Area Plans may be prepared for identified Urban Development Areas, or large, cohesively owned portions of identified UDA's. These Area Plans should be part of the Mohave County General Plan.
- Policy 22.2 The policies in approved Area Plans shall apply in addition to the policies contained in other sections of the General Plan. The more specific policies shall apply.
- Policy 22.3 The General Land Use Diagram contained in the General Plan establishes the range of land use categories appropriate within an urban Area Plan. The Detailed Land Use Diagram contained in any Area Plan shall be consistent with this General Land Use Diagram, and should be interpreted according to the policies set forth in this Land Use Element.

## Urban Facility Provision

**Goal 23: To provide for organized planning for coordinating funding, construction and maintenance of urban infrastructure, at locations consistent with planned land uses and with capacities that are adequate to meet the needs of these planned land uses.**

- Policy 23.1 Mohave County should require that adequate levels of service are provided to serve planned urban development. These service levels are defined in the Public Infrastructure and Facilities Elements of this General Plan, in adopted Area Plans, and in the County's Development Regulations.
- Policy 23.2 Mohave County may coordinate with utility providers when amending General Plan Land Use Diagrams, when updating its CIP, and when reviewing development proposals.

## **Growth Coordination Goals and Policies**

### **Development Review**

**Goal 24: To provide a development review process that is open to the public, consistent, and designed to achieve the goals of the General Plan.**

- Policy 24.1 Mohave County should periodically evaluate its development review and approvals processes and revise as needed to ensure:
- ◆ adequate opportunity for public input at appropriate development phases;
  - ◆ that consistency and predictability are maximized for all parties involved in the processes; and
  - ◆ that these processes help to achieve the goals and implement the policies of the General Plan.
- Policy 24.2 Adequate public notice should be provided at appropriate phases of the development process and that hearings provide the public with the opportunity for meaningful input on public decisions.
- Policy 24.3 Mohave County should endeavor to maintain policies and regulations that promote consistency and predictability in the development process. *[Note: this policy is not intended to diminish the County's ability to modify its policies or regulations to meet changing conditions.]*

### **Growth Monitoring**

**Goal 25: To regularly monitor the type and location of development occurring in Mohave County.**

- Policy 25.1 Mohave County should keep accurate records of the types and locations of development approvals that it grants.
- Policy 25.2 Mohave County should monitor all subdivision activity, and record the types and locations of lots approved by the County.
- Policy 25.3 Mohave County should monitor all building and development permits and record the types and locations of development projects.
- Policy 25.4 Mohave County should regularly review development activity and identify growth trends.

**Goal 26: To monitor and evaluate changes that may have an impact on Mohave County's public health and safety, natural resources, economy, public services, fiscal condition and community character.**

- Policy 26.1 Mohave County may monitor information regarding changes, trends and projections affecting public health and safety.
- Policy 26.2 Mohave County may monitor and evaluate trends in employment, labor force characteristics, property values, sales and other fiscal factors. This information may be evaluated to assess the need to modify projections, regulations, plans or policies.

## **Land Use Element Amendments**

**Goal 27: To use a defined public process to consider proposals to change the General Plan's land use and development area designations and defining major or minor amendment.**

- Policy 27.1 Mohave County should consider the following factors in acting on a proposal to change from one urban land use category to another within an identified Urban Development Area:
- a.) effect on the character and identity of adjacent neighborhoods;
  - b.) compatibility with surrounding land uses, existing and planned;
  - c.) capacity of planned urban services and facilities to accommodate the proposed use in addition to previously-planned development;
  - d.) effect on the overall character and balance of the urban community;
  - e.) consistency with other goals and policies of the Area Plan; and
  - f.) consistency with the goals and policies of the General Plan.
- Policy 27.2 Mohave County should consider the following factors in acting on a proposal to change from one suburban land use category to another within an identified Suburban Development Area:
- a.) effect on the character and identity of adjacent neighborhoods;
  - b.) compatibility with surrounding land uses, existing and planned;
  - c.) capacity of planned rural services and facilities to accommodate the proposed use in addition to previously-planned development;
  - d.) effect on the overall character of the outlying community;
  - e.) consistency with other goals and policies of any applicable Area Plans; and
  - f.) consistency with the goals and policies of the General Plan.
- Policy 27.3 Mohave County shall consider the policies established under Goals 15 and 19 of this Land Use Element in acting on a proposal to expand an identified Urban or Suburban Development Area.
- Policy 27.4 Mohave County should consider interpretations in the boundaries between land use categories as part of Planning Commission and Board actions on proposed rezonings and subdivisions. Such adjustments may be found consistent with the Plan if:
- a.) they affect no more than one acre of land;
  - b.) they involve change to the next higher or lower residential category or change between non-residential uses with comparable effects on the community;
  - c.) they do not, in the opinion of the Board of Supervisors, negatively affect the overall character of the community; and
  - d.) the adjustment does not change the plan designation or zoning of adjacent property.

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- Policy 27.5 Mohave County should only approve General Plan amendments that meet the established standards for services and facilities, as described in the Public Infrastructure and Facilities Elements of the General Plan, adopted Area Plans, and the County's development regulations.
- Policy 27.6 All major amendments proposed shall be presented to the Board of Supervisors at a single public hearing during the same calendar year the proposal is made.
- Policy 27.7 The following are considered major amendments to the General Plan or existing Area Plans, or the adoption of an Area Plan that contains goals, policies and land use designations that constitute a major amendment to the General Plan:
- a.) For development proposals other than alternative energy projects, which are covered by separate criteria, proposals less than 1,800 acres in size will be processed as minor amendments. Projects 1,800 acres and larger will typically require major amendments, however, the Board of Supervisors will consider each proposal and make that determination prior to processing the actual amendment item.
  - b.) Any proposed amendment in an Urban Development Area or a Suburban Development Area that will facilitate an alternative energy proposal consisting of 1,800 gross acres or more.
  - c.) Any proposed amendment in a Rural Development Area that will facilitate an alternative energy project consisting of 3,800 acres or more. For alternative energy proposals in RDAs involving both public and private lands, only the private lands will be counted toward the acreage in determining whether the proposal requires a major or minor amendment (if any) to the General Plan.
  - d.) The Board of Supervisors may determine that any proposal requiring an amendment to the General Plan constitutes a minor amendment if it finds, consistent with A.R.S. 11-805, that the proposal is beneficial to the county, and does not present a substantial alteration of the county's land use mixture or balance to the land use element for that area of the county as depicted in the General Plan.
- Policy 27.8 The creation of, or major amendment to, an Area Plan that involves one of the criteria of 27.7 above shall be subject to the major amendment process.
- Policy 27.9 Proposed major amendments will be analyzed for suitability and feasibility. The Board will consider the following in determining the suitability of an application as a major amendment:
- a.) The applicant's demonstration of perceived benefit to Mohave County, in addition to any benefit they themselves may gain from the proposal.
  - b.) The applicant's documentation indicating that, based on currently available information and/or studies, there is sufficient water in the aquifer to support the proposed development. This does not, however, obligate the applicant to prepare a hydrology or hydrogeology study, although they may include them with their proposal.
  - c.) The result of the proposed major amendment should provide reasonable continuous support, access, and service, to the location of the amendment so it can be accessed. The location of development as a result of the amendment should not be so remote that stated goals and policies within predicted time development increments cannot be attained.



- d.) Proposed future uses as the result of a major amendment should be environmentally compatible with their surroundings.
- e.) For proposed major amendments to all Development Areas, it will be necessary to demonstrate how future land uses and proposed development as a result of the amendment will provide a cohesive self-supporting community or function in addition to adjacent, existing development.
- f.) For amendments in or to Urban or Suburban Development Areas, the amendment will need to describe future land use development with full infrastructure in a logical development pattern with prescribed time frames for completion or the preliminary development steps to be taken leading toward incorporation.

### **Land Use Implementation Measures (LU)**

- LU1: Monitor population growth and urban and suburban boundaries as necessary to accommodate growth and provide additional capacity for market choice and flexibility.
- LU2: Maintain complete, up-to-date, reproducible copies of the Land Use Diagram in the Development Services Department to facilitate its use by the public.
- LU3: Assist outlying communities in developing rural planning areas that are consistent with this General Plan and the character of individual communities.
- LU4: Prepare a handout for the public describing major and minor amendments and the processes for each type.
- LU5: Incorporate compatibility standards within the County's Zoning Ordinance. These standards should address:
  - a.) the relationships between different zoning districts;
  - b.) the relationships between residential and non-residential land uses;
  - c.) standards for commercial and industrial uses in rural and suburban areas; and
  - d.) standards for access to arterial, collector and local streets, and
  - e.) standards for the creation of minimum lot sizes for rural and suburban areas.
- LU6: Include applicable utility providers in the development review process and forward their comments to developers.
- LU7: Periodically review the development review process and revise as needed to ensure that:
  - a.) notification requirements are appropriate, providing sufficient opportunity for public input at appropriate phases of the development process;
  - b.) the process is consistent and predictable, without any unnecessary delays; and
  - c.) the process furthers the goals and policies of this General Plan;
- LU8: Consider developing and maintaining a growth monitoring program to track the types, locations and timing of development approvals. This program to monitor subdivision activity, building permits and zoning requests may include the production of periodic growth trends reports.

## 2. Historic Preservation

Mohave County's cultural heritage includes both historical and archaeological resources. Historic sites, structures and natural features throughout the County can enhance its charm and character, and provide opportunities for tourism and business. Historic structures, such as the London Bridge, the Beale Hotel in Kingman's historic district, several of the buildings in Oatman and the Hoover Dam attract the people and businesses required for a vibrant economy. The numerous abandoned mine and mill sites, such as those at or near Oatman, White Hills, McCracken Mine, Goldroad and numerous other locations, and natural resources with historical significance, such as the Grand Canyon, Lake Mead, Beale's Spring, Union Pass, Sitgreaves Pass and Topock Marsh provide residents and tourists opportunities for recreation and enrichment.

### Key Historic Preservation Issues

***Preservation of Cultural Heritage.*** Historic and archaeologically significant buildings, sites and natural features should be recognized for their important contributions to the character of the County and the economic opportunities they create. Through appropriate preservation efforts, Mohave County has the opportunity to capitalize on its past.

***Protecting Natural Resources of Historic Value.*** Preserving natural historic resources will also help the County retain its character and expand its opportunities for tourism. Identification, protection and maintenance of these resources are necessary to ensure that they are not lost to neglect, oversight or abuse.

### Historic Preservation Goals and Policies

**Goal 28: To preserve Mohave County's historic resources as physical reminders of the County's past and as unique focal points to shape its identity, now and in the future, including providing opportunities for tourism.**

- Policy 28.1 The County may consider encouraging the preservation of sufficient historic resources, in number and type, to evoke the distinctive character of the County at significant stages in its history for the enjoyment of residents and visitors.
- Policy 28.2 The County may work with other public and private groups to identify and perpetuate buildings and sites of historical, cultural, archaeological and aesthetic value.
- Policy 28.3 Mohave County should recognize the value of historic sites for tourism and business.

### Historic Preservation Implementation Measures (HP)

HP 1: Meet with groups, such as the Route 66 Historic Association, interested in historic preservation to determine how the County can support the efforts of these groups to preserve and promote the County's historic resources.

## 3. Hazards Management

This section of the Land Use Element focuses on minimizing the risks from natural and man-made hazards to Mohave County's residents and their property. The County's primary natural hazards are from floods and wildfire. Hazardous wastes and materials pose an increasing threat to the country's population.

The arid climate of Mohave County masks the very real threat to life and property posed by floods. Periodic downpours in the County's mountains transform normally dry washes into raging rivers. Inappropriate development in or near the floodplains of these washes is at risk of being inundated by sediment-loaded floodwaters or undercut by the strong erosive forces of these streams on the County's predominantly alluvial soils. The Federal Emergency Management Agency (FEMA) has mapped floodplains throughout the County, but has designated only one floodway -- the Colorado River.<sup>14</sup> This places a responsibility on the County to carefully review all requests for floodplain development to ensure that it does not pose an inappropriate risk to life or property.

While much of the County is typified by sparse vegetation, there are areas subject to threats from wildfire. The heavily wooded Hualapai Mountains are of particular concern because of increased development in recent years. Development on wooded slopes is at high risk because wildfire can travel up slopes at great speeds. Wildfire risks extend outside of the heavily vegetated mountain areas to the arid basins of the County.

If allowed to accumulate close to a building, dry brush and tumbleweeds can pose a serious fire hazard. Drought conditions have exacerbated the wildfire threat. Structures in these environments should have a "defensible space" to mitigate against wild fires.

The Mohave County Community Wildfire Protection Plan (MCCWPP) has evaluated all areas in the county exclusive of tribal lands, mapped the Wildland Urban Interface boundaries, categorized specific areas by degree of wildfire risk, identified treatment management units and corresponding fuel management/defensible space requirements, and developed specific recommended mitigation measures for certain higher risk communities.

Hazardous materials, including wastes, are potential threats to human health by definition. These materials can affect the public health through direct contact with the source, or through indirect means, such as groundwater contamination. While EPA regulations govern many aspects of handling hazardous materials, the Agency is not as sensitive to locational issues as local governments can be. Often, local governments can better determine the most appropriate locations for transporting, storing and disposing of hazardous materials. By virtue of their involvement in the development process, local governments also can provide valuable assistance to State and Federal regulatory agencies.

With the advent of the 21st Century, cities and counties throughout the United States should also consider potential terrorists targets within their jurisdictions and how their personnel will respond to a terrorist attack. "Terrorism can include computer-based (cyber) attacks and the use of weapons of mass destruction (WMD) to include chemical, biological, radiological, nuclear or explosive (CBRNE) agents." Targets include public facilities and offices, transportation and communications systems, historical sites, and centers of commerce, to name several. Even though the probability of a terrorist attack in Mohave County is extremely low, such an attack on surrounding cities such as Las Vegas and Phoenix would greatly impact the County. There are numerous emergency planning and preparedness efforts underway by the County to reduce the potential threats.

## **Key Hazards Management Issues**

***Informing Residents About Natural Hazards.*** One cost-effective means of improving public safety is to keep the public informed of risks to their property and personal safety due to hazards, as well as means of reducing those risks. The County can disseminate information directly or work with other agencies such as school districts, utility companies or other governmental agencies to promote public awareness of risks and risk reduction techniques.

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<sup>14</sup>FEMA has designated 100-year floodplains, which are areas subject to inundation from a storm event that has a one percent chance of occurring in any given year. A floodway consists of the channel and other areas in the floodplain that should be reserved to discharge the 100-year flood without increasing the water surface elevation by more than one foot.

***Improving Available Information.*** The County needs good information to effectively identify high risk areas, high risk practices and appropriate abatement techniques. While FEMA has identified floodplains, their information should be refined for site specific analysis and should periodically be updated to reflect changes in stormwater characteristics resulting from development and natural forces.

The Mohave County Community Wildfire Protection Plan, which will be monitored and updated as needed by a multi-agency administration group, should be used to provide information to county planners and the public about the wildfire risk in existing and proposed developments and the corresponding fuel management, defensible space, and wildfire protection needs.

To effectively manage the transportation, storage and disposal of hazardous materials, the County should be aware of these activities. Improving the quality of information about these and other hazards will improve the quality of the County's decision-making.

## **Hazards Management Goals and Policies**

### **Goal 29: To reduce the effect on County residents of natural hazards due to flooding.**

- Policy 29.1 Mohave County should use the Federal Emergency Management Agency's (FEMA) FIRM maps to determine the locations of floodplains and floodways in Mohave County. The County should review and revise its land use plans and maps following receipt of FEMA updates of floodplain areas or other valid drainage studies to assure consistency.
- Policy 29.2 Mohave County should allow construction in identified floodways if it is properly engineered to prevent or substantially reduce flood hazards.
- Policy 29.3 Mohave County should not allow the storage or production of hazardous wastes in identified floodways of floodplains.
- Policy 29.4 Mohave County should not permit the division of land for any development purpose without an engineering study illustrating that:
  - a.) proposed structures would not be subject to damage from the 100-year storm event;
  - b.) proposed development will not increase the base flood elevation above that provided for in FEMA regulations. This policy should be implemented through the County's development regulations and other applicable regulations.
- Policy 29.5 Mohave County should use its planning and zoning authority and floodplain regulations to establish appropriate uses and intensity of development in floodplains.
- Policy 29.6 Mohave County should provide the opportunity to cluster development so the owner of property which includes floodplains may use its development potential while locating residential structures outside floodplain areas.
- Policy 29.7 Parcels created via the rezone process, that are between one and ten acres in size, shall have sufficient areas to place a home site, well head and septic system in a flood-free zone.

**Goal 30: To reduce the effect on County residents of wildland fire hazards.**

- Policy 30.1 Mohave County should support efforts to educate County residents about wildfire hazards, and to promote actions by residents to minimize such risks, including utilization of the information and recommendations in the Mohave County Community Wildfire Protection Plan.
- Policy 30.2 Land divisions should be limited in wooded areas that have a high fire hazard potential where fire districts are not established.

**Goal 31: To reduce the risks to County residents due to hazardous materials and hazardous wastes.**

- Policy 31.1 Mohave County may review the use, storage, transport and disposal of hazardous materials and hazardous wastes in reviewing development proposals which involve the use of hazardous materials.
- Policy 31.2 In reviewing hazardous material facilities, Mohave County should consider the site's natural features and environmental constraints, the project's compatibility with surrounding land uses, the availability of adequate emergency services and infrastructure and other impacts on area residents, businesses and the environment.
- Policy 31.3 The storage of radioactive waste within Mohave County should be discouraged.

**Hazards Management Implementation Measures (HM)**

- HM1: Monitor floodplain mapping throughout the unincorporated area of Mohave County based on FEMA reports and other reliable studies.
- HM2: Prepare aerial surveys and topographic maps of the most populated floodplain areas of the County for the purpose of aiding existing property owners when developing flood protection measures, aiding future land developers and laying the foundation for the development of area drainage plans.
- HM3: Implement a public outreach program to promote awareness of flood hazard and risk reduction methods.
- HM4: Regulate floodplain and floodway development in a manner consistent with FEMA guidelines and General Plan policies. Use General Plan land use designations and zoning to establish appropriate densities for floodplain development.
- HM5: Work with the MCCWPP administrative group, including but not limited to the Mohave County Fire Officers Association, the BLM, and County Emergency Management, and community groups to educate residents in the Wildland Urban Interface areas about the risks to life and property from wildfires, as well as risk management techniques.
- HM6: Develop hillside development guidelines to provide for “defensible space” around each structure and ensure that dwellings are not on unstable soils or on steep slopes in the path of wildfire.

HM7: Coordinate with the County's Emergency Management, Risk Management, and Environmental Health Divisions to inform residents about The Mohave County Multi-Jurisdictional Hazard Mitigation Plan.

## **B. HOUSING ELEMENT**

Housing is an essential part of any community; the availability of housing that is safe, decent and affordable is critical to each resident's quality of life. In Mohave County, planning for the future means planning additional housing for a growing population. In addition to planning enough housing for future residents, the County should also consider the need for a diverse housing mix with a variety of housing types and styles, as well as the creation of housing affordable to residents in all income groups.

Information and statistics provided within this element may be updated in the next General Plan review after the completion of the 2010 census, and upon availability of that updated data.

In 2000, Mohave County had 80,062 dwelling units.<sup>15</sup> As shown in Exhibit VI.20, 52 percent of these were detached single family homes, 33 percent were mobile or manufactured homes and 15 percent were attached single family, duplexes, multi-family units or other. Single family homes were the dominant housing type in Kingman (72 percent), Lake Havasu City (77 percent), and Colorado City (72 percent). Mobile and manufactured homes and trailers were the dominant housing type in most of the remainder of the County, comprising over 44 percent of the housing units in Bullhead City. A plurality of the County's multi-family dwellings are in Bullhead City, with most of the remaining units located in Lake Havasu City and Kingman.

The supply of housing available today in Mohave County is significantly larger than in 1990. There were 50,822 dwelling units in the County in 1990, according to the U.S. Census Bureau. The 1990's saw a 58 percent increase in the County's housing supply, a reflection of the dramatic growth experienced during this decade. As shown in Exhibit VI.21, detached single-family units increased at the fastest rate, followed by duplexes and multi-family housing units (apartments).

As a result of this recent growth, much of the housing stock is relatively new, reducing the percentage of housing units in substandard condition. Monitoring of housing conditions will be important to ensure that residents continue to have quality housing available over time. This is particularly true given the large and increasing number of mobile and manufactured homes. To limit the spread of older pre-HUD label mobile homes, many of which are reaching the end of their economic life, the County has amended the Zoning Ordinance to prevent their further placement.

Are there enough residential units to meet the County's demands? A 5 percent vacancy rate in rental units and a 2 percent vacancy rate in units for sale are considered<sup>16</sup> to be the minimum vacancy rates needed to ensure that an adequate supply of housing is available. Census estimates of these vacancy rates for Mohave County were 9.2 and 3.7 percent respectively in April, 2000. Therefore, in 2000, the County had nearly twice the minimum vacancy rates needed to ensure the availability of an adequate number of housing units for rent or sale.

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<sup>15</sup>U.S. Bureau of the Census; 2000 Decennial Census

<sup>16</sup>Arizona Department of Commerce, Community Planning Program. A Community's Guide to Preparing a Housing Plan. June 1990.

**Exhibit VI.20: Types of Housing Units**

Housing Types	1980		1990		2000	
	Total Units	% of Total	Total Units	% of Total	Total Units	% of Total
SF-detached	14,378	50.71%	22,460	44.19%	41,548	51.89%
SF-attached	263	0.93%	1,091	2.15%	1,582	1.98%
Duplex	608	2.14%	631	1.24%	1,151	1.44%
MF	2,118	7.47%	4,633	9.12%	7,544	9.42%
Mobile home	10,989	38.75%	21,653	42.61%	26,622	33.25%
Other <sup>17</sup>			354	0.69%	1,615	2.02%
Total	28,356		50,822		80,062	

**Exhibit VI.21: Change in Housing Types (1980-2000)**

Housing Types	1980	1990	% Change	1990	2000	% Change
SF-detached	14,378	22,460	56.21%	22,460	41,548	84.99%
SF-attached	263	1,091	314.83%	1,091	1,582	45.0%
Duplex	608	631	3.78%	631	1,151	82.41%
MF	2,118	4,633	118.74%	4,633	7,544	62.83%
Mobile home	10,989	21,653	97.04%	21,653	26,622	22.95%
Total	28,356	50,822	79.23%	50,822	80,062	57.53%

Not all housing units in Mohave County are occupied by year-round residents. In 2000, an estimated nine percent of the County's housing units were vacant. Another 12.5 percent of the housing units were considered "seasonal" -- intended for use only in a certain season or for weekend or other occasional use throughout the year. While the County attracts tourists throughout the year, most of the seasonal units house people in the mild winter months. According to 2000 Census data, most of the County's seasonal units are along the Colorado River, with 64 percent of the County's seasonal units in Bullhead City and Lake Havasu City.

The County's popularity among "snowbirds" is likely to remain high. Bullhead City's General Plan projects a 56 percent increase in its seasonal population from the year 1990 to 2010 (from 5,000 to 7,800). The 2000 Census reported a median home value in Mohave County of, \$95,300 and a median rent for available rental units of \$559. Median values for owner occupied homes and median monthly rents vary significantly from one Mohave County community to another, as Exhibit VI.22 illustrates. The highest costs for housing are in Desert Hills, Bullhead City, Lake Havasu City, Colorado City and the Mohave Valley.

<sup>17</sup>Includes travel trailers, RVs, boats and vans.

**Exhibit VI.22: 1990 and 2000 Housing Values and Rents by Census Designated Place<sup>18</sup>**

Place	1990 Median Home Value	2000 Median Home Value	% Chng	1990 Median Monthly Rent	2000 Median Monthly Rent	% Chng
Bullhead City	\$97,400	\$102,500	5%	\$423	\$591	40%
Willow Valley	\$90,600	\$88,700	-2%	\$559	\$525	-6%
Lake Havasu City	\$83,500	\$99,200	19%	\$403	\$609	51%
Mohave Valley	\$79,772	\$117,300	47%	\$375	\$608	62%
Kingman	\$63,200	\$87,500	39%	\$311	\$510	64%
Golden Valley	\$56,784	\$77,900	37%	\$316	\$513	62%
Desert Hills	\$55,000	\$157,300	186%	\$399	\$517	30%
Colorado City	\$52,100	\$99,200	90%	\$175	\$345	97%
New Kingman/Butler	\$40,975	\$71,800	75%	\$263	\$493	88%
Dolan Springs	\$36,182	\$59,100	63%	\$177	\$352	99%
Peach Springs	\$35,400	\$43,800	24%	\$99	\$218	120%
Mohave County	\$75,600	\$95,300	26%	\$375	\$559	49%

Since income determines the location, size and quality of the housing unit a resident can consider affordability should be measured in terms of one's income. A typical mortgage lender's "rule of thumb" indicates that one can afford a home that costs 2.8 times the annual income. An annual household income of \$34,000 would be required to afford the median-priced home in Mohave County. Housing costs for renters should not exceed 30% of gross income. An annual household income of \$22,360 is needed to afford the median rent in Mohave County.

Can Mohave County residents afford housing? The U.S. Census Bureau reports that the median household income for Mohave County in 1999 was \$31,521. Thus, most households can afford rental property, but less than half the County's households can afford the median priced home. Low income households (those earning less than \$40,700 per year) can afford rental property, and are just able to afford to purchase the median priced home. Very low income households (those earning less than \$25,450 per year) can not afford to purchase median priced housing. This marks an improvement in housing affordability in the last ten years since very low-income households could neither afford to rent or purchase median priced housing in 1990.

To promote an adequate supply of affordable housing, the County may monitor changes in the supply and cost of housing, as well as the resources that its residents can devote to housing. During the 1990s, Mohave County experienced a growing need for housing to accommodate the elderly and lower-paid service sector workers. These groups contributed to the surge in demand for mobile homes and manufactured housing, a trend that is likely to continue.

<sup>18</sup>U.S. Census Bureau, 1990 and 2000 data for Census Designated Places.



## Key Housing Issues

***Housing Types and Densities.*** A mix of residential densities and housing types is important to give residents choice in their selection of housing types. The General Plan provides locations for various types and densities of residential development in order to create opportunities for varied housing types while retaining the desired character of each community. Higher densities are planned in urban communities where public facilities and services will be able to meet the needs of a larger population. Rural communities are planned for housing which retains the rural character of these areas. For the most part, the General Plan maintains or increases the residential densities that exist today.

The General Plan provides flexibility in the type of housing built, particularly in the urban residential areas (those with more than one unit per acre). Within a planned residential density range, several types of housing can be developed. For example, an area planned for residential uses between 5 and 12 units per acre might be developed with single family detached homes, attached units, zero lot line homes, apartments or condominiums. In this way, a property owner can choose to develop a particular housing type and different housing types may be made available to County residents.

***Affordable Housing.*** Affordability is a key housing issue in Mohave County and nationwide. As noted above, most County households can afford to pay the median rent and just be able to afford the median priced home.

While the median household may be able to rent the median-priced rental unit, there are still other households in the County for whom affordability is a significant concern. Households with very low incomes are extremely limited in housing choices within this County. Based on the 2002 HUD standards, a low income family in Mohave County could afford to pay \$636 to \$1,018 per month rent and a very low income family could afford a maximum of \$636 per month.<sup>19</sup>

Housing for single working parents and lower income workers is a concern for businesses that rely on this segment of the labor force. In addition, seniors and others on fixed incomes are affected by increasing housing costs.

***Housing for Persons with Special Needs.*** For many residents, the choice of a particular housing type or location is based on personal preference. Residents with special needs, however, may be limited to units with particular design features or locations. Seniors and retirees, people with limited mobility, the physically disabled and others with special needs may require housing units designed for easy access and safety, such as assisted-living facilities. On the other hand, persons with special needs may place fewer demands on some public facilities. Senior households, for example, typically generate fewer automobile trips than other households of a similar size. The General Plan addresses these special housing needs through policies which provide appropriate housing densities in locations with necessary services; incentives can also be used to support private development of housing for these special residents.

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<sup>19</sup>These estimates are based on HUD's 2002 income limits for assisted housing in Mohave County for a family of three. Low income families are those earning no more than \$40,700 per year and very low income families are those earning below \$25,450 per year. Maximum rents are based on 30% of monthly income.

## **Housing Goals and Policies**

### **Goal 32: To meet the housing needs of Mohave County's projected 2020 population through retention of existing dwellings and construction of new housing units.**

- Policy 32.1 The General Plan's Land Use Element and Area Plans should designate sufficient land for residential uses to meet the needs of approximately 150,000 residents living in the unincorporated area by the year 2020, including provision for vacant and seasonal units. Enough additional land should be designated for residential development to ensure sufficient market flexibility.
- Policy 32.2 The General Plan should designate sufficient land for residential use, in areas where adequate services are available, to meet the needs of population growth projected for at least the next five (5) years. The availability of sufficient serviced land should be reviewed as part of the General Plan Review and service areas should be re-evaluated as necessary to provide opportunities for short-term residential development needs.
- Policy 32.3 Mohave County should identify substandard housing and promote the revitalization and rehabilitation of these structures.

### **Goal 33: To provide locations for a wide variety of housing types.**

- Policy 33.1 Through the application and distribution of land use densities and use categories established in the General Plan, Mohave County encourages a diversified mix of housing types, including conventional single family homes, townhomes, manufactured housing, mobile homes and apartments, to provide a range of housing alternatives.
- Policy 33.2 Mohave County should provide for factory-built homes in identified areas as an affordable form of housing, and should encourage site designs that help maintain the value of these homes and nearby properties. Factory-built homes include panel homes, modular housing, and HUD approved manufactured homes.
- Policy 33.3 Mohave County should provide for manufactured homes in identified areas as an affordable form of housing.
- Policy 33.4 Mohave County's development regulations should provide mechanisms to permit flexibility and innovation in residential project design, to promote land use efficiency and environmental protection.
- Policy 33.5 Mohave County should recognize the unique characteristics of senior households and should allow unique housing designs to meet their special needs.
- Policy 33.6 If determined appropriate Mohave County should allow the creation of second units on a single lot, when the purpose is to accommodate persons with special medical needs, where such units can be developed within the planned residential densities and where these units are compatible with the existing neighborhood's character.
- Policy 33.7 Mohave County should promote compatibility between adjacent residential areas developed at different residential densities or with different unit types, and should encourage the use of design techniques to minimize the impacts between these areas.

**Goal 34: To provide for higher density housing to meet the needs of Mohave County residents, in locations where it is compatible with surrounding uses and where adequate services are available.**

- Policy 34.1 Mohave County should support development of higher density housing (more than 5 dwelling units per acre) in urban areas where adequate infrastructure and facilities are available and surrounding land uses are compatible.
- Policy 34.2 Mohave County should promote compatibility between higher density residential areas and neighboring lower density areas through the use of techniques to minimize impacts on surrounding lower density residential areas. Techniques may include locating intermediate density areas between lower and higher density areas, prohibiting access from higher density areas to local residential streets, or developing buffers between uses.

**Goal 35: To provide for housing affordable to persons of all income levels.**

- Policy 35.1 Mohave County should assist in the development and implementation of State and local Comprehensive Housing Affordability Strategies (CHAS) as approved by the U.S. Department of Housing and Urban Development (HUD).
- Policy 35.2 Mohave County should consider developments of low and moderate income housing to meet the needs of current and future residents in proportion to employment growth in the local economy.
- Policy 35.3 Mohave County should consider methods to encourage very low, low and moderate income households with housing in a variety of locations, housing types and price ranges.
- Policy 35.4 Mohave County should support the use of manufactured housing, consistent with applicable, adopted codes, as a means to encourage affordable housing to very low, low and moderate income households.
- Policy 35.5 Mohave County should consider mixed use developments as a means of reducing housing costs. Mixed use developments should provide retail and employment opportunities, thereby reducing transportation costs for residents. The inclusion of higher density residential units in mixed use developments will enable developers to pass through savings on land and infrastructure, thus reducing housing costs.

**Implementation Measures - Housing (H)**

- H1: As part of the Major General Plan Review, evaluate the amount of "available residential land" -- undeveloped land that is planned for residential development and is currently provided with adequate public services and facilities.
- H2: When U.S. Census data on age and condition of housing become available, review the information and identify any additional actions the County might take to support revitalization or rehabilitation of these structures. Include monitoring of the number of substandard housing units as part of the Major General Plan Review.

- H3: Periodically review and revise County codes to ensure that they continue to provide for reasonable design flexibility through planned developments. Guidelines and performance criteria should be adjusted periodically to accommodate design innovations that will further the goals and policies of the General Plan.
- H4: Periodically review and revise County codes to ensure that project design guidelines and site plan standards promote design compatibility between higher density residential projects and neighboring lower density areas in a cost effective manner.
- H5: Periodically review and revise County code provisions addressing manufactured housing on individual lots and in mobile home parks and subdivisions to minimize impacts on surrounding uses.
- H6: Provide for development of second units on residential lots for persons with special medical needs. Establish appropriate provisions for such housing to be built in urban communities, in areas where such units are consistent with the planned residential densities. Establish performance criteria for the design of these units to meet the needs of this group and to be compatible with surrounding units.
- H7: Draft and adopt a Housing Affordability Study under the auspices of the Community Development Department.
- H8: Periodically review current and reputable housing studies such as the Fair Market Rent Documentation System.
- H9: Periodically review current housing studies and trends to better strategize the encouragement of affordable housing developments.

## **C. ECONOMIC DEVELOPMENT ELEMENT**

This element describes priorities for economic development in Mohave County. This plan identifies specific issues that Mohave County and its economic development partners may focus on to achieve short and long term economic development successes. Economic growth and diversification should meet residents' needs for employment opportunities that provide adequate income and security.

### **Background**

Economic development strategic planning has never been more important to the future success of communities and regions than it is today. The speed of socioeconomic change and technological advances are increasing, and therefore having a plan in place that provides a solid footing to address these changes is important. The challenge that economic development faces today is providing value and remaining relevant, and to foster a quality of life that will attract and retain skilled workers and corporate decision makers. Economic development should focus not just on cost competitive locations, but on offering value. Therefore, factors such as productivity, profitability, quality of life, and many others are evaluated by companies in determining where to startup or expand an operation.

Communities need a workforce that is motivated and trainable to fit into higher productivity jobs. They need the ability to quickly and efficiently bring in materials and ship out goods. A smooth and simple development process is needed that will allow a company to startup or expand in a timely fashion. Mohave County communities should offer a quality of life that will attract and retain skilled workers that choose to locate there.

Economic development is not just the field of business recruitment, retention, and expansion; it involves integrating the workforce development and education systems into the economic development process and channeling public investment in infrastructure. To be successful, economic development agencies will need to work as a team on areas of mutual interest, each contributing time and financial resources to a broader, coordinated, economic development effort. Collaboration with key stakeholders will be the catalyst for community action, which will help build economic sustainability and vitality for the county.

### **Statistical Information**

Mohave County is a net exporter of labor. In 1991, there were 35,275 employed persons in Mohave County's labor force and only 27,525 jobs in the County. Nearly 94 percent of the County's labor force is employed, but only 73 percent of the labor force is employed in Mohave County. By 2000, Mohave County had 60,517 employed persons, 41,225 of which were earning wages in the employ of the private or public sector. In 2000, an Arizona Department of Economic Security survey of employers reported 35,310 jobs were in Mohave County, indicating that the area is still a net exporter of labor.

Mohave County's work force enjoyed strong growth in employment opportunities between 1986 and 1991, but most of this growth occurred outside the County. The number of employed persons in Mohave County's work force increased at an average annual rate of 7.2 percent, from 25,675 to 36,400 during this period. This rate declined somewhat to 5.8% per year by 2000. Unemployment declined from 9.6 percent in 1986 to 6.25 percent in 1991 but increased to 7.5 percent by 2000. The most significant factor in the rapid growth of employment opportunities was the hotel/casino industry in Laughlin, Nevada. Laughlin, which surged from a population of less than 100 in 1980 to nearly 5,000 people in 1990 and 7,076 by 2000, provides 11,000 primarily low paying service sector jobs. Most of these jobs are held by Mohave County residents. By 2000, over 15,000 Mohave County residents were employed in the Arts, Entertainment, Recreation, Accommodation and Food Service industry. The rapid growth in the 1980's, and significant growth in the 1990's, also spawned increases in the number of retail trade and construction jobs in Mohave County. When information from the 2010 Census becomes available it may be included in this document.

As shown in Exhibit VI.23, the Service (19.3 percent) and Retail/Wholesale Trade (23 percent) sectors provide more of the jobs within Mohave County than any of the other sectors in 2000. The Construction (9.88 percent) and Manufacturing (7.70 percent) sectors each constitute nearly 10 percent of the County's job opportunities.

While Laughlin will continue to provide employment for Mohave County residents and service and retail jobs will continue to dominate the job market, increasing the number and diversity of job opportunities in the County will improve the stability and health of the County's economy. Economic growth and diversification in this County will require increasing competition with other areas as communities seek to attract or retain businesses. Public and private sector efforts will be important in attracting new jobs to Mohave County in the future. To draw strength from a regional approach, Mohave County, south of the Colorado River, and the Parker area of La Paz County have been aggregated together by the Department of Commerce to create the North River Economic Development Region. With the creation of an Enterprise Zone, covering much of rural Mohave County, south of the Colorado River, these two efforts will attract additional business and industry to the area.

County involvement in economic development activities can have a significant impact. By actively working with the business community, the County can build confidence among local and visiting business leaders. This confidence often translates into business investments and growth in the number of jobs to meet the needs of local residents. In addition, improved communication between the County and other participants in economic development will help ensure that the County experiences the most appropriate type of economic growth in the most appropriate locations.

## Key Economic Development Issues

***Progressive Economic Growth.*** The County supports efforts to attract new jobs and expand local employment opportunities. This General Plan supports strong economic growth that is compatible with Mohave County's goals for environmental protection and planned, timed urban development where appropriate services are available. It establishes a general goal of enough jobs, located in Mohave County by the year 2020, to meet the needs of the County's anticipated population. It also recognizes the County's role in supporting and assisting the economic development efforts underway in the private sector. The Land Use Element reflects these goals in its planned land uses.

***Alternative Energy.*** Advancements and capital cost reductions in the field of renewable energy technology along with recent Federal and State incentives have increased the popularity and development of alternative energy projects for both residential and utility-scale applications. Arizona has some 101 million annual megawatt hours of solar energy potential and some 5 million annual megawatt hours of wind energy potential.<sup>20</sup> Tapping these innate resources could make Arizona and Mohave County a leader in the field of renewable energy production and stimulate rural economic development. Today, a number of new, large scale solar projects are contemplated on private or public lands.

***Role of Non-Wage Earning Income Households.*** Statistics indicate that a larger percentage of Mohave County residents are of retirement age and on fixed incomes when compared to their Las Vegas and Phoenix counterparts. National demographic trends will continue to bring retirees to Arizona and Mohave County. To help maintain the quality of life for this segment of the population, expansion of existing and new services, notably health care, hospitality management, finance, investment management and legal services is necessary and may be encouraged by the County.

***Economic Diversification.*** Along with economic growth, economic diversification is a key concern for Mohave County. A diverse economy is generally more stable and better able to weather recessions or economic down-turns that affect a single industry. Diversification means that some segments of the community's economic base would be stable or growing even though others may be declining.

To diversify the economy is to decrease local reliance on the hotel/casino industry. While gaming in Nevada has promoted growth in Mohave County, reliance on these out-of-state jobs is not a formula for long-term economic stability. The General Plan proposes actions to increase employment in other industries within Mohave County, reducing the importance of Laughlin in the local economy. Expanding the number of production and distribution center jobs will increase the diversity of employment opportunities for County residents. By diversifying the economy, the County can enjoy a more stable economic base. Secondary firms (those providing goods or services to larger firms) can provide goods and services that benefit residents as well as businesses. New businesses and their customers will increase the cash flow in the County's economy and enhance the health of businesses and residents.

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<sup>20</sup>“Arizona is often called the ‘solar capital’ of the US. Thanks to the passage of a renewable portfolio standard designed to boost the development of renewables, especially solar, across the state, a number of new large-scale solar projects are now under construction.” Renewable Energy Atlas of the Southwest, 2003. Arizona also has potential energy production from geothermal and biomass, but little exists in Mohave County

**Exhibit VI.23: Mohave County 1990 – 2000 Employment, by Sector**

	1991		2000			
	Employees	% of Employed Residents	Employees	% of Employed Residents	Change	Percent Change
Total Wage and Salary	28,025	76.99%	41,225	79.20%	13,200	47.10%
Manufacturing	2,525	6.94%	3,175	7.70%	650	25.74%
Mining and Quarrying	50	0.14%	100	0.24%	50	100.00%
Construction	2,750	7.55%	4,075	9.88%	1,325	48.18%
Transportation and Utilities	1,350	3.71%	2,075	5.03%	725	53.70%
Trade	8,375	23.01%	12,200	29.59%	3,825	45.67%
Finance, Ins. & Real Est.	1,425	3.91%	1,375	3.34%	-50	-3.51%
Services and Miscellaneous	7,000	19.23%	11,025	26.74%	4,025	57.50%
Government	4,550	12.50%	7,200	17.47%	2,650	58.24%

***Tourism.*** In Arizona, tourism accounts for \$16 billion in direct spending, with the majority of this coming from out of state visitors.<sup>21</sup> Mohave County is well positioned geographically to attract tourist activity. Mohave County has several top tourist attractions including Lake Havasu State Park, Lake Mead, Historic Route 66, Grand Canyon and the London Bridge. In addition the region is rich with Native American and other culture and includes the scenic attractions of the Colorado River and Hualapai Mountains.

Mohave County can build on its current strengths in tourism by adding new types of attractions or marketing new packages of activities. The natural resources of the area and its rural character support other types of non-gaming tourism. Active recreational pursuits, such as hiking and water sports, could be expanded. Tourism, emphasizing the historic qualities of the towns, the experience of visiting an abandoned mine, or simply "getting away from it all" can build on traditional strengths of the County while broadening the potential customer base.

The annual impact of 4.8 million visitor days provides an approximately \$442,000,000 stimulus to the Laughlin/Bullhead economy.

***Provision of Jobs for the Resident Labor Force.*** Economic development efforts benefit companies seeking locations in Mohave County and provides revenues to the public sector. They also directly benefit the County's residents by providing them a greater number and variety of job opportunities close to home. For this reason, one of the County's economic development goals is to provide more opportunities for jobs for County residents with a variety of skills.

<sup>21</sup>Arizona Office of Tourism, December 2004.

## **Economic Development Goals and Policies**

### **Goal 36: To support commercial and industrial development which promotes a diverse and stable County economy.**

- Policy 36.1 Mohave County may support the retention and expansion of existing County businesses through cooperative programs with other public, private and quasi-public organizations.
- Policy 36.2 The County may cooperate with private and quasi-public entities, such as the Chambers of Commerce, in preparing and conducting marketing and advertising campaigns to attract new employers to the North River Economic Region.
- Policy 36.3 Mohave County may participate in economic development efforts aimed at attracting a broad range of tourism activities, including tourism oriented to outdoor recreation and historic sites.
- Policy 36.4 Mohave County may encourage non-residential development projects that may lead to significant long-term increases in County employment.
- Policy 36.5 Mohave County may participate with various economic development agencies to attract business. Mohave County may assist industries by providing information, identifying potential sites and serving as an ombudsman to public and private entities.
- Policy 36.6 The County may work with private and quasi-public entities, and other economic development organizations to develop and update information on current and projected economic trends, labor force, land availability, development processes or other issues relevant to economic development efforts.
- Policy 36.7 Mohave County may participate in efforts to obtain funding for economic development programs from State, Federal and other sources.
- Policy 36.8 Mohave County may provide information and assistance to economic development projects interested in participating in State, Federal or other economic development programs.
- Policy 36.9 Mohave County may improve public access to building and site information to meet the needs of businesses.

### **Goal 37: To encourage economic development throughout Mohave County.**

- Policy 37.1 The Land Use Element and Area Plans may identify areas designated for future commercial and industrial development, including sites for alternative energy development. The Area Plans may include additional policies defining the appropriate types of non-residential development.
- Policy 37.2 Capital improvement planning and funding by Mohave County should consider economic development benefits as a criteria in reviewing improvement projects and in setting funding priorities.
- Policy 37.3 The County may encourage infrastructure development that meets the needs of current and future residents and businesses.



**Goal 38: To encourage economic development which provides employment opportunities for County residents at a variety of skill levels.**

- Policy 38.1 The County may encourage job training programs designed to improve employment opportunities for Mohave County residents, including programs provided by private businesses, trade schools, school districts and other educational programs that match skills with existing and desired industries.
- Policy 38.2 The County may work with local economic development programs to inform potential future employers of the skills and expertise available in the Mohave County labor force.
- Policy 38.3 The County may work with local economic development programs to encourage creation of employment opportunities for minorities, and disadvantaged and disabled persons.
- Policy 38.4 The County may encourage educational institutions to provide basic business management training for small business owners in their first year of operation.

**Implementation Measures- Economic Development (ED)**

- ED1: Establish meetings between County representatives and other economic development organizations. Use these meetings for communication and coordination regarding issues such as recent economic trends, cooperative programs, alternative economic development projects, marketing efforts, and development opportunities.
- ED2: Review possible new economic development programs or projects for Mohave County and establish an action agenda for cooperative economic development efforts.
- ED3: Establish regular monitoring programs to evaluate the County's employment growth, by job type and location, and the jobs-to-resident worker ratio for the County and its planning areas.
- ED4: Produce a regular informational report for the public containing information on employment growth and development.
- ED5: Prepare informational materials explaining the County's development review processes and regulations, particularly as they pertain to the location or relocation of businesses in Mohave County. Make these informational handouts available at County offices and other public locations.
- ED6: Develop information on the skills and experience of the County's resident labor force and collect this information in a report available for use in economic development efforts.
- ED7: Identify ways to evaluate the County's development review procedures to streamline the review of projects with significant economic development benefits while providing for appropriate public review and input.

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- ED8: Conduct a business retention survey to identify the needs of Mohave County businesses.
- ED9: Together with the private sector, conduct a study to identify particular goods or services desired by local residents and businesses, to shape the focus of efforts to attract new firms to the County.
- ED10: Include economic development benefit as one of the criteria in ranking proposed capital improvement projects within a County Capital Improvements Program (CIP).
- ED11: Evaluate opportunities to obtain economic development funding from State, Federal or other sources. Pursue funding sources available and appropriate to Mohave County. Mohave County shall encourage the use of grant writers as one avenue of funding sources.

## **VII. Public Infrastructure and Services**

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*Public Infrastructure Element*  
*Public Facilities Element*



## VII. PUBLIC INFRASTRUCTURE AND SERVICES

### A. PUBLIC INFRASTRUCTURE ELEMENT

This section addresses concerns related to infrastructure for the water, wastewater, solid waste, flood control/drainage, and road systems in Mohave County. Aside from flood control and roadway systems, these public services are, for the most part, provided by the private sector. Section A.1 includes goals and policies that are common to all of those systems. Sections A.2 through A.6 list goals and policies that are unique to each system.

#### 1. Public Infrastructure Provision

While Mohave County does not directly provide all public infrastructure to its businesses and residents, it has a vital interest in ensuring that public infrastructure needs are met. The quality of life in the County depends on its residents' ability to travel safely and freely, have safe and adequate water supplies, be able to safely dispose of wastewater and solid waste and be protected from floodwaters.

Mohave County residents should expect more infrastructure in Urban Development Areas, less infrastructure in Suburban Development Areas, and minimal infrastructure in Rural Development Areas. Development in areas where infrastructure has not been developed can expect additional permitting and extended timelines.

The infrastructure to provide for these needs is operated by numerous public and private sources. The County maintains an extensive road network throughout its unincorporated areas that is linked with the State and Federal highway networks. Special districts provide water service to some areas. The County also is assuming an active role in coordinating wastewater service provision in Mohave Valley as well as throughout the county with the adoption of the Areawide Water Quality Management Plan ("208" Plan).<sup>22</sup> The Mohave County Flood Control District is the coordinator for all flood control and drainage facilities. The Mohave County Flood Control District encompasses the entire County including the incorporated areas and collects taxes for flood control administration and construction projects through the County. Recently completed projects included the Mohave Channel in New Kingman/Butler. The County's role in planning and regulating land use is a key factor in ensuring the adequacy and affordability of needed infrastructure, no matter who provides it.

#### Key Public Facilities Issues

***Planning for Facilities.*** Road and utility systems should be planned carefully to make the most efficient use of public resources. Providing adequate capacity to meet demands in the most cost effective and safe manner requires planning and coordination between other transportation agencies or utility providers and the County. Mohave County can take a leadership role in these efforts through responsible use of its planning and regulatory powers.

***Ensuring Adequacy of Facilities.*** Ensuring the adequacy of the road and drainage systems is a key aspect of Mohave County's responsibility to protect the health, safety and welfare of its residents. Adequacy means that sufficient capacities are available to serve demands as those demands occur. Mohave County's development regulations should address these issues of timing and capacity to ensure that its residents' needs are met.

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<sup>22</sup>Mohave County has the delegated authority as a "Designated Planning Agency" from the Arizona Department of Environmental Quality.

***Extending Facilities.*** Policies on the extension of public facilities have a significant impact on public and private infrastructure costs. By encouraging compact growth patterns and carefully reviewing proposals for facility extension, the County can minimize capital and maintenance costs for public facilities and services. Other costs such as increased commuting times and fuel use, lower work productivity, and loss of open space and wilderness are also reduced with a more compact form of urban growth.

***Financing Facilities.*** Financing public infrastructure requires the County to balance resources, costs and benefits. The County should identify the costs of construction and maintenance and then determine how to equitably finance those costs. Presently, parcels for future public facilities are designated on master planned communities via the Area Plan process.

## **Public Infrastructure Goals and Policies**

### **Goal 39: To plan for facilities to meet the needs of Mohave County's growing population.**

- Policy 39.1 Mohave County should encourage regional provision of facilities and infrastructure whenever feasible and should discourage the proliferation of small service districts within or adjacent to existing districts.
- Policy 39.2 Facility Master Plans should be consistent with the General Plan goals and policies for service provision. They may be adopted separately or as part of the General Plan.
- Policy 39.3 The County should prepare its Capital Improvements Program (CIP) and, funds permitting, construct its capital improvement projects to provide adequate public facilities and services to serve the population and employment levels projected through the year 2020, according to the land uses designated in the Land Use Diagram and the service levels adopted in the Public Infrastructure and Facilities Elements.
- Policy 39.4 Mohave County should coordinate with utility providers when amending General Plan land uses, when updating its Capital Improvements Program (CIP), and when reviewing development proposals.
- Policy 39.5 Mohave County should ensure that facilities are designed and constructed to accommodate the demands from planned development in the most cost-effective manner.
- Policy 39.6 Mohave County should require all infrastructure system improvements to be designed and constructed, as a minimum, in accordance with Mohave County Standard Specification and Details, and other county adopted standards, as these may be modified from time to time.
- Policy 39.7 Mohave County may develop and maintain solid waste, flood control/drainage and transportation system facility master plans for urban and suburban development areas.

**Goal 40: To encourage new development to locate within or adjacent to urban areas and suburban areas, where public facilities can be provided in a timely manner and a sense of community can be created or complemented.**

- Policy 40.1 Mohave County may use its zoning regulations to promote growth in or adjacent to existing urban areas and suburban areas where adequate public facilities are available.
- Policy 40.2 Mohave County may encourage infill development of urban and suburban areas where existing public facilities are adequate to meet the demands of such development.
- Policy 40.3 The County may designate areas within Urban Development Areas (UDA's) and Suburban Development Areas (SDA's) that are appropriate for development based on proximity of public services and facilities. These areas should be given first priority for extension of public facilities. New urban or suburban development that is not in one of these designated areas may be approved if the developer provides, at no cost to the County, adequate public facilities.
- Policy 40.4 Within Urban and Suburban Development Areas, Mohave County should not allow subdivisions and other development activities that are not served by adequate public facilities, unless such facilities can be provided by the developer at established levels of service.

**Goal 41: To ensure that public facilities are designed and phased to adequately meet the demands from new development.**

- Policy 41.1 Mohave County should require public facilities in new developments to be designed to accommodate demands resulting from planned land uses. Construction of facilities sized to meet demands at full build-out of planned land uses may be deferred if:
- ◆ proposed interim facilities are adequate to serve anticipated growth;
  - ◆ proposed rights-of-way and easements are sufficient to meet demands from planned land uses; and
  - ◆ the County finds that incremental provision of facilities is the most efficient use of public resources, in this instance.
- Policy 41.2 When determining the adequacy of public facilities to serve development, the County shall consider the development potential of adjacent land, particularly those lands under the same ownership as the parcel to be developed.
- Policy 41.3 The County should establish a standard formula for allocating the capacity of facilities built with joint public-private funding. Project-specific development agreements, where appropriate, shall be used to record these allocations.
- Policy 41.4 Required on-site improvements shall be in place at the time project occupancy creates demands for those improvements.
- Policy 41.5 Required off-site improvements shall be constructed or funded as a condition of development approval.

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- Policy 41.6 Required off-site improvements shall be installed prior to the creation of demands for these facilities. If off-site improvements are not in place at the time of a development request, then a County approved development phasing plan and assurance agreement shall be required to ensure that improvements will be in place at the time of project occupancy.
- Policy 41.7 Where public facilities are not adequate to serve an entire development project, phasing may be used to ensure that adequate facilities will be available concurrently with demands for those facilities.
- Policy 41.8 Mohave County may use development agreements, where appropriate, to phase construction of required improvements concurrent with development creating demand for those improvements.
- Policy 41.9 Mohave County may require of developers the provision of facility capacity in excess of that required by a proposed development, as determined by the County Engineer, and allowing for any possible reimbursement to the developer, that may be allowed within the limits of its statutory authorities as a county.

**Goal 42: To establish an equitable system for funding the costs of new public infrastructure.**

- Policy 42.1 New development shall be required to fund its fair share of the costs for public facilities needed to serve it.
- Policy 42.2 The costs of creating or expanding facilities and services shall be borne by those creating the need for the new service or the expansion.
- Policy 42.3 The developer shall be responsible for installation of all on-site improvements, required off-site improvements, as well as the provision of on-site and off-site easements and rights-of-way.
- Policy 42.4 Costs for system improvements shall be borne by the development creating the need for those improvements. This policy shall be implemented through specific provisions of Mohave County's subdivision and zoning ordinances.
- Policy 42.5 A portion of the costs of system improvements in UDA's may be borne by the County if the Board of Supervisors determines that said improvements further the goals of this General Plan. Under special circumstances, the County may participate in the costs of system improvements for SDA's.
- Policy 42.6 Any joint financing of facilities with private landowners shall be based on a development agreement with specific allocations of capacity.
- Policy 42.7 When improvements are a condition of development approval, Mohave County shall require security for those improvements at the time of approval.-This policy shall be implemented through specific provisions of Mohave County's subdivision and zoning ordinances.
- Policy 42.8 As statutes allow, the County may adopt development fees or require developer contributions through development agreements to finance system improvements in UDA's and SDA's.

## 2. Water Systems

Numerous entities provide water to parts of Mohave County, but the vast majority of the County does not have centralized water service. Mohave County is not a water provider, however under limited circumstances it may serve as a quasi water provider to various areas and projects. This function may be accomplished through County administered water improvement districts. Adequate water system infrastructure is a primary development constraint in many parts of the County. Urban and, in many cases, suburban development is limited to areas where organized water service can be provided. Expansion of existing systems or creation of new systems will be needed to accommodate the growth and development provided for in the Land Use Diagram.

Exhibit VII.1 illustrates the generalized boundaries of the State certified service areas of existing water service providers. The exhibit shows a circle around the general service area of providers with small or uncertificated boundaries. The exhibit shows the relatively large proportion of the County that is not within the service area of an organized water system. Considering the fact that much of the land within the certificated water service areas shown on the map currently is not served, the map highlights the vast amount of land in Mohave County that can not be readily developed at urban or suburban land use intensities without additional infrastructure.

Organized water systems are essential to provide for normal use and emergency fire flows for urban development. Organized systems also are needed to adequately serve most suburban development, although wells may provide adequate service to some low intensity suburban areas. Existing systems were estimated by Arizona Department of Environmental Quality (ADEQ) to have provided 35,700 acre feet of water for municipal and industrial purposes in 1990.<sup>23</sup> ADEQ expects this demand to double by 2015, and triple by 2040, requiring significant expansion of systems in incorporated and unincorporated areas. Water demand for mining and agricultural purposes is not expected to change significantly.

Coordination between the County and other water providers could benefit these providers and County residents. Water system expansions require significant capital investment. These capital costs, as well as operation and maintenance costs, are ultimately borne by the County's residents and businesses. The County and water service providers can minimize these costs through cooperative efforts to promote contiguous and compact development patterns through land use and facility extension policies and by coordinating water system planning with County land use and development decisions.

### Key Water Systems Issues

***Providing for Adequate Water Supplies.*** The availability of adequate water supplies is essential for growth and development. While all residents and businesses require safe and reliable supplies, the standards for adequacy may vary from one part of the County to another. Urban development demands more water, and a centralized water system, to meet the daily needs of residents and businesses and to provide water for fighting fires. Reclaimed water (treated effluent) can also be used for non-potable uses including landscape irrigation, dust control and fire suppression.

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<sup>23</sup>Unpublished Arizona Department of Environmental Quality projections of water use by type for Mohave County. Mohave County does not have records or projections of current, projected or committed demands for individual water systems. These records will be needed to evaluate a particular system's capacity to serve proposed new development.



***Using Water Resources Wisely.*** Much of Mohave County is desert land, some with limited water resources. Mohave County has an undetermined, but limited amount of groundwater within its fourteen watershed basins, and must compete with other counties and states for surface water from the Colorado River. By using water wisely, the County, its residents and its businesses can minimize expenditures on water and infrastructure, and help ensure that existing water supplies will support long term growth.

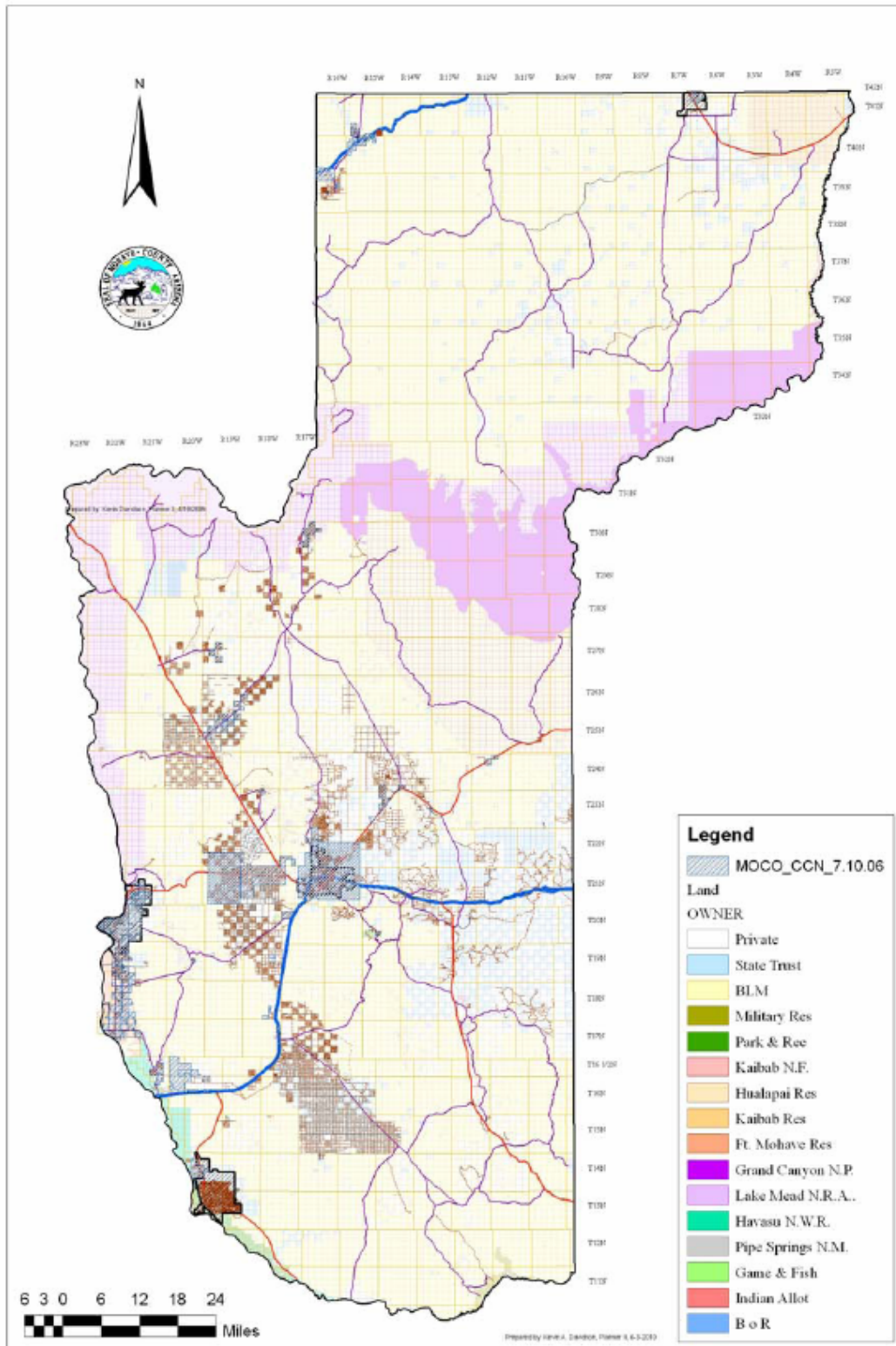
## **Water Service Goals and Policies**

**Goal 43: To plan for sufficient water supply systems, at levels appropriate to meet the service and emergency needs of urban and suburban areas.**

- Policy 43.1 The County should require developers to provide water facilities to service proposed developments at approved levels of service.
- Policy 43.2 Levels of water service should satisfy the minimum standards of the Arizona Department of Environmental Quality.
- Policy 43.3 Water systems should be designed to provide for emergency water needs for fire protection.
- Policy 43.4 Connection to an organized water system should be required for all projects in Urban Development Areas and in Suburban Development Areas where lot sizes are two acres or less.
- Policy 43.5 In Urban and Suburban Development Areas, residential and non-residential subdivisions, other non-residential projects, and (through the rezone process) minor land divisions may be required to connect to or provide an organized water system. One consideration in this decision should be the area's level of transition into an Urban or Suburban Development Area, and the availability of water services.
- Policy 43.6 The County should require water suppliers to provide copies of their current drought preparedness and water conservation plans, as those plans are required to be prepared and submitted to the Arizona Department of Water Resources under A.R.S. 45-342.

Exhibit VII.1: Water Service Areas

Exhibit VII.1  
Water Service Areas



### 3. Wastewater Systems

The increasingly urban and suburban character of development in the unincorporated areas of Mohave County is increasing the County's involvement in the provision of organized wastewater systems through the creation of improvement districts. In Mohave Valley, urbanization led to the creation of numerous small, privately operated systems. However, the long-term operational costs of these systems will be high. Regional systems can offer significant long-term cost savings on a per-unit basis, but require high initial costs, careful planning and ongoing coordination to ensure that new development and facilities are compatible with the design of the regional system. Exhibit VII.2 illustrates existing wastewater planning areas in the County. Mohave County has adopted a Wastewater Master Plan that provides for regional service in Mohave Valley and Golden Valley. This two-volume plan addresses long-term wastewater needs in two of the County's fastest-growing unincorporated areas. Mohave Valley can be effectively served by the Fort Mojave Tribal Utilities Authority, which is planning some major system expansions. After examining wastewater alternatives in Mohave Valley and Golden Valley, the County's Wastewater Master Plan concludes that:

- ◆ Given current and projected land uses, the most environmentally responsible long-term regional wastewater treatment plan is to tie into the existing wastewater systems provided by the Fort Mojave Tribal Utilities Authority and the Arizona-American Utility Company in Mohave Valley, and to construct regional wastewater treatment plants in Golden Valley.
- ◆ Any entity providing regional wastewater management should be required to provide septage treatment, as well as long-term sludge handling.
- ◆ In most cases in Mohave Valley, interceptors will be more cost-effective than satellite plants, but satellite systems may be the most appropriate method of handling wastewater in some remote areas until the regional system is in place. In Golden Valley, satellite systems serving approximately 300 units each can effectively treat wastewater until a regional system becomes economically feasible. All satellite systems should be designed to accommodate at least 100,000 gallons per day of wastewater. (Sullivan Design Group, 1991)

Coordination with the Fort Mojave Tribal Utilities Authority and other wastewater treatment providers in the planned wastewater service areas of Mohave Valley and Golden Valley will be essential to implement the County's Wastewater Master Plan. This master plan has been recently updated with the Adoption of the Areawide Water Quality Management Plan ("208" Plan) to adequately and efficiently accommodate the sewerage needs of existing populations and that of projected growth, while ensuring the high quality of water resources. The "208" Plan is not a plan for the county or cities to extend sewer services, but a plan that will help the county and the cities determine where such services are needed, and where they should be required of existing or new development. In this regard, the "208" Plan will complement and correspond with the applicable jurisdiction's Comprehensive Plan and regulations, and adopted facilities plans.

Bullhead City's Wastewater Management Plan addresses needs within its corporate boundaries and in the urbanizing area to the east of its city limits. Lake Havasu City is in the process of planning for wastewater facilities in the area surrounding its airport. This effort also addresses the unincorporated development areas to the west of the airport.

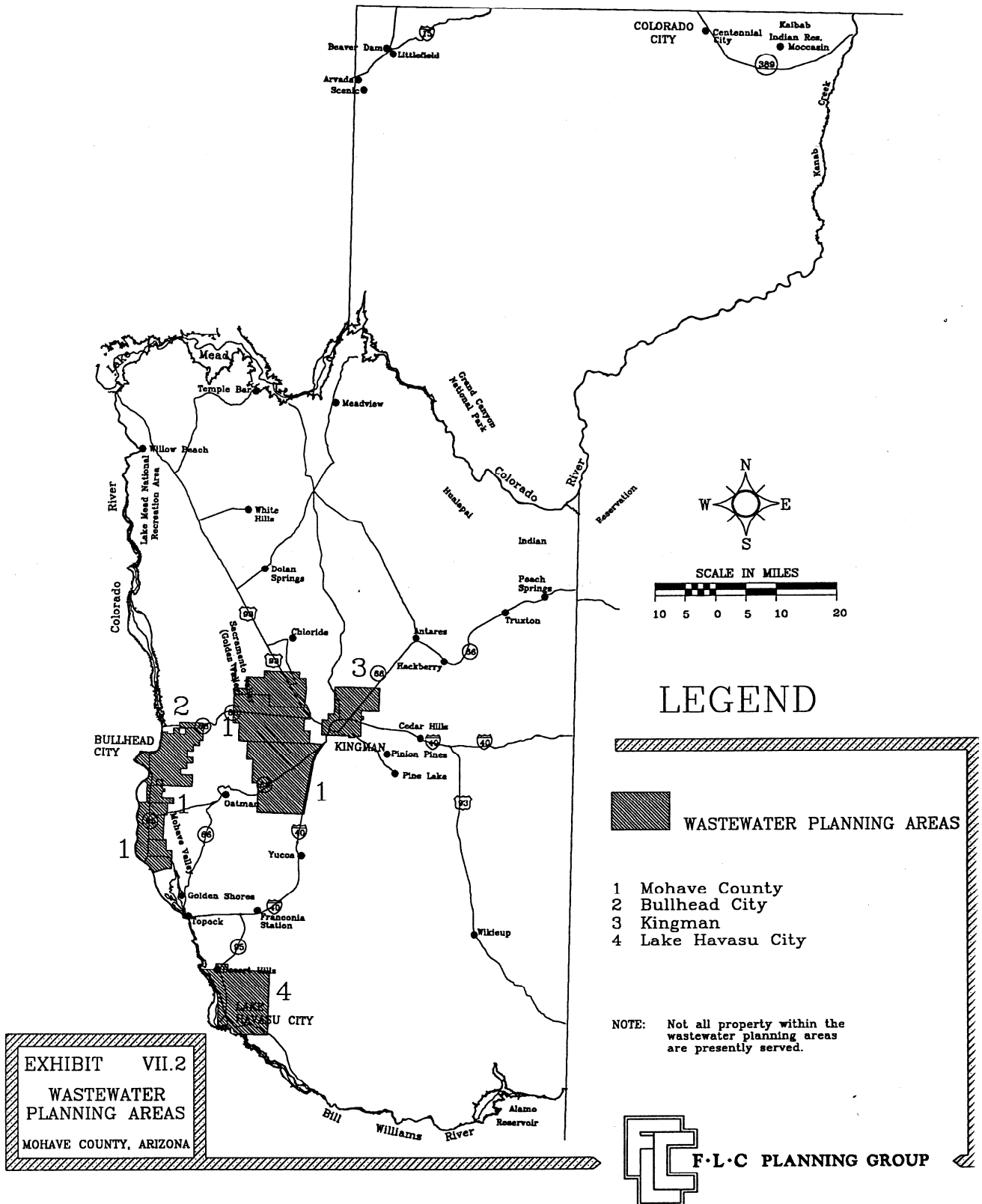
Kingman is planning the ultimate expansion of its wastewater system throughout the Butler area.

## **Key Wastewater Systems Issues**

***Providing for Adequate Wastewater Facilities.*** The availability of organized wastewater systems is essential for urban and suburban growth and development. While rural and suburban residents on larger lots and businesses may be able to satisfy, treat and dispose of wastewater on-site, most urban development is typically too intense to permit the use of septic tanks or other on-site solutions. To protect the environment from pollution and to protect the health and welfare of Mohave County residents, Mohave County may work with the Arizona Department of Environmental Quality (ADEQ) to ensure that wastewater treatment and disposal methods are adequate to serve proposed development.

***Coordinating Wastewater Service Planning.*** Centralized wastewater service is provided by a variety of cities, special districts and utilities. Through the use of its planning and regulatory powers (such as through its Land Division and other regulations and 208 Plan), the County can make it more likely that service is adequate to meet the needs of future growth and development.

Exhibit VII.2: Wastewater Planning Areas



## Wastewater Goals and Policies

**Goal 44: To plan for adequate wastewater treatment and disposal systems, at levels (type of treatment, and capacity) appropriate to meet the needs of urban, suburban and rural communities.**

Policy 44.1 Connection to a centralized wastewater system should be required for all projects in Urban Development Areas and as required by ADEQ.

Policy 44.2 Mohave County should require developers to provide wastewater collection and treatment capacity needed to serve development.

**Goal 45: To provide coordination by the County for the planning and operation of wastewater treatment and disposal systems.**

Policy 45.1 Mohave County may identify and implement programs that will improve communication and coordination between the County and wastewater treatment service providers.

## 4. Solid Waste

As the County's population grows, the need for adequate sanitary landfill facilities and solid waste collection increases. While the County's need for landfill facilities is increasing, the County's ability to provide those facilities is being limited by new Federal regulations. State law prohibits Mohave County from collecting solid waste so collection is a private endeavor. Services are available to most of the populated areas; however, rural areas are often left wanting.

There are four authorized landfills operating in Mohave County. The County is responsible for two of these facilities: one off of State Highway 93 on Mineral Park Road (Cerbat Sanitary Landfill) and one off of State Highway 95 on El Rodeo Road in Mohave Valley (Mohave Valley Landfill). The County contracts the operation of these landfills to an independent party. In addition, the county contracts out the operation of a solid waste transfer site in Beaver Dam/Littlefield area. Lake Havasu City operates a landfill near the City's airport; Colorado City operates a landfill on land managed by the BLM.

Since the County is prohibited by state law from collecting solid waste, collection is accomplished by private haulers. At least nine haulers serve Mohave County. While population centers appear adequately served, rural areas do not have the population base to support private haulers. Individuals are often responsible for hauling their waste to an appropriate landfill. Many rural residents consider the County operated landfills to be at unacceptable distances from their homes. Further, rural residents often find the fee charged at the landfill exorbitant. Although many rural residents pool their waste and resources to ensure that waste is hauled to an appropriate site, the random and "wildcat" dumping of waste in out-lying areas is common. The public health implications of this type of dumping concerns many rural residents. The County investigates and prosecutes illegal dumping through the Mohave County Public Works administered Environmental Rural Area Cleanup and Enforcement (ERACE) program which employs certified officers under the Mohave County Division Parks Administrator.

## Key Solid Waste Management Issues

*Providing sufficient landfill facilities that comply with Federal regulations at a reasonable cost.* EPA regulations require that improved construction, operation and closure techniques be used at landfills. Compliance with applicable State and Federal laws and requirements is required.

*Ensure adequate landfill facilities and solid waste collection services to rural areas.* The distance from many of the County's rural areas to the landfills is substantial. Since solid waste collectors often do not cover rural areas, residents should haul their own. Many rural residents find the fees charged at the landfills beyond their financial means. Distance from the landfill and the fees encourage random dumping.

## **Solid Waste Goals and Policies**

**Goal 46: To provide adequate sanitary landfill Facilities, that comply with applicable state and federal laws and requirements, to meet the needs of county residents.**

- Policy 46.1 The County should encourage that regional sanitary landfill facilities are provided for County residents consistent with growth planned by the General Plan.
- Policy 46.2 The County should provide for landfill facilities that at a minimum comply with EPA and ADEQ laws and regulations.
- Policy 46.3 The County shall require developers of subdivisions in UDAs and SDAs to provide for solid waste collection services.
- Policy 46.4 The County should develop a program to encourage rural residents to use the County's landfills as opposed to random dumping.

## **5. Flood Control/Drainage**

Despite its arid climate, Mohave County has significant flood control and drainage issues. Storm water rushing out of the steep mountains into the alluvial plains has produced considerable property damage in the past. The County should ensure that new development complies with FEMA's regulations for floodplain development.

The County should take a leadership role in planning for County-wide flood control. In addition to monitoring of local drainage studies, the County should seek input from the Public Works Departments of each city on their high priority flood control/drainage problems. The County should use this information to identify drainage system needs and prioritize improvements to address those needs on a countywide basis. Establishing a multi-year plan based on input from all parts of the County will help ensure that flood control/drainage project expenditures are equitable and responsive to the needs of County residents and businesses.

Mohave County can help prevent future drainage problems through its regulation of new development. As new buildings, streets, parking lots, driveways and sidewalks are built, the amount of surface area available to absorb water is reduced. The increase in impervious surface tends to increase the volume and velocity of storm water runoff. Through careful design of new developments and their drainage systems, the County can minimize the impact on downstream drainage-ways and land uses. The County can, during the rezone process, ensure that newly created lots and parcels have adequate flood-free areas for structures and support activities such as septic systems and well sites.

## Key Flood Control/Drainage Issues

***Providing Adequate Flood Control/Drainage Facilities.*** The County enforces FEMA regulations in designated floodplains in unincorporated areas and in the cities of Colorado City and Kingman. To effectively protect life and property from flood damages, the County should monitor changes in floodplains caused by natural events or human activities, and ensure that development is consistent with anticipated changes in the floodplains. The reconstruction of Highway 68 through Golden Valley and the El Rodeo Channel in the Mohave Valley has removed some properties from the flood hazard zone while adding others to the flood hazard area.

***Coordinating Drainage System Planning.*** Planning a flood control/drainage system is a multi-jurisdictional endeavor because floodwaters ignore jurisdictional boundaries. Water flows from development in Kingman through unincorporated areas of the County and from unincorporated areas of the County through Bullhead City and Lake Havasu City. The fact that development and drainage improvements in one jurisdiction directly affect the flood control/drainage system in other jurisdictions increases the importance of coordinating drainage planning, improvements, and regulatory efforts.

Flood control/drainage facilities in Mohave County are funded by a County-wide flood tax. Mohave County reimburses a portion of these funds directly to its cities. Coordinated planning and implementation of joint and extra-territorial flood control/drainage projects will help the County and the cities use available funding to address the most serious drainage problems first.

## Flood Control/Drainage Goals and Policies

**Goal 47: To coordinate flood control/drainage system improvements with planned land uses throughout the County.**

- Policy 47.1 The County should adopt and implement Master Flood Control/Drainage Facilities Plans for all developing unincorporated areas.
- Policy 47.2 The County should continue to rely on its "flood tax" as a primary source of funds for flood control/drainage activities. Allocation of these funds for specific projects within cities should be based on a County-wide flood control/drainage facilities improvements program that is developed with the cooperation of the County and its cities.
- Policy 47.3 Drainage studies should be required for all proposed development projects.
- Policy 47.4 In compliance with the Mohave County Flood Control Drainage Design Manual, developments shall not increase runoff from the site where downstream properties will be adversely impacted by the rate of runoff.

**Goal 48: To establish and maintain a system of natural and manmade drainageways that is effective in carrying stormwater and is compatible with the character of the County's communities and its natural resources.**

- Policy 48.1 The County should encourage the design and siting of flood control/drainage facilities that are integrated with open space and landscaped areas.



- Policy 48.2 The County should consider public safety, appearance, recreational use, and economical maintenance and operations in the design of flood control/drainage facilities.
- Policy 48.3 The County should encourage flood control/drainage system design alternatives which maintain a natural appearance.
- Policy 48.4 The County should require that flood control/ drainage facilities be designed and constructed to minimize the intrusion of pollutants and excess sediments into sensitive areas and onto adjoining properties.
- Policy 48.5 The County may, within the limits of its statutory authority, identify methods of encouraging recharge of groundwater aquifers through storm water detention.

## **6. Transportation**

Providing an adequate transportation system requires multi-jurisdictional cooperation and coordination. The flow of traffic is affected by the capacity and condition of city, County, State and Federal roads, as well as development along those roads. The condition of the road network affects the quality of most people's lives on a daily basis. To maintain or enhance the quality of life of its residents, the County should actively participate in efforts to improve or maintain satisfactory levels of service on roads Countywide. These efforts should include seeking a sustainable revenue collection system for County transportation funding in response to increasing vehicle fuel economy and alternative-power; establishing a Countywide, continuous thoroughfare network; and protecting existing and future major roadways from development causing undue safety and operational impact without consideration for functional access and mitigating improvements. To aid in this effort, the General Plan has adopted language under Policy 48.14 to implement Highway Access Management Plans.

Rapid growth has increased traffic congestion along State Highways 68 and 95. The State has upgraded S.H. 68 through the urbanizing Golden Valley area, but S.H. 95 continues to be heavily congested through Bullhead City and Mohave Valley. Bullhead City has built a loop road that bypasses the most congested roadway through the City but this will not remedy the problems to the south of the City. County efforts to regulate land use along this road and to secure State funding for roadway modifications are essential to the safety and effectiveness of this highway. Initial efforts included completion of a design concept report for Vanderslice Road, from Courtwright Road to Bullhead Parkway, which establishes a continuous alignment and design standards for future construction by public and/or private entities. The Arizona Department of Transportation is funding an Environmental Impact Statement to reroute State Highway 95 east of the current alignment to link Interstate-40 with State Highway 68. ADOT, Mohave County, and Lake Havasu City also funded a corridor study for the realignment of SR 95 through the incorporated area of Lake Havasu City.

To be effective, the County's roadway system should be compatible with city, State and Federal Roads. Cooperative efforts, such as forthcoming Planning for Assistance for Rural Areas (PARA) transportation planning studies for the greater Kingman and Lake Havasu City areas, can help coordinate transportation planning and improvement programming at all levels of government. Monitoring State and Federal roadway changes requires ongoing communication with the Arizona Department of Transportation. Coordination with cities is necessary to ensure that the design and location of city and County roads are compatible.

The County can improve the efficiency of its transportation system by identifying potential urban and suburban development areas; preserving rights-of-way required to serve those areas; and managing the timing, design and construction of roadway extensions in cooperation with private developers. Monitoring traffic conditions, through the County's traffic volume count program, and planning to meet future demands, through the Mohave County Transportation Commission, will help ensure that the County maintains a system that adequately meets needs of the County's residents.

The movement of people, goods and services through public and private airports is an important part of the overall transportation network with Mohave County. Airports provide several desirable services to nearby communities, including:

- ◆ Access to population centers in the event of a natural disaster or need of emergency services.
- ◆ Backup and access in the event or need for civil/military defense.
- ◆ Provision of commuter and scheduled air service to the traveling public.
- ◆ Provision of general aviation services to the public as a whole.

## **Key Transportation Issues**

***Securing Funding for Needed Highway Improvements.*** Ensure that funds are allocated for the most needed projects. The State of Arizona taxes motor fuels, diesel fuels and collects a variety of fees and charges relating to the registration and operation of motor vehicles on the public highways of the state. These collections include gasoline and use fuel taxes, motor carrier fees, vehicle license tax, motor vehicle registration fees and other miscellaneous fees. These funds represent the primary source of revenues available to Mohave County for road maintenance, operation, construction, improvements and other related expenses. In addition, Mohave County represents a jurisdiction under the Western Arizona Council of Governments (WACOG), and WACOG receives a distribution of Federal-aid funds via the Arizona Department of Transportation in accordance with Federal directives and guidelines. WACOG programs allocated Federal-aid funds for road improvement projects through its 5-year transportation improvement program. Future reauthorization of the Federal surface transportation program may affect amount and distribution of appropriated Federal-aid funds for local government projects. Specific, one-time actions at the Federal and State levels resulting in funds appropriation or planning for local government projects include the (1) American Recovery and Reinvestment Act of 2009 and (2) ongoing Building a Quality Arizona transportation planning study to identify future infrastructure needs across all transportation modes and building on the 2008 Statewide Transportation Investment Strategy.

***Identifying Key Growth Corridors Thoroughfares.*** The long term effectiveness of the County's arterial network requires the protection of those arterials from inappropriate development, and future new thoroughfares serving regional traffic targets, preservation of road capacity attainable through careful planning for adjoining land access and existing/new intersection improvements. The identified thoroughfares will be connected by County highways, State highways, and natural boundaries, and these highways will serve most trips generated by area residential and commercial land uses to/from regional or out-of-area destinations accessible via the State highway system.

By identifying key growth corridors, the County can anticipate where new thoroughfares will be needed or existing arterials improved and regulate development along those roadways to provide adequate right-of-way widths and to ensure that adjacent land uses, driveways and side streets do not create future traffic safety hazards and road capacity constraints.

***Protecting airspace around airport facilities.*** The long-term viability and sustainability of airport facilities and airspace is important to creating a sound economic development program, provision of reliable alternatives to the movement of goods and people, and expansion of emergency service alternatives. To protect its airports, Mohave County should meet obligations it may have through any contracts there may be between the County and those airports.

## Transportation Goals and Policies

**Goal 49: To plan, construct and maintain an efficient transportation system that is adequate to meet the mobility needs of County residents and businesses.**

- Policy 49.1 Mohave County should require transportation facilities with lane and intersection capacity to serve the growth planned by the General Plan.
- Policy 49.2 The County should prioritize, phase, and schedule transportation system improvements in accordance with General Plan policies and the County's ability to fund such improvements.
- Policy 49.3 Mohave County should coordinate with ADOT, WACOG and local jurisdictions when planning transportation system improvements. The County may continue to participate in multi-jurisdictional planning efforts such as the previous Colorado River Regional Transportation Study and the Kingman Area Transportation Study and future (PARA) transportation planning studies.
- Policy 49.4 Streets and native material roadways should be designed to provide safe access for vehicles normally accessing developed parcels and for emergency and service vehicles.
- Policy 49.5 The County's street system should consist of a network of arterial, collector and local streets. Collector streets should be arranged to provide easy access from property on local and collector streets to arterial streets. The County's regional roadways are shown in Exhibit VII.3. Arterial streets and, in RDA's, collector streets should follow section lines wherever feasible.
- Policy 49.6 The County should adopt Master Transportation Facilities Plans for its developing Urban and Suburban Development Areas. For areas surrounding cities, the County should seek cooperation and possible assistance from those cities.
- Policy 49.7 The County should require that arterial and collector streets are designed and constructed in accordance with its Master Transportation Facility Plan and CIP.
- Policy 49.8 On-site local and collector streets should be constructed by developers in accordance with County regulations. The County may also require the construction of off-site streets needed to provide adequate access to a development.
- Policy 49.9 Mohave County's roadway design standards should be appropriate to the function of the road and anticipated traffic volumes.
- Policy 49.10 Mohave County may coordinate transportation system planning with the appropriate cities.
- Policy 49.11 The County should coordinate standards for the design and construction of streets in the extraterritorial areas with the appropriate city.
- Policy 49.12 Mohave County should coordinate with WACOG and local jurisdictions to secure ADOT funding for priority highway transportation system improvements in the County.

Mohave County General Plan

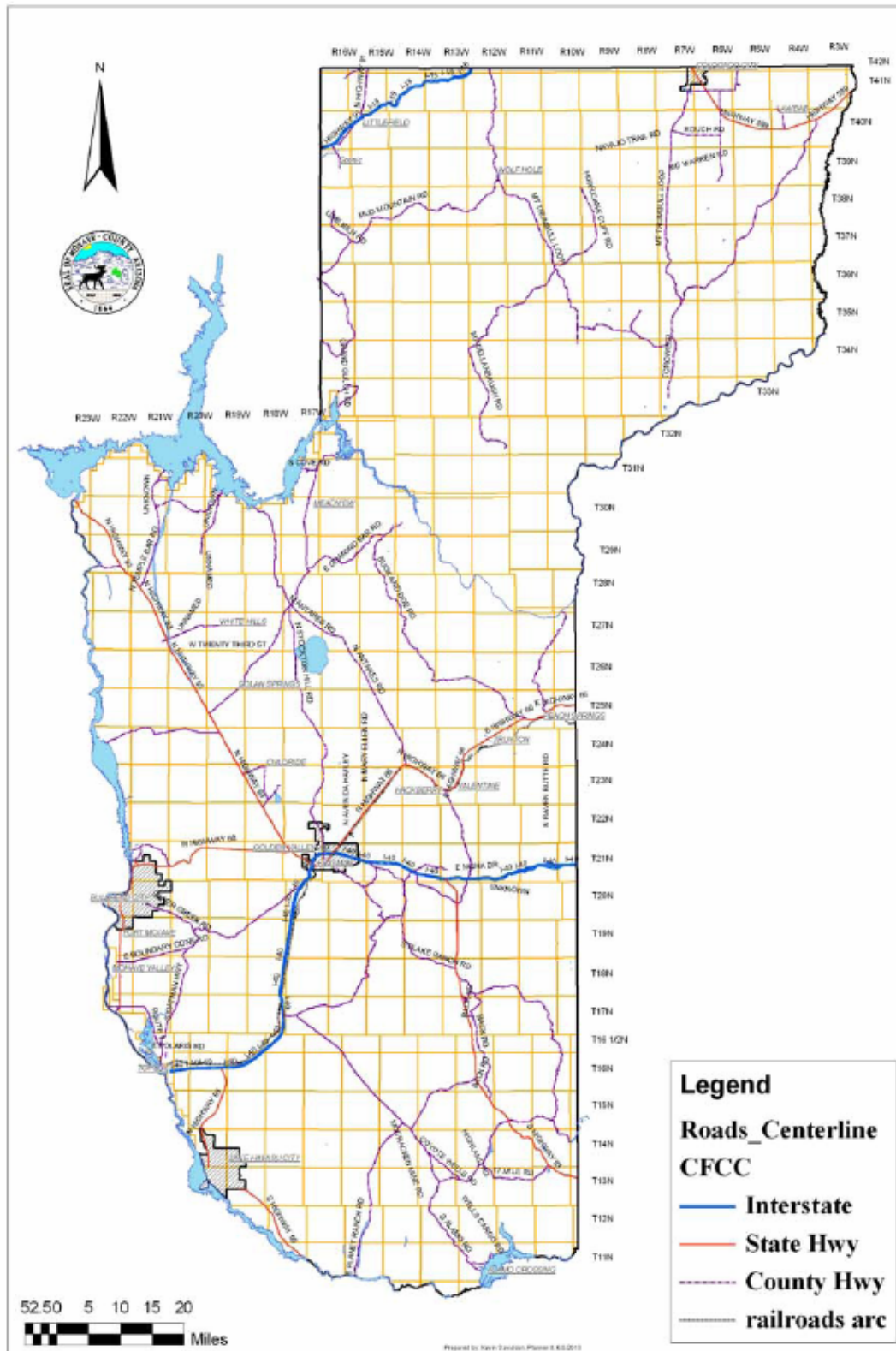
- Policy 49.13 The County may adopt a Comprehensive Five Year Capital Improvement Plan (CIP) for transportation projects.
- Policy 49.14 The County may adopt access management plans for highways and roadways that are projected to have degraded levels of service and increased accident rates without the implementation of a management plan.
- Policy 49.15 Mohave County should encourage developers proposing developments within three miles of an existing airport to consult with the airport concerning the protection of aircraft operations and reducing impacts from noise, light and vibration, thus ensuring compatibility with future residents.
- Policy 49.16 When specifically considering proposed wind farms within an 8 mile radius of an existing airport, developers should consult with the airport and the Federal Aviation Administration to reduce or eliminate interference with aircraft operations.

**Goal 50: To promote compatibility between roadway improvements, land use patterns and natural features.**

- Policy 50.1 Mohave County should use the development review and approval process to ensure that road improvements and rights-of-way are adequate to serve planned land use.
- Policy 50.2 Mohave County should require traffic impact analyses for major development projects and in areas experiencing or projected to experience traffic problems in accordance with Mohave County Traffic Impact Analysis Standards. The Public Works Director should require the submittal and approval of a traffic impact analysis as part of a development application.
- Policy 50.3 The County should locate land uses, design roadways and use project design to ensure that development is adequately and efficiently served by the roadways and that the impacts of the roadways on adjacent land uses are minimized.
- Policy 50.4 Except as otherwise approved by the County, all development should provide adequate on-site parking for normal operations.

**Exhibit VII.3: Mohave County Regional Roadways**

**Exhibit VII.3**  
**Mohave County's Regional Roadway Network**



**Goal 51: To minimize the impacts of automobile travel on the County's air quality, natural environment and developed communities.**

Policy 51.1 The County should require the paving of all streets in UDA subdivisions. In SDA subdivisions with lots 1.0 acres or less, the County should require paving. For SDA subdivisions with lots greater than 1.0 acres, the County may require paving.

Policy 51.2 The County should require paving in any area where traffic load or air quality conditions justify.

**Goal 52: To minimize automobile miles and trips in Mohave County through such approaches as transportation system management, provision for transit, bicycle use and other alternative travel modes, and through land use planning.**

Policy 52.1 Mohave County should support WACOG and local jurisdictions in transportation management efforts.

Policy 52.2 The County should not promote urban or suburban residential development through its rezoning process when site adjacent roadways are not maintained.

**Implementation Measures - Public Infrastructure (PI)**

PI1: Develop facility master plans for the County's flood control/drainage, and transportation systems. Periodically update these and the County's Area Wide Water Quality Management 208 Plan (wastewater master plan) to reflect existing and needed infrastructure. Use these facility master plans to promote regional service provision where such service is feasible. Development of these plans should be coordinated with the plans of other service providers and the appropriate cities. The County should coordinate with WACOG to ensure that high priority highway improvements receive the maximum available funding.

PI2: Adopt standards for the preparation and evaluation of traffic impact analyses.

PI3: Establish standards for the spacing of streets and driveways along collector and arterial streets.

PI4: Establish appropriate setback and/or buffer standards to ensure compatibility between arterial streets and adjacent development.

**B. PUBLIC FACILITIES ELEMENT**

**1. Parks and Recreation**

Parks and recreation facilities provide many important benefits. They give residents a place for both active and passive recreation. They provide a quiet setting for picnics and relaxation. They may include unique natural features or open space areas for outdoor recreation and nature study. Facilities for special activities or interests benefit community residents involved in the activity and create opportunities for others to become involved. In addition to the benefits gained by individual residents who use the parks and recreation facilities, the County realizes other benefits from a carefully-designed parks and recreation system. Parks can shape and enhance the distinct identities of individual communities. By including a park with a school site and other community-serving facilities, a community focal point can be created, giving residents a meeting place and providing opportunities for efficient sharing of facilities.

Park sites emphasizing the natural environment provide important environmental benefits as well as recreational opportunities. These environmental benefits range from storm water retention and protection of steep slopes to preservation of sensitive habitats and significant views. By coordinating parks planning and design with other County programs, these multiple objectives can be efficiently achieved.

Finally, parks and recreation facilities can assist a community's economic development efforts. Attractive and available parks contribute to the quality of life desired by many firms seeking new locations for their businesses and their employees. Recreational areas are important attractions for tourism; parks visitors from outside the County may generate revenue for the public and for commercial businesses during their visit. Special recreational facilities or events can place a community "on the map" for certain specialized recreational activities, such as soaring or long-distance racing. When coordinated with a community's other objectives, planning for recreation builds significant opportunities for enhanced quality of life.

Mohave County enjoys an extensive system of parks and recreation facilities. Some of these are operated by the County itself, while others are the responsibility of the Federal Government, the State of Arizona, or individual cities.

In 1991, Mohave County operated 4,675 acres of parkland. Exhibit VII.4 lists the County's parks and provides information about the park size, type and facilities. The locations of these County parks, in addition to some of the major State and Federal parks and recreation areas, are illustrated in Exhibit VII.5. Additional park facilities in Kingman, Lake Havasu City and Bullhead City are not shown on the map.

In addition to the County parks listed above, there are numerous Federal, State and local parks and recreation areas in Mohave County. Federal recreational facilities are located throughout the County. In the Arizona Strip, the Paiute Primitive Area, Kaibab National Forest, the Beaver Dam Mountains, Cottonwood Point, Grand Wash Cliffs, Kanab Creek, Mt. Logan, and Mt. Trumbull Wilderness Areas provide opportunities for camping, hiking, horsepacking, and other recreational activities. South of the Grand Canyon, Alamo State Park, the Lake Mead National Recreation Area, the Grand Wash Cliffs, the Black Mountains, Lake Havasu State Park, and ten Designated Wilderness Areas offer opportunities for hiking, camping, horsepacking, boating, fishing, swimming, and raft trips. While the primary entrance to Grand Canyon National Park is in neighboring Coconino County, much of the park and the Grand Canyon National Monument are in Mohave County. The Havasu National Wildlife Refuge offers naturalists the chance to view diverse wildlife. Lake Havasu, Lake Mohave and the Alamo Reservoir provide other opportunities for water activities.

The State of Arizona operates three parks near the southern end of Mohave County. Lake Havasu State Park is located in and south of Lake Havasu City along the Colorado River above Parker Dam. Cattail Cove State Park is located along the Colorado River downstream of Lake Havasu State Park and upstream of Buckskin Mountain State Park in LaPaz County. Alamo Lake State Park straddles the boundary between Mohave and LaPaz Counties at the Alamo reservoir. Bullhead City, Kingman and Lake Havasu City each maintain parks within their City limits. In addition to golf courses in Lake Havasu City, Bullhead City, and Kingman, there are several private golf courses, often in conjunction with subdivisions, throughout the unincorporated parts of Mohave County.

Two types of parks facilities are addressed in this General Plan Element: community parks and special use facilities. Community parks are typically used for such activities as field games, court games, crafts, playground activities and picnicking. They generally are designed to provide areas for intensive recreation such as large swimming pools, ball fields and tennis courts. A community park may also have areas of natural quality for outdoor recreation such as walking, sitting and picnicking. These parks typically serve communities of up to 10,000 people.

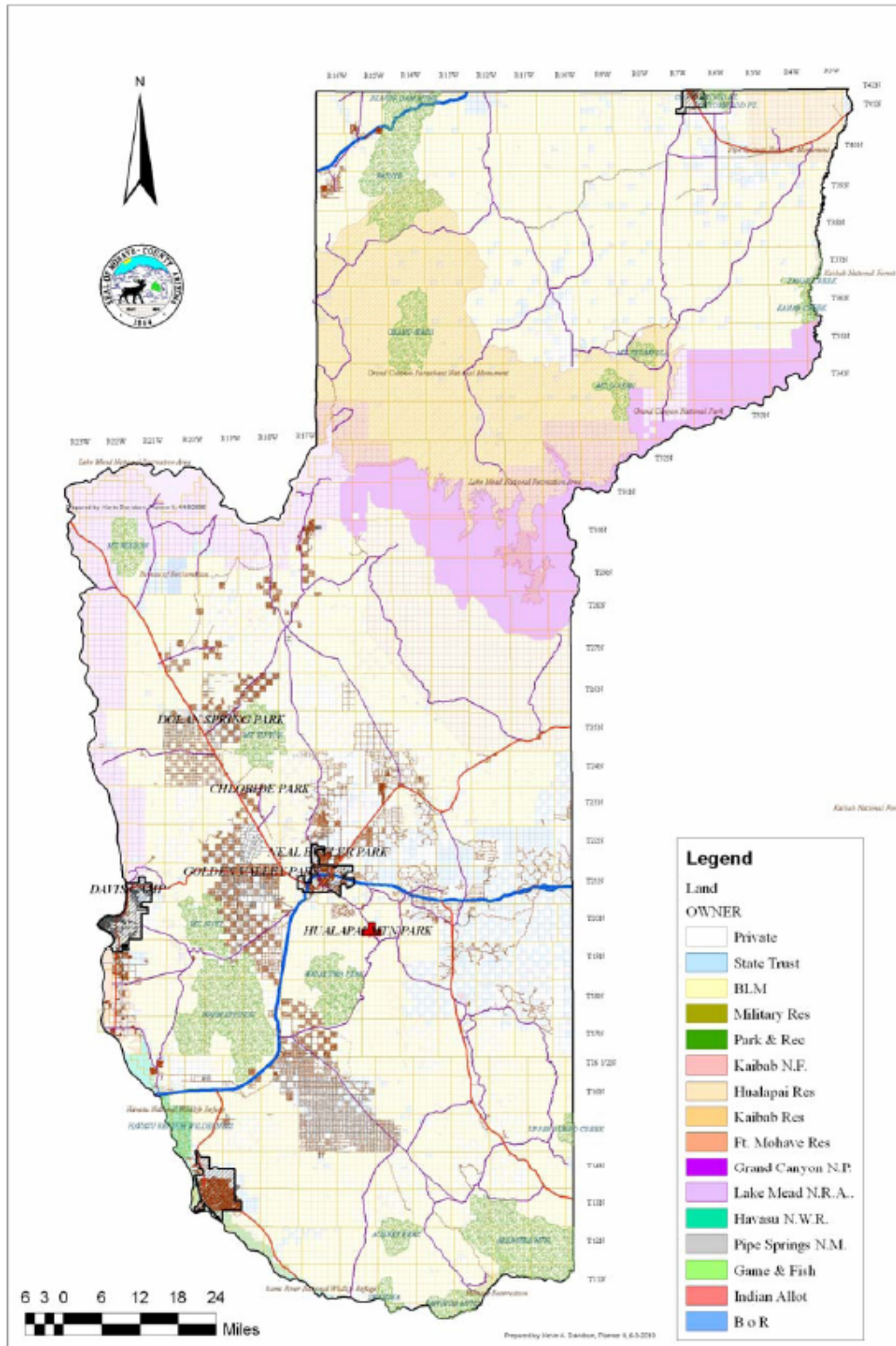
**Exhibit VII.4: Mohave County Parks and Recreation Facilities**

PARK	ACREAGE	TYPE	FACILITIES
Hualapai Mountain Park	2,262	Special Use	Rental cabins, campsites, group recreational areas, RV sites, hiking trails, playgrounds, outdoor theater, and restrooms
Davis Camp	350	Special Use	RV hookups, showers, boat ramp and dock, picnic areas, dump station, playground, lighted basketball court, 84 rental homes concert/activity pavilion, and restrooms
Neal Butler Park	20	Community	Lighted ball field, picnic tables, grills, walking trail, playground, and restrooms
Dolan Springs Park	16	Community	Ball field, picnic tables, grills, playground, horseshoe pits, basketball/tennis court, and restrooms.
Golden Valley Park	10	Community	Ball field, picnic tables, grills, playground, basketball/tennis court, and restrooms
Chloride Park	1	Community	Picnic tables, grills, playground, volleyball court, and restrooms



**Exhibit VII.5: Existing Parks**

**Exhibit VII.5  
Existing County Parks and Nationally Designated Areas**



Special use parks are those designed to meet the needs of a particular recreational activity. As a result, they serve a large population and service area, but they cater to individuals interested in a certain type of recreational activity. There is not a specific standard for measuring the adequacy of these facilities. Rather, the County's choice to provide such facilities should reflect the residents' interests and the opportunities afforded by the County's location or natural features, as well as the county's fiscal considerations, and ability to provide such services.

## **Key Parks and Recreation Issues**

In planning for the next twenty years, the County faces several challenges in terms of parks and recreation facilities. These important issues relate primarily to keeping pace with the growing population and its changing recreational needs.

***Adequate Parks and Recreation Facilities.*** As the County continues to grow, maintaining adequate parks and recreation facilities will be an important concern. While there is an abundance of park land in the County, growth in outlying communities is likely to generate demand for additional community parks.

***Provision of Diverse Services.*** Residents will continue to demand a variety of park services and facilities. The County may provide a range of park services and facilities to meet the diverse needs of its residents pending the availability of funding mechanisms and revenue sources for development and operation. Existing special use facilities will meet the community's needs for specialized activities. The County should endeavor to provide for as many of its residents' recreational needs at community parks as is feasible.

***Meeting Special Needs.*** Some County residents will need or desire recreational facilities tailored to meet special needs. The growing senior population will create a demand for some programs and facilities different from those desired by children and young adults. Persons with physical or other disabilities may need specially-designed facilities in order to fully benefit from the available activities. The County (and other providers) should work with non-profit organizations and other government entities to periodically assess changing needs for special facilities, facility designs, or special programs and activities capable of being self supporting.

## **Parks and Recreation Goals and Policies**

**Goal 53: To meet the recreational and open space needs of residents Countywide, with sites that provide for active recreation, specialized recreational opportunities and enjoyment of natural areas.**

**Policy 53.1** Mohave County should directly provide, or coordinate with other entities to provide, parks and recreational services and facilities to meet the community's demands for a variety of recreational activities, within its fiscal means. The Parks and Recreation Element establishes policies for two primary types of parks: community parks and special use facilities.

**Policy 53.2** The County should continue to work with Mohave County school districts in the development, maintenance and joint operation of local school/park sites where it is economically and functionally desirable to do so.

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- Policy 53.3 Mohave County should coordinate with other entities, such as the cities, the State, Federal agencies and utility providers, to promote the efficient location, design and use of shared sites and facilities.
- Policy 53.4 Mohave County may consider providing assistance to the public in identifying methods to establish community parks in areas of significant population within the County.
- Policy 53.5 Mohave County should locate community parks only in designated Urban or Suburban Development Areas.
- Policy 53.6 When planning new community parks, Mohave County should identify sites and park configurations that create distinct community boundaries, gateways or focal points.
- Policy 53.7 Mohave County should incorporate the planning and provision of identified community parks and special use facilities in its review and approval of development projects, such as subdivisions plats, including or adjacent to planned sites. Project review should address park access, traffic patterns, land use compatibility and aesthetics.
- Policy 53.8 The County should periodically assess needs for new multi-purpose facilities.
- Policy 53.9 Mohave County should continue to provide and enhance the recreational opportunities available at Hualapai Mountain Park and Davis Camp.
- Policy 53.10 Mohave County may consider provision of additional public beach access at sites on Lakes Mead, Mohave and Havasu.
- Policy 53.11 Mohave County may consider creation of new regional parks that provide access to unique natural areas and that expand or enhance opportunities for recreational use of public open space.
- Policy 53.12 Mohave County should encourage development projects to contribute to the acquisition or improvement of identified community parks and special use facilities.

### **Goal 54: To provide recreational services for unique segments of the County's population with special needs.**

- Policy 54.1 The County's standards for park design and recreational activities should address the needs of special populations, such as persons with disabilities.

## **2. Fire Protection**

As shown in Exhibit VII.6, 17 fire districts operate in Mohave County. They provide services to most of the County's urbanized areas. In addition to these districts, Lake Havasu City and Kingman each operate municipal fire departments. Firefighters, many of whom are volunteers, are responsible for their jurisdictions, but often provide services beyond their service boundaries. Most of the fire districts have large, primarily rural service areas. The districts' resources (in terms of equipment, personnel, water supplies and revenues) are limited.

## Key Fire Protection Issues

***Establishing Appropriate Levels of Service.*** Mohave County offers urban, suburban and rural settings for its residents. The facility, equipment and water service costs to provide uniform urban fire protection service throughout the County would be prohibitive. Therefore, the County's fire districts should establish level of service standards that are appropriate for their service areas, whether urban, suburban or rural. These standards could address factors such as response times, staffing and water supplies.

***Addressing Fire Protection Through Development Review.*** The design of new development is a critical factor affecting the costs of future fire protection services. Roads should be designed to allow access by fire equipment, although local rural roads need not be paved. Sufficient water for firefighting should be provided and building sites should be located where emergency vehicles can reach them.

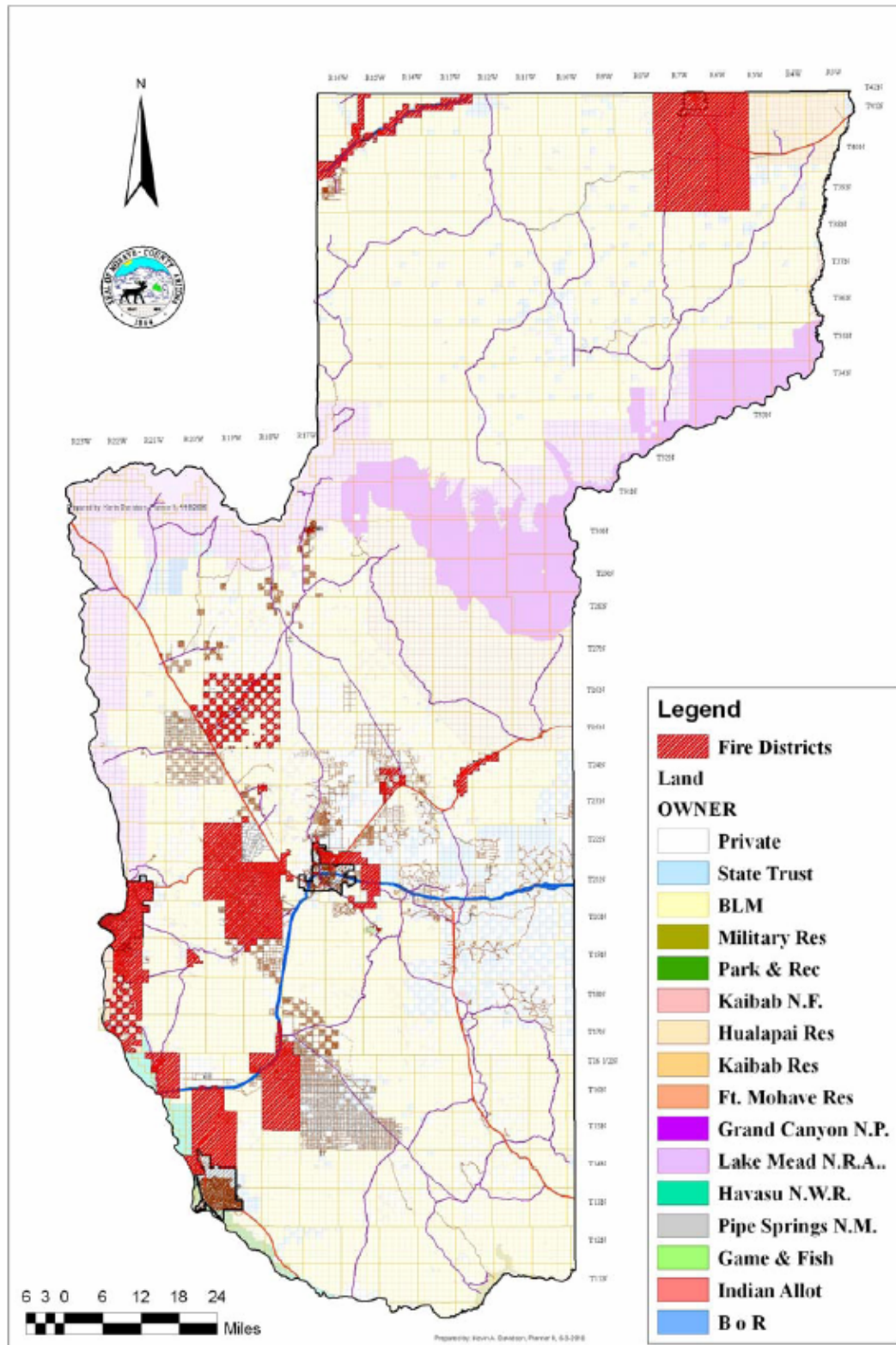
## Fire Protection Goals and Policies

**Goal 55: To plan and provide for adequate fire protection services at levels appropriate to the County's urban, suburban, and rural areas.**

- Policy 55.1 Mohave County should encourage and assist fire districts in developing standards for levels of service that are appropriate to the County's urban, suburban and rural areas.
- Policy 55.2 Mohave County should include the appropriate fire district(s) in the review of development proposals and should assist the fire districts in communicating their concerns to developers.
- Policy 55.3 Mohave County should consider inclusion of fire service standards or design requirements in its development regulations following adoption of the fire service standards or development requirements by fire districts.
- Policy 55.4 The County should limit the increase in housing density, via the rezone process, outside of fire districts and in areas where roadways are substandard.

Exhibit VII.6: Fire Districts

Exhibit VII.6  
Fire Districts



### 3. Other Services and Facilities

In addition to its involvement in the services and facilities described in previous sections, Mohave County plays an active role in protecting its citizens and providing them with cultural opportunities. The Sheriff's Department provides law enforcement services throughout the unincorporated areas of the County. The long distances between communities, makes this a formidable task. Through its assistance to the Library District, Mohave County helps provide educational and cultural opportunities to its residents. The Library District provides resources to residents throughout the County, including the outlying communities. In addition to these highly-visible services, the County provides or supports specialized services, such as emergency response, planning, building and floodplain management. The County continually strives to ensure that these and other services provide excellent values for its residents' tax dollars.

#### Key Services and Facilities Issues

***Establishing Appropriate Levels of Service.*** Standards for service provision are valuable tools for measuring and monitoring the effectiveness of service. Objective standards of service provision are valuable to assess how well services are provided. Establishing level of service standards that are appropriate for urban, suburban and rural residents can help the County make short and long-term budget and facilities planning decisions.

***Providing Appropriate Levels of Service.*** Demands for services tend to exceed most jurisdictions' resources. Mohave County does not have the resources to immediately satisfy all the service demands of its residents. The County should adopt service provision standards that are realistic in light of available public resources.

#### Services and Facilities Goals and Policies

**Goal 56: To plan and provide for Sheriff's Department services at levels adequate to meet the needs of all County residents.**

Policy 56.1 The County should plan and provide appropriate Sheriff's Department services to meet the needs of businesses and residents in urban, suburban and rural areas.

Policy 56.2 The Sheriff's Department should evaluate its services and seek to maintain or improve services over time.

**Goal 57: To support provision of adequate emergency medical services to meet the needs of County residents.**

Policy 57.1 Mohave County should encourage the provision of emergency medical services appropriate to meet the needs of urban, suburban and rural area residents.

Policy 57.2 Mohave County should continue to support 911 services, providing regular updates of address information for new developments.

Policy 57.3 Mohave County should continue to support the provision of appropriate facilities and services to meet the needs of the County's senior citizens, including those residing in outlying communities.

**Goal 58: To provide a full service library system that is easily accessible and supplies residents with a variety of educational and recreational materials.**

- Policy 58.1 Mohave County should support the continued development of a library system.
- Policy 58.2 Mohave County should expand library services by planning space for station libraries as part of public buildings in outlying communities.
- Policy 58.3 Mohave County should coordinate its provision of library services with other public service providers.

**Goal 59: To promote improved coordination between the County and other governmental entities.**

- Policy 59.1 Mohave County should coordinate with other jurisdictions (such as cities, school districts, special districts, State and Federal agencies and local Tribal authorities) to identify opportunities for joint service provision that will improve the quality and/or efficiency of public service provision. These efforts should explore options for sharing facilities and consolidating service provision.
- Policy 59.2 The County should include other jurisdictions, as appropriate, in the development review process, to ensure that proposed developments can be effectively served.
- Policy 59.3 The County should establish intergovernmental agreements to ensure compatibility between extraterritorial development and development in the cities.

**Implementation Measures - Public Facilities (PF)**

- PF1: Continue coordinating with the Bureau of Land Management, the State, local school districts and cities to provide a system of community and regional parks in Urban and Suburban Development Areas that meet the needs of County's residents.
- PF2: Modify parks as necessary to meet the unique recreational needs of the County's seniors and disabled residents.
- PF3: Work with the fire districts interested in developing appropriate standards, such as minimum roadway standards and greatest residential densities, for the review of development proposals in Urban, Suburban and Rural Development Areas. Modify the development review process as necessary to incorporate the opportunity for fire districts to transmit their concerns to developers.
- PF4: Adopt operational level of service standards for County facilities and services (such as the library and Sheriff's Department), and use these standards as a basis for evaluating service adequacy and needs.
- PF5: Continue coordinating with other jurisdictions to explore opportunities for shared facilities and joint service provision. Investigate opportunities to minimize redundant services within the County and between different jurisdictions.

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- PF6: Continue working with emergency service providers to enhance their levels of service. Consult with providers during the development review process.
- PF7: Periodically review existing and available sources of funding for public facilities and evaluate the need to modify existing funding mechanisms.



## VIII. Area Plans

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*Introduction*  
*Rural Planning Areas Goals and Policies*



## **VIII. AREA PLANS**

### **A. INTRODUCTION**

Numerous area plans have been adopted in Mohave County. Existing area plans may be updated or amended, however new area plans, other than Rural Planning Areas, are limited to cohesive, single-ownership sites (or, with unanimous consent of the owners, multiple-ownership sites), necessary or desirable for significant new development proposals.

### **B. RURAL PLANNING AREAS GOALS AND POLICIES**

Persons who own real property in designated Rural Development Areas of these Land Use Regulations may submit a petition to the Board to form a Rural Planning Area (RPA). The petitions must include the signatures of a majority of ownership of real property in the proposed planning area. Property owners may opt out of RPAs. Participation is voluntary and any property owner whose real property is contained within the Rural Planning Area may withdraw the property from the Planning Area. Property owners in these areas are encouraged to participate in Rural Planning Areas to provide non-regulatory incentives for compliance and accommodation of continuing traditional rural and agricultural enterprises.

**Goal 60: To provide a method for real property owners in the unincorporated portions of the county to form a Rural Planning Area.**

- Policy 60.1 Rural Planning Areas may only be formed in Rural Development Areas as described in the land use elements of this General Plan.
- Policy 60.2 Rural Planning Areas should be one (1) square mile or larger in size.
- Policy 60.3 Real property owners on their own initiative may petition the Board of Supervisors to form a Rural Planning Area with specific boundaries outside of any current approved Area Plan boundary. Petitions should be signed by owners of a majority of acres of real property in the proposed Rural Planning Area.
- Policy 60.4 Rural Planning Areas should be voluntary on the part of property owners and the Board should encourage voluntary participation.
- Policy 60.5 The Board should aid the planning areas in providing a sound factual and policy basis for planning.
- Policy 60.6 Rural Planning Area recommendations should emphasize voluntary, non-regulatory incentives for compliance and accommodation of continuing traditional rural and agricultural enterprises.
- Policy 60.7 Rural Planning Areas should transmit their recommendations to the Commission and Board of Supervisors for approval.
- Policy 60.8 Adoption of Rural Planning Areas should be considered minor.
- Policy 60.9 Any property owner may withdraw their real property from the Rural Planning Area at any time by notification of that action to the chairman of the Rural Planning Area Committee, the chairman of the Planning and Zoning Commission and the chairman of the Board of Supervisors in writing.

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- Policy 60.10 An approved Rural Planning Area shall become null and void when all property owners within the Planning Area voluntarily remove their properties from the Planning Area.
- Policy 60.11 Rural Planning Areas are considered planning guides for providing voluntary, non-regulatory incentives for compliance and accommodation of continuing traditional rural and agricultural enterprises.

## IX. Plan Implementation

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*Introduction*  
*Development Review*  
*Facility Master Planning*  
*Intergovernmental Coordination*  
*Public Involvement*  
*Review of the General Plan*

## **IX. PLAN IMPLEMENTATION**

### **A. INTRODUCTION**

This section provides an overview of many of the tools and techniques Mohave County can use to implement its General Plan. These are general descriptions, intended to describe the variety of tools and techniques that can be used to implement the General Plan's policies. Effective implementation of the General Plan depends on a series of individual decisions by a variety of people and agencies over time. By considering the General Plan policies in daily decision-making, the County's administrative, appointed and elected representatives will use these decisions to achieve the goals of this Plan. These decision-making processes include development review, capital improvements planning and intergovernmental coordination. To be effective, the Plan should remain sensitive to the public's needs; therefore, this section also addresses public involvement and review of the General Plan.

### **B. DEVELOPMENT REVIEW**

Most of the physical changes taking place in the unincorporated parts of Mohave County result from human activities and are reviewed by the County. The County regulatory authority permits the review of changes to land use, ownership patterns and development. Through subdivision, zoning and other regulations, the County can ensure that it grows in a manner consistent with the General Plan.

#### **1. Subdivision**

Subdivision regulations govern the division of land into lots. The County's role in this process is to ensure that the lots and subdivision improvements will be of a sufficient size, shape and design configuration to serve their intended purpose and to ensure that the subdivision plat adequately documents this information. The County also should ensure that subdivision improvements provide sufficient levels of service for future occupants and that the subdivision's design is consistent with planned land uses and infrastructure in the surrounding area. Lot splits are another means of land division that can affect the County's ability to implement its General Plan. The County's approach to monitoring lot splits, as allowed by state law, is particularly important in urban and suburban areas.

#### **2. Adequacy of Public Facilities and Services**

Evaluating the adequacy of public facilities and services to serve new development is an important aspect of the development review process. By establishing guidelines and standards for adequate levels of service, the County can ensure that wastewater; transportation, solid waste disposal and flood control systems meet the needs of future residents and businesses. Levels of service standards should address the location, capacity and timing of facilities. Facilities should be located so they can effectively serve new development. They also should have sufficient capacity to serve existing and currently proposed development. Finally, they should provide facility capacity concurrently with demands for that capacity. In situations where adequate facilities are not immediately available, the County may still permit development to occur through the use of agreements that establish phasing of construction over time. Appropriate public facilities regulations may be incorporated in the County's subdivision regulations or zoning regulations or may be placed in free-standing ordinances.

### 3. Zoning

Zoning ordinances, in the interest of public health, safety and general welfare, govern permissible land use and establish standards for the arrangement of those uses. The following zoning tools can be particularly effective in carrying out the goals and policies of this General Plan.

***Zoning Classifications.*** Zoning classifications promote compatibility between land uses on adjacent properties. Zoning classifications can protect neighborhoods from encroachment by inappropriate uses and foster a healthy local economy by balancing residential, commercial and industrial uses. The Plan's Land Use Diagram describes the land uses planned for the future. Compatible zoning classifications can be used to achieve this land use pattern over time.

***Zoning Development Standards.*** Development standards establish the possible relationships between uses on a lot and adjacent development. By controlling height, setbacks, parking requirements, landscape requirements and a variety of other aspects of site design, these standards promote compatibility between land uses. Development standards also can achieve other goals. For example, landscape requirements can support policies related to community character, energy conservation and water conservation. For this reason, it is important to review development standards in light of the full range of community goals and policies expressed in the General Plan.

***Planned Residential Developments.*** Planned residential developments (PRD's) are residential projects of large-scale or of mixed dwelling types, which are developed according to a concept plan and detailed development plan. PRD's may include commercial convenience uses as well. The detailed development plan allows the County to evaluate the relationship of the project to surrounding uses and the internal relationships among the proposed uses within the project. PRD's employ alternative design techniques for purposes of establishing common open space, fostering compatible design, and minimizing infrastructure costs, while meeting density standards established in the General Plan.

***Clustering.*** Clustered housing offers an alternative to traditional rectilinear lot design without the necessity of using PRD procedures. Cluster housing allows the concentration of residential density on unconstrained land within a development site consistent with General Plan densities in exchange for preservation of constrained land (for example, land with steep slopes).

***Zoning Conditions.*** The County may establish reasonable conditions in approving zoning applications. For instance, the County, in granting a zoning request, may establish a condition requiring a schedule of development that addresses each phase of the project. Clear guidelines for conditions placed on rezonings can provide greater flexibility in the zoning process without sacrificing its predictability.

***Performance Standards.*** Performance standards are based on a use's effects on adjacent properties. They may address noise, spill-over lighting and emissions from a site. The developer of a site can choose the most effective design to meet these standards and ensure that off-site effects are within acceptable levels. Performance standards can vary depending on the type of adjacent uses. For example, requirements for noise levels at the property line could be stricter if the adjacent use is a single family residence than if it is a retail center. Well-designed performance standards can also make a normally incompatible use acceptable in a particular location because they address the effects which would otherwise make the use undesirable.

***Special Use Permits.*** Special use permits are most appropriate for the kinds of uses that are not clearly compatible with other uses in a given district, but that can be compatible if properly located, developed, and operated. For instance, a child care facility may be compatible with surrounding single family homes if the number of children and hours of operation do not exceed certain thresholds. By establishing specific criteria for special use permits, the County can provide land use flexibility while protecting neighborhoods.

***Site Plan Review.*** A site plan is a graphical depiction of the location, dimensions and relationships of proposed structures, landscaping, driveways, parking facilities and utilities on a lot. County review of site plans ensures that the proposed development meets County requirements, promotes compatibility with adjacent development, and protects residents from hazardous driveways and other safety hazards. In addition to being a useful regulatory tool, site plans can provide valuable records of improvements for Public Works and Emergency services personnel, as well as future property owners. The type of information and level of detail required on site plans should be appropriate to the type of development proposed. Multi-family and non-residential projects typically require a higher level of site plan review than single family development.

#### **4. Building Permits**

The building permit process is the primary mechanism for ensuring that buildings are constructed or renovated in a way that ensures the safety of future occupants. Mohave County issues building permits for and inspects all new development and redevelopment within its borders. The building permit applications and subsequent inspections ensure that building code standards are enforced.

#### **5. Development Agreements**

Where authorized under State law, development agreements can facilitate development by resolving land use and infrastructure issues. Agreements can address the timing, location and intensity of development, as well as the timing, location, sizing and funding of infrastructure improvements. Well written agreements can assure the County that adequate facilities and services will be available to meet new demands, and they can assure developers that their investment in a project will not be lost due to some future change in County regulations or policy. While development agreements can help overcome obstacles to development on a site by site basis, they can create administrative burdens, if the agreements are not drafted in a way that is easy to monitor and enforce. By establishing a common format and a tracking system for development agreements, the County can take advantage of this useful tool while minimizing its administrative costs.

### **C. FACILITY MASTER PLANNING**

Rapid growth areas such as Mohave County face escalating costs for constructing, operating and maintaining public facilities -- costs that can be minimized through sensible planning and programming. Facility master plans describe the locations and capacities of system improvements needed to serve planned growth. Capital improvements programs establish time frames for construction of planned improvements and describe how those improvements will be funded.

## **1. Master Plans**

Facility master plans are guides for the general design of drainage, transportation or other systems. These plans project the size, location and timing of anticipated demands, show where facilities will be located, describe the general design and required capacities to meet anticipated demands, and estimate the costs associated with system improvements. The drainage master plan should provide a general analysis of anticipated flood conditions and indicate the types and sizes of natural and built drainage facilities required to accommodate anticipated floodwaters from the design storm. The transportation master plan should address the location and design of major streets, including typical rights-of-way for urban, suburban and rural development areas.

## **2. CIP**

The Capital Improvements Plan (CIP) is the primary tool for implementing facility master plans. A CIP is a multi-year plan for publicly funded infrastructure projects, one that describes the locations and sizes of the County's high priority public improvements. Any CIP that the County Board of Supervisors may choose to adopt should be updated regularly so that decision makers can project anticipated costs and revenue needs and so that the public knows where and when to expect public investment in infrastructure. Capital improvements should be consistent with General Plan policies, planned land uses and facility master plans.

The County will need to monitor and project short term demands because the Land Use Diagram provides more than enough land for anticipated development through the year 2010. Monitoring development trends can help the County avoid under- or over-building infrastructure. Some areas planned for urban land uses will develop more quickly than others. By comparing anticipated demands with infrastructure capacity, the County can ensure that its CIP addresses the areas of greatest need.

## **3. CFD**

A Community Facility District (CFD) is a tool that helps developers finance public improvements for a specific area. By establishing a CFD developers are allowed to create an additional jurisdiction or “special district”, and issue bonds that are used towards financing public improvements. Only the end users of these public improvements are responsible for the repayment of issued bonds. By utilizing CFDs the County may be able to facilitate developers in their development of large tracts of land with sufficient infrastructure that, as a result, may provide various levels of affordable housing. CFDs are essentially a mechanism that allows the end users of growth to pay directly for that growth.

## **D. INTERGOVERNMENTAL COORDINATION**

Mohave County is one of many agencies involved in decisions affecting growth and development. The U.S., State and city governments all participate in land use decisions on a regular basis. In addition, numerous utility providers plan system expansions to serve anticipated development. Coordinating land use and facility planning can help the County and other agencies make decisions that protect or enhance property values, minimize infrastructure costs and preserve the quality of life for Mohave County's residents.

### **1. Coordination with Cities**

The need for infrastructure, such as streets, water and sewer facilities, and development patterns do not recognize corporate boundaries. Planning for extraterritorial areas around cities requires coordination between the County and cities. The County should include the appropriate city when planning for extraterritorial areas. Intergovernmental agreements can be used to coordinate design standards, development standards and construction.



## **2. Utility Coordination**

County residents and utility companies can benefit from similar coordination between the County and other utility providers. By coordinating utility extensions with planned land uses and development proposals, utility providers will be able to determine the most appropriate timing, location and capacity of utility extensions.

## **3. Planning for Development on Government Land**

State legislation authorizes the County to enter into cooperative agreements with State agencies and Indian tribes for purposes of determining the nature and timing of development, applicable development standards and supporting infrastructure. Under such agreements, many uncertainties concerning private development on government lands can be resolved through negotiated agreements.

## **E. PUBLIC INVOLVEMENT**

An informed, involved citizenry is a key element of democratic society. The County's primary mission is to meet the needs and desires of the public. By encouraging appropriate public involvement in decision-making through mail outs and the media, County leaders can ensure that their actions truly address public needs. Public involvement can take many forms, including active participation in County committees and boards, participation at public meetings, responding to surveys or requests for comments, or voting. Mohave County can benefit from the collective wisdom of its residents, but only if it maintains an open decision making process.

### **1. Public Participation**

The public participation and hearing process described in the County's zoning regulations should be used to implement the public participation process in order to ensure adequate public participation in the development and amendment of the General Plan, an existing Area Plan, or the adoption of an Area Plan which does not conform to the General Plan.

## **F. REVIEW OF THE GENERAL PLAN**

### **1. Amendments**

The General Plan should be a dynamic document that grows with the County -- changing to meet changing needs and conditions. However, if the Plan is subject to modification too frequently, the County's planning efforts will lose their effectiveness and credibility. The Plan provides for major and minor amendment processes to maximize its flexibility while ensuring its consistency. Policies relating to amendment of this General Plan are found in Goal 27 of the Land Use Element. Plan amendment processing, governed by A.R.S. 11-805, is incorporated into the County zoning regulations.

Plan implementation is not a single event. It results from consistent application of established policy to many decisions. While the County should consistently apply its policies, the Plan should be flexible enough to respond to changing conditions. Minor amendments, such as a change of land use category within a particular development area, may be considered periodically as needed. Minor amendments are not a major change in direction in the County decision making process.

Modification of the General Plan's goals and policies can be a major or minor amendment. Amendments that clarify direction or that expand on existing policies may be a minor amendment. Amendments that represent a change in direction are major amendments and should occur infrequently. A General Plan review should occur every five (5) years to confirm that the goals, policies and land use designations are still valid. The General Plan shall be completely reviewed through public participation and readopted every ten (10) years as required by state law.

This Plan establishes the Area Plan adoption process to refine the General Plan policies and Land Use Diagram for specific areas within the County. This Plan provides criteria defining a major amendment to the Plan. Some area plans for adoption will be major amendments to the General Plan. Frequent major changes to the Plan risk shifting its direction and intent. However, area plan adoptions or modifications determined to be minor amendments (or other minor changes to the adopted Land Use Diagram) may be made more frequently without reducing the General Plan's effectiveness.

## **2. Plan Monitoring**

This General Plan will be most effective if the County regularly monitors its implementation. This can be accomplished by semi-annual review. Annual reviews can be used to evaluate the County's progress in implementing the Plan. A five year review should summarize development activity, describe any public actions taken to implement the Plan, report obstacles to implementation, recommend modifications and suggest priority implementation strategies for the next five (5) years. Five (5) year reviews can be conducted with minimal administrative burden if the County incorporates General Plan references into existing procedures.

## **3. Plan Policy Review**

The goals and policies and implementation measures of the General Plan should also be reviewed at five (5) year intervals to ensure that they reflect the County's current needs. This review should examine the assumptions and conditions that form the basis of the Plan. Base data should be updated to reflect changes in demographics, utility systems, environmental conditions, development trends, regulatory conditions, and other pertinent information. The County shall follow state and county laws and regulations concerning the public participation process to provide the opportunity for individuals, neighborhood groups, the development industry and other interested parties to have input into the reevaluation of the County's goals and policies.

## **X. Appendices**

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*Glossary of Terms*  
*Background Reports from Plan Preparation*  
*Average Surface Water Flows*  
*Water Quality Indicators and USGS Report*  
*Well Depths & Water Levels by Water Use & Well Status*  
*Colorado River Water Entitlement Holders*  
*Mohave County Census Data & Overlay on Drainage Basins*  
*Watershed Prioritization Criteria*  
*Additional Background on Water*  
*Background on General Plan Preparation*  
*Renewable Energy Projects Overlay*

## **X. APPENDICES**

### **A. GLOSSARY OF TERMS**

#### **APPENDIX A GLOSSARY OF TERMS<sup>24</sup>**

##### **Affordable Housing**

Housing capable of being purchased or rented by a household with very low, low, or moderate income, based on a household's ability to make monthly payments necessary to obtain housing. Housing is considered affordable when a household pays less than 30 percent of its gross monthly income for housing including utilities.

##### **Air Quality Standard**

A legal requirement for air quality, usually expressed in terms of a maximum allowable pollutant concentration averaged over a specified interval.

##### **Ambient Noise Level**

The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

##### **Amendment, Major Plan**

A proposal to modify the adopted General Plan in a way which represents a change in the County's overall policy direction and which will have a significant effect on the County's ability to achieve the Plan's goals and policies. Major Plan amendments include, but are not limited to, changes to the text of General Plan goals and policies, and as further defined in this document, proposals to change the boundaries of Urban or Suburban Development Areas depicted in the Land Use Element of the General Plan.

##### **Amendment, Minor Plan**

A proposal to modify the adopted General Plan in a way which refines the application of overall County policy direction or which is not likely to have a significant effect on the County's ability to achieve the Plan's general goals. Minor Plan amendments include, but are not limited to, the creation or amendment of Area Plans and proposals to change the General Plan land use designation of a single property within an Urban, Suburban or Rural Development Area. The County Board of Supervisors may determine any amendment proposal to be defined and processed as a Minor Plan Amendment.

##### **Approach Zone**

The air space at each end of a landing strip that defines the glide path or approach path of an aircraft and which should be free from obstruction.

##### **Area Plan**

Detailed plan focusing on a subarea of Mohave County. Area Plans include specific plans and community plans adopted by the County.

##### **Arterial**

Medium-speed (30-40 mph), medium-capacity (10,000-35,000 average daily trips) roadway that provides intra-community travel and access to the county-wide highway system. Access to community arterials should be provided at collector roads and local streets; direct access from parcels to existing arterials should be discouraged.

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<sup>24</sup>Adapted from the California General Plan Glossary, 1990.

**Bajada**

A nearly flat, or slightly sloping fan of alluvial deposits along the base of a mountain range.

**Base Flood**

In any given year, a 100-year flood that has a one percent likelihood of occurring.

**Clustered Development**

Development in which a number of dwelling units are placed in closer proximity than usual, or are attached, with the purpose of retaining an open space area.

**CNEL**

Community Noise Equivalent Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of 4.77 decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

**Collector**

Relatively-low speed, relatively-low volume (5,000-20,000 average daily trips) street that provides circulation within and between neighborhoods. Collectors usually serve short trips and are intended for collecting trips from local streets and distributing them to the arterial network.

**Compatible**

Capable of existing together with minimal conflict or ill effects.

**Conservation**

The management of natural resources to prevent waste, destruction, or neglect.

**dB**

Decibel; a unit used to express the relative intensity of a sound as it is heard by the human ear.

**dBA**

The "A-weighted" scale for measuring sound in decibels; weighs or reduces the effects of low and high frequencies in order to simulate human hearing. Every increase of 10 dBA doubles the perceived loudness through the noise is actually ten times more intense.

**Dedication**

The turning over of private land for public use, and the acceptance of land for such use by the governmental agency having jurisdiction over the public function for which it will be used.

**Density, Residential**

The number of residential dwelling units per acre of land. Densities specified in the General Plan are expressed in units per gross site acre and/or gross site acres per unit.

**Developer**

An individual who, or business that, prepares raw land for the construction of buildings or causes to be built physical building space for use primarily by others.

**Developing**

In the process of undergoing development. Developing areas are those parts of the County where the number or scale of development proposals or projects is resulting in a change in the character of the area and, often, a change in the type of public services and facilities necessary to meet residents' needs.

**Development**

The physical extension and/or construction of buildings or infrastructure. Development activities include: subdivision of land; construction or alteration of structures, roads, utilities, and other facilities; installation of septic systems; grading; deposit of refuse, debris, or fill materials. Routine repair and maintenance activities are exempted.

**Dwelling Unit**

A room or group of rooms (including sleeping, eating, cooking, and sanitation facilities, but not more than one kitchen), that constitutes an independent housekeeping unit, occupied or intended for occupancy for more than thirty days.

**Easement**

Usually the right to use property owned by another for specific purposes or to gain access to another property. For example, utility companies often have easements on the private property of individuals to be able to install and maintain utility facilities.

**Easement, Conservation**

A tool for acquiring open space with less than full-fee purchase, whereby a public agency buys only certain specific rights from the landowner. These may be positive rights (providing the public with the opportunity to hunt, fish, hike, or ride over the land) or they may be restrictive rights (limiting the uses to which the landowner may devote the land in the future).

**Endangered Species**

A species of animal or plant is considered to be endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes.

**Environmentally Sensitive**

Lands which have important environmental resources, the continuing health or stability of which is sensitive to disruption by human activities. The General Plan identifies wetlands and sensitive habitats (identified critical habitat for threatened or endangered species) as environmentally sensitive.

**Erosion**

(1) The loosening and transportation of rock and soil debris by wind, rain, or running water. (2) The gradual wearing away of the upper layers of earth.

**Established levels (of service)**

The extent of existing improvements, utilities and other infrastructure and facilities, as well as any existing services that might be provided for a given area.

**Extraterritorial Area**

Typically extraterritorial areas will constitute a three mile radius of the corporate boundaries. Areas adjacent to, but outside, a city's incorporated boundary that affect the environment, land use and facilities inside the city. A city's ability to affect development in an extraterritorial area is dependent on the relevant provisions of state law. In Mohave County, Joint Development Planning Areas, if adopted, may describe those extraterritorial areas of greatest concern to cities.

**Extraterritorial Development**

Development occurring in an extraterritorial area.

**Flood, 100-year**

The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a 1/100, or one percent, chance of occurring in any given year.

**Floodplain**

The land area on either side of the banks of a stream subject to flooding. That part of the floodplain subject to a one percent chance of flooding in any given year is designated as an "area of special flood hazard" by the Federal Insurance Administration.

**Floodway**

The channel of a river or other watercourse and the adjacent land areas that should be reserved in order to discharge the "base flood" without cumulatively increasing the water surface elevation more than one foot.

**Freeway**

A high-speed, high-capacity, limited-access transportation facility serving regional and county-wide travel. Such roads are free of tolls, as contrasted with "turnpikes" or other "toll roads." Freeways generally are used for long trips between major land use generators. Major streets cross at a different grade level.

**Goal**

Description of a desired state of affairs for the community in the future. They are the broad public purposes toward which policies and programs are directed. Since goals are general statements, more than one set of actions could be taken to achieve each goal. In this Plan, goals are phrased to express the desired results of the Plan; they complete the sentence "Our goal is ...."

**Gross Site Acre**

All of the land that is part of a development site including street rights-of-way.

**Growth Areas**

Cohesive areas in the county which have been rapidly growing, continuously growing over a substantial time period, or are expected to grow in the immediate future. These areas will typically include areas within three miles of an incorporated city that is experiencing growth, and areas of the County, including outlying communities, which have experienced rapid growth or sustained growth such as Golden Valley and Mohave Valley.

**Guidelines**

General statements of policy direction around which specific details may be later established.

**Habitat**

The physical location or type of environment in which an organism or biological population lives or occurs.

**Hazardous Material**

Any substance that is recognized by the Environmental Protection Agency as a hazardous material.

**Historic, Historical**

A registered historic building or site that is noteworthy for its significance in local, state, or national history or culture, its architecture or design, or its works of art, memorabilia, or artifacts.

**Historic Preservation**

The preservation of registered, historically significant structures, sites, features or neighborhoods in order to facilitate, restoration and rehabilitation of the building(s) to a former condition.

**Household**

All those persons -- related or unrelated -- who occupy a single housing unit.

**Impact**

The effect of any direct man-made actions or indirect repercussions of man-made actions on existing physical, social, or economic conditions.

**Impervious Surface**

Surface through which water cannot penetrate, such as roof, road, sidewalk, and paved parking lot.

**Implementation Measures**

Specific actions which Mohave County may choose to take in achieving the goals of the General Plan.

**Infrastructure**

Public services and facilities, such as sewage-disposal systems, water-supply systems, other utility systems, and roads.

**Issues**

Unsettled community matters or problems that are identified in a community's general plan and dealt with by the plan's goals, policies, and implementation programs.

**Joint Development Planning Areas (JDPAs)**

An area of Mohave County, adjacent to a city, where the county and the city have agreed under A.R.S. 11-951 and A.R.S. 9-461 to a general plan, a specific plan, land use regulations and/or infrastructure financing.

**Land Use Diagram**

Graphic representation which designates the proposed general distribution and general location and extent of land use categories in the County.

**Landscaping**

Planting of trees, shrubs, and ground covers and earthscaping of soils and rocks that are suitably designed, selected, installed, and maintained as to enhance a site or roadway.

**Land Use**

The occupation or utilization of land for any human activity or purpose defined in the General Plan.

**Ldn**

Day-Night Average Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

**Lot**

A portion of a subdivision having frontage on a street and intended for transfer or ownership intended or used for building development.

**Major Development Projects**

Projects which, because of their size or location, may result in significant impacts on the operation of roadways and other public facilities. A quantitative definition of major development projects may be established as part of procedures for the use of traffic impact analysis for development projects.

**Minimum**

The least amount, or the nominal threshold. In a General Plan context, the term is commonly used to indicate a lowest acceptable level of regulatory compliance, or lowest acceptable standard. Use of this term does not obligate the County, or an applicant to limit standards to the minimum, but do require compliance with at least minimum standards.



**Noise**

Any loud, discordant or disagreeable sound or sounds.

**New Kingman**

A Census designated place name (one of many in Mohave County), also generally intended to mean “Butler”, or “New Kingman Addition”, or more recently developed portions of the north Kingman area, most or all of which is currently unincorporated, and not actually within the city limits of the City of Kingman.

**Off-Site**

Land area not included in a development application made to Mohave County.

**On-Site**

Land area included in a development application made to Mohave County; a development site.

**Open Space Land**

Any parcel or area of land or land covered with water that is essentially unimproved and devoted to an open space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety.

**Ordinance**

A law or regulation set forth and adopted by a governmental authority, usually a city or county.

**Parcel**

A separate or distinct part or portion of land other than a lot.

**Policy**

Statements of government intent against which individual actions and decisions are evaluated.

**Pollutant**

Any introduced gas, liquid, or solid that makes a resource unfit for its normal or usual purpose.

**Pollution**

The presence of matter or energy the nature of which, the location, or the quantity produces an established undesired environmental effect.

**Pro Rata**

Refers to the proportionate distribution of something to something else or to some group, such as the cost of infrastructure improvements associated with new development apportioned to the users of the infrastructure on the basis of projected use.

**Rare or Endangered Species**

A species of animal or plant listed in Title 50, Code of Federal Regulations, Section 17.11 or Section 17.2, pursuant to the Federal Endangered Species Act designating species as rare, threatened, or endangered.

**Recognize**

To officially (or by official action) identify or perceive a given situation.

**Recycle**

The process of extraction and reuse of materials.

**Regional**

Pertaining to activities or economies at a scale greater than that of a single jurisdiction, and affecting a broad geographic area.

**Regulation**

A rule or order for implementing ordinances or laws of a governmental body.

**Residential**

Land designated for buildings consisting only of dwelling units.

**Restore**

To renew, rebuild, or reconstruct to a former state.

**Restrict**

To check, bound, or decrease the range, scope, or incidence of a particular condition.

**Rezoning**

An amendment to the map and/or text of a zoning ordinance to effect a change in the nature, density, or intensity of uses allowed in a zoning district and/or on a designated parcel or land area.

**Right-of-way**

A strip of land occupied or intended to be occupied by certain transportation and public use facilities, such as roadways, railroads, and utility lines.

**Runoff**

That portion of rain or snow that does not percolate into the ground or evaporate.

**Scenic Highway Corridor**

The area outside a highway right-of-way that is generally visible to persons travelling on the highway.

**Scenic Highway/Scenic Route**

A highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and man-made scenic resources and access or direct views to areas or scenes of exceptional beauty or historic or cultural interest.

**Sign**

Any representation (written or pictorial) used to convey information.

**Slope**

Land gradient described as the vertical rise divided by the horizontal run, and expressed in percent.

**Soil**

The unconsolidated material on the immediate surface of the earth created by natural forces that serves as natural medium for growing land plants.

**Solar Access**

The provision of direct sunlight to an area specified for solar energy collection when the sun's azimuth is within 45 degrees of true south.

**Solid Waste**

General category that includes organic and inorganic wastes.

**Standards**

(1) A rule or measure establishing a level of quality or quantity that should be complied with or satisfied. (2) Requirements in a zoning ordinance that govern building and development as distinguished from use restrictions -- for example, site-design regulations such as lot area, height limit, frontage, landscaping, and floor area ratio.

**Storm Runoff**

Surplus surface water generated by rainfall that does not seep into the earth but flows overland to flowing or stagnant bodies of water.

**Subdivision**

The division of a tract of land into defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed in accordance with A.R.S. 32-2101.

**Trip**

A one-way journey that proceeds from an origin to a destination via a single mode of transportation.

**Trip Generation**

The dynamics that account for people making trips in automobiles, other self propelled vehicles or by means of public transportation.

**Wash**

A normally dry natural water course having bed and banks.

**Zone**

A specific use classification established by ordinance which limits or permits various and specific uses. Synonymous with the definition of "District" in A.R.S. 11-801.

**Zoning**

A division of the county by ordinance into areas, or zoning districts, that specify allowable uses for property, allowable building area and size limitations for buildings; the process of zoning as described in A.R.S. 11-804, 11-805, and 11-811; a tool or program intended to implement the policies of the General Plan.

## **APPENDIX B**

### **BACKGROUND REPORTS FROM PLAN PREPARATION**

The following reports were prepared as part of the General Plan process to provide background information. Each of the reports was prepared by the County's General Plan consultants, Freilich, Leitner, Carlisle and Shortlidge.

Phase I Report: Growth Coordination Program Issues and Opportunities for Mohave County, Arizona. This report provides a brief overview of existing conditions, lists key issues and opportunities, recommends goals and strategies to address the key issues, prescribes a growth coordination program and identifies short term regulatory needs.

Mohave County, Arizona General Plan Baseline Analysis. This document, which is based on a comprehensive review of existing conditions and trends, examines the County's natural and cultural resources, its population and employment characteristics, recent development activity, and its public facilities and services. In addition to examining existing conditions and trends, the analysis reviews numerous projections of population growth. The report also provides discussions of issues relating to each of the major headings.

Mohave County General Plan Alternatives Analysis. This document defines four growth and development alternatives and analyzes the impacts of each of those alternatives on the environment, communities, public facilities, the regulatory environment, and other factors. A City Infill/Joint Development Emphasis alternative focuses all growth in existing incorporated cities. A Focus on New Centers shifts the County's emphasis to the urban development of the emerging urban centers of Golden Valley and Mohave Valley. A Tier Development alternative defines growth areas based on available infrastructure and environmental constraints. A Base Case alternative explores the impacts of maintaining existing policies and regulations.

**APPENDIX C**

<b>Average Surface Water Flows, excluding Colorado River &amp; Reservation (Source: ADWR Water Atlas)</b>				
<b>Basin</b>	<b>USGS Station Name</b>	<b>Peak Flow (cu. ft./Sec)</b>	<b>Daily Flow (cu. ft./Sec)</b>	<b>Annual Flow (ac. ft./yr)</b>
<b>Kanab</b>	Bitter Seeps Wash near Fredonia	497	No Data	No Data
<b>Hualapai</b>	Truxton Wash at Valentine	5,740	No Data	No Data
<b>Hualapai</b>	Truxton Wash near Valentine	1,384	1.43	No Data
<b>Hualapai</b>	Valentine Wash near Valentine	520	No Data	No Data
<b>Virgin</b>	Virgin River above the Narrows	31,555	139.60	See Littlefield
<b>Virgin</b>	Beaver Dam	No Data	No Data	No Data
<b>Virgin</b>	Virgin River at Littlefield	7,641	173.38	174,600
<b>Virgin</b>	Big Bend Wash near Littlefield	38	No Data	No Data
<b>Detrital</b>	Detrital Wash near Chloride	119	No Data	No Data
<b>Mohave</b>	Ringbolt Wash near Hoover Dam	70	No Data	No Data
<b>Sacramento</b>	Little Meadow Creek near Oatman	113	No Data	No Data
<b>Sacramento</b>	Walnut Creek near Kingman	277	No Data	No Data
<b>Sacramento</b>	Sacramento Wash near Yucca	3,992	No Data	No Data
<b>Sacramento</b>	Sacramento Wash near Topock	189	No Data	No Data
<b>Big Sandy</b>	Cottonwood Wash near Kingman	3,840	4.67	No Data
<b>Big Sandy</b>	McGarry's Wash near Kingman	158	No Data	No Data
<b>Big Sandy</b>	Big Sandy River near Kingman	74	No Data	No Data
<b>Big Sandy</b>	Big Sandy River near Wikieup	12,949	84.74	55,730
<b>Burro Creek</b>	Kaiser Spring Canyon near Wikieup	208	No Data	No Data
<b>Burro Creek</b>	Francis Creek near Bagdad	5,088	14.96	1,740
<b>Burro Creek</b>	Burro Creek near Hwy 93	15,241	91.30	43,430
<b>Santa Maria</b>	Santa Maria River near Bagdad	7,841	60.10	48,490
<b>Santa Maria</b>	Santa Maria River near Alamo	6,861	34.45	22,440

## APPENDIX D

Well Count and Groundwater Inventory (Source: ADWR Wells 55 Database, 1/2010)								
Watershed/Basin/Sub-Basin	All Wells		Exempt Wells		Non-Exempt Wells		Est. Ac-Ft in Storage	Drainage Basin Area (sq. mi.)
	Count	Exempt	Avg Well Depth	Avg Water Depth	Avg Well Depth	Avg Water Depth		
<b>Bill Williams Watershed</b>	<b>2,024</b>	<b>1,583</b>	<b>348</b>	<b>192</b>	<b>355</b>	<b>182</b>		
Big Sandy/Fort Rock	299	276	361	195	254	18	250,000	See Wikieup
Big Sandy/Wikieup <sup>26</sup>	1,343	1,063	343	195	298	80	9,250,000	1,988
Bill Williams/Alamo	111	72	264	126	201	63	10 - 20 Million	3,350
Bill Williams/Burro Creek	114	86	455	205	391	151	See Alamo	See Alamo
Bill Williams/Clara Peak	75	15	354	211	152	49	See Alamo	See Alamo
Bill Williams/Santa Maria	1	1	NA	NA	NA	NA	See Alamo	See Alamo
Bill Williams/Sacramento Valley <sup>4</sup>	81	70	375	186	598	240	See Sacramento	See Sacramento
<b>Colorado River Watershed</b>	<b>8,526</b>	<b>5,655</b>	<b>301</b>	<b>171</b>	<b>447</b>	<b>195</b>		
Big Sandy/Wikieup <sup>26</sup>	192	158	362	185	281	79	See Alamo	See Wikieup
Detrital Valley	394	220	557	388	842	379	1.5-3.9M	892
Grand Wash	48	14	348	190	100	0	?	959
Hualapai Valley	1,529	1,255	466	277	733	375	3.8-10.1M	1,212
Kanab Plateau <sup>5</sup>	365	67	354	174	167	61	?	4,247
Lake Havasu	547	131	249	128	243	63	2 Mill (71,204)*	252
Lake Mohave	3,351	2,330	133	64	235	95	1.2 Mill (170,563)*	980
Meadview	64	33	723	530	723	568	62,440	190
Peach Springs	41	33	307	187	466	169	1,000,000	1,409
Sacramento Valley <sup>27</sup>	1,933	1,414	394	226	715	332	3.6-9.5M	1,587
Shivwits Plateau <sup>5</sup>	62	7	65	29	NA	NA	?	See Virgin River
<b>Virgin River Watershed</b>	<b>1,343</b>	<b>685</b>	<b>223</b>	<b>132</b>	<b>230</b>	<b>97</b>		
Kanab Plateau <sup>28</sup>	535	215	118	53	199	85	?	See Colorado River
Shivwits Plateau <sup>28</sup>	84	12	38	15	480	260	?	1,821
Virgin River	724	458	286	189	250	105	1,700,000	434
<b>Grand Total</b>	<b>11,893</b>	<b>7,923</b>	<b>305</b>	<b>169</b>	<b>376</b>	<b>155</b>		

<sup>26</sup> The Wikieup sub-basin is divided between the Bill Williams and Colorado River watersheds

\* Colorado River Entitlement holders in Mohave County have 241,767 acre feet of water per year

<sup>27</sup> The Sacramento Valley basin is shared between the Bill Williams and Colorado River watersheds.

<sup>28</sup> The Kanab and Shivwits Plateaus drain to both the Virgin River and Colorado River watersheds.

## APPENDIX D

<b>Water Quality Indicators (Source: Various ADWR Hydrological Maps and Studies)</b>			
<b>Watershed/Basin/Sub-basin</b>	<b>Total Dissolved Solids (499 mg/liter or less)</b>	<b>Fluoride (1.39 mg/liter or less)</b>	<b>Overall Quality</b>
<b>Bill Williams Watershed</b>			
Big Sandy/Fort Rock	?	?	Generally Good
Big Sandy/Wikieup <sup>29</sup>	282 to 2,460	0.2 to 20.0	Generally Good
Bill Williams/Alamo	?	?	Generally Good
Bill Williams/Burro Creek	?	?	Generally Good
Bill Williams/Clara Peak	?	?	Generally Good
Bill Williams/Santa Maria	?	?	Generally Good
<b>Colorado River Watershed</b>			
Detrital Valley	227 to 1,530	0.3 to 2.2	Generally Suitable
Grand Wash	287 to 317	0.2 to 0.4	Generally Suitable
Hualapai Valley	210 to 2,365	0.1 to 6.5	Generally Good
Lake Havasu	?	?	No Comment
Lake Mohave	330 to 2,700	Higher	No Comment
Meadview	240 to 420	0.9 to 3.4	Generally Good
Peach Springs	156 to 660	0.0 to 0.8	Generally Good
Sacramento Valley <sup>30</sup>	198 to 1,728	0.3 to 5.1	Generally Good
<b>Virgin River Watershed</b>			
Kanab Plateau <sup>31</sup>	Higher	?	Generally Accepted
Shivwits Plateau <sup>31</sup>	?	?	Generally Suitable
Virgin River	276 to 2,000	0.5 to 1.5	Generally Suitable

<sup>29</sup>The Wikieup sub-basin is divided between the Bill Williams and Colorado River watersheds.

<sup>30</sup>The Sacramento Valley basin is shared between the Bill Williams and Colorado River watersheds.

<sup>31</sup>The Kanab and Shivwits Plateaus drain to both the Virgin River and Colorado River watersheds.















## APPENDIX D



Prepared in cooperation with the  
ARIZONA DEPARTMENT OF WATER RESOURCES

## Hydrogeologic Investigation of the Detrital, Hualapai, and Sacramento Valleys of Northwestern Arizona: A Project of the Rural Watershed Initiative

The Detrital, Hualapai, and Sacramento Valleys are broad, intermountain desert basins in Mohave County, northwestern Arizona, and are home to residents in the city of Kingman and several rural communities (fig. 1). Ground water is the primary source of water in these valleys and is essential for many economic and cultural activities. As in many parts of the Western United States, population growth in these valleys is substantial. From 2000 to 2004, the population of Kingman grew from 20,100 to 24,600—an increase of 22 percent (Arizona Department of Economic Security, 2005). During the same time period, the population of Mohave County increased by 16 percent. Management of the available ground-water resources in these valleys guided by a comprehensive scientific understanding can help the growing communities to meet their needs in a sustainable manner.

In 2005, the U.S. Geological Survey (USGS) began an investigation of the hydrogeology of the Detrital, Hualapai, and Sacramento Valleys in cooperation with the Arizona Department of Water Resources (ADWR) as part of the Rural Watershed Initiative (RWI), a program established by the State of Arizona and managed by the ADWR. Other projects in the RWI program include investigations that began in 2005 in the middle San Pedro Basin and the Willcox and Douglas Basins, and investigations that began in 1999 in the Coconino Plateau, the Mogollon Highlands, and upper and middle Verde River study areas (<http://az.water.usgs.gov/rwi-ii/>).

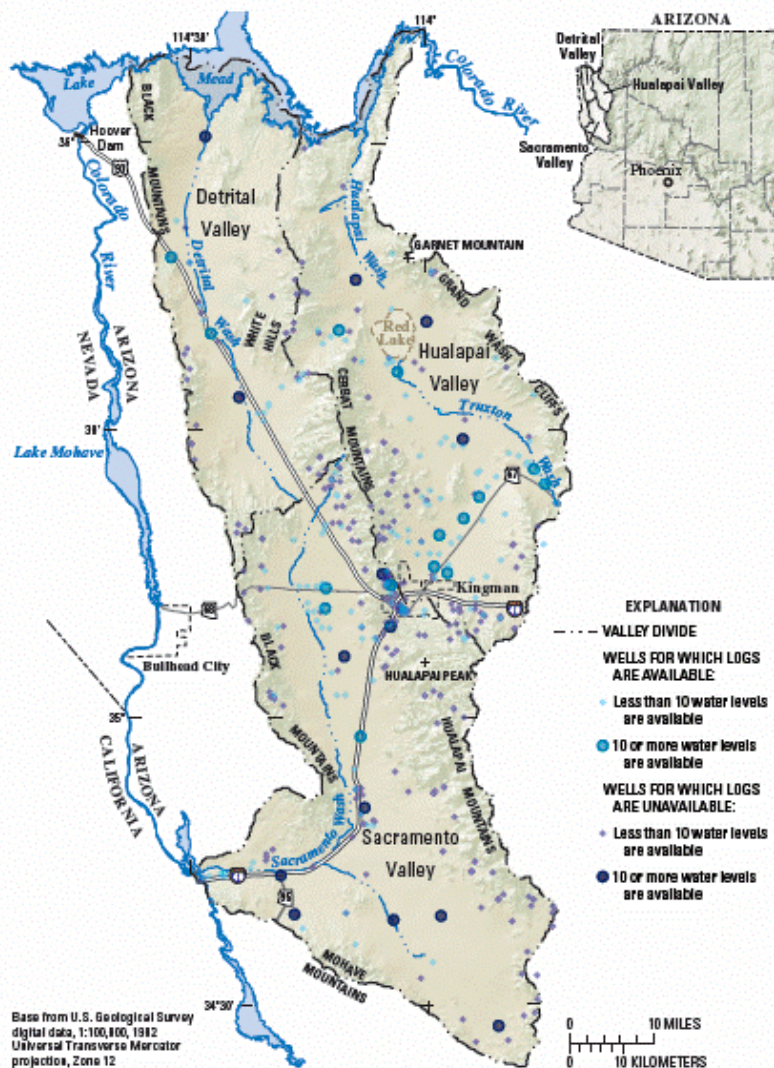


Figure 1. Physiography and location of water-level and well-log data for Detrital, Hualapai, and Sacramento Valleys, northwestern Arizona.



## APPENDIX D

The primary objective of this investigation is to improve the understanding of the hydrogeologic systems of Detrital, Hualapai, and Sacramento Valleys. This will be accomplished by:

1. Assessing the current knowledge of the ground-water flow system and existing data-collection networks, and identifying additional data needs.
2. Improving the understanding of the extent and lithology of geologic units and structures, and their relation to the storage and movement of ground water.
3. Improving the understanding of ground-water movement and the estimates for ground-water budget terms, including recharge, discharge, and total water in storage.
4. Evaluating the ground-water quality for key water uses.
5. Establishing a hydrologic-monitoring network to detect and characterize changes in aquifer conditions.
6. Informing the hydrologic community and valley residents about hydrologic conditions.

### Physical Setting

The Detrital, Hualapai, and Sacramento Valleys are three distinct northwest-southeast trending alluvial basins in the Basin and Range Physiographic Province. The valley floors of Detrital and Hualapai Valleys generally slope downward to the north, and the valley floor of Sacramento Valley generally slopes downward to the south. Valley floor elevations range from about 3,500 ft near Kingman to about 500 ft at the mouth of Sacramento Wash. Mountain crests rise as much as 5,500 ft above valley floors, and the highest mountain in the study area is Hualapai Peak at 8,417 ft.

The climate of the valleys is arid to semiarid with hot summers and mild winters. Maximum daily temperatures in the valley floors typically are between 90 and 110°F during the summer, and between 50 and 70°F during the winter (Western Regional Climate Center, 2005). Annual precipitation on the valley floors ranges from about 5 to 10 in. Valley floors generally are covered with sparse



**Figure 2.** Desert vegetation and municipal development of the city of Kingman in Hualapai Valley.

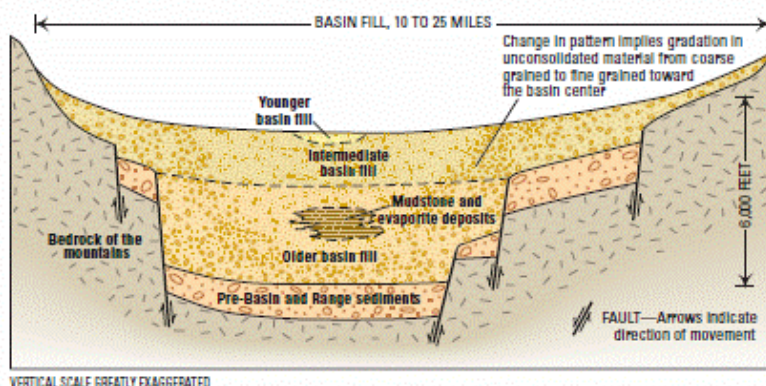
desert vegetation (fig. 2) owing to the hot temperatures and little precipitation. Shrubs and trees cover mountain slopes and peaks in the higher elevations where temperatures are cooler and precipitation is greater. Annual precipitation in the mountains ranges from about 10 to 15 in.

### Geology

The structural basins of Detrital, Hualapai, and Sacramento Valleys were formed during the Basin and Range disturbance, in which mountain ranges and basins were formed on adjacent sides of high-angle normal faults (fig. 3). The bedrock of the mountains that separate the valleys consists of granitic, metamorphic, sedimentary, and volcanic rocks (fig. 4). In most areas, the bedrock is relatively impermeable compared to the basin fill and forms

barriers to ground-water movement in the basin-fill aquifer. The Grand Wash Cliffs along the eastern margin of the Hualapai Valley consist of Paleozoic sedimentary rocks that extend eastward and mark the boundary between the Colorado Plateau and Basin and Range Physiographic Provinces (Gillespie and Bentley, 1971).

The structural basins of the Detrital, Hualapai, and Sacramento Valleys contain basin fill (fig. 3) that ranges in thickness from a veneer along the mountain fronts to more than 5,000 ft in parts of each valley (Freethy and others, 1986; fig. 4). The basin fill is divided into older, intermediate, and younger hydrogeologic units (Gillespie and Bentley, 1971). Older basin fill is stratigraphically the oldest and deepest deposit, and consists of moderately consolidated fragments of rocks eroded from the surrounding mountains in a



**Figure 3.** Generalized hydrogeologic section of the Detrital, Hualapai, and Sacramento Valleys (modified from Anderson and others, 1992).



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silty-clay or sandy matrix. The grain size decreases from pebble- and boulder-size fragments in the conglomerate near the mountains to coarse sand and interbedded clay and silt in the basin center. Each valley has large areas of older basin fill where more than 55 percent of the sediments are fine grained (Freethy and others, 1986; fig. 4). In the northern parts of Hualapai and Detrital Valleys, massive evaporite deposits occur in the older basin fill (Gillespie and Bentley, 1971; Laney, 1979; Freethy and others, 1986; fig. 4). The composition of the intermediate basin fill is similar to that of the older basin fill, and the intermediate basin fill also becomes finer grained towards the basin center; however, the thickness of the intermediate basin fill is on the order of a few hundred feet rather than a few thousand feet. Thickness of the younger basin fill, which consists of Holocene piedmont, stream, and playa deposits, is also less than that of the older basin fill. In the northern parts of Detrital and Hualapai Valleys, the basin fill also includes clastic sediments, limestone, and basalt flows of the Muddy Creek and Chemehueve Formations (Laney, 1979).

### Hydrology and Water Use

Detrital, Hualapai, and Sacramento Valleys are drained by a network of streams that are intermittent or ephemeral owing to the dry climate. Detrital Wash, Hualapai Wash, and Sacramento Wash are the primary streams in their valleys and drain to the Colorado River. A topographic divide separates the northern and southern parts of Hualapai Valley. Truxton Wash, the only major stream that originates outside of the three valleys, drains part of the basin east of Hualapai Valley and flows westward into the southern part of the Hualapai Valley into Red Lake Playa (fig. 1). Streams generally flow only in response to regionally extensive winter storms or from spatially scattered summer thunderstorms. Runoff in mountain tributaries usually does not reach the valley's primary stream, but rather infiltrates the streambed sediments or evaporates. Many stream channels become poorly defined with distance from the mountain front owing to the lack of streamflow. Although the Colorado River forms a small part of the perimeter of each valley, it generally is

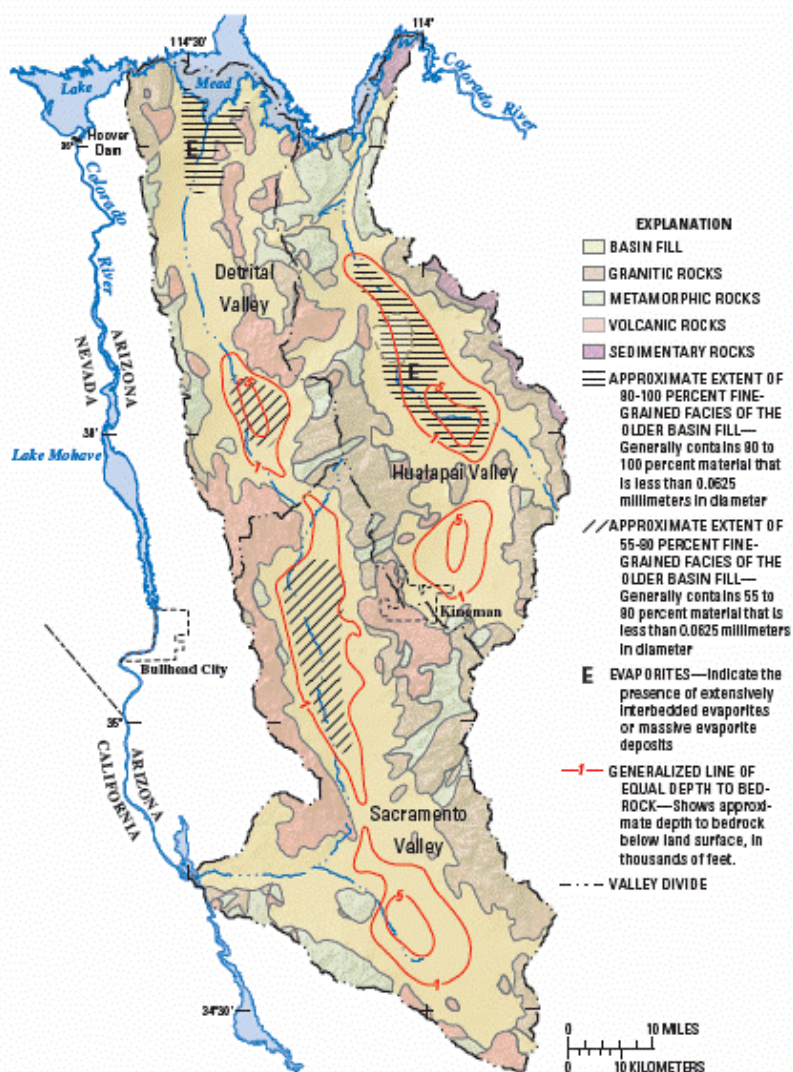


Figure 4. Bedrock geology and basin-fill characteristics in the Detrital, Hualapai, and Sacramento Valleys (modified from Richard and others, 2000, and Freethy and others, 1986).

not a significant water supply within the valleys.

Ground water from the basin-fill aquifer is the primary water supply for each of the three valleys. The older basin fill is the primary water-bearing deposit because intermediate and younger basin fill are above the water table in most areas. Most ground-water withdrawals in the valleys are for municipal and industrial uses; a small percentage of withdrawals is used for agriculture. The combined annual ground-water pumpage for the three valleys was

about 6,600 acre-ft in 1991; by 2000, pumpage had nearly doubled to about 11,000 acre-ft (Tadayon, 2005). The combined annual recharge for the three valleys was estimated to be about 9,000 acre-ft (Freethy and Anderson, 1986), and ground-water storage was estimated to be about 13 million acre-ft (Arizona Department of Water Resources, 1994). Regional ground-water movement in the basin-fill aquifer generally is from the mountain fronts towards the valley center and then along the valley axis to the Colorado River. In general, depths



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to ground water are greatest in the upper parts of the valleys and decrease downgradient to within a few feet below the land surface near the Colorado River. The greatest depths to water are about 1,200 ft near the boundary between Detrital and Sacramento Valleys (Dillenburg, 1987; Rascona, 1991), and about 600 ft near Kingman in the Hualapai Valley (Remick, 1981).

Local ground water in consolidated rocks serves as a water supply in some areas, especially where rocks are faulted, fractured, and weathered (Gillespie and Bentley, 1971). In the Kingman area, volcanic rocks are locally permeable near two fault zones, and ground-water stored in the fractures has been used as part of the municipal water supply. Several springs issue from consolidated rocks and in some cases serve as water supplies for livestock and wildlife.

### Water Quality

The Arizona Department of Environmental Quality has completed baseline ground-water quality studies in the Detrital (Towne, 2003) and Sacramento Valleys (Towne and Freark, 2001), and has begun a similar study in the Hualapai Valley. A total of 28 sites were sampled in Detrital Valley, and 48 sites were sampled in Sacramento Valley; sites included wells completed in basin-fill and consolidated-rock aquifers. In Detrital Valley, constituents for which 10 percent or more of the samples exceeded State or Federal water-quality standards include gross alpha, nitrate, total dissolved solids, sulfate, and manganese. In Sacramento Valley, constituents for which 10 percent or more of the samples exceeded such standards include gross alpha, nitrate, total dissolved solids, fluoride, chloride, and sulfate. In both valleys, dissolved-solids concentrations exceeded the standards more than any other constituent. On the basis of the results for all samples from each valley, the studies concluded that ground water in the Detrital and Sacramento Valleys generally met drinking-water standards.

### Planned Approach

Previous studies have provided a basic understanding about the hydrogeologic systems of Detrital, Hualapai, and Sacramento Valleys; however, several aspects need refinement and improved

definition for optimal management of the ground-water resources. The study will begin with a compilation of existing information to develop a hydrogeologic database for the three valleys. In addition, field surveys will be conducted to update existing data for boreholes, wells, and water levels (fig. 1). Information gained in these efforts will be used to refine the initial conceptual models of the hydrogeologic systems of the valleys and to guide data-collection efforts in the following years. A preliminary assessment indicates that more hydrogeologic information and data are available for Hualapai and Sacramento Valleys than for Detrital Valley; therefore, data-collection and analysis efforts likely will be focused on Detrital Valley. Possible data-collection and analysis efforts include:

1. Geophysical and geological investigations to define geologic features that affect storage and flow of ground water. Features include structures, such as faults, and the thickness, lateral extent, and lithology of hydrogeologic units.
2. Determination of hydraulic properties of the hydrogeologic units using field and empirical methods.
3. Determination of ground-water storage and the direction and rate of ground-water movement using water-level, geometry, and hydraulic-property information for the hydrogeologic units.
4. Determination of ground-water recharge to and discharge from the basin-fill aquifers in each valley using information gained in item 3 about ground-water movement, as well as climate, water-use, and other data.
5. Establishment of a hydrologic-monitoring network that utilizes gravity data and water-level data to assess changes in ground-water storage over time.
6. Collection and analysis of ground-water samples from several wells to further characterize the extent of high dissolved-solids concentrations in ground water and their relation to hydrogeologic factors.

—David W. Anning, Marilyn E. Flynn, and Margot Truini

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**APPENDIX E**

<i><b>Water Use</b></i>	<i><b>Well Type</b></i>	<i><b>Count</b></i>		<i><b>Average Well Depth</b></i>		<i><b>Average Water Level</b></i>		<i><b>Well Depth Change</b></i>	<i><b>Water Level Change</b></i>
		<i><b>2000</b></i>	<i><b>2010</b></i>	<i><b>2000</b></i>	<i><b>2010</b></i>	<i><b>2000</b></i>	<i><b>2010</b></i>	<i><b>2000-2010</b></i>	<i><b>2000-2010</b></i>
Domestic	Exempt	3,265	6,299	244.7	311.0	144.9	181.6	-66.3	-36.7
	Non-Exempt	336	462	281.4	306.6	138.8	140.8	-25.1	-2.0
Commercial	Exempt	19	35	159.1	265.2	97.7	171.6	-106.1	-73.9
	Non-Exempt	29	153	743.8	763.0	335.4	351.1	-19.2	-15.7
Industrial	Exempt	40	53	276.2	272.6	159.6	150.7	3.6	8.9
	Non-Exempt	99	138	200.5	262.3	88.8	98.9	-61.8	-10.1
Irrigation	Exempt	125	164	161.5	185.6	84.1	97.1	-24.2	-13.0
	Non-Exempt	374	543	211.8	220.3	81.2	81.0	-8.5	0.2
Mining	Exempt	21	34	403.7	473.4	210.7	257.3	-69.7	-46.7
	Non-Exempt	44	112	713.3	810.4	401.0	351.2	-97.1	49.8
Municipal	Exempt	15	17	336.6	344.9	198.9	186.4	-8.3	12.4
	Non-Exempt	98	127	504.5	572.2	205.8	194.2	-67.6	11.6
Utility Co	Exempt	2	5	345.0	600.0	196.5	338.3	-255.0	-141.8
	Non-Exempt	16	51	521.3	691.9	286.5	339.9	-170.5	-53.4
Stock	Exempt	579	838	203.2	222.3	107.3	96.7	-19.1	10.6
	Non-Exempt	38	77	298.1	453.6	107.9	128.7	-155.6	-20.9
<b>Total*</b>	<b>Exempt</b>	<b>4,169</b>	<b>7,445</b>	<b>239.8</b>	<b>299.2</b>	<b>139.6</b>	<b>170.4</b>	<b>-59.4</b>	<b>-30.7</b>
	<b>Non-Exempt</b>	<b>1,090</b>	<b>1,663</b>	<b>303.2</b>	<b>370.0</b>	<b>133.6</b>	<b>148.8</b>	<b>-66.8</b>	<b>-15.2</b>

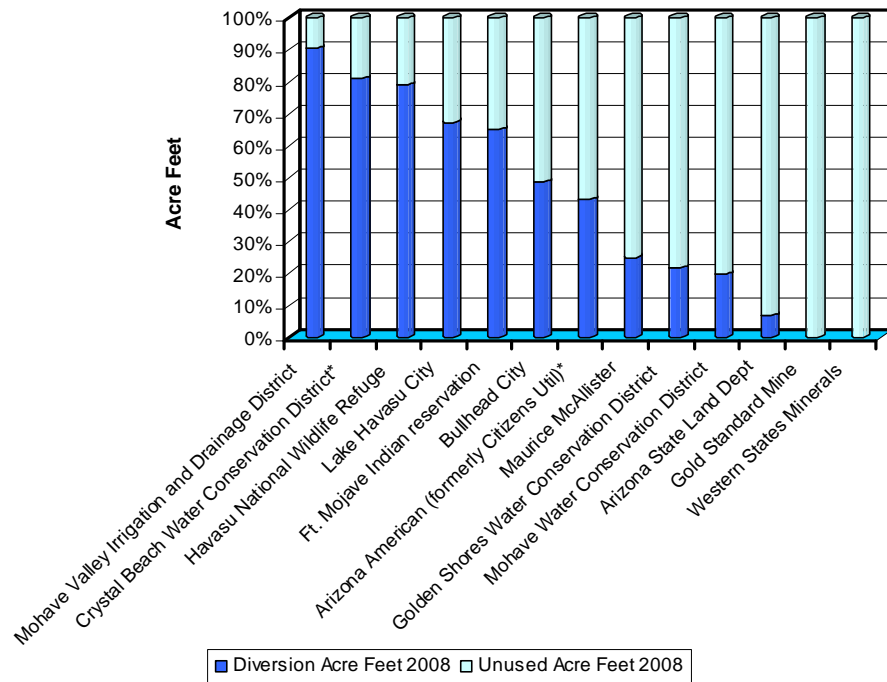
\* Excepting Monitor, Piezometer, Exploration and other non-water production wells.

**APPENDIX F**

<b>Bureau of Reclamation, Lower Colorado River Accounting System</b>					
Water User	Diversion Acre Feet		Unused Acre Feet		Ac Ft Entitlement
	2000	2008	2000	2008	
Mohave Valley Irrigation and Drainage District	37,432	37,088	3,568	3,912	41,000
Ft. Mojave Indian reservation	65,871	67,264	37,664	36,271	103,535
Crystal Beach Water Conservation District*	90	107	42	25	132
Havasu National Wildlife Refuge	40,228	33,108	1,611	8,731	41,839
Lake Havasu City	14,630	16,973	10,550	8,207	25,180
Bullhead City	8,122	10,290	13,088	10,920	21,210
Arizona American (formerly Citizens Util)*	423	611	997	809	1,420
Golden Shores Water Conservation District	547	435	1,453	1,565	2,000
Mohave Water Conservation District	694	941	4,106	3,859	4,800
Arizona State Land Dept	0	31	468	437	468
Gold Standard Mine	0	0	75	75	75
Western States Minerals	0	0	70	70	70
Maurice McAllister	0	10	40	30	40
<b>Total</b>	<b>168,037</b>	<b>166,858</b>	<b>73,732</b>	<b>74,911</b>	<b>241,769</b>

**Colorado River Water Users**

Source: Bureau of Reclamation, 2008

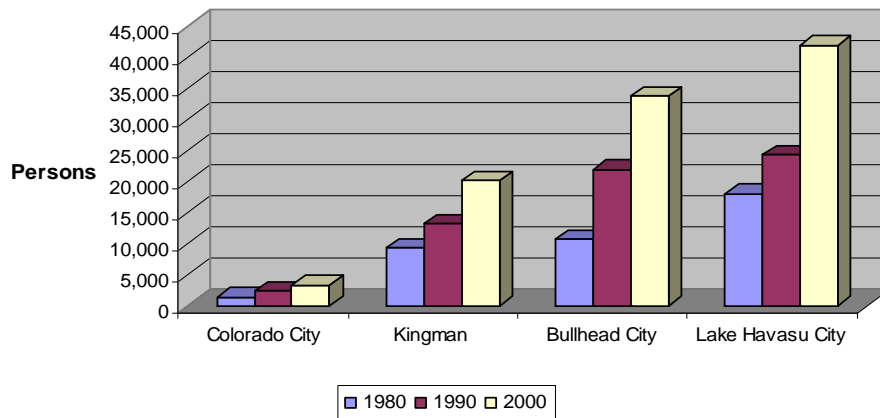




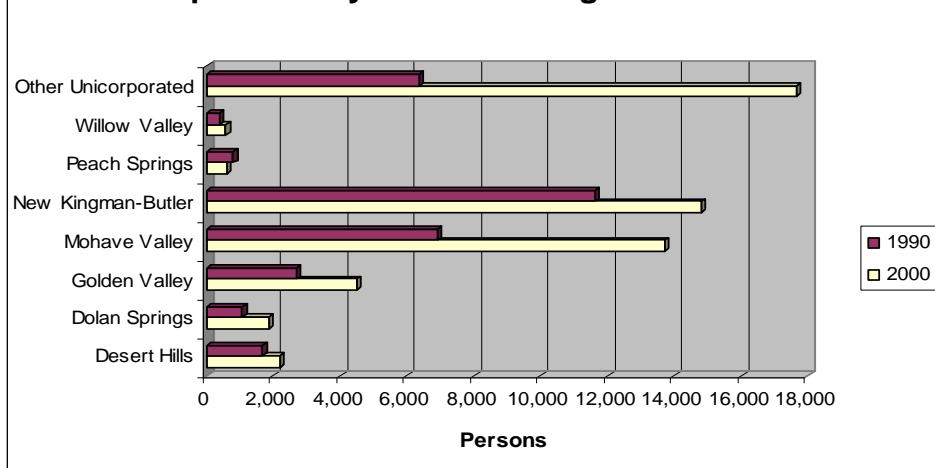
## APPENDIX G

<b>Population and Growth Rates 1980, 1990 &amp; 2000</b>						
	Place	1980	1990	2000	80s	90s
<b>C I T Y</b>	Colorado City	1,439	2,426	3,334	68.59%	37.43%
	Kingman	9,257	13,208	20,069	42.68%	51.95%
	Bullhead City	10,719	21,951	33,769	104.79%	53.84%
	Lake Havasu City	18,052	24,363	41,938	34.96%	72.14%
<b>C D P</b>	Desert Hills		1,682	2,183		29.79%
	Dolan Springs		1,076	1,867		73.51%
	Golden Valley		2,690	4,515		67.84%
	Mohave Valley		6,913	13,694		98.09%
	New Kingman-Butler		11,627	14,810		27.38%
	Peach Springs		801	600		-25.09%
	Willow Valley		404	585		44.80%
	Other Unincorporated		6,356	17,668		177.97%
	Total Unincorporated	15,909	31,549	55,922	98.31%	77.25%
	Total	55,376	93,497	155,032	68.84%	65.81%

### Population Growth in Cities



### Population by Census Designated Places



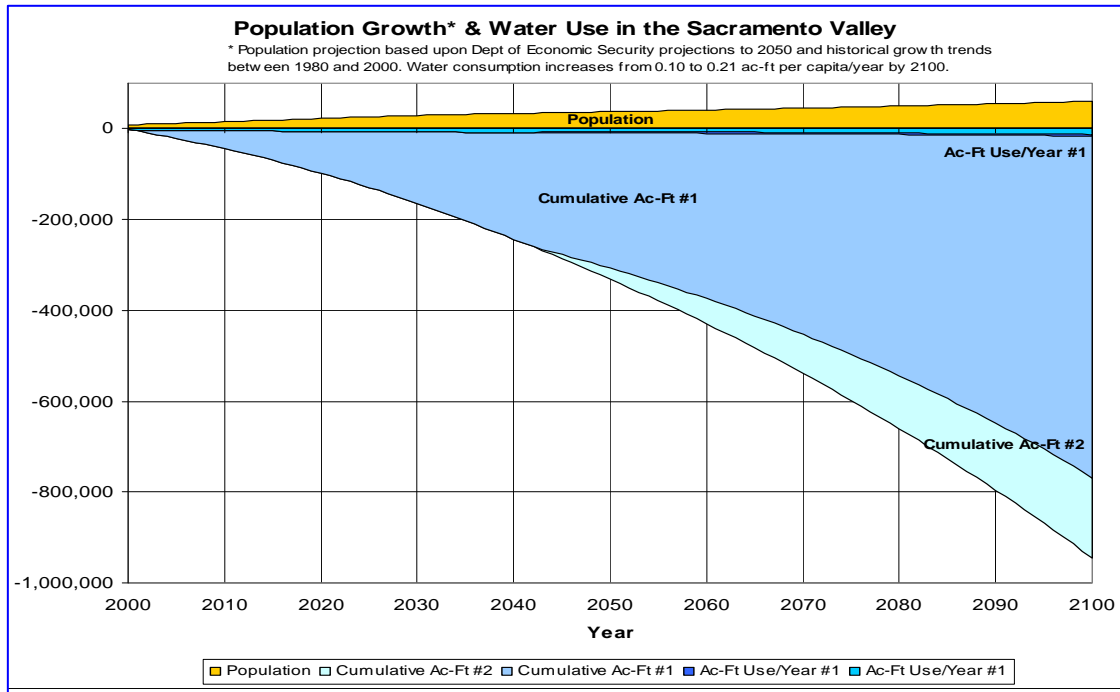
## APPENDIX G

### *Sacramento Valley (Part of Kingman) Population Projection and Water Use*

<b>Water Supply w/o recharge in the Aquifer</b>				
Population*	Ac Feet Available	AcFt percapita Yr	AcFt Use Yr	Years Supply
9,000	7,000,000	0.10	900	7,778
25,000	7,000,000	0.15	3,750	1,867
50,000	7,000,000	0.20	10,000	700
100,000	7,000,000	0.25	25,000	280
250,000	7,000,000	0.30	75,000	93
500,000	7,000,000	0.30	150,000	47
1,000,000	7,000,000	0.30	300,000	23

<b>Water Supply w/ 4,500 ac-ft of recharge in the Aquifer</b>				
Population*	Ac Feet Available	AcF percapita Yr	AcFt Use Yr	Years Supply
9,000	Surplus	0.10	900	Surplus
25,000	Surplus	0.15	3,750	Surplus
50,000	10,150,000	0.20	10,000	1,015
100,000	8,260,000	0.25	25,000	330
250,000	7,420,000	0.30	75,000	99
500,000	7,210,000	0.30	150,000	48
1,000,000	7,105,000	0.30	300,000	24

\* Includes downtown Kingman since it is part of the Sacramento Basin

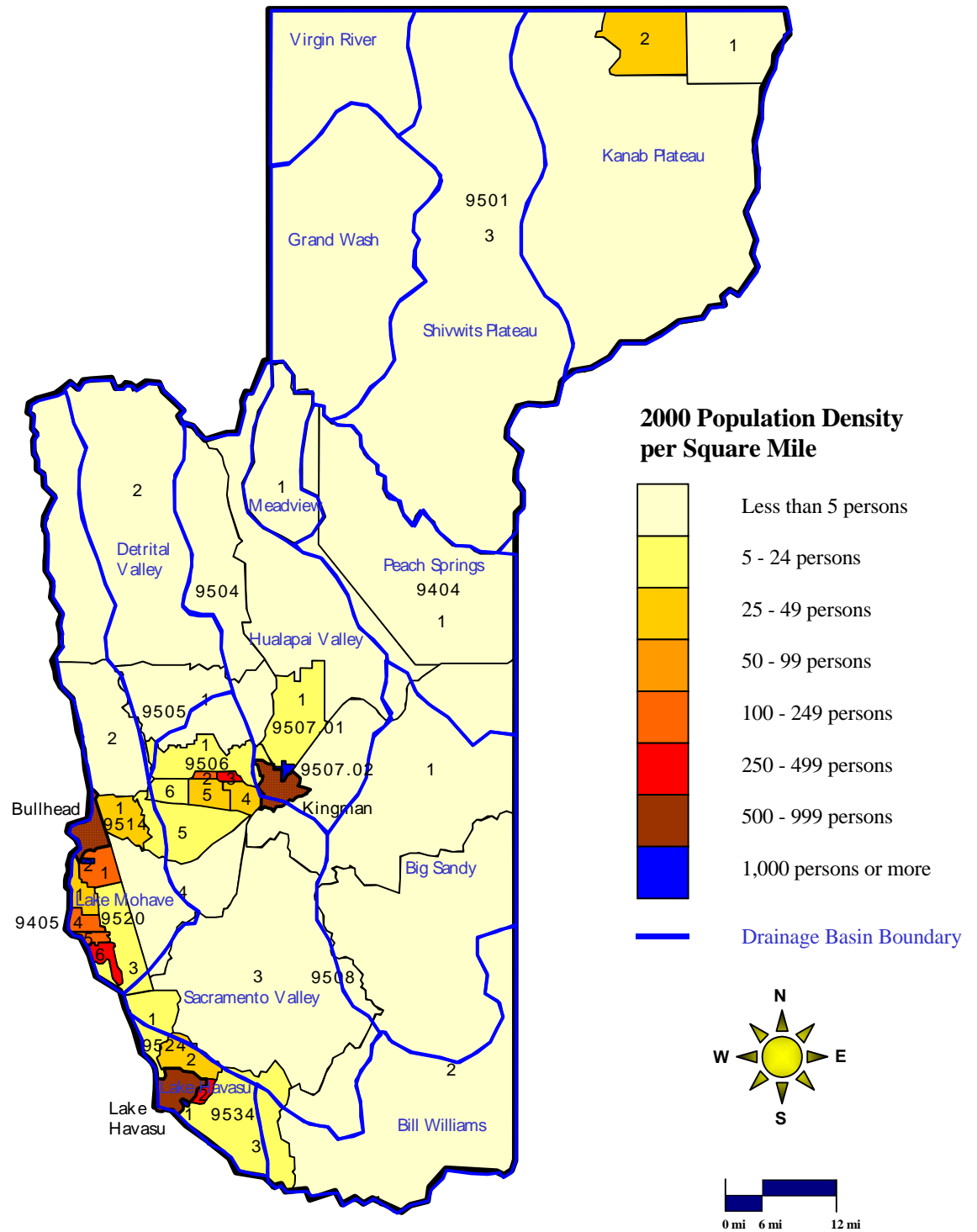




APPENDIX G

Mohave County Census Tract Overlay on Drainage Basins

Source: 2000 Census/ ADWR/ Mohave County P& Z Dept.



## APPENDIX H

Prioritization Criteria (Rank)					
Watershed/Basin/Sub-basin	Population Growth Rate	Est. Persons per Sq. Mi	Storage (Ac-Ft)	Potential Contaminate	% Exempt Wells
<b>Bill Williams Watershed</b>					
Big Sandy/Fort Rock (4 <sup>th</sup> )	150-200%	< 5	250,000	Low	92.3%
Big Sandy/Wikieup <sup>32</sup> (4 <sup>th</sup> )	50-74%	< 5	9,250,000	Mod	79.2%
Bill Williams/Alamo (10 <sup>th</sup> )	50-74%	< 5	S. Maria	Low	64.9%
Bill Williams/Burro Creek (10 <sup>th</sup> )	50-74%	< 5	S. Maria	Low	75.4%
Bill Williams/Clara Peak (10 <sup>th</sup> )	50-74%	< 5	S. Maria	Low	20.0%
Bill Williams/Santa Maria (10 <sup>th</sup> )	50-74%	< 5	10 – 20M	Low	100.0%
<b>Colorado River Watershed</b>					
Detrital Valley (5 <sup>th</sup> )	50-74%	< 5	1.5–3.9M	Mod	55.84%
Grand Wash (13 <sup>th</sup> )	NA	< 5	?	Low	29.2%
Hualapai Valley (7 <sup>th</sup> )	50-74%	40	3.8-10.1M	Mod	82.1%
Lake Havasu (3 <sup>rd</sup> )	75-100%	100	71,204 *	High	24.0%
Lake Mohave (2 <sup>nd</sup> )	75-100%	50	170,563 *	High	69.5%
Meadview (9 <sup>th</sup> )	150-200%	< 5	62,440	Mod	51.6%
Peach Springs (11 <sup>th</sup> )	50-74%	< 5	1,000,000	Low	80.5%
Sacramento Valley <sup>33</sup> (1 <sup>st</sup> )	100-149%	15	3.6-9.5M	Mod	73.2%
<b>Virgin River Watershed</b>					
Kanab Plateau <sup>34</sup> (8 <sup>th</sup> )	50-74%	< 5	?	Low	40.2%
Shivwits Plateau <sup>34</sup> (12 <sup>th</sup> )	NA	< 5	?	Low	14.3%
Virgin River (6 <sup>th</sup> )	200%+	< 5	1,700,000	Mod	66.6%

<sup>32</sup>The Wikieup sub-basin is divided between the Bill Williams and Colorado River watersheds.

<sup>33</sup>The Sacramento Valley basin is shared between the Bill Williams and Colorado River watersheds.

<sup>34</sup>The Kanab and Shivwits Plateaus drain to both the Virgin River and Colorado River watersheds.

## APPENDIX I

According to information from the Arizona Department of Water Resources, the quantity, quality and sensitivity of groundwater varies throughout the County. The County includes all or portions of the 14 groundwater basins illustrated in Exhibit V.1. As of January 2010 there were 11,893 wells in Mohave County according to ADWR (see Appendix D). Most of these wells occur in the Colorado River Drainage Basin (8,526), with 3,531 wells in the Lake Mohave Basin. The Sacramento Valley ranks second with 1,933 wells. Nearly two-thirds (7,923) of the wells in the County are exempt<sup>35</sup> with many used for domestic consumption (53.0%). A higher percentage (63.9%) of wells in the Sacramento Valley are for domestic use and 73.2% of all wells are exempt. The owners of these exempt, domestic wells are likely to feel the effects of groundwater depletion before commercial, industrial and municipal well operators. Exempt wells typically do not penetrate the water table as deep as non-exempt wells. For example the typical exempt, domestic well stops 100' below the water table, whereas, non-exempt, municipal wells are 300' lower than the water table (see Appendix E). Municipal wells, including private water companies, make up 1.4% in the Sacramento Valley and include GVID No.1, Chloride, Valley Pioneers, Yucca, Walnut Creek, City of Kingman and City of Needles Water Companies. Wells in these basins yield volumes ranging from a few gallons per minute to over 1,600 gallons per minute. Of the 3,510 wells with reported pump rates in 2000, 141.52 gallons per minute was the average yield. This value is biased towards the high end of the spectrum with a relatively small number of high capacity pumps (126 wells with 1,000 gallons or more per minute). The median pump rate is 20 gallons per minute and reflects the preponderance of exempt, low-yield, domestic wells in the County.

Near the Colorado River, water is plentiful, clean and relatively close to the surface averaging 150 feet deep. However, its quality is sensitive to contaminants in river water and in the alluvial soils above it. Septic systems, fertilizers, pesticides and urban development are known and potential sources of contamination. This annual supply will allow development in the area for somewhat more than 50 years. However, the amount of available groundwater supply clearly shows the limits on future groundwater use in the area (ADWR, 1994 and 2008). To the north of Highway 68, the depth to groundwater approaches 1,000 feet and yields are much lower than in the south. The groundwater study notes that there is enough groundwater in the area between Golden Valley, south of Ash Drive, and Yucca to satisfy 16,000 acre-feet of annual demand for 100 years before the water table lowers to 1,200 feet. This portion of the aquifer could be used, according to ADWR, to meet demand in Golden Valley if there is enough financing to construct wells and pipelines to transport the water. Griffith Energy is projected use 3,060 acre-feet per year for the 40-year life of the power plant.

The water quality in aquifers in other parts of the County varies with soil conditions. (see Appendix D) These aquifers are recharged primarily through precipitation and are sensitive to natural and introduced soil contaminants in the mountain washes where most of the precipitation occurs. Higher total dissolved solids and fluoride concentrations are found outside of the aquifer, typically along the recharge areas at the base of the mountain fronts. The Town of Chloride has poor water quality and many residents haul water from water companies located in Golden Valley. Residents are working with WIFA and Valley Pioneers Water Co. to build a pipeline from Mineral Park. Other factors affecting water quality are illegal dumping in washes (oils & solvents) and nitrates from septic tanks. Virtually all of the development in the unincorporated parts of the Sacramento Valley and Dutch Flat is dependent on individual septic systems and will be for some time since the density required to make a sanitary district financially feasible is not seen in the current low density development pattern of 1-acre-plus lots.

<sup>35</sup> An exempt well has a maximum pump capacity of 35 gallons per minute. Typical uses include non-irrigation purposes, non-commercial irrigation of less than 2 acres of land, and watering stock. Most exempt wells are used for residences and are more than adequate for household use. In AMAs, new exempt wells used for non-residential purposes can withdraw a maximum of 10 acre-feet per year (ADWR, Drilling a Well in Arizona: A Practical Guide).

The Arizona Department of Water Resources and the United States Geological Survey monitor the use of groundwater throughout the state and produce periodic reports summarizing available groundwater information. Current reports, which are summarized in the Baseline Analysis for this Plan, do not estimate firm yields of any of the groundwater basins. The USGS is studying the Detrital, Hualapai and Sacramento Basins.<sup>36</sup> See also ADWR preliminary studies.<sup>37</sup> The General Plan appendices include references to the best available information from these agencies, and as additional studies may be completed, future updates of the plan may include new information contained therein, or by reference. The studies themselves cite other references, as noted. The basins along the Colorado River appear to be limited only to the allocations. While the firm yield of the Sacramento Valley has not been determined, (estimated at 3.6 to 9.5 million acre-feet of groundwater in storage for the entire drainage basin) a study for the Golden Valley County Improvement District estimates that there is sufficient water in the basin to supply the 1.3 million acre feet projected to be demanded by the District over the next 100 years. This is nearly 60% of the total amount of water estimated to be in storage in the Sacramento aquifer north of Yucca. Information on other basins is limited. Of the 14 basins listed here, nine have estimates on the amount of acre-feet in groundwater storage (see Appendix D and ADWR Arizona Water Atlas, Volumes 4 and 6 for additional information). The Lake Mohave and Lake Havasu basins are under the purview of the Lower Colorado River Accounting System (LCRAS) and have exact allocations for water entitlement holders within (see Appendix F). Other basins, such as those in the Arizona Strip and in the Bill Williams Watershed have not been studied. Recharge estimates for the various drainage basins are limited in nature, with some based upon an “equilibrium” model, in that whatever water flows out of the aquifer will be replenished annually. Further recharge studies are needed before additional drainage basin studies can be conducted. By supporting and monitoring efforts to quantify supplies and demands, Mohave County can better plan for the long term water demands for residents and businesses as required by A.R.S. 11-804.

Effluent is processed primarily by septic tanks in Mohave County and provides soil moisture for evapotranspiration. Aside from small, independent package treatment plants owned and operated by private parties, the only organized sewer service area are managed by the Cities of Bullhead, Lake Havasu and Kingman, the Fort Mojave Tribal Utility Authority (FMTUA) and Arizona American in the Mohave Valley. The City of Kingman’s treatment facilities process some 1.5 million gallons of sewage per day and dispose of the effluent through pond evaporation, plant transpiration, and infiltration. This technology is being replaced at the City’s Hilltop Water Treatment Plant with a mechanical treatment system capable of producing over 1,000 acre-feet annually of A+ effluent to meet ADEQ nitrate rules (<10 ppm) for aquifer protection and potential reuse in the growing reclaimed water market. A small portion of this effluent is derived from the unincorporated lands adjoining the City. The Bullhead City sanitary district is contained within its corporate limits and serves its own residences; however, approximately 2,400,000 gallons of effluent are processed per day by its three treatment plants in 2010 and used to water city parks and golf courses. Approximately 300,000 gallons of effluent are produced by FMTUA per day (after loss to evaporation) and used in tribal agricultural pursuits. A portion of this effluent is obtained from non-reservation lands. Arizona American serves part of the unincorporated Mohave Valley and sends between 60,000 to 70,000 gallons of effluent per day to a local golf course where it supplements sweet water irrigation. Approximately 3,000 acre-feet of effluent is generated in the region annually (Arizona Water Atlas, v. 4, p. 29). In 2010, wastewater treatment facilities serving the City of Lake Havasu and surrounding areas generated 3,920 acre-feet of effluent.

<sup>36</sup> See Hydrogeologic Investigation of the Detrital, Hualapai, and Sacramento Valleys : <http://az.water.usgs.gov/>

<sup>37</sup> See Open File Reports 9, 10 & 11 at: <http://www.azwater.gov/azdwr/Hydrology/Library/OpenFileReports.htm>

## APPENDIX J

### 1. DEVELOPMENT OF THE 1995 PLAN

This planning process began as a result of a series of community workshops held by Mohave County in the summer and fall of 1990. The "Community Unity Forum" brought together key leaders and decision-makers from the County, the cities, special districts, the private sector and Indian tribes. These sessions resulted in a set of shared goals for the County's future and a greater degree of communication between jurisdictions. The report, Mohave County Community Unity Forum: Conference Proceedings, details these efforts.

Following the first Community Unity sessions, the County retained the consulting firm of Freilich, Leitner, Carlisle and Shortlidge to assist in preparing a comprehensive County Growth Coordination Program. Creation of an updated Countywide General Plan was identified as an important component of this program. The Growth Coordination Program also included efforts to propose new State enabling legislation for cooperative city-county planning and implementation; preparation of revised development ordinances and regulations; and pursuit of joint planning efforts with the cities, the State and the Indian tribes. This Growth Coordination Program began in the fall of 1990.

The first product of the program compiled information from initial research and from interviews with County leaders. Initial meetings were held in October of 1990 with each County Supervisor, and with key administration officials.<sup>38</sup> Based on these interviews and research on development trends, the Phase I Report: Growth Coordination Program Issues and Opportunities for Mohave County Arizona provides a brief overview of existing conditions, lists key issues and opportunities, recommends goals and strategies to address these key issues, prescribes a growth coordination program, and identifies short term regulatory needs. This assessment forms the basis for other aspects of the growth coordination program.

The second Growth Coordination Program product was the passage of new enabling legislation specifically for Mohave County. This legislation, known as HB 2345, gave Mohave County the ability to enter into agreements with its cities and to negotiate plans, regulations and funding for facilities serving fast-growing unincorporated areas. Although not specifically addressed in this General Plan, Joint Development Planning Area (JDPA) plans are available for planning the extraterritorial areas adjacent to incorporated cities.

The Growth Coordination Program continued with the planning and fact-finding efforts. A series of interviews were conducted with representatives of key Mohave County groups and agencies. These interviews, conducted in February through April of 1991, included representatives from County departments, special districts, utilities, the cities, the Planning Commission, developers, realtors and community organizations. The interviews were successful in obtaining information about the plans, programs and regulations of other agencies. They also were constructive in identifying opportunities for improving the County's planning and regulatory efforts, such as:

- ◆ The need for better coordination and communication in planning and timing utility line extensions
- ◆ Suggestions for improving agency response to development applications
- ◆ Support for a County plan for growth, instead of case-by-case response to proposals
- ◆ Support for coordination with BLM in addressing environmental and recreational issues
- ◆ Recommendations for revised street design requirements and easement policies.

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<sup>38</sup> These officials included David Grisez, County Manager; William Ekstrom, County Attorney; Jeff Johnson, Finance Director; and Jim Neblett, Planning Director.



Community workshops provided additional information and insight into the needs of the County. Workshops were held in Kingman, Golden Valley, Mohave Valley and Lake Havasu City June 24 through 27, 1991. Citizens attending the workshops were asked to identify their key concerns about the County's growth and future, to describe the opportunities and constraints facing future development in the County, and to suggest a desired vision of the County's future. Comments and recommendations from these workshops included:

- ◆ The County's assets include its open spaces, rural character, recreational opportunities and the distinct character of its communities.
- ◆ Economic development efforts are needed to provide more diverse job opportunities for residents.
- ◆ Concerns about maintaining groundwater quality were noted, as a significant aspect of the County's natural resources.
- ◆ Residents were concerned about managing growth, planning and constructing water and sewer facilities, and providing adequate roads.
- ◆ Rural residents felt the County should work to retain the rural character of their communities, rather than allowing them to become mixed urban-rural centers.
- ◆ Several participants recommended that the County use different planning policies and regulations in the rural areas than in the rapidly-urbanizing centers.
- ◆ The need for more aggressive County action to control trash dumping, hauling and similar practices was noted by many participants.

The perspectives and recommendations from these interviews and workshops were used in focusing the Plan's baseline analysis, in defining possible Plan alternatives and in developing Plan goals and policies.

## **2. BASELINE ANALYSIS**

In addition to the issues initially identified by the public, many of the Plan's assumptions are based on a comprehensive review of existing conditions and trends. A Baseline Analysis examines the County's natural and cultural resources, its population and employment characteristics, recent development activity, and its public facilities and services. In addition to examining existing conditions and trends, the analysis reviews numerous projections of population growth.

The Baseline Analysis includes five key sections. The Natural Resources section explores conditions and issues relating to Mohave County's unique geographical features, air quality, water resources, wildlife, cultural resources, energy and potential natural hazards. The Population and Employment section discusses trends and issues relating to population growth, population characteristics, housing, employment and the relationship between jobs and housing. The Development Activity section reviews available subdivision and building permit data. Based on population and development trends, the Population Projections section examines various projections for population growth to the year 2010. The Baseline Analysis concludes with an overview of existing public facilities and services, including: parks, public safety, fire protection, water, wastewater, transportation, electricity, natural gas, emergency medical services, solid waste and hazardous materials, libraries and schools. Much of the information in the analysis has been updated and summarized in this General Plan.

## **3. EVALUATION OF PLAN ALTERNATIVES**

This General Plan does not reflect the only possible future for the County; it is the refinement of a growth and development alternative preferred by County representatives.

The Mohave County General Plan Alternatives Analysis defines four alternatives and analyzes the impacts of each of those alternatives on the environment, communities, public facilities, the regulatory environment, and other factors. A City Infill/Joint Development Emphasis alternative focuses all growth in existing incorporated cities. A Focus on New Centers option shifts the County's emphasis to development of the emerging urban centers of Golden Valley and Mohave Valley. A Tier Development alternative defines growth areas based on available infrastructure and environmental constraints. A Base Case alternative explores the impacts of maintaining existing policies and regulations.

After reviewing the impacts of each of these alternatives and obtaining public comment, the County defined a new alternative that incorporated elements of each of those described above. The preferred alternative, which is illustrated in Exhibit VI.1 of this General Plan, provides for urban growth around existing and emerging centers, as well as in outlying communities where existing development patterns and infrastructure can support such growth. The preferred alternative also provides for suburban growth on the fringes of urban areas.

#### **4. PREPARATION OF THE GENERAL PLAN**

The General Plan is based on information obtained in previous phases of the Growth Coordination Program. The issues raised in each of those phases are addressed by the Plan's goals and policies. Much of the base information summarized in this report has been updated since it was originally discussed in the Growth and Opportunities report and the Baseline Analysis.

To ensure that the goals, policies and implementation measures of the initial draft of the General Plan reflect the specific needs of this County, the County's planning consultant worked closely with County staff in preparing the General Plan discussion draft. Through meetings and discussion of policy issues and options, the direction, level of emphasis and amount of detail appropriate for Mohave County's goals and policies were determined. The product of this cooperative effort was a draft General Plan for initial public discussion. The public review process and County adoption of the General Plan are described below.

#### **5. PLAN ADOPTION**

The first public discussion draft of the General Plan was presented to the Planning and Zoning Commission on August 10, 1992. The Commission referred the draft to the Ad Hoc Committee with instruction to review and recommend changes where necessary. The Committee's recommendations were transmitted to the Commission on February 8, 1993.

From August 10, 1993 to November 9, 1993, the commission held a series of workshops to consider the Ad Hoc Committee's comments as well as comments from County departments, State agencies and concerned citizens.

A second public draft of the General Plan was released in May 1994. To present the draft to the public, eight area meetings were held in June at the following locations:

- ◆ Lake Havasu Area at the Desert Hills Fire Station
- ◆ Mohave Valley/Bullhead City Area at the Joy Lane School
- ◆ Golden Valley/Yucca Area at the Black Mountain Elementary School
- ◆ Wikieup Area at the Owen Whitney School
- ◆ Dolan Springs/Meadview Area at the Dolan Springs Community Center
- ◆ Littlefield/Beaver Dam Area at the Littlefield School
- ◆ Colorado City/Centennial Area at the Colorado City Hall
- ◆ Kingman Area at the Board of Supervisors Hearing Room in the Negus Building

Issues discussed at the area meetings included the following:

- ◆ General and Detailed Land Use Diagrams for each area;
- ◆ Joint Development Planning Areas;
- ◆ Protection of rural lifestyle, particularly the keeping of animals;
- ◆ Level of County services, particularly handling solid waste.

Following the area meetings the Planning and Zoning Commission held three public hearings:

- ◆ Mohave Valley/Bullhead City on July 1, 1994;
- ◆ Lake Havasu City on July 28, 1994;
- ◆ City of Kingman on August 4, 1994.

As a result of these meetings, the second public hearing draft of the General Plan was amended. The Land Use Diagrams for the Lake Havasu Area, Golden Valley Area, Dolan Springs/Meadview Area, the Wikieup Area and for the Kingman Area were amended. The role Joint Development Planning Area Plans played in the General Plan was substantially reduced. The Planning and Zoning Commission recommendation briefly acknowledged that such plans can be developed. Also, a solid waste section was added to the Public Infrastructure Element.

The Planning and Zoning Commission passed P&ZC Resolution No. 94-3 on September 14, 1994, recommending to the Board of Supervisors that the General Plan be adopted as amended.

The Planning and Zoning Commission's recommended General Plan was presented to the Board of Supervisors at their regular meeting on December 5, 1994. The Board set the public hearing for the General Plan on January 4, 1995.

Comments at the public hearing included concerns over the lack of paved roadways, permitting process and zoning enforcement process. Questions were also raised concerning the constitutionality of zoning. The Board proposed minor text amendments and a major map amendment to the Golden Valley Land Use Diagram. Those amendments were referred to the Planning and Zoning Commission for comment. The remainder of the General Plan was adopted via BOS Resolution No. 95-24.

The Planning and Zoning Commission considered the Board of Supervisors' amendments at a special meeting held on February 9, 1995. The Commission concurred with most of the text changes. In considering the changes to the Golden Valley Land Use Diagram, the Commission recommended that the Board accept the land use diagram recommended by the Commission in September 1994. At their meeting on March 10, 1995, the Board of Supervisors adopted BOS Resolution No. 95-110 accepting the Planning and Zoning Commission's recommendations on the text changes and adopting the amended Golden Valley Land Use Diagram.

## **6. 2001 GENERAL PLAN UPDATE**

Growing Smarter and Growing Smarter Plus legislation, focusing on Smart Growth principles, such as promoting a compact and contiguous urban form, was adopted by Arizona in 2000. Mohave County's 2000 population qualified the jurisdiction for many of the new requirements. In 2001, the General Plan was updated to reflect changes in water conservation, public participation and rural planning areas. For example, the Water Resources Goal was modified to provide water in perpetuity. New language was added to address rural planning areas, initiated by citizens of outlying communities. The residents of Dolan Springs began with this template as their planning model, and later developed a traditional Area Plan that was adopted into the General Plan in 2003.

## **7. 2005 GENERAL PLAN UPDATE**

Baseline Analysis information used in the 2005 General Plan Update has been augmented with new information from the 2000 Census and the 1997 Economic Census. Additional information has been taken from the Arizona Department of Commerce, the Arizona Corporation Commission, the Arizona Department of Water Resources, and several other agencies and woven directly into the General Plan.

Public participation began by asking each member of the Board of Supervisors to appoint four citizens from his district to serve on the 2005 General Plan Update Committee. The first Update Committee meetings occurred in October, 2004, where the task of updating the General Plan was described. Ensuing meetings discussed the approach to update the plan, synthesizing public comments into goal and policy statements, and developing strategies to enhance public outreach.

Public outreach began with a set of public meetings at eight locations throughout the County in late fall, 2004.

- ◆ Kingman Area at the Board of Supervisors Hearing Room in the Negus Building
- ◆ Dolan Springs/Meadview Area at the Dolan Springs Community Center
- ◆ Golden Valley/Yucca Area at the Black Mountain Elementary School
- ◆ Lake Havasu Area at the Aquatic Center
- ◆ Mohave Valley/Bullhead City Area at the Junior High School (Boundary Cone)
- ◆ Wikieup Area at the Owens Whitney School
- ◆ Colorado City/Centennial Area at Mohave Community College
- ◆ Littlefield/Beaver Dam Area at the Littlefield/Beaver Dam School

Each meeting was conducted with the aid of a facilitator where participants were asked to write down their concerns with the General Plan. Questions and comments from the public were grouped by the elements of the General Plan. After a brief staff presentation, customized to each venue, questions and comments were discussed to see if: 1) the concern related to the General Plan, 2) the problem could be resolved with information provided by another agency, and 3) the issue could be crafted into a goal and/or policy statement in the General Plan. All comments were recorded and placed in an evaluation matrix. From this primary research, existing goals and policies were reevaluated with new language drafted by staff and the Update Committee at their regular monthly meetings.

With a working draft approved by the Update Committee in early spring, 2005, the second set of public meeting were held throughout the County to show: 1) how questions and concerns raised during the fall 2004 outreach sessions had been addressed and 2) how the General Plan's goals and policies were modified to deal with the issues. In June, the Update Committee held a final meeting to consider public comments. After integrating comments on population growth and expanded commercial land uses along highways, the Update Committee directed staff to distribute the Draft for 60-day review.

## APPENDIX K

### Map of Renewable Projects Planned for Mohave County

# Mohave County's Renewable Energy Projects Overlay on Land Tenure Pattern

