



Flood Control District of Maricopa County
2801 W. Durango Street
Phoenix, AZ 85009
(602) 506-6762

Aguila Hazard Mitigation Grant Program Application

Prepared for FEMA and the State of Arizona
Dec. 22, 2000

Aguila Acquisition Project

Introduction

Flood Control District of Maricopa County
Property of MC Library
Return to
Phoenix, AZ 85009

Aguila resident Florence Moody watched several feet of water swirl around her home on October 23. Each wave that licked at the house ate away at its foundation. The walls are collapsing around her.

For most people this would be a difficult turn of events. For Mrs. Moody, it was devastating. At 82, she uses a wheelchair to get around and is too weak to leave the house.

FEMA paid her to make repairs to her home, but she could not physically get to the bank to cash the checks, nor did she understand how to hire a contractor to perform those tasks for her. If this application is approved, Mrs. Moody said she will likely use the money she receives for the acquisition and demolition of her property to enter a rest home or a senior citizens mobile home park.

Mrs. Moody's situation is only one of many heartbreaking stories in the unincorporated Aguila area. Most of the residents live in stunningly beautiful countryside, yet in great financial poverty. The flood events of Oct. 23 took many of the few possessions these people had and left their homes in ruin. Water has wicked up walls, potentially causing disease-spreading mold and electrical damage. Roofs are caving in from excessive rainfall. Wallpaper is still peeling off two months after the event and floor tiles continue popping up. Residents have made make-shift repairs as best they could, but those repairs are insufficient for safe living,

But even the best of repairs cannot help these people. They live in the floodplain or the floodway and in the event of any major storm they will be flooded. Again and again, they will experience the dangers of fast-moving water, taking their hard-earned possessions and potentially endangering their lives.

The project that the Flood Control District of Maricopa County is submitting addresses this problem by acquiring and demolishing the homes of many who experienced damages in the floods. According to FEMA requirements, this land will then be preserved as open space and could someday be utilized as a community park. No structures will ever be built on this land.

More than 900 fliers were delivered to area residences in hopes of getting as many people as possible into this project. Public meetings held on Dec. 20 and 21 were extremely well attended. About 75 people attended the first session and about 45 visited the next day to fill out the appropriate forms and discuss their situations in particular. Spanish translators were made available at both meetings.

This document was created in only four days. While as much of the application was filled out as possible, we were simply unable to obtain some detailed information in a timely manner. In those cases, we will continue our work.

The next page will contain the names and phone numbers of Flood Control District experts who provided the facts for this application. Please feel free to call any of them with questions.

Flood Control District of Maricopa County Information Contacts

Clerical Assistance

Faye Hensley and Frank Garcia
(602) 506-1501
Kathy Smith
(602) 506-4708

Hydrology and historical flooding information

Amir Motamedi
(602) 506-4871
Steve Waters
(602) 506-4694

Environmental Analysis

Bob Stephens
(602) 506-4073

Land Acquisition and Demolition Costs

Mike Wilson
(602) 506-4748
Lisa Amos
(602) 506-4747

Maps and GIS Information

Marta Dent
(602) 506-8612
Jim Smith
(602) 506-5190

Determination of Damages

Chuck Feuquay
(602) 506-4716

Public Involvement and Application Preparation

Kris Baxter
(602) 506-6762

Chief Engineer and General Manager

Michael S. Ellegood, P.E.

THIS SECTION FOR STATE USE ONLY		
FEMA-____-DR-____ <input type="checkbox"/> Conforms with State 409 Plan <input type="checkbox"/> In Declared Area <input type="checkbox"/> Statewide Community NFIP Status: <input type="checkbox"/> Participating <input type="checkbox"/> Non-Participating <input type="checkbox"/> CRS (Check all that apply) State Application ID _____ Date Application Received _____ State Reviewer _____ Signed _____ Date _____ (Print Name) Reviewer Phone # _____ Reviewer Fax # _____ Reviewer Email: _____	<input type="checkbox"/> Standard HMGP or <input type="checkbox"/> 5% Initiative Application <input type="checkbox"/> Initial Submission or <input type="checkbox"/> Resubmission Eligible Applicant <input type="checkbox"/> State or Local Government <input type="checkbox"/> Private Non-Profit (Tax ID Received) <input type="checkbox"/> Recognized Indian Tribe or Tribal Organization	<input type="checkbox"/> Application Complete Project Type(s) <input type="checkbox"/> Wind <input type="checkbox"/> Flood <input type="checkbox"/> Seismic <input type="checkbox"/> Other _____

This application is for all Federal Emergency Management Agency (FEMA Region IV) Hazard Mitigation Grant Program (HMGP) proposals. Please complete ALL sections and provide the documents requested. If you require technical assistance with this application, please contact your State Emergency Management Division at (____)____-____.

- A. To Fill Out This Application:** complete all sections which correspond with the type of project proposed
- General Application Sections* pp.1-9: All Applicants must complete these Sections
 - Maintenance Agreement* p. 10: Any applications involving public property, or public ownership, or management of property
 - Acquisition Worksheet* pp.11-12: *Acquisition Projects* only -- one per structure
 - Elevation Worksheet* pp.13-14: *Elevation Projects* only -- one per structure
 - Drainage Worksheet* p. 15: *Drainage Projects* only

B. Applicant Information

Title / Brief Project Descriptive Summary Aguila Acquisition Project

1. **Applicant (Organization)** Flood Control District of Maricopa County
2. **Applicant Type**
 State or Local Government Recognized Indian Tribe Private Non-Profit
3. **County / Counties** Maricopa County
4. **State Legislative district(s)** 23 **Congressional District(s)** 2
5. **Tax I.D. Number** 86-6000472 **FIPS Code (if known)** 013-99013-00
6. **Point of Contact**
 Ms. Mr. Mrs. First Name Michael S. Last Name Ellegood, P.E.
 Title Chief Engineer and General Manager
 Street Address 2801 W. Durango St.
 City Phoenix State AZ Zip Code 85009
 Telephone (602) 506-4700 Fax (602) 506-4601
 Email Address (if available) mse@mail.maricopa.gov
7. **Application Prepared by:** Ms. Mr. Mrs. First Name Kristina R. Last Name Baxter
 Title Public Information Officer Telephone (602) 506-6762 Fax (602) 506-4601
8. **Authorized Applicant Agent**
 Ms. Mr. Mrs. First Name Michael S. Last Name Ellegood, P.E.
 Title Chief Engineer and General Manager Telephone (602) 506-4700 Fax (602) 506-4601
 Street Address 2801 W. Durango St.
 City Phoenix State AZ Zip Code 85009
 Email Address (if available) mse@mail.maricopa.gov
 Date 12/22/00 Signature Kristina R. Baxter 11/5-3/1-1

NOTE: If your project is found eligible and approved for funding, work must begin within 90 days of the obligation of funds

STATE OF ARIZONA

PROJECT APPLICATION
FOR
HAZARD MITIGATION GRANT PROGRAM

PROJECT TITLE: **Aguila Acquisition Project**

DATE: **12/22/00**

Application is hereby submitted for a Hazard Mitigation Grant under the provisions of the Presidential Declaration, FEMA-AZ -DR 1347- dated Oct. 23, 2000. The following information is furnished in support of this application. (Use continuation sheets if necessary.)

1. Name and Address of Applicant (Subgrantee):

Flood Control District of Maricopa County
2801 W. Durango Street, Phoenix, AZ 85009

Type: County
 City
 State
 Private Non-Profit entities (requires an IRS ruling letter granting tax exemption under sections 501(c), (d), or (e) of the IRS code, or certification from the Secretary of State)
 Indian Tribe
 Other -- County Flood Control District, taxed separately

Federal Information Processing Standard (FIPS) Number **013-99013-00**

Employer Identification Number (EIN) **86-6000472**

Applicant's U.S. Congressional District: **2**

Is the project in a different U.S. Congressional District (if so, which) **3**

Applicant's State Legislative District: **23**

Is the project in a different State Legislative District (if so, which) **15**

2. **Point of contact** (Applicant's Agent) for the proposed measure or project:

a. **Name: Michael S. Ellegood, P.E.,**
b. **Title: Chief Engineer and General Manager**
Address: 2801 W. Durango St.
Phoenix, AZ 85009
d. **Work Telephone Number: (602) 506-4700**
FAX: (602) 506-4601
e. **E-mail Address: mse@mail.maricopa.gov**

f. **Alternate contact:**

- a. **Name: Kris Baxter**
- b. **Title: Public Information Officer**
- c. **Address: 2801 W. Durango St., Phoenix, AZ 85009**
- d. **Work Telephone Number: (602) 506-6762**
- e. **FAX (602) 506-4601**
- f. **E-mail Address: krb@mail.maricopa.gov**

3. Location of proposed mitigation measure or project (include a map or drawing of the area showing location by road or street within the appropriate city, county, etc.)

Please see attachment in maps section of binder.

5. Description of the proposed mitigation measures or project:

- a. Describe any previous damage, which has been caused by a disaster (Include any damage from the current disaster and any repetitive damage):

See Attachment A – Hydrology and History of Aguila

- b. Describe the work that will be necessary to prevent damage from occurring in the future or reducing substantially the damage that would occur if a similar event occurred again:

Acquire properties subject to flood damage.

6. The estimated cost for the proposed mitigation measure or project is: (ensure that detailed and complete documentation is submitted supporting each grant request.)

\$977,300

See Aguila Acquisition Project Summary for detailed breakout.

7. Alternatives (3 required, which can include the proposed project and a no-action alternative):

No Action Alternative

Cost: Nothing At This Time

The No Action Alternative will result in continued flood damage similar to or in excess of what occurred on Oct. 23, 2000. As such, the no action alternative was discarded.

Elevate All Homes

Cost: \$225,000

An elevation alternative was considered for each of the properties with the following results:

Flood Control District of Maricopa County

Hazard Mitigation Grant Program Project

FEMA-DR-AZ-1347

Aguila Acquisition Project

Budget Worksheet

	Unit Cost	# of Units	Total Cost
Site Inventory	Varies	6	\$559,500
Appraisal	\$1,250	6	\$7,500
Property Survey	\$3,000	6	\$18,000
Title Search and Closing	\$750	6	\$4,500
Structure Demolition	Varies	6	\$112,600
Structure Relocation	None	None	None
Tenant or Housing relocation assistance	\$22,500	10	\$225,000
Environmental Costs	Varies	6	\$50,200
Total Cost Estimate			\$977,300

A. Fairhaven RV Park – Six permanent slab on grade concrete block structures exist within the Fairhaven RV Park. These were built during the late 1940s, 1950s. There is also one structure, a wood frame home, built during the 1950s and a restroom/laundry structure built in the 1980s. All structures would be prohibitively expensive to elevate, costing in excess of \$25,000 each. It is believed that these structures probably could not be safely elevated because of age and deterioration.

B. Five other homes – Five other homes in the application were considered for elevation. These homes would cost in excess of \$15,000 per home to elevate, however, these homes are in such a deteriorated condition that elevation would not be a viable option and as such, this option was discarded. Additionally, homeowners of the subject properties wish to be out of harm's way and thus desire to sell their properties and move out of the floodplain to less vulnerable sites

C. Acquisition and Demolition

Cost: \$977,300

8. Explain how the cost of the project compares with the anticipated value of future damage reduction (the benefits must be greater than the cost):

All subject properties were assessed for damage and found to be substantially damaged by the Regulatory Inspection/Permitting Branch Manager.

Detailed Work Schedule (should correspond with cost categories):

Upon project approval:

Conduct Appraisals	Four Months
Make Offers to Property Owners	One Month
Perform Surveys/Title Searches	Two Months
Conduct Closings	One Month
Structure Demolition	One Year
<u>Land Reclamation</u>	<u>Four Months</u>
Total	Two Years

All projects must be in compliance with National Environmental Policy Act and state environmental regulations. Complete the Environmental Consideration form.

See Attachment B: Environmental Report

Will this project have a significant impact on the environment?

No

If yes, has an environmental impact assessment been made?

If yes, include a copy with this application. Explain as necessary.

10. Does the project comply with all federal requirements for the Hazard Mitigation Grant Program as outlined in the program guidance provided?

Yes

11. How many people (families and individuals) will benefit from the project?

Families: 16 Individuals: unknown

Also, 40 RV spaces will remain empty. These spaces could have otherwise been occupied by families who would be endangered by flooding.

Additionally, taxpayers will benefit from the elimination of future flood damages.

12. This program requires a 75/25 cost sharing; 75% federal and 25% nonfederal. Has funding been committed to support the non-federal share?

Yes

Describe the non-federal funding source:

The Flood Control District of Maricopa County will provide this funding.

13. Does the community participate in the National Flood Insurance Program?
Yes
14. Does the applicant (Subgrantee) agree to provide the necessary maintenance required after completion of the project?
Yes
15. Does this proposal address a recurrent or repetitive problem rather than a one time event and are benefits permanent or long-term rather than temporary or short-term:

This program addresses flooding in the Aguila area. Some homes have been flooded as many as three times in four years. The benefits are permanent, as the people and their property will be forever removed from harm's way.

16. Is this project being funded in any part by other Federal Funding sources (for example: other disaster programs such as Public Assistance, Army Corps of Engineers, or the Natural Resources and Conservation Service)?

No.

The undersigned does hereby submit this application for financial assistance under the State Hazard Mitigation Grant Program and does certify that the organization/community/county will fulfill all requirements of the program as contained in the program guidelines.

Organization Name & Address:

**Flood Control District of Maricopa County
2801 W. Durango Street
Phoenix, AZ 85009**

Signature-Applicant's Agent

115511

Signature-Chief Executive Officer

115511

Date

12/22/00

Describe the non-federal funding source:

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Organization Name & Address:

**Flood Control District of Maricopa County
2801 W. Durango Street
Phoenix, AZ 85009**

Signature-Applicant's Agent _____

Signature-Chief Executive Officer _____

Date _____

DESIGNATION OF APPLICANT AGENT

Michael S. Ellegood, P.E., Chief Engineer and General Manager
(602) 506- 4700 Business Phone (602) 468-3142 Home Phone

is hereby authorized to execute for and on behalf of **the Flood Control District of Maricopa County**, a public entity established under the laws of the State of Arizona, this application and to file it with the Arizona Division of Emergency Management for the purpose of obtaining certain Federal financial assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 100-707) or under the Federal Disaster Relief Act of 1974 (Public Law 93-288 as amended) or otherwise available from the President's Disaster Relief Fund.

That of **the Flood Control District of Maricopa County**, a public entity established under the laws of the State of Arizona, hereby authorizes its agent to provide to the State and to the Federal Emergency Management Agency for all matters pertaining to such Federal disaster assistance the assurances attached to the project application.

Approved By

Michael S. Ellegood, P.E.
Chief Engineer and General Manager

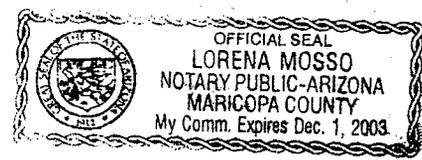
Type name and title

Signature *1115415-1*

Date *12/22/00*

Lorena Mosso

(Notary Seal)
required



**STATE-LOCAL DISASTER ASSISTANCE AGREEMENT
HAZARD MITIGATION GRANT PROGRAM**

This agreement between the State of Arizona and the **Flood Control District of Maricopa County** (the applicant) shall be effective on the date signed by the state and the applicant. It shall apply to all assistance funds provided by or through the state to the applicant as a result of a Presidential Declared Disaster occurring within the State of Arizona.

The applicant's designated representative certifies that:

1. He/she has legal authority to apply for assistance on behalf of the applicant.
2. The applicant will provide all necessary financial and managerial resources to meet the terms and conditions of receiving federal and state disaster.
3. The applicant will use disaster assistance funds solely for the purposes for which these funds are provided and as approved by the Governor's Authorized Representative (GAR).
4. The applicant agrees to provide the necessary local share of funding for completion of the project.
5. The applicant will appoint by resolution an Applicant's Local Agent to act on the jurisdiction's behalf and will establish and maintain a proper accounting system to record expenditures of disaster assistance funds in accordance with generally accepted accounting standards or as directed by the Governor's Authorized Representative.
6. The local cost share funding will be available within the specified time.
7. The applicant will give state and federal agencies designated by the Governor's Authorized Representative, any advance funds which are not supported by audit or other federal or state review of documentation maintained by the applicant.
8. The applicant will return to the state, within 15 days of such request by the Governor's Authorized Representative, any advance funds that are not supported by audit or other federal or state review of documentation maintained by the applicant.
9. The applicant will comply with all applicable codes and standards as pertains to this project and agrees to provide maintenance as appropriate.
10. The applicant will comply with all applicable provisions of federal and state law and regulation in regard to procurement of goods and services.
11. The applicant will begin project work within 90 days of approval of the grant and complete all items of work within one year unless an exception is granted to extend the time frame.

12. The applicant will comply with all federal and state statutes and regulations relating to nondiscrimination.
13. The applicant will comply with provisions of the Hatch Act limiting the political activities of public employees.
14. The applicant will comply with the National Flood Insurance Program (NFIP) purchase requirements.
15. The applicant will not enter into cost-plus-percentage-of cost contracts for completion of Hazard Mitigation Grant Projects.
16. The applicant will not enter into contracts for which payment is contingent upon receipt of state or federal funds.
17. The applicant will not enter into any contract with any party who is debarred or suspended from participating in federal assistance programs.

Signed for the Applicant

Typed Name Michael S. Ellegood, P.E.

Title Chief Engineer and General Manager

Signature M/S/Ellegood

Date 12/22/00

Signed for the State:

Typed Name _____

Governor's Authorized Representative

Signature _____

Date _____

STATE OF ARIZONA

CERTIFICATION REGARDING LOBBYING
AND
DISCLOSURE OF LOBBYING ACTIVITIES

Disaster Contract FEMA- AZ -DR- 1347

The undersigned certifies, to the best of his/her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, grant, loan or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee or any agency, a Member of congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$ 10,000 and not more than \$100,000 for each such failure.

Name and Title (typed);

Michael S. Ellegood, P.E.
Chief Engineer and General Manager
Flood Control District of Maricopa County

Authorized Signature

M S Ellegood

Date *12/22/00*

Environmental Considerations Questionnaire

Projects funded under the Hazard Mitigation Grant Program must comply with the National Environmental Policy Act and State of Arizona environmental requirements. To help meet these requirements, please complete this questionnaire as thoroughly as possible and attach to the Project Application. If a previous Environmental Impact Statement or Environmental Assessment is available, attach it to the application.

Information provided in this questionnaire should be as complete and thorough as possible to expedite approval. "Yes" or "no" answers should be avoided when possible. Instead, try to provide detailed explanations to as many answers as you can. Both beneficial and adverse impacts must be addressed.

1. Purpose and Need

Discuss why the proposed action is needed, describe the problem(s) or issue(s) that is/are being addressed and provide historical or other information that demonstrates the importance of solving the particular problem.

2. Description of the Proposed Action:

Provide a clear statement of the scope of the project (discussing the relationship between each project element), include estimated quantities and costs of needed materials, size of the area affected (if appropriate) and maps and/or diagrams.

3. Alternatives and Associated Impacts:

Provide as detailed a description as possible of each technically feasible alternative and the expected impacts. The "no action" alternative must be described.

4. Affected Environments:

Provide a brief description of the project area. Include an assessment of the following: the Physical environment (i.e., water resources -lakes/drainage ditches/streams; land minerals/geology); the Human environment (i.e., health/public safety resources; transportation resources; economic resources; land use; aesthetic resources; recreational resources; historical, cultural and archeological resources); the ecological environment (any rare or unique vegetation; any wildlife, including aquatic and unique/endangered species, in or near site). Also identify any significant cultural or social issues. Provide as much background information on the existing conditions as necessary to assist in evaluating the potential impacts.

5. Environmental Consequences of Proposed Action:

Evaluate any short-term impacts (i.e., a temporary road closing) as well as long-term impacts (i.e., relocation of an essential service) that the proposed action may have.

HISTORICAL REVIEW CHECKLIST

Historical review was designed to ensure that historic properties are considered during Federal project planning and execution. The National Historic Preservation Act of 1966 (NHPA) assures that Federal agencies "take into account" the effects of the project on historic properties. Historic Property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. This term includes, for the purposes of these regulations (36 CFR Part 800) artifacts, records and remains that are related to and located within such properties. The term "eligible for inclusion in the National Register" includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria.

	If a building is 50 years old or older, this indicates to FEMA that the building may be on or eligible for the National Register of Historic Places. Building construction dates must be verified.
	Will the proposed project have an adverse influence or change to characteristics of the historic property(s) in the project area?
	Is the proposed project going to adversely effect the historic district? Historic district information can be found through local historic groups, societies, and/or the State Historic Preservation Office.
	Is the project breaking new ground or increasing the depth of excavation or beyond the original width?
	Is the project outside previously disturbed soil?
	Does the project area contain any prehistoric, historic, archaeological or cultural resources? Local cultural or archaeological resources can be researched by a licensed archaeologist in Archaeological Information Center (AIC). Additional information can also be found in local historic groups, societies, and/or the State Historic Preservation Office.
	For structures less than 50 years old, provide one color photograph from the front.
	For structure 50 years and older, provide four color photographs of the structure from all four corners and a view up the street and down the street showing the surrounding area.
	Please include any AIC searches or other documents related to historical properties in the project area.

GENERAL ENVIRONMENTAL REVIEW DOCUMENTATION

NEPA is the established environmental policy for the nation. This policy insures that the environment is considered in all federal actions. NEPA requires that federal agencies consider the effects of their proposed actions and alternatives on the human environment before deciding to fund and implement the action. The law requires a decision making process and not a specific outcome. All federal actions are subject to NEPA review.

	A clear written description of the entire scope of work, including any alternatives that may be under consideration, and any additional work, not funded by FEMA, that will be performed at substantially the same time. Include any studies, plans, drawings, sketches, or schematics, as may be available, to help understand the entire project.
	Photos are required showing the proposed project area in the context of its surroundings. If the project is a building, show all sides of the entire building (at least from opposite corners), and the context of the building in its setting including the surrounding buildings. If the project is in a rural setting, show the project area in the foreground with the background of the surrounding area in all four directions.
	Location maps (e.g., USGS maps, Thomas Bros. Maps or City Maps) as necessary to show the undertaking in the context of its surroundings. For projects in rural settings or for project with ground disturbing activities, USGS maps are mandatory.
	Documentation of any other agency's environmental determinations within the scope of the project and surrounding areas.

NATIONAL HISTORIC PRESERVATION ACT

	Documentation of the date of construction for the original, existing facility (e.g., building permit records, tax records, newspaper accounts, architectural drawings, etc.)
	Plans showing the limits of proposed excavations or other ground disturbing activities associated with the project.
	Location maps, in addition to those mentioned above, showing the project within local, state or national historic districts.
	Local, state or national landmark listings of historic properties within the project area, including the National Register of Historic Places
	Any existing cultural resource surveys or reports describing the archaeological/historic properties (e.g., archaeological sites, historic buildings, historic landmarks, etc.) that exist within the project area or could be affected by the project.
	Copies of all available plans for the existing facility as well as documentation of any changes made since the original construction.

ENDANGERED SPECIES ACT

	Documentation (e.g., Biological Assessment, Initial Study, and Environmental Impact Report) evaluating biological resources that might be affected by the project activities.
	Documentation of coordination with other agencies (e.g., USFWS, etc.) including reports, studies and recommendations.
	Species lists identifying endangered or threatened species that might be affected by the proposed project

FISH AND WILDLIFE COORDINATION ACT

	Detailed plans and studies for the control or modification of a natural stream or body of water
	Documentation of coordination with other agencies (e.g., USFWS, etc) including reports, studies and recommendations
	Detailed maps, reports and studies documenting the scope of the project and surrounding areas including construction of dams, levees, impoundments, stream locations, and water-diversion structures

	Detailed descriptions and related reports and studies of proposed discharges of pollutants including industrial, mining, and municipal wastes or dredged and fill material into a body of water or wetlands.
	Recommendations of the USFWS and affected state(s) for protecting fish and wildlife
WILD AND SCENIC RIVERS ACT	
	Detailed plans and studies for the construction of any water resource project (e.g., dam, water conduit, reservoir, powerhouse, transmission line, discharge to water or development project)
	Documentation of coordination with other agencies (e.g., BLM, USFWS, etc) including reports, studies and recommendations.
	Detailed maps, reports and studies documenting the scope of the project and surrounding areas including scenic, recreational, geological, fish and wildlife, historic, cultural or similar areas.
EXECUTIVE ORDER 11988 – FLOODPLAIN MANAGEMENT	
	Detailed maps (e.g., FIRM, FBFM, State designated floodway maps, etc.) defining floodplain/floodway boundaries within the project area.
	Reports and studies (e.g., hydrology, hydraulics, etc.) documenting the scope of the project and surrounding areas as they relate to the occupancy or modification of floodplains including direct and indirect effects.
	Documentation of compliance/consistency with federal, state, local and county floodplain management programs and plans.
	Documentation of coordination with other agencies, including reports, studies and recommendations
	Documentation of any public notices or public meetings
EXECUTIVE ORDER 11990 – PROTECTION OF THE WETLANDS	
	Detailed maps (e.g., USACE, USFWS, etc.) defining wetland boundaries with the project areas.
	Reports and studies (e.g., wetland assessment, hydrology, hydraulics, etc.) documenting the scope of the project and surrounding areas as they relate to the occupancy or modification of wetlands including direct and indirect effects.
	Documentation of compliance/consistency with federal, state, local and county floodplain management programs and plans.
	Documentation of coordination with other agencies, including reports, studies and recommendations
	Documentation of any public notices or public meetings
EXECUTIVE ORDER 12898 – ENVIRONMENTAL JUSTICE FOR LOW INCOME AND MINORITY POPULATIONS	
	Documentation of coordination with other agencies (e.g., US Census Bureau, Local and Community Planning and Development Agencies, etc.) including reports, studies and recommendations.
	Reports and studies (e.g., traffic, noise, odor, etc.) documenting the scope of the project and surrounding areas as they relate to low income and minority populations including direct and indirect effects.
	Census data and income information on affected populations
OTHER RELEVANT LAWS AND ENVIRONMENTAL REGULATIONS	
	Seismic Safety Executive Order (if applicable)
	See examples above.

Land-use and Socio-economic Factors

- A. Describe any inconsistencies with current land-use in the project area.
- B. Describe any conflicts with local zoning ordinances.
- C. Identify potential relocation of structures that may result from the project.
- D. Describe the effect the project will have on economic activities in the area.
- E. What effects will the project have on parks or recreation areas?
- F. How will the project effect "prime and unique" farmlands or farmlands with state or local significance?
- G. Is the project located in a FLOODPLAIN or floodway? If so, hydrologic analyses may be required.

Air and Water Quality

- A. Describe any potential effects the project may have on air quality.
- B. Will the project require any dredging and/or disposal of any material (including construction) in any wetlands or waterways? If so, the project may require a U.S. Army Corps of Engineers Section 404 permit.
- C. Describe any modifications to streambeds or banks of waterways that may result from the project.
- D. Describe any effect the project may have on wild and scenic rivers, or rivers being studied for inclusion as wild and scenic rivers.

Natural Resources

- A. Describe any removal of marine, aquatic or terrestrial vegetation.
- B. Describe any adverse impacts to wetlands or marshlands.
- C. List all known rare and endangered species within range of the project area.
- D. Is the project located inside or near a wildlife refuge or wildlife conservation area?

Archeological and Historical Resources

Is the project site located in any area of archeological, cultural or historical significance?
Contact the State Historic Preservation Officer for determination.

Coordination

State and federal agencies, such as those listed below, may have information pertinent to the potential environmental impacts of the project. Contact these and other agencies to coordinate development of the project and preparation of the environmental analysis. Coordination may consist of phone conversation logs, letters, or meeting minutes. Those items should be included in the submittal package.

Agencies requiring coordination:

State Planning Coordinators Office
State Historic Preservation Officer (SHPO)
Division of Environmental Protection
U.S. Natural Resources Conservation Service
State Department of Wildlife
Local Floodplain Administrators
U.S. Fish and Wildlife Service
U.S. Department of Interior
U.S. Environmental Protection Agency
U.S. Army Corps of Engineers
State Department of Transportation
U.S. Geological Survey
State Bureau of Mines and Geology
Other appropriate Departments or Agencies

The information provided in the above questionnaire will be analyzed by the FEMA Regional Director to determine if there will be significant environmental impacts as a result of the proposed project. If not, then a Finding of No Significant Impact (FONSI) will be prepared, attached to the Environmental Analysis, now an Environmental Assessment (EA), and forwarded to FEMA Headquarters Mitigation Division for approval. If significant impacts are anticipated, then either the project will be reviewed and revised or an Environmental Impact Statement (EIS) will be prepared.

Project Hazard Mitigation Coordinator

Signature _____

Date _____

BENEFIT COST ANALYSIS – FLOOD SUPPLEMENT

FEMA requires a benefit cost analysis of all projects. Benefits must be equal to or greater than the project costs for a project to be eligible for funding. The benefits considered are the reduction in project future damages and losses due to the mitigation project.

If exact information is not available, it is acceptable to use approximate data, reasonable estimates or informed judgments. However, all estimates must be clearly identified and be justified by a written explanation. Since benefit cost uses mathematical calculations, all prior damage estimates, probable future losses, duration, etc., must be quantified.

1. Please provide a 7.5 minute Quad Map and general area map with the location of the project on the map. Are the maps attached? **Yes**
2. Were public facilities or structures damaged during the declared disaster?
No
3. Describe the damages(s), the repair, and the cost of the repair.
4. Were the damages addressed in a Public Assistance Project Worksheet (PW)?
No
5. Has the PW(s) been approved for funding? Yes ___ No ___
6. Attach copies of PW(s).
7. If there is no PW for the repair of a damaged facility or structure, please explain why there was no PW written.
8. Were any non-profit organizations or institutions that perform essential governmental services in the project area displaced during the flood event?
No
9. What service does the non-profit provide?
10. Did the non-profit or service provider temporarily relocate? Yes ___ No ___
11. Did another organization or government entity provide substitute services?
Yes ___ No ___
12. What is the usual cost to provide the service? Please separate cost into line items (moving cost, rent, computer rentals, staff members, etc.)
13. What were the additional costs to provide the service during and after the flooding?
14. Please explain the financial benefits of the service to the community.

Please review the following worksheets and questions that best describe each element of your project, and then complete the appropriate worksheet(s).

- Worksheet A, A1 and A2 are for Culvert, Detention Basin, Water Conveyance System, Openspace, Wetland and Channel Restoration projects.
- Worksheet B is for Single Family Home Elevations and Acquisitions

**CULVERT, DETENTION BASIN, WATER CONVEYANCE SYSTEM,
OPENSACE, WETLAND AND/OR CHANNEL RESTORATION**

BENEFIT COSTS WORKSHEET "A"

1. What level of protection does the channel, culvert, water conveyance system, rip/rap, detention basin, etc. currently provide? (The level of protection is generally called recurrence interval; 10 year, 20 year, 100 year.)
2. What level of protection will the channel, culvert, water conveyance system, rip/rap, detention basin, etc. provide after the proposed project is completed?
3. Please attach any engineer reports such as hydrological or others that were used to determine design and level of protection. Are the reports attached? Yes ___ No ___
4. Were there damages to home or other occupied structures? Yes ___ No ___
5. How many households or businesses were displaced in the project area? Households ___ Businesses ___
6. How long were they displaced? ___ Hours ___ Days ___ Weeks ___ Months
7. How long will the households or businesses be displaced during the construction of the proposed project? ___ Days ___ Weeks ___ Months
8. What is the average cost of rent in this area per month? Homes _____ Business _____ (by sq.ft.)

BENEFIT COST WORKSHEET "A1"

The benefits of the project are determined by the damage that will be avoided in the future. The damage is calculated from the depth and frequency of the flood events. Therefore, it is important to provide detailed information relating to the depth of flooding experienced by homes and other occupied structures. This worksheet is for the accounting of damages that occurred to homes and other occupied structures that are within the area that would benefit from the proposed project. Please group the structures according to similar types, sizes and usage. You may also group structures by common first floor elevation or by common depth of flooding.

First floor elevation	FIRM Special Flood Hazard Zone	Number of Structures	Average Square Feet (include basement)	Total Square Footage of the Group	Number of Stories (do not include basement)	Average Basement Square Footage	Flood Depth in 19 __ and Recurrence Interval	Flood Depth in 19 __ and Recurrence Interval

Please provide any additional information on the usage of structures included in the table A1 by answering the following questions.

1. If businesses are listed in the table above, briefly describe the type of business and provide the approximate number of employees.
2. Are there any structures such as schools, hospitals, clinics that are used to provide government services listed in the table above? Please describe.

BENEFIT COST WORKSHEET "A2"

If your project area has types of damages other than to homes or other occupied buildings, please list the loss in the table below. List actual or potential damages in one row and project an anticipated loss above or below the flood event that damaged occurred. (for example, if loss occurred at a 5 year recurrent interval, estimate the possible losses of a 10 year recurrence level.) Do not combine losses. List each type of loss.

Year of Loss	Flood Recurrence Interval in years (5 year, 10 year, 20 year, 100 year)	What was damaged? Roadway, loss of rip/rap, concrete headwall, etc.	List the dollar amount of actual damages that occurred, and damaged that could occur in a future event (pavement, roadbase, debris, fencing, pipes, rip/rap, etc)	Estimated damages after mitigation is completed (similar event and projected event)

Please add any additional comments to clarify or add any relevant data to the table above.

SINGLE FAMILY HOME ELEVATION / RELOCATION / ACQUISITION PROJECTS

BENEFIT COST WORKSHEET "B"

1. The benefits of the project are determined by the damage that will be avoided in the future. The damage is calculated from the depth and frequency of the flood events. Therefore, it is important to provide detailed information relating to the depth of flooding experienced by homes and other occupied structures. Is the plat map or other drawing attached?

Yes

2. Is the flood problem repetitive? Yes
3. How many times did the sites flood, and what were the years of the flood events?

Please see Attachment A

4. **Were there damages to homes or other structures? Yes How many? 35**
5. How many homes or structures do you plan to elevate? Homes 0 Other 0
6. **How many homes or structures do you plan to acquire? Homes _____ Other _____**
7. Were any of the potential elevation or acquisition site occupants displaced during the flood event? Yes
8. Who was displaced and how many homes, non-profits or other service providers were displaced? Homes _____ Apartment Complex _____ Number of apartment units _____ Non-Profits _____ Other service providers _____
9. How long were they displaced? _____ Hours _____ Days _____ Weeks _____ Months
10. How long will homeowners or other potential elevation candidates become displaced during the elevation process? _____ Days _____ Weeks _____ Months
11. What is the average cost of rent in this area per month? Homes Business

It is unnecessary for individuals to rent new homes as we are buying them out.

You must complete the individual site-by-site worksheet for each home or structure to be elevated or acquired. (Following Page) Make as many copies as needed of the worksheet.

A color photo is required for each home or structure to be elevated / relocated / acquired.

Property Site Inventory Information				
Project Number				
Project Title				
Present Owner				
Address				
City, Town or Community				
State or Jurisdiction				
County Name				
Zip Code + Extension				
Square Footage				
Number of Stories				
Basement	Yes	No		
Year Built				
SHPO Clearance	Yes	No		
Type of Construction				
Type of Foundation	Wood	Slab	Wood/Slab	Other
First Floor Elevation				
FIRM Special Flood Hazard Zone				
NFIP Policy Number				
Percent Damaged	0-49%	50-99%	100%	NA
Flood Damage	Date Recurrence Level Depth of Flooding			
Purpose of Residence	Primary Residence		Rental	Other
Latitude				
Longitude				
Parcel Number				
Legal Description				
Pre-Event Fair Market Value				
Title Holder-Post Mitigation				
Property Action – Pull Down Menu	Acquisition/Demolition Elevation Relocation Acquisition/Vacant Land Floodproofed Seismic Retrofit Wind Retrofit Other Retrofit Unknown....			
URA - Tenant Name				
Comments				

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

ANNEX A

BENEFIT COST ANALYSIS – FIRE SUPPLEMENT

FEMA requires a benefit cost analysis of all projects. Benefits must be equal to or greater than the project costs for a project to be eligible for funding. The benefits considered are the reduction in project future damages and losses due to the mitigation project.

If exact information is not available, it is acceptable to use approximate data, reasonable estimates or informed judgments. However, all estimates must be clearly identified and be justified by a written explanation. Since benefit cost uses mathematical calculations, all prior damage estimates, probable future losses, duration, etc., must be quantified.

SITE SPECIFIC INFORMATION FOR VEGETATION MANAGEMENT – FUEL BREAKS

1. Is this a fuel modification project? Yes ____ No ____
2. What methods will be used to modify the fuels? Prescribed Fire ____ Grazing ____
Mechanical Clearing ____ Manual Clearing ____
3. How many structures will be protected by the fuel break?
4. What is the replacement value of the structures that this fuel break will protect?
5. Does the proposed fuel break provide infrastructure protection (i.e. bridges, roads, etc.)?
Yes ____ No ____ If yes, what is the replacement value of the infrastructure protected?
6. What is the cost per acre for the proposed fuel break?
7. Annually, how many fires occur in the area protected by the proposed fuel break?
8. Annually, how many fires in the area protected by the proposed fuel break exceed 100 acres?
9. Annually, how many fires in the area protected by the proposed fuel break exceed 500 acres?

SITE SPECIFIC INFORMATION FOR VEGETATION MANAGEMENT – DEFENSIBLE SPACE

1. Is this a defensible space project? Yes ____ No ____
2. What methods will be used to provide defensible space? Enforcement of defensible space standards ____ Installation of fire resistive landscaping around existing structures
3. How many structures will be protected by improving their defensible space?

4. What is the average replacement value of the structure, which will be protected by improving their defensible space?
5. Annually how many fires occur in the area protected by the improved defensible space?
6. Annually how many fires occur in the area protected by the improved defensible space exceed 100 acres?
7. Annually how many fires occur in the area protected by the improved defensible space exceed 500 acres?

Building Type – Check the appropriate category(ies):

	1	Wood Light Frame
	2	Wood (Commercial or Industrial)
	3	Steel Moment Frame
	4	Steel Braced Frame
	5	Steel Light Frame
	6	Steel Frame with Concrete Shear Walls
	7	Steel Frame with Unreinforced Masonry Fill
	8	Concrete Moment Frame
	9	Concrete Frame with Concrete Shear Walls
	10	Concrete Frame with Unreinforced Masonry Infill
	11	Precast Concrete Tilt-up
	12	Precast Concrete Frame with Concrete Shear Walls
	13	Precast Concrete Frame without Shear Walls
	14	Unreinforced Masonry Bearing Wall
	15	Reinforced Masonry with Precast Concrete Diaphragm
	16	Reinforced Masonry with Flexible Diaphragm
	17	Mobile Home
	18	Other-User Defined...provide explanation.

Demolition Threshold:

Many buildings or facilities (structures) may be considered to be demolished rather than be repaired when the cost to repair the damage exceeds the replacement cost. Demolition threshold is the percentage of a structure damage., in which case the structure would be replaced rather than be repaired. Demolition threshold may be considered 20% to 30% for old, marginal or substandard structures, 50% 50 60% for modern structures and 100% for historical structures.

What is the demolition threshold?

Replacement Value:

The replacement value is the cost to provide a functionally equivalent building or facility (structure) of the same size. For historical buildings, provide reproduction value; this value is a more appropriate measurement for a historical structure replacement value.

What is the structure replacement value (total cost or cost per square foot)?

Contents Value:

The value of the structure contents is the estimated total value of its contents, including furniture, flooring, equipment, computers, supplies, artwork, etc. For most structures the contents value is significantly smaller than the value of the structure.

Please provide a description and a value of the contents (total value or per square foot).

Displacement Costs Due to Earthquake Damage:

Displacement costs due to earthquake damage may occur when occupants must operate from a temporary site while earthquake damage to the original structure is repaired. Major earthquakes may cause extensive damage to many structures, thus reducing any available alternate space leading to higher rental costs through the damaged area. Other displacement costs include moving and extra operating costs incurred because of the disruption and displacement from the original and normal quarters.

Please provide other costs of displacement (per month).

Building Occupancy:

Provide the average number of persons (employees and visitors) present in the building during the day, evening and night for weekdays and weekends, the hours per day, months per year.

	Weekdays			Weekends		
	Day	Evening	Night	Day	Evening	Night
Occupants						
Days per Week						
Hours per Day						
Months per Year						

Value of Public/Nonprofit Services:

This section applies to public/nonprofit facilities only. If the building under evaluation is commercial or residential then bypass this section. The annual budget is the total annual operating cost of all public/nonprofit agency functions located in the building. This total includes rental costs, but exclude "pass through money", such as Social Security payments that the agency receives and redistributes.

Describe the services provided.

What is the annual budget of the public/nonprofit agency?

Is the rent included in the annual budget?

If the rent is not included, what is a reasonable estimated rent (per month)?

Post-Disaster Continuity Premium:

Some public/nonprofit services may have little demand after a disaster, while other may be vital to be maintained. Public/nonprofit services that are important for post-disaster response and recovery are worth more to the community after the disaster than in normal circumstances. The post-disaster continuity premium assigns an extra value to these post-disaster services. For example, emergency services would be vital in the hours and days immediately following a disaster, whereas routine services, such as employment referral, would not. Based on the nature of the services, the post-disaster continuity premium is how much extra daily costs the tenant or agencies would be willing to spend to maintain the normal functions. Routine services that can be delayed with little or no impact should not have a continuity premium.

Please provide the post-disaster continuity premium (per day) if applicable.

Functional Downtime:

Functional downtime is the estimated number of days a public/nonprofit agency cannot provide due to disaster related caused damage. For example, an agency may estimate to relocate out of its building for 60 days, but may resume service from temporary quarters after seven days. The functional downtime is considered seven (7) days.

The typical functional downtime estimate assumes that for every 1% of building damage sustained, one day of functional downtime occurs. It is assumed that public/nonprofit agencies and businesses will resume function at a temporary site within 30 days. Thus, the typical functional downtime is capped at 30 days.

Functional downtime is also used to estimate income losses (if applicable) due to earthquake damage.

If the estimated functional downtime is different from the typical, please describe in detail.

Rent and Business Income Loss:

Where there is rental income from residential and commercial space, please provide the total monthly rent from all tenants.

Please provide the estimated net income of commercial business per month.

Project Mitigation Costs:

Project mitigation costs should include all direct construction costs plus other costs such as architectural and engineering fees, testing, building permits and project management, but

relocation costs should be excluded. Unavoidable costs such as required code upgrades are to be individually listed.

Please provide the project mitigation costs:

The year in which the project cost was estimated:

Project Life of Mitigation:

The project's useful life is the estimated number of years during which the project mitigation will maintain its effectiveness. A useful life of 5 to 10 years for an equipment purchase is commonplace. Useful lives of 30 years for residential buildings and 50 years for non-residential buildings are typical. For major infrastructure projects, or for historically important buildings, useful lives of 50 to 100 years may be appropriate.

Please provide the project in mitigation useful life (in years).

Relocation Costs:

For some mitigation projects, occupants may have to be relocated for construction of the project. Relocation time is the number of months for which the building must be vacated in order for the mitigation project to be completed. Note this relocation time is completely distinct from the displacement time needed to repair earthquake related damages. Other relocation costs include moving and extra operating costs incurred because of the temporary relocation.

What is the project relocation time (in months)?

What are the estimated rental costs during occupant relocation (in square foot/per month)?

If there are other relocation costs (per month) please provide.

Displacement costs:

Displacement time is the estimated number of days the occupants are vulnerable to displacement due to seismic damage. Displacement time may be shorter than the repair time because some earthquake damage repairs can be made with occupants in the building. If the estimated displacement time due to earthquake is unusual or out of the ordinary.

Please describe displacement costs in detail.

**SEISMIC RETROFIT OF PENDANT LIGHTING AND
SUSPENDED CEILING SYSTEMS**

Facility Information:

Number of facility locations requiring retrofit

Provide name(s) and address (es) of facility

Provide a street map with location of facility

Project Information:

Provide total number of lights to be retrofitted per facility

Provide unit cost per light per facility to retrofit

Provide total cost per facility to retrofit lights

Provide total cost to retrofit all lights if different from the preceding answer.

Provide the total square feet of ceiling to retrofit per facility

Provide unit cost per square foot to retrofit ceiling per facility

Provide total cost per facility to retrofit ceiling.

Provide total cost to retrofit all ceilings if different from the preceding answer.

SEISMIC BRACING OF EMERGENCY POWER OR COMMUNICATIONS SYSTEMS

Facility Information:

Provide number of locations requiring bracing.

Provide name(s) and address(es) of facility(ies).

Provide a street map with the location of the facility(ies).

Project Information:

Please provide a list of equipment to be braced per facility.

Include the size or capacity of the equipment and the replacement cost.

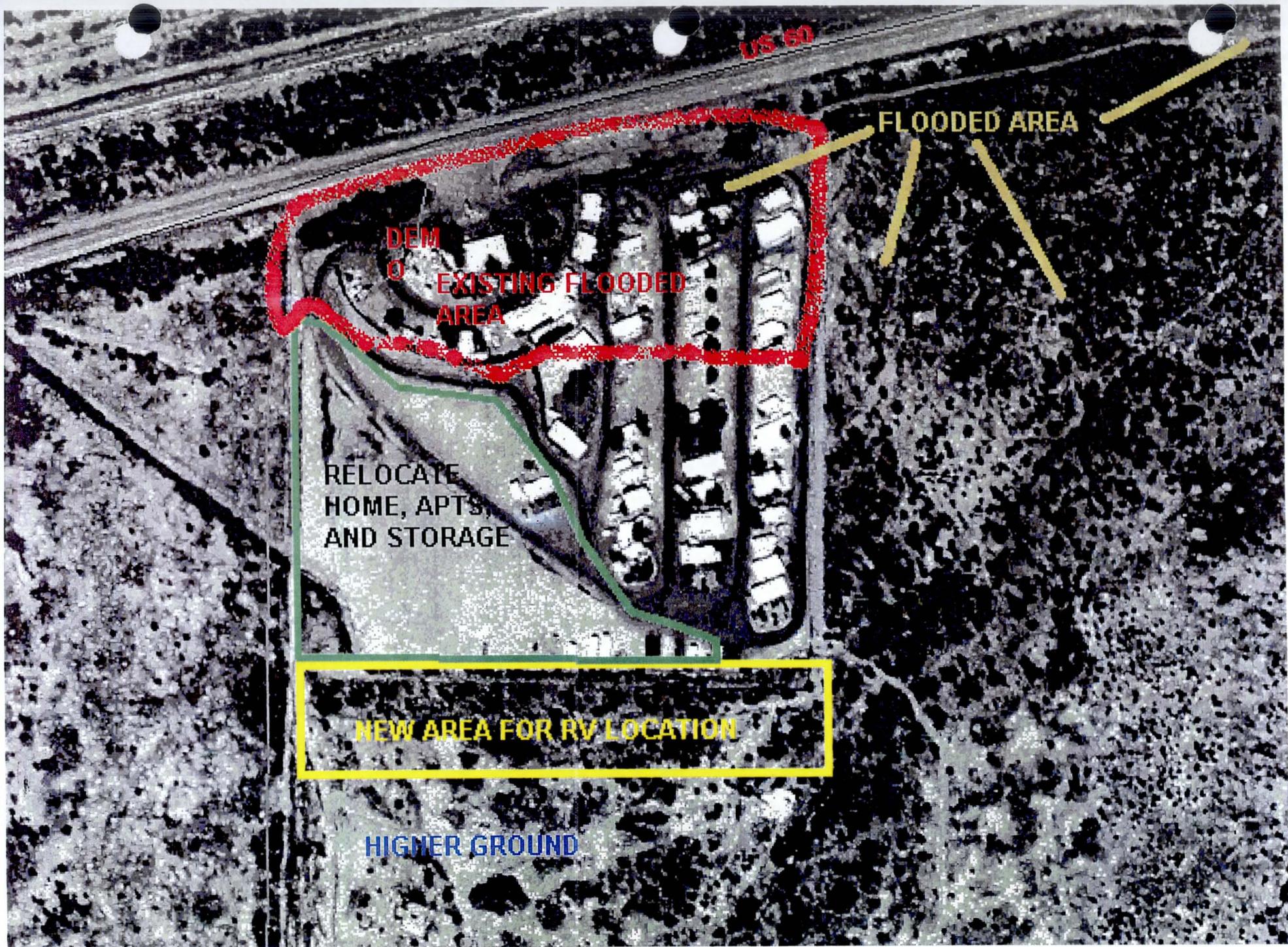
Describe the critical function of the equipment and the consequences if there was a loss of function due to a seismic event. If a cost for the loss of function can be determined, please provide.

What is the cost of bracing the equipment per each piece of equipment requiring bracing?

What is the total cost of all bracing at each facility?

What is the total cost of all bracing at all facilities?





US 60

FLOODED AREA

DEM
EXISTING FLOODED AREA

RELOCATE HOME, APTS, AND STORAGE

NEW AREA FOR RV LOCATION

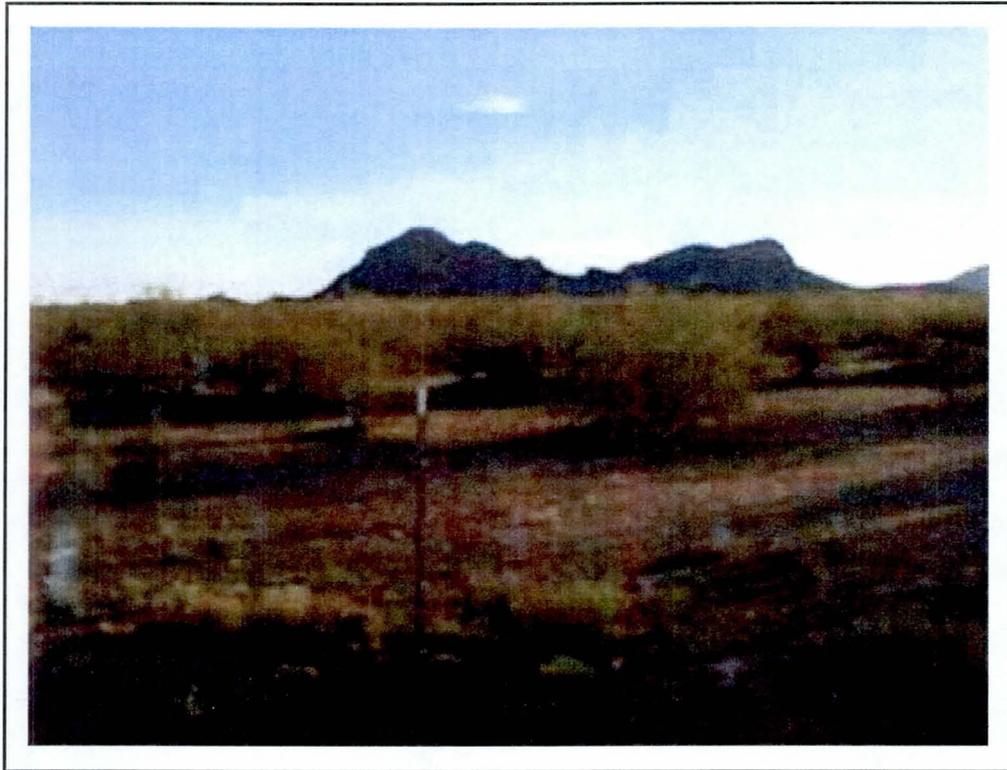
HIGHER GROUND

END ILLUMEN RV PARK

NI ↑



10 Acre Tract RV Park



RV Park Land 24.88 Acre Tract



RV Park Land 24.88 Acre Tract

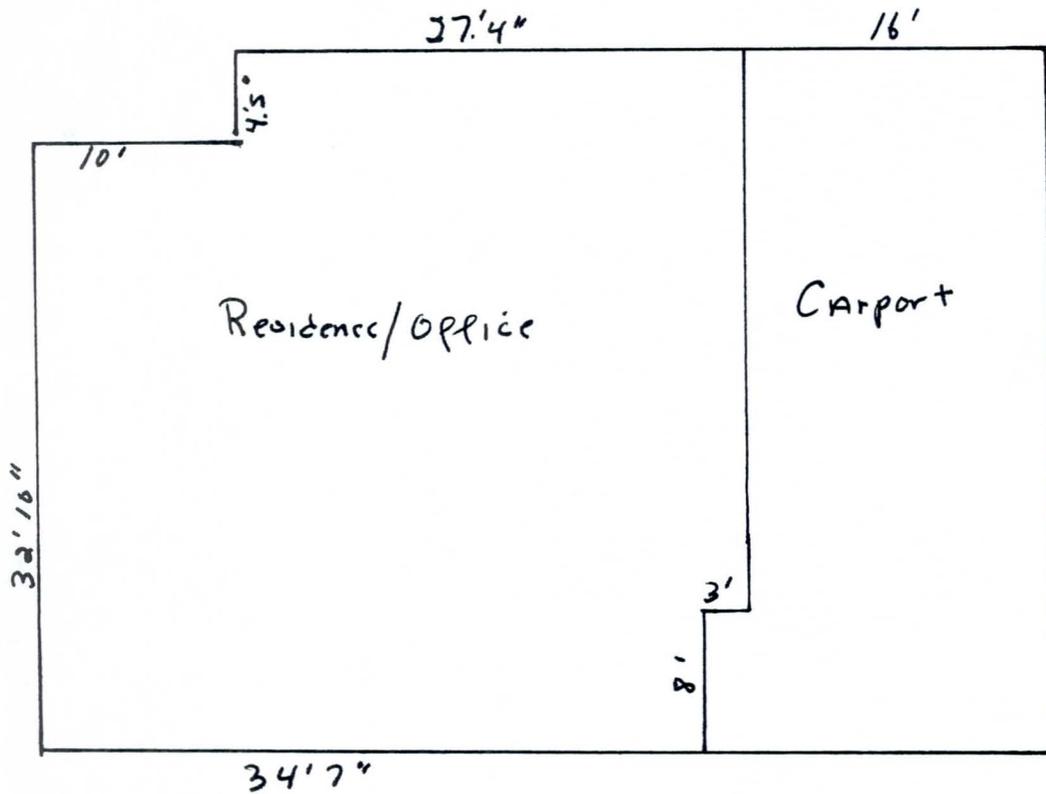
Property Site Inventory Information

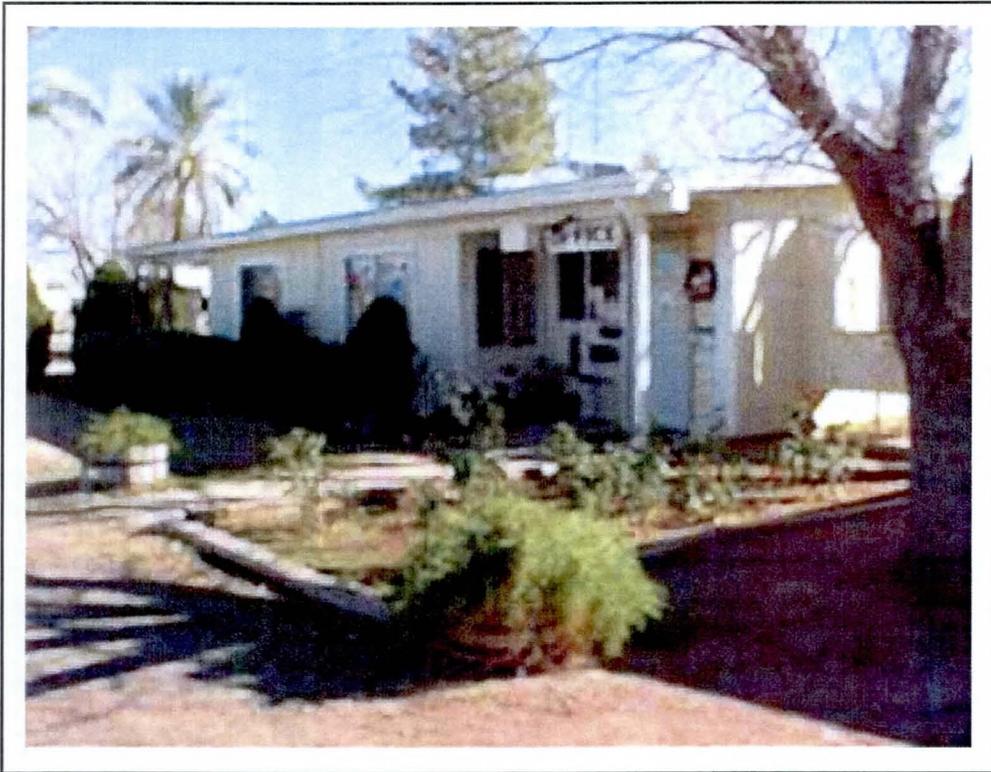
Project Number	Aguila #1 Building A -- Owner Residence/Office
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	1,150
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1953
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Wood Frame
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

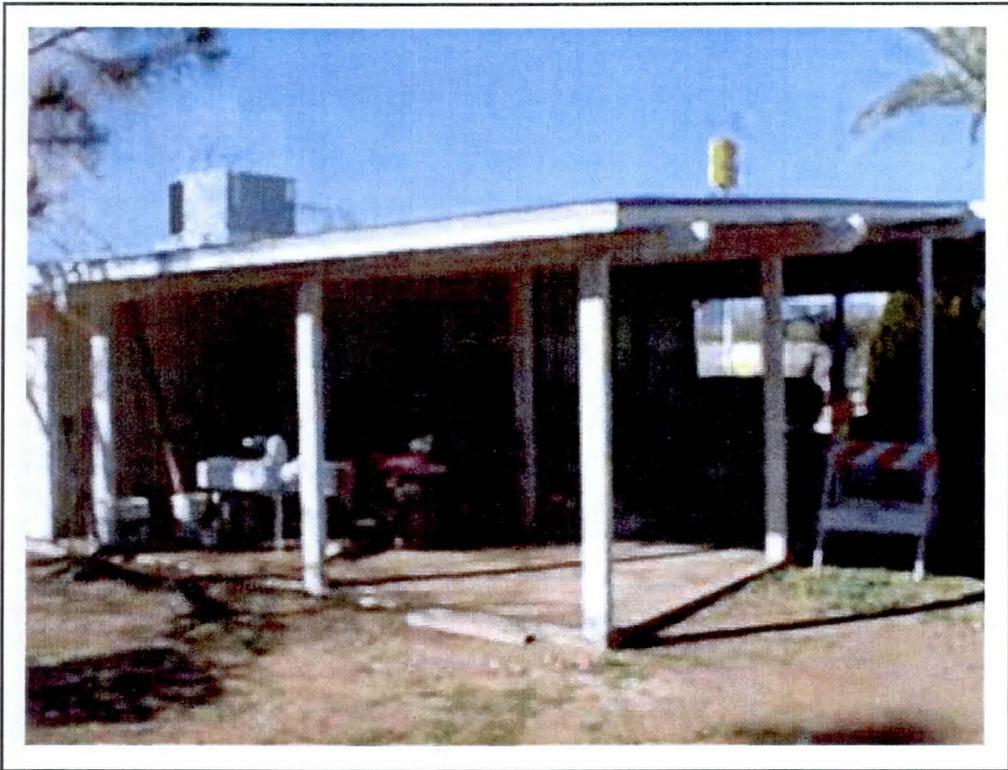
Aguila #1

Building A – Owner Residence/Office





Fairhaven RV Park Office / Residence



Fairhaven RV Park Office / Residence

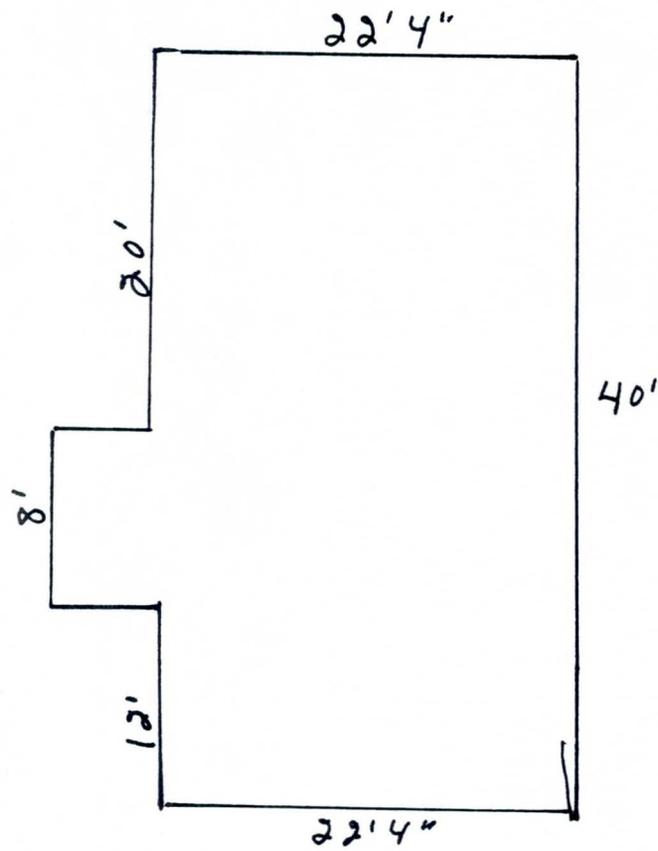
Property Site Inventory Information

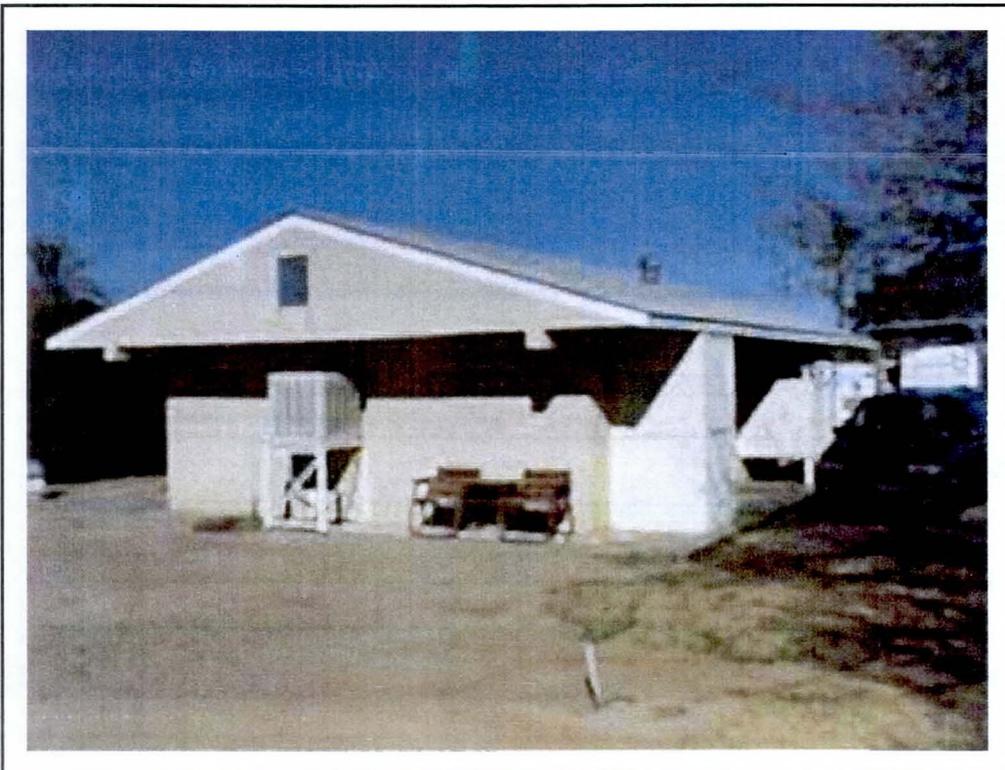
Project Number	Aguila #1 Building B -- Restroom/Laundry
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	891
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1988
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	concrete block
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Aguila #1

Building B – Restroom/Laundry





Restroom / Laundry



Restroom / Laundry

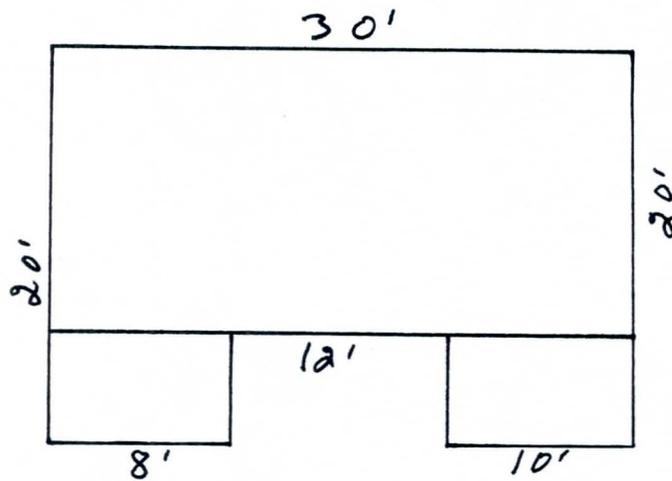
Property Site Inventory Information

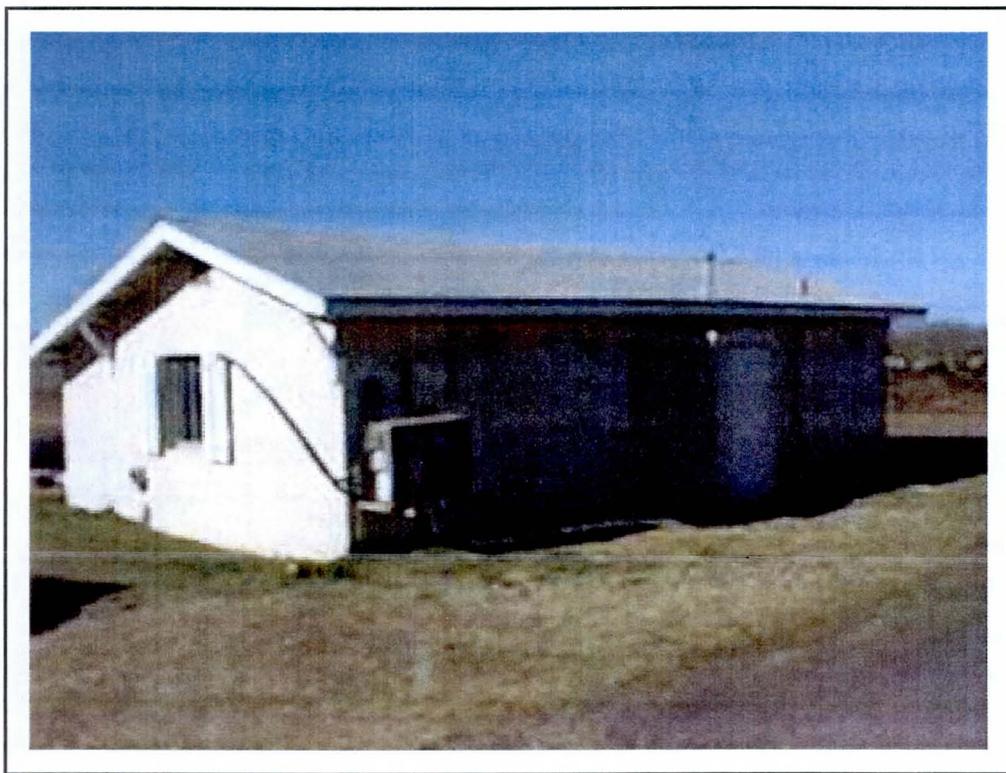
Project Number	Aguila #1 Building C -- Rental Apartment #1
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	465
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1946
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	concrete block
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input type="checkbox"/> Primary Residence <input checked="" type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Aguila #1

Building D – Rental Apartment #1





Rental Apartment #1

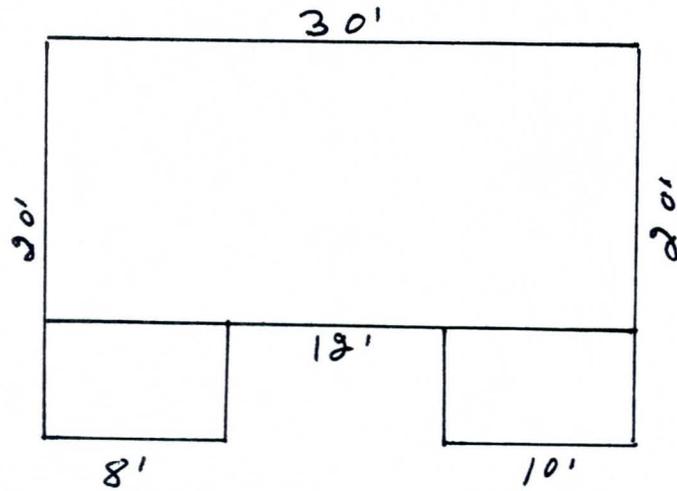
Property Site Inventory Information

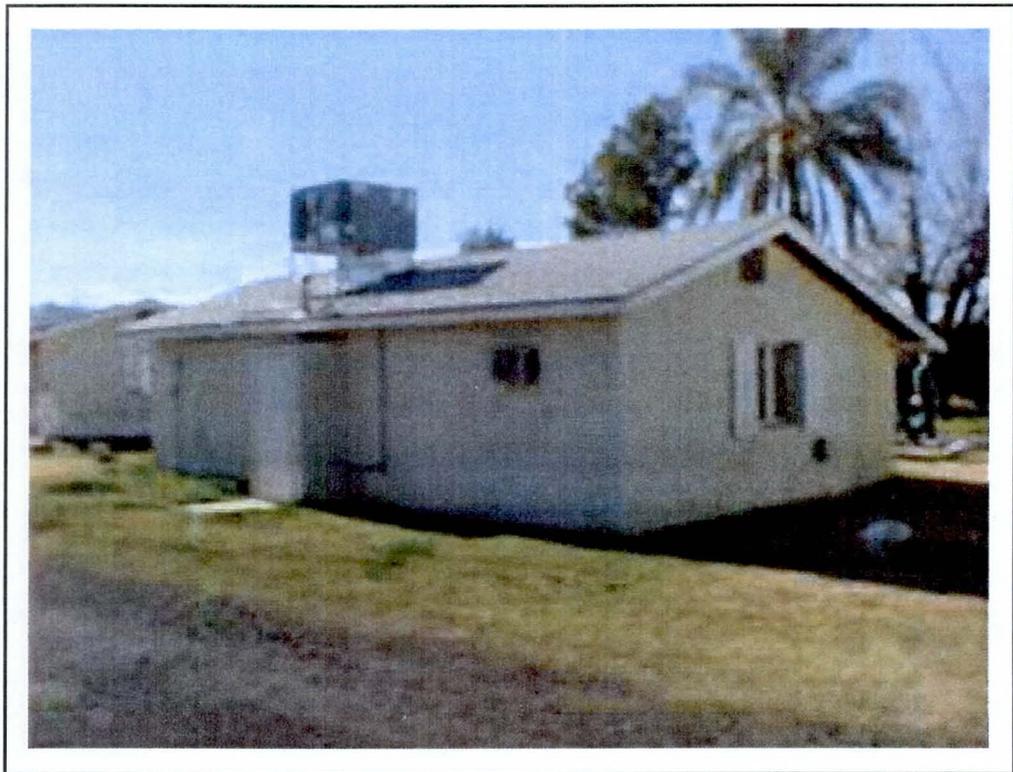
Project Number	Aguila #1 Building D -- Rental Apartment #2
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	465
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1946
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	concrete block
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input type="checkbox"/> Primary Residence <input checked="" type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Aguila #1

Building E – Rental Apartment # 2





Rental Apartment #2

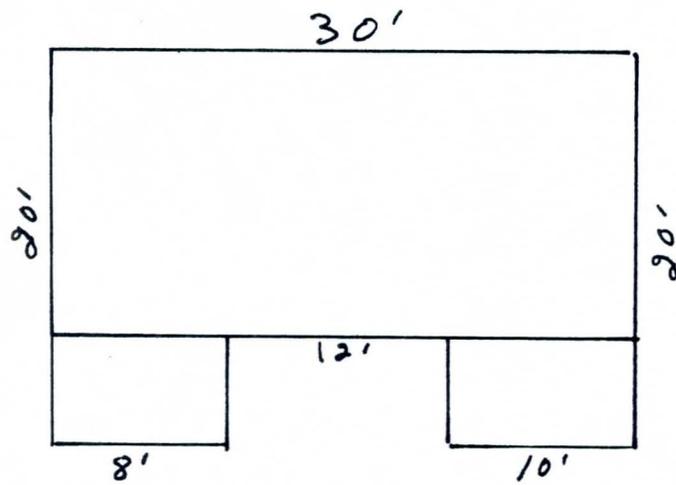
Property Site Inventory Information

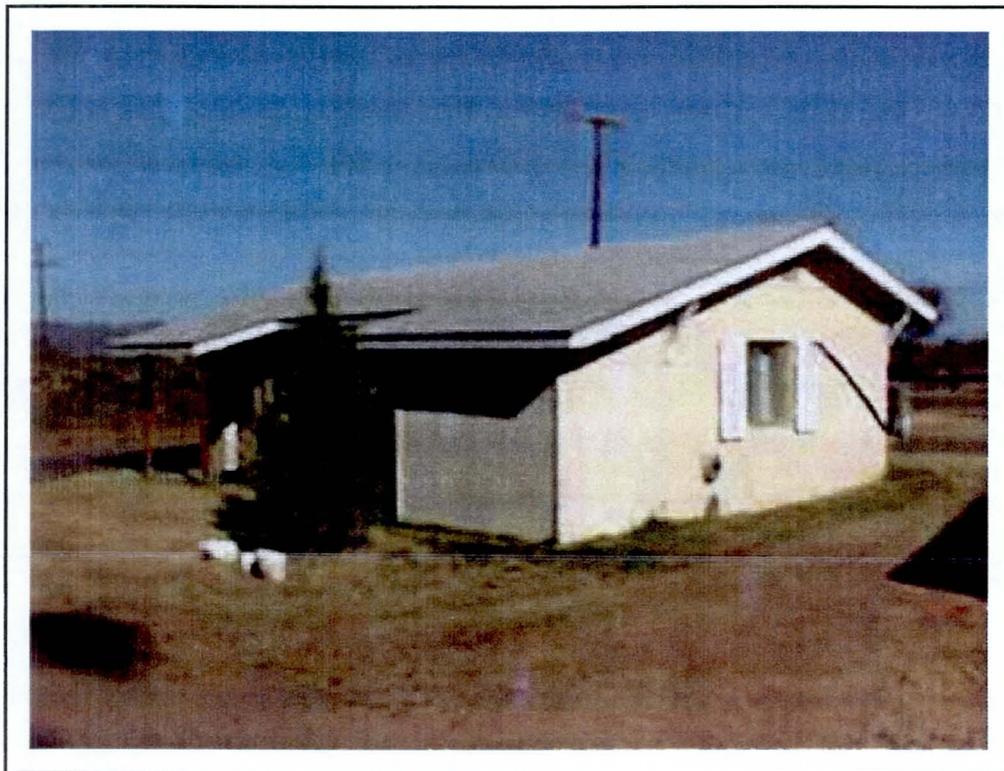
Project Number	Aguila #1 Building E -- Rental Apartment #3
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	465
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1946
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	concrete block
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input type="checkbox"/> Primary Residence <input checked="" type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Aguila #1

Building C – Rental Apartment





Rental Apartment #3

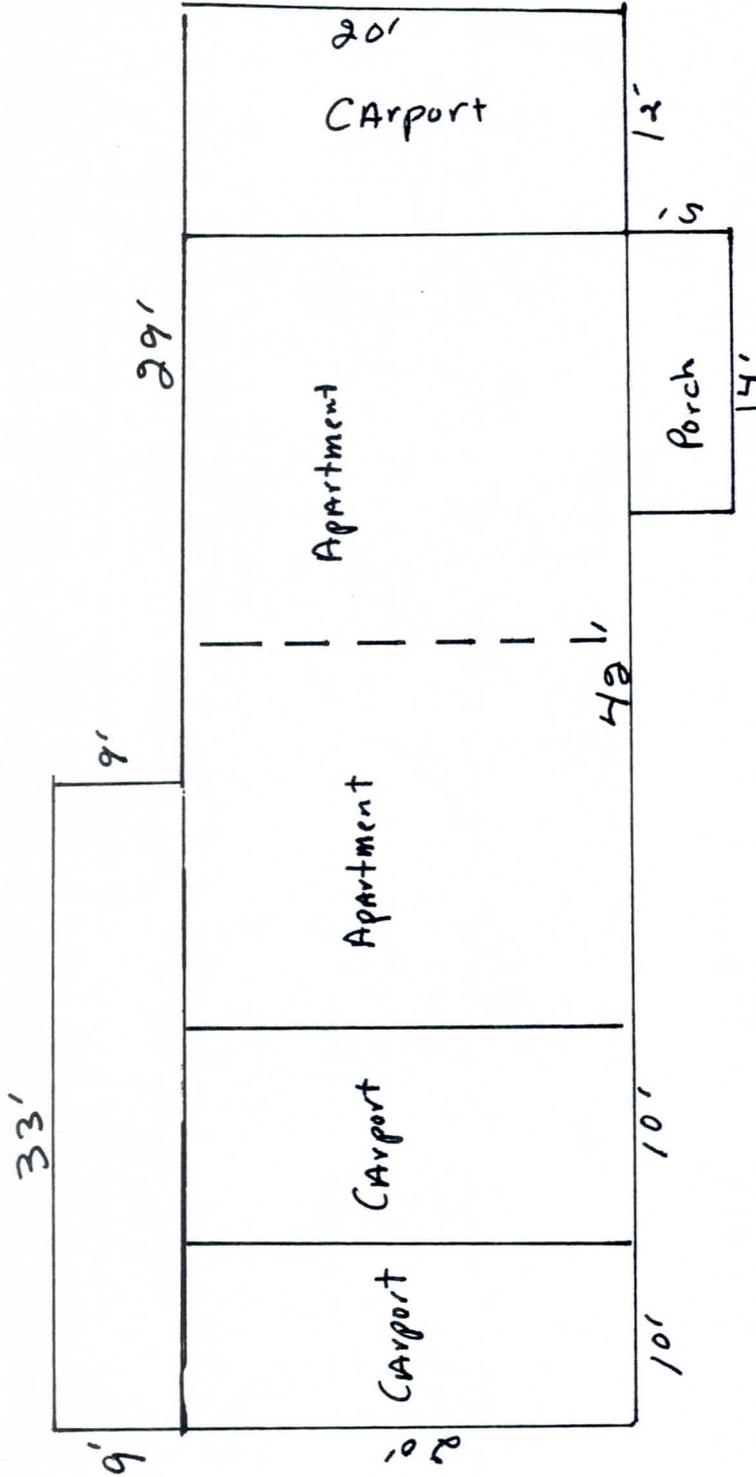
Property Site Inventory Information

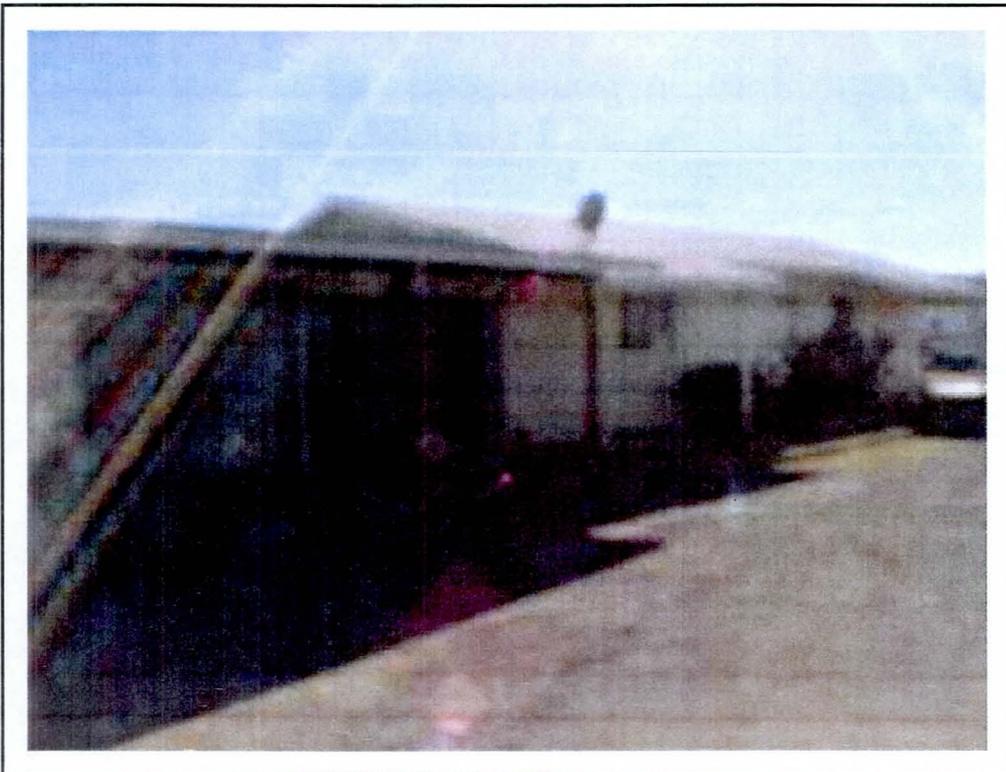
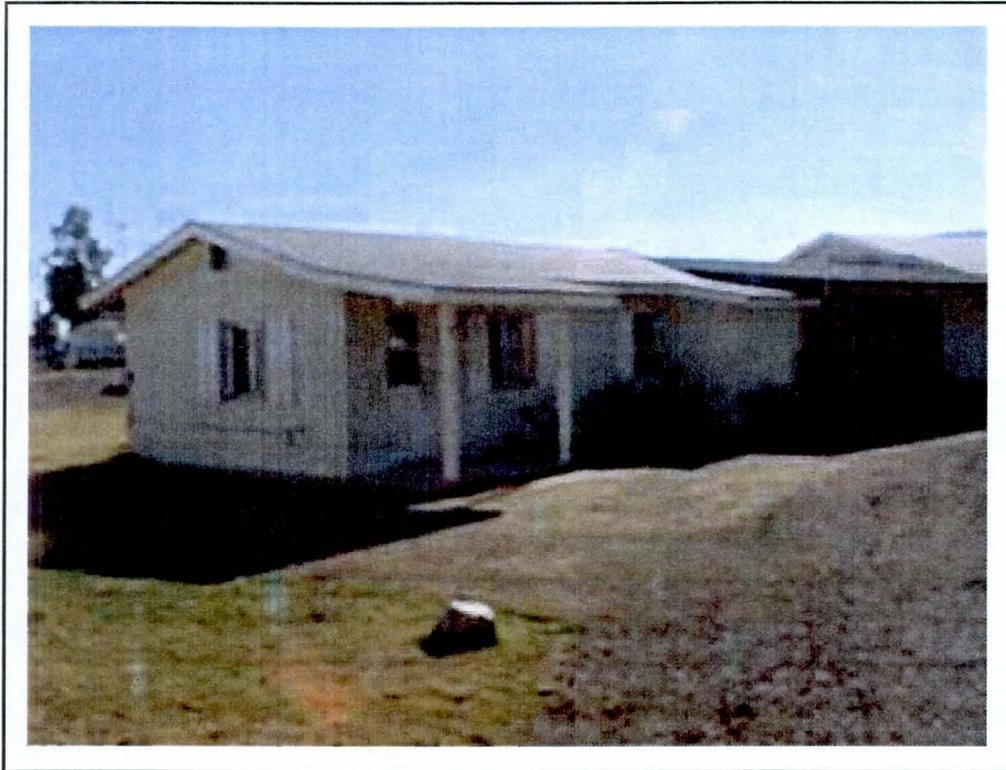
Project Number	Aguila #1 Building F- Rental Apartment Duplex
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	800
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1953
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	concrete block
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input type="checkbox"/> Primary Residence <input checked="" type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

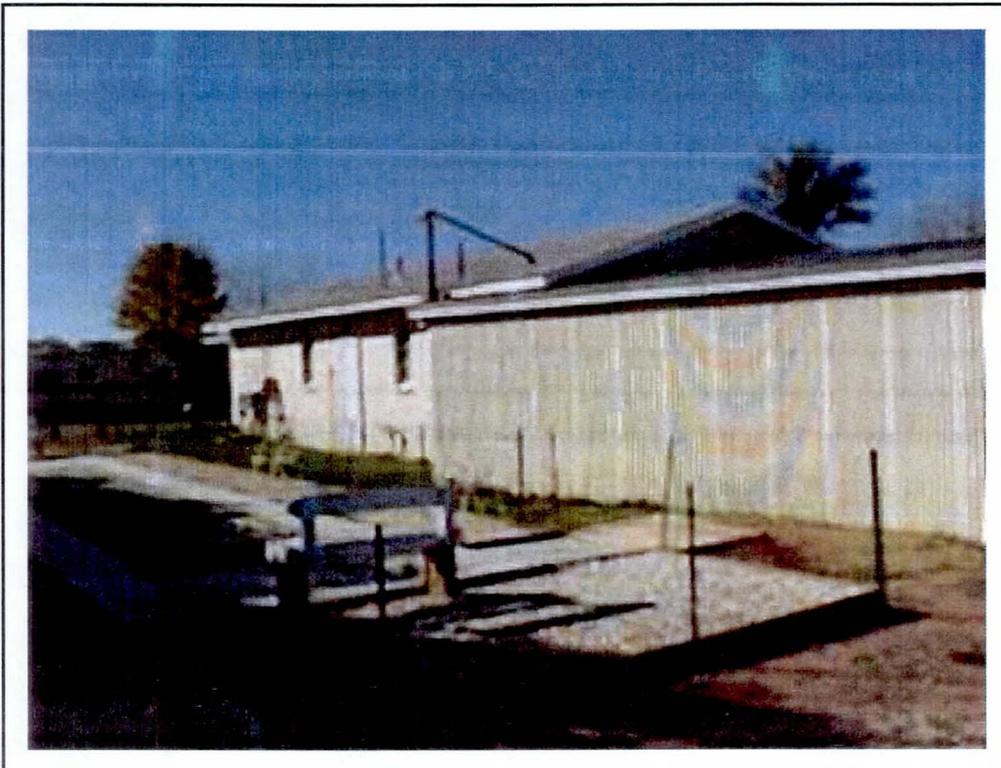
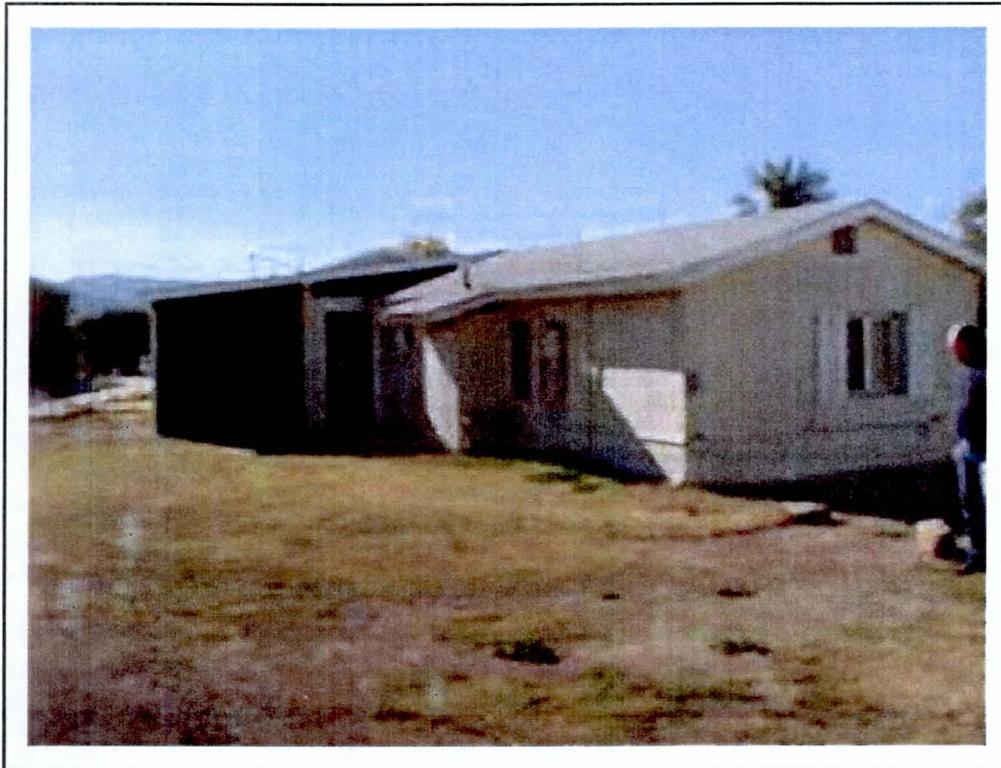
Aguila #1

Building F – Rental Apartment Duplex





Rental Apartment Duplex



Rental Apartment Duplex

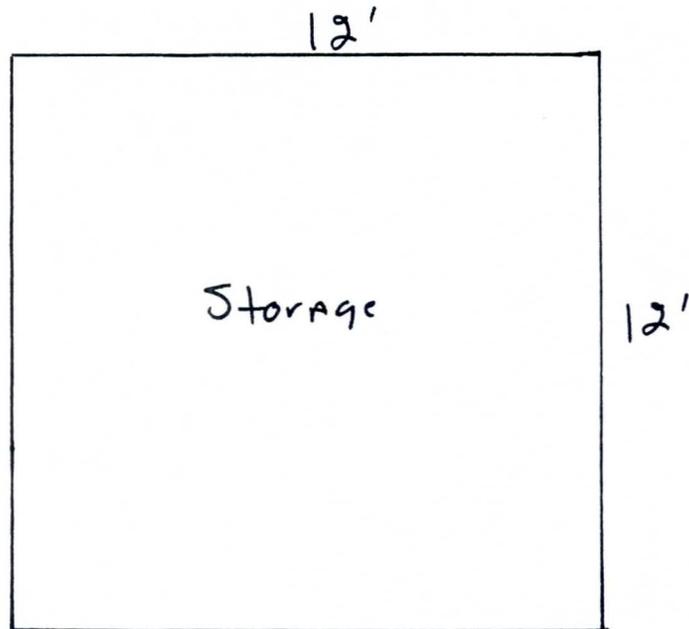
Property Site Inventory Information

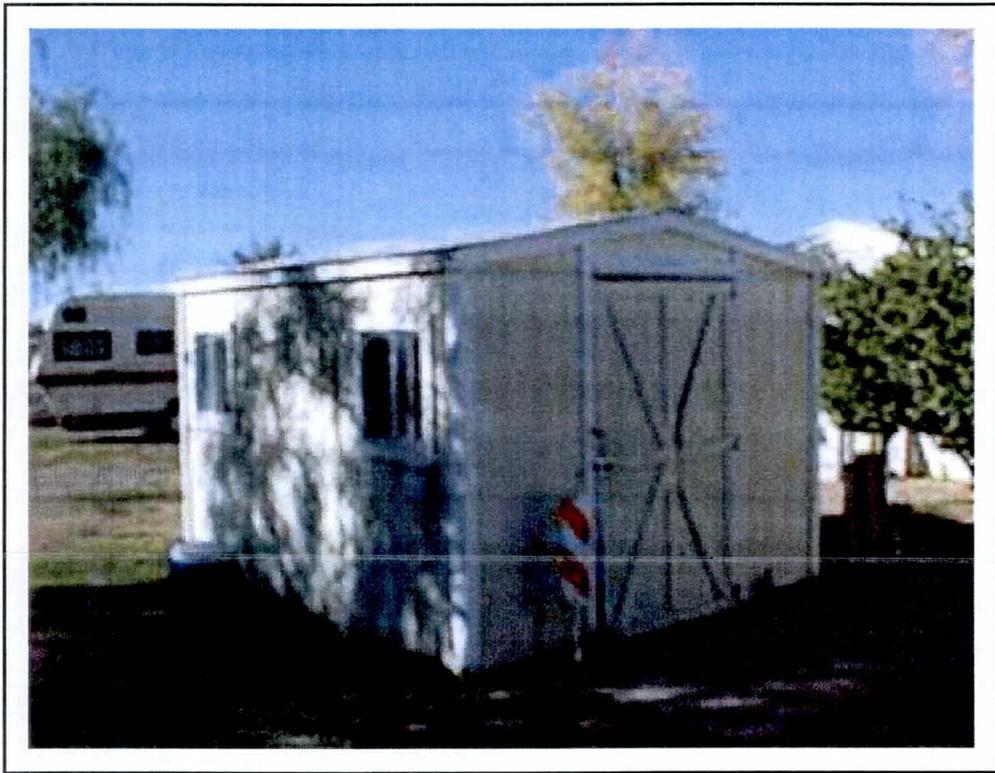
Project Number	Aguila #1 Building G-Storage Building #1
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	144
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1968
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	concrete block
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Aguila #1

Building H – Storage Building # 1





Storage Building #1

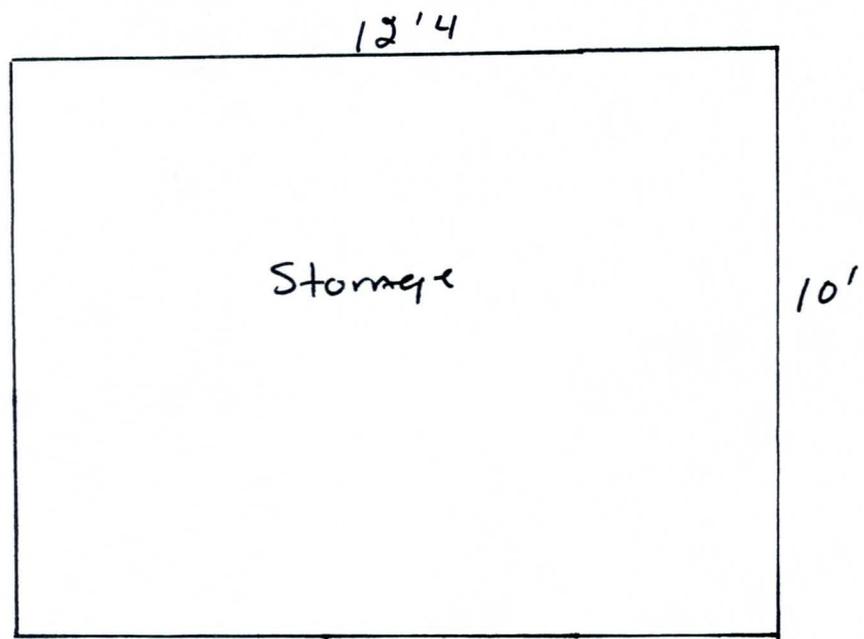
Property Site Inventory Information

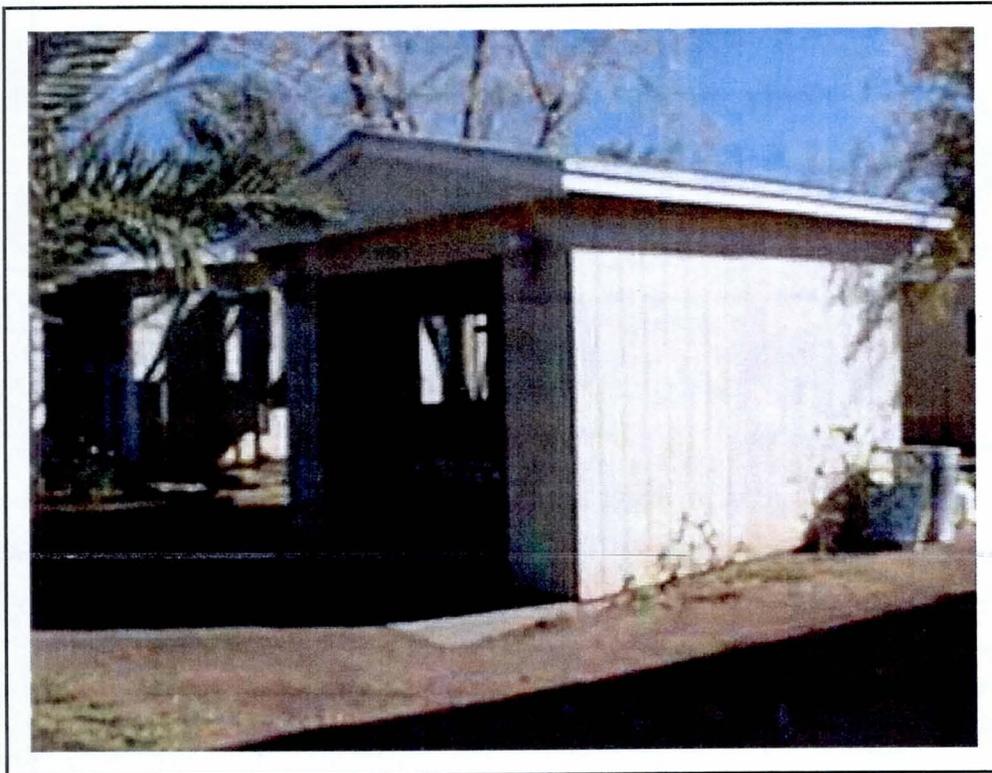
Project Number	Aguila #1 Building H-Storage Building #2
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	120
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1968
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	wood frame
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Aguila #1

Building G – Storage Building # 2





Storage Building #2

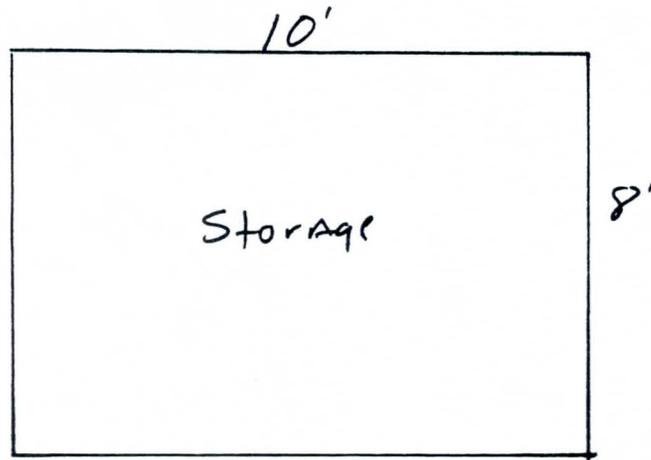
Property Site Inventory Information

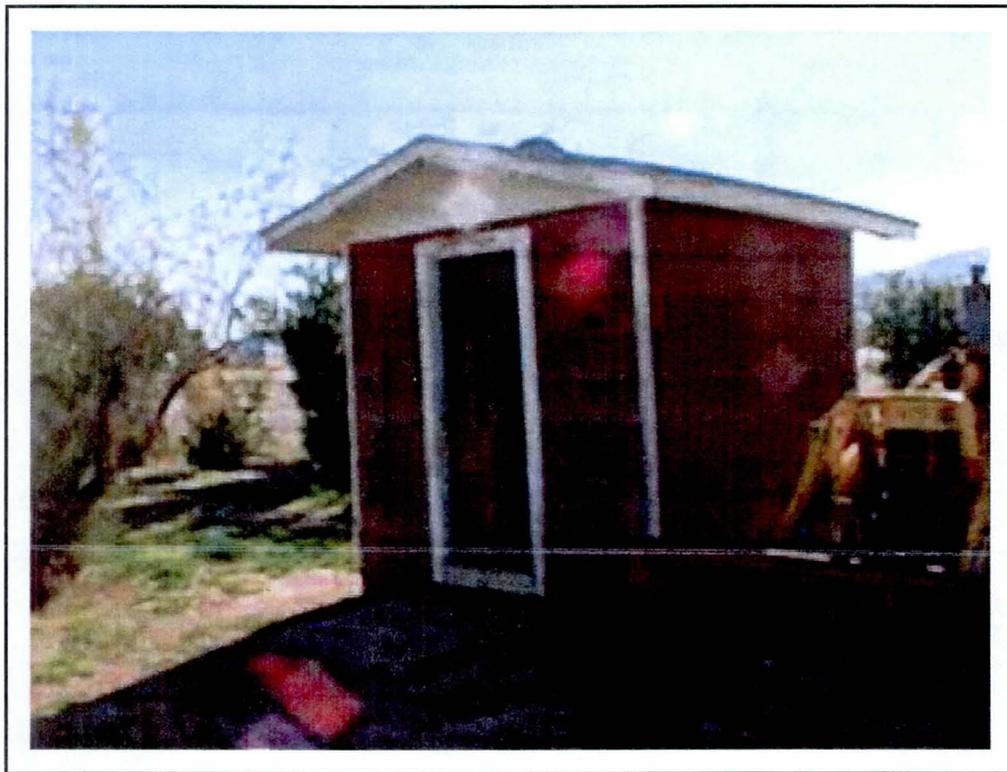
Project Number	Aguila #1 Building I --Storage Building #3
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	80
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1968
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	wood frame
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

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Aguila #1

Building I – Storage Building #3



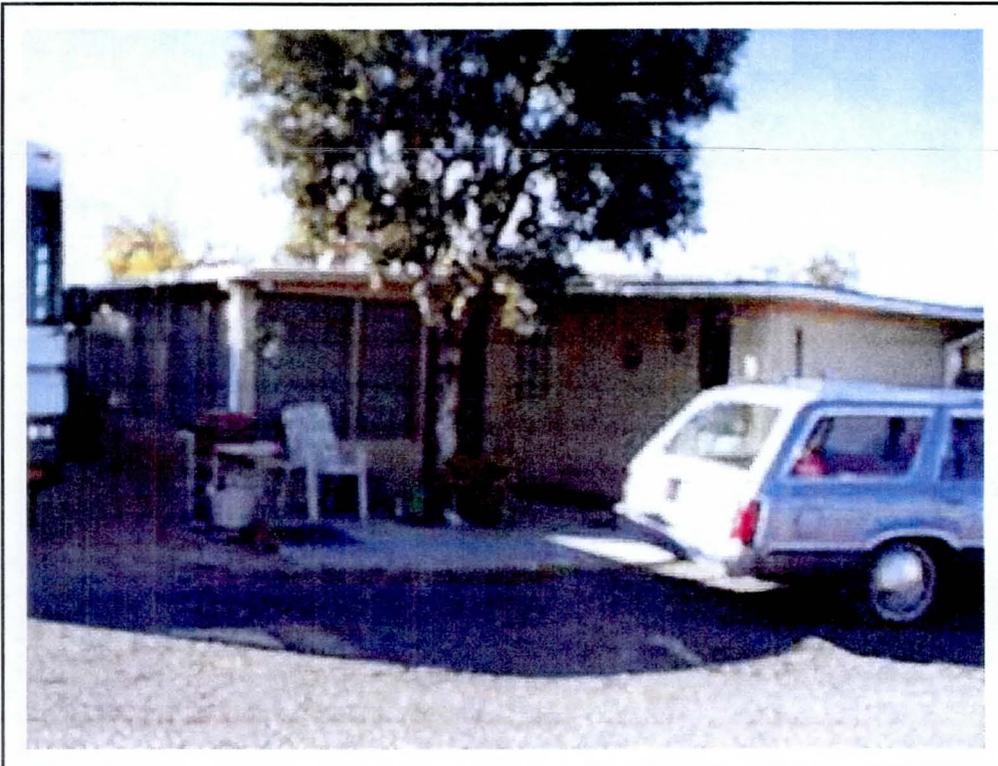
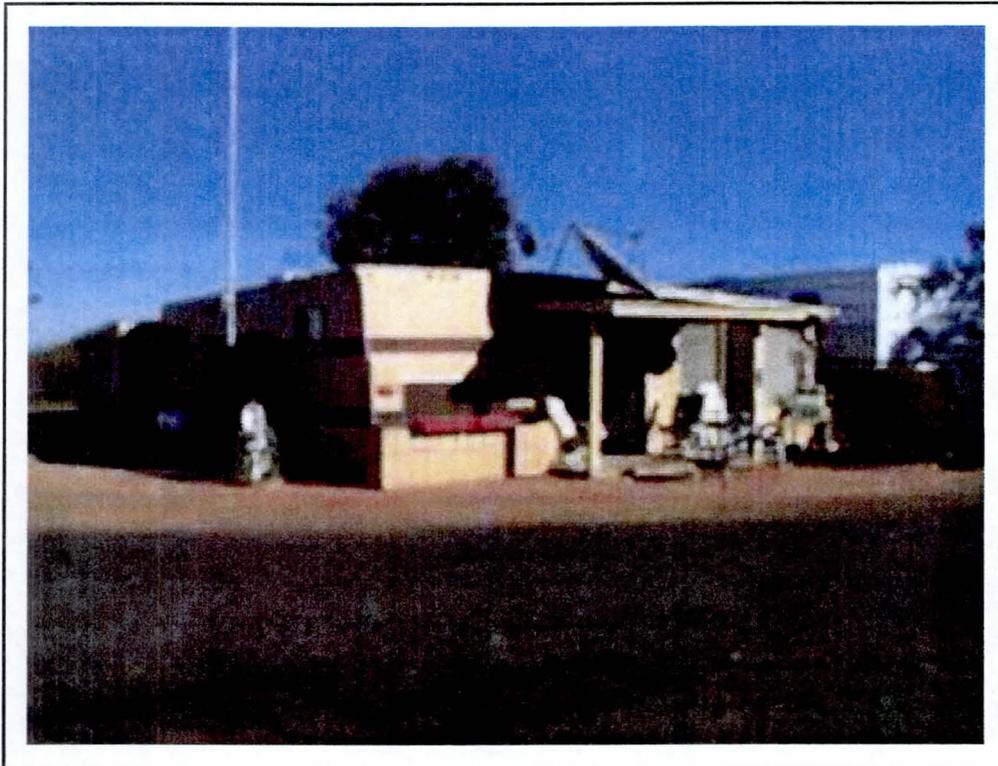


Storage Building #3

Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 10
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	1155
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	W 113 11 31.4
Longitude	N 33 56 16.5
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Margaret Howard
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

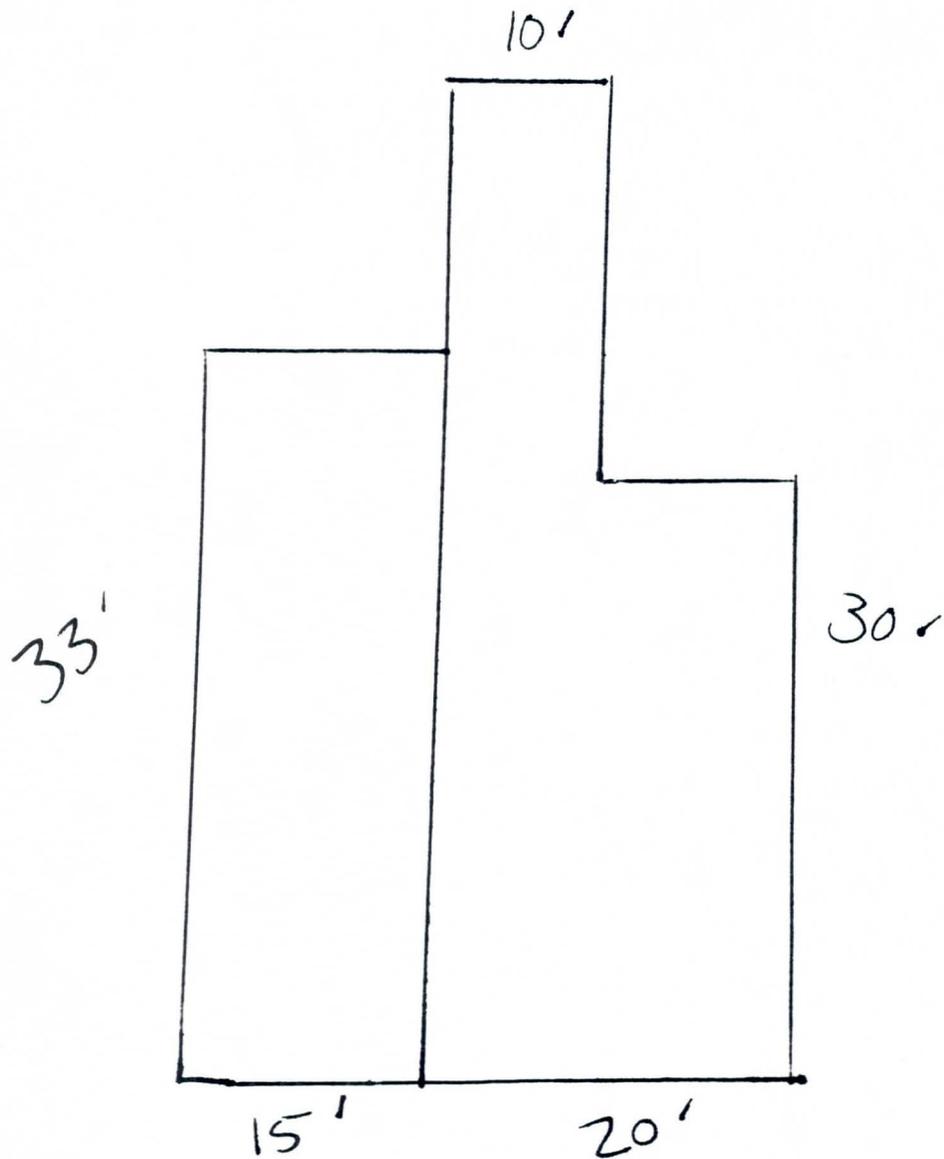


Fairhaven RV Park Rental Space #10

Aguila #1

Fairhaven RV Park

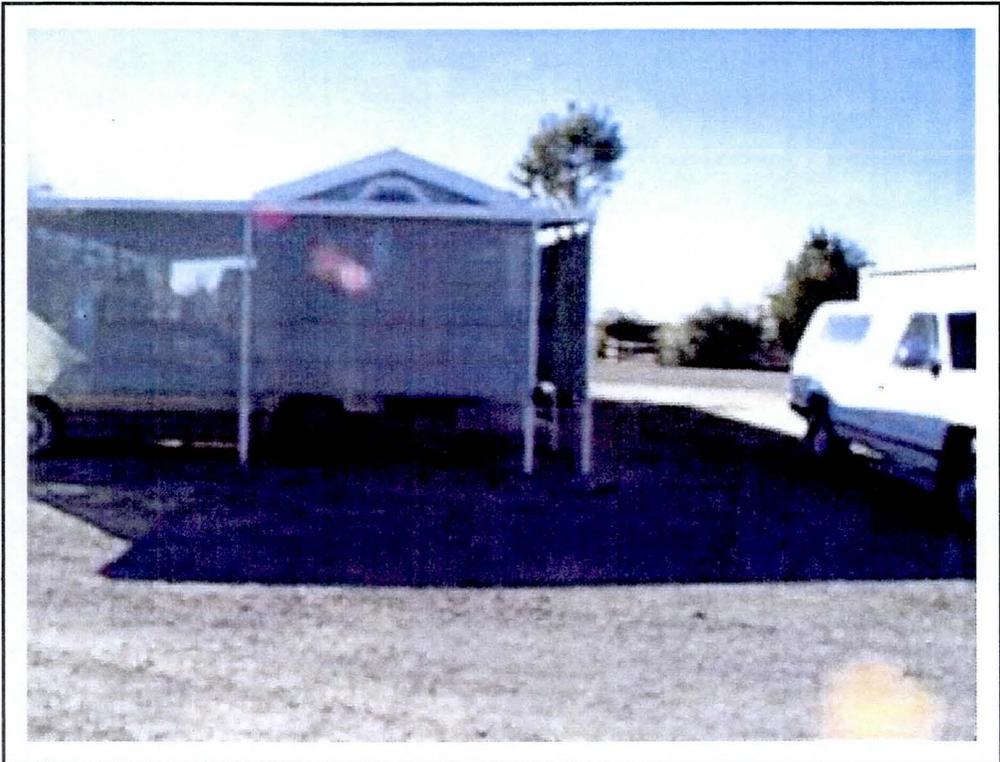
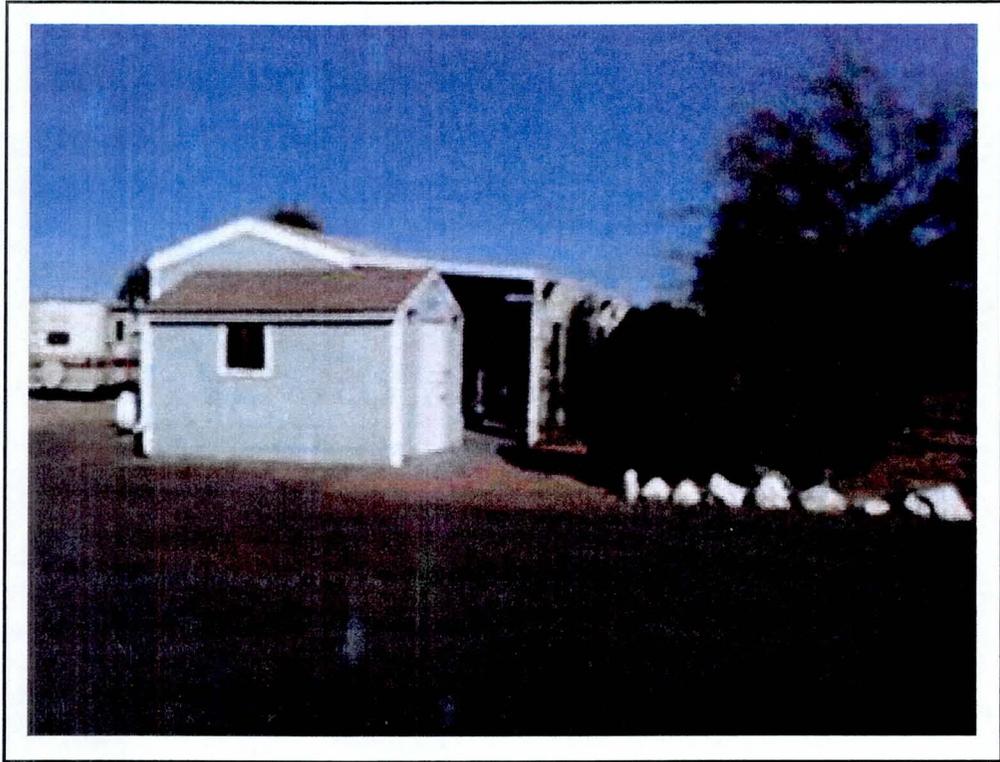
Space 10 -- Margaret Howard



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 17
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	495
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	W 113 11 30.8
Longitude	N 33 56 14.2
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Morley and Colleen McCauley
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

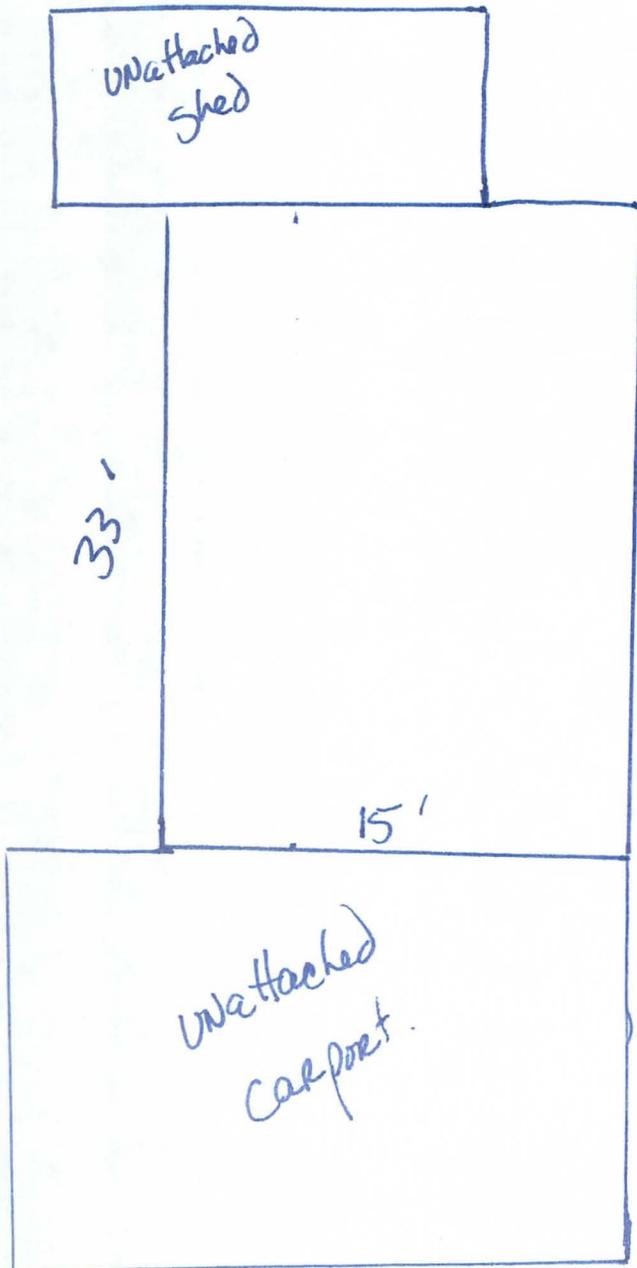


Fairhaven RV Park Rental Space #17

Aguila #1

Fairhaven RV Park

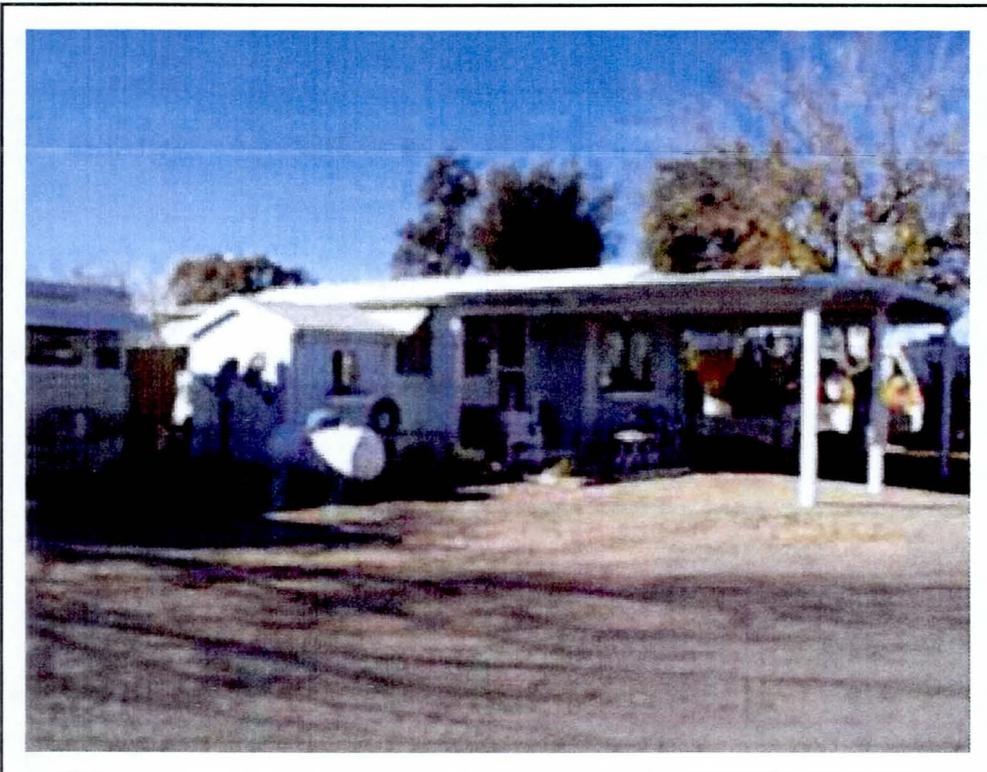
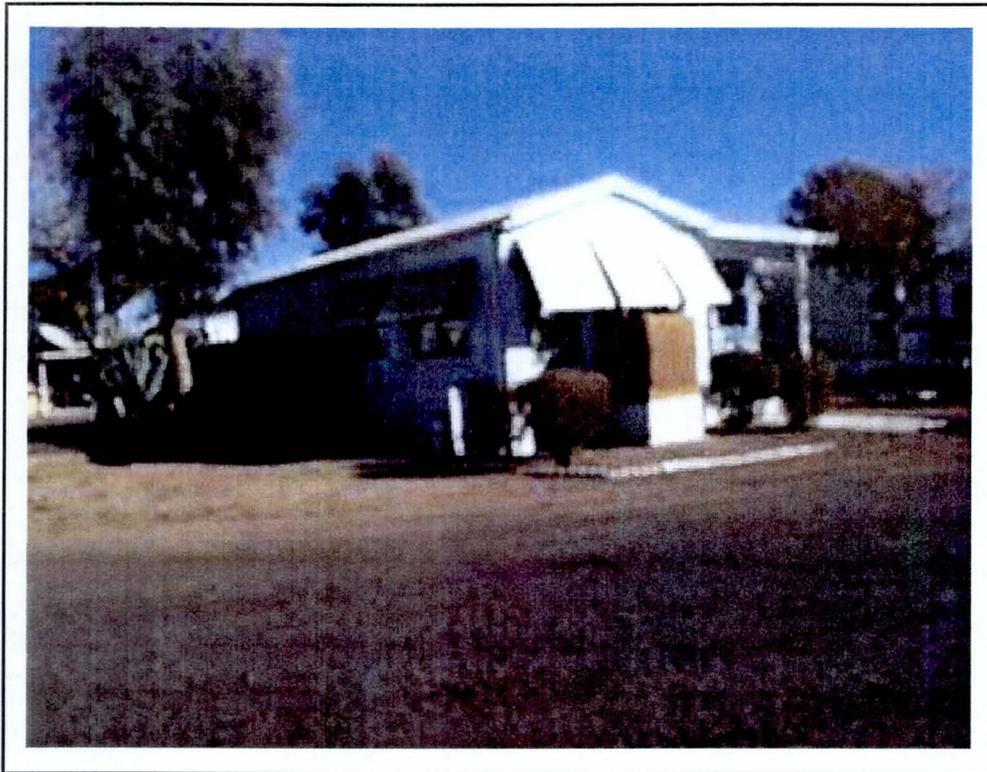
Space 17 – Morley and Colleen McCauley



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 29
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	545
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	W 113 11 32.0
Longitude	N 33 56 16.3
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Robert Brisbin
Comments	

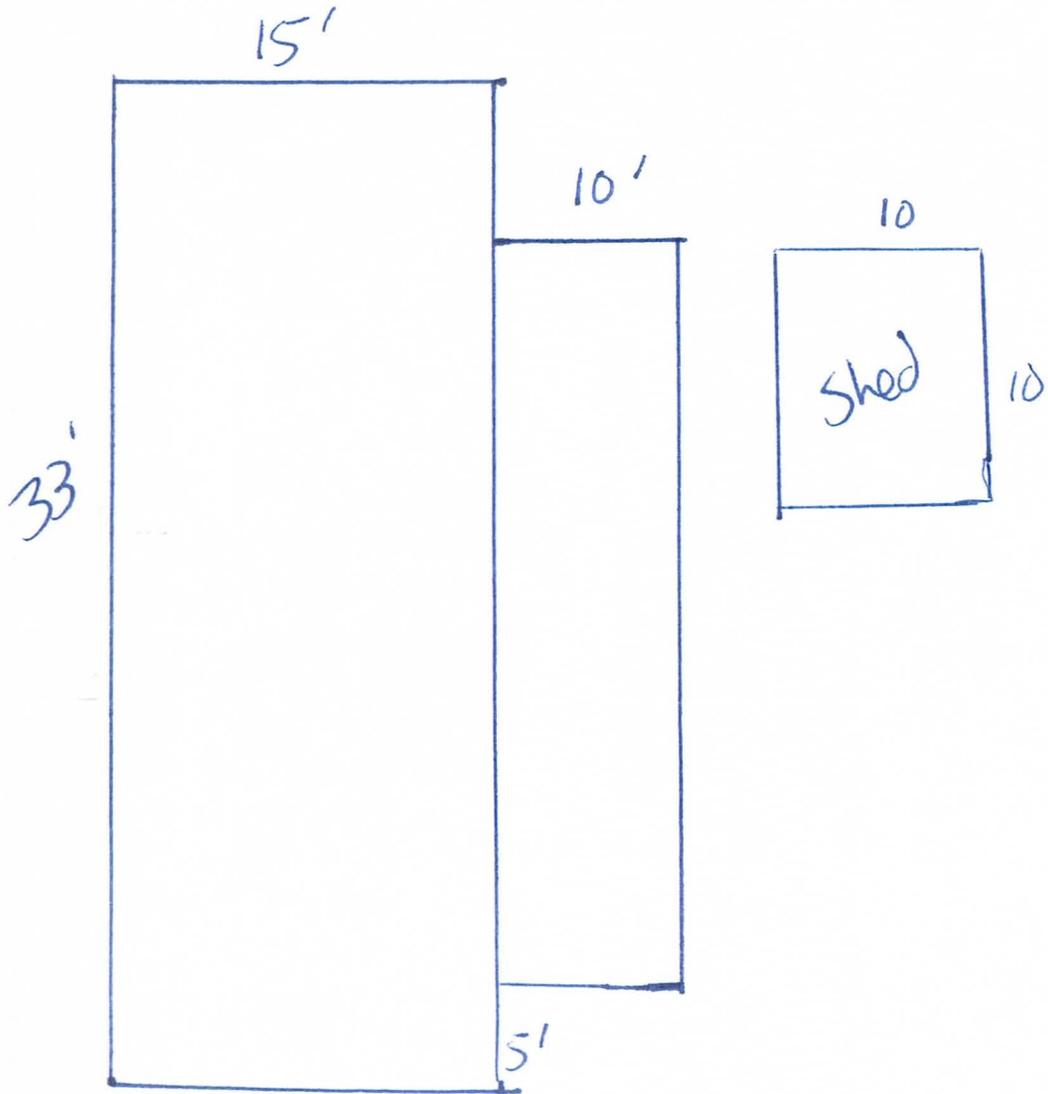
ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.



Fairhaven RV Park Rental Space #29

Aguila #1

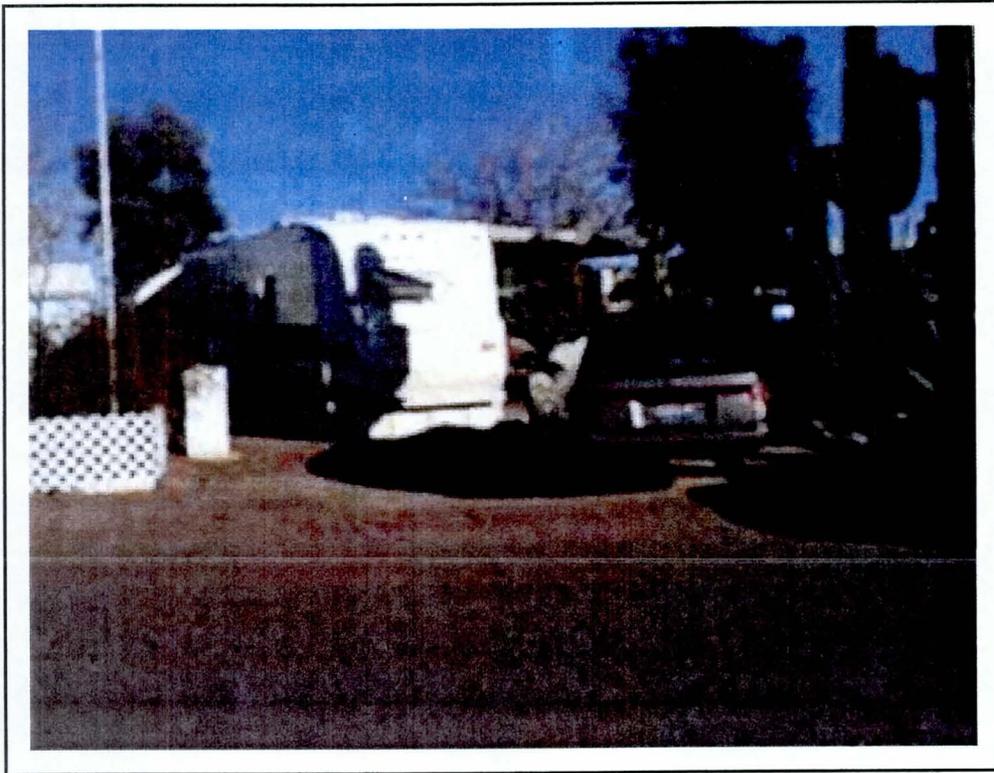
Fairhaven RV Park
Space 29 – Robert Brisbin



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 30
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	450
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	W 113 11 31.9
Longitude	N 33 56 31.9
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Theresa Coon
Comments	

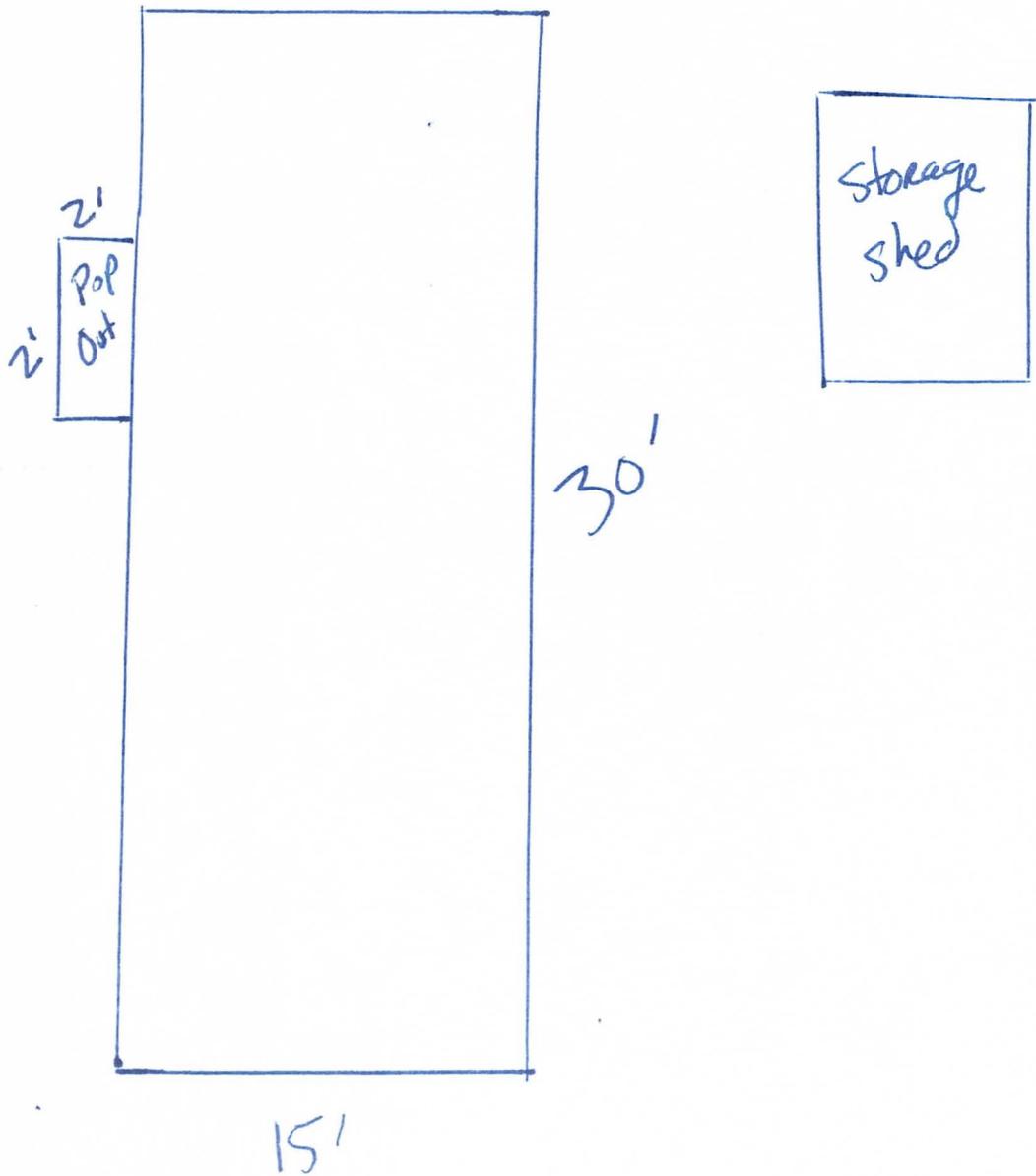
ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.



Fairhaven RV Park Rental Space #30

Aguila #1

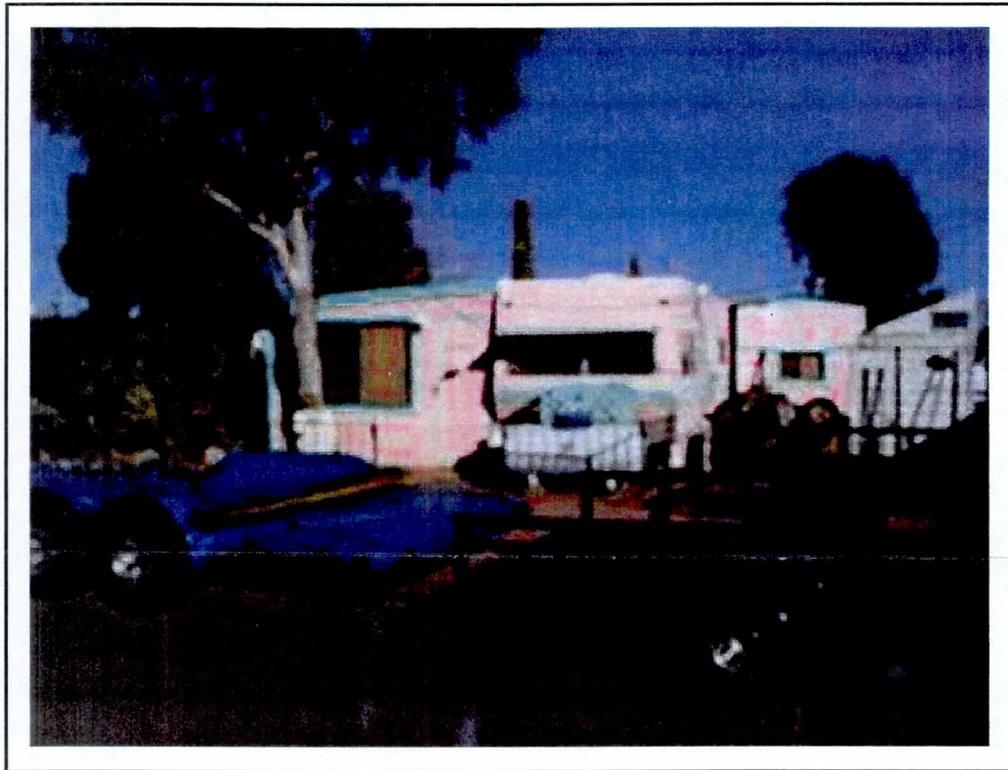
Fairhaven RV Park
Space 30 – Theresa Coon



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 31
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	945
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Bill and Evelyn Self
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

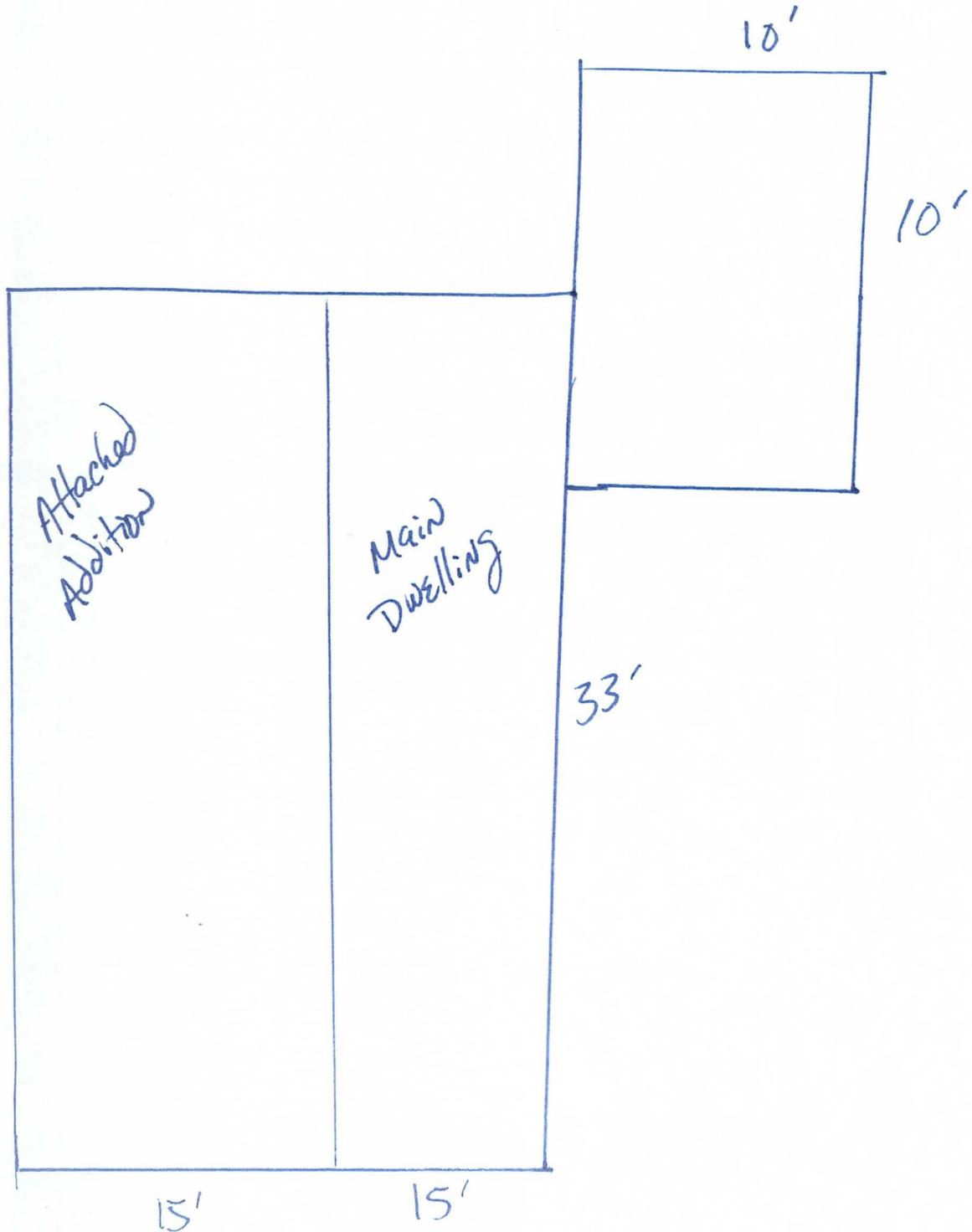


Fairhaven RV Park Rental Space #31

Aguila #1

Fairhaven RV Park

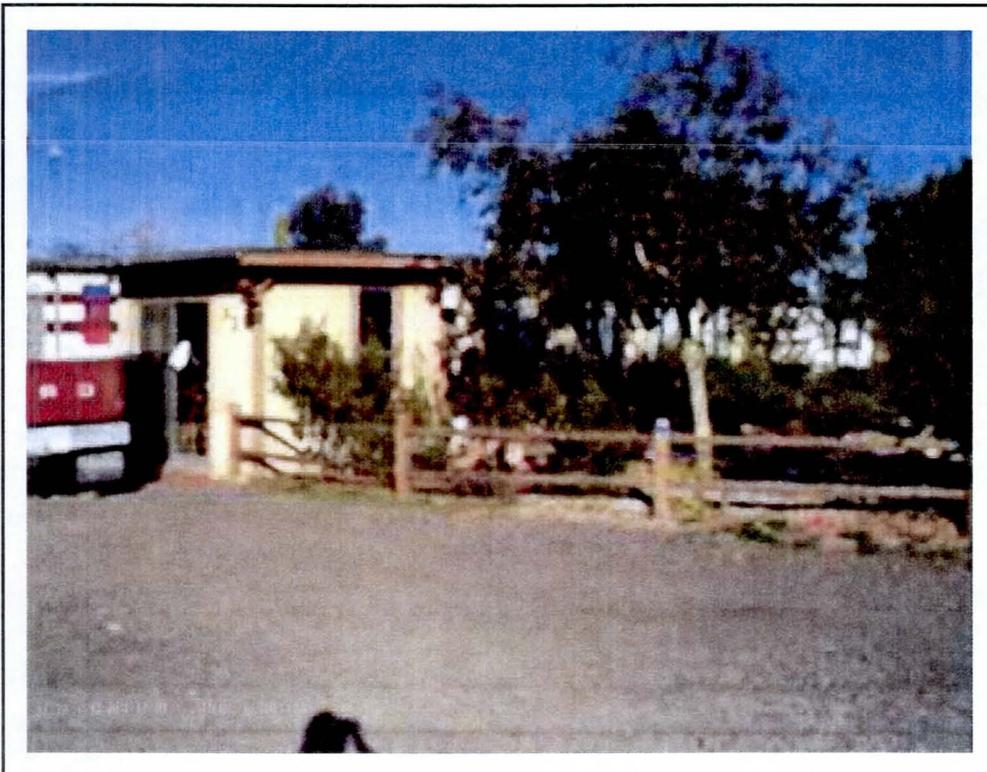
Space 31 – Bill and Evelyn Self



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 32
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	1000
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	N 33 56 14.7
Longitude	W 113 11 32.1
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Carl and Pep Patterson
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

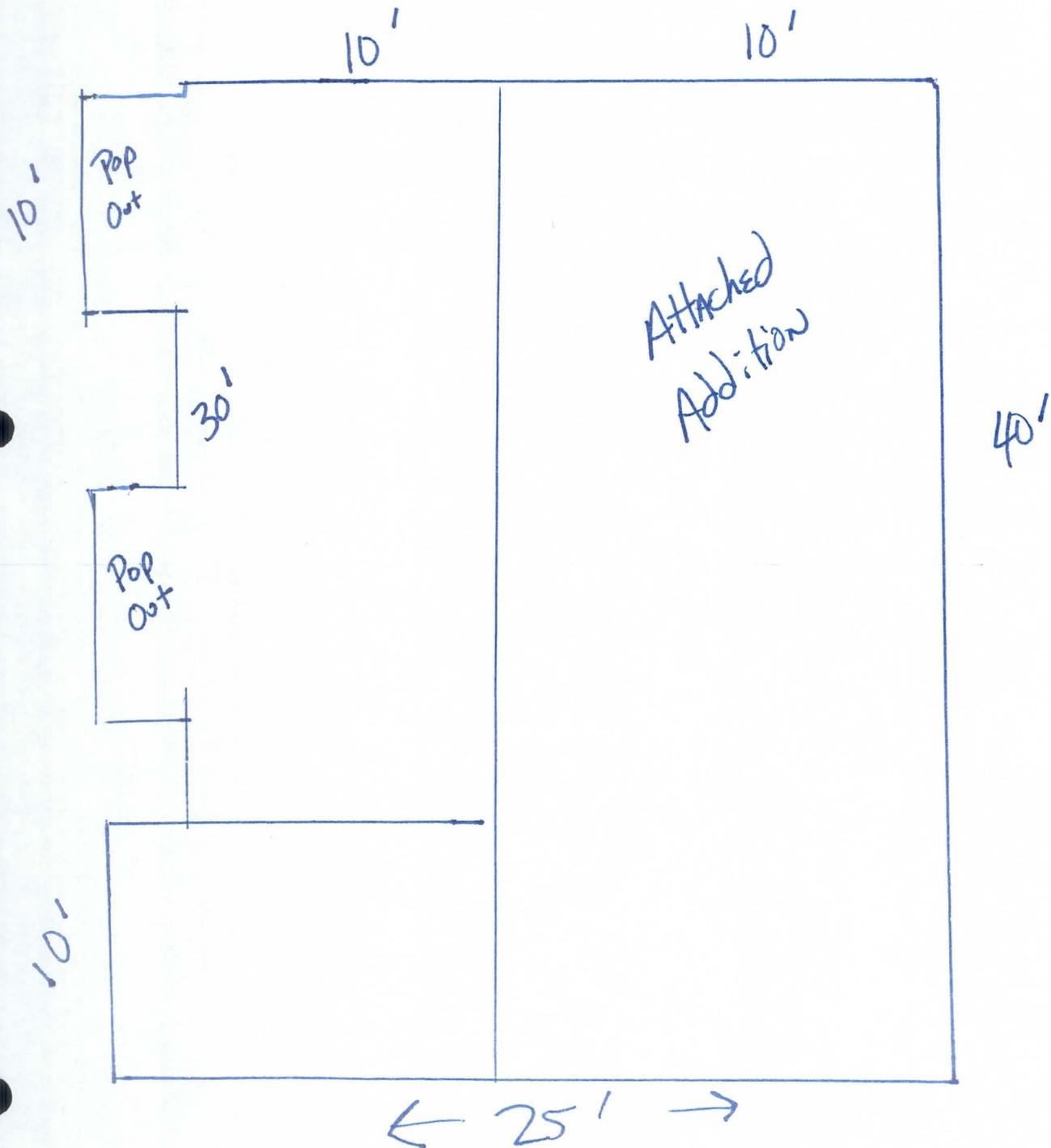


Fairhaven RV Park Rental Space #32

Aguila #1

Fairhaven RV Park

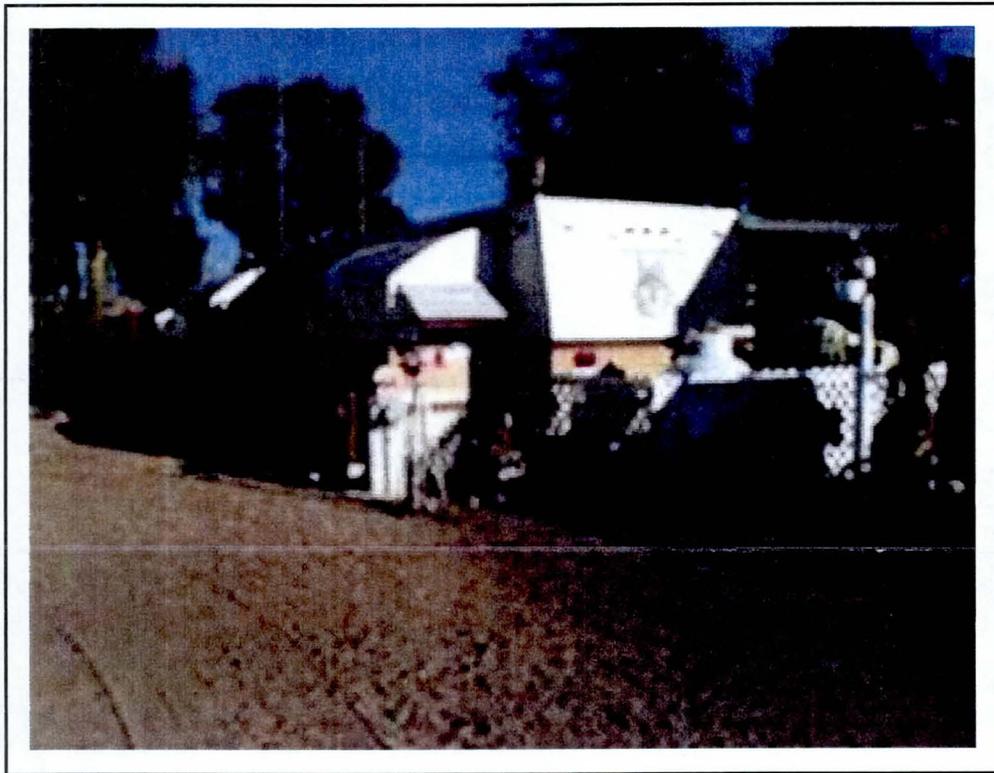
Space 32 – Carl and Pepe Patterson



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 44
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	630
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	N 33 56 15.4
Longitude	W 113 11 32.5
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Lois Adams
Comments	

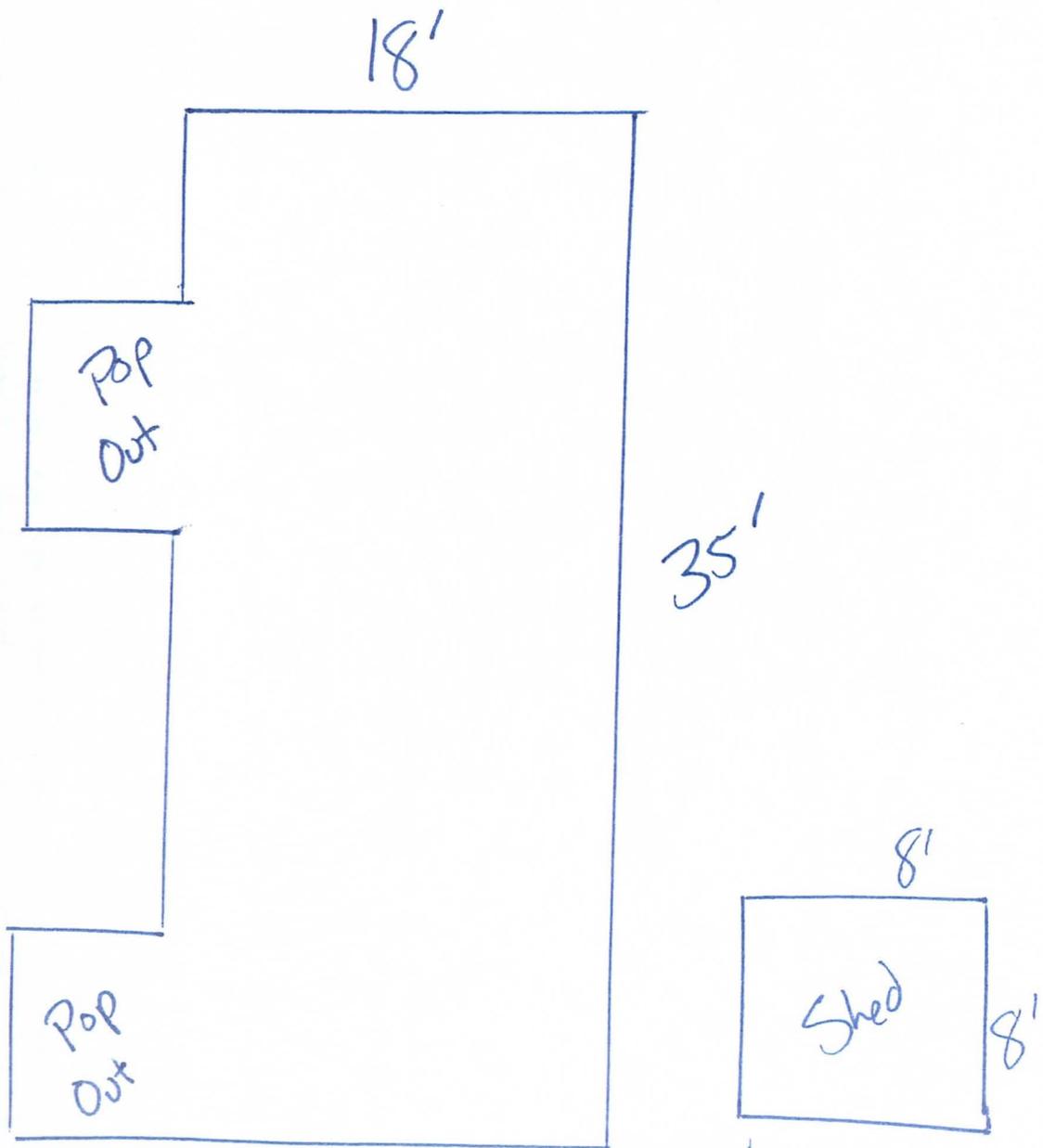
ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.



Fairhaven RV Park Rental Space #44

Aguila #1

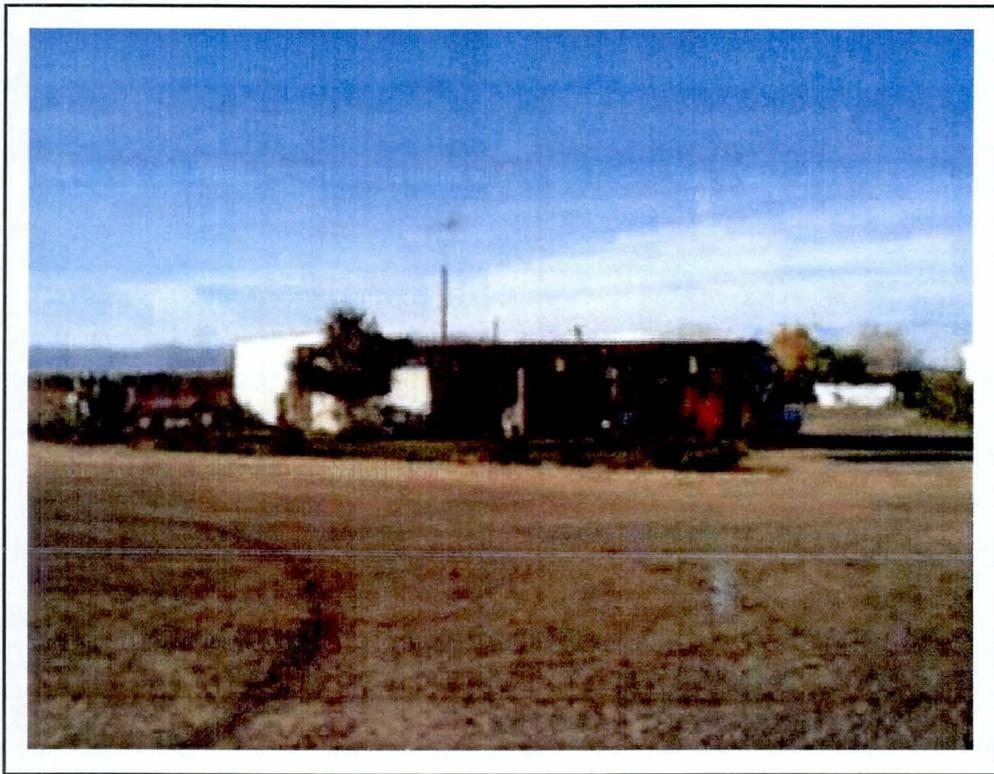
Fairhaven RV Park
Space 44 – Lois Adams



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 46
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	620
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	N 33 56 15.5
Longitude	W 113 11 34.0
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Bob and Wyrst Castle
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

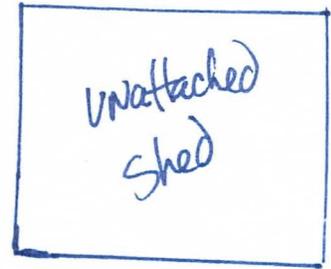
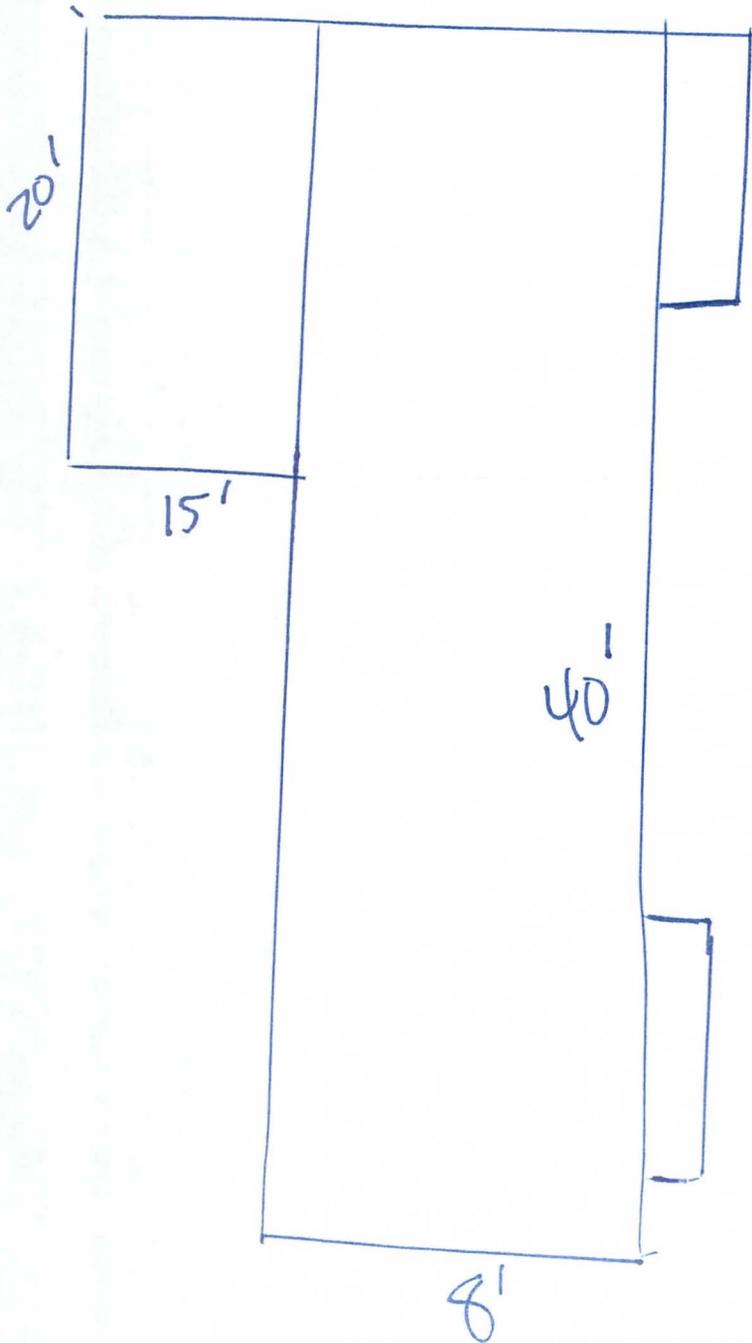


Fairhaven RV Park Rental Space #46

Aguila #1

Fairhaven RV Park

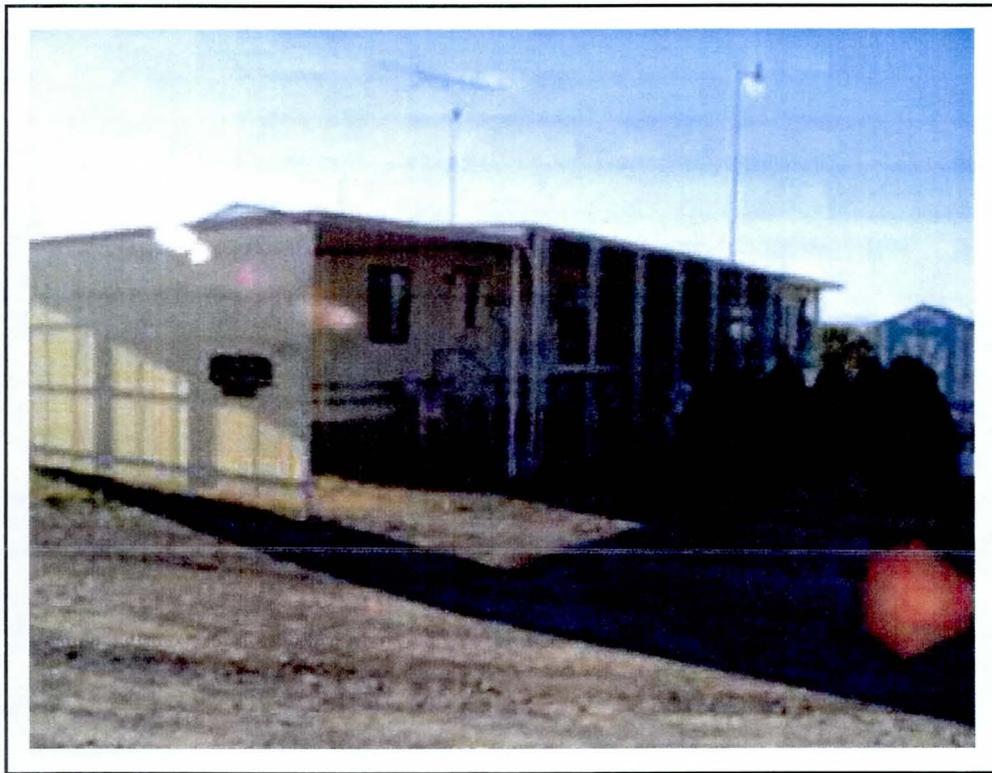
Space 46 – Bob and Wyrst Castle



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 47
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	620
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	N 33 56 16.0
Longitude	W 113 11 33.7
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Willard and Bernice Dibble
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

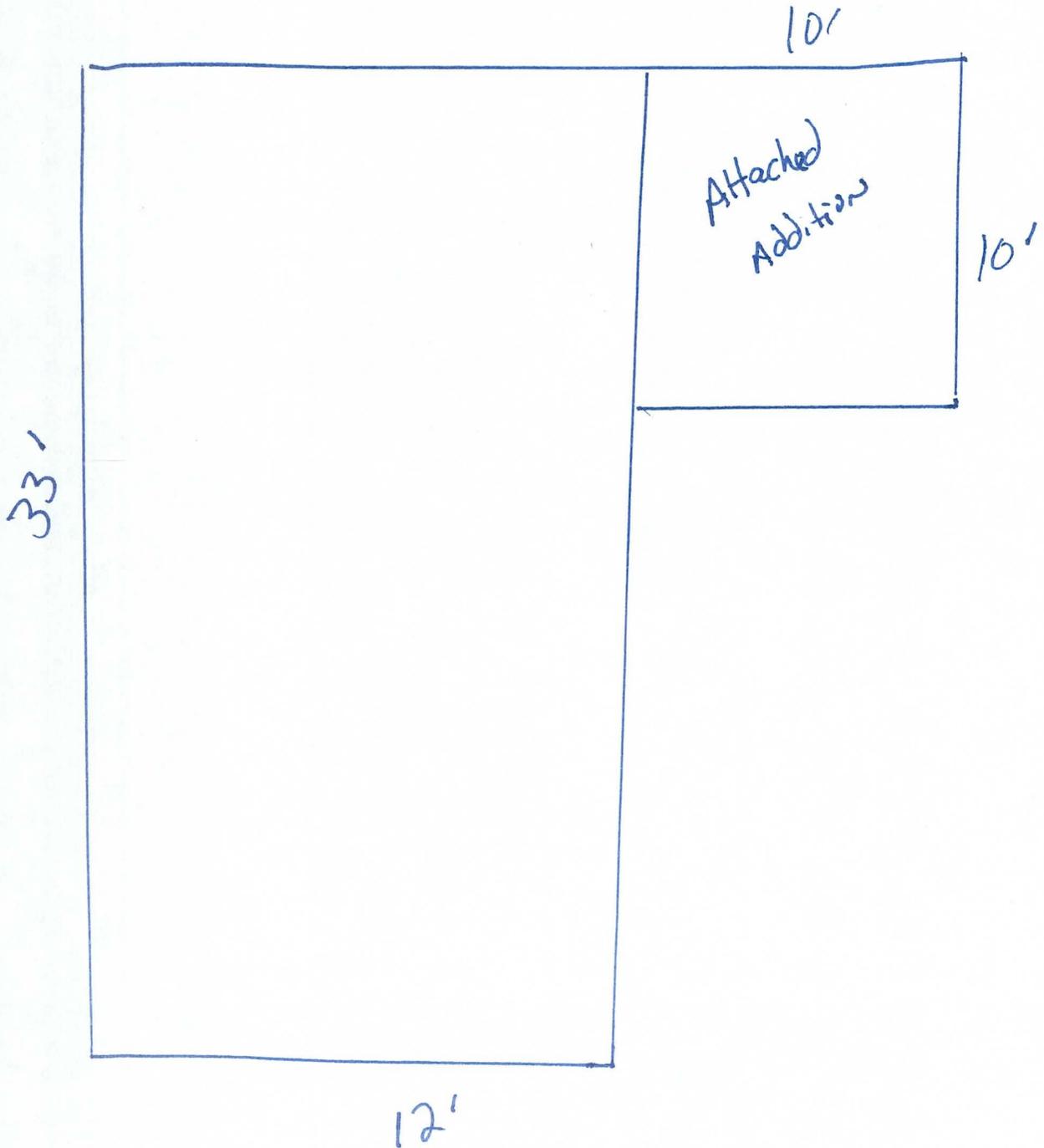


Fairhaven RV Park Rental Space #47

Aguila #1

Fairhaven RV Park

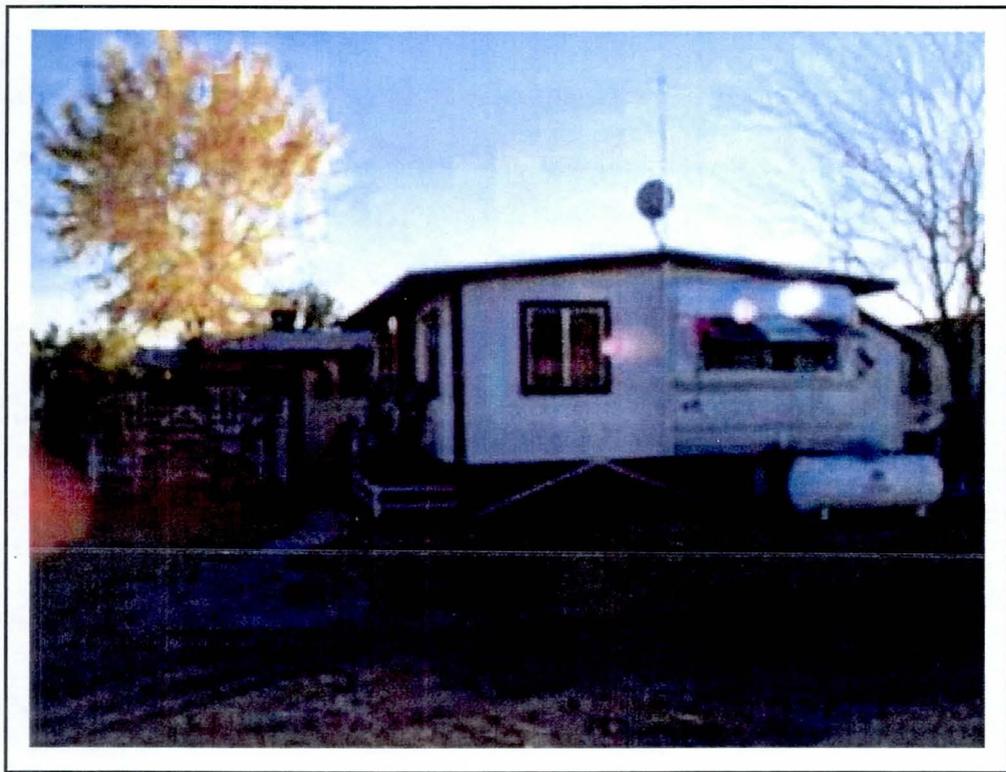
Space 47 – Willard and Bernice Dibble



Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60 Space 49
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	552
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input checked="" type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	N 33 56 17.7
Longitude	W 113 11 35.6
Parcel Number	
Legal Description	See Attached
Pre-Event Fair Market Value	\$4,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	Glenda Chance and Ralph Barnes
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.



Fairhaven RV Park Rental Space #49

Property Site Inventory Information

Project Number	Aguila #1 RV Park
Project Title	Aguila Acquisition Project
Present Owner	Jim Sterrenberg
Address	52227 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	Az
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	4,590 -- 9 structures
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	As indicated
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	As indicated
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	unknown
FIRM Special Flood Hazard Zone	floodplain AE zone
NFIP Policy Number	N/a
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date 10/23/00 Recurrence Level ' Depth of Flooding 27"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input checked="" type="checkbox"/> Rental <input checked="" type="checkbox"/> Other
Latitude	
Longitude	
Parcel Number	PID 506-05-011-8
Legal Description	See Attached
Pre-Event Fair Market Value	\$350,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Flood Control District of Maricopa County Regulatory Branch

2801 W. Durango St.
Phoenix, AZ 85009

Substantial Damage Certification

This is to certify that the Flood Control District of Maricopa County code enforcement conducted a damage assessment at Fairhaven RV Park, 52227 W. Highway 60, Aguilera, AZ 85320. Pursuant to this assessment; in accordance with the National Flood Insurance Program and Flood Control District of Maricopa County flood damage prevention and control ordinance, this structure has been classified non-conforming and substantially damaged.

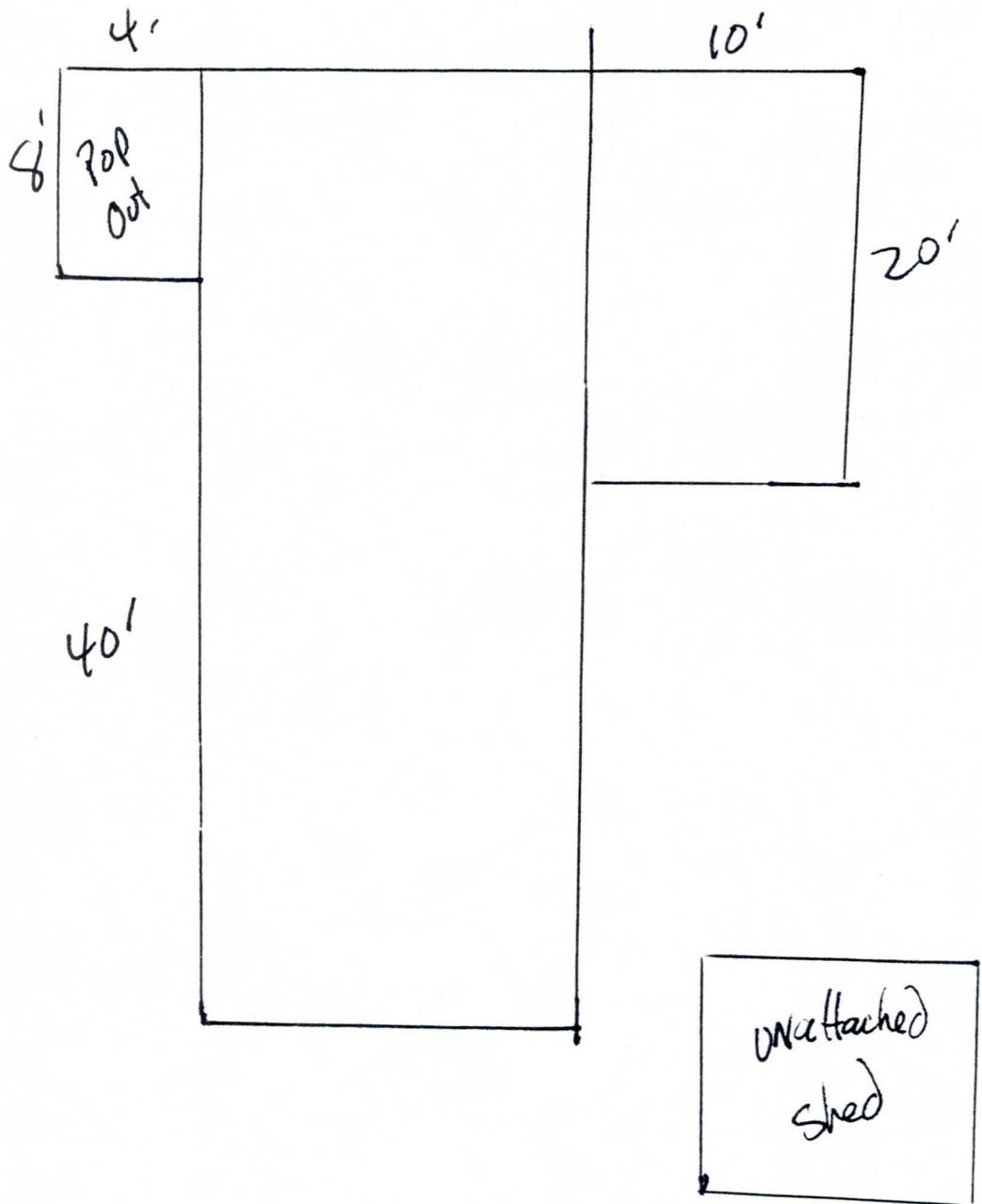


Charles Feuquay, C.T., E.T.
Regulatory Inspection/Permitting Branch Manager
Dec. 22, 2000

Aguila #1

Fairhaven RV Park

Space 49 Glenda Chance and Ralph Barnes



22-7N-9W FR SW COR NW4 RUN N 444.02' TH E 50' TO TRUE POB TH E
638.15' N 766.80' TH SLY R/W LI WICK-BLYTHE HIWAY TH S 75D 13' W ALG
R/W LI 660' TH S 598.40' TO POB CONT 10 AC M/L 10 AC

10ac

22-7N-9W W 50' OF NW4 LY S OF H/W 60 EX S 444.02' .67 AC

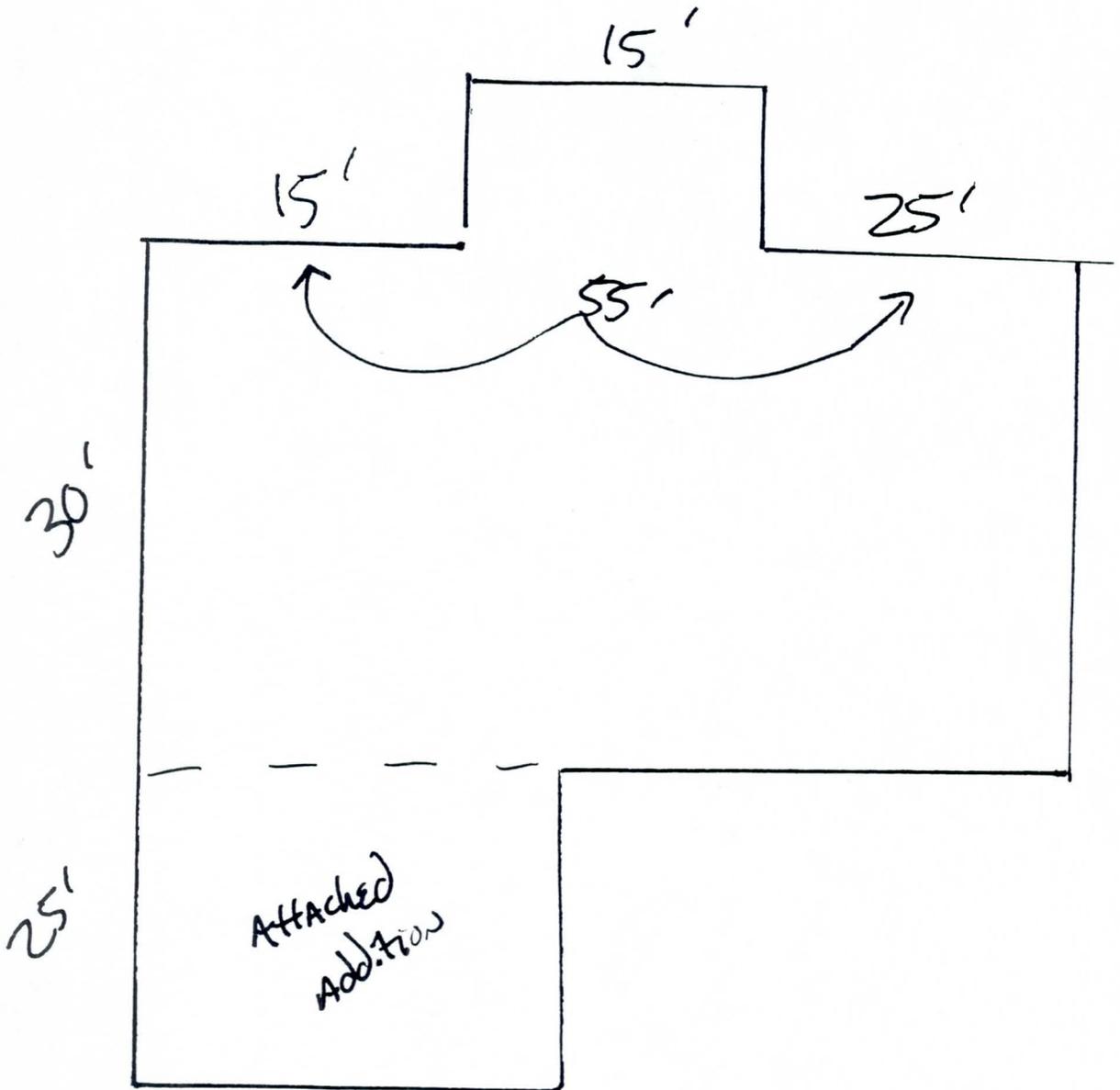
0.67a

22-7N-9W S 444.02' OF NW4 24.88 AC



Aguila #2

Helen Knight



Property Site Inventory Information

Project Number	Aguila #2
Project Title	Aguila Acquisition Project
Present Owner	Helen Knight
Address	51711 W. Highway 60
City, Town or Community	Aguila
State or Jurisdiction	AZ
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	2200
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1969
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Block
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	
FIRM Special Flood Hazard Zone	Floodplain
NFIP Policy Number	None
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date Recurrence Level Flooded three times since 1997 Depth of Flooding three feet
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	33 56' 28.7
Longitude	113 10' 53.7
Parcel Number	506-49-042A
Legal Description	See attached
Pre-Event Fair Market Value	\$65,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	Check F.P. Photos 18-22 Cabinet in kitchen--extensive mold appearance throughout-vanity and air intake damage

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Flood Control District of Maricopa County Regulatory Branch

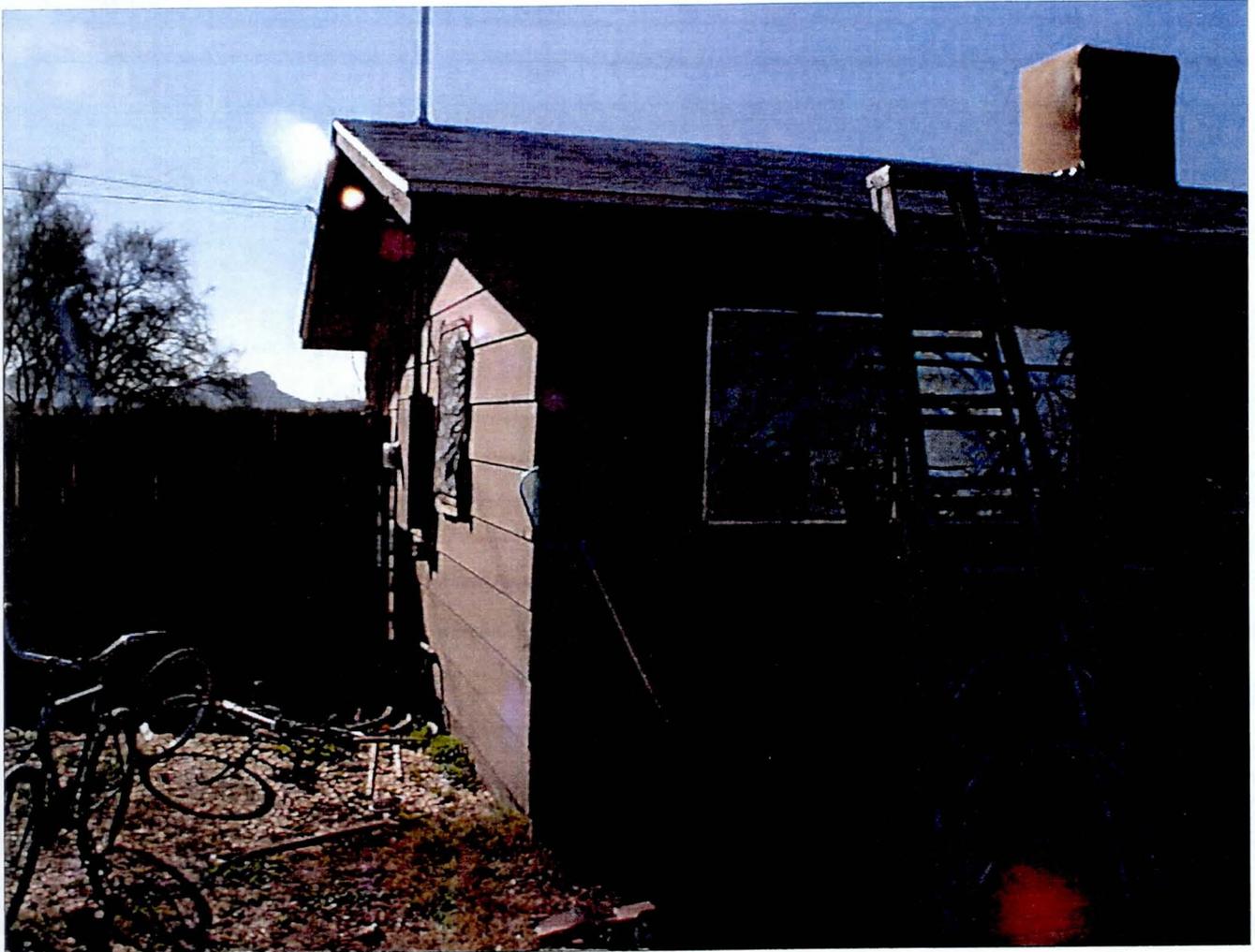
2801 W. Durango St.
Phoenix, AZ 85009

Substantial Damage Certification

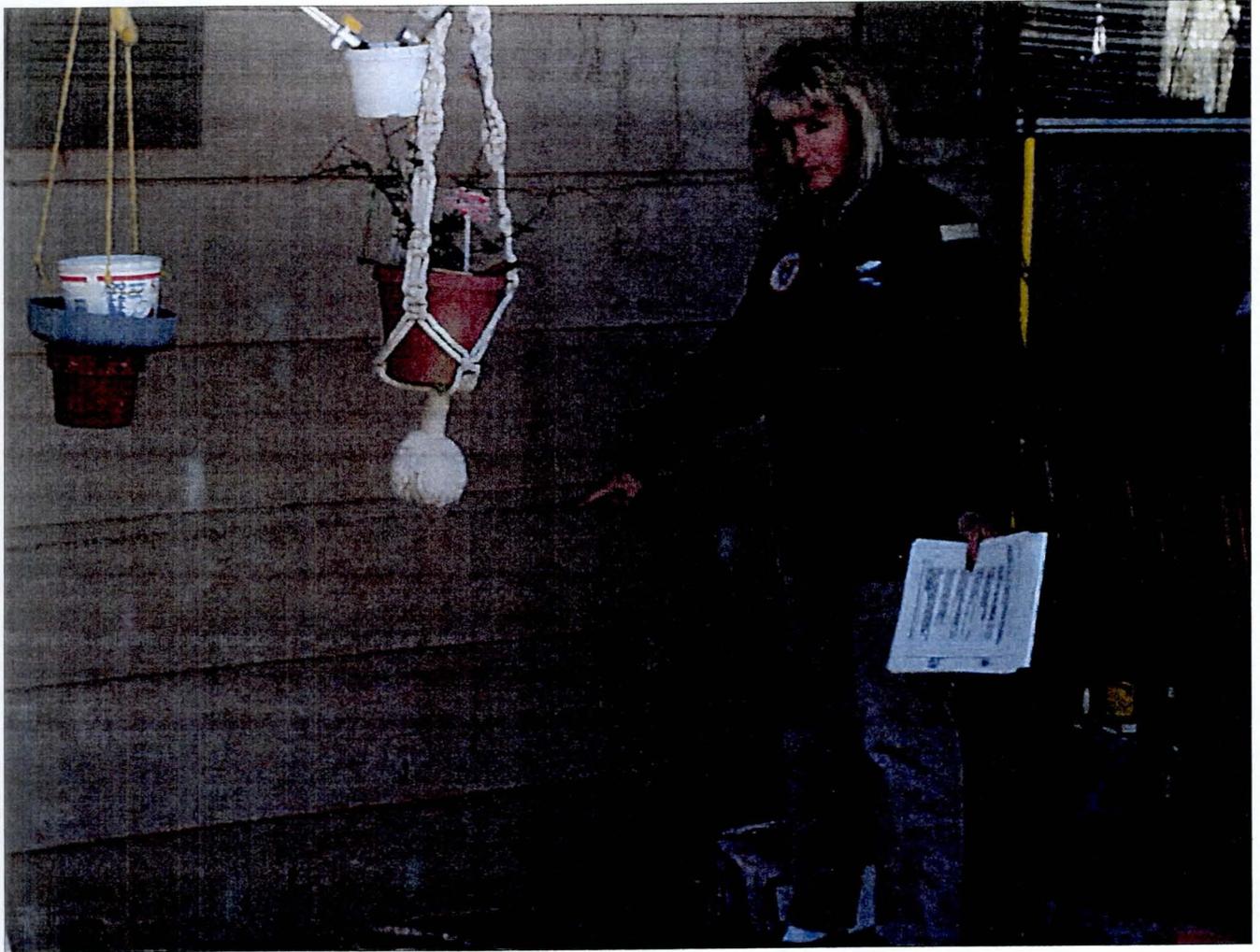
This is to certify that the Flood Control District of Maricopa County code enforcement conducted a damage assessment at 51711 W. Highway 60, Aguila, AZ 85320 Pursuant to this assessment; in accordance with the National Flood Insurance Program and Flood Control District of Maricopa County flood damage prevention and control ordinance, this structure has been classified non-conforming and substantially damaged.



Charles Feuquay, C.T., E.T.
Regulatory Inspection/Permitting Branch Manager
Dec. 22, 2000



Name: P000266.KDC
Dimensions: 1280 x 960 pixels



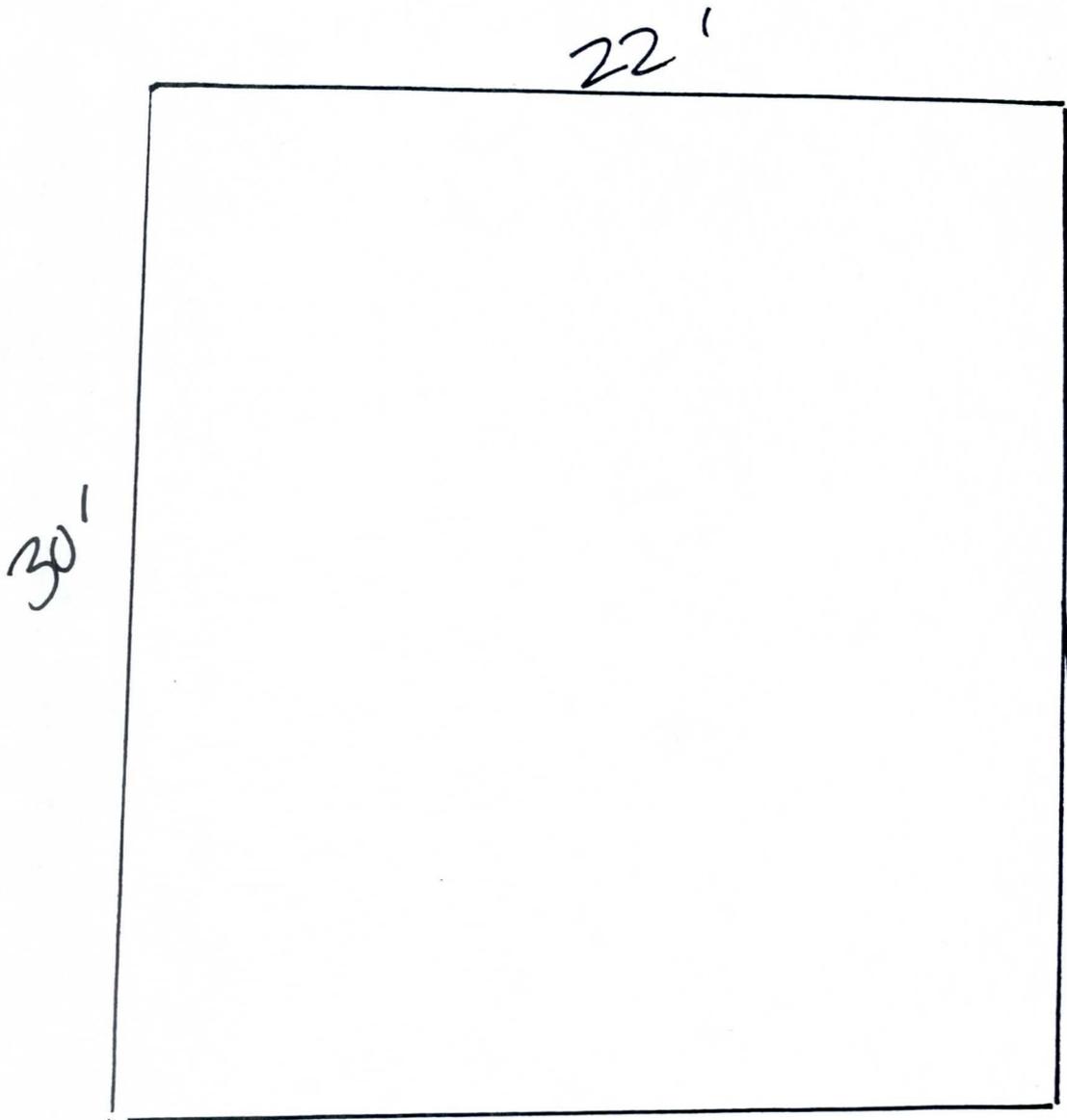
Name: P000267.KDC
Dimensions: 1280 x 960 pixels

22-7N-9W TH PT NE4 SEC 22 DAF COM E4 COR SEC 22 TH N ALG E 22 LI SD
SEC 2053.31F TH W ALG C/L RAY ST PER MCR 13/31 1200.85F TH S 57.26F
TH W 200F TH S 39.59F TH W 62.08F TO POB TH S 3D 17M E 68.53F TH S
74D 50M W 99.95F TH N 3D 31M W 55F TH W 92F TH NLY 150F TH NELY ALG
LN PAR WI C/L U S HWY 60-70 TO PT LY NLY FR SW COR OF PROP DESC P/D
323 PG 561 TH SLY TO PT 39.59F S FR SD SW COR TH W 62.08F TO POB EX
ANY PT LY NLY OF LI PAR WI & 50F SLY FR C/L OF U S HWY 60-70

1 acre

Aguila #3

Florence Moody



Property Site Inventory Information

Project Number	Aguila #3
Project Title	Aguila Acquisition Project
Present Owner	Florence Moody
Address	51791 E. Ray Street
City, Town or Community	Aguila
State or Jurisdiction	AZ
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	1200
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1945
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Wood frame
Type of Foundation	<input checked="" type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	
FIRM Special Flood Hazard Zone	Floodplain
NFIP Policy Number	None
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date Recurrence Level Depth of Flooding 12-15"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	33 56 28.3
Longitude	113 10' 41.3
Parcel Number	506-49-055
Legal Description	See attached
Pre-Event Fair Market Value	\$27,500
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Flood Control District of Maricopa County Regulatory Branch

2801 W. Durango St.
Phoenix, AZ 85009

Substantial Damage Certification

This is to certify that the Flood Control District of Maricopa County code enforcement conducted a damage assessment at 51791 E. Ray Street, Aguila, AZ 85320 Pursuant to this assessment; in accordance with the National Flood Insurance Program and Flood Control District of Maricopa County flood damage prevention and control ordinance, this structure has been classified non-conforming and substantially damaged.



Charles Feuquay, C.T., E.T.
Regulatory Inspection/Permitting Branch Manager
Dec. 22, 2000

Violence
copy

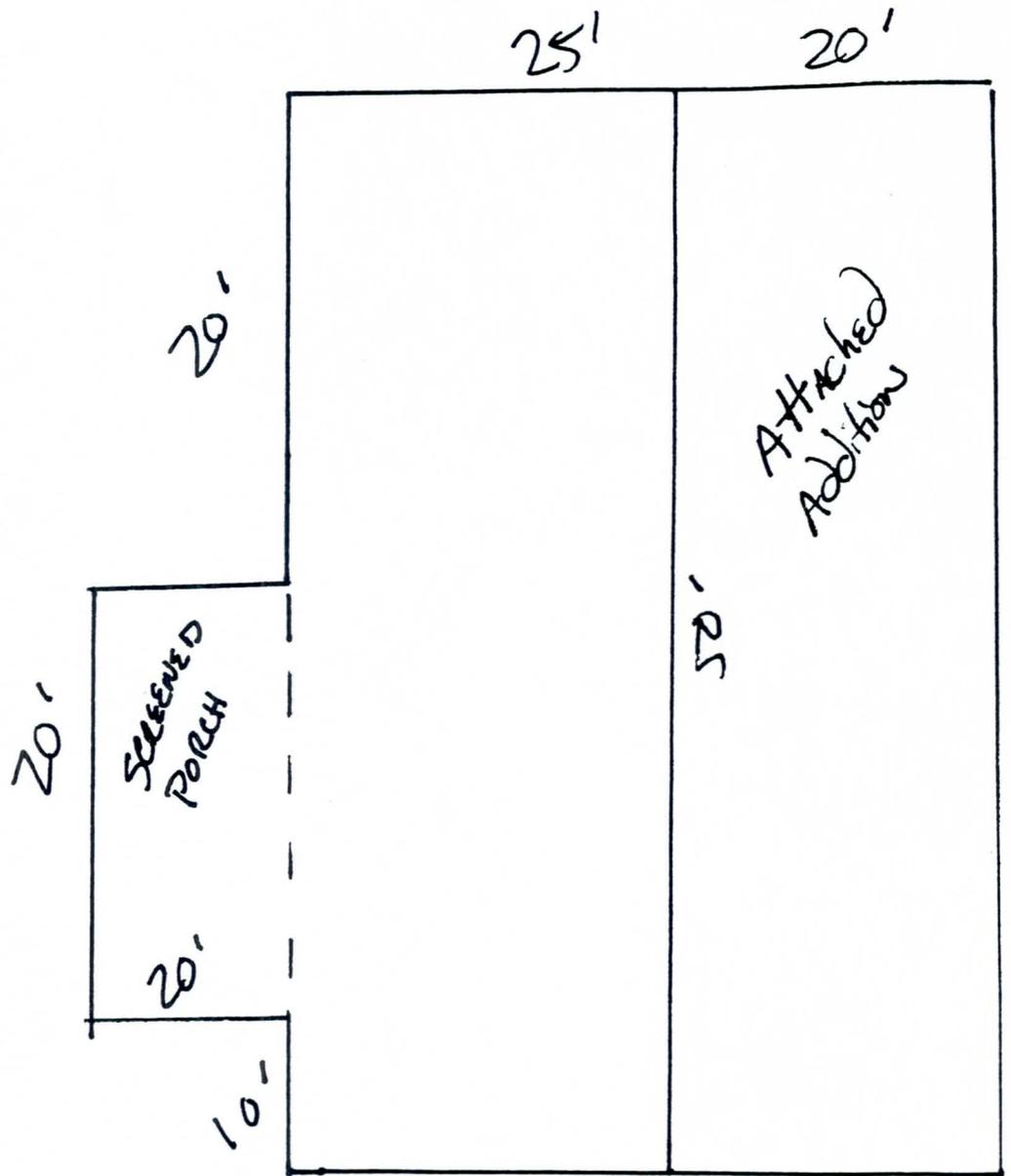
0.31 ac

22-7N-9W BEG AT NW COR THAT PLOT CONVEYED BY DEED OF NOV 21 1936 TO
GEO VIOLETTA THIS PT BEING ALSO 86' S OF N LINE OF RAY ST IN MILTON
RAY'S FIRST SUB TH 142' S ALG W LINE VIOLETTA LOT TO PT TH 100' W TH
142' N TH 100' E TO BEG .31 AC



Aguila #4

Bruce Essig



Property Site Inventory Information

Project Number	Aguila #4
Project Title	Aguila Acquisition Project
Present Owner	Bruce Essig
Address	Fourth Street at Longrifle
City, Town or Community	Aguila
State or Jurisdiction	AZ
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	1400
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1973
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	
FIRM Special Flood Hazard Zone	Floodplain
NFIP Policy Number	None
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date Recurrence Level Depth of Flooding 12-15"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	33 55 911
Longitude	113 10' 41.3
Parcel Number	506-49-O15P
Legal Description	See Attached
Pre-Event Fair Market Value	\$22,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Flood Control District of Maricopa County Regulatory Branch

2801 W. Durango St.
Phoenix, AZ 85009

Substantial Damage Certification

This is to certify that the Flood Control District of Maricopa County code enforcement conducted a damage assessment at Fourth Street and Longrifle Pursuant to this assessment; in accordance with the National Flood Insurance Program and Flood Control District of Maricopa County flood damage prevention and control ordinance, this structure has been classified non-conforming and substantially damaged.



Charles Feuquay, C.T., E.T.
Regulatory Inspection/Permitting Branch Manager
Dec. 22, 2000



Name: P000277.KDC
Dimensions: 1280 x 960 pixels

(Essef)

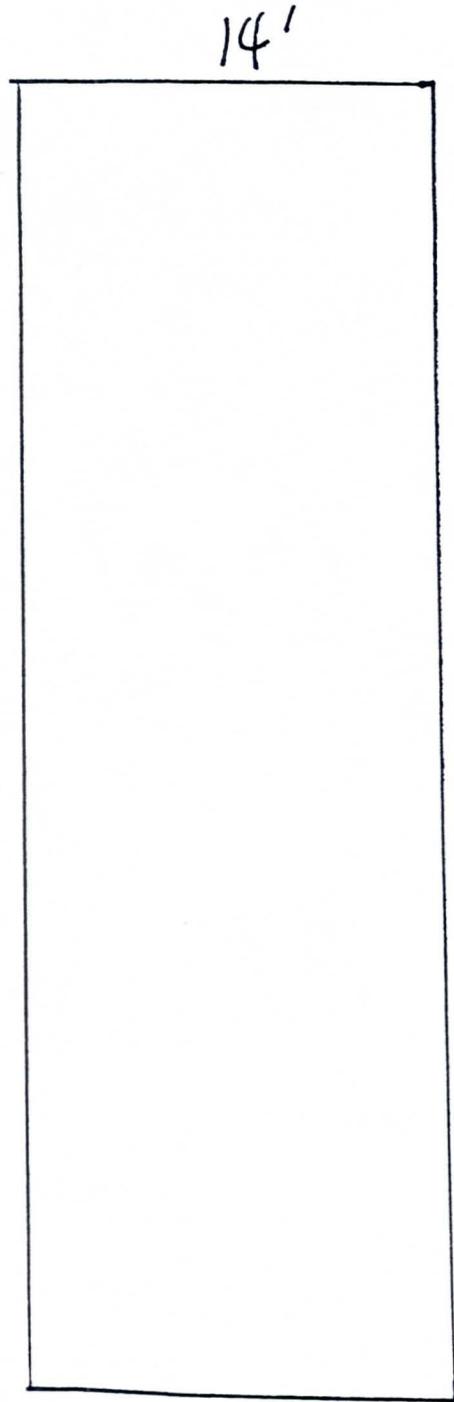
23-7N-9W N2 N2 SE4 SW4

10 ac



Aguila #5

John Martinez



Property Site Inventory Information

Project Number	Aguila #5
Project Title	Aguila Acquisition Project
Present Owner	John Martinez
Address	Fourth Street at Longrifle west side
City, Town or Community	Aguila
State or Jurisdiction	AZ
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	980
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1967
SHPO Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Construction	Mobile Home
Type of Foundation	<input type="checkbox"/> Wood <input type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input checked="" type="checkbox"/> Other
First Floor Elevation	
FIRM Special Flood Hazard Zone	Floodplain
NFIP Policy Number	none
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date Recurrence Level Depth of Flooding 24"
Purpose of Residence	<input checked="" type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	33 55 56.7
Longitude	113 10' 04.1
Parcel Number	506-49-15N
Legal Description	See Attached
Pre-Event Fair Market Value	\$25,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Flood Control District of Maricopa County Regulatory Branch

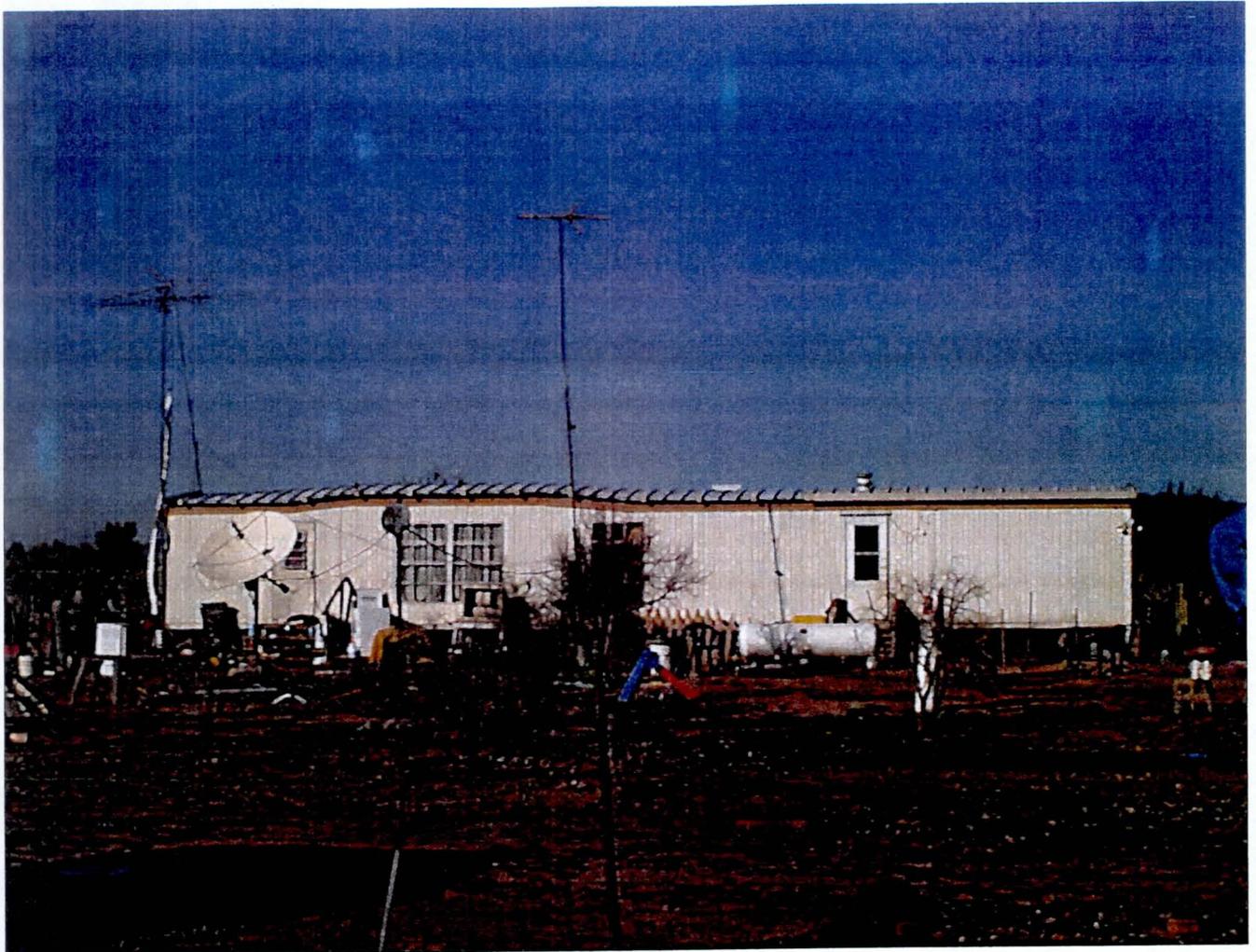
2801 W. Durango St.
Phoenix, AZ 85009

Substantial Damage Certification

This is to certify that the Flood Control District of Maricopa County code enforcement conducted a damage assessment at Fourth Street and Longrifle, west side Pursuant to this assessment; in accordance with the National Flood Insurance Program and Flood Control District of Maricopa County flood damage prevention and control ordinance, this structure has been classified non-conforming and substantially damaged.



Charles Feuquay, C.T., E.T.
Regulatory Inspection/Permitting Branch Manager
Dec. 22, 2000



Name: P000276.KDC
Dimensions: 1280 x 960 pixels

(JOHN MARTINEZ)



Name: P000275.KDC
Dimensions: 1280 x 960 pixels

(J. MARTINEZ)

23-7N-9W S2 SE4 NE4 SW4

Sac

Property Site Inventory Information

Project Number	Aguila #6
Project Title	Aguila Acquisition Project
Present Owner	Lupe and Jesse Ordunez
Address	1st Street and Church
City, Town or Community	Aguila
State or Jurisdiction	AZ
County Name	Maricopa
Zip Code + Extension	85320
Square Footage	1200
Number of Stories	1
Basement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Year Built	1971
SHPO Clearance	<input type="checkbox"/> Yes <input type="checkbox"/> No
Type of Construction	Block
Type of Foundation	<input type="checkbox"/> Wood <input checked="" type="checkbox"/> Slab <input type="checkbox"/> Wood/Slab <input type="checkbox"/> Other
First Floor Elevation	
FIRM Special Flood Hazard Zone	Floodplain
NFIP Policy Number	None
Percent Damaged	<input type="checkbox"/> 0-49% <input checked="" type="checkbox"/> 50-99% <input type="checkbox"/> 100% <input type="checkbox"/> NA
Flood Damage	Date Recurrence Level Depth of Flooding 20 inches
Purpose of Residence	<input type="checkbox"/> Primary Residence <input type="checkbox"/> Rental <input type="checkbox"/> Other
Latitude	33 56' 18.1"
Longitude	113 10' 28.4"
Parcel Number	506-05-17E
Legal Description	See Attached
Pre-Event Fair Market Value	\$70,000
Title Holder-Post Mitigation	Flood Control District of Maricopa County
Property Action – Pull Down Menu	<input checked="" type="checkbox"/> Acquisition/Demolition <input type="checkbox"/> Elevation <input type="checkbox"/> Relocation <input type="checkbox"/> Acquisition/Vacant Land <input type="checkbox"/> Floodproofed <input type="checkbox"/> Seismic Retrofit <input type="checkbox"/> Wind Retrofit <input type="checkbox"/> Other Retrofit <input type="checkbox"/> Unknown.....
URA – Tenant Name	
Comments	

ATTACH A COLOR PHOTO OF EACH SITE TO BE ELEVATED / RELOCATED / ACQUIRED.

Flood Control District of Maricopa County Regulatory Branch

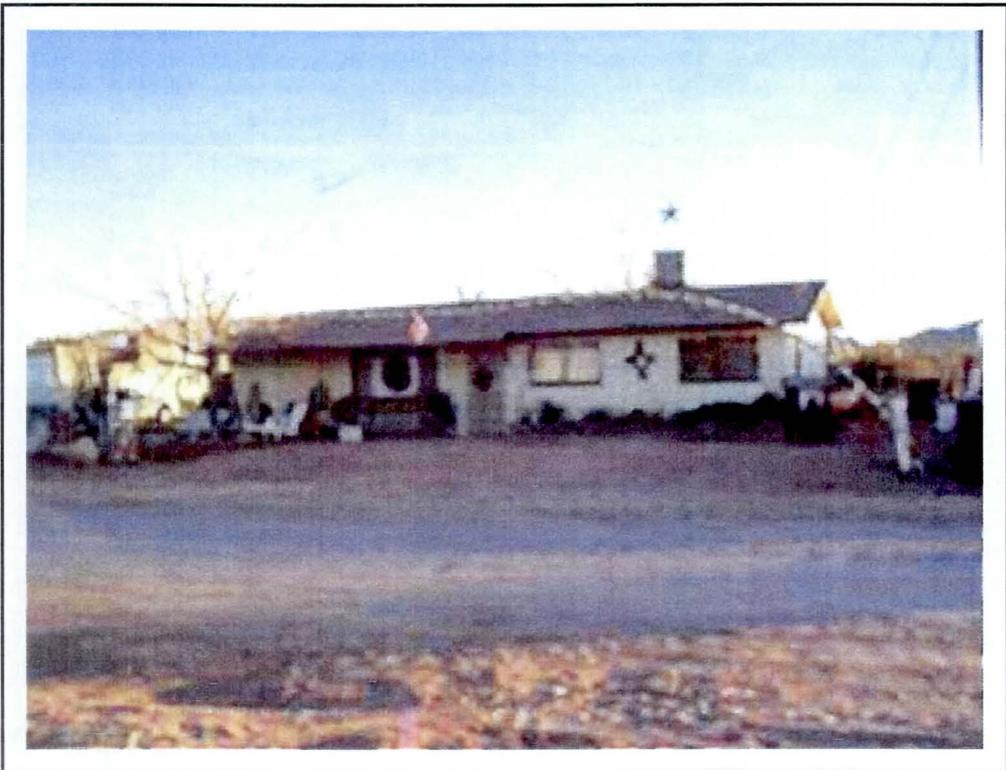
2801 W. Durango St.
Phoenix, AZ 85009

Substantial Damage Certification

This is to certify that the Flood Control District of Maricopa County code enforcement conducted a damage assessment at First Street and Church Pursuant to this assessment; in accordance with the National Flood Insurance Program and Flood Control District of Maricopa County flood damage prevention and control ordinance, this structure has been classified non-conforming and substantially damaged.



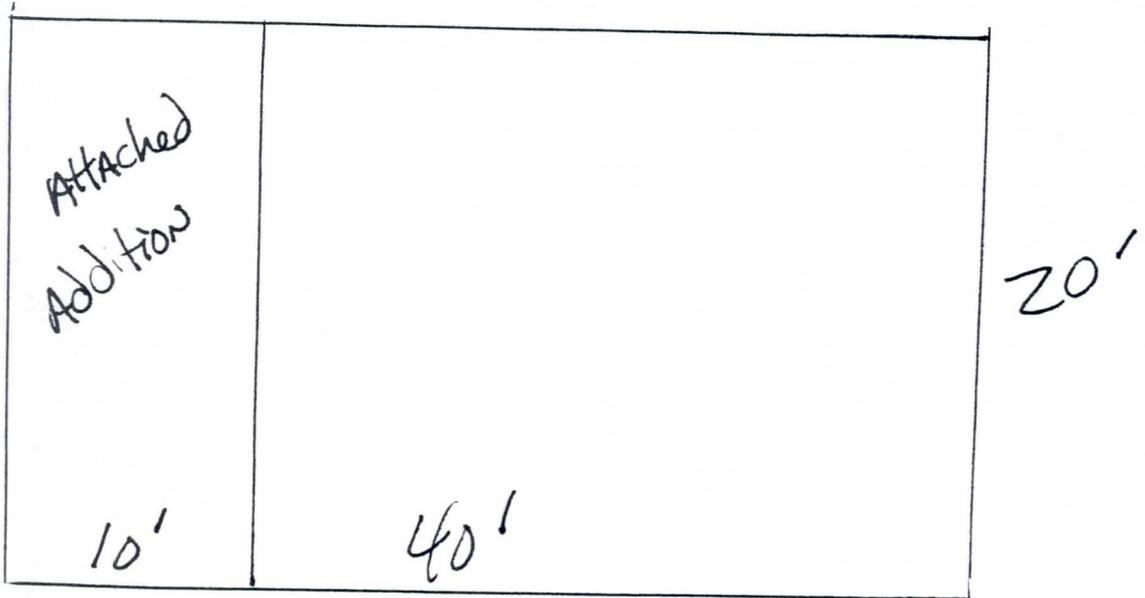
Charles Feuquay, C.T., E.T.
Regulatory Inspection/Permitting Branch Manager
Dec. 22, 2000



Ordinez Property

Aguila #6

Lupe and Jesse Ordunez



23-7N-9W BEG S 1541' & E 33' OF NW COR NW4 TH E 647' S 512' W 647' N
512' TO POB 7.60 AC

HAZARD MITIGATION GRANT PROGRAM (HMGP)

Pre-Application/Letter of Intent



FEMA - 1347 - DR - AZ

Applicant: Flood Control District of **Date:** 12-4-2000
Maricopa County

Point of Contact: Terrilyn Thomas

Phone: 602-506 2902 **Fax:** 602-506-7346

Address: 2801 W. Durango St.
Phoenix, AZ 85009

Email Address: tet@mail.maricopa.gov

Project Title: Relocate and Elevate Structures in the Aguila Community

Project Location: Aguila, Arizona, and surrounding community

(physical location or use intersection with compass directions)

Brief Project Description: - AMENDED

Approximately thirty five (35) homes in the Aguila community were
damaged in the recent flooding of August and October of 2000. The
Flood Control District of Maricopa County has identified the locations
of these structures and would like to relocate several of the residents
to areas out of flood danger, and elevate the remaining structures to
meet our regulatory base flood elevation requirements and mitigate any
further flooding hazards to the Aguila residents in this flood hazard
area.

Estimated Total Costs: \$850,000

If this project meets the minimum requirements, please send HMGP sub-grant application materials to the point of contact at the address above.

12-4-00

Signature

Terrilyn Thomas, CFM

Name (typed or printed)

Date

Floodplain Representative

Title



Attachment A

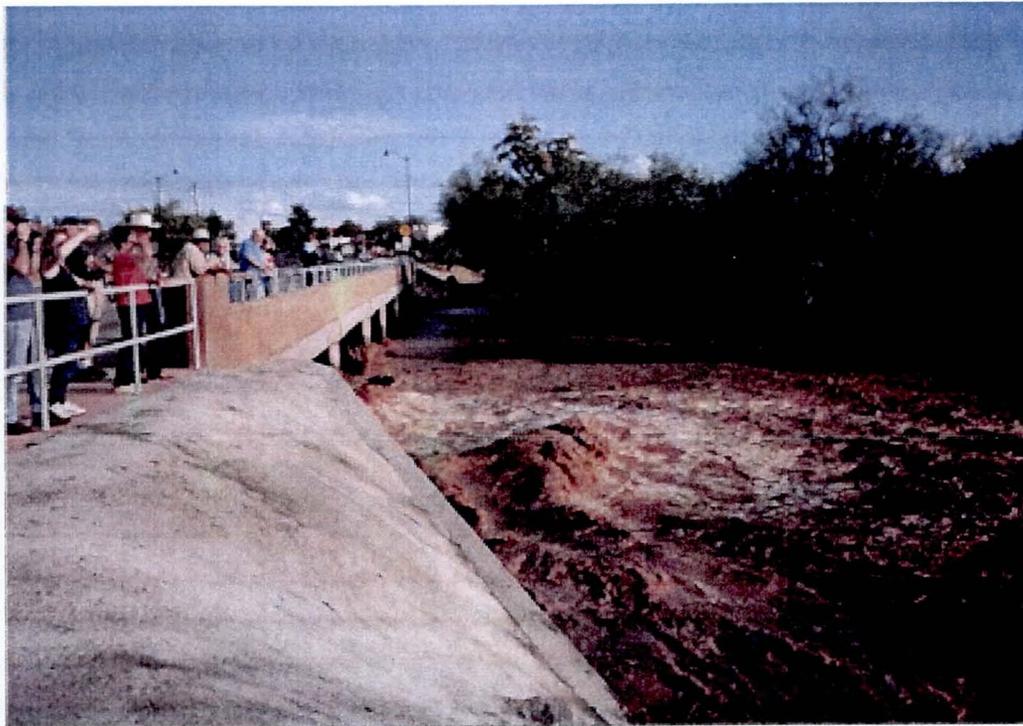
This attachment contains storm reports and photographs of historical flooding in and around Town of Aguila, Maricopa County, Arizona. The reports cover the flood event of September 1997 (Tropical Storm Nora), as well as the more recent flooding of Aug-October 2000.

The Flood Control District of Maricopa County could not locate any records of the monetary value of the damages caused by these floods.

Please contact Steve Waters sdw@mail.maricopa.gov or Amir Motamedi at amm@mail.maricopa.gov with any questions.

STORM REPORT
Summer/Autumn Storms of 2000
August 29th, October 10th, October 21st-23rd, October 27th

Flood Control District of Maricopa County
2801 W. Durango Street
Phoenix, AZ 85009
(602) 506-1501



Prepared by:
Stephen D. Waters, E. Jim Perfrement & David E. Gardner
Engineering Division, Flood Warning Branch
December, 2000

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INTRODUCTION

A number of heavy thunderstorms dropped large amounts of rain in the Wickenburg area, lower Hassayampa and upper Centennial watersheds on August 29th, 2000. These storms caused flooding along several watercourses in northwestern Maricopa County and eastern La Paz County, including Martinez Creek, Sols Wash and Centennial Wash.

The month of October featured a series of Pacific low-pressure frontal systems which tapped tropical moisture in northern Mexico as they passed through the State, resulting in heavy widespread rain with numerous embedded thunderstorms. Again, the Wickenburg and Centennial areas were affected, along with Grass Wash, Tiger Wash, Jackrabbit Wash and much of northern Maricopa County.

The purpose of this report is to present in a concise manner selected rainfall, runoff, graphical and statistical data from the storm events of August 29, October 10, October 21-23 and October 27, 2000. The majority of the data presented was collected by the Flood Control District's (FCD) ALERT System, with contributions from the Phoenix National Weather Service (NWS) Forecast Office and the United States Geological Survey (USGS) surface-water data collection program.

The goal of this report is to present data and derived products for general information purposes, and as a guide for future prediction of water levels and discharge rates in the watersheds affected by flooding.

DISCLAIMER: Although these data have been reviewed and/or edited they may be subject to significant change. Data users are cautioned to consider carefully the provisional nature of this information before using it for decisions that concern personal or public safety or the conduct of business that involves substantial monetary or operational consequences.

This report and the data contained within it, as well as the entire compliment of real-time and historic FCD ALERT data can be viewed or downloaded from our website at:

<http://www.fcd.maricopa.gov/alert/alert.htm>

Also, a Compact Disk containing this report and all associated tables and graphics can be ordered from the FCD at the address on the report cover page or by calling (602) 506-8701.

METEOROLOGY

August 29, 2000

On the 29th of August the atmosphere over central and southern Arizona was very moist, possibly the most moisture available for shower and thunderstorm development of any day during the 2000 monsoon season. As for a trigger (dynamics) to get storms going, there was a lower/mid level atmospheric disturbance forecast to move north/northwest through the state. Also, in the upper levels of the atmosphere, there was a disturbance off the California coast - aiding the import of moisture from the south, as well as acting as an additional trigger for storm development.

The precipitable water at 5 AM was 1.84 inches, the 850mb dewpoint was >14 degrees, and the 600mb dewpoint depression was <2 degrees - collectively a strong indicator of very moist air from the surface to over 15,000 feet altitude. The only concern, which could inhibit storm development, was existing cloud cover and relatively cool temperatures - but as it turned out these concerns didn't materialize.

A few showers and thunderstorms developed on the 28th, continued to develop and became stronger late that night and peaked on the morning of the 29th. Moisture at lower and middle levels of the atmosphere continued to be pumped into Maricopa County from the south (Mexico/Gulf of Mexico) through most of the day. Thus there was no drying of consequence following the initial outbreak of showers. To make matters worse, the storm moved at a relatively slow speed (mostly 12-15 mph), allowing locally heavy rain to remain over an area for a period of time. The storm center finally moved north of the County during the night of the 29th.

October 2000

A series of weather disturbances moved south/southeast from the northern Pacific (a pattern referred to as split flow) - for the extended period of mid October into November. Although this is not an overly unusual trend or general track, what was different was the extended period of time that was involved, the strength of the systems and the track's location so far south for the time-of-year (into Arizona). Normally only one or two of these disturbances will become moderately strong, but this time most resulted in periods of moderate to heavy rain for Maricopa County. As a result our (calendar) annual rain accumulation went from a deficit to above normal.

October 10, 2000

On the 9th of October weather maps showed a large upper-level atmospheric weather disturbance sliding south along the west coast. At lower and mid levels of the atmosphere moisture from the subtropics was advected north, via south to southeast winds, into Maricopa County. And lastly, there was a strong cold front moving east through southern California - located along a north-south line near the western border of Arizona the morning of the 10th, moving east to roughly a Page to Blythe line by around noon.

This resulted in a moist atmosphere that was "triggered" by the approaching disturbance and associated cold front. The end result was short-lived, locally-heavy morning rain in the Phoenix area - which moved east and northeast with time.

Farther to the south, over northern Mexico, there were remnants of tropical storm Olivia, but it's doubtful that this system had much of an impact on what took place over Maricopa County. Most of the moisture associated with Olivia was advected eastward into New Mexico and Texas.

October 21- 23, 2000

To set the stage for this event a few showers and thunderstorms moved through Maricopa County on the 19th (Thursday). Local rain accumulations amounted to .25 to .50 inch. This rain was the result of the first in an extended series of upper level weather disturbances that moved south/southeast into our area during October/November.

It was dry on the 20th (Friday), as Maricopa County was between disturbances. But an approaching strong cold upper atmospheric weather disturbance (from the northwest) resulted in the development of scattered showers and thunderstorms Friday night and Saturday morning.

This Pacific storm had considerable moisture associated with it, and moved into an area that was already moist due to residual moisture associated with the disturbance that moved east across southern Arizona on the 19th.

Numerical guidance, as early as Wednesday (18th), suggested the threat of rain for the weekend. And by Friday guidance indicated the threat of heavy rain - to over an inch. With the Saturday "Weather Outlook" issued at 1:10 PM, clients were alerted to break out their Flood Response Plans and prepare for a significant rain event.

The heaviest and most destructive rains fell Saturday evening (21st) - with portions of western Maricopa County receiving over 3 inches of rain. Especially hard hit, as a result of the heavy rain, were Centennial Wash (flow into Wenden), Wickenburg (Sols Wash) and Skunk Creek.

The associated upper level disturbance was slow to leave the area. As a result additional rains fell Saturday night and Sunday, with the storm exiting to the north and east Sunday night and Monday. But the heaviest rains by Sunday (to over an inch) were over the east and northern fringes of the County - not the same area hit hard Saturday evening.

October 27, 2000

The major storm that took place October 21-23 left the soil very wet - possibly saturated in many areas. Thus additional rain would become mostly runoff. The weather disturbance that moved toward Maricopa County on the 26th and 27th, like previous disturbances, moved into the area from the northwest.

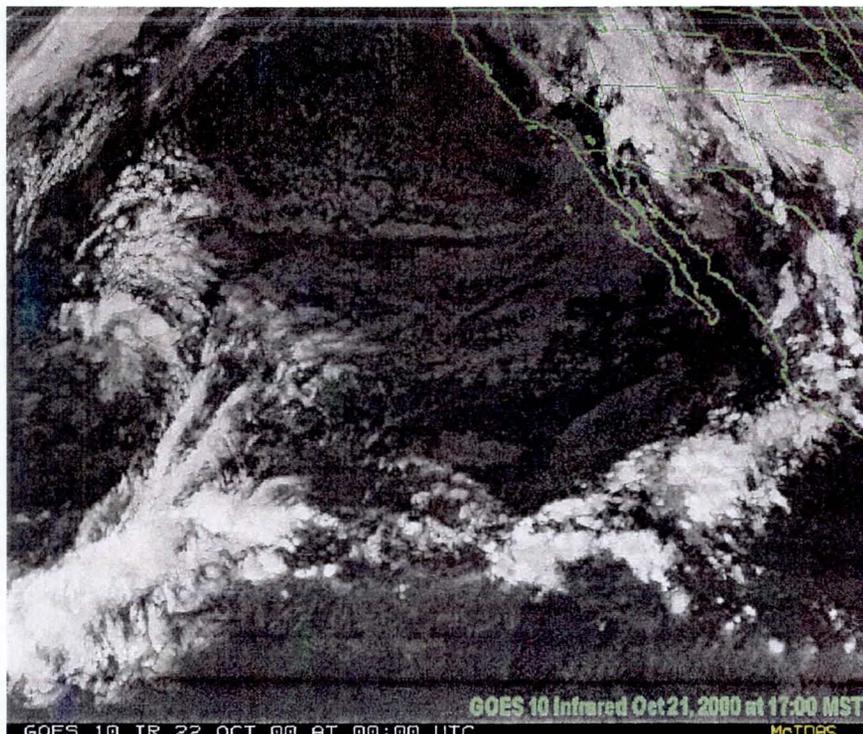
This weather disturbance had an unseasonably strong cold front associated with it. Wednesday morning the front was positioned north-south over far southeast California and eastern Nevada. By Wednesday evening the front was north-south through central Arizona. By Thursday morning (27th) it had dissipated east of the County, but a secondary front, or trough, developed back near the Arizona/California border. This latter feature was probably a significant trigger that aided development of the locally heavy rain that followed.

The advection of moisture from Mexico was probably not overly noteworthy, compared to the disturbance 5 days earlier, but as mentioned the ground was already very moist. And the upper level disturbance was very strong - resulting in good dynamics to act on the existing moisture.

Showers and thunderstorms moved into the area from the west, again hitting northwest Maricopa County with locally heavy rain. The main band of rain (north-south orientation) was very slow to move east. By late morning (27th) some areas west and southwest of Wickenburg reported rain accumulations of over an inch, and locally heavy rain remained in the general Wickenburg area into the afternoon hours.

During the afternoon the heaviest rains slowly moved east toward the central portion of the County. By late afternoon the heaviest rains were centered over the central portion of the County; and by evening the heaviest rains were over the far eastern portion of the County - as the associated weather disturbance started to move away from the area. But local showers persisted over much of the County through the evening.

[Appendix A](#) contains selected Outlook and Message Products from our Meteorological Services Program (MSP). The MSP provides heavy rainfall and severe weather forecast products to emergency management agencies, public works and transportation agencies, engineering departments, law enforcement, and fire departments and recreation departments within Maricopa County.



PRECIPITATION

A series of heavy thunderstorms dropped large amounts of rain in the Wickenburg area, lower Hassayampa and upper Centennial watersheds on August 29th, 2000. These storms caused flooding along several watercourses in northwestern Maricopa County and eastern La Paz County, including Martinez Creek, Sols Wash and Centennial Wash. Rain fell in general from 7:00 AM through 2:00 PM.

The month of October featured consecutive Pacific low-pressure frontal systems which tapped tropical moisture in northern Mexico and the Gulf of California as they passed through the State, resulting in heavy widespread rain with numerous embedded thunderstorms. The heavy event periods were from 4:00 AM through 11:00 AM on the 10th, 7:00 PM on the 21st through 11:00 AM on the 22nd (with scattered showers on the 23rd), and 7:00 AM through 6:00 PM on the 27th. Again, the Wickenburg and Centennial areas were affected, along with Grass Wash, Tiger Wash, Jackrabbit Wash and much of northern Maricopa County, including Skunk Creek, New River and Cave Creek.

The following Table 1 lists selected frequency statistics at seven automated ALERT Stations:

Gage ID	Gage Name	Storm Date	Depth (inches)	Duration (hours)	Return Period / Duration
7030	Sols Tank	8/29/00	3.50	12	60 yr - 12 hr.
5275	Sols Wash	8/29/00	4.61	12	>100 yr - 12 hr.
4930	Carefree Ranch	10/22/00	2.09	24	2 yr - 24 hr.
7120	Wickenburg Airport	10/22/00	2.87	2	100 yr - 2 hr.
5190	Smith Peak	10/22/00	3.27	24	30 yr - 6 hr.
5640	Cooks Mesa	10/22/00	3.98	24	40 yr - 12 hr.
5180	Centennial Wash	10/27/00	2.56	6	30 yr - 6 hr.

For general locations of these gages and the graphs used to create this table, see Appendix D

[Appendix B](#) contains four pages showing two graphics for each storm. The first is a map of the County showing point rainfall totals measured by the ALERT automated gages. The rainfall period and ending time are shown at the bottom. The second graphic is a contoured rainfall map using the point values from the first map. It covers the same time period but may focus on areas of interest.

[Appendix C](#) contains several NEXRAD radar images from the storms in 1-hour, 3-hour and Storm Total formats, courtesy of Phoenix WFO. [Appendix D](#) displays depth/duration/frequency plots and

histograms for seven selected stations. Additional detailed rainfall information is available on the web at: <http://156.42.96.39/showrain.html> or <http://156.42.96.39/alert/raindata.html>.

RUNOFF

The storm of August 29th featured significant runoff events in the Wickenburg area and in the Centennial watershed. Flows in these areas had estimated return periods of between 8 and 17 years.

On October 10th, flows in central Phoenix and Scottsdale were generally around a 2-year return period. But the rains from this storms served to wet many watersheds around the County, which added to the runoff potential for subsequent storms.

October 21st through 23rd saw heavy runoff in the northern, central, western and northwestern portions of the County. Centennial Wash experienced what is believed to be a 100-year event, Sols Wash saw a 66-year return period event, Flying E Wash in Wickenburg around a 40, and Hartman and Tiger Washes approximately 16-year events.

Flows during the October 27th storm were again heavy in the western and northwestern parts of the County. Jackrabbit Wash experienced a 50-year flood, Hassayampa @ I-10 recorded a 70-year event, Casandro Wash in Wickenburg suffered a 40-year, and Sols Wash and Tiger Wash each were deluged by 10-year events.

Table 2 on the following page lists significant discharge peaks and return periods for selected FCD stream gages. Table 3 presents peak stage and discharge values at all FCD water-level stations. Following Table 3 are three selected hydrograph plots showing travel and warning times.

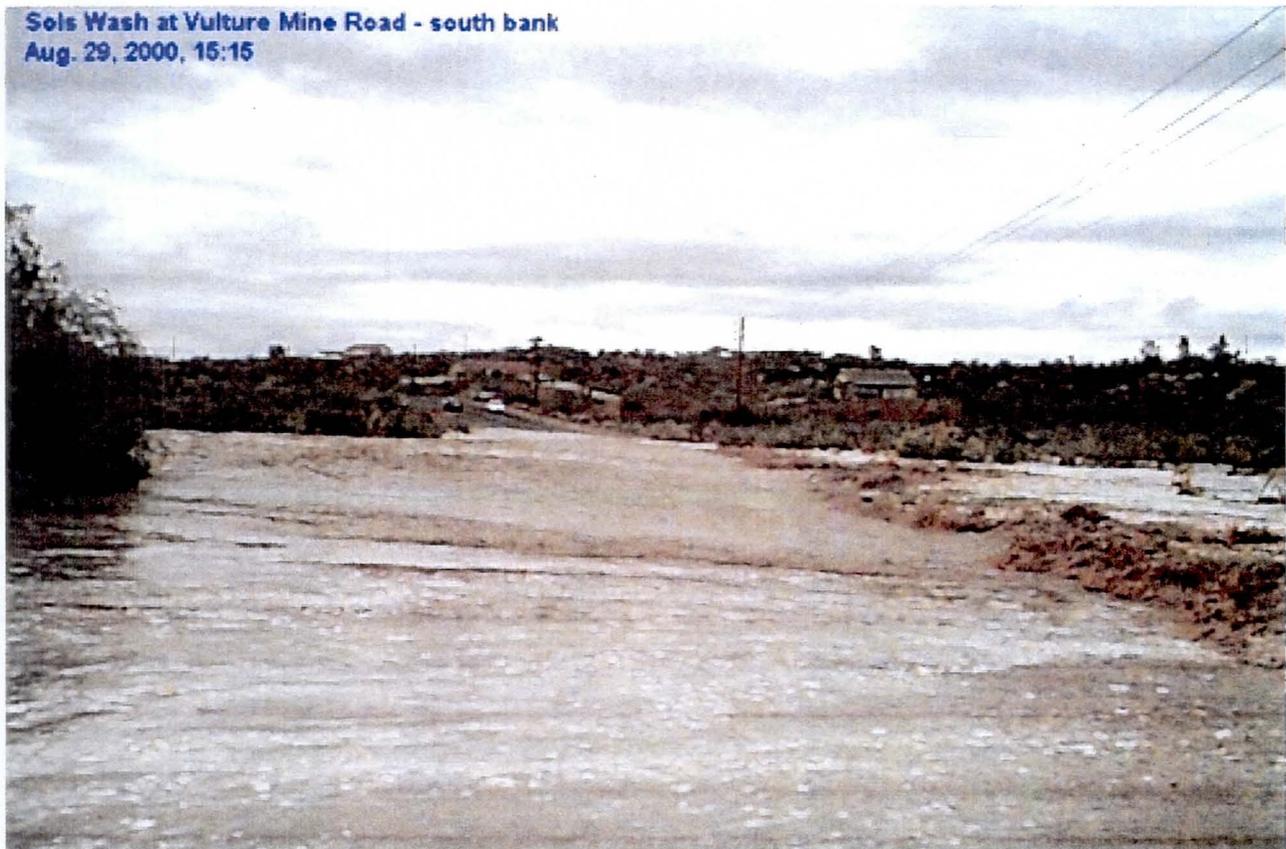


TABLE 2
Significant Discharge Peaks and Return Periods for Automated ALERT Stream Gages

GAGE NAME	GAGE ID	STORM DATE	PEAK DISCHARGE (cfs)	RETURN PERIOD (years)
Centennial @ Wenden	5093	08/29/00	4,850	10 (a)
Hassayampa @ US 60	5228	08/29/00	5,625	8 % of Q ₁₀₀ (a)
Martinez Creek	7013	08/29/00	7,270	8 (a)
Powderhouse Wash	7113	08/29/00	515	17 (a)
Sols Wash nr Matthie	7043	08/29/00	5,240	13 (a)
ACDC @ 43 rd Ave.	4821	10/10/00	395	< 2 (b)
ACDC @ 67 th Ave.	5523	10/10/00	375	< 2 (b)
Berneil Wash	4688	10/10/00	305	15 % of Design Q
EMF @ Broadway	6573	10/10/00	504	14 % of Q ₁₀₀ (a)
IBW @ Shea Blvd.	4693	10/10/00	1,250	14 % of Q ₁₀₀ (a)
ACDC @ 43 rd Ave.	4821	10/21-23/00	360	< 2 (b)
Adobe Dam Outflow	5538	10/21-23/00	497	NA
Cave Buttes Dam Outflow	4899	10/21-23/00	206	NA
Centennial @ Wenden	5093	10/21-23/00	> 20,000 (1)	~ 100 (a)
Delaney Wash	5108	10/21-23/00	260	NA
EMF @ Queen Creek Rd.	6583	10/21-23/00	574	NA
Flying E Wash	7083	10/21-23/00	3,675	40 (a)
Greene Wash @ SR 84	0793	10/21-23/00	1,155	NA
Hartman Wash	7063	10/21-23/00	2,350	16 (c)
Hassayampa @ US 60	5228	10/21-23/00	15,400	22 % of Q ₁₀₀ (a)
Hassayampa nr Morristown	5223	10/21-23/00	5,240	3 (c)
Martinez Creek	7013	10/21-23/00	890	< 2 (a)
New River Dam Outflow	5609	10/21-23/00	440	NA
Powderhouse Wash	7113	10/21-23/00	350	12 (a)
Santa Cruz @ SR 84	0788	10/21-23/00	1,260	NA
Skunk Creek @ I-17	5568	10/21-23/00	2,320	4 (c)
Sols Wash nr Matthie	7043	10/21-23/00	10,800	66 (a)
Tiger Wash	5163	10/21-23/00	3,850	16 (c)
Waterman Wash	6833	10/21-23/00	1,980	~7 % of Q ₁₀₀ (a)
ACDC @ 43 rd Ave.	4821	10/27/00	880	< 2 (b)
Agua Fria @ Grand Ave.	5503	10/27/00	5,839	NA
Casandro Wash	7093	10/27/00	400	46 (a)
Centennial @ Wenden	5093	10/27/00	11,150	28 (a)
EMF @ Queen Creek	6583	10/27/00	2,460	NA
Gila River @ Olberg	0783	10/27/00	2,590	< 2 (a)
Hartman Wash	7063	10/27/00	1,050	6 (c)
Hassy @ Box Canyon	5308	10/27/00	3,215	2 (c)
Hassayampa @ I-10	5283	10/27/00	40,800	70 (a)

GAGE NAME	GAGE ID	STORM DATE	PEAK DISCHARGE (cfs)	RETURN PERIOD (years)
Hassayampa @ US 60	5228	10/27/00	8,070	12 % of Q ₁₀₀ (a)
Jackrabbit Wash	5218	10/27/00	>22,700	~ 50 (c)
Martinez Creek	7013	10/27/00	2,650	4 (a)
New River @ Glendale	5508	10/27/00	2,450	< 2 (a)
Scatter Wash	5543	10/27/00	490	9 (a)
Skunk Creek @ I-17	5568	10/27/00	480	< 2 (c)
Sols Wash nr Matthie	7043	10/27/00	4,760	10 (a)
Tiger Wash	5163	10/27/00	3,170	10 (a)

"Q" refers to discharge; Q₁₀₀ is the 100-year or Regulatory Discharge

(a) - Return period estimated from Flood Insurance Study rainfall/runoff modeling

(b) - Return period estimated from structure design report

(c) - Return period estimated from streamflow data recorded prior to these storms

NA - Not Available

(1) - Gage rating only capable of measuring values up to 20,000 cfs; peak may have been about 22,000 cfs judging from the shape of the hydrograph.

Values in Blue are computed from and/or verified by slope/area survey computations and/or high-water marks. Values in Green are provided by USGS.

To find the location of an ALERT water-level station, point your browser to

<http://www.fcd.maricopa.gov/alert/alert.htm> and use the "Station Location Maps" tool. Additional stage and discharge information is available on the web at: <http://156.42.96.39/showflow.html>

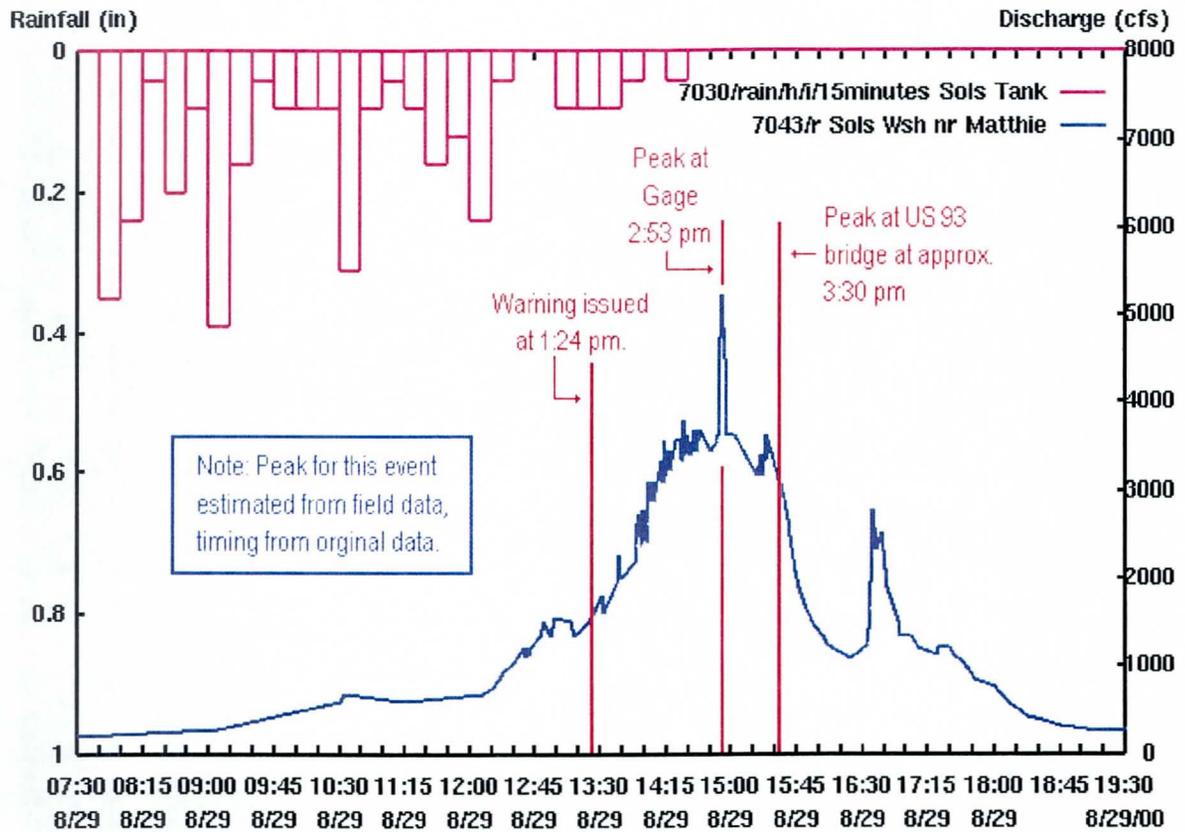
TABLE 3 - Peak Stage and Discharge Values at FCDMC Water-level Stations

GAGE_ID	NAME	PEAKS							
		10/27/00 Q	10/27/00 Stage	10/22/00 Q	10/22/00 Stage	10/10/00 Q	10/10/00 Stage	8/29/00 Q	8/29/00 Stage
4818	10th St. Wash Basin #1	9	1.40	17	2.10	0	0.00	1	0.50
4813	ACDC @ 14th St.	27	0.70	0	0.00	0	0.00	0	0.00
4808	ACDC @ 36th St.	7	1.02	3	0.47	3	0.47	0	0.00
4821	ACDC @ 43rd Ave.	880	2.25	360	1.44	395	1.51	0	0.00
5523	ACDC @ 67th Ave.	417	3.42	271	2.95	375	3.30	81	1.90
5538	Adobe Dam Outlet	154	2.45	497	4.45	0	0.00	0	0.00
5534	Adobe Dam Pool	196	4.58	419	8.20	0	0.00	0	0.00
5403	Agua Fria @ Buckeye	1,288	0.15	433	-0.38	433	-0.38	0	0.00
5503	Agua Fria @ Grand	5,839	6.46	10	2.95	0	0.00	0	0.00
6673	Apache Junction FRS	26	4.23	25	3.98	0	0.00	0	0.00
5988	Aspen Dam	36	2.28	7	0.66	10	0.86	0	0.00
4688	Berneil Wash	100	0.70	297	1.35	305	1.38	46	0.43
5203	Buckeye FRS #1	0	0.00	0	0.00	0	0.00	0	0.00
5208	Buckeye FRS #2	0	0.00	0	0.00	0	0.00	0	0.00
6813	Buckeye FRS #3	0	0.00	0	0.00	0	0.00	0	0.00
6863	Bullard Wash	243	1.04	0	0.00	0	0.00	0	0.00
7133	Casandro Dam	15	7.22	14	5.27	0	0.00	13	4.29
7093	Casandro Wash	400	1.20	74	0.82	0	0.00	147	1.42
4903	Cave Buttes Dam Outlet	21	1.60	29	1.80	31	1.87	0	0.00
4899	Cave Buttes Dam Pool	163	10.49	206	18.56	0	0.00	0	0.00
4918	Cave Cr. nr Cave Cr.	221	1.10	590	2.12	0	0.00	0	0.00
4923	Cave Cr. @ Spur Cross	180	4.33	635	5.83	0	0.00	0	0.00
4833	Cave Cr. @ Cactus	222	8.58	386	10.33	138	4.76	62	2.70
5093	Centennial @ Wenden	11,150	5.68	>20,000	>7.82	0	0.00	4,850	3.92
5103	Centennial Railroad	0	0.00	180	3.10	0	0.00	0	0.00
5408	Colter @ El Mirage	135	1.45	31	0.60	0	0.00	0	0.00
5013	Columbus Wash	0	0.00	0	0.00	0	0.00	0	0.00
6623	Crossroads Park	0	0.00	0	0.00	0	0.00	0	0.00

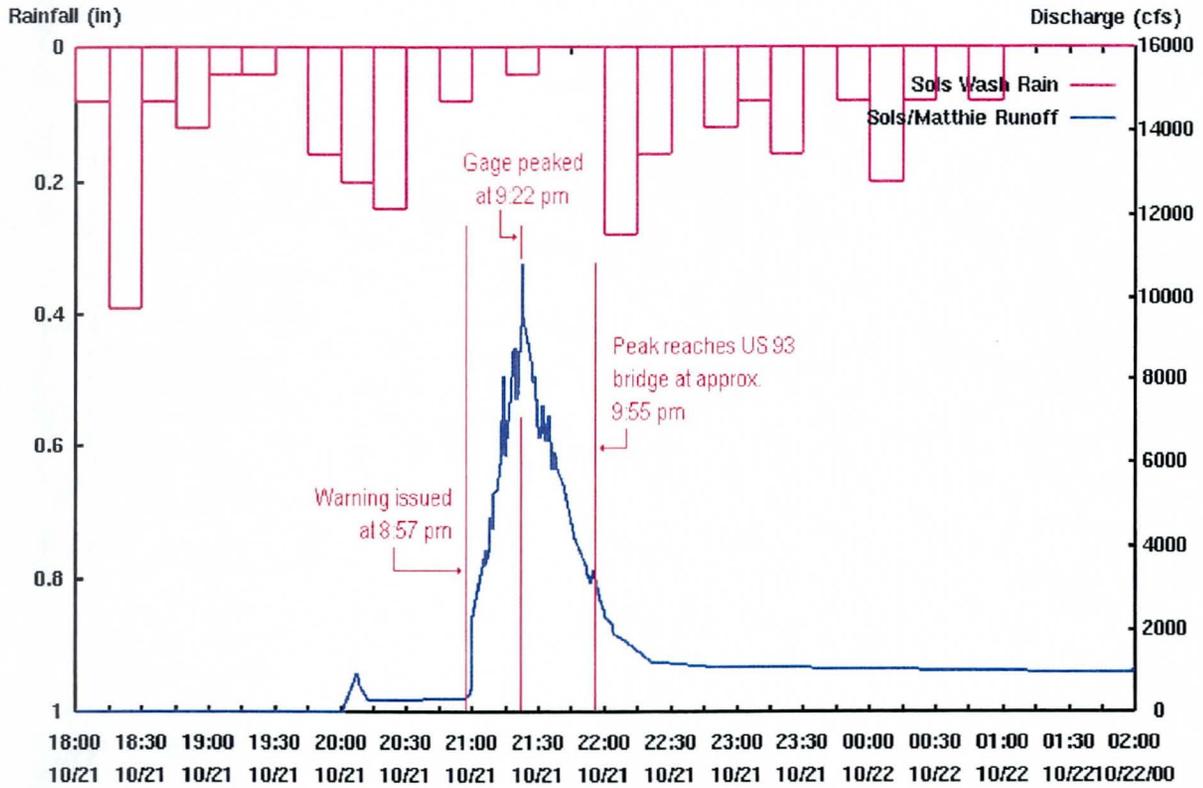
GAGE_ID	NAME	PEAKS							
		10/27/00	10/27/00	10/22/00	10/22/00	10/10/00	10/10/00	8/29/00	8/29/00
		Q	Stage	Q	Stage	Q	Stage	Q	Stage
5108	Delaney Wash	98	2.04	260	2.77	203	2.52	32	1.48
4803	Dreamy Draw Dam	22	1.98	0	0.00	51	3.44	0	0.00
5422	Dysart @ El Mirage	311	3.18	92	1.62	4	0.28	0	0.00
5413	Dysart @ LAFB	113	1.47	19	0.55	0	0.00	0	0.00
4648	E. Fork Cave Cr. #1	0	0.00	0	0.00	0	0.00	4	0.57
4683	E. Fork Cave Cr. #3	0	0.00	0	0.00	14	0.45	28	0.95
4658	E. Fork Cave Cr. #4	21	1.58	14	1.17	41	2.58	56	3.15
4668	EFCC nr 7th Ave.	15	0.40	15	0.40	116	1.62	94	1.42
6598	EMF @ AZ Ave.	1,025	1.85	198	0.65	0	0.00	0	0.00
6573	EMF @ Broadway	650	1.87	80	0.75	504	1.62	0	0.00
6583	EMF @ Queen Cr.	2,460	3.80	574	1.65	0	0.00	144	0.68
6893	Estrella Fan	0	0.00	0	0.00	0	0.00	0	0.00
7083	Flying E Wash	263	1.75	3,675	5.60	0	0.00	211	1.55
6608	Freestone Basin	0	1.23	0	1.25	0	0.00	0	4.68
6853	Gila @ Estrella Pkwy.	1,900	6.95	1,500	6.60	0	0.00	0	0.00
778	Gila @ Maricopa Rd.	71	2.04	0	0.00	0	0.00	0	0.00
783	Gila @ Olberg	2,590	3.40	980	1.67	0	0.00	106	0.60
6848	Gila @ 116th Ave.	0	0.00	0	0.00	0	0.00	0	0.00
5978	Golden Eagle Park Dam	136	6.52	28	5.52	39	5.66	0	0.00
793	Greene Wash @ SR 84	80	0.52	1,155	3.28	0	0.00	0	0.00
6603	Guadalupe Channel	526	1.98	235	1.25	0	0.00	0	0.00
6503	Guadalupe FRS	0	0.00	0	4.07	0	0.00	0	0.00
5128	Harquahala FRS	375	22.80	0	0.87	0	0.00	0	0.00
7063	Hartman Wash	1,050	3.68	2,350	6.16	0	0.00	313	1.58
5228	Hassayampa @ US 60	15,400	4.90	0	0.00	0	0.00	5,625	2.90
5308	Hassy @ Box Canyon	3,215	7.20	1,020	4.93	0	0.00	636	4.33
5283	Hassayampa @ I-10	40,800	7.05	0	0.00	0	0.00	0	0.00
5353	Hassy @ Wagoner Rd.	39	3.84	156	4.66	0	0.00	13	3.31
5223	Hassy @ Morristown	7,030	11.73	5,240	11.10	0	0.00	1,310	10.90
5993	Hesperus Dam	45	3.09	0	0.00	0	0.00	0	0.00
4613	IBW @ Indian Bend Rd.	211	2.00	177	1.83	238	2.12	14	0.50
4618	IBW @ Indian School	239	2.56	253	2.59	267	2.62	0	0.00

GAGE_ID	NAME	PEAKS							
		10/27/00 Q	10/27/00 Stage	10/22/00 Q	10/22/00 Stage	10/10/00 Q	10/10/00 Stage	8/29/00 Q	8/29/00 Stage
4628	IBW @ McDonald	485	0.95	412	0.90	511	0.98	0	0.00
4603	IBW @ McKellips	210	1.42	114	1.15	190	1.38	0	0.00
4693	IBW @ Shea Blvd.	200	1.25	200	1.25	1,250	2.50	142	1.10
4643	IBW @ Sweetwater	292	2.00	271	1.91	924	3.69	241	1.77
4623	Interceptor Channel IBW	37	0.60	65	0.98	5	0.12	0	0.00
5218	Jackrabbit Wash	>22,700	>7.00	0	0.00	0	0.00	0	0.00
4678	Lake Margarite	160	1.30	195	1.52	160	1.30	0	0.00
7013	Martinez Creek	2,650	6.30	890	4.00	0	0.00	7,270	8.32
5448	McMicken Dam	0	0.60	0	0.00	0	0.00	0	0.00
5438	McMicken Floodway	8	0.35	5	0.20	0	0.00	0	0.00
5598	New River @ Bell	430	1.05	396	1.00	0	0.00	0	0.00
5613	New River Dam Outlet	411	5.82	390	5.72	0	0.00	0	0.00
5609	New River Dam Pool	440	6.70	440	6.70	0	0.00	0	0.00
5508	New River @ Glendale	2,450	2.11	420	1.30	209	1.20	0	0.00
5983	North Heights Dam	0	0.00	0	0.00	0	0.00	0	0.00
4748	Old Crosscut @ McDowell	78	0.61	68	0.53	71	0.56	0	0.00
7113	Powderhouse Wash	760	1.50	350	1.02	0	0.00	515	1.23
6683	Powerline FRS	32	2.67	29	2.50	5	0.73	5	0.68
6707	Queen Cr. @ Rittenhouse	0	0.00	0	0.00	0	0.00	0	0.00
6723	Queen Cr. @ CAP	445	4.60	454	4.65	0	0.00	198	3.08
4863	Rawhide Wash	0	0.00	0	0.00	70	1.00	0	0.00
6703	Rittenhouse FRS	85	6.83	89	7.38	9	1.23	27	2.40
5113	Saddleback FRS	47	1.00	29	0.60	0	0.00	0	0.00
4523	Salt River @ Priest	1,220	3.38	1,785	3.62	0	0.00	0	0.00
788	Santa Cruz @ SR 84	200	2.03	1,260	3.90	0	0.00	84	1.38
798	Santa Rosa @ SR 84	0	0.00	575	0.41	0	0.00	0	0.00
6923	Sauceda Wash	0	0.00	0	0.00	0	0.00	0	0.00
5543	Scatter Wash	490	1.33	83	0.50	28	0.40	255	0.90
6628	Signal Butte FRS	0	0.00	0	0.00	0	0.00	0	0.00
5583	Skunk Cr. nr New River	172	2.00	687	3.50	0	0.00	0	0.00
5568	Skunk Cr. @ I-17	480	2.16	2,320	3.37	0	0.00	0	0.00
7043	Sols Wash nr Matthie	4,760	3.22	10,800	5.15	0	0.00	5,240	3.40

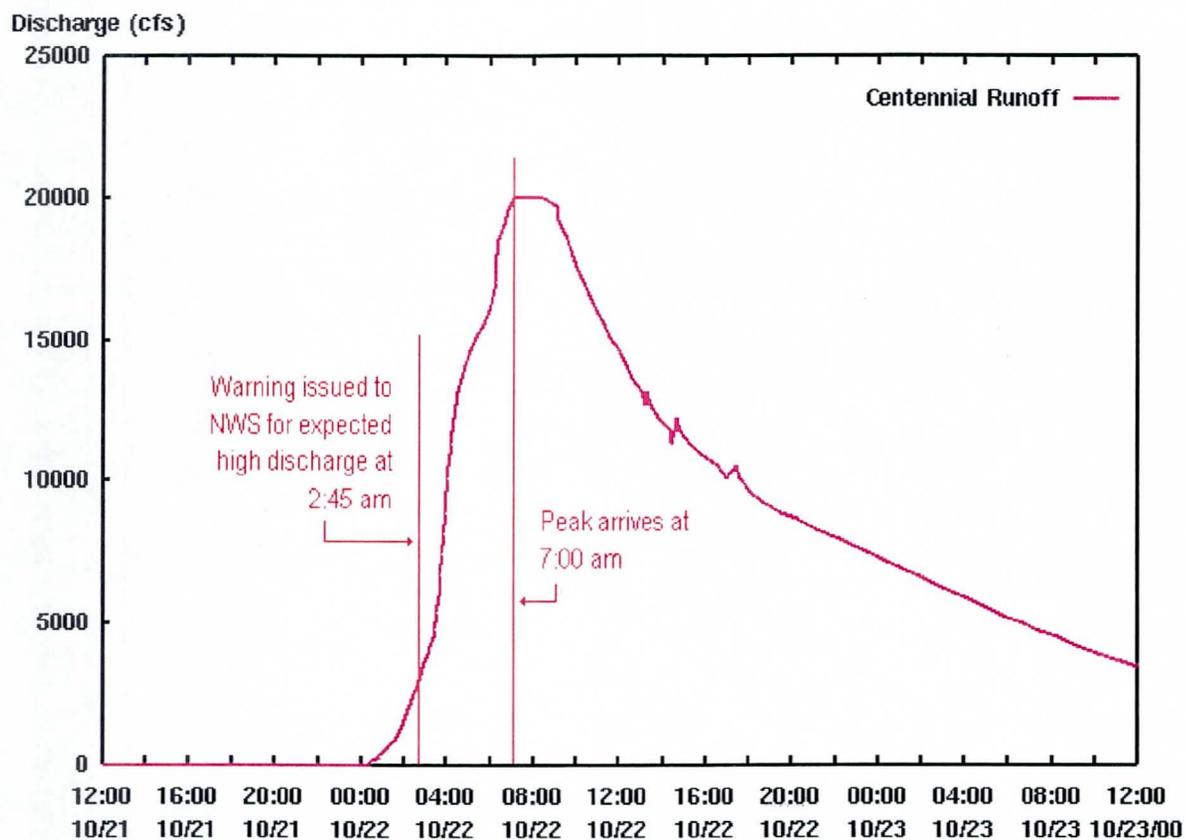
GAGE_ID	NAME	PEAKS							
		10/27/00	10/27/00	10/22/00	10/22/00	10/10/00	10/10/00	8/29/00	8/29/00
		Q	Stage	Q	Stage	Q	Stage	Q	Stage
6563	South Mtn. Fan	14	0.38	0	0.00	14	0.38	0	0.00
4563	Spookhill FRS	43	6.26	32	4.44	36	5.04	0	0.00
5968	Stone Ridge Dam	39	4.43	0	0.75	0	0.75	0	0.00
5973	Sun Ridge Canyon Dam	28	1.95	0	0.00	0	0.00	0	0.00
5248	Sunnycove FRS	38	15.16	29	6.51	0	0.00	34	10.63
5233	Sunset FRS	25	8.43	23	7.03	0	0.00	24	7.78
4638	Tatum Basin Inflow	8	0.20	0	0.00	0	0.00	0	0.00
4653	Tatum Basin Outflow	0	0.00	0	0.00	0	0.00	0	0.00
773	Tat Momolikot Dam	0	4.01	0	0.00	0	0.00	0	4.53
5163	Tiger Wash	3,170	7.40	3,850	7.84	0	0.00	0	0.00
6983	Vekol Wash	0	0.00	0	0.00	0	0.00	0	0.00
6688	Vineyard FRS	61	3.40	20	1.85	0	0.00	6	0.93
6833	Waterman @ Rainbow	130	3.08	1,980	8.77	0	0.00	0	0.00
5418	White Tank FRS #3	0	0.00	0	0.00	0	0.00	0	0.00
6823	White Tank FRS #4	0	0.00	0	0.00	0	0.00	0	0.00
6739	Whitlow Ranch Dam	0	0.00	0	0.00	0	0.00	0	0.00
5118	Winters Wash	44	0.92	0	0.00	0	0.00	0	0.00
<p>Values in BLUE are computed from slope/area survey computations and/or high-water marks Values in GREEN are provided by USGS</p>									



This graph shows the Sols Wash runoff event of August 29th (navy), along with rainfall from the Sols Tank raingage (magenta). Note the time-to-peak is around 3 hours and that a warning was issued approximately 2 hours before the peak flow reached downtown Wickenburg. This runoff event had a discharge peak of 5,240 cfs which translates to a return period of approximately 13 years.



This graph shows the Sols Wash runoff event of 10/21(navy), along with rainfall from the Sols Wash raingage (magenta). Note here that the time-to-peak is only 30 minutes, and that a warning was issued approximately 1 hour before the peak flow reached downtown Wickenburg. This runoff event had a discharge peak of 10,800 cfs which translates to a return period of approximately 66 years.



This graph shows the Centennial Wash runoff event of 10/22. Note here that the time-to-peak is 7 hours, and that a warning was issued approximately 4 hours before the peak flow reached Wenden. This runoff event had a discharge peak of approximately 22,000 cfs which translates to a return period of around 100 years.

ALERT SYSTEM PERFORMANCE

During the storms of August 29th through October 27th, 2000 the FCD ALERT System consisted of approximately 238 automated rain sensors and 106 automated water-level sensors.

On the August 29th storm only one rain/water-level station failed to operate - Agua Fria @ Buckeye Road.

The October 10th storm saw two rain/water-level stations fail due to lightning strikes - ACDC at 14th Street and ACDC @ 36th Street. Sunset Dam rain/water-level station was down because of a failed battery. The IBW @ McKellips Rd. and Hesperus Dam raingages did not operate properly because of plugged funnels. The Delaney Wash and Flying E Tank raingages were down because of programming errors, and the Buckeye @ 547th Ave. and Freestone Basin raingages were down for unknown reasons.

On October 19th a lightning strike hit a power pole across the street from the FCD office building, sending a surge across data and phone lines which destroyed four modems and two multi-port boards. As a result the ALERT base station was down from approximately 08:45 through 11:30. Steps are being taken to make sure this does not happen in the future.

The storm of October 21st-23rd saw inaccurate readings from the water-level sensors at Flying E and Hartman Washes, but did not hamper the generation of warnings for these areas. The Pinnacle Peak Vista raingage was down due to transmitter failure, and the ASU South raingage was down due to battery failure. The IBW @ McKellips raingage was still inoperative because of a plugged funnel.

On October 27th the Hartman and Flying E Wash gages were still sending inaccurate data, and IBW @ McKellips raingage still had a plugged funnel, but all other stations worked properly.

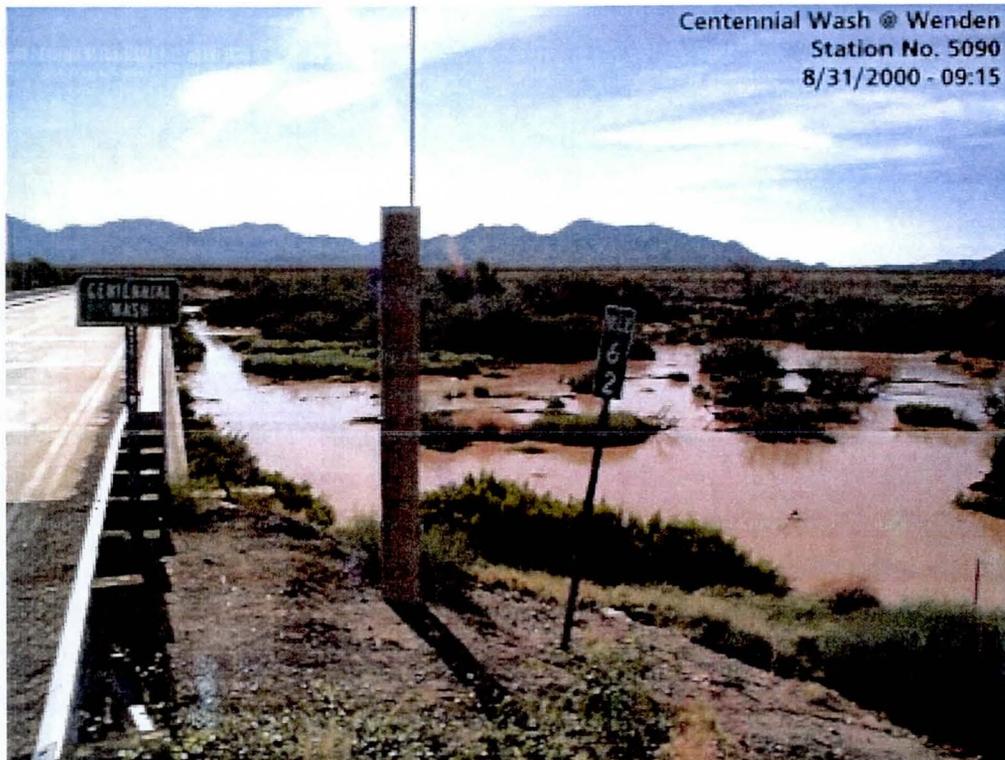
The following Table (4) lists most of warnings and information disseminated during the storms by FCD ALERT personnel. We were unable to log all of the warnings for various reasons, and are working to resolve this for future event logs.

TABLE 4

Date_Time	Agency	Message Description
8/29/00 10:00 AM	Wickenburg Police Dispatch	Martinez creek has substantial flow, expect a large flow on Sols Wash in 30-45 minutes.
8/29/00 12:41 PM	MCDOT Radio Room	Hassayampa may get going enough later to warrant closing Patton Road
8/29/00 1:24 PM	Wickenburg Police Dispatch	Told them to expect a flood on Sols Wash, comparable to Nora, at around 4:00 to 5:00 PM today.
8/29/00 2:02 PM	MCDOT Radio Room	Alarm at Hassy/Morristown, told her we would need to close Hassy @ Patton Rd.
8/30/00 9:00 AM	La Paz County Emergency Management	Told them of a report from field crew of flooded trailers in the Wenden area due to breakout of Centennial Wash. Centennial @ Wenden currently flowing at 3,400 cfs.

8/30/00 10:08 AM	MCDOT Radio Room	Report from field crew of damage around SR71 bridge over Centennial Wash, also nearby Railroad bridge, also a heads up for flows coming down the wash past I-10 into Harquhala Valley.
10/10/00 7:02 AM	Glendale Police Dispatch	Told them we were measuring 200 cfs at 43rd Ave, but did not expect it to go much higher unless more rain moved in from the west
10/21/00 8:57 PM	Wickenburg Police Dispatch	Told them I expected a large flood on Sols given the contributions from Flying E and Hartman. Several other calls both ways as the event progressed.
10/22/00 2:45 AM	NWS - Phoenix	Increasing flow in Centennial - suggested a warning for the Wenden area, and alert citizens of possible evacuation.
10/22/00 6:00 AM	NWS - Phoenix	Flow in Centennial at 19,000 cfs - pleaded with them to spread word and get people out.
10/22/00 3:00 PM	MCDOT	Advised them to monitor or close old US80 by dark - due to waters within Centennial Wash.
10/22/00 3:20 PM	MCDEM	Wanted info on any major expenses to FCD as a result of storm. Told him of repeater and ALERT computers - passed info to Tom Johnson next morning (early).
10/22/00 5:30 PM	Southern Pacific Railroad	Briefed on expected Centennial Wash flow.
10/23/00 11:00 AM	CAP	Centennial Wash about to spill over into CAP if it goes up another 6 inches. Told him wash had probably peaked.
10/24/00 9:00 AM	MCDEM	Rains last night causing a flow upper portion of New River (about 1600 cfs).
10/24/00 3:00 PM	MCDOT	Centennial Wash flow should reach Old US 80 area around 5 PM.
10/27/00 7:15 AM	La Paz County Emergency Management	Briefing - Wash may go to about 1000 cfs, another threat later on - 4000 cfs?
10/27/00 8:55 AM	La Paz County Emergency Management	Updated him on weather events - a little flow this morning, a little more later on.
10/27/00 9:00 AM	La Paz County Emergency Management	Updated 0715 AM briefing. 2000 cfs this morning?
10/27/00 9:15 AM	Wickenburg Police Dispatch	Heavy rain on the way - mainly west side of town?
10/27/00 10:27 AM	Scottsdale Fire	Water accumulating behind StoneRidge Dam
10/27/00 10:55 AM	Wickenburg Police Dispatch	Already half to one inch into upper reaches of Sols Wash - more to come.
10/27/00 11:15 AM	MCDOT	Tiger Wash starting to flow.
10/27/00 11:45 AM	CAP	Flow increasing in Centennial - now up to 2600 cfs upstream of concerned area (I-10).
10/27/00 12:15 PM	NWS at Wenden	Briefed on happenings. Told him should be some runoff - probably no big deal.
10/27/00 12:40 PM	Wickenburg Police Dispatch	.50 to 1.25 inches next 1 to 2 hours many areas. Expect the worse, but probably not quite as bad as few days ago.
10/27/00 4:15 PM	Wickenburg Police Dispatch	Weather update. Worse about over?
10/27/00 4:30 PM	Scottsdale Fire	Loss of water behind StoneRidge - why?
10/27/00 5:45 PM	La Paz County Emergency Management	Briefed on runoff expected. Not sure but rain pattern did not suggest much.
10/27/00 8:00 PM	MCDOT	Some minor flows many washes - Agua Fria/Grand, New River/Glendale, New River Dam and Hassayampa at Arlington.

10/27/00 8:30 PM	NWS - Phoenix	Briefed them on flows/runoff.
10/27/00 10:30 PM	NWS - Phoenix	Updated them on flows/runoff.
10/28/00 12:07 AM	Wickenburg Police Dispatch	Briefed them on weather for they're planning purposes, - see no additional or new problems..
10/28/00 2:30 AM	NWS - Phoenix	At Wenden Centennial up to about 3000 cfs - flow increasing rather rapidly.
10/28/00 7:05 AM	MCDEM	Told him Centennial Wash had risen from 5000 to 10,000 cfs since 5:00 am, asked him to notify his contact in La Paz County.
10/28/00 7:30 AM	La Paz County Emergency Management	Mary Dahl called the ALERT room for status of Centennial, whether it might go up or down or stabilize, told her I did not know at this point.
10/28/00 8:00 AM	La Paz Co. Public Works	Called Tammy of Public Works at request of MCDEM, told her how to get 5093 stage data via the web.



SUMMARY

A number of heavy thunderstorms dropped large amounts of rain in the Wickenburg area, lower Hassayampa and upper Centennial watersheds on August 29th, 2000. These storms caused flooding along several watercourses in northwestern Maricopa County and eastern La Paz County, including Martinez Creek, Sols Wash and Centennial Wash. The storm produced significant runoff events in the Wickenburg area and in the Centennial watershed with estimated return periods of between 8 and 17 years.

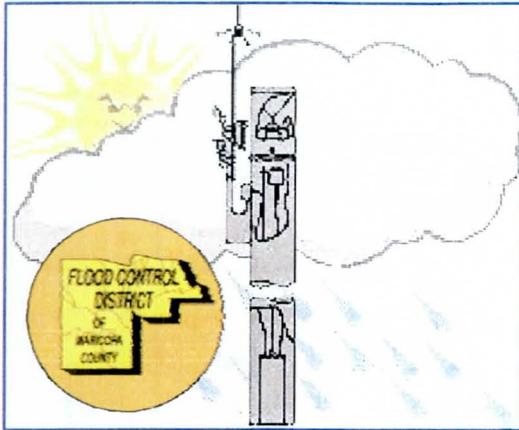
The month of October featured a series of Pacific low-pressure frontal systems which tapped tropical moisture in northern Mexico as they passed through the State, resulting in heavy widespread rain with numerous embedded thunderstorms. Again, the Wickenburg and Centennial areas were affected, along with Grass Wash, Tiger Wash, Jackrabbit Wash and much of northern and central Maricopa County. On October 10th, flows in central Phoenix and Scottsdale were generally around a 2-year return period. But the rains from this storms served to wet many watersheds around the County, which added to the runoff potential for subsequent storms. October 27th saw heavy runoff in the northern, central, western and northwestern portions of the County. Centennial Wash experienced what is believed to be a 100-year event, Sols Wash saw a 66-year return period event, Flying E Wash in Wickenburg around a 40, and Hartman and Tiger Washes approximately 16-year events. Flows during the October 27th storm were again heavy in the western and northwestern parts of the County. Jackrabbit Wash experienced a 50-year flood, Hassayampa @ I-10 recorded a 70-year event, Casandro Wash in Wickenburg managed a 40-year, and Sols and Tiger Washes each were treated to 10-year events.

[Appendix E](#) contains selected digital photos of flooding from around the County.



APPENDIX A

Selected Outlook and Message Products from the
Meteorological Services Program



WEATHER OUTLOOK

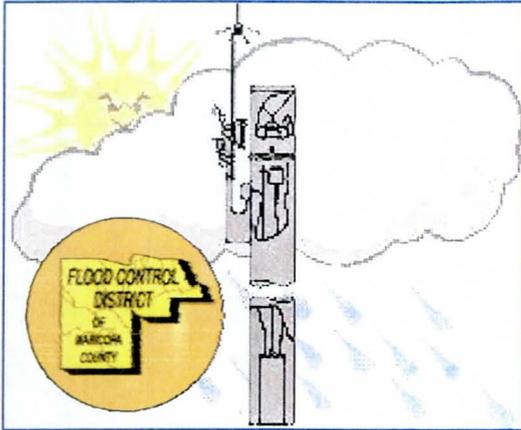
Date & Time: Monday, August 28, 2000 1:35 PM MST
 Forecaster: Jim Perfrement
 Phone: 602-506-8701

SYNOPSIS:

A little rain this morning in spots, nothing really significant. But it shows how moist the atmosphere has become - perhaps more moist than any other time this summer. But cloud cover and relatively cool temperatures hurting the chances of significant rain this afternoon/tonight. Believe there will be some storms but perhaps not much heavy rain. **Kinda feel tomorrow afternoon or night may be the biggy.** And looking down the road - monsoon may end about Thursday (give or take a day), as very dry air to move in and stay awhile.

At 1:15 PM there were light showers everywhere, though a minimum over MSP area. The strongest storms were over far southwest Maricopa County and southeast of our area - roughly a line from east of Globe down to the Tucson. Movement was generally toward the north or northwest 15 mph.

Forecast Zone	Tonight / Tue A.M. Chance of Rain (%)	Prime Time	Maximum Prime Time Amount (in.)
Palo Verde	40	5pm - 1am	.60
Rainbow Valley	40	5pm - 1am	.70
West Valley	40	6pm - 1am	.60
Northwest Valley	40	6pm - 1am	.60
Wickenburg	40	5pm - 1am	.60
Lake Pleasant	50	5pm - 1am	.70
New River/Cave Creek	50	Now - 1am	.80
Phoenix	40	6pm - 1am	.60
Tempe Town Lake	40	6pm - 1am	.60
Southeast Valley	50	5pm - 1am	.70
Scottsdale	50	6pm - 1am	.70
Lower Salt River Lakes	50	4pm - 1am	.70
Superstition	60	4pm - 1am	.80



Flood Control District of Maricopa County
 Meteorological Services Program (MSP)

WEATHER OUTLOOK

Date & Time: Friday, October 20, 2000 1:30 PM MST
 Forecaster: Waters

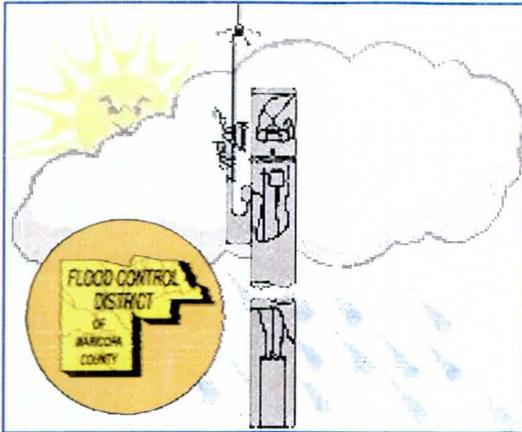
SYNOPSIS:

Quite pleasant outside right now, temperatures in the mid-80s with very few clouds. Look for a high today around 87 with light winds and some gusts to 15 mph. Tonight will be clear and cool. Should be dry between now and Saturday evening.

Starting Saturday night, we are expecting a Pacific storm which is now moving over San Francisco, to slide into the MSP zones. This storm has reasonable moisture with it, and will pull in additional moisture from yesterday's storm which remains over SE AZ and northern Mexico. **This will combine to cause a significant rain event for this time of year, possibly an inch on the deserts and 2 inches in the mountains.** Luckily, the warm air that caused embedded thunderstorms and lots of lightning yesterday will not be present, and we can expect a more winter-like rain of long duration and low intensity. This storm could cause intermittent showers through Tuesday morning.

If conditions warrant we will produce a forecast/products on Sunday.

Forecast Zone	Tonight / Sat A.M. Chance of Rain (%)	Prime Time	Maximum Prime Time Amount (in.)
Palo Verde			
Rainbow Valley	N		
West Valley			
Northwest Valley	O		
Wickenburg			
Lake Pleasant	N		
New River/Cave Creek			
Phoenix	E		
Tempe Town Lake			
Southeast Valley			
Scottsdale			
Lower Salt River Lakes			
Superstition			



Flood Control District of Maricopa County
 Meteorological Services Program (MSP)

WEATHER OUTLOOK

Date & Time: Saturday, October 21, 2000 1:10 PM MST
 Forecaster: Jim Perfrement

SYNOPSIS:

Think wet - very wet. This outlook will also be a heads up, or flash flood watch, regarding expected weather conditions. Storm action plans should be looked at - as the odds are good this storm will result in locally (at least) runoff. Be prepared!

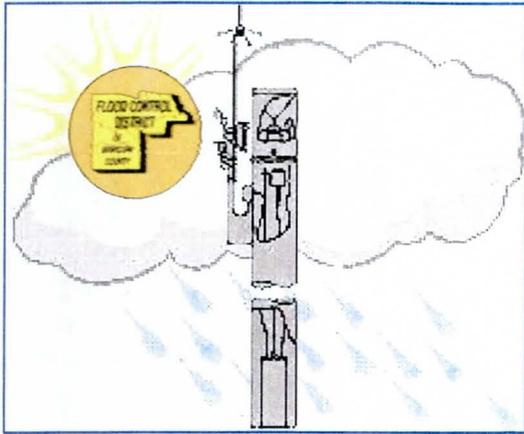
A few showers have already taken place over portions of the MSP area - all light. And at 12:45 PM radar showed scattered light to moderate showers and thunderstorms developing over southwest Maricopa county - from northwest of Gila Bend to east of Gila Bend. Movement was toward the northeast about 15 mph.

Although rain will be taking place this afternoon and evening I believe the main event will be from late tonight through Sunday night. If the guidance is anywhere near correct some MSP areas should get an inch to 1.5 inches. And there will be additional rain, at times, lasting through Monday and possibly as long as Tuesday morning. Again, be prepared.

It will also be very cool the next few days, with afternoon highs ranging from the upper 60s to middle 70s. And it will be breezy.

I will be in the office Sunday (possibly late tonight if it gets nasty).

Forecast Zone	Tonight / Sun A.M. Chance of Rain (%)	Prime Time	Maximum Prime Time Amount (in.)
Palo Verde			
Rainbow Valley			
West Valley	A		
Northwest Valley	B	2 AM	.25
Wickenburg	O		
Lake Pleasant	U	T	
New River/Cave Creek	T	O	TO
Phoenix			
Tempe Town Lake	100	NOON	
Southeast Valley	%		.50
Scottsdale			
Lower Salt River Lakes			
Superstition			



Flood Control District of Maricopa County
Meteorological Services Program (MSP)

Message 1 Alert

Date & Time: Saturday, October 21, 2000 11:40 PM MST
Forecaster: Jim Perfrement
Phone: 602-506-8701

Comments:

Time to update everyone on weather events. As for this past evening - business was done by phone to areas that received significant rain - resulted in flooding of washes/roads. It appears the hardest hit area was Wickenburg, and areas to the west and north of Wickenburg. Rainfall was generally from 1 to 3 inches. At 11 PM there was a significant flow in the Hassayampa River moving south from Wickenburg that will probably result in the closing of Patton Road in an hour or two (MCDOT give me a call for details).

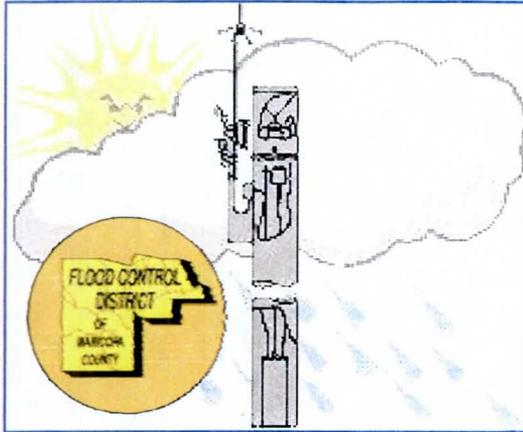
Another area of concern was Rainbow Valley, as locally heavy rain caused Waterman Wash to flow. Overall, there was a lot more rain than expected for the evening hours. And more is to come.

At 11:30 PM very little rain was being reported over the southern portion of the MSP area. But there were still scattered light to moderate showers and thunderstorms over northern sections - but at most locations not as much rain as earlier in the evening. And for the most part additional rain the next couple of hours will not be sufficient to result in significant additional flooding - just retard the drying process.

But more rain is on the way - possibly a lot more rain. Radar shows activity developing over La Paz and Yuma county - moving north and east. And numerical guidance suggests rains of well over an inch may fall later this coming day - with additional amounts Sunday night and into Monday. So stay tuned.

I will be at the above phone number for the remainder of the night, and will update the weather picture as additional information becomes available.

This message is not intended for public dissemination. Please pass this information along to appropriate emergency response organizations (police, fire, transportation, etc.) you support. Also, please take appropriate actions to prepare for possible flooding.



WEATHER OUTLOOK

Date & Time: Thursday, October 26, 2000 1:00 PM MST
 Forecaster: Jim Perfrement

SYNOPSIS:

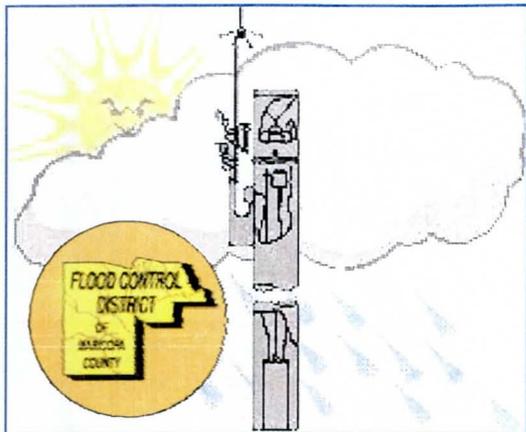
More weather disturbances on the way - main periods appear to be Friday (probably afternoon) through Friday night, then Monday, and then again late in the week. For now will only discuss the next two. The atmosphere remains rather moist from the storm this past weekend - more importantly the ground is also very moist. **And due to saturated soil conditions additional rain will mostly become runoff. In other words - a situation than could lead to additional flooding.**

On a more positive note this next disturbance should not linger over our area like the past one did. It should be east of the MSP area by late Saturday. The big question is - how much rain will fall until then? Right now I would place the average storm total in the .50 to .75 inch bracket, enough to cause many washes and creeks to once again flow - though overall not to levels of past storm. **But there could be higher rain accumulations, over an inch, especially over the higher terrain of the MSP area - so once again stand by.**

The weather disturbance forecast to arrive Sunday night and/or Monday is forecast to track a little farther north. If so the main impact (heavy rain) should be north of the MSP area, though very possibly some showers our area.

Temperatures will remain below normal through the weekend, and it may become locally very breezy at times.

Forecast Zone	Tonight / Fri A.M. Chance of Rain (%)	Prime Time	Maximum Prime Time Amount (in.)
Palo Verde	60	3am - noon	.40
Rainbow Valley	"	"	"
West Valley	"	"	"
Northwest Valley	"	"	"
Wickenburg	"	"	"
Lake Pleasant	"	"	"
New River/Cave Creek	"	"	"
Phoenix	"	"	"
Tempe Town Lake	"	"	"
Southeast Valley	"	"	"
Scottsdale	"	"	"
Lower Salt River Lakes	"	"	"
Superstition	"	"	"



Flood Control District of Maricopa County
 Meteorological Services Program (MSP)

Message 3 Flash Flood Warning

Date & Time: Friday, October 27, 2000 12:55 PM MST
 Forecaster: Jim Perfrement
 Phone: 602-506-8701

Forecast Zone

Palo Verde		Phoenix	
Rainbow Valley		Tempe Town Lake	
West Valley		Southeast Valley	
Northwest Valley		Scottsdale	
Wickenburg	X	Lower Salt River Lakes	
Lake Pleasant		Superstition	
New Rvr/Cave Creek			

This warning is valid **Now to 5:00 PM MST.**

Comments:

Strong thunderstorms have moved into the Wickenburg area - rain accumulation rate of an inch an hour some areas. As ground is saturated all this will result in runoff. At 12:45 the heaviest rain was over southern portions of the town, but will spread through most areas the next half to one hour.

Take precautions.

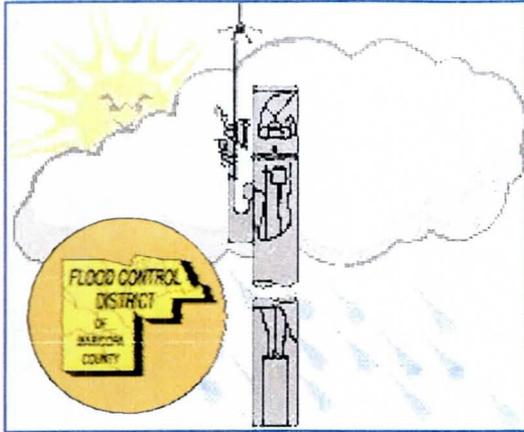
Note: A Flash Flood Warning is issued when it appears flooding is imminent - usually within 30 minutes of the statement.

This message is not intended for public dissemination.

Please expedite this information to affected emergency response organizations (police, fire, transportation, etc.) within your area.

Also, please take appropriate actions to prepare for possible flooding.

Further information will be provided as it becomes available.



Flood Control District of Maricopa County
 Meteorological Services Program (MSP)

Message 3 Flash Flood Warning

Date & Time: Friday, October 27, 2000 1:50 PM MST
 Forecaster: Jim Perfrement
 Phone: 602-506-8701

Forecast Zone

Palo Verde		Phoenix	X
Rainbow Valley	X	Tempe Town Lake	X
West Valley	X	Southeast Valley	
Northwest Valley	X	Scottsdale	
Wickenburg		Lower Salt River Lakes	
Lake Pleasant		Superstition	
New Rvr/Cave Creek	X		

This warning is valid **Now to 4:00 PM MST.**

Comments:

Updated to include Phoenix, Tempe Town Lake and Rainbow Valley zones. Sorry about that.

Strong thunderstorms have moved into the warning area. Movement was toward the northeast about 30 mph. Rain accumulation from this band of storms was locally over an inch an hour. This will result in flash flooding.

Take precautions.

Note: A Flash Flood Warning is issued when it appears flooding is imminent - usually within 30 minutes of the statement.

This message is not intended for public dissemination.

Please expedite this information to affected emergency response organizations (police, fire, transportation, etc.) within your area.

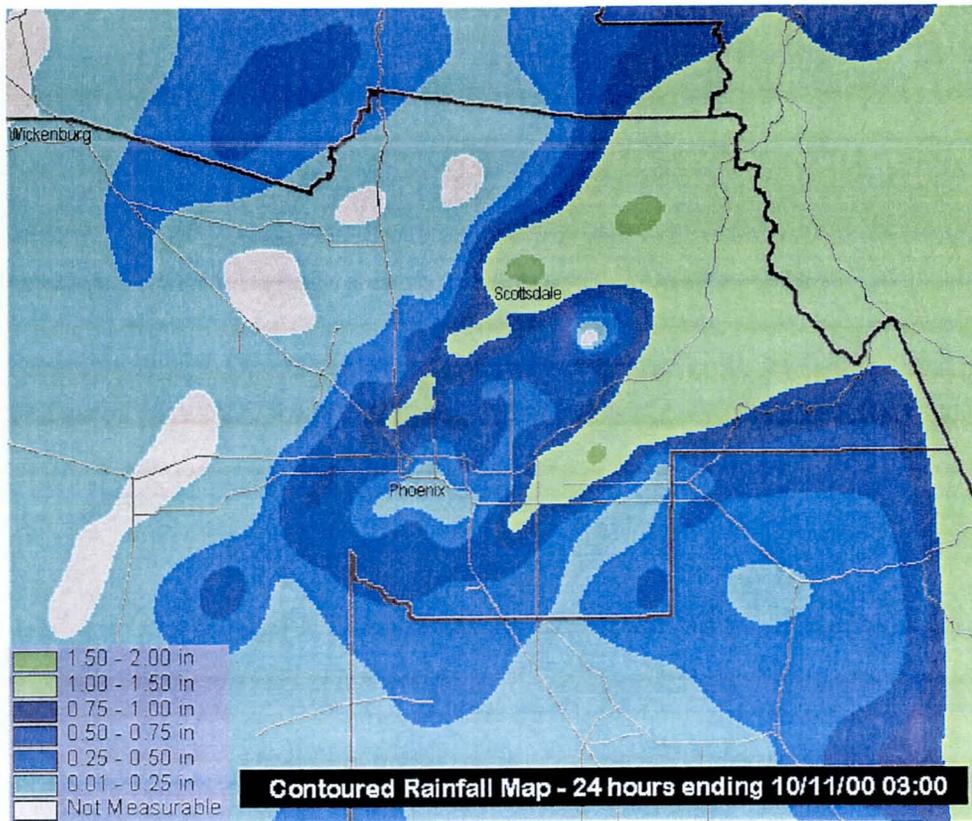
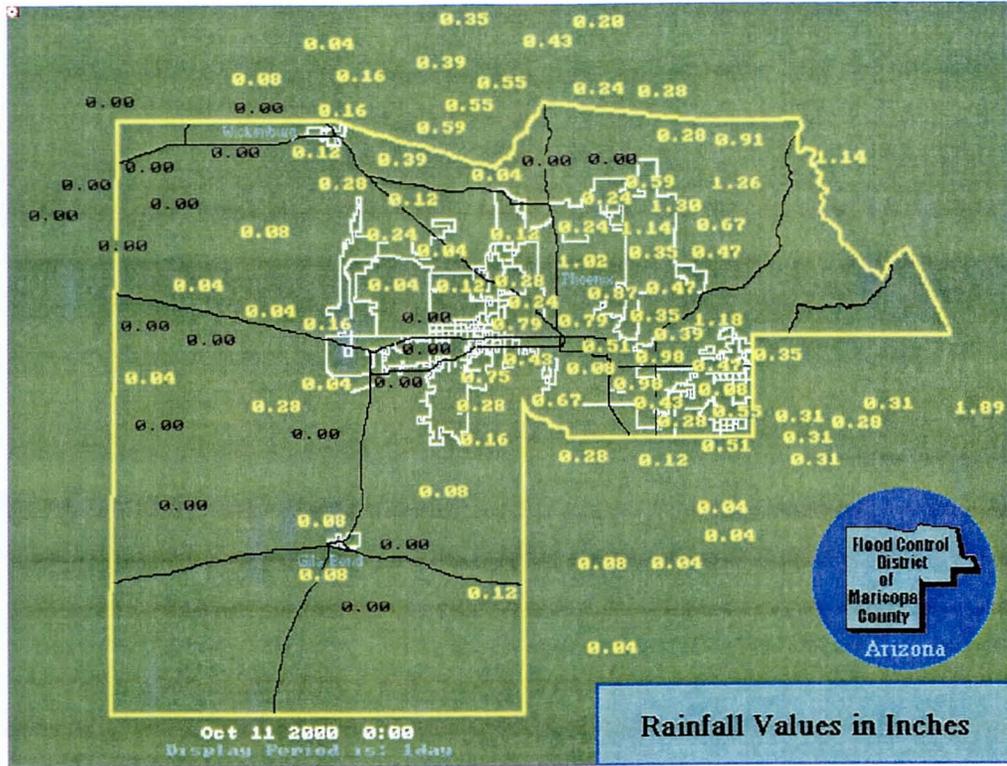
Also, please take appropriate actions to prepare for possible flooding.

Further information will be provided as it becomes available.

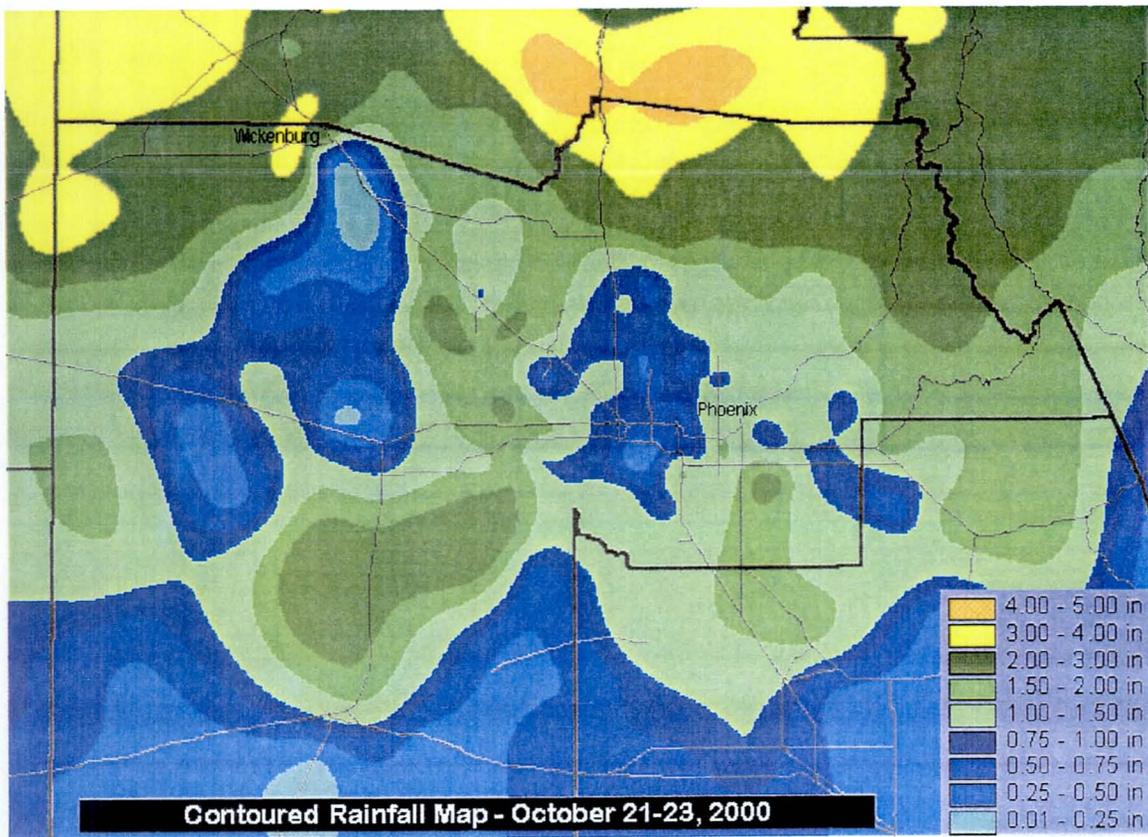
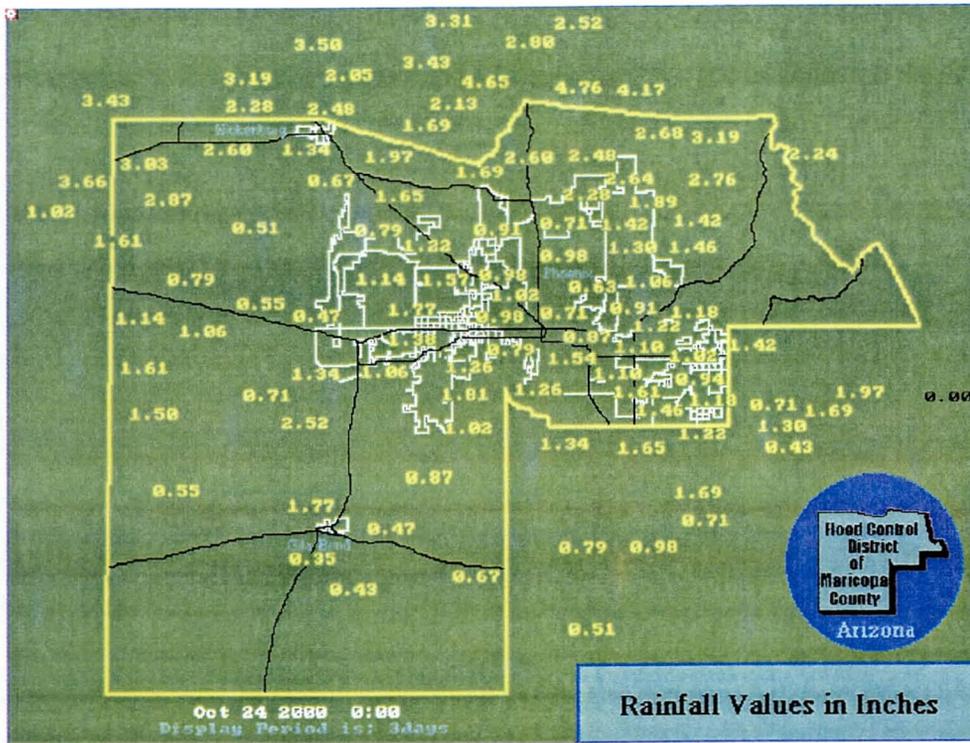
APPENDIX B

Point Rainfall Maps and
Isohyetal Rainfall Coverage Maps
from FCD Automated Gage Data

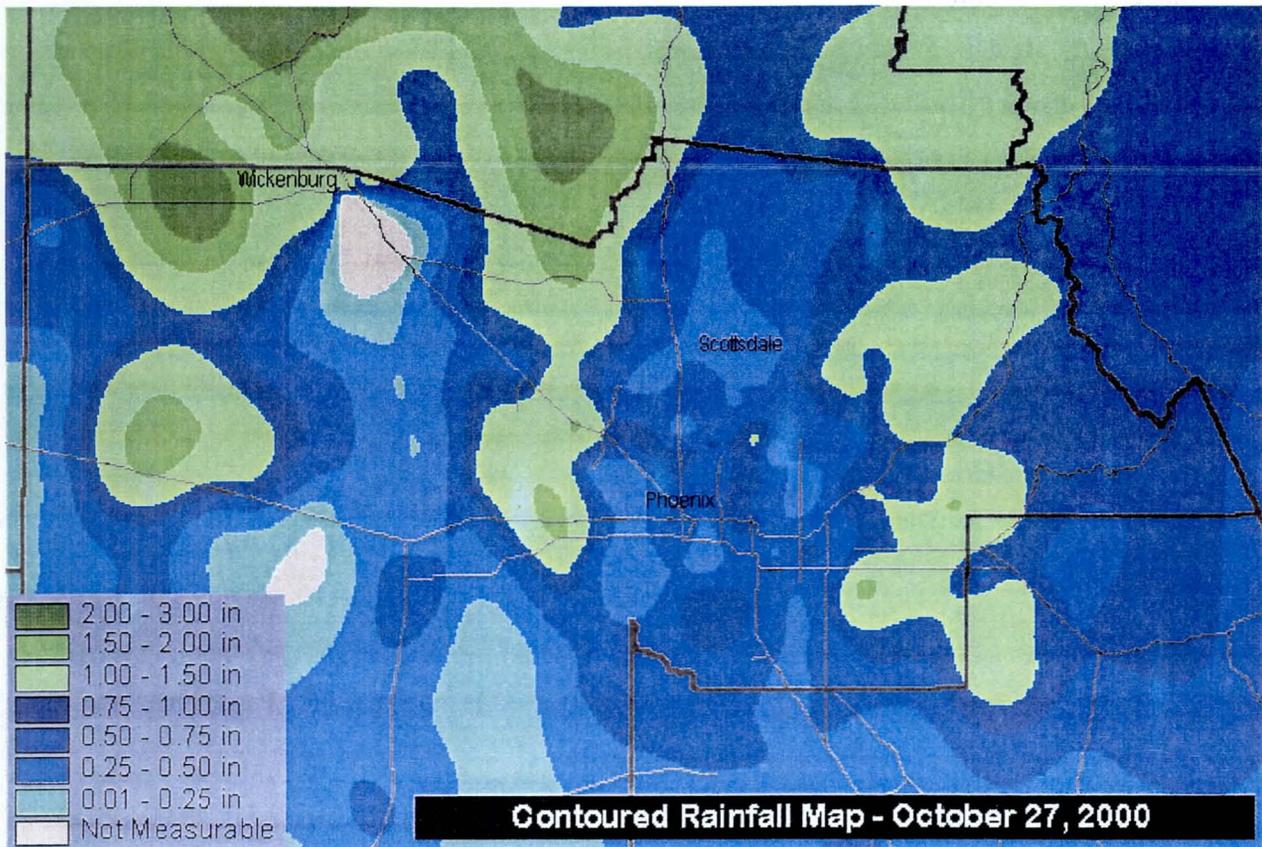
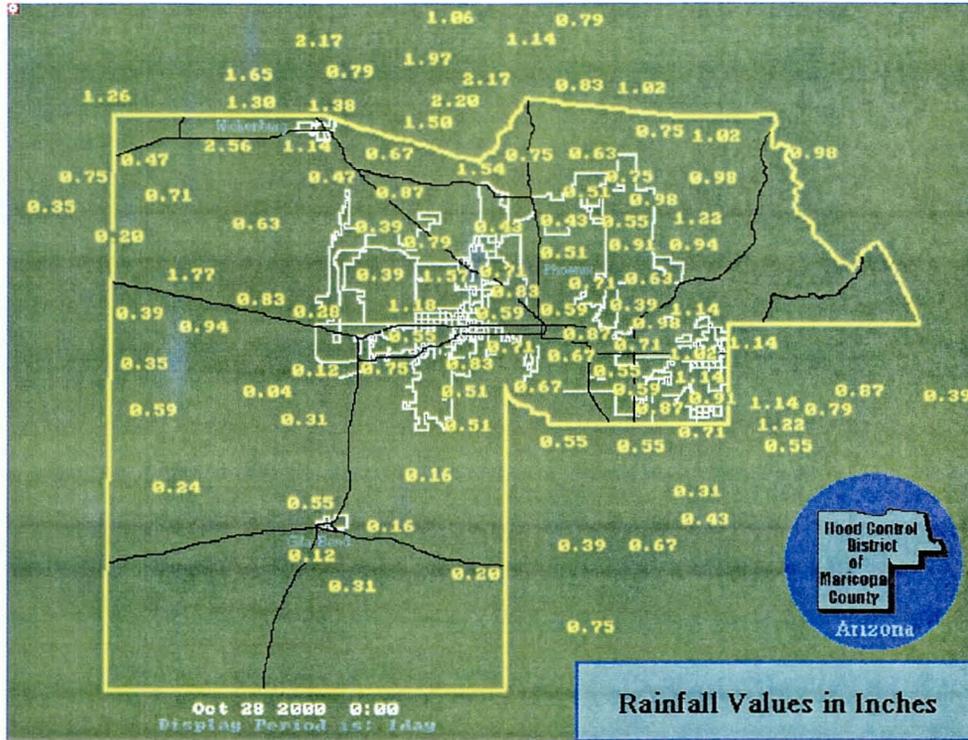
October 10th, 2000



October 21st - 23rd, 2000

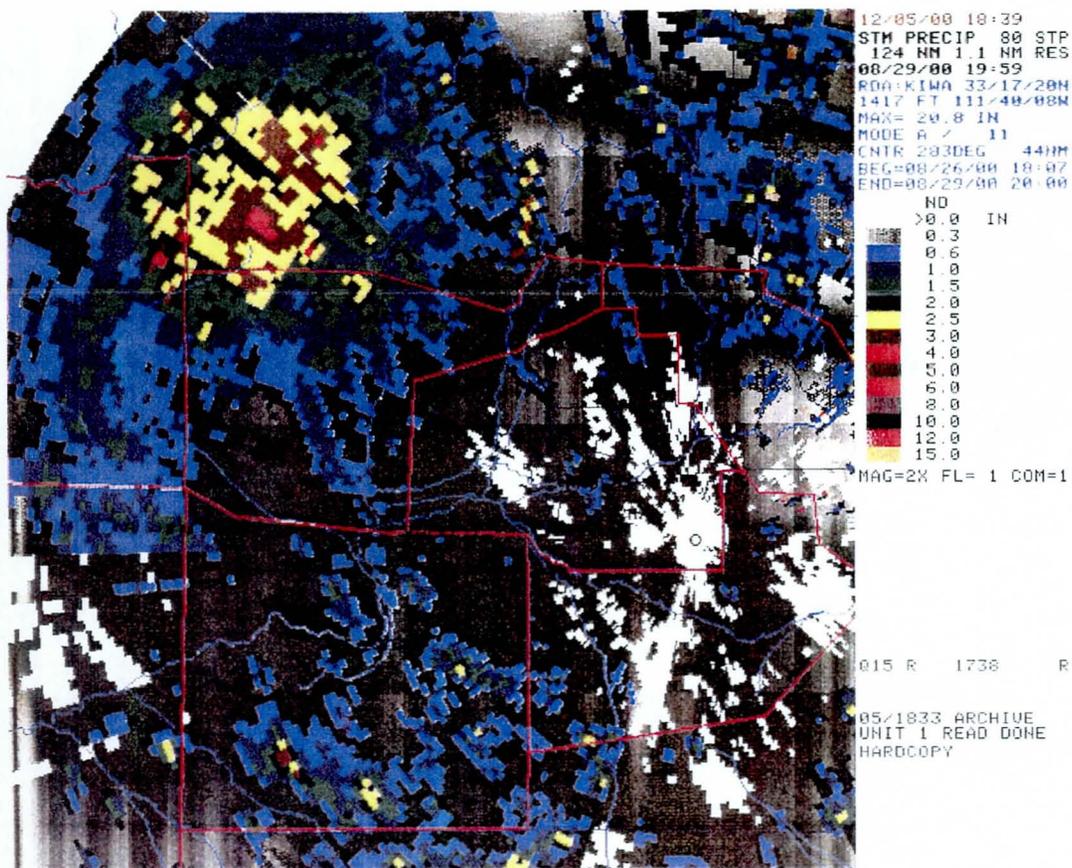


October 27th, 2000

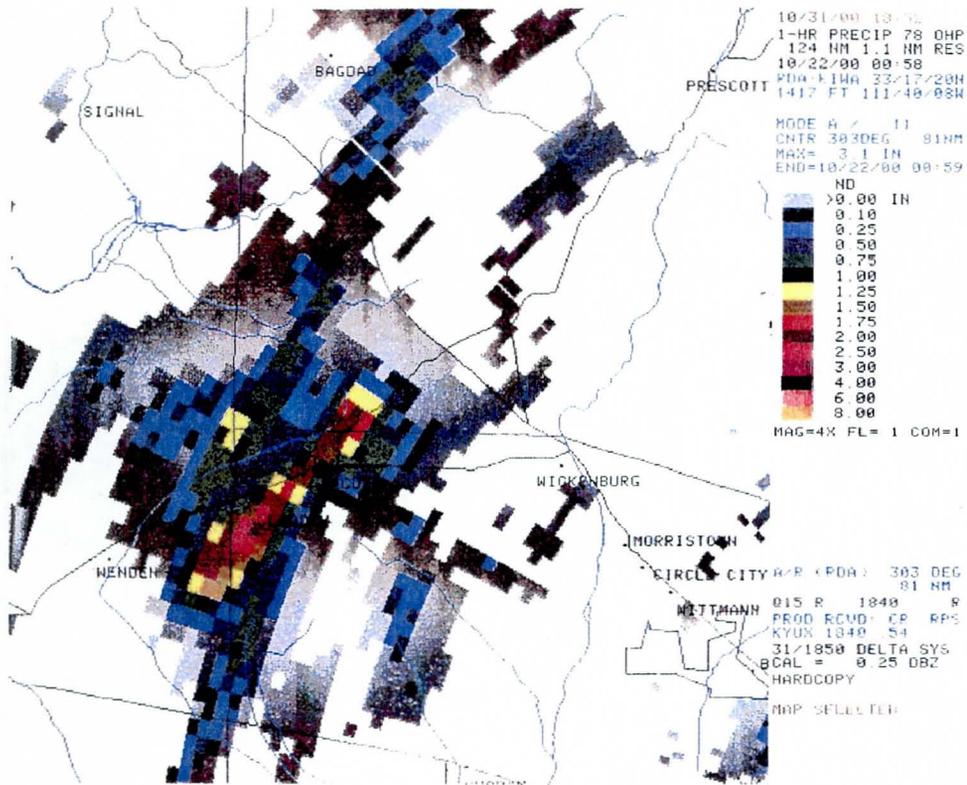


APPENDIX C

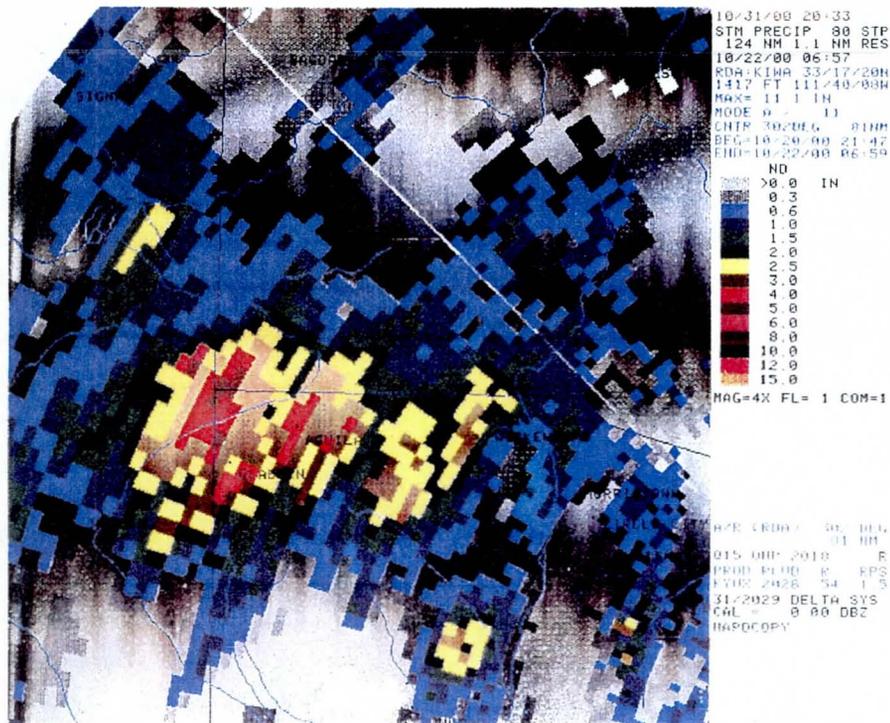
NEXRAD Radar Reflectivity Images From Phoenix WFO



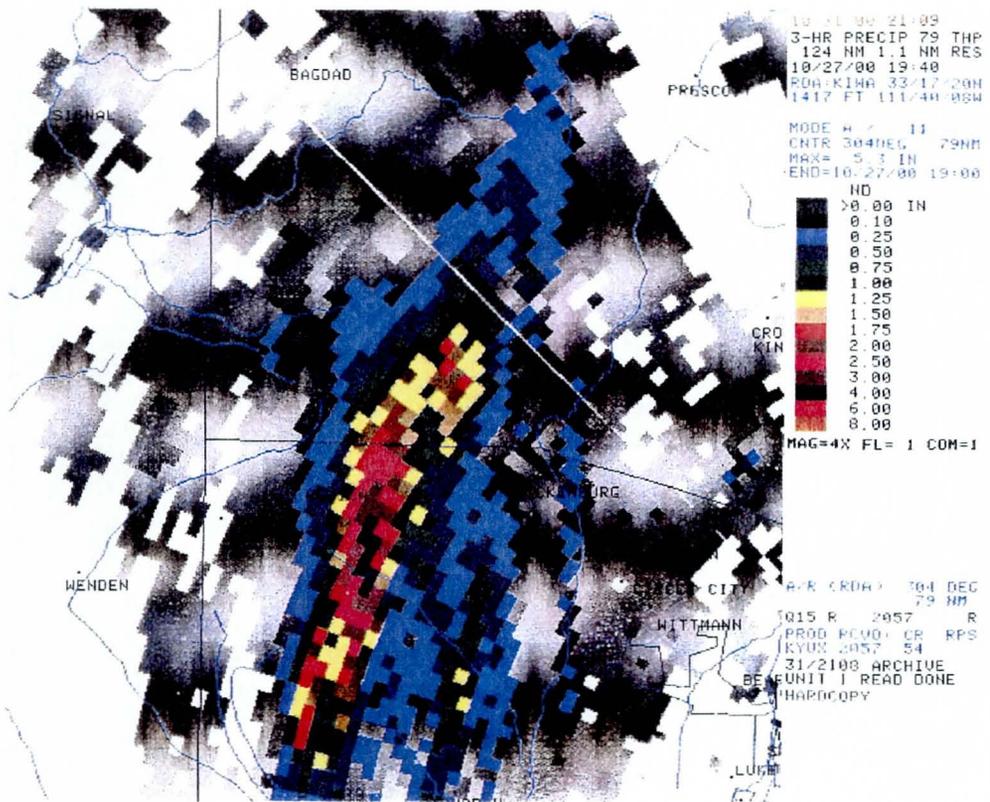
Storm-Total Precipitation Map for 08/26/00 11:07 through 08/29/00 13:00 MST



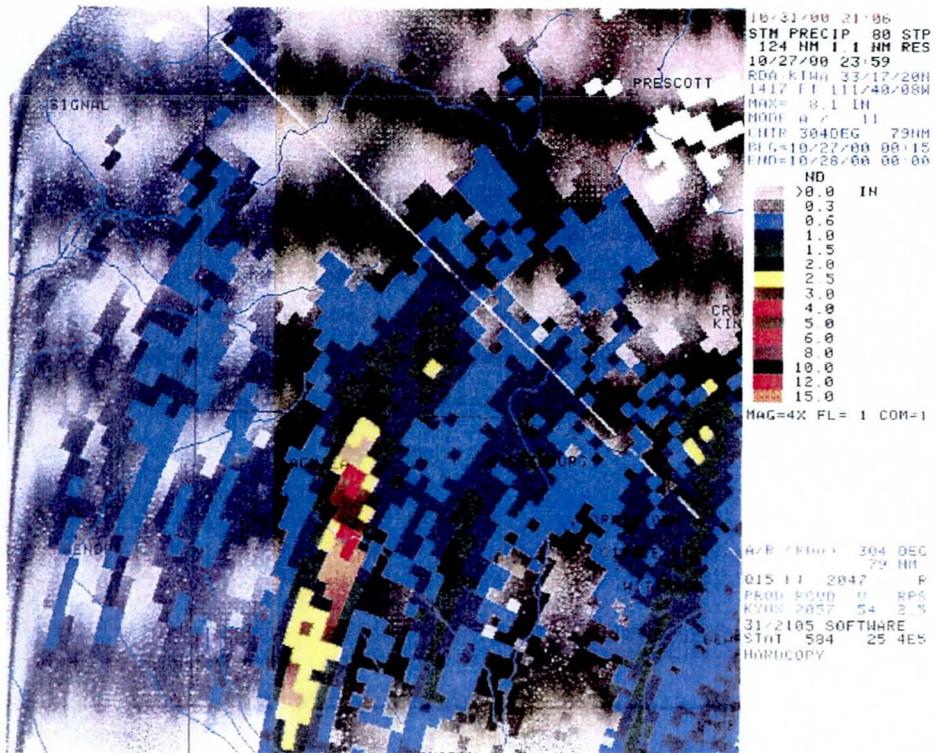
1-hour Precipitation Map ending 10/21/00 at 18:00 MST



Storm-Total Precipitation Map for 10/20/00 14:47 through 10/22/00 00:00 MST



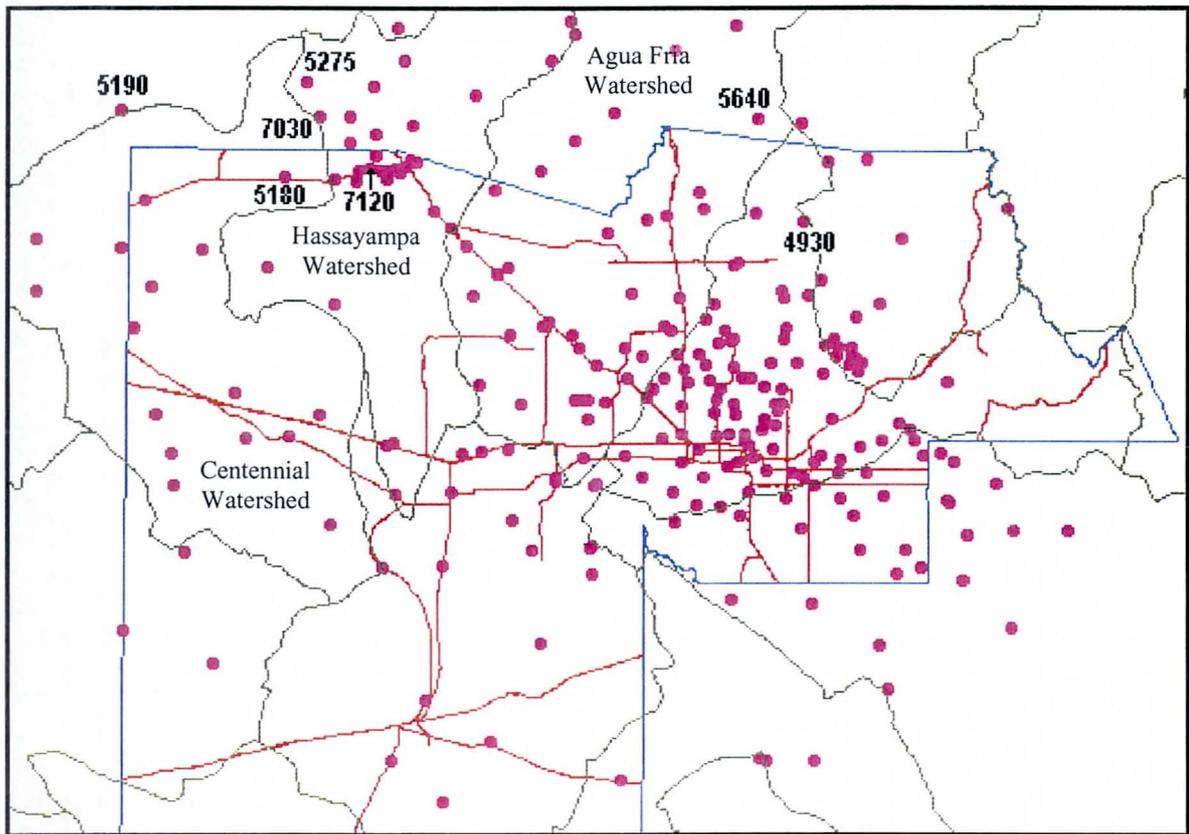
3-hour Precipitation Map ending 10/27/00 at 12:00 MST



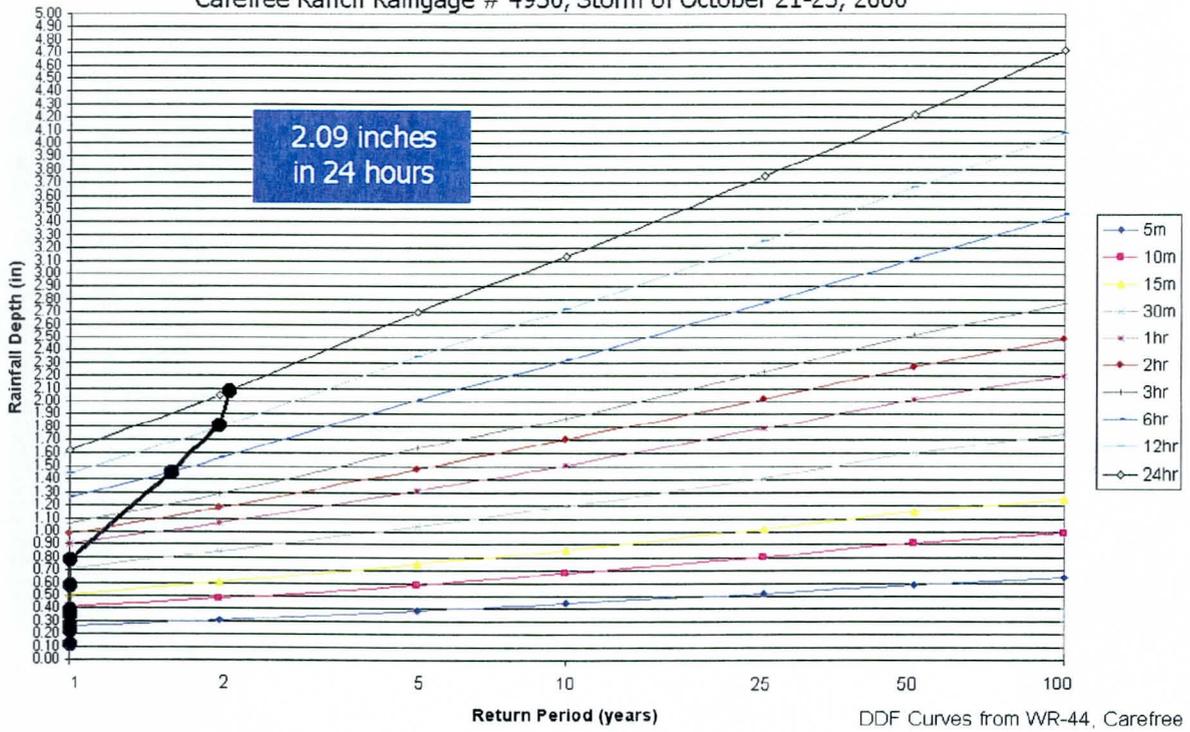
Storm-Total Precipitation Map for 10/26/00 17:15 through 10/27/00 17:00 MST

APPENDIX D

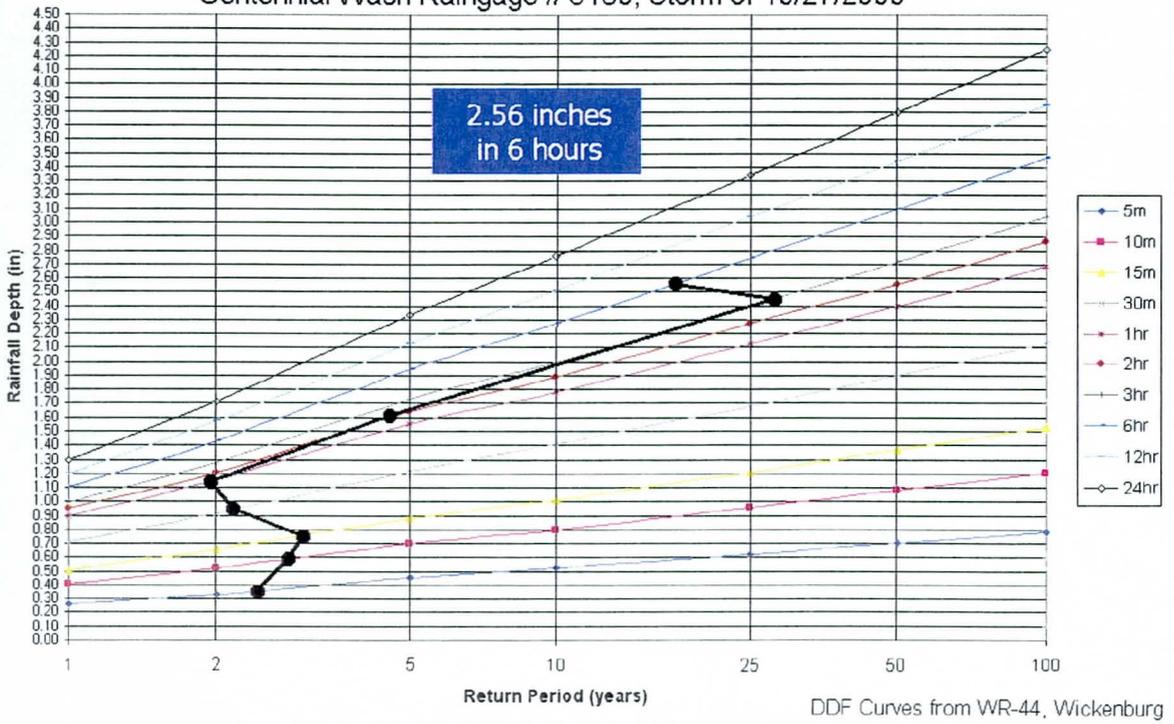
Depth/Duration/Frequency Plots and Histograms for Seven Selected Stations



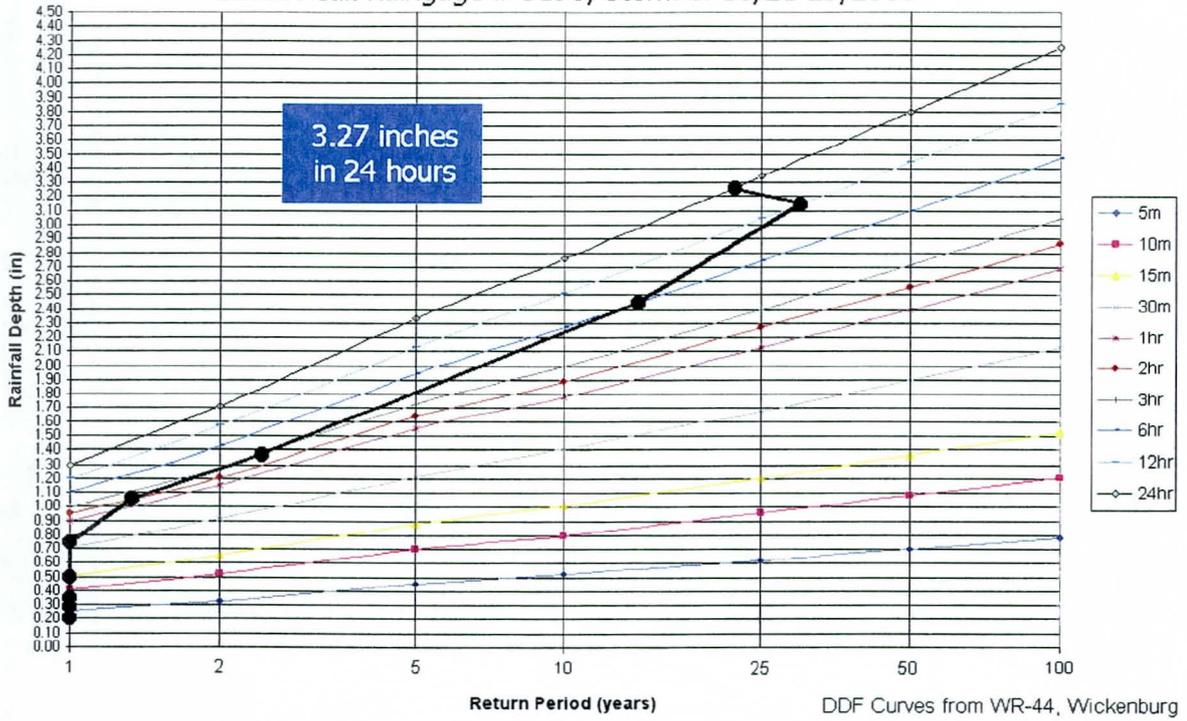
Carefree Ranch Raingage # 4930, Storm of October 21-23, 2000



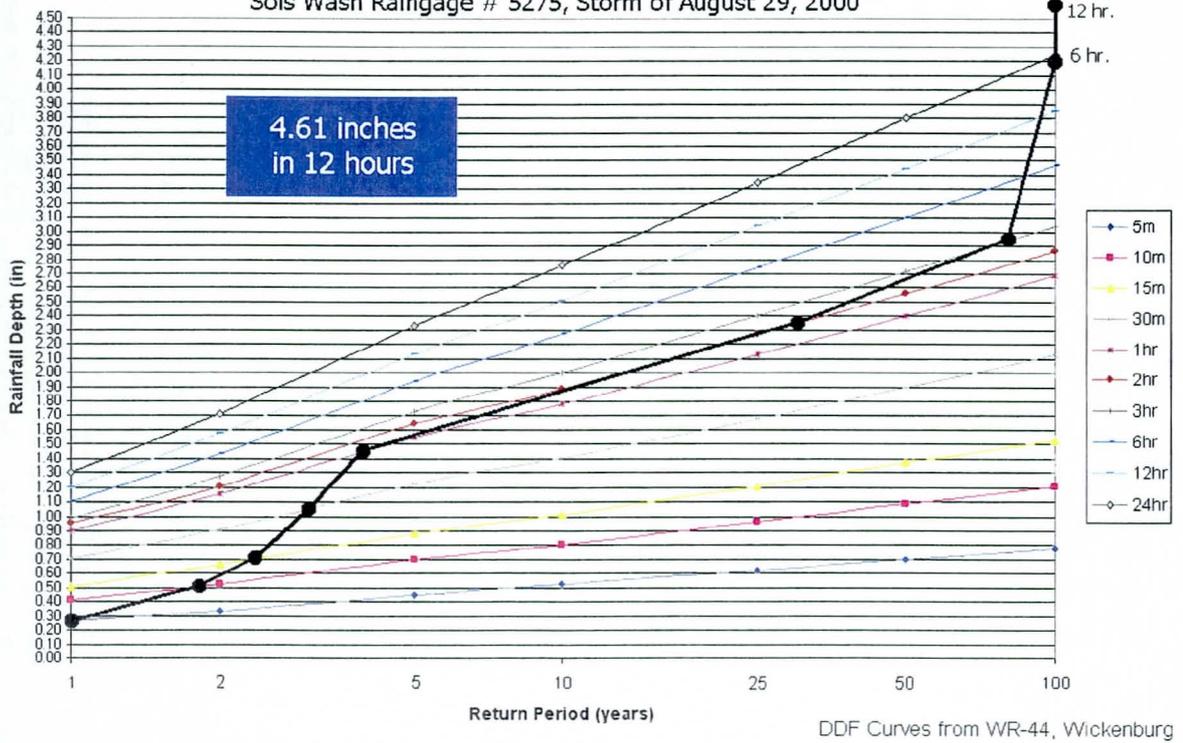
Centennial Wash Raingage # 5180, Storm of 10/27/2000



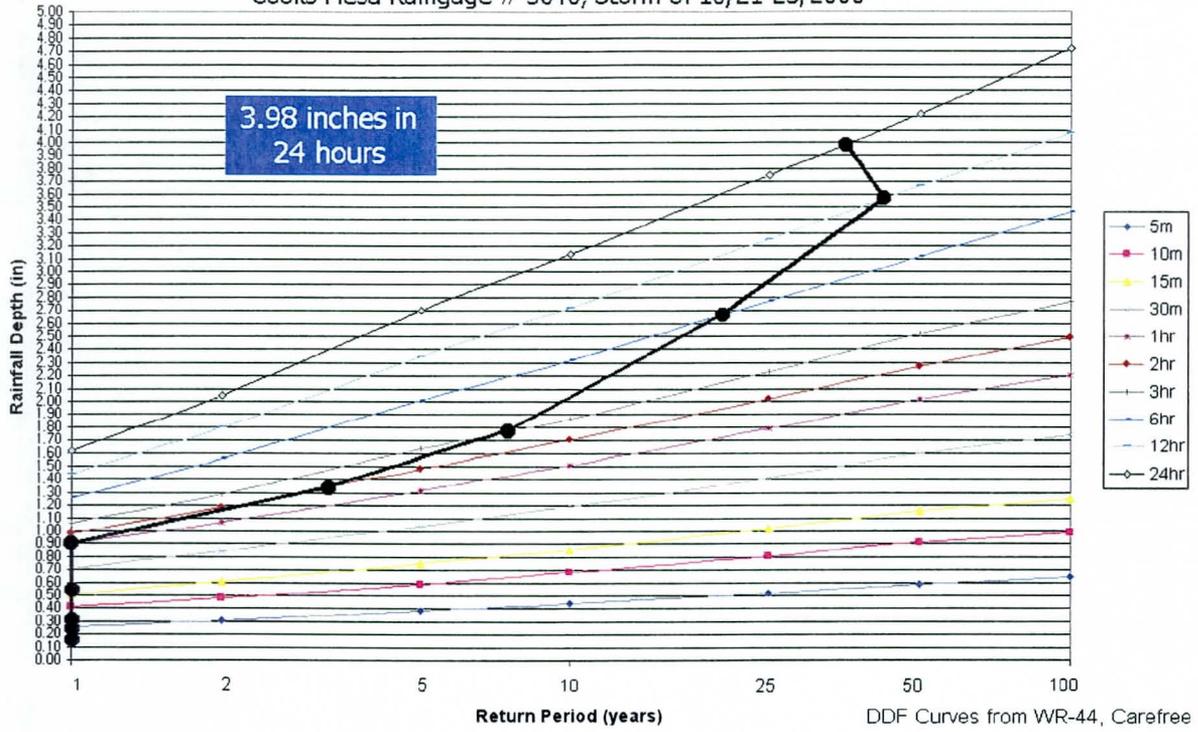
Smith Peak Raingage # 5190, Storm of 10/21-23/2000



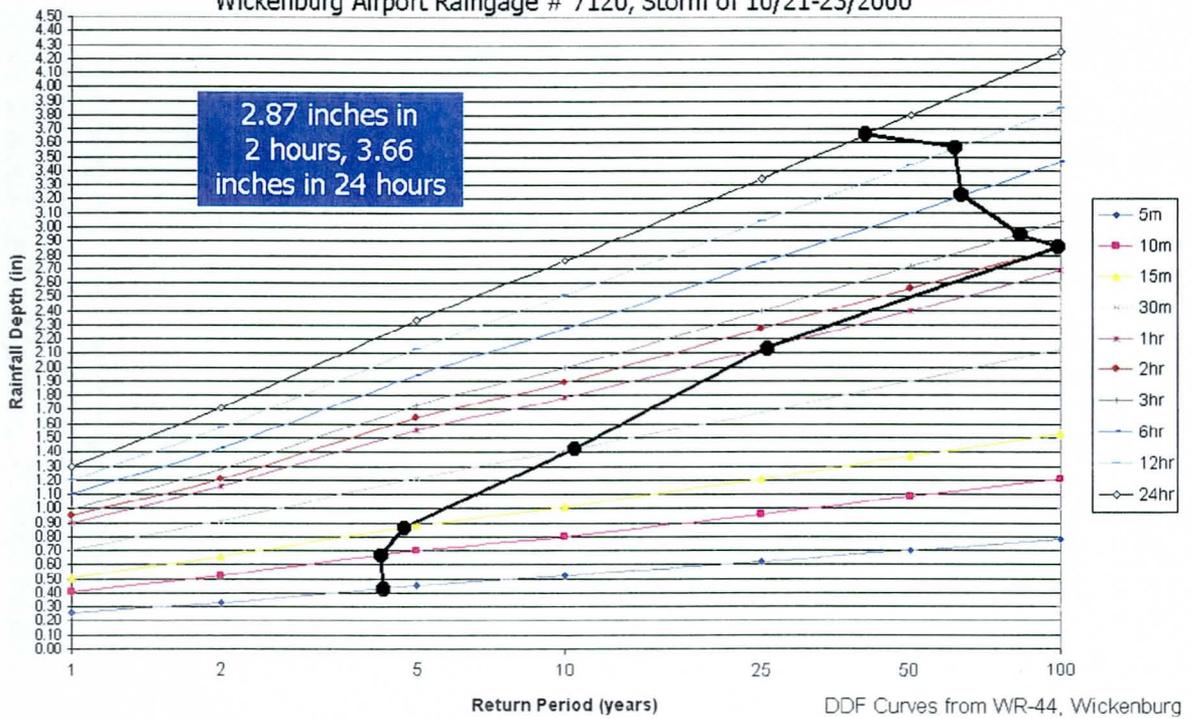
Sols Wash Raingage # 5275, Storm of August 29, 2000



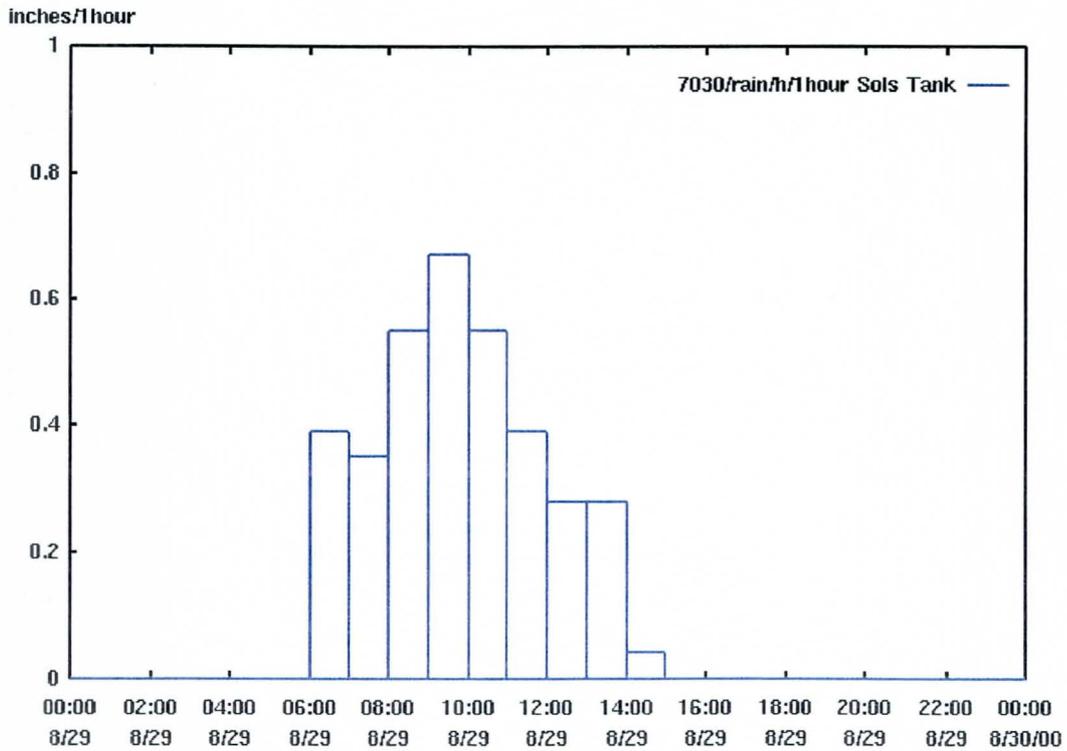
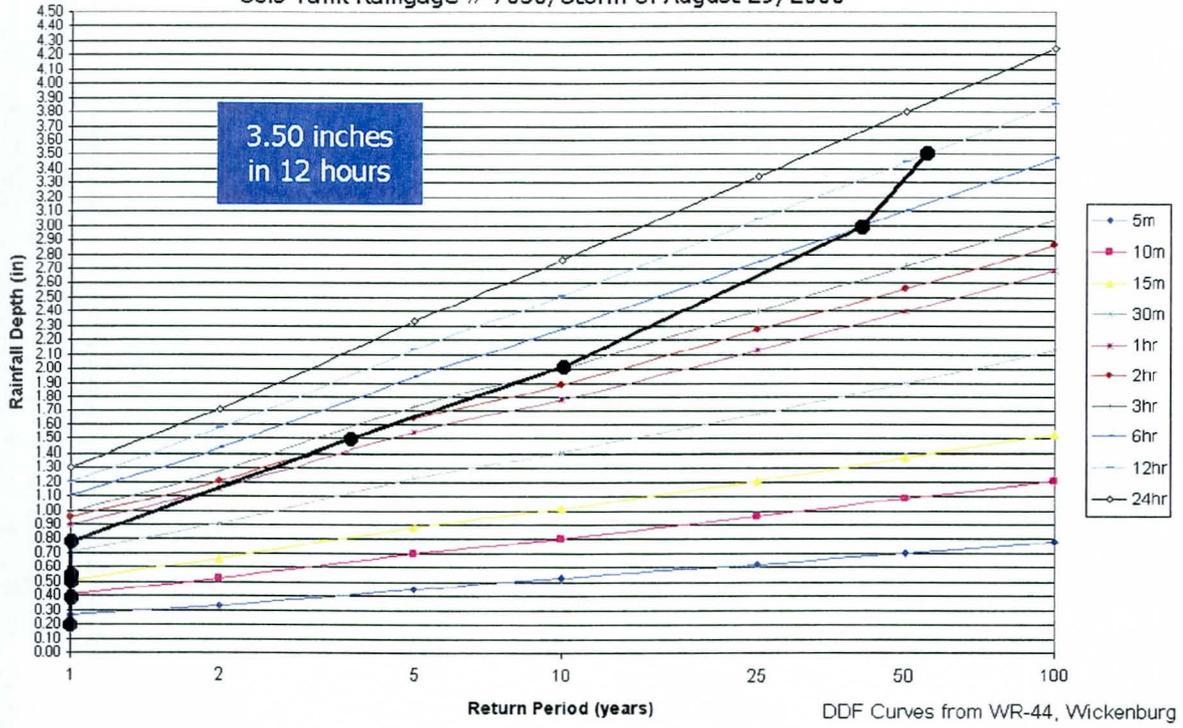
Cooks Mesa Raingage # 5640, Storm of 10/21-23/2000



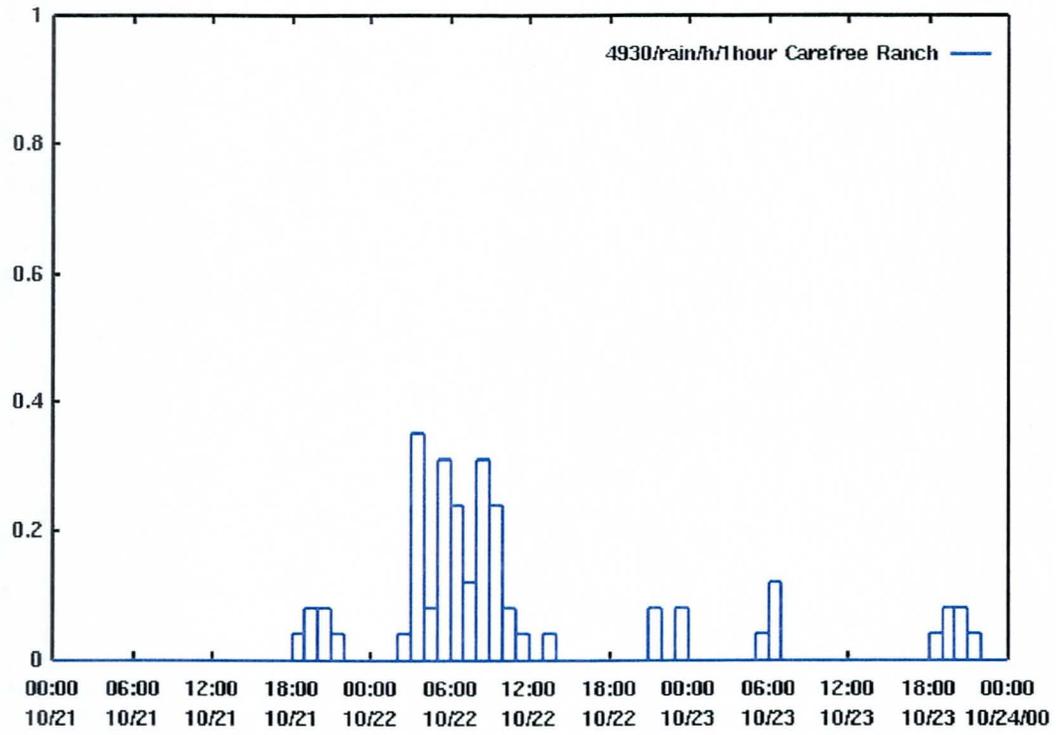
Wickenburg Airport Raingage # 7120, Storm of 10/21-23/2000



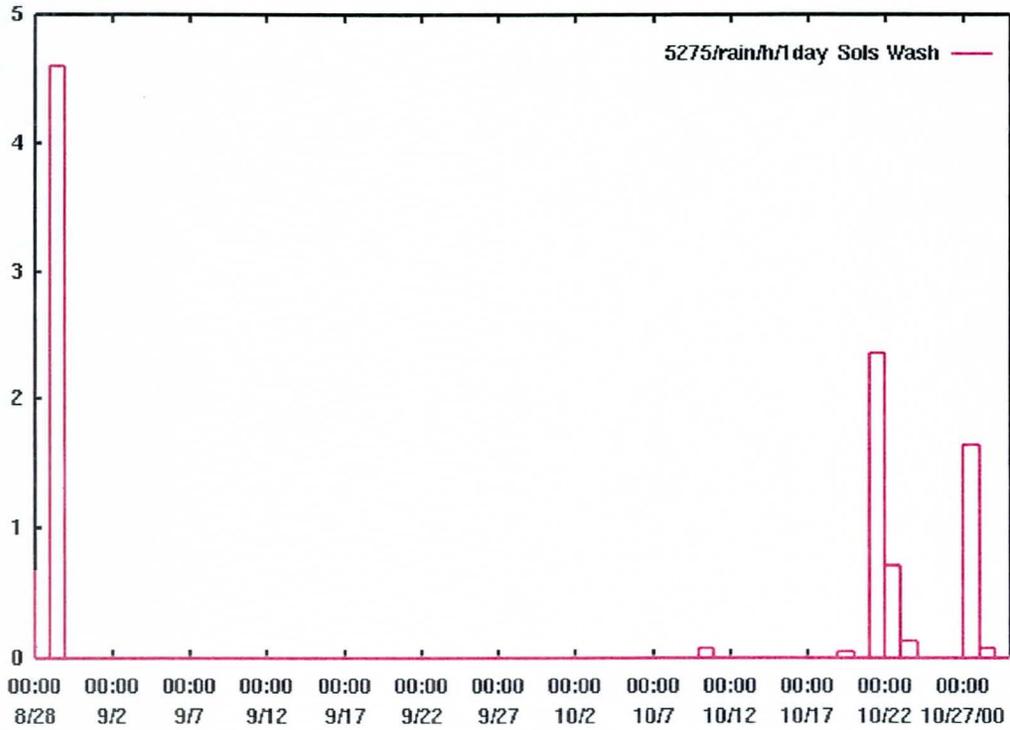
Sols Tank Raingage # 7030, Storm of August 29, 2000



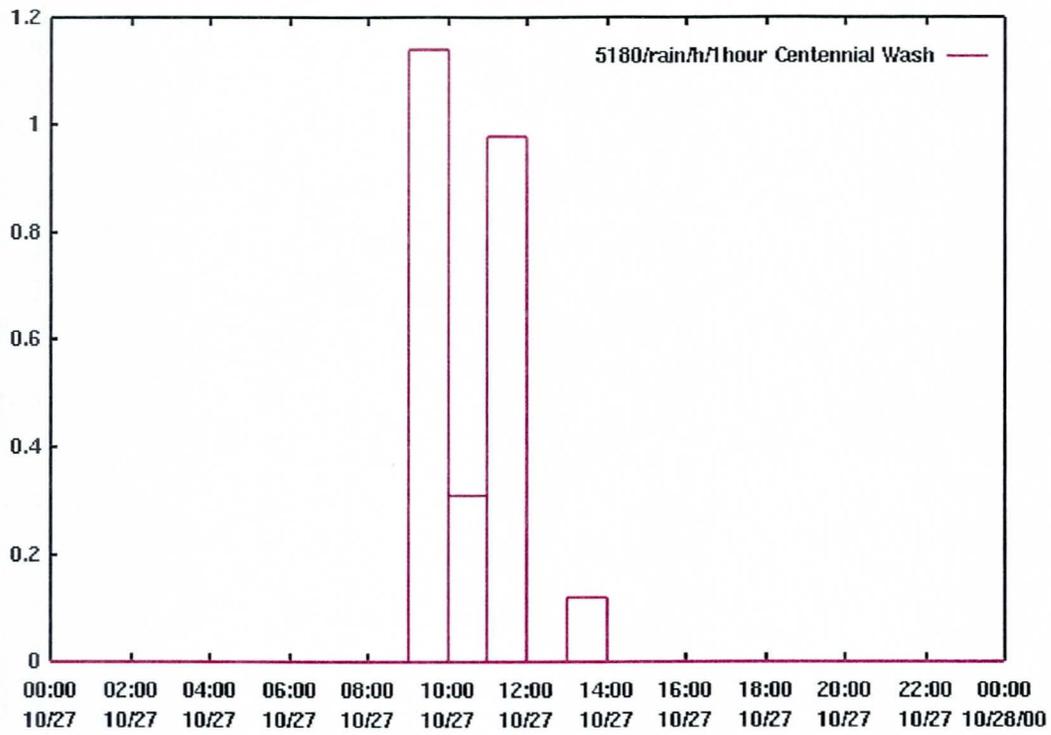
inches/1 hour



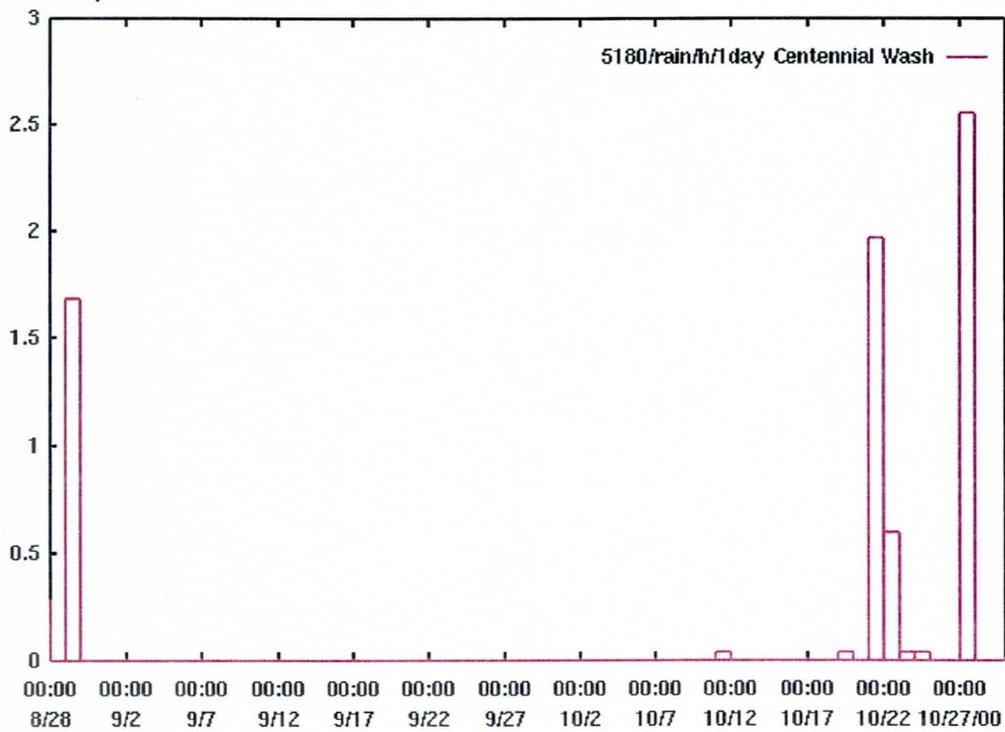
inches/1 day

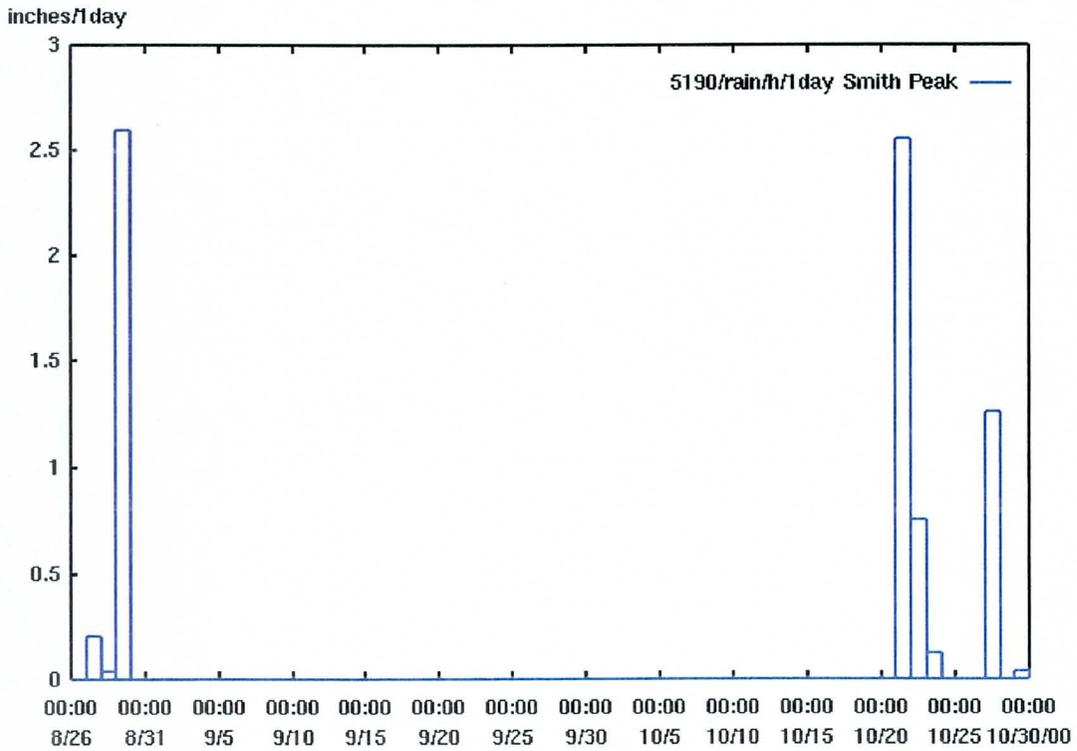
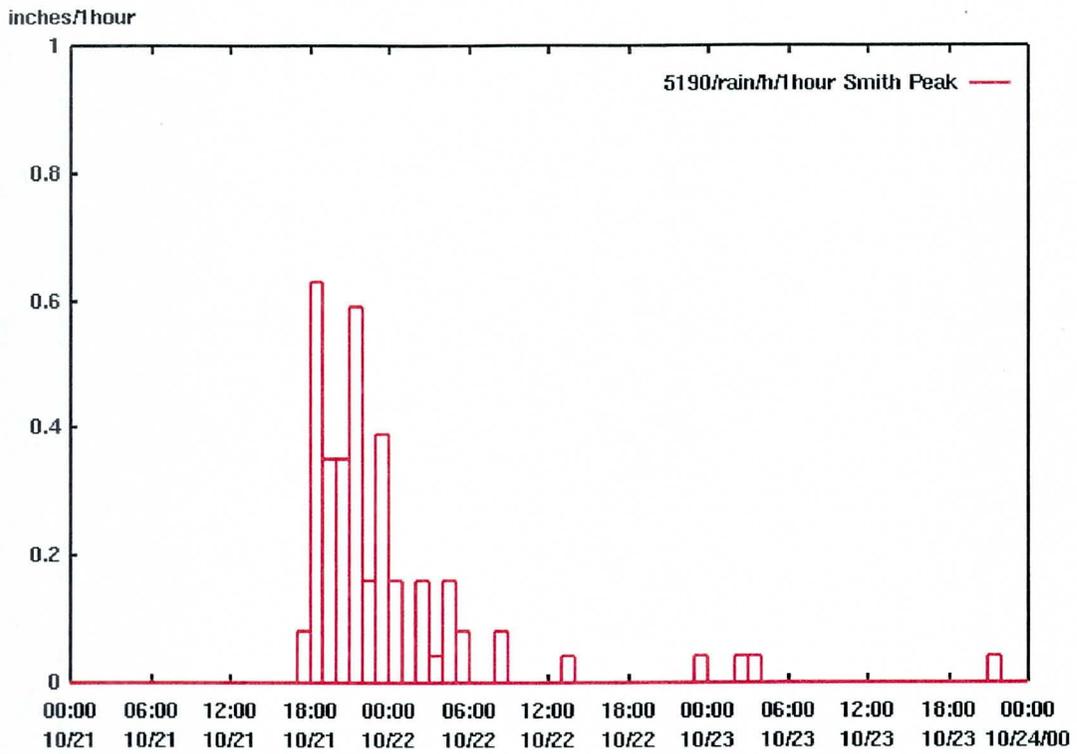


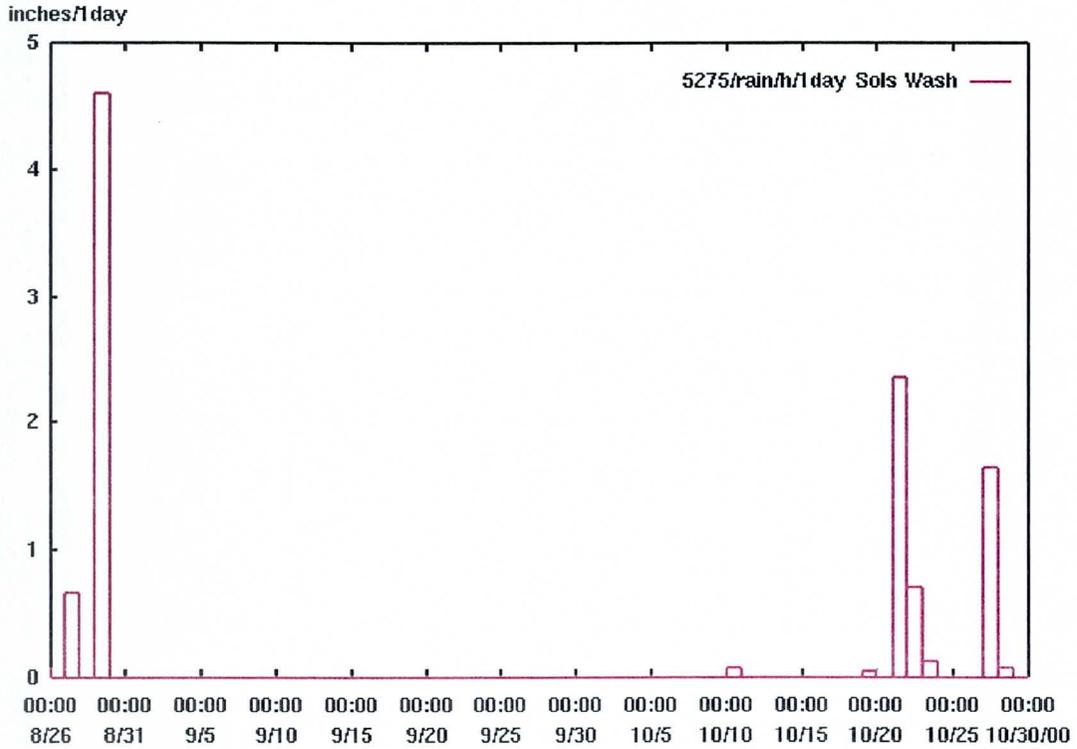
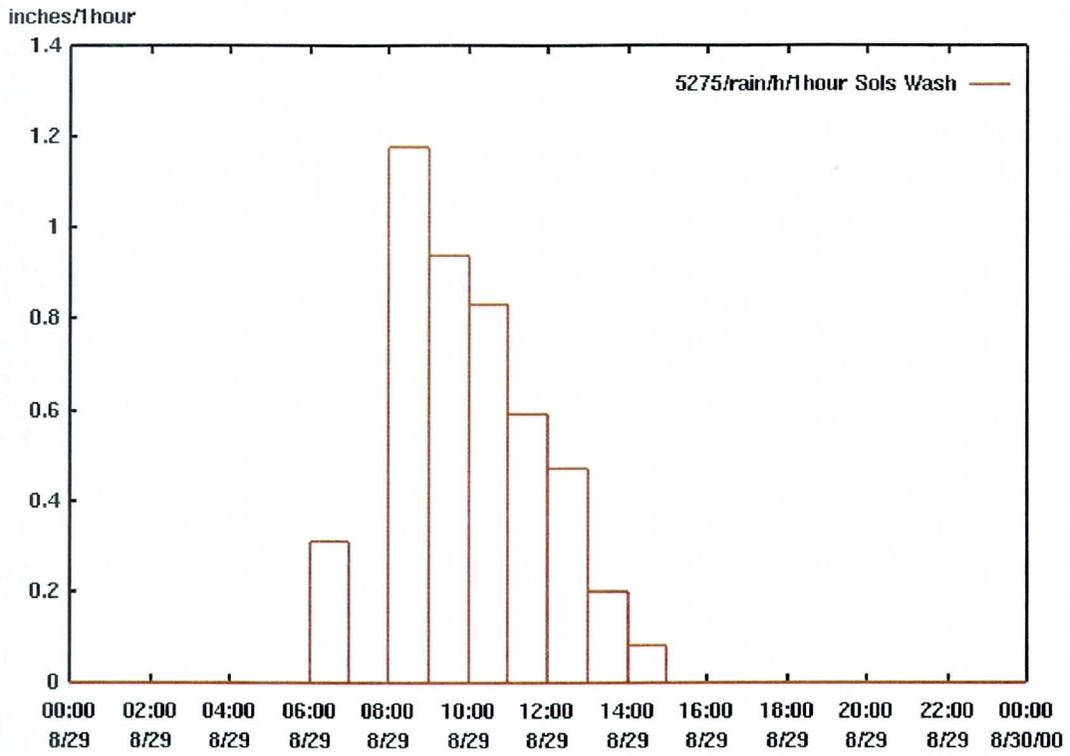
inches/1hour

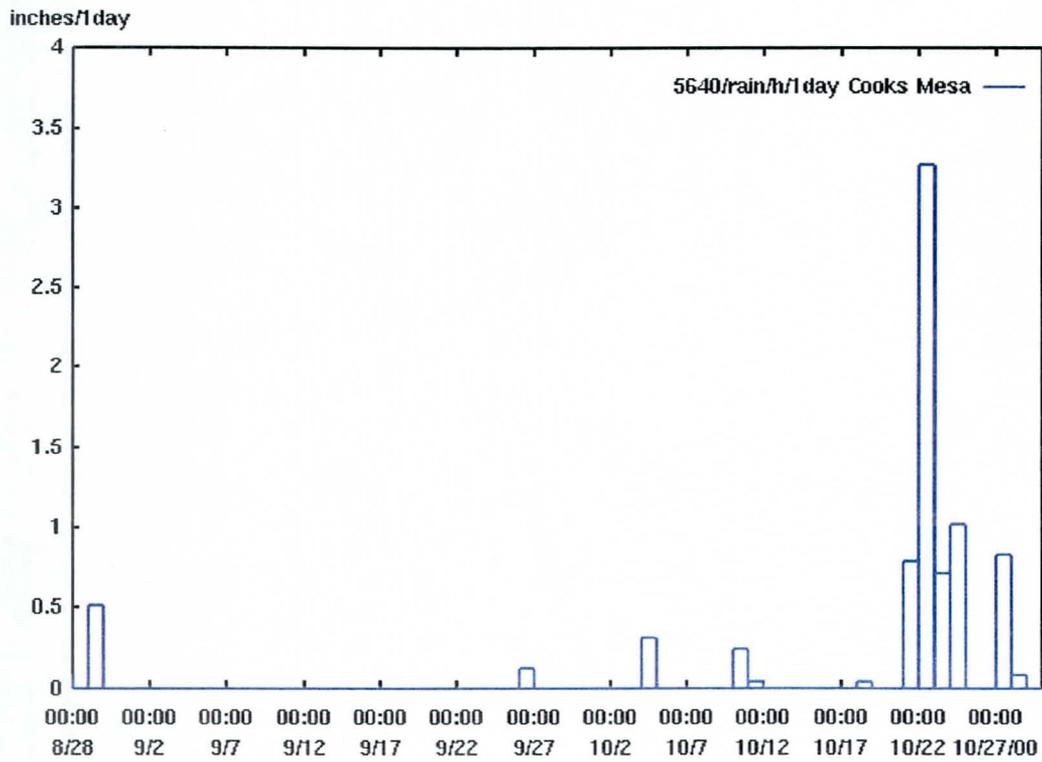
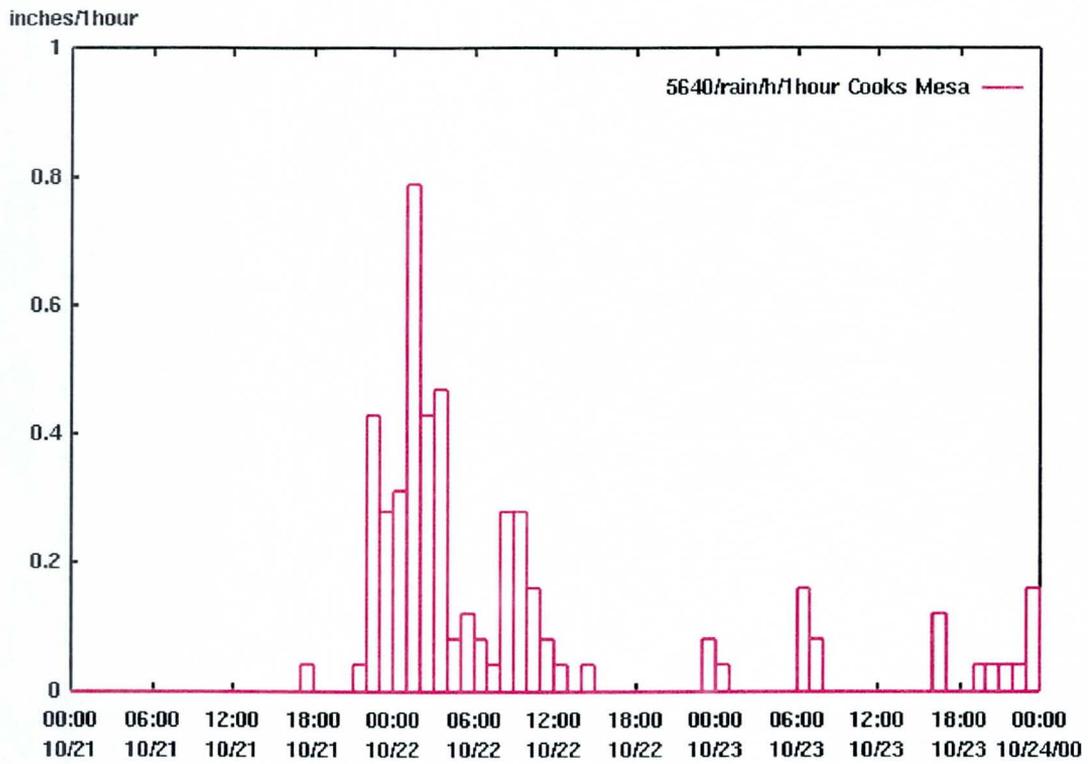


inches/1day

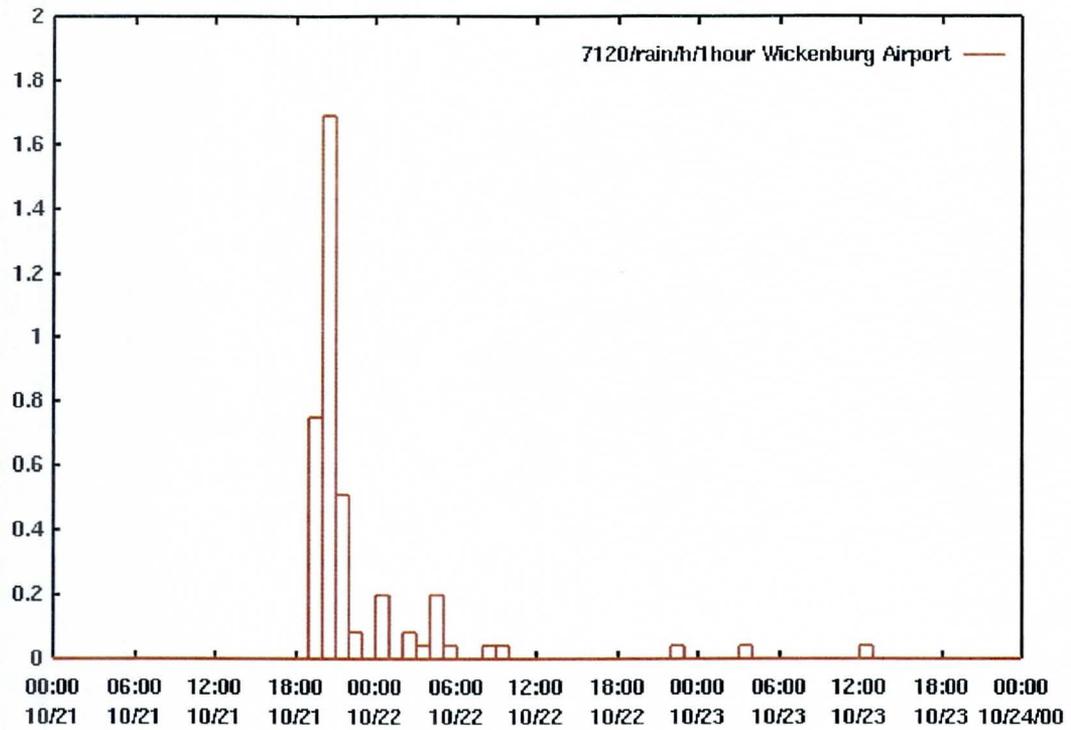




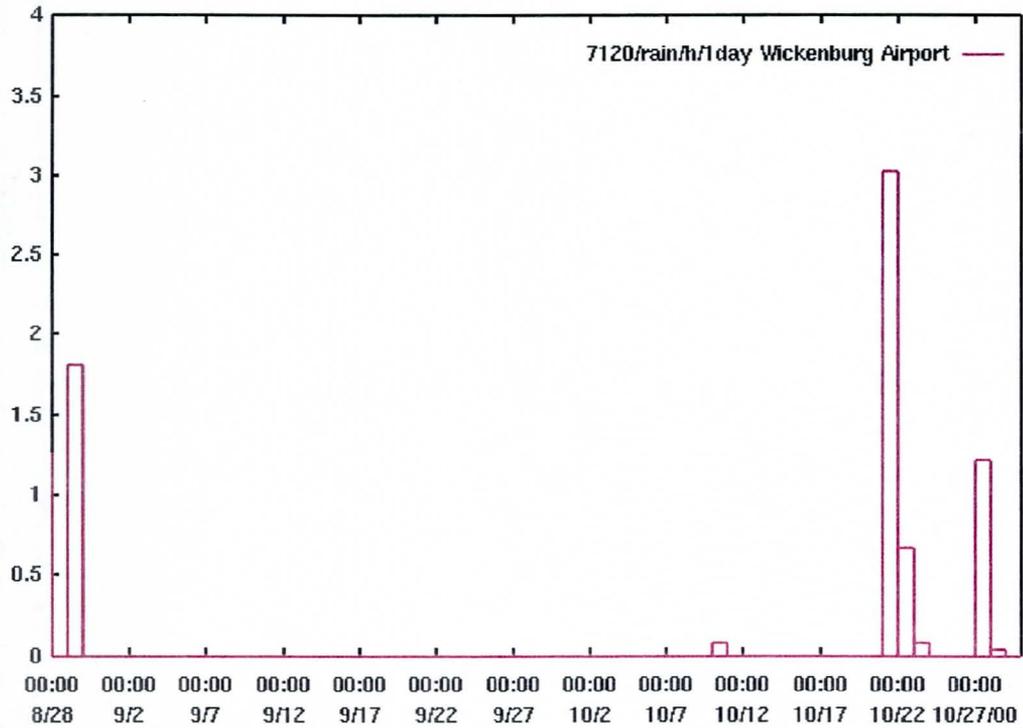




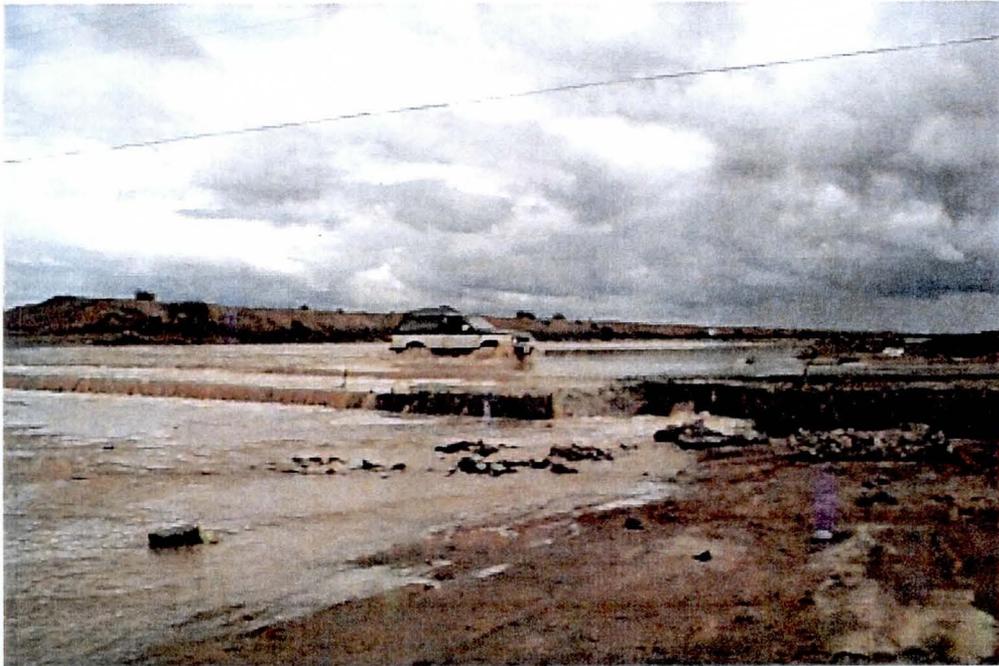
inches/1 hour



inches/1 day



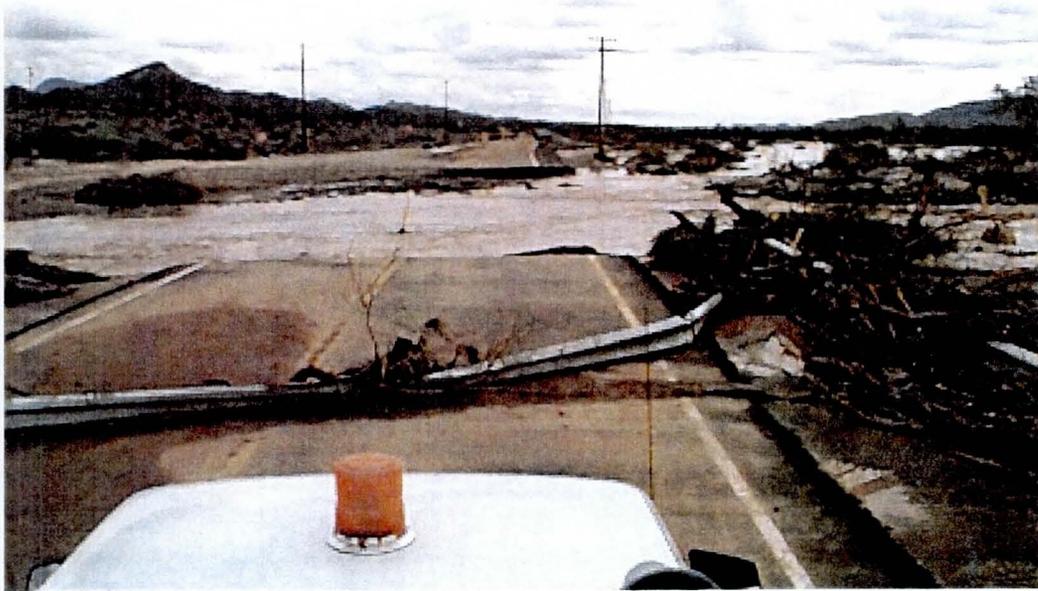
APPENDIX E
Selected Digital Photos



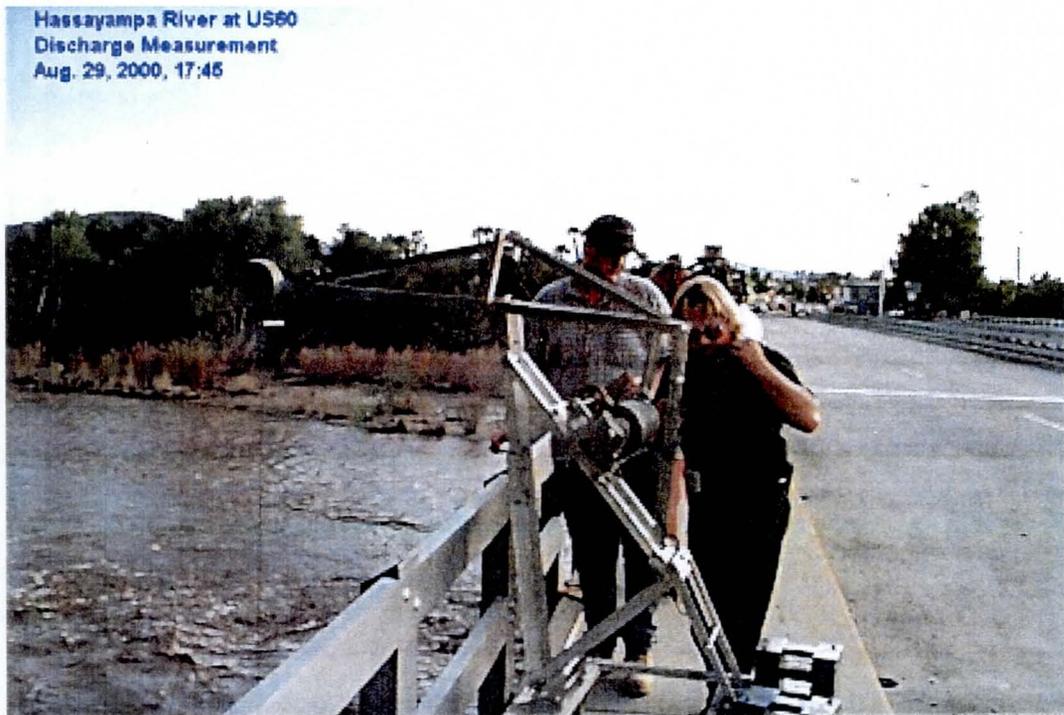
Big No-No on Centennial Wash @ Eagle Eye Road near Aguila, 10/23/2000



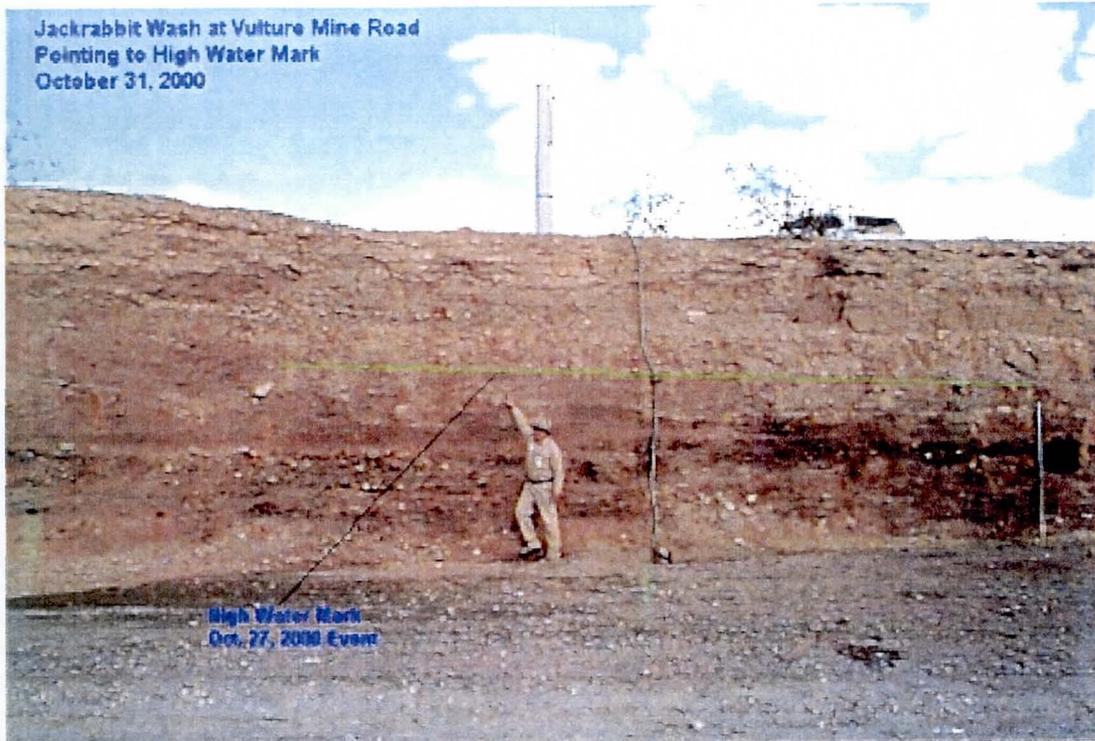
Centennial Wash @ Harquahala Valley Road - 10/23/2000



Centennial Wash @ Salome Road - 10/23/2000



FCD crew taking a flow measurement on the US 60 Bridge over the Hassayampa River



High-water mark, Jackrabbit Wash near the intersection of Wickenburg and Vulture Mine Roads, caused by the flood of 10/27/2000. The gage was installed on the 31st and not in service during the flood.



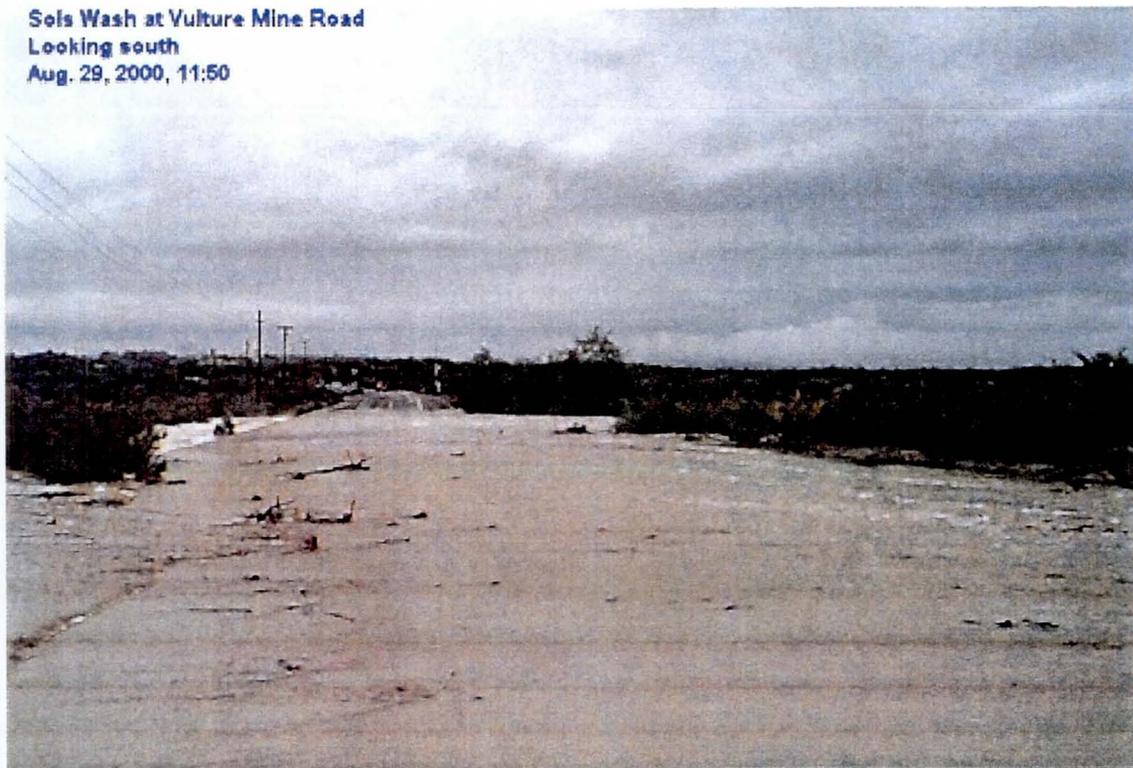
Martinez Creek at Scenic Loop Rd., Aug. 29, 2000 at 12:10, note large standing waves

Powderhouse Wash at Constellation Road
August 29, 2000, 11:35

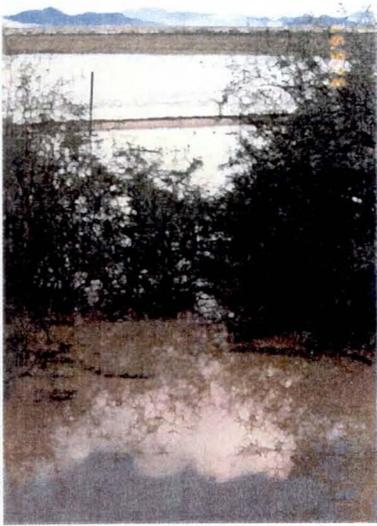


Powderhouse Wash at Constellation Road, Aug. 29, 2000 at 11:35

Sols Wash at Vulture Mine Road
Looking south
Aug. 29, 2000, 11:50



Sols Wash at Vulture Mine Road, view to south, Aug. 29, 2000 at 11:50

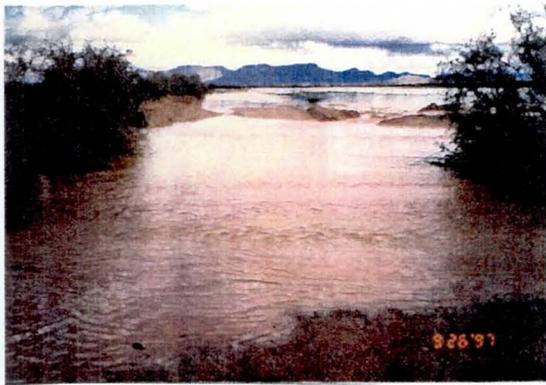


Tropical Storm Nora. Flooding, looking west, south side, US 60 at SR 71.

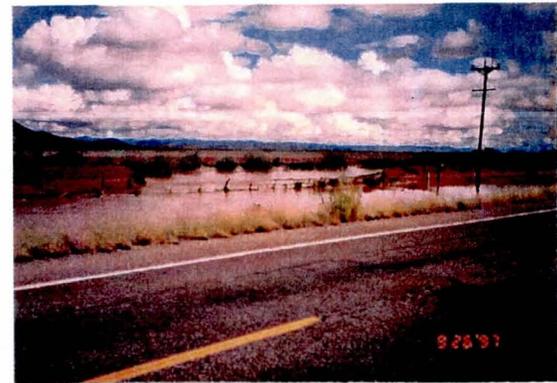
Tropical Storm Nora. Flooding, US 60 near junction west SR 71



Tropical Storm Nora. Flooding, looking north, US 60, east of SR 71.



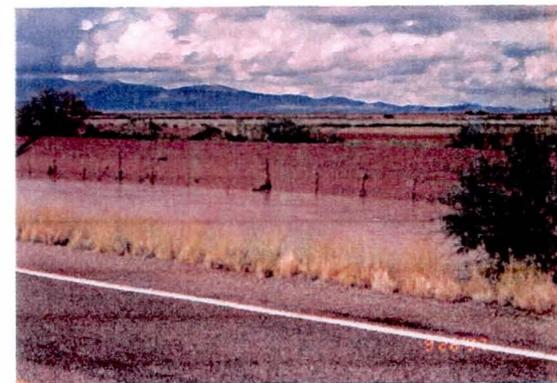
Tropical Storm Nora. Flooding, looking north, US 60 just east of SR 71



Tropical Storm Nora. Flooding, broken berm, looking northeast, US 60, M. P. 89.



Tropical Storm Nora. Flooding, looking west, US 60 at SR 71



Tropical Storm Nora. Flooding, broken berm, looking northwest, US 60, M. P. 89.



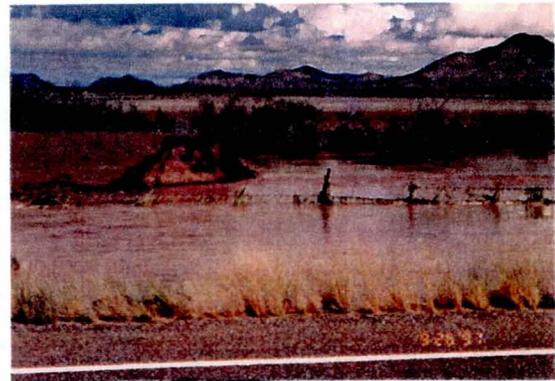
Tropical Storm Nora. Flooding, broken berm, looking northeast, US 60, M. P. 89.



October/23/2000 Eagle Eye Road (Rd.) & US 60, Aguila, Maricopa County, T3N R10W
PHOTO DESCRIPTIONS: Eagle Eye Road (Rd.) north of US 60, town of Aguila looking east. Photos taken at 12:30 PM



Centennial Wash at Aguila, Arizona. View to west. 15:30



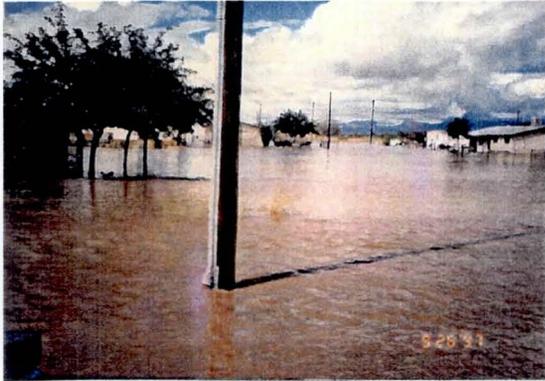
October/23/2000 Eagle Eye Road (Rd.) & US 60, Aguila, Maricopa County, T3N R10W
PHOTO DESCRIPTIONS: Eagle Eye Road (Rd.) north of US 60 Photos taken at 12:30 PM



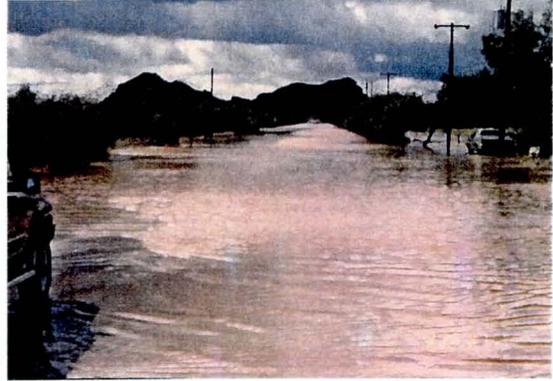
Tropical Storm Nora. Flooding, looking at 1st Street (St.), south of US 60



Tropical Storm Nora. Flooding, looking at south of Eagle Eye Road (Rd) from south of US 60



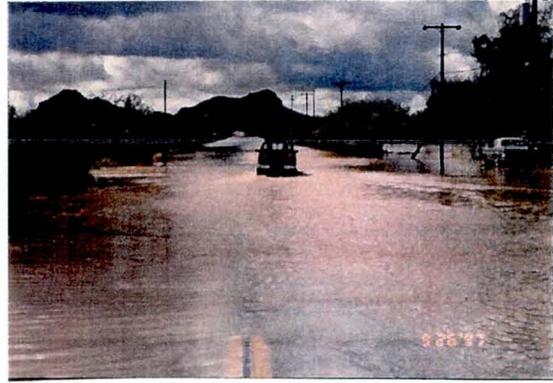
Tropical Storm Nora. Flooding, looking at 1st Street (St.), south of US 60



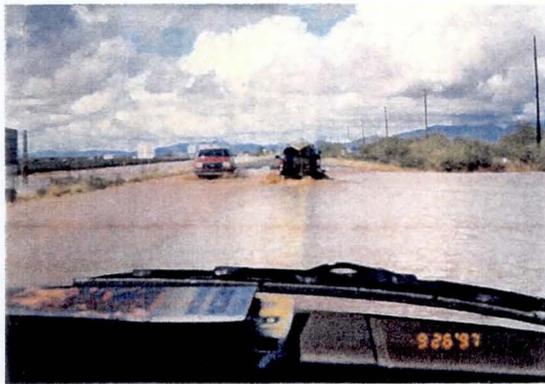
Tropical Storm Nora. Flooding, looking at south of Eagle Eye Road (Rd) from south of US 60



Tropical Storm Nora. Flooding, US 60, M. P. 88, east of Aguila, north side of road



Tropical Storm Nora. Flooding, looking at south of Eagle Eye Road (Rd) from south of US 60



Tropical Storm Nora. Flooding, US 60, M. P. 88, east of Aguila, looking west



Tropical Storm Nora. Flooding, looking at south of Eagle Eye Road (Rd) from south of US 60.



Tropical Storm Nora. Flooding, looking at 1st Street (St.), south of US 60.



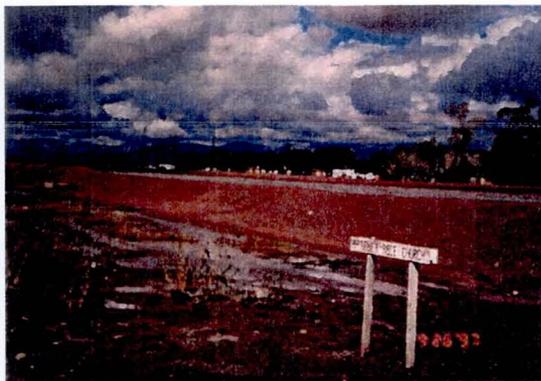
Tropical Storm Nora. Flooding, looking north at Eagle Eye Road (Rd), north of US 60.



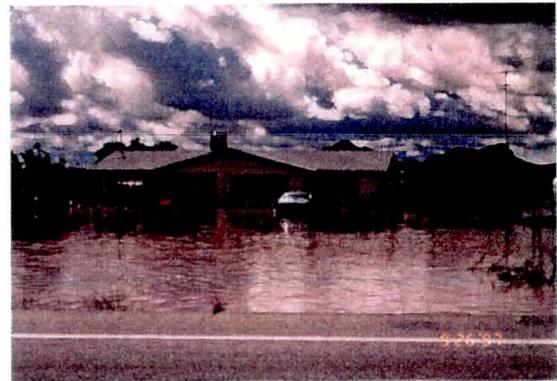
Tropical Storm Nora. Flooding, looking north at Eagle Eye Road (Rd), north of US 60.



Tropical Storm Nora. Flooding, looking northwest at Eagle Eye Road (Rd), north of US 60.



Tropical Storm Nora. Flooding, looking north west at Eagle Eye Road (Rd), north of US 60.



Tropical Storm Nora. Flooding, south side of US 60, east of Grass Wash Bridge.



Tropical Storm Nora. Flooding, looking north at Eagle Eye Road (Rd), north of US 60.



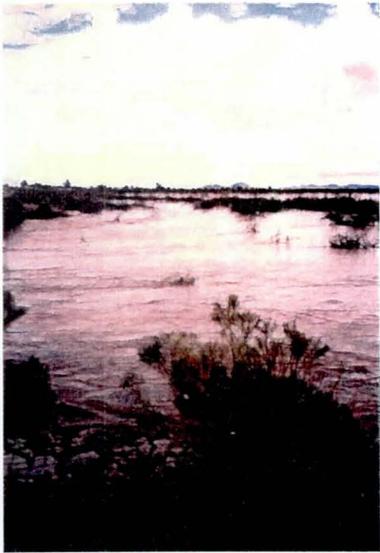
Tropical Storm Nora. Flooding, Grass Wash Bridge at US 60, looking east, north side of road



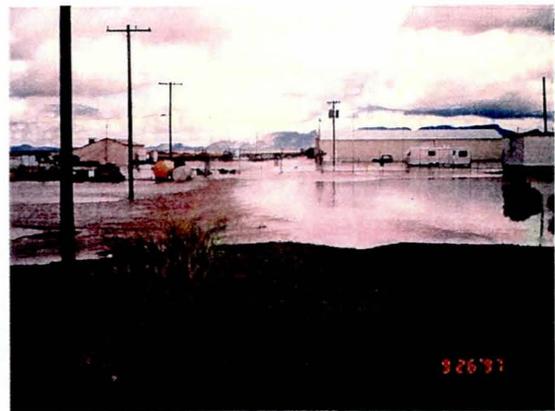
Tropical Storm Nora. Flooding, looking northeast From US 60 at Grass Wash



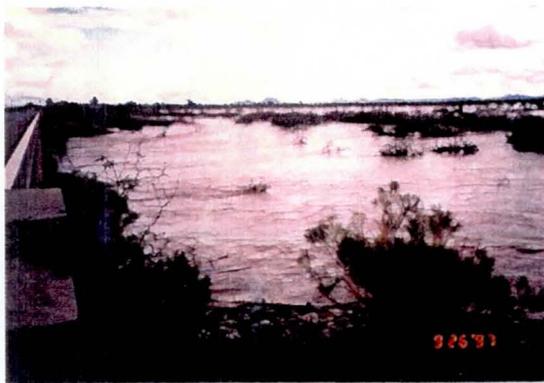
Tropical Storm Nora. Flooding, looking east, south side of Grass Wash Bridge at US 60.



Tropical Storm Nora. Flooding, looking east, south side of Grass Wash Bridge at US 60



Tropical Storm Nora. Flooding, east part of Aguila, looking north from US 60



Tropical Storm Nora. Flooding, looking east, south side of Grass Wash Bridge at US 60

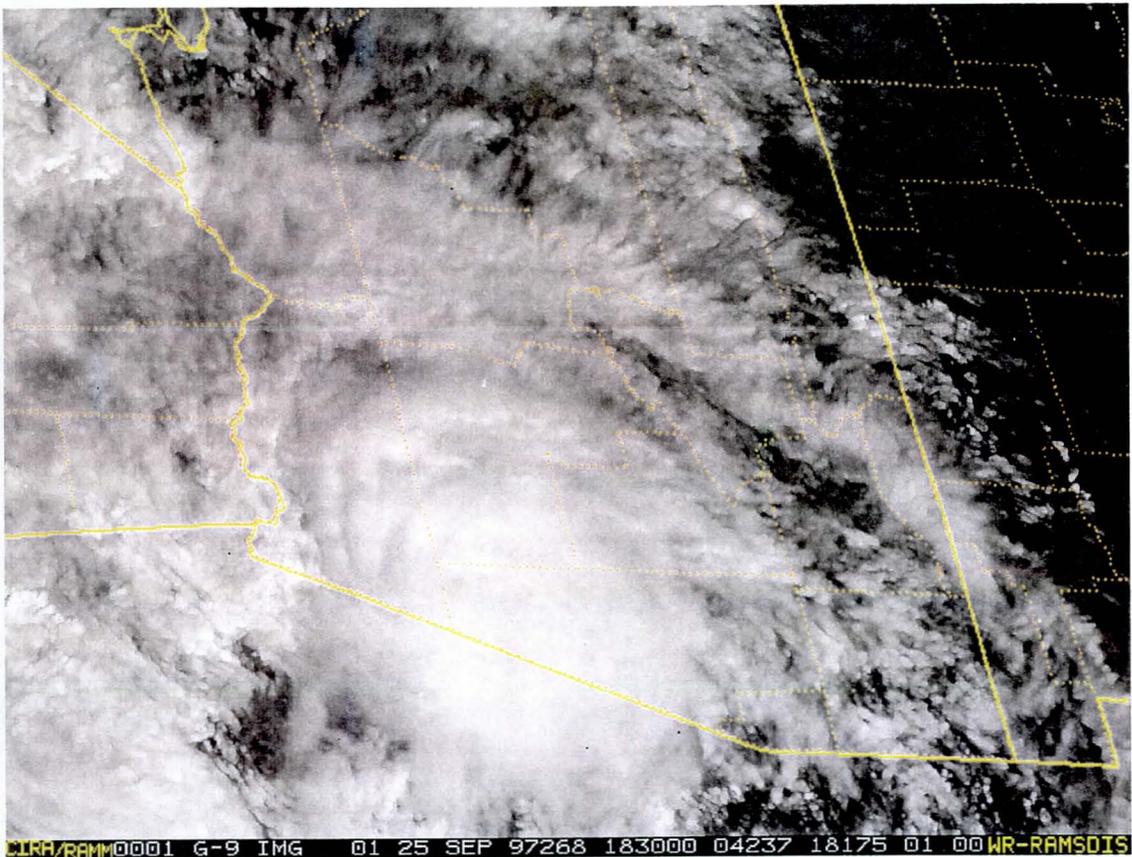


Tropical Storm Nora. Flooding, US 60 near SR 71 junction

STORM REPORT

Tropical Storm Nora - September 1997

Prepared by the
Flood Control District of Maricopa County
2801 W. Durango Street
Phoenix, Arizona 85009
(602) 506-1501



by:

Stephen D. Waters

Senior Hydrologist / ALERT Program Coordinator

Engineering Division, Special Projects Branch

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INTRODUCTION

The purpose of this report is to present in a concise manner selected rainfall, runoff, and statistical data from the storm event (Tropical Storm Nora) of September 25th and 26th, 1997, which was most intense in the northwest portion of the County. The majority of the data presented was collected by the Flood Control District's (FCD) ALERT system, with contributions from the Phoenix National Weather Service (NWS) Forecast Office.

The goal of this report is to present and record data for general information purposes, and as a guide for future prediction of water levels and discharge rates for FCD structures, particularly the Wickenburg Dams and Washes, the Hassayampa River, and Centennial, Tiger and Jackrabbit Washes.

METEOROLOGY

The synoptic history of Hurricane Nora is paraphrased from a preliminary report by Edward N. Rappaport of the National Hurricane Center...

Hurricane Nora formed early on the 16th of September about 250 nautical miles to the southwest of Acapulco. It originated in a large area of disturbed weather that had slowly become better organized while drifting west northwestward during the previous few days. Analysis of satellite pictures indicates that this activity was likely related to a westward-moving tropical wave that crossed from Africa into the Atlantic hurricane basin on the 30th and 31st of August. The northern part of the wave was associated with the formation of Hurricane Erika in the central tropical Atlantic, while the southern part continued westward through the Caribbean Sea and northern South America, and arrived in the eastern Pacific basin on September 12th.

Nora matured in an environment of relatively light wind shear, and much of its development appears to have been related to variations in sea-surface temperature (SST). Nora formed over very warm water (29-30° C). Deep convection quickly increased and became organized in well-defined bands on the 16th, and further strengthening occurred over the next two days. The first signs of what would become a rather large and ragged eye were detected in infrared satellite pictures early on the 18th. By late that day, Nora was a hurricane with 90-knot sustained winds.

During Nora's first few days, the winds around a mid-level high over northern Mexico helped direct the tropical

cyclone slowly toward the west-northwest. From midday on the 18th to early on the 20th, however, Nora nearly stalled and weakened significantly. The height, amount and organization of convection decreased and the eye disappeared. The maximum wind is estimated to have decreased to 65-knots. This weakening is presumed to have occurred in response to the hurricane's prolonged stay over waters cooled by upwelling beneath its circulation. Analyses in this report on Nora's wake show SSTs cooled by about 2° C, on average, to about 27° C.

By late on the 20th, Nora was on the move again, at 5 to 10 knots toward the west-northwest, roughly parallel to the southwest coast of Mexico. Nora then rapidly restrengthened and the eye reappeared, initially with a diameter of 15 nautical miles. Nora reached its peak maximum wind speed of 115-knots near 1200 UTC (Zulu) on the 21st.

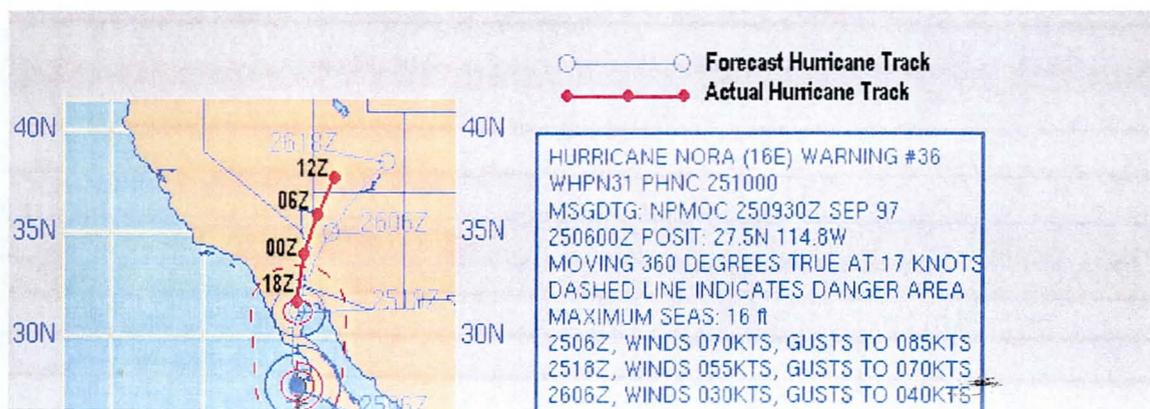
On the 21st through 23rd, Nora's track converged with and then followed the track previously taken by Hurricane Linda. In that area, Linda had been the strongest eastern Pacific hurricane on record just a few weeks earlier and its circulation had induced lower SSTs. Nora gradually weakened over Linda's wake, with the eye temporarily broadened to a diameter of about 50 nautical miles and the eyewall becoming broken. Estimated wind speeds decreased to about 70-knots at 1800 UTC on the 23rd.

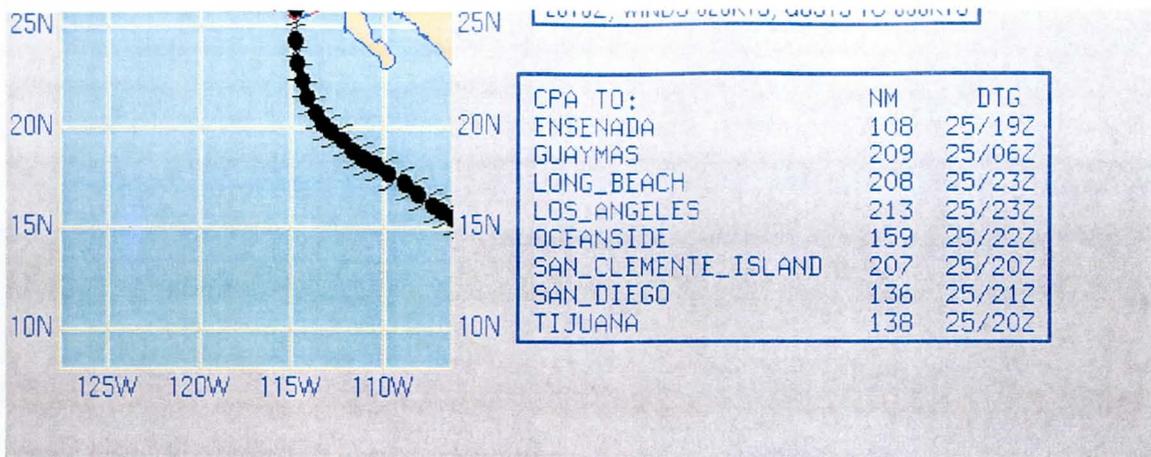
An omega-like blocking pattern developed over the western United States during the last week of September. This led to a weakness in the height pattern to the north of Nora and eventually a trough with a cut-off low to the northwest of the hurricane. The track of Nora became north-northwestward and then northward on the 24th. This carried Nora over yet another SST anomaly, a large area of water more than 2° C above normal abutting the west coast of Baja California. Nora remained over waters of at least 26° C all the way to its landfall on the morning of the 25th at Punta Eugenia at about 50 nautical miles south-southeast of San Fernando, Baja California. Hence, Nora had restrengthened slightly, and then weakened less quickly than most tropical cyclones in that area. It was still at hurricane strength during its landfalls (on Mexico and the US).

Nora was accelerating northward at landfall, steered by the flow associated with the trough to its northwest. The center of the cyclone crossed the Baja California peninsula at 20-25 knots and traveled up the western shoreline of the Gulf of California. It crossed in the United States near the CA/AZ border, still a tropical storm, at approximately 2100 UTC (2:00 PM MST) on the 25th. Most of the heavy precipitation was then located to the northeast of the storm center.

Rapid weakening ensued and winds dropped to tropical depression strength near 0000 UTC (5:00 PM MST) on the 25th on the 26th, when the center was located about midway between Blythe and Needles, California. The low-level center was moving toward the north-northeast as it degenerated early on the 26th (which was late on the 25th in MST). A remnant circulation aloft persisted and is likely to have been responsible for a period of near hurricane-force wind observed at the NWS Cedar City Doppler radar, located in the mountains of southwestern Utah at an elevation of about 10,600 feet.

The residual area of cloudiness and showers gradually became more diffuse over the following two days while moving generally northeastward, through portions of Utah, Colorado, Idaho and Wyoming.





RAINFALL

Rainfall amounts were highest in the northwestern portion of Maricopa County, in eastern La Paz County and in the western and southern Bradshaw Mountains in Yavapai County (Figure 2).

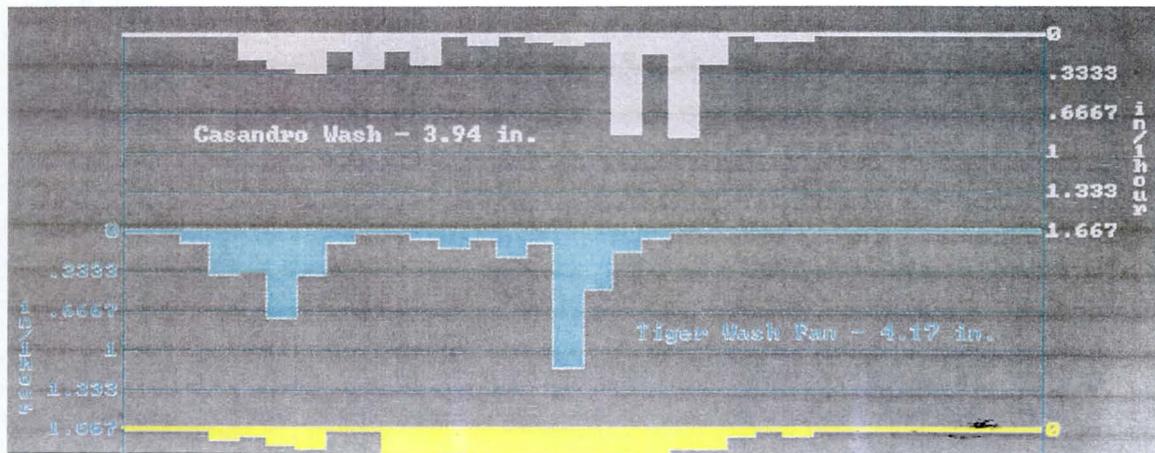
The calculated 24-hour, 100-year rainfall amount in NW Maricopa County is approximately 4.20 inches. This amount was exceeded at six ALERT measuring sites (Table 1).

Three ALERT gages recorded more than five (5) inches of rain, eight gages recorded more than four (4) inches, twenty-six gages recorded more than three (3) inches, thirty-nine gages recorded more than two (2) inches and fifty-one gages recorded more than one (1) inch of rain.

Figure 1 shows selected hyetal bar-graphs for four ALERT stations in northwest Maricopa County.

Figures 3-10 show spatially the distribution of storm total rainfall recorded at ALERT rainfall stations in the affected Meteorological Services Project zones.

Table 2 presents storm-total rainfall amounts measured at regional airports and by National Weather Service cooperative observers.



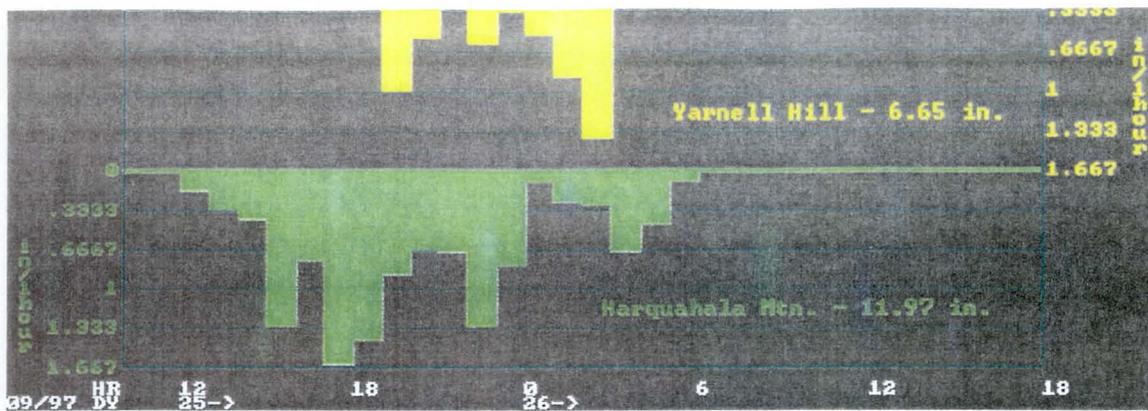


FIGURE 1

Tropical Storm Nora Rainfall Totals

Amounts > 1.00 Inch for 9/25/97 10:00 through 9/26/97 18:00

SENSOR_NAME	SENSOR_ID_#	ELEVATION	AMOUNT	LOCATION
Harquahala Mtn.	5185	5681	11.97 *	Top of Harquahala Mtn., 36 mi. WSW of Wickenburg
Yarnell Hill	5290	5128	6.65	1 mi. ENE of Yarnell, Yavapai County
Wilhoit	5365	5043	5.39	At Wilhoit, 10 mi. SSW of Prescott, Yavapai County
Mt. Union	5380	7495	4.57	Top of Mt. Union, 10 mi. SSE of Prescott
Centennial Wash	5180	2417	4.53	1 mi. N of US 60, 19 mi. W of Wickenburg
Horsethief Basin	5700	6702	4.37	At HB Recreation Area, 6 mi. SE of Crown King
Tiger Wash Fan	5140	1605	4.17	1 mi. W of Eagle Eye Rd. and 4 mi. N of Salome Highway
Gladden	5170	2198	4.06	US 60 at Gladden, 34 miles W of Wickenburg
Hassy R. @ Box Canyon	5305	2245	3.98	6 mi. N of Wickenburg on Hassayampa River, Yavapai Co.
Casandro Wash	7090	2240	3.94	On US 60 bridge, 2 mi. West of US 60 / US 93
Crown King	5715	6783	3.90	Crown King, Bradshaw Mtns, 24 mi. SSE of Prescott
Flores West	7025	2625	3.90	Along US 93, 3.2 mi. NW of the US 93 / US 89 junction
Upper Tiger Wash	5130	2198	3.82	11 mi. S. of Aguila off Eagle Eye Road
O'Brien	5320	2798	3.70	11 mi. NE of Wickenburg, Yavapai County
Casandro Dam	7130	2180	3.70	1.1 miles W of the US60 / US93 intersection
Hartman Wash	7060	2488	3.66	On US 60 bridge, 6.3 mi. West of US 60 / US 93
Towers Mtn.	5340	7528	3.62	3 mi. NW of Crown King, Yavapai County
Martinez Creek	7010	2300	3.43	1 mi. East of the US 93 / US 89 junction
Sols Tank	7030	2690	3.43	6.3 mi. WNW of the US 93 / US 89 junction
Mid-Martinez Creek	7005	2725	3.39	4.4 mi SSE of the US 89 / SR 71 junction
Flying E Tank	7070	2480	3.31	6.3 mi. WSW of the US 93 / US 89 junction at Wickenburg
Sunset FRS	5230	2100	3.15	3/4 mi. WSW of the US 60 / US 93 intersection in Wickenburg
Stanton	7000	3250	3.15	6.5 mi. East of Congress, Yavapai County
Vulture Mine	5260	2311	3.11	3 mi. SW of Wickenburg
Hassy R. @ Wagoner Rd.	5350	3785	3.03	6 mi. ESE of Kirkland Junction
Black Mountain	7050	2617	3.03	Along US 60, 9 mi. West of US 60 / US 93
Flying E Wash	7080	2302	2.99	On US 60 bridge, 3 mi. West of US 60 / US 93
Annemaha	5335	5602	2.95	8 mi. E of Wagoner, Yavapai County
Sols Wash nr Matthie	7040	2220	2.95	Sols Wash at SPRR bridge, 2 mi. N. of Wickenburg Airport
Hassy R. @ US 60	5225	2035	2.87	Hassayampa River at US 60/93 in Wickenburg
Black Hill	7035	2560	2.83	2.3 miles WSW of the US 93 / US 89 junction
Smith Peak	5190	5131	2.80	Harcuver Mtns., 13 mi. NW of Aguila

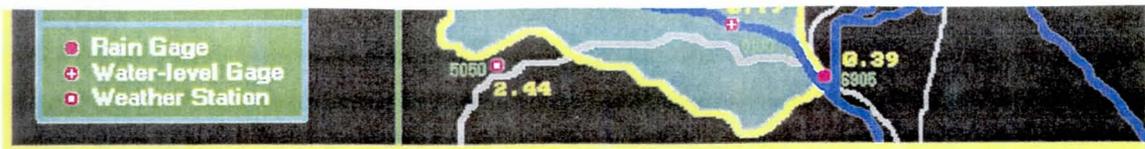


Figure 6: Centennial Wash Watershed

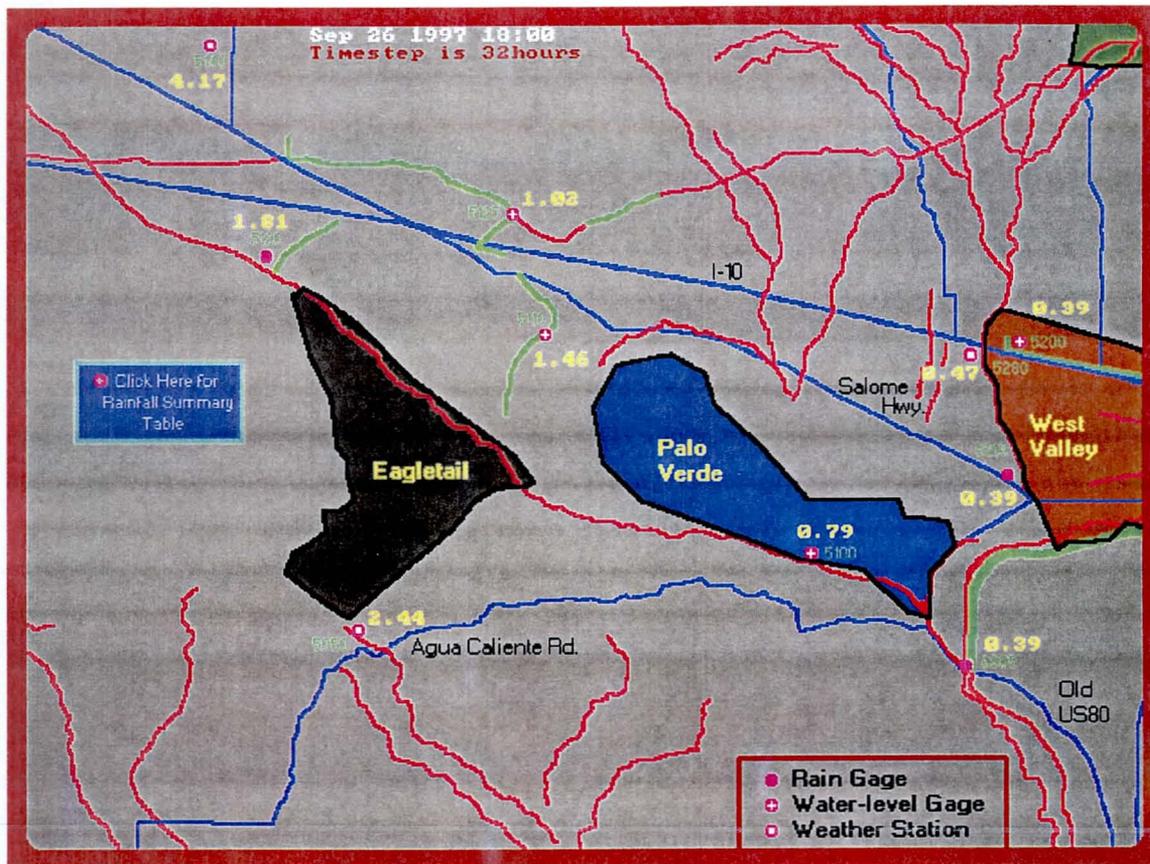
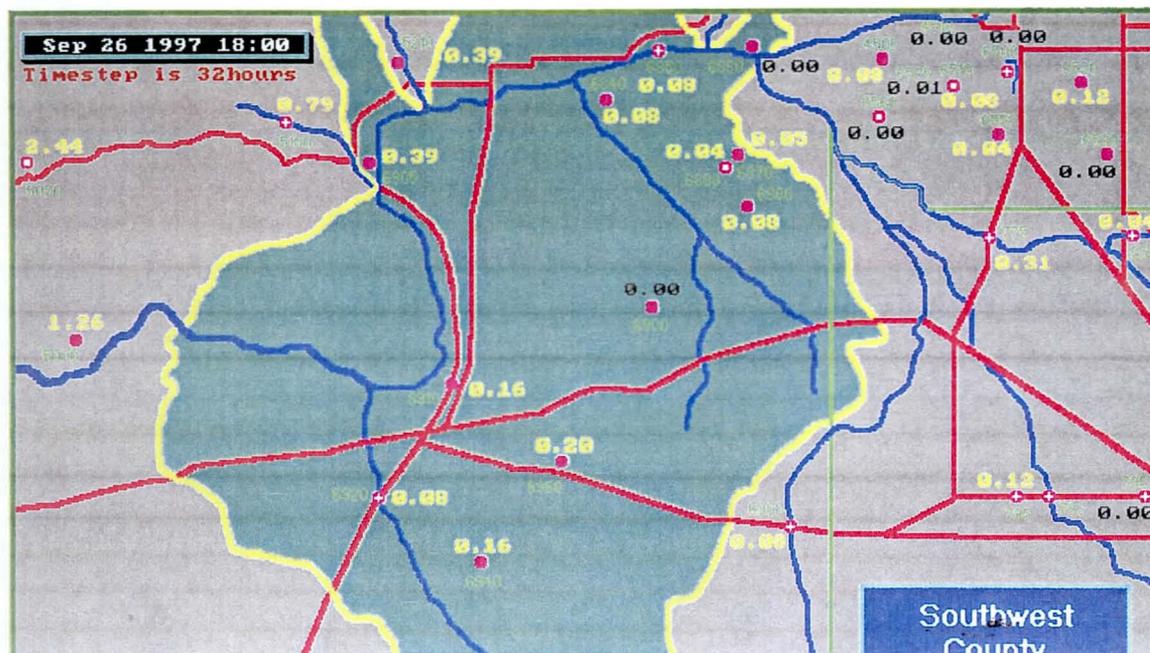


Figure 7: Eagletail and Palo Verde Forecast Zones



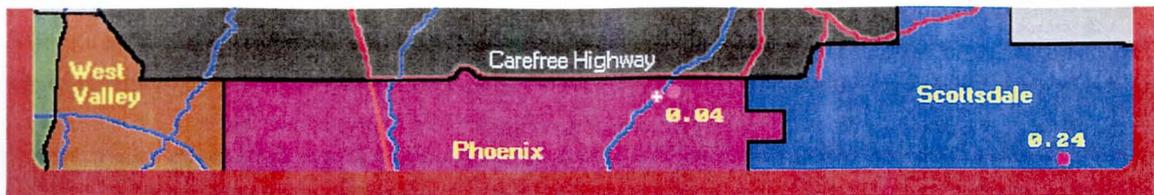


Figure 10: New River / Skunk Creek / Cave Creek Forecast Zone

Table 2

Additional Rainfall Reports from Airports and NWS Coop. Sites

STATION	STORM TOTAL (inches)
Alamo Lake State Park, AZ	2.10
Blythe City, CA	2.78
Blythe, CA Airport	2.03
Calexico, CA	3.30
Dateland Ranch, AZ	1.80
Eagle Mountain, CA	1.40
Ehrenberg, AZ	1.06
El Centro, CA	1.48
Imperial, CA Airport	0.96
Iron Mountain, CA	1.83
Niland, CA	1.23
Ocotillo, CA	1.88
Parker Reservoir, CA	2.15
Salome, AZ	3.60
Sky Harbor Airport, Phoenix, AZ	0.03
Yuma Citrus Station, AZ	2.02
Yuma Marine Corps Naval Air Station, AZ	3.59

RUNOFF

Rainfall intensities and volumes were high enough to cause runoff mainly in the southwest, west and northwestern portions of Maricopa County, as well as in the Hassayampa watershed in Yavapai County and in eastern La Paz County. Major watercourses which experienced significant flow events were the Hassayampa River, Sols Wash, Martinez Creek, Centennial Wash, Grass Wash, Jackrabbit Wash, Tiger Wash and Winters Wash. Table 4 lists recorded peak discharges and times at selected FCDMC and USGS stream gaging sites. Figure 11 shows a collage of storm hydrographs in the Wickenburg area.

The only Flood Control District structures significantly affected by Nora were in the Wickenburg area: Sunset FRS (39.5% full), Sunnycove FRS (13.9% full), and Casandro Dam (45.0% full). Table 3 lists the impoundment statistics for these dams.

The big runoff story of TS Nora was Narrows Dam on Centennial Wash in La Paz County. The dam began filling around 5:00 PM on September 25th, reached the emergency spillway elevation (18.2 ft.) at around 3:30 PM on the 26th, and reached a maximum depth of 20.68 ft. at 8:50 PM on the 26th. The water surface remained fairly constant until 10:45 PM, when it started to fall noticeably. A falling-rate alarm sounded on the ALERT computer at 20 minutes after midnight on the 27th, and the water level fell below the emergency spillway elevation at approximately 1:25 AM. Unfortunately, FCD did not possess a stage/storage curve for the pool area, and thus was unable to determine whether the drop in water-surface was due to failure or spillway outflow. Field reconnaissance at daybreak on the 27th revealed two large breaches, one near the middle of the dam and one on the north end. Each breach was about 100 feet wide and probably caused by piping. At some point during the night the north breach captured the entire outflow from the pool area. The water level returned to its dry-state elevation (6.6 ft.) at approximately 4:00 AM on the 28th. Appendix 4 contains some digital photos of the dam and pool area in pre- and post failure condition, and Figure 12 compares the fill-hydrograph at Narrows Dam with the rainfall hyetograph from the Gladden rain gage.

TABLE 3: Wickenburg Dam Impoundment Statistics

DAM	Volume (ac-ft)	% Full	Stage (feet)
Sunset FRS	34	39.5	12.27
Sunnycove FRS	30	13.9	17.19
Casandro Dam	65	45.0	11.30

Flood of September 26, 1997
15 Minute Maximum Discharges

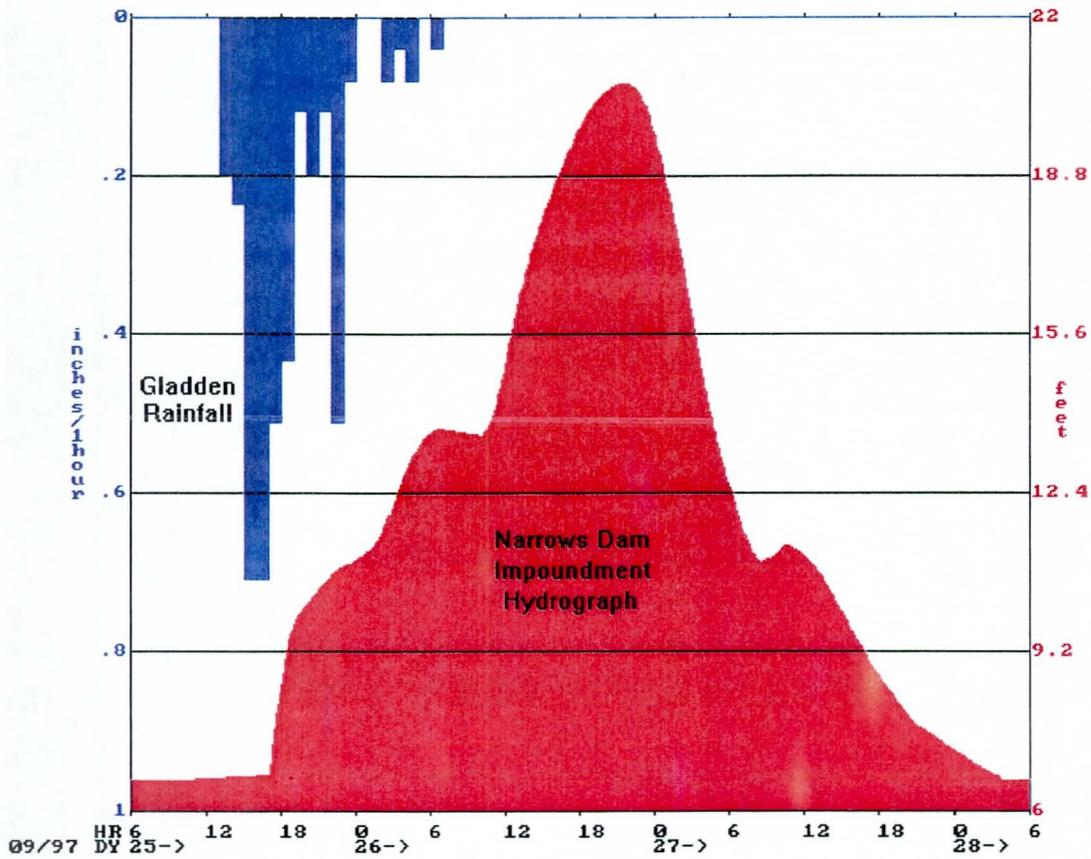
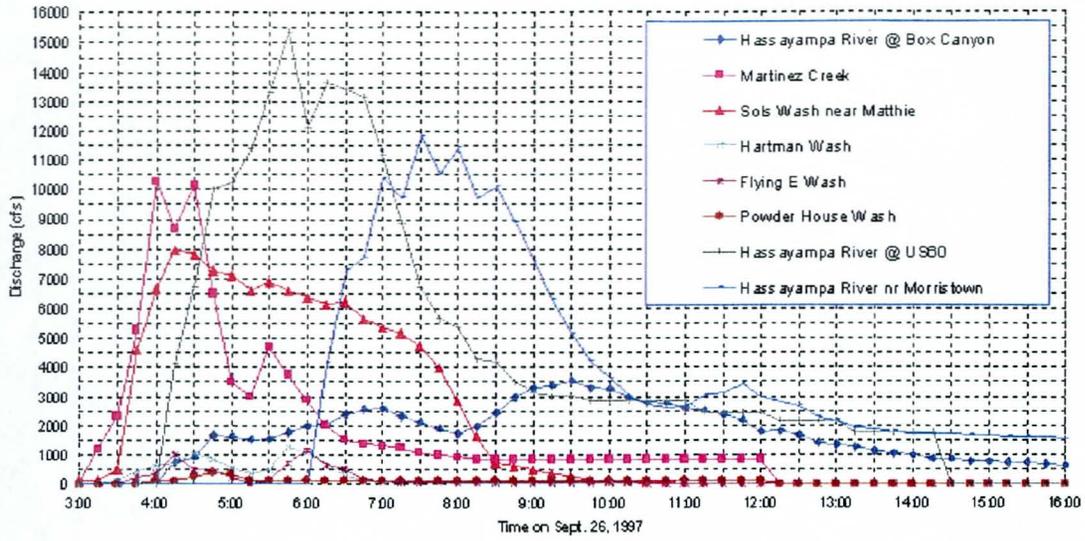


TABLE 4: Recorded Peak Discharges and Times at Selected FCDMC and USGS Stream Gauging Sites

Gage Name	ID No.	Peak Q (cfs)	Date	Time	Peak Q Per (year)
Centennial Wash above Narrows Dam	NA	8,100 (2)	9/26/97	20:20 (1)	7
Narrows Dam Outflow	5153	2,610	9/26/97	20:50	N
Hassayampa R. @ US60	5228	15,376	9/26/97	05:30 (1)	8
Hassayampa R. @ I-10	5283	7,440	9/26/97	15:00 (1)	5
Hassayampa R. @ Box Canyon	5308	3,549	9/26/97	09:21	<
Martinez Creek	7013	10,300 (3)	9/26/97	04:28	2
Sols Wash nr Matthie	7043	7,977	9/26/97	04:14	1
Hartman Wash @ US60	7063	1,253	9/26/97	05:44	6
Flying E Wash @ US60	7083	1,145 (3)	9/26/97	05:51	1
Casandro Wash	7093	177 (3)	9/26/97	04:30 (1)	2
Powderhouse Wash	7113	387	9/26/97	04:43	1
Hassayampa R. near Morristown	5223 09516500	11,800	9/26/97	07:30	6
Jackrabbit Wash	09516800	9,710 (2)			1
Hassayampa R. near Arlington	09517000	2,900	9/26/97	16:30 (1)	7
Tiger Wash	09517280	8,000 (2)			3
Centennial Wash @ SPRR	5103 09517490	1,400	9/26/97	01:45	<

1. Time of Peak is estimated.
2. Peak Q estimated using slope-area method from crest-stage gage, no time information available.
3. Peak Q modified using slope-area survey.

ALERT SYSTEM PERFORMANCE

The overall performance of the ALERT system during this storm event was very good. All but one (Cave Creek at Cactus) of the 209 rain gages performed during the storm. All 82 weather sensors operated throughout the storm. However, pressure transducers did not fare as well with either partial or total failures at Casandro Wash, Casandro Dam, Sunnycove FRS, Hassayampa River at I-10 and Powderhouse Wash. Peak discharges and impoundment volumes at these sites were estimated from high-water marks, and in some cases checked by slope-area survey.

A record of ALERT alarms is presented in Table 5. Eleven rain gages and ten water-level gages reached ALERT alarm criteria during the storm. Warnings and information relayed by ALERT room staff included:

- o 9/25 16:00 MCDOT - advised them of possible flowing washes across Salome Highway, Eagle Eye Road and Courthouse Road
- o 9/25 16:45 Wickenburg Police - advised that Flying E Wash was flowing and threatened Vulture Mine Road
- o 9/26 03:40 Wickenburg Police - advised that Sols Wash was flowing at 850cfs near Matthie and that Martinez Creek was flowing at 950cfs near Scenic Loop Road
- o 9/26 04:45 FCD O&M - advised crews be sent to Wickenburg dams
- o 9/26 06:13 MCDOT - advised them to close Patton Rd. at the Hassayampa River
- o 9/26 09:45 MCEM - updated rain and flow information for Wickenburg Area
- o 9/26 13:50 MCEM - updated rain and flow information for Wickenburg Area
- o 9/26 14:45 MCDOT - updated pool depth at Narrows Dam
- o 9/26 15:00 La Paz County EOC - provided a map showing the location of Narrows Dam
- o 9/26 16:35, 17:30, 18:00, 18:30, 19:00, 19:30, 19:50, 20:30 and 21:20 MCEM - updated pool depth at Narrows Dam
- o 9/27 17:00 ADOT - notified of our concern for Narrows Dam and I-10 downstream
- o 9/27 04:00 MCDOT - updated pool depth at Narrows Dam
- o 9/27 12:50 MCEM - updated on status of Narrows Dam via helicopter survey
- o 9/27 14:10 MCDOT - provided travel-time estimate from Narrows to SPRR

Table 5

Historical ALERT Alarm Log: Tropical Storm Nora

Alarm Action 1, Alarms: 0 3 5 6

ID Name TYPE and cause Date Time

5140 Tiger Wash Fan DEV rainfall rate 09/25/1997-15:44:16

5185 Harquahala Mtn. DEV rainfall rate 09/25/1997-15:58:26

7083 Flying E Wash DEV upper limit 09/25/1997-17:27:52

5103 Centennial Railroad DEV upper limit 09/26/1997-00:59:51

7025 Flores West DEV rainfall rate 09/26/1997-02:37:43
7010 Martinez Creek DEV rainfall rate 09/26/1997-03:19:31
60 Hartman Wash DEV rainfall rate 09/26/1997-03:23:15
7070 Flying E Tank DEV rainfall rate 09/26/1997-03:29:37
7043 Sols Wsh nr Matthie DEV upper limit 09/26/1997-03:30:23
7120 Wickenburg Airport DEV rainfall rate 09/26/1997-03:33:28
7040 Sols Wsh nr Matthie DEV rainfall rate 09/26/1997-03:37:34
7063 Hartman Wash DEV upper limit 09/26/1997-03:39:59
7013 Martinez Creek DEV upper limit 09/26/1997-03:40:58
7090 Casandro Wash DEV rainfall rate 09/26/1997-03:41:22
5305 Hassy @ Box Canyon DEV rainfall rate 09/26/1997-03:43:33
7130 Casandro Dam DEV rainfall rate 09/26/1997-03:46:22
5233 Sunset FRS DEV upper limit 09/26/1997-03:56:27
5228 Hassayampa @ US60 DEV upper limit 09/26/1997-05:00:50
5133 Casandro Dam DEV upper limit 09/26/1997-05:49:55
5223 Hassy nr Morristown DEV upper limit 09/26/1997-06:09:43
5153 Narrows Dam DEV upper limit 09/26/1997-12:06:10
5153 Narrows Dam DEV falling rate 09/27/1997-00:19:49

Note: Many of the above alarms occurred more than once, in which case only the first occurrence is listed.

Stations that would have alarmed but were inoperable during the event:

1. Casandro Wash PT
1. Casandro Dam PT - should have alarmed earlier
1. Sunnycove FRS PT

5283 Hassayampa R. @ I-10

SUMMARY

This report presented rainfall, discharge and impoundment data from the Flood Control District's ALERT data collection system and other sources for Tropical Storm Nora, September 25-26, 1997. The greatest rainfall amounts were recorded in the western and west-central portions of the County. Significant runoff events occurred on several

small and medium-sized washes in the Wickenburg area, as well as on the Hassayampa River, Tiger Wash, Jackrabbit Wash and Centennial Wash. Narrows Dam on Centennial Wash near Salome breached as a result of the impoundment from this and possibly previous storms in August. The performance of the ALERT system was exemplary, allowing operators to disseminate advisories and information in a timely manner according to District policy.

Observations for future consideration:

- The west and northwest portions of the County are 40-70 miles from the closest NWS WSR-88D radar site (Phoenix or Yuma). Because this storm was extremely moisture-packed, cloud bases and the rain-producing layer were below the elevation of the radar beams in the west County, thus radar precipitation estimates were well below the actual rainfall amounts in this area. It is believed that this led to a general lack of concern on the evening of the 25th as the TS center passed, and the convergence-line storms began to form in the wake. In the future, more attention should be paid to sounding, dewpoint and rain gage data in this area for storms of this type.
- On Friday the 26th and Saturday the 27th helicopter flights were made of the Centennial Watershed upstream and downstream of Narrows Dam. Hydrologists were able to make quick estimates of the amount of remaining inflow in the watershed, the inflow discharge to the dam and impacts to downstream hazard areas including I-10. These observations were relayed back to the FCD ALERT room and MCDEM immediately via cell phone. This practice was very beneficial and should be continued in the future.
- During the Narrows Dam failure, Hydrologists at the District were unsure of the situation at the dam for three reasons:
 1. A stage/storage relationship for the pool area was not available;
 2. It was the middle of the night and access to the dam had been cutoff;
 3. No dam-failure models had been produced.

To minimize the occurrence of a similar situation, staff must be sure to have an accurate stage/storage table for each instrumented dam, and should create for each instrumented dam a graph showing a typical fill/drain hydrograph versus a failure hydrograph.

Appendix A: NWS Advisories, Watches, and Warnings

BULLETIN - EAS ACTIVATION REQUESTED

FLASH FLOOD WARNING

NATIONAL WEATHER SERVICE PHOENIX AZ

708 PM MST THU SEP 25 1997

FLASH FLOOD WARNING FOR

NORTHWESTERN MARICOPA COUNTY IN CENTRAL ARIZONA

SOUTHERN AND EAST CENTRAL LA PAZ COUNTY IN WEST CENTRAL ARIZONA

UNTIL 9:00 PM MST

SOME LOCATIONS AFFECTED

AGUILA

GLADDEN

CKENBURG

VICKSBURG

SALOME

WENDEN

ALAMO STATE PARK

AT 705 PM MST RADAR CONTINUED TO SHOW MODERATE TO LOCALLY HEAVY RAIN CONTINUEING OVER THE WARNING AREA. IN ADDITION AUTOMATIC RAIN GAGES IN THE WARNING AREA WERE RECEIVING IN EXCESS OF THREE-QUARTERS /0.75/ OF AN INCH OF RAIN PER HOUR. AS A RESULT... FLASH FLOODING IS OCCURRING OR IMMINENT IN THE WARNING LOCATIONS.

BULLETIN

TROPICAL DEPRESSION NORA ADVISORY NUMBER 30

NATIONAL WEATHER SERVICE MIAMI FL

8 PM PDT THU SEP 25 1997

... NORA DYING OVER THE SOUTHWESTERN UNITED STATES...STILL A HEAVY RAIN THREAT...

NORA HAS WEAKENED TO A TROPICAL DEPRESSION AND IS EXPECTED TO DISSIPATE IN A DAY OR SO.

AT 8 PM PDT ...0300Z... THE CENTER OF TROPICAL DEPRESSION NORA WAS LOCATED NEAR LATITUDE 35.0 NORTH... LONGITUDE 114.7 WEST OR ABOUT 50 MILES WEST-SOUTHWEST OF KINGMAN ARIZONA.

NORA IS MOVING TOWARD THE NORTH NEAR 25 MPH AND A GRADUAL TURN TOWARD THE NORTH-NORTHEAST IS EXPECTED DURING THE NEXT 24 HOURS.

ESTIMATED MINIMUM CENTRAL PRESSURE IS 998 MB... 29.47 INCHES.

ADDITIONAL RAINFALL TOTALS OF 1 TO 3 INCHES... WITH ISOLATED LARGER AMOUNTS ARE POSSIBLE IN ASSOCIATION WITH NORA. HEAVIEST RAINS ARE NORTH AND EAST OF THE CENTER. THIS ACTIVITY WILL CONTINUE TO SPREAD NORTHWARD AND NORTHEASTWARD ... AND COULD CAUSE LIFE-THREATENING FLASH FLOODS AND MUD SLIDES. SEE STATEMENTS FROM LOCAL NATIONAL WEATHER SERVICE OFFICES.

THIS IS THE LAST PUBLIC ADVISORY ISSUED BY THE NATIONAL HURRICANE CENTER ON NORA.

FLASH FLOOD STATEMENT

NATIONAL WEATHER SERVICE PHOENIX AZ

906 PM MST THU SEP 25 1997

...FLASH FLOOD WARNING FOR NORTHWEST MARICOPA AND PORTIONS OF NORTHERN AND EAST CENTRAL LA PAZ COUNTIES EXPIRED...

855 PM PHOENIX AND YUMA DOPPLER RADAR SHOWED THE FOCUS OF THE HEAVIEST RAINS HAD SHIFTED INTO MOHAVE AND YAVAPAI COUNTIES.. WITH MOSTLY SPOTTY LIGHT SHOWERS OR SPRINKLES CONTINUING OVER LA PAZ AND NORTHWEST LA PAZ COUNTIES. THUS THE WARNING ISSUED EARLIER WAS ALLOWED TO EXPIRE.

ALTHOUGH THE RAIN HAS TAPERED OFF FOR THE MOST PART... WASHES WILL CONTINUE RUNNING IN THE AREA AND FLOODING OF SECONDARY ROADS WILL PERSIST UNTIL AT LEAST 11 PM.. THUS AN URBAN AND SMALL STREAM FLOOD ADVISORY WILL BE ISSUED SHORTLY FOR NORTHWEST MARICOPA AND PORTIONS OF NORTHERN AND EAST CENTRAL LA PAZ COUNTIES.

HEAVY RAIN BETWEEN 7 AND 8 PM CAUSED EXTENSIVE FLOODING IN THE TOWN OF AGUILA.. WITH REPORTS OF SIX INCHES OF STANDING WATER ON SOME PROPERTIES AND ROADS. THERE WAS ALSO WATER FLOWING ACROSS EAGLE EYE ROAD IN WESTERN AGUILA.

URBAN AND SMALL STREAM FLOOD ADVISORY

NATIONAL WEATHER SERVICE PHOENIX AZ

1101 PM MST THU SEP 25 1997

...URBAN AND SMALL STREAM FLOOD ADVISORY FOR NORTHWEST MARICOPA AND PORTIONS OF NORTHERN AND EAST CENTRAL LA PAZ COUNTIES EXPIRED...

ISOLATED SHOWERS WILL PERSIST OVER PORTIONS OF LA PAZ AND MARICOPA COUNTIES. THE SHOWERS WERE MOVING RAPIDLY NORTH... NEAR 25 MPH. THUS ANY HEAVY SHOWERS THAT FORM OR MOVE ACROSS THE AREA ARE EXPECTED TO BE BRIEF. ADDITIONAL RAINFALL AMOUNTS ARE ANTICIPATED TO AVERAGE UNDER A QUARTER OF AN INCH THROUGH 1 AM... HOWEVER THERE COULD BE LOCALLY HIGHER AMOUNTS WHERE HEAVY SHOWERS MOVE ACROSS. OTHERWISE SIGNIFICANT RAIN IS NOT EXPECTED TO FALL ACROSS THE AREA THROUGH EARLY FRIDAY MORNING... THUS THE ADVISORY WAS ALLOWED TO EXPIRE.

ALTHOUGH SHOWERS HAVE BECOME ISOLATED AND MOSTLY LIGHT... WASHES IN THE AREA WILL CONTINUE RUNNING DURING THE NIGHT.

BULLETIN - EAS ACTIVATION REQUESTED

FLASH FLOOD WARNING

NATIONAL WEATHER SERVICE PHOENIX AZ

352 AM MST FRI SEP 26 1997

FLASH FLOOD WARNING FOR NORTHWESTERN MARICOPA COUNTY IN CENTRAL ARIZONA UNTIL 645 AM MST

SOME LOCATIONS AFFECTED

WICKENBURG AND AGUILA

STATE ROUTE 71 AND US HIGHWAY 60 IN NORTHERN MARICOPA COUNTY

AT 345 AM MST RADAR ESTIMATED RAINFALL RATES OF 1 TO 2 INCHES DURING THE PAST 2 TO 3 HOURS IN

NORTHWEST MARICOPA COUNTY. AS A RESULT... FLASH FLOODING IS OCCURRING OR IMMINENT IN THE WARNING LOCATIONS.

AT 330 AM A SPOTTER IN WICKENBURG REPORTED WASHES RUNNING ALONG WITH 2 INCHES OF RAINFALL SINCE THURSDAY AFTERNOON.

RESIDENTS OF WICKENBURG SHOULD USE CAUTION IF TRAVEL IS NECESSARY EARLY THIS MORNING... AS SOME SECONDARY ROADS IN LOW-LYING AREAS MAY BE COVERED BY FLOODWATERS.

BULLETIN - EAS ACTIVATION REQUESTED

FLASH FLOOD WARNING

NATIONAL WEATHER SERVICE PHOENIX AZ

640 AM MST FRI SEP 26 1997

FLASH FLOOD WARNING FOR NORTHWESTERN MARICOPA COUNTY IN CENTRAL ARIZONA

UNTIL 800 AM MST

SOME LOCATIONS AFFECTED

WICKENBURG AND SOUTHWARD ALONG THE HASSAYAMPA RIVER TO MORRISTOWN

AT 600 AM MST WICKENBURG POLICE REPORTED SOME EVACUATIONS TAKING PLACE NEAR SOLS WASH IN WICKENBURG. FLASH FLOODING IS LIKELY TO CONTINUE IN THE WARNED AREA AS UP TO 4 INCHES OF RAIN WAS REPORTED IN WICKENBURG SINCE LATE THURSDAY.

PEOPLE IN WICKENBURG SHOULD MONITOR FLOOD CONDITIONS... AND BE PREPARED TO MOVE TO HIGHER GROUND... SHOULD FLOODWATERS THREATEN.

PUBLIC INFORMATION STATEMENT

NATIONAL WEATHER SERVICE PHOENIX AZ

305 PM MST FRI SEP 26 1997

... NORA PRODUCES LOCALLY HEAVY RAIN AND FLASH FLOODING OVER PORTIONS OF FAR SOUTHEAST CALIFORNIA AND WESTERN ARIZONA...

ON THURSDAY... NORA BECAME THE THIRD TROPICAL STORM TO AFFECT ARIZONA THIS CENTURY. THE OTHER TWO TROPICAL STORMS TO AFFECT ARIZONA WERE JOANNE (OCTOBER 1972) AND KATHLEEN (SEPTEMBER 1976). BY DEFINITION... TROPICAL STORMS POSSESS MAXIMUM SUSTAINED SURFACE WINDS RANGING FROM 39 TO 73 MPH. NORA WAS DOWNGRADED FROM A HURRICANE TO A TROPICAL STORM THURSDAY MORNING AFTER CROSSING THE NORTHERN BAJA PENINSULA. NORA CONTINUED TO WEAKEN AND ACCELERATED AS SHE MOVED NORTH INTO THE SOUTHWEST UNITED STATES.

AS NORA PASSED NEAR YUMA THURSDAY AFTERNOON... WINDS WERE SUSTAINED AT 40 MPH WITH GUSTS IN EXCESS OF 50 MPH BETWEEN 2 AND 3 PM. ALTHOUGH NORA CONTINUED TO WEAKEN... SHE OFFICIALLY MAINTAINED TROPICAL STORM STATUS DURING THE REMAINDER OF THE AFTERNOON WHILE TRACKING NORTH ALONG THE LOWER COLORADO RIVER. BY 8 PM... NORA WAS CENTERED 50 MILES WEST-SOUTHWEST OF KINGMAN... AND HAD BEEN DOWNGRADED TO A TROPICAL DEPRESSION.

ALTHOUGH MUCH OF THE PHOENIX METROPOLITAN AREA RECEIVED LITTLE RAIN AND MINIMAL WIND FROM TROPICAL STORM NORA... A SIGNIFICANT RAINFALL EVENT OCCURRED OVER A LARGE PORTION OF WESTERN AND NORTH-CENTRAL ARIZONA AS WELL AS OVER FAR SOUTHEAST CALIFORNIA. RAINFALLS OF 1 TO 4 INCHES WERE COMMON OVER THIS AREA... WITH LOCAL AMOUNTS IN EXCESS OF 5 INCHES. SEVERAL LOCATIONS ALONG OR NEAR THE LOWER COLORADO RIVER... INCLUDING YUMA... RECEIVED AS MUCH RAIN FROM NORA AS THEY TYPICALLY EXPERIENCE DURING AN ENTIRE YEAR.

SOME RAINFALL AMOUNTS FROM SOUTHEAST CALIFORNIA AND WESTERN ARIZONA SITES INCLUDE:

MARICOPA COUNTY ARIZONA

WICKENBURG (15 MILES WEST) 4.53 INCHES

GLADDEN 4.02

AGUILA (11 MILES SOUTH) 3.82

GILA BEND MTNS (16NW OF PAINTED ROCK) 2.44

WICKENBURG AIRPORT 2.20

WITTMAN (2 MILES NORTHEAST) 1.73

TONOPAH (7 MILES WEST OF TONOPAH) 1.46

LA PAZ COUNTY ARIZONA

HARQUAHALA MTN 5.97

CENTENNIAL WASH (19 MI W WICKENBURG) 4.21

SMITH PEAK (HARCUVAR MTNS) 2.17

PARKER 1.39

YUMA COUNTY ARIZONA

YUMA 3.83

DATELAND 2.80

IMPERIAL COUNTY CALIFORNIA

IMPERIAL 0.69

RIVERSIDE COUNTY CALIFORNIA

BLYTHE 1.66

SOUTH-CENTRAL SAN BERNADINO COUNTY CALIFORNIA

TWENTYNINE PALMS 2.40

JOSHUA TREE NATIONAL PARK 2.00

FLASH FLOODING WAS REPORTED OVER PORTIONS OF YUMA AND LA PAZ COUNTIES THURSDAY ... AND OVER PORTIONS OF LA PAZ AND NORTHWEST MARICOPA COUNTIES THURSDAY NIGHT AND FRIDAY MORNING. SOME LOCATIONS AFFECTED BY FLASH FLOODING INCLUDE SOMERTON ... YUMA ... VICKSBURG ... PARKER ... WICKENBURG ... AND AGUILA.

Appendix B: Hourly Precipitation Amounts for Selected Automatic Stations

Storm Period:

September 25th 10:00 AM through

September 26th 6:00 PM

FCD of Maricopa County ALERT System

Precip 1 : Lower Gila/Centennial

DeviceID 5000 5050 5100 5110 5120 5125

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00

1000 0.00 0.00 0.00 0.00 0.00 0.00

0900 0.00 0.00 0.00 0.00 0.00 0.00

0800 0.00 0.00 0.00 0.00 0.00 0.00

0700 0.00 0.00 0.00 0.00 0.00 0.00

0600 0.00 0.00 0.00 0.00 0.00 0.00

0500 0.00 0.00 0.00 0.00 0.04 0.00

0400 0.00 0.00 0.00 0.00 0.00 0.00

0300 0.00 0.00 0.00 0.00 0.00 0.00

0200 0.00 0.00 0.00 0.00 0.00 0.00

0100 0.00 0.00 0.00 0.00 0.00 0.00

09/25/97

2400 0.00 0.00 0.00 0.00 0.00 0.00

2300 0.00 0.00 0.00 0.00 0.00 0.00

2200 0.00 0.00 0.00 0.00 0.00 0.00

2100 0.04 0.00 0.00 0.00 0.00 0.00

2000 0.00 0.00 0.00 0.00 0.04 0.00

1900 0.00 0.00 0.00 0.08 0.00 0.04

1800 0.00 0.04 0.00 0.04 0.04 0.12

1700 0.04 0.63 0.08 0.35 0.39 0.20

1600 0.28 0.67 0.12 0.59 0.55 0.43

1500 0.35 0.63 0.24 0.16 0.31 0.16

1400 0.20 0.12 0.24 0.16 0.28 0.00

1300 0.20 0.20 0.12 0.08 0.16 0.08

1200 0.16 0.16 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 1.26 2.44 0.79 1.46 1.81 1.02

FCD of Maricopa County ALERT System

Precip 2 : Upper Centennial

Hourly Rainfall Values in Inches

/26/97

1800 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1700 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1500 0.00 0.00 0.00 0.00 0.00 0.00 0.28
1400 0.00 0.00 0.00 0.00 0.00 0.00 0.31
1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1000 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0900 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0800 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0700 0.00 0.00 0.00 0.04 0.00 0.00 0.04
0600 0.00 0.00 0.00 0.00 0.31 0.08 0.00
0500 0.28 0.04 0.00 0.08 0.63 0.43 0.00
0400 0.47 0.16 0.00 0.04 0.20 0.67 0.00
0300 0.20 0.47 0.04 0.08 0.67 0.28 0.00
0200 0.55 1.14 0.00 0.00 0.79 0.24 0.00
0100 0.24 0.08 0.00 0.00 0.08 0.08 0.00

09/25/97

2400 0.08 0.20 0.00 0.08 0.00 0.79 0.00
2300 0.08 0.04 0.00 0.51 0.12 1.30 0.08
2200 0.24 0.12 0.04 0.12 0.04 0.67 0.08
2100 0.04 0.04 0.12 0.20 0.00 0.63 0.08
2000 0.08 0.00 0.04 0.12 0.08 0.87 0.28
1900 0.08 0.00 0.12 0.43 0.39 1.42 0.51
1800 0.16 0.08 0.43 0.51 0.20 1.61 0.47
1700 0.43 0.35 0.08 0.71 0.43 0.75 0.35

0400 0.00 0.00 0.00 0.04 0.00 0.28

0300 0.00 0.00 0.00 0.20 0.00 0.12

0200 0.00 0.00 0.00 0.00 0.00 0.08

0100 0.00 0.00 0.00 0.00 0.00 0.04

09/25/97

2400 0.00 0.00 0.00 0.00 0.00 0.00

2300 0.00 0.00 0.00 0.00 0.00 0.00

2200 0.00 0.00 0.00 0.00 0.00 0.04

2100 0.00 0.00 0.00 0.00 0.04 0.08

2000 0.00 0.00 0.00 0.08 0.08 0.20

1900 0.00 0.00 0.00 0.20 0.00 0.04

1800 0.00 0.00 0.00 0.20 0.04 0.04

1700 0.04 0.08 0.00 0.24 0.24 0.35

1600 0.08 0.04 0.08 0.35 0.04 0.20

1500 0.16 0.00 0.16 0.28 0.08 0.08

1400 0.12 0.04 0.12 0.16 0.00 0.04

1300 0.00 0.00 0.04 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.39 0.16 0.39 1.77 0.87 2.87

FCD of Maricopa County ALERT System

Precip 4 : Middle Hassayampa

DeviceID 5230 5245 5260 5275 5280 5290 5305

Daily Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.04 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.08 0.39 0.00 0.00 0.00

1100 0.00 0.00 0.12 0.08 0.00 0.00 0.00

1000 0.20 0.12 0.16 0.00 0.00 0.04 0.00

0900 0.04 0.04 0.28 0.00 0.00 0.00 0.00

0800 0.00 0.00 0.35 0.00 0.00 0.04 0.00

0700 0.08 0.08 0.31 0.00 0.00 0.16 0.39

0600 0.51 0.35 0.24 0.00 0.00 0.16 0.51

0500 0.55 0.51 0.24 0.04 0.00 0.28 0.71

0400 0.47 0.28 0.08 0.04 0.00 0.20 1.10

0300 0.04 0.12 0.04 0.04 0.00 1.38 0.08

0200 0.04 0.04 0.08 0.08 0.00 0.87 0.08

0100 0.04 0.04 0.04 0.08 0.00 0.51 0.00

09/25/97

2400 0.04 0.04 0.00 0.04 0.00 0.31 0.04

2300 0.00 0.00 0.04 0.08 0.00 0.59 0.00

2200 0.04 0.00 0.08 0.08 0.00 0.20 0.04

2100 0.12 0.12 0.08 0.08 0.00 0.55 0.08

2000 0.20 0.24 0.16 0.12 0.00 0.98 0.47

1900 0.12 0.08 0.12 0.12 0.00 0.00 0.00

1800 0.04 0.04 0.04 0.08 0.00 0.00 0.00

1700 0.31 0.31 0.24 0.08 0.04 0.16 0.20

1600 0.20 0.24 0.20 0.08 0.08 0.12 0.16

1500 0.08 0.12 0.08 0.04 0.16 0.04 0.04

1400 0.04 0.00 0.04 0.00 0.16 0.08 0.08

1300 0.00 0.00 0.00 0.00 0.04 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 3.15 2.76 3.11 1.54 0.47 6.65 3.98

FCD of Maricopa County ALERT System

Precip 5 : Wickenburg 1

DeviceID 7000 7005 7010 7020 7025 7030

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.04

1000 0.00 0.00 0.00 0.00 0.04 0.00

0900 0.04 0.04 0.00 0.00 0.00 0.00

0800 0.00 0.00 0.00 0.00 0.00 0.00

0700 0.16 0.08 0.08 0.04 0.00 0.00

0600 0.24 0.16 0.47 0.12 0.20 0.24

0500 0.12 0.16 0.24 0.04 0.55 0.28

0400 0.31 0.12 0.94 0.04 0.04 0.04

0300 0.43 0.71 0.35 0.31 1.22 0.28

0200 0.12 0.43 0.00 0.47 0.47 0.55

0100 0.08 0.08 0.04 0.08 0.04 0.04

09/25/97

2400	0.12	0.04	0.04	0.08	0.04	0.04
2300	0.28	0.24	0.08	0.24	0.08	0.12
2200	0.04	0.00	0.00	0.04	0.04	0.00
2100	0.31	0.16	0.08	0.16	0.08	0.00
2000	0.43	0.47	0.16	0.28	0.20	0.43
1900	0.00	0.12	0.08	0.04	0.04	0.16
1800	0.04	0.12	0.12	0.20	0.20	0.43
1700	0.24	0.24	0.35	0.31	0.35	0.31
1600	0.08	0.12	0.28	0.12	0.20	0.31
1500	0.08	0.08	0.08	0.08	0.08	0.12
1400	0.04	0.04	0.04	0.00	0.04	0.04
1300	0.00	0.00	0.00	0.00	0.00	0.00
1200	0.00	0.00	0.00	0.00	0.00	0.00
1100	0.00	0.00	0.00	0.00	0.00	0.00

TOTALS: 3.15 3.39 3.43 2.64 3.90 3.43

FCD of Maricopa County ALERT System

Precip 6 : Wickenburg 2

DeviceID 7035 7040 7050 7060 7070 7080

Hourly Rainfall Values in Inches

09/26/97

1800	0.00	0.00	0.00	0.00	0.00	0.00
1700	0.00	0.00	0.00	0.00	0.00	0.00
1600	0.00	0.00	0.00	0.00	0.00	0.00
1500	0.00	0.00	0.00	0.00	0.00	0.00
1400	0.00	0.00	0.00	0.00	0.00	0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00

1000 0.00 0.00 0.00 0.00 0.00 0.08

0900 0.00 0.00 0.00 0.00 0.08 0.00

0800 0.00 0.00 0.00 0.00 0.00 0.00

0700 0.04 0.12 0.00 0.24 0.04 0.16

0600 0.16 0.31 0.12 0.24 0.39 0.71

0500 0.20 0.16 0.20 0.28 0.24 0.08

0400 0.04 1.02 0.51 1.10 0.79 0.39

0300 0.43 0.08 0.16 0.12 0.04 0.04

0200 0.04 0.00 0.08 0.08 0.04 0.04

0100 0.08 0.00 0.04 0.00 0.04 0.08

09/25/97

2400 0.00 0.04 0.04 0.04 0.04 0.00

2300 0.16 0.08 0.16 0.12 0.16 0.04

2200 0.04 0.04 0.12 0.04 0.00 0.04

2100 0.12 0.16 0.04 0.04 0.04 0.20

2000 0.28 0.08 0.35 0.16 0.20 0.12

1900 0.04 0.12 0.12 0.08 0.08 0.12

1800 0.24 0.16 0.35 0.24 0.16 0.16

1700 0.43 0.31 0.24 0.35 0.39 0.28

1600 0.35 0.16 0.28 0.31 0.35 0.28

1500 0.16 0.08 0.20 0.16 0.16 0.12

1400 0.04 0.04 0.04 0.08 0.08 0.08

1300 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 2.83 2.95 3.03 3.66 3.31 2.99

FCD of Maricopa County ALERT System

Precip 7 : Wickenburg 3

DeviceID 7090 7100 7110 7120 7130

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.12 0.00 0.00

1100 0.00 0.00 0.12 0.20 0.00

1000 0.04 0.04 0.24 0.00 0.24

0900 0.04 0.00 0.12 0.00 0.00

0800 0.00 0.00 0.24 0.00 0.00

0700 0.24 0.24 0.28 0.00 0.08

0600 0.87 0.20 0.24 0.39 0.83

0500 0.16 0.83 0.24 0.12 0.43

0400 0.83 0.12 0.12 0.94 0.67

0300 0.04 0.16 0.12 0.04 0.04

0200 0.08 0.00 0.00 0.04 0.04

0100 0.04 0.04 0.00 0.00 0.04

09/25/97

2400 0.00 0.04 0.04 0.04 0.04

2300 0.08 0.08 0.00 0.04 0.00

2200 0.00 0.00 0.20 0.00 0.04

2100	0.24	0.00	0.16	0.08	0.12
2000	0.12	0.16	0.00	0.08	0.28
1900	0.28	0.00	0.08	0.08	0.12
1800	0.12	0.04	0.12	0.12	0.08
1700	0.31	0.24	0.12	0.24	0.35
1600	0.28	0.12	0.12	0.24	0.20
1500	0.20	0.04	0.00	0.12	0.12
1400	0.00	0.04	0.00	0.04	0.00
1300	0.00	0.00	0.00	0.00	0.00
1200	0.00	0.00	0.00	0.00	0.00
1100	0.00	0.00	0.00	0.00	0.00

TOTALS: 3.94 2.36 2.64 2.80 3.70

FCD of Maricopa County ALERT System

Precip 8 : Upper Hassayampa

DeviceID 5320 5335 5340 5350 5365 5380

Hourly Rainfall Values in Inches

09/26/97

1800	0.00	0.00	0.00	0.00	0.00	0.00
1700	0.00	0.16	0.00	0.00	0.00	0.00
1600	0.00	0.00	0.00	0.00	0.00	0.00
1500	0.00	0.00	0.00	0.00	0.00	0.00
1400	0.00	0.00	0.00	0.00	0.00	0.00
1300	0.00	0.00	0.00	0.00	0.00	0.04
1200	0.00	0.00	0.04	0.00	0.00	0.08
1100	0.08	0.00	0.00	0.04	0.00	0.35
1000	0.00	0.00	0.04	0.12	0.31	0.12

0900 0.00 0.00 0.00 0.00 0.43 0.04

0800 0.00 0.04 0.12 0.08 0.35 0.31

0700 0.35 0.04 0.20 0.16 0.28 0.24

0600 0.75 0.63 0.75 0.12 0.47 0.16

0500 0.63 0.28 0.71 0.28 0.28 0.35

0400 0.67 0.12 0.12 0.20 0.55 0.59

0300 0.20 0.08 0.04 0.12 1.22 0.28

0200 0.00 0.04 0.08 0.20 0.28 0.24

0100 0.08 0.16 0.16 0.04 0.04 0.20

09/25/97

2400 0.08 0.12 0.20 0.20 0.12 0.24

2300 0.04 0.04 0.08 0.12 0.00 0.12

2200 0.00 0.28 0.20 0.00 0.12 0.39

2100 0.31 0.12 0.12 0.59 0.39 0.20

2000 0.08 0.04 0.08 0.28 0.16 0.04

1900 0.04 0.08 0.08 0.04 0.04 0.12

1800 0.12 0.28 0.31 0.24 0.24 0.16

1700 0.20 0.24 0.16 0.16 0.04 0.16

1600 0.08 0.24 0.12 0.08 0.04 0.08

1500 0.00 0.00 0.04 0.00 0.04 0.04

1400 0.00 0.00 0.00 0.00 0.00 0.04

1300 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 3.70 2.95 3.62 3.03 5.39 4.57

FCD of Maricopa County ALERT System

Precip 9 : McMicken

Hourly Rainfall Values in Inches

09/26/97

1800	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1700	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0700	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0600	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
0500	0.00	0.00	0.00	0.04	0.08	0.00	0.00	0.00	0.00
0400	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
0300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

09/25/97

2400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1900	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.28	0.20	0.00	0.00

1700 0.00 0.00 0.00 0.16 0.24 0.24 0.28 0.12
1600 0.00 0.00 0.04 0.00 0.08 0.04 0.04 0.08
1500 0.00 0.00 0.00 0.00 0.04 0.00 0.00 0.12
1400 0.00 0.00 0.00 0.00 0.08 0.00 0.00 0.04
1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.00 0.04 0.04 0.20 0.67 0.55 0.51 0.43

FCD of Maricopa County ALERT System

Precip 10: Circle City

DeviceID 5455 5460 5465 5475 5490

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00
1700 0.00 0.00 0.00 0.00 0.00
1600 0.00 0.00 0.00 0.00 0.00
1500 0.00 0.00 0.00 0.00 0.00
1400 0.00 0.00 0.00 0.00 0.00
1300 0.00 0.00 0.00 0.00 0.00
1200 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.04 0.00
1000 0.00 0.00 0.00 0.00 0.00
0900 0.00 0.00 0.00 0.08 0.00
0800 0.00 0.00 0.00 0.00 0.20
0700 0.00 0.00 0.00 0.00 0.00
0600 0.00 0.00 0.00 0.00 0.00

0500 0.00 0.04 0.00 0.00 0.00

0400 0.00 0.00 0.00 0.00 0.12

0300 0.00 0.00 0.00 0.00 0.00

0200 0.00 0.00 0.00 0.00 0.00

0100 0.00 0.00 0.00 0.00 0.00

09/25/97

2400 0.00 0.00 0.00 0.00 0.04

2300 0.00 0.00 0.00 0.00 0.12

2200 0.00 0.00 0.00 0.00 0.00

2100 0.08 0.00 0.00 0.04 0.04

2000 0.00 0.00 0.00 0.04 0.00

1900 0.00 0.00 0.00 0.00 0.00

1800 0.00 0.04 0.08 0.00 0.04

1700 0.20 0.20 0.31 0.24 0.28

1600 0.12 0.12 0.12 0.08 0.12

1500 0.08 0.00 0.00 0.08 0.00

1400 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.47 0.39 0.51 0.59 0.94

FCD of Maricopa County ALERT System

Precip 11: Lower New R./Skunk Cr.

DeviceID 5500 5505 5510 5515 5520 5525 5535 5550

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0900 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0800 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0700 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0600 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0500 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

09/25/97

2400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1900 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1800 0.00 0.00 0.08 0.08 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.08 0.00 0.00 0.00 0.04

1600 0.04 0.04 0.04 0.04 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.04 0.04 0.12 0.20 0.00 0.00 0.00 0.04

FCD of Maricopa County ALERT System

Precip 12: Upper New R./Skunk Cr.

DeviceID 5565 5580 5595 5610 5625 5630 5640

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1000 0.00 0.00 0.00 0.00 0.00 0.00 0.04

0900 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0800 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0700 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0600 0.00 0.00 0.00 0.00 0.00 0.00 0.08

0500 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0400 0.00 0.00 0.00 0.00 0.00 0.00 0.04

0300 0.00 0.00 0.00 0.00 0.00 0.00 0.04

0200 0.00 0.00 0.00 0.00 0.00 0.00 0.04

0100 0.00 0.00 0.00 0.00 0.00 0.00 0.04

09/25/97

2300 0.00 0.00 0.00 0.00 0.00 0.00 0.20

2200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2100 0.00 0.00 0.00 0.00 0.00 0.08 0.00

2000 0.00 0.04 0.00 0.00 0.00 0.00 0.00

1900 0.00 0.00 0.00 0.00 0.00 0.00 0.04

1800 0.00 0.00 0.00 0.00 0.04 0.00 0.12

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.12

1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.00 0.04 0.00 0.00 0.04 0.08 0.75

FCD of Maricopa County ALERT System

Precip 13: Lake Pleasant

DeviceID 5650 5670 5685 5700 5715 5730

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.04 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00
1400 0.00 0.00 0.00 0.00 0.00 0.00
1300 0.00 0.00 0.00 0.00 0.04 0.00
1200 0.00 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.00 0.00 0.00
1000 0.00 0.00 0.00 0.00 0.08 0.00
0900 0.00 0.00 0.04 0.00 0.00 0.12
0800 0.00 0.00 0.71 0.08 0.08 0.20
0700 0.00 0.00 0.00 0.35 0.12 0.04
0600 0.00 0.00 0.08 0.51 0.59 0.39
0500 0.00 0.00 0.16 0.28 0.35 0.00
0400 0.00 0.00 0.04 0.16 0.20 0.12
0300 0.00 0.00 0.00 0.16 0.20 0.04
0200 0.08 0.00 0.00 0.16 0.28 0.00
0100 0.00 0.00 0.04 0.28 0.24 0.16

/25/97

2400 0.00 0.00 0.00 0.28 0.24 0.04
2300 0.00 0.04 0.00 0.24 0.16 0.08
2200 0.00 0.00 0.08 0.47 0.16 0.08
2100 0.00 0.08 0.04 0.08 0.24 0.00
2000 0.00 0.00 0.00 0.12 0.00 0.04
1900 0.00 0.00 0.04 0.24 0.04 0.24
1800 0.04 0.04 0.35 0.47 0.43 0.51
1700 0.16 0.00 0.20 0.28 0.24 0.04
1600 0.00 0.00 0.08 0.20 0.20 0.00
1500 0.00 0.00 0.00 0.00 0.04 0.00
1400 0.00 0.00 0.00 0.00 0.00 0.00
1300 0.00 0.00 0.00 0.00 0.00 0.00
1200 0.00 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.28 0.16 1.85 4.37 3.90 2.09

FCD of Maricopa County ALERT System

Precip 14: Upper Agua Fria

DeviceID 5745 5760 5775 5790 5805 5820

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.04 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.04 0.04

1500 0.00 0.00 0.00 0.00 0.00 0.00

00 0.00 0.00 0.00 0.00 0.08 0.00

1300 0.00 0.00 0.04 0.04 0.04 0.00

1200 0.00 0.00 0.00 0.08 0.08 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.04

1000 0.00 0.00 0.04 0.00 0.04 0.12

0900 0.08 0.08 0.04 0.00 0.04 0.04

0800 0.08 0.00 0.04 0.12 0.08 0.04

0700 0.08 0.08 0.16 0.28 0.04 0.08

0600 0.00 0.04 0.28 0.20 0.16 0.12

0500 0.00 0.00 0.08 0.08 0.00 0.31

0400 0.00 0.00 0.00 0.00 0.04 0.24

0300 0.04 0.04 0.00 0.00 0.04 0.12

0200 0.00 0.00 0.00 0.00 0.08 0.00

0100 0.00 0.00 0.08 0.00 0.08 0.00

09/25/97

2400 0.00 0.08 0.28 0.00 0.08 0.00

2300	0.00	0.00	0.16	0.00	0.16	0.12
2200	0.00	0.00	0.00	0.00	0.00	0.08
2100	0.00	0.00	0.00	0.00	0.08	0.00
2000	0.00	0.00	0.12	0.20	0.12	0.04
1900	0.08	0.00	0.24	0.16	0.20	0.24
1800	0.12	0.04	0.31	0.04	0.24	0.12
1700	0.04	0.00	0.12	0.00	0.00	0.04
1600	0.00	0.00	0.00	0.00	0.00	0.00
1500	0.00	0.00	0.00	0.00	0.00	0.00
1400	0.00	0.00	0.00	0.00	0.00	0.00
1300	0.00	0.00	0.00	0.00	0.00	0.00
1200	0.00	0.00	0.00	0.00	0.00	0.00
1100	0.00	0.00	0.00	0.00	0.00	0.00

TOTALS: 0.51 0.35 1.97 1.18 1.73 1.77

FCD of Maricopa County ALERT System

Precip 15: Lower Verde River

DeviceID 5900 5915 5930 5945 5950 5960

Hourly Rainfall Values in Inches

09/26/97

1800	0.00	0.00	0.00	0.00	0.00	0.00
1700	0.00	0.00	0.00	0.00	0.00	0.00
1600	0.00	0.00	0.00	0.00	0.00	0.00
1500	0.00	0.00	0.00	0.00	0.00	0.00
1400	0.00	0.00	0.00	0.00	0.00	0.00
1300	0.00	0.00	0.00	0.00	0.00	0.00
1200	0.00	0.00	0.00	0.00	0.00	0.08

1100 0.00 0.00 0.00 0.00 0.00 0.00

1000 0.00 0.00 0.00 0.00 0.00 0.00

900 0.00 0.00 0.00 0.00 0.00 0.08

800 0.00 0.00 0.04 0.00 0.00 0.04

700 0.00 0.00 0.08 0.00 0.00 0.04

600 0.00 0.00 0.00 0.00 0.00 0.04

500 0.00 0.00 0.00 0.00 0.00 0.16

400 0.04 0.00 0.00 0.00 0.00 0.08

300 0.00 0.00 0.00 0.00 0.00 0.04

200 0.00 0.04 0.00 0.04 0.04 0.00

100 0.00 0.20 0.00 0.16 0.00 0.00

09/25/97

2400 0.00 0.04 0.08 0.24 0.00 0.08

2300 0.00 0.00 0.00 0.00 0.00 0.00

2200 0.00 0.00 0.00 0.00 0.00 0.00

2100 0.00 0.00 0.00 0.00 0.00 0.00

2000 0.00 0.00 0.00 0.00 0.00 0.00

1900 0.00 0.00 0.00 0.00 0.00 0.00

1800 0.00 0.00 0.04 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.04 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00

FALS: 0.04 0.28 0.24 0.47 0.04 0.63

FCD of Maricopa County ALERT System

Precip 16: Fountain Hills

viceID 5965 5970 5975 5980 5985 5990 5995

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.04

1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1000 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0900 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0800 0.00 0.00 0.08 0.00 0.08 0.00 0.00

0700 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0600 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0500 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0400 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0300 0.00 0.04 0.00 0.00 0.00 0.00 0.00

0200 0.04 0.00 0.00 0.00 0.00 0.00 0.04

0100 0.00 0.00 0.20 0.04 0.24 0.04 0.16

09/25/97

2400 0.00 0.00 0.04 0.00 0.04 0.00 0.24

2300 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2100 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2000 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.04	0.00	0.04	0.00	0.04
1700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TOTALS: 0.04 0.04 0.35 0.04 0.39 0.04 0.51

FCD of Maricopa County ALERT System

Precip 26: Upper Cave Creek

DeviceID 4900 4915 4920 4930 4935 4940 4950

Hourly Rainfall Values in Inches

09/26/97

1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0800	0.00	0.00	0.00	0.00	0.00	0.08	0.04
0700	0.00	0.00	0.00	0.00	0.04	0.00	0.00

0600 0.00 0.00 0.00 0.00 0.04 0.00 0.08 0.00

0500 0.00 0.00 0.00 0.00 0.00 0.00 0.04 0.04

0400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.04

0300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.04

0200 0.00 0.00 0.00 0.00 0.00 0.00 0.04 0.04

0100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

09/25/97

2400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.04

2300 0.00 0.00 0.00 0.00 0.00 0.00 0.08 0.00

2200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.04

2100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1900 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.04

1800 0.00 0.04 0.00 0.04 0.00 0.00 0.00 0.08

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.00 0.04 0.00 0.08 0.04 0.31 0.39

FCD of Maricopa County ALERT System

Precip 31: Lower Waterman Wash

DeviceID 6810 6820 6840 6850 6860 6870 6880 6890

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0900 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0800 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0700 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0600 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0500 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

09/25/97

2400 0.00 0.04 0.00 0.00 0.00 0.00 0.00 0.00

2300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1900 0.00 0.00 0.00 0.04 0.00 0.00 0.00 0.00

1800 0.00 0.00 0.04 0.00 0.00 0.00 0.04 0.00

1700 0.12 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.08 0.08 0.04 0.04 0.00 0.05 0.04 0.04

1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.20 0.12 0.08 0.08 0.00 0.05 0.08 0.04

FCD of Maricopa County ALERT System

Precip 32: Upper Waterman Wash

DeviceID 6900 6905 6910 6920 6940 6960 6980

Hourly Rainfall Values in Inches

09/26/97

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1600 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1500 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1400 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1300 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.00 0.00 0.00 0.00
1000 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0900 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0800 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0700 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0600 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0500 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0400 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0300 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0100 0.00 0.00 0.00 0.00 0.00 0.00 0.04

'25/97

2400 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2300 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2100 0.00 0.00 0.00 0.00 0.00 0.00 0.00

2000 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1900 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1800 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00 0.00 0.04

1500 0.00 0.16 0.12 0.08 0.12 0.20 0.00

1400 0.00 0.12 0.04 0.00 0.00 0.00 0.00

1300 0.00 0.08 0.00 0.00 0.04 0.00 0.00

1200 0.00 0.00 0.00 0.00 0.00 0.00 0.00

1100 0.00 0.04 0.00 0.00 0.00 0.00 0.00

TOTALS: 0.00 0.39 0.16 0.08 0.16 0.20 0.08

FCD of Maricopa County ALERT System

Precip 33: Pinal County

DeviceID 750 775 780 785 795

Hourly Rainfall Values in Inches

09/26/97

1800 0.00 0.00 0.00 0.00 0.00

1700 0.00 0.00 0.00 0.00 0.00

1600 0.00 0.00 0.00 0.00 0.00

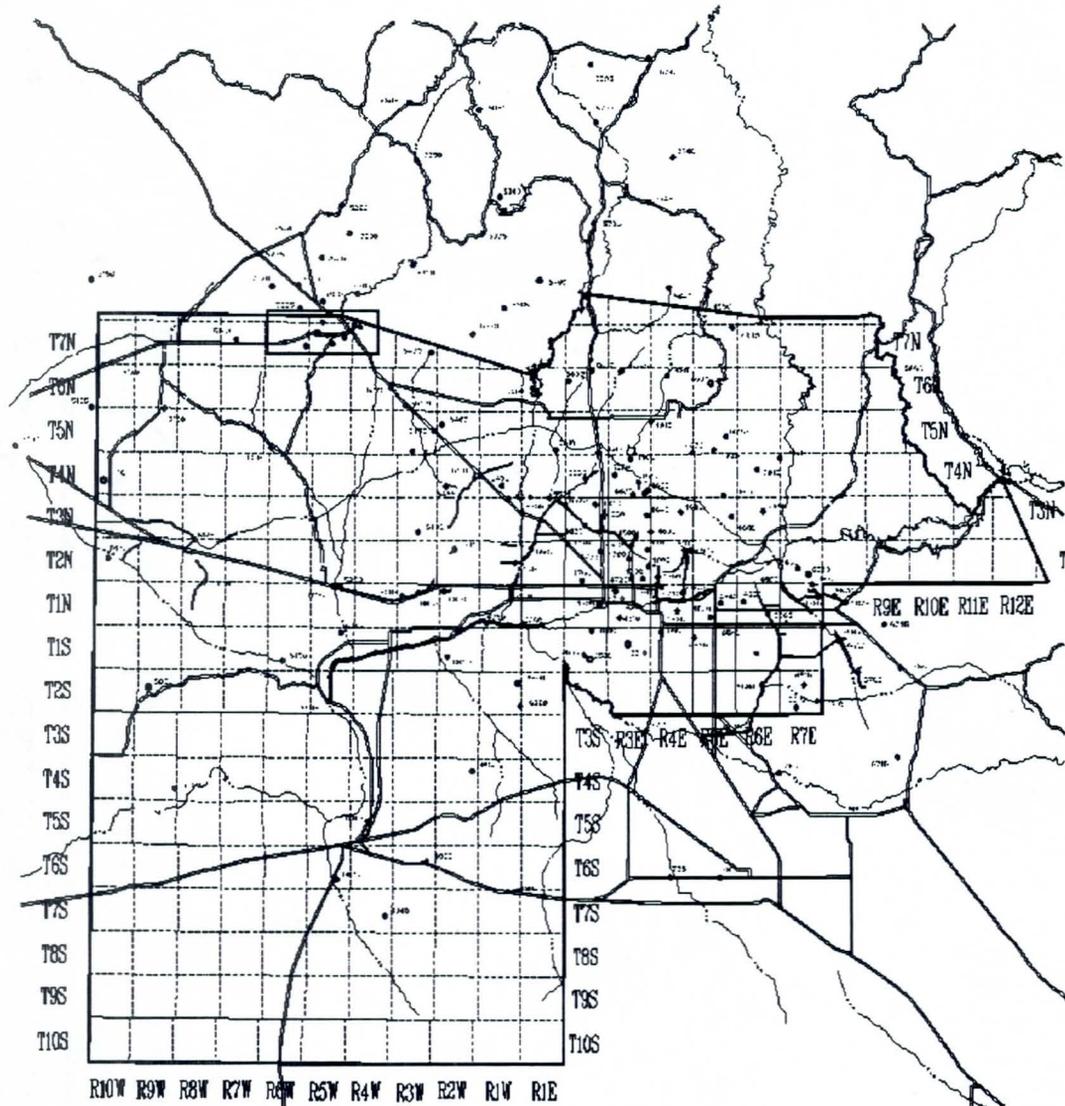
1500 0.00 0.00 0.00 0.00 0.00
1400 0.00 0.00 0.00 0.00 0.00
0 0.00 0.00 0.00 0.00 0.00
1200 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.00 0.00
1000 0.00 0.00 0.00 0.00 0.00
0900 0.00 0.00 0.00 0.00 0.00
0800 0.00 0.00 0.00 0.00 0.00
0700 0.00 0.00 0.00 0.00 0.00
0600 0.00 0.00 0.00 0.00 0.00
0500 0.00 0.00 0.00 0.00 0.00
0400 0.00 0.00 0.00 0.00 0.00
0300 0.00 0.00 0.00 0.00 0.00
0200 0.00 0.00 0.00 0.00 0.00
0100 0.00 0.00 0.00 0.00 0.00

/25/97

2400 0.00 0.00 0.00 0.00 0.00
2300 0.00 0.16 0.00 0.00 0.00
2200 0.00 0.00 0.00 0.00 0.00
2100 0.00 0.00 0.00 0.00 0.00
2000 0.00 0.00 0.00 0.00 0.00
1900 0.00 0.00 0.00 0.00 0.00
1800 0.00 0.00 0.00 0.00 0.00
1700 0.00 0.04 0.00 0.00 0.12
1600 0.00 0.12 0.00 0.00 0.00
1500 0.00 0.00 0.00 0.00 0.00
1400 0.00 0.00 0.00 0.00 0.00
10 0.00 0.00 0.00 0.00 0.00
1200 0.00 0.00 0.00 0.00 0.00
1100 0.00 0.00 0.00 0.00 0.00

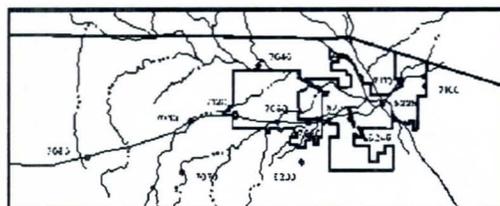
TOTALS: 0.00 0.31 0.00 0.00 0.12

Maricopa County ALERT Precipitation Gauges and Weather Stations



R10W R9W R8W R7W R6W R5W R4W R3W R2W R1W R1E

Legend



Created June 20, 1995

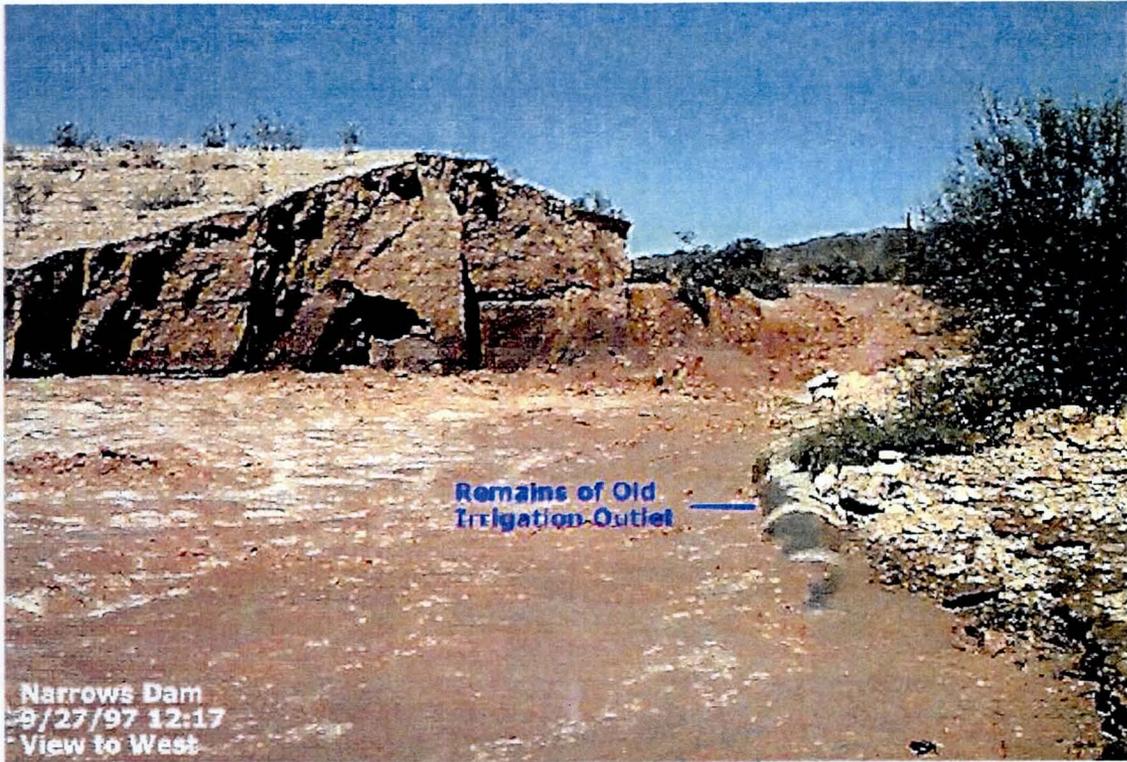
Appendix D: Selected Digital Photos



Narrows Dam, Approximately 7 Hours Prior to Failure



Narrows Dam, Approximately 14 Hours After Failure



Narrows Dam
9/27/97 12:17
View to West

North End of Narrows Dam, 9/27/97 at 12:17 hrs



Aguila, AZ
9/26/97 15:30
View to West

Centennial Wash at Aguila, AZ 9/26/97 at 15:30 hrs

APPENDIX E - Rainfall Data Recorded at Harquahala Mountain

Data Display for 5185 Harquahala Mtn. 15-minute Rainfall Totals

Precipitation Gage StatType rain

DataType precip

Date Time inches Raw Units in

09/26/1997-06:19:38	18.46	469	09/26/97
09/26/1997-05:48:29	18.46	469	0700 0.00
09/26/1997-05:08:03	18.43	468	0645 0.00
09/26/1997-04:33:03	18.39	467	0630 0.00
09/26/1997-04:25:43	18.35	466	0615 0.00
09/26/1997-04:23:28	18.31	465	0600 0.04
09/26/1997-04:15:42	18.27	464	0545 0.00
09/26/1997-04:14:29	18.23	463	0530 0.00
09/26/1997-04:11:57	18.19	462	0515 0.04
09/26/1997-04:09:20	18.15	461	0500 0.00
09/26/1997-04:08:14	18.11	460	0445 0.04
09/26/1997-04:07:05	18.07	459	0430 0.12
09/26/1997-04:05:22	18.03	458	0415 0.28
09/26/1997-03:58:41	17.95	456	0400 0.20
09/26/1997-03:52:56	17.91	455	0345 0.12
09/26/1997-03:48:54	17.87	454	0330 0.24
09/26/1997-03:39:22	17.76	451	0315 0.12
09/26/1997-03:37:57	17.72	450	0300 0.16
09/26/1997-03:33:48	17.68	449	0245 0.00
09/26/1997-03:27:45	17.64	448	0230 0.08

09/26/1997-03:24:39 17.60 447 0215 0.04

09/26/1997-03:22:04 17.56 446 0200 0.08

/26/1997-03:20:14 17.52 445 0145 0.00

09/26/1997-03:15:01 17.44 443 0130 0.16

09/26/1997-03:09:05 17.40 442 0115 0.00

09/26/1997-03:05:10 17.36 441 0100 0.00

09/26/1997-03:01:54 17.32 440 0045 0.08

09/26/1997-02:59:58 17.28 439 0030 0.00

09/26/1997-02:56:52 17.24 438 0015 0.00

09/26/1997-02:46:52 17.20 437

09/25/97

09/26/1997-02:23:54 17.13 435 2400 0.31

09/26/1997-02:11:49 17.05 433 2345 0.20

09/26/1997-01:54:48 17.01 432 2330 0.16

09/26/1997-01:47:26 16.97 431 2315 0.12

09/26/1997-01:15:51 16.93 430 2300 0.24

09/26/1997-00:39:32 16.77 426 2245 0.55

09/26/1997-00:15:22 16.69 424 2230 0.35

09/25/1997-23:58:35 16.69 424 2215 0.16

09/25/1997-23:56:19 16.65 423 2200 0.12

09/25/1997-23:51:13 16.61 422 2145 0.08

09/25/1997-23:49:19 16.57 421 2130 0.16

09/25/1997-23:46:15 16.50 419 2115 0.31

09/25/1997-23:45:30 16.46 418 2100 0.16

09/25/1997-23:43:32 16.38 416 2045 0.20

09/25/1997-23:39:57 16.34 415 2030 0.16

/25/1997-23:38:19 16.30 414 2015 0.12

09/25/1997-23:36:09 16.26 413 2000 0.28

09/25/1997-23:32:45 16.22 412 1945 0.16

09/25/1997-23:29:47 16.18 411 1930 0.31

09/25/1997-23:27:40 16.14 410 1915 0.12

/25/1997-23:15:18 16.06 408 1900 0.28

09/25/1997-23:13:34 16.02 407 1845 0.39

09/25/1997-23:05:48 15.98 406 1830 0.39

09/25/1997-23:03:13 15.94 405 1815 0.35

09/25/1997-22:58:00 15.91 404 1800 0.43

09/25/1997-22:55:01 15.87 403 1745 0.20

09/25/1997-22:52:43 15.83 402 1730 0.55

09/25/1997-22:50:24 15.75 400 1715 0.43

09/25/1997-22:49:06 15.71 399 1700 0.20

09/25/1997-22:44:53 15.67 398 1645 0.16

09/25/1997-22:39:56 15.63 397 1630 0.20

09/25/1997-22:39:04 15.59 396 1615 0.20

09/25/1997-22:38:28 15.55 395 1600 0.31

09/25/1997-22:36:52 15.47 393 1545 0.28

09/25/1997-22:34:39 15.39 391 1530 0.39

09/25/1997-22:33:41 15.35 390 1515 0.31

09/25/1997-22:33:06 15.31 389 1500 0.16

09/25/1997-22:31:28 15.24 387 1445 0.04

09/25/1997-22:30:50 15.20 386 1430 0.08

09/25/1997-22:30:04 15.16 385 1415 0.12

09/25/1997-22:26:15 15.12 384 1400 0.12

09/25/1997-22:24:15 15.08 383 1345 0.08

09/25/1997-22:22:28 15.04 382 1330 0.08

/25/1997-22:19:21 14.96 380 1315 0.04

09/25/1997-22:18:03 14.92 379 1300 0.12

09/25/1997-22:16:45 14.88 378 1245 0.04

09/25/1997-22:15:21 14.84 377 1230 0.00

09/25/1997-22:05:59 14.76 375 1215 0.00

09/25/1997-22:03:54 14.72 374

09/25/1997-22:02:39 14.69 373 TOTAL: 11.97

09/25/1997-22:00:00 14.61 371

09/25/1997-21:56:03 14.57 370

09/25/1997-21:50:08 14.53 369

09/25/1997-21:42:45 14.49 368

09/25/1997-21:23:03 14.41 366

09/25/1997-21:19:57 14.37 365

09/25/1997-21:17:57 14.33 364

09/25/1997-21:16:05 14.29 363

09/25/1997-21:14:32 14.25 362

09/25/1997-21:12:02 14.21 361

09/25/1997-21:09:31 14.17 360

09/25/1997-21:08:22 14.13 359

09/25/1997-21:06:50 14.09 358

09/25/1997-21:04:58 14.06 357

09/25/1997-20:53:43 13.94 354

09/25/1997-20:51:31 13.90 353

09/25/1997-20:49:29 13.86 352

09/25/1997-20:46:05 13.82 351

09/25/1997-20:41:42 13.78 350

09/25/1997-20:38:22 13.74 349

09/25/1997-20:35:11 13.70 348

09/25/1997-20:33:31 13.66 347

09/25/1997-20:30:59 13.62 346

09/25/1997-20:28:22 13.58 345

09/25/1997-20:25:30 13.54 344

09/25/1997-20:05:50 13.43 341

09/25/1997-20:03:43 13.39 340

09/25/1997-20:01:20 13.35 339

09/25/1997-19:59:18 13.31 338

09/25/1997-19:58:01 13.27 337

09/25/1997-19:56:02 13.23 336

09/25/1997-19:53:43 13.19 335

09/25/1997-19:51:15 13.15 334

09/25/1997-19:49:45 13.11 333

09/25/1997-19:46:04 13.07 332

09/25/1997-19:42:11 13.03 331

09/25/1997-19:38:18 12.99 330

09/25/1997-19:34:47 12.95 329

09/25/1997-19:30:17 12.91 328

09/25/1997-19:27:27 12.87 327

09/25/1997-19:23:12 12.80 325

09/25/1997-19:20:27 12.76 324

09/25/1997-19:15:32 12.68 322

09/25/1997-19:06:04 12.56 319

09/25/1997-19:03:20 12.52 318

09/25/1997-19:00:43 12.48 317

09/25/1997-18:58:23 12.44 316

09/25/1997-18:56:34 12.40 315

09/25/1997-18:54:31 12.36 314

09/25/1997-18:50:47 12.28 312

09/25/1997-18:48:42 12.24 311

09/25/1997-18:46:49 12.20 310

09/25/1997-18:44:29 12.17 309

09/25/1997-18:41:13 12.09 307

09/25/1997-18:39:58 12.05 306

09/25/1997-18:38:44 12.01 305

09/25/1997-18:37:43 11.97 304

09/25/1997-18:36:35 11.93 303

09/25/1997-18:34:58 11.89 302

09/25/1997-18:33:08 11.85 301

09/25/1997-18:31:43 11.81 300

09/25/1997-18:29:53 11.77 299

09/25/1997-18:28:29 11.73 298

09/25/1997-18:25:07 11.65 296

09/25/1997-18:23:15 11.61 295

09/25/1997-18:21:37 11.57 294

09/25/1997-18:18:56 11.50 292

09/25/1997-18:17:18 11.46 291

09/25/1997-18:16:11 11.42 290

09/25/1997-18:14:48 11.38 289

09/25/1997-18:13:40 11.34 288

09/25/1997-18:12:29 11.30 287

09/25/1997-18:11:16 11.26 286

09/25/1997-18:09:47 11.22 285

09/25/1997-18:08:10 11.18 284

09/25/1997-18:06:07 11.14 283

09/25/1997-18:02:43 11.10 282

09/25/1997-17:59:27 11.02 280

09/25/1997-17:57:31 10.98 279

09/25/1997-17:56:18 10.94 278

09/25/1997-17:53:21 10.87 276

09/25/1997-17:50:51 10.79 274

09/25/1997-17:49:39 10.75 273

09/25/1997-17:48:29 10.71 272

09/25/1997-17:46:43 10.67 271

09/25/1997-17:40:21 10.59 269

09/25/1997-17:35:42 10.55 268

09/25/1997-17:33:52 10.51 267

09/25/1997-17:31:52 10.47 266

09/25/1997-17:30:42 10.43 265

09/25/1997-17:29:35 10.39 264

09/25/1997-17:28:17 10.35 263

09/25/1997-17:26:38 10.31 262

09/25/1997-17:24:17 10.28 261

09/25/1997-17:22:35 10.24 260

09/25/1997-17:21:22 10.20 259

09/25/1997-17:20:41 10.16 258

09/25/1997-17:20:03 10.12 257

09/25/1997-17:19:05 10.08 256

09/25/1997-17:18:22 10.04 255

09/25/1997-17:17:23 10.00 254

09/25/1997-17:16:37 9.96 253

09/25/1997-17:15:57 9.92 252

09/25/1997-17:15:08 9.88 251

09/25/1997-17:14:24 9.84 250

09/25/1997-17:12:34 9.76 248

09/25/1997-17:11:08 9.72 247

09/25/1997-17:09:48 9.69 246

09/25/1997-17:06:59 9.61 244

09/25/1997-17:05:52 9.57 243

09/25/1997-17:04:32 9.53 242

09/25/1997-17:03:20 9.49 241

09/25/1997-17:01:39 9.45 240

09/25/1997-16:58:01 9.41 239

/25/1997-16:54:53 9.37 238

09/25/1997-16:52:47 9.33 237

09/25/1997-16:50:13 9.29 236

09/25/1997-16:47:35 9.25 235

09/25/1997-16:43:04 9.21 234

09/25/1997-16:41:01 9.17 233

09/25/1997-16:38:04 9.13 232

09/25/1997-16:29:42 9.06 230

09/25/1997-16:25:03 8.98 228

09/25/1997-16:21:53 8.94 227

09/25/1997-16:15:04 8.90 226

09/25/1997-16:11:25 8.86 225

09/25/1997-16:06:30 8.82 224

09/25/1997-16:02:40 8.78 223

09/25/1997-16:01:59 8.74 222

09/25/1997-16:00:52 8.70 221

09/25/1997-15:59:36 8.66 220

09/25/1997-15:58:26 8.62 219

09/25/1997-15:57:34 8.58 218

09/25/1997-15:56:27 8.54 217

09/25/1997-15:54:10 8.50 216

09/25/1997-15:50:17 8.46 215

09/25/1997-15:48:32 8.43 214

09/25/1997-15:46:29 8.39 213

/25/1997-15:43:25 8.35 212

09/25/1997-15:41:17 8.31 211

09/25/1997-15:38:08 8.27 210

09/25/1997-15:35:46 8.23 209

09/25/1997-15:34:11 8.19 208

/25/1997-15:32:51 8.15 207

09/25/1997-15:30:00 8.07 205

09/25/1997-15:28:55 8.03 204

09/25/1997-15:27:34 7.99 203

09/25/1997-15:26:09 7.95 202

09/25/1997-15:24:24 7.91 201

09/25/1997-15:22:50 7.87 200

09/25/1997-15:20:49 7.83 199

09/25/1997-15:19:17 7.80 198

09/25/1997-15:17:16 7.76 197

09/25/1997-15:12:02 7.68 195

09/25/1997-15:10:34 7.64 194

09/25/1997-15:08:31 7.60 193

09/25/1997-15:05:04 7.56 192

09/25/1997-15:03:40 7.52 191

09/25/1997-15:02:11 7.48 190

09/25/1997-14:55:21 7.36 187

09/25/1997-14:51:52 7.32 186

09/25/1997-14:47:17 7.28 185

09/25/1997-14:32:18 7.20 183

09/25/1997-14:22:08 7.17 182

09/25/1997-14:17:58 7.13 181

09/25/1997-14:12:15 7.09 180

09/25/1997-14:03:07 7.01 178

/25/1997-13:57:19 6.97 177

09/25/1997-13:53:14 6.93 176

09/25/1997-13:48:34 6.89 175

09/25/1997-13:42:20 6.85 174

09/25/1997-13:31:51 6.81 173

09/25/1997-13:24:06 6.77 172

09/25/1997-13:16:30 6.73 171

09/25/1997-13:08:46 6.69 170

09/25/1997-12:58:05 6.65 169

09/25/1997-12:53:48 6.61 168

09/25/1997-12:45:33 6.57 167

09/25/1997-12:31:59 6.54 166

09/25/1997-12:06:57 6.50 165 Rainfall Begins

End of Report.

1073

edited 4-30-97

STATE OF AZ

TT

REGISTRATION

LAWS

MH

REVENUE

LAWS

I. PURPOSE

The purpose of this policy is to provide guidelines for the issuance of a title and/or registration for travel trailers, changes in travel trailer use and database update.

II AUTHORITY

As indicated by ARS 41-2142, a travel trailer is a recreational vehicle which is primarily designed as temporary living quarters for recreational, camping or travel use, but which is not designed for permanent residence or commercial use. It is a non-powered vehicle designed to be pulled by a motor vehicle.

In accordance with ARS 28-2153, travel trailers used for recreational purposes and moved on Arizona highways must be registered. As indicated by ARS 28-2355, the Division issues a single license plate when registering travel trailers.

Travel trailers which do not exceed eight feet in width or forty feet in length are within the legal size limits imposed by ARS 28-2003.12(3) and may be operated on the highway when registered.

Travel trailers, as provided by ARS 28-4135, are exempt from Arizona's mandatory insurance laws.

ARS 42-641 establishes guidelines for determining when a travel trailer is considered to be a mobile home. For the purposes of determining whether or not a mobile home in Arizona is subject to the tax provisions of Title 42, ARS 42-642(E) defines "resident," in part, as "any person ... who remains in the state for a period of seven months or more." When erected on site, a travel trailer is considered to be a mobile home if it is used as a single family dwelling for at least six consecutive months or is used for commercial purposes (business or office).

ARS 42-541.01(A) provides that any person owning a mobile home and owning real property to which the mobile home has been permanently affixed may file an Affidavit of Affixture with the County Recorder of the county in which the real property is located. In accordance with ARS 33-1476.03(A), an owner who has not filed an Affidavit of Affixture for a mobile home permanently affixed to the owner's real property shall pay an assessment to the County Treasurer.

ARS 42-610(A) and 42-610(B) state that a mobile home cannot be moved, sold, or have the title transferred when there is an outstanding personal property tax (commonly referred to as tax delinquency) recorded against the mobile home. As required by ARS 28-304.02(B), the Division must prepare and maintain a listing identifying each prior year of outstanding tax delinquencies. These delinquencies are recorded on the database record by the Division and prohibit the issuance of a vehicle title.

III. POLICY

It is the policy of the Division that the registering agent may request additional documentation necessary to provide satisfactory proof of ownership.

IV. PROCEDURE

A. Declaring Travel Trailer Use

The following criteria is used to establish recreational travel trailer use:

1. The owner verbally declares the travel trailer use at the time of application for title and/or registration.
2. A travel trailer is considered recreational when it is used only as a temporary dwelling place for recreational use.
3. A travel trailer cannot exceed legal size limitations established for highway use (eight feet wide by forty feet in length).
 - a. Objects that can be removed or collapsed, such as awnings, are not measured when determining vehicle size.

B. Title Issuance

1. The applicant must submit a completed application for title and supporting documentation necessary to properly justify ownership or transfer of ownership.

a. Any procedure outlined in this manual that used to justify ownership in applying for vehicle title may also be used in support of an application for a travel trailer title.

2. Ownership documents for travel trailers and for mobile homes may occasionally reflect a derivative of the actual vehicle identification number (VIN) on the unit.

a. When the VIN shown on the ownership document can be matched with a portion of the VIN reflected on the Verification of Vehicle form in an unbroken sequence, the ownership document may be accepted in application for Arizona title and/or registration as related to vehicle identification.

b. The VIN as shown on the verification form is the VIN to be reflected on the Arizona title and/or registration records.

Example 1: Ownership document has VIN 12345.

Verification has VIN B6CK4L60 12345
DWR.

(1) Ownership document and verification are acceptable as to having identified the same vehicle.

c. Title and/or registration records are to reflect VIN B6CK4L6012345DWR.

Example 2: Ownership document has VIN 12345.

Verification has VIN 36 12 CK 74 L60 5
DWR.

(1) The ownership document does not appear to describe the same vehicle as the verification form and is, therefore, not acceptable.

d. If unable to resolve the discrepancy, the applicant may need to apply for a Bonded Title (see Policy TR 150.25, Bonded Title).

Example 3: Ownership document has VIN B6CK4L6012345DWR.

Verification has VIN 12345.

- (1) Ownership documents and verification are acceptable as to having identified the same vehicle.
- (2) Title and Registration records are to reflect VIN 12345.

3. The MVD agent must:

- a. query the Mobile Home database to determine declared use of travel trailer, and
- b. if any tax delinquencies (status code 67) are recorded for the vehicle.
- c. if there is a delinquency,
 - (1) a tax clearance must be submitted with the supporting documents.
 - (2) The tax clearance must identify:
 - (a) The county that issued the clearance.
 - (b) The mobile home make, year, and VIN.
 - (c) The rate(s) under which the delinquency is recorded.
 - (d) The tax roll number, and
 - (i) the year of the delinquency.
- d. When the tax clearance is accepted, the status code 67 is removed.
- e. create/update a travel trailer (TV) record for the unit on the Title and Registration database, and
 - (1) determine the disposition of any existing MH record if:
 - (a) a mobile home record currently exists for the unit and
 - (b) there are no prohibitive status codes on the MH record and
 - (c) there has been no activity on the MH record for one full year.

- (2) purge the MH record with supervisor approval, but prior to purging the record:
 - (a) determine if the current title number and prior title number on the TV record are accurate.
 - (b) if not, transfer the information from the mobile home record to the TV record prior to purging it.
- (3) If the MH record is not to be purged in accordance with the guidelines in item (1) above,
 - (a) create/update a TV record placing a status code 51 to indicate a duplicate record exists on the MH database.
 - (b) The MH record is to reflect the identical owner and title data as the TV record, and
 - (c) is to reflect a status code 51.
 - (4) If a mobile home record does not currently exist, create a record, or
 - (a) update the existing TV record as a TV on the Title and Registration database.

4. Collect applicable fees, see Policy TR 500.05, Fees.

C. Change of Travel Trailer Use

1. When changing the use of a travel trailer, the titled owner is not required to apply for a corrected title.
2. When travel trailer use is changing from temporary/recreational use to commercial use (business or office) or residential use (single family dwelling), it is considered to be a mobile home. The MVD agent must:
 - a. collect the license plate and registration for cancellation (see Policy TR 300.10, Cancellation of Plates).
 - b. query the Mobile Home database to determine if a tax delinquency (status code 67) is recorded on the vehicle record.

(1) If there is a delinquency, a tax clearance must be submitted (see item B.3., for guidelines).

c. determine the appropriate method for updating the database.

(1) If there are NO prohibitive status codes or comments on the TV record and

(a) there has been NO activity on the TV record for one full year.

(b) create/update a record on the mobile home database

(2) The TV record is to be purged.

(3) If the TV record is not to be purged in accordance with the guidelines in item (1) above,

(a) create or update a mobile home record placing a status code 51 to indicate a duplicate record for a travel trailer exists on the Title and Registration database.

(b) The TV record is to reflect the identical owner and title data as the mobile home record, and

(c) is to reflect a status code 51.

3. If the travel trailer is being relocated but will still be used as a single family dwelling.

a. a Temporary General Use Registration Permit will be issued (see Policy TR 220.20, Temporary General Use Permit).

4. When a travel trailer is changing from commercial or residential use to recreational use.

a. a trailer license plate must be obtained upon payment of a fee. The MVD agent must:

(1) review the mobile home record on the database to determine if any tax delinquencies are recorded for the vehicle.

(2) If there is a delinquency, a tax clearance must be submitted (see item B.3., for guidelines).

b. collect all fees and license taxes.

(1) If personal property taxes are current, upon presentation of a paid tax receipt,

(a) only an \$6 registration fee will be collected.

(b) When the registration is prepared, the notation "PP tax PD" will be typed in the "Veh Lic Tax" field to indicate personal property taxes were paid and

(2) If personal property taxes are current upon presentation of a paid tax receipt,

(a) issue a vehicle license plate and validating tabs.

(b) a registration and validating tab will be issued to expire with the expiration of the tax receipt presented.

(3) If personal property taxes are not current, all fees and license taxes will be collected for a full-year registration.

(4) If personal property taxes are not current, a full year registration and validating tab will be issued.

(5) create a TV record on the Title and Registration database to record

(a) the issuance of the license plate and validating tabs, and

(1) determine the disposition of the MH record:

(b) If there are no prohibitive status codes or comments on the MH record and

(c) there has been no activity on the MH record for one full year,

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0000000000

- (d) create/update a record for the unit as a TV on the Title and Registration database.
- (e) The MH record is to be purged with supervisor's approval.
- (E) If the MH record is not to be purged in accordance with the guidelines in item (b) above.
 - (i) create or update a TV record for the unit placing a status code 51 to indicate a duplicate record exists on the MH database.
 - (ii) The MH record is to reflect the identical owner and title data as the TV record and is to reflect a status code 51.

E. Fees

See Policy TR 500.05, Fees.

V. POLICY AUTHORIZATION

Date

Paul R. Hammock
Division Director

NJ-06-2000 14:18
AZ DIV OF EMER MGMT
602327028
7.10



CHAPTER 7

**MOBILE HOMES
AND MANUFACTURED
HOUSING**



MOBILE HOMES AND MANUFACTURED HOUSING

Terminology in the manufactured housing industry has been modified in recent years to describe the structures it currently produces as "manufactured housing" rather than "mobile homes." Generally, the industry adheres to the definitions provided in A.R.S. § 41-2142, as part of the legislation regarding the construction of manufactured housing provided for the Arizona Department of Building and Fire Safety. The definitions for "mobile home" and "manufactured housing" in A.R.S. § 41-2142 recognize a change in terminology as of June 15, 1976. Structures built prior to June 15, 1976 are considered to be "mobile homes," while structures built after that date are referred to as "manufactured housing."

A.R.S. § 41-2142 also provides definitions for mobile homes, manufactured housing, mobile offices, park models and recreational travel trailers, which describe the identifying characteristics of each type of structure. The Arizona Department of Revenue recognizes those definitions provided by A.R.S. § 41-2142 as generally accepted terminology used in the manufactured housing construction industry. A.R.S. §§ 42-19151 through 19153 are the authority for the taxation of mobile homes as personal property. In A.R.S. § 42-19151, the term "manufactured housing" has not been substituted for the term "mobile homes" as it has in A.R.S. § 41-2142. Also, there is no specific date in A.R.S. § 42-19151 by which to identify a transition in terminology from "mobile home" to "manufactured housing." The Department acknowledges current terminology used in the manufactured housing industry, but maintains its use of the term "mobile home" for property tax purposes.

Mobile homes and other factory built structures are subject to assessment for property taxes, including manufactured housing, travel trailers, fifth-wheels, mobile offices, recreation vehicles, and park models. These structures are defined in the "Mobile Home Categories" section of this chapter.

Mobile Home Categories. For valuation purposes, the following categories of mobile homes have been established:

Mobile Home: Pursuant to A.R.S. § 42-19151, "Mobile home" means a structure transportable in one or more sections, including the plumbing, heating, air conditioning and electrical systems contained in such structure which, when erected on site, is either of the following:



- (a) Greater than eight body feet in width, thirty-two body feet or more in length and built on a permanent chassis; or
- (b) Regardless of the size, used as a single family dwelling or for commercial purposes with or without a permanent foundation.

A.R.S. § 41-2142 provides various definitions in Arizona legislation that apply to the construction of homes by the manufactured housing industry.

Manufactured Housing: A structure built on or after June 15, 1976, that is 8 or more feet wide and 40 or more feet long; has a permanent chassis, is transportable in one or more sections, is equipped with complete plumbing, heating and electrical systems from the factory, and is designed to be used with or without a permanent foundation as a dwelling when connected to on-site utilities. Manufactured housing is built in accordance with the National Manufactured Home Construction and Safety Standards Act of 1974, and Title VI of the Housing and Community Development Act of 1974 A.R.S. § 41-2142. Federal regulations control both the design and construction of all manufactured housing.

Mobile Home: A structure built prior to June 15, 1976, on a permanent chassis, transportable in one or more sections, and designed to be used with or without a permanent foundation as a dwelling when connected to on-site utilities. This definition does not include recreational vehicles or factory-built buildings. A.R.S. § 41-2142.

Mobile Office: A structure built on a permanent chassis, capable of being transported in one or more sections, and designed to be used with or without a permanent foundation as an office or commercial space when connected to on-site utilities. Mobile offices are categorized for valuation purposes into groups of 8 feet and less in width, and greater than 8 feet in width.

Park Model: A structure built on a single chassis, mounted on wheels and designed to be connected to utilities for operation of installed fixtures and appliances. A park model has a gross trailer area of not less than 320 square feet and not more than 400 square feet when it is set up. This category does not include fifth wheel trailers. A.R.S. § 41-2142(30)(c). Park models are categorized for valuation purposes into groups of 8 feet and less in width, and greater than 8 feet in width.



Recreational Travel Trailer: A structure mounted on wheels, designed to provide temporary living quarters for recreational, camping or travel use, being of a size or weight that may require a special highway movement permit when towed by a motorized vehicle, and having a trailer area of less than 320 square feet. This category includes fifth wheel trailers. A.R.S. § 41-2142(30)(c). Travel trailers are licensed and taxed in the same manner as any other vehicle. Travel trailers are assessed as personal property if the units are unlicensed, have expired licenses or their use changes.

Valuation Schedule Codes: Valuation schedules have been developed for each of the six types of units:

- Code 72 Manufactured Housing and Mobile Homes
- Code 721 Recreational Travel Trailers: 8' wide, 32' long or less
- Code 722 Mobile Offices: 8' wide or less, 40' long or less
- Code 723 Mobile Offices: greater than 8' wide, greater than 40' long
- Code 724 Park Models: 8' wide, and 33' - 40' long
- Code 725 Park Models: greater than 8' wide, and 33' - 40' long

Exceptions from Taxation as Personal Property. Not all mobile homes are taxable as personal property. Mobile homes that are affixed to real property by an Affidavit of Affixture are listed on the secured tax roll and taxed as an improvement to real property. For further discussion, refer to the "Affidavit of Affixture" section in this chapter.

Some mobile homes are exempt from taxation in Arizona. Exempt mobile homes include those that are properly licensed in another state which are owned by a bona fide tourist in this state. This does not apply to owners who are residents of Arizona as defined by statute, and does not apply to trailers that are 8 feet or less in width and less than 32 feet in length and which are not used as a residence or for a commercial purpose. For continued discussion of exempt status of mobile homes, refer to the "Exemptions" section in this chapter.

MOBILE HOME LOCATION AND IDENTIFICATION

Identification of a taxable mobile home at a specific location can be accomplished by the County Assessor in several ways. Some common methods are:



- Manufactured Housing (Mobile Home) & Mobile Office Acquisition and Sales Report (DCR Form 82525): A dealer or broker who participates in the sale of a previously titled mobile home unit is required to report that sale to the Department of Revenue and to the Assessor of the county in which the dealer is located, using the Manufactured Housing (Mobile Home) & Mobile Office Acquisition and Sales Report. This report contains data identifying the mobile home unit, its address of origin, the destination address, and facts concerning the sale. Mobile home dealers are not required to use the Acquisition & Sales Report to report the sale of new mobile units, only previously titled mobile homes. Private individuals are not required to use this form to report transacted sales.

The Department maintains files of mobile home sales activity for each county, based on information reported by dealers and brokers using DOR Form 82525. Those files include a listing of mobile home units purchased or sold within the county. Availability of specific information may vary by county.

- Mobile Home Property Tax Clearance (DOR Form 82504): Prior to moving a mobile home from one location to another, a Mobile Home Property Tax Clearance must be issued by the Assessor of the county in which a mobile home is located. A Mobile Home Property Tax Clearance is required prior to the transportation of a mobile home unit greater than 8 feet wide, under certain conditions. Specifically that tax clearance form is required when a mobile home is transported to a new owner's premises from the factory, dealer, or previous owner. In these situations, the mobile home title is transferred or the unit is moved out of dealer inventory, so that mobile home would be liable for a personal property tax assessment thereafter. In contrast, a Mobile Home Property Tax Clearance is not required when a new mobile home is transported from the factory to the dealer's lot or from one dealer to another. These are situations where the mobile home is considered to be inventory and is not titled; therefore, personal property assessment and taxation is not applicable at that time. Also, a mobile dealer moving a mobile home held in inventory from one location to that same mobile dealer's inventory in another location is not required to obtain a Mobile Home Property Tax Clearance. However, a Mobile Home Property Tax Clearance is required when transporting a used mobile home from one dealer to another.



- Mobile Home Park and Trailer Court Operator's Report to County Assessor (DOR Form 82505): Mobile home park operators maintain registers of mobile home activity in their parks. These registers list changes in occupancy, identifying units that are moved into and out of the parks. Mobile home park operators are required to provide a copy of the register to the County Assessor each month.
- Mobile Home and Travel Trailer Register (DOR Form 82505A): Persons who permit a mobile home to be placed on land that they own, possess, or control, are required to keep a register of information concerning that mobile home if it is occupied as a dwelling or sleeping place for one or more persons for a period of 30 days or more. A.R.S. § 42-19154. Register forms, as prescribed by the Department, require the disclosure of information to identify the mobile home lien holder, and owner.
- Office of Manufactured Housing - Application for Mobile/Manufactured Home Installation Permit (ADBFS Form 189): Prior to placing a mobile home on a site, mobile home owners are required to apply for Mobile/Manufactured Home Installation Permit from the Office of Manufactured Housing in the Arizona Department of Building and Fire Safety (ADBFS). This permit is required for either a new placement or a replacement mobile home on site. Typically, the zoning departments of county, city or town governments provide the County Assessors with copies of installation permits.
- Motor Vehicle Division of the Arizona Department of Transportation: The Motor Vehicle Division (MVD) provides the counties with a monthly report which lists applications for title, and transfers of title for mobile homes and travel trailers in that county. Specifically, the report identifies title applications for new units, and recent sales of existing units. Information from this report may be used to update ownership records.
- Arizona Business Property Statement (DOR Form 82520)
Arizona Agricultural Business Property Statement (DOR Form 82520A): A mobile home is occasionally reported on one of the above Arizona Property Statements. If a mobile home is listed on either of these forms, the County Assessor should verify that the unit has been properly assessed.



- **Mobile Home Park Field Checks:** Appraisers periodically recanvass mobile home and travel trailer parks to list mobile homes that may not be on the tax roll. Field checks may identify new improvements (add-on items), such as carports, porches, and concrete slabs that have not been previously listed.
- **Real Property Field Checks:** In the course of their field work, real property appraisers often discover unreported mobile homes in use. Appraisers should list identifying information such as size, make and model number, vehicle identification number (VIN) or serial number, to update the County Assessor's records.

ASSESSMENT OF MOBILE HOMES

Classification. In accordance with A.R.S. § 42-12001 through 12011, a mobile home is to be assigned a legal classification based upon its current use.

Affidavit of Affixture. An Affidavit of Affixture is a document that is used to change the status of a mobile home unit from personal property to real property. The owner of a mobile home that is "permanently affixed" to real property may file an Affidavit of Affixture (DOR Form 8252B) with the Assessor in the county where the real property is located. Pursuant to A.R.S. § 42-15201(2), a "permanently affixed" mobile home is a mobile home that is installed on real property, where the real property and the mobile home have identical ownership. "Affixed" does not mean that the mobile home is physically attached to the land. The Affidavit of Affixture process is best thought of as a legal process, not a physical one. No physical changes to the mobile home are required in order to file an Affidavit of Affixture.

The Affidavit of Affixture must contain such information as required under A.R.S. § 42-15203, including the VIN of the mobile home, and the legal description of the real property to which the mobile home has been affixed. The Affidavit is recorded in the same manner as a deed, and replaces the title. When an Affidavit of Affixture is recorded, A.R.S. § 42-15203 and 23-2063(A)(3) require that the owner surrender the original Certificate(s) of Title or Manufacturer's Statement of Origin (MSO), to the Arizona Department of Transportation (ADOT). A permanently affixed mobile home for which an Affidavit of Affixture has been recorded is assessed as real property.



FEMA

DISASTER RECOVERY OPERATIONS CENTER
 FEMA -1292 NC
 1800 - G TILLERY PLACE
 RALEIGH, NC 27604
 (919) 754-3019
 HMGP MITIGATION FAX #'S (919) 754-3054
 (919) 754-3053

FAX COVER SHEET

HMGP MITIGATION DIVISION

DATE: 12-20-00

PAGE 1 OF 2

TO: LONNIE RYDER

FROM: SAM WINNINGHAM

PHONE: _____

PHONE: 919 754-3030

FAX: 602 217-8723

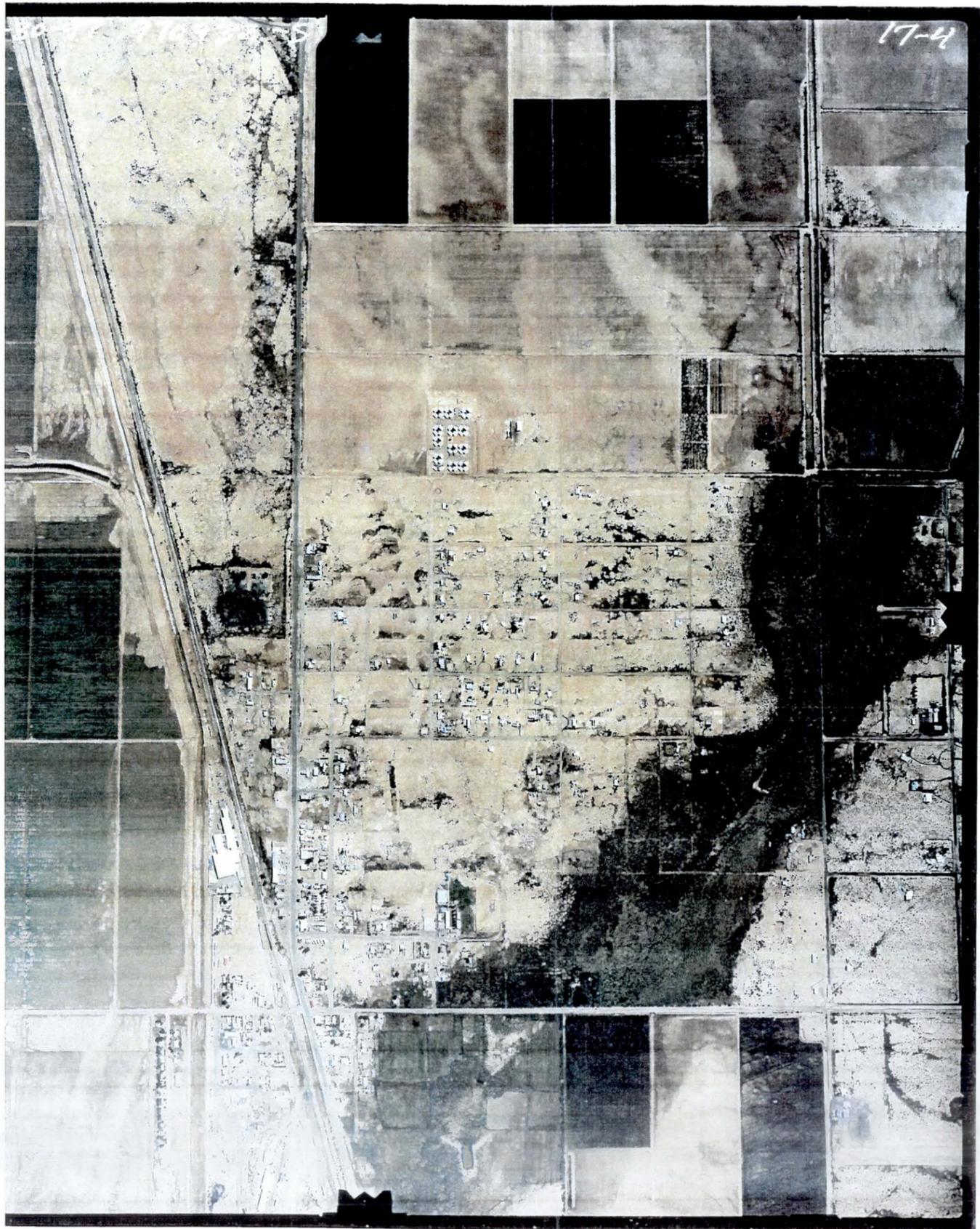
FAX: 919-754-3054 & 919-754-3053

DELIVERY: URGENT IMMEDIATE NORMAL

COMMENT: _____

U	Total Project Cost	Comments	Supplemental Acceptable Units	Acceptable Units Cost	HMGP Eligible	Acceptable HMGP Unit Cost
250	\$ 22,500					
00	\$ 29,081	0	1	\$ 29,081	0	\$ -
00	\$ 29,396	0	1	\$ 29,396	0	\$ -
00	\$ 42,500	0	1	\$ 42,500	0	\$ -
00	\$ 29,615	0	1	\$ 29,615	0	\$ -
00	\$ 31,066	0	1	\$ 31,066	0	\$ -
00	\$ 30,966	0	1	\$ 30,966	0	\$ -
00	\$ 29,081	0	1	\$ 29,081	0	\$ -
00	\$ 35,334	0	1	\$ 35,334	0	\$ -
00	\$ 34,364	0	1	\$ 34,364	0	\$ -
00	\$ 31,168	0	1	\$ 31,168	0	\$ -
00	\$ 43,396	0	1	\$ 43,396	0	\$ -
00	\$ 34,821	0	1	\$ 34,821	0	\$ -
00	\$ 42,273	0	1	\$ 42,273	0	\$ -
00	\$ 43,137	0	1	\$ 43,137	0	\$ -
00	\$ 41,609	0	1	\$ 41,609	0	\$ -
00	\$ 30,373	0	1	\$ 30,373	0	\$ -
00	\$ 29,464	0	1	\$ 29,464	0	\$ -
00	\$ 28,485	0	1	\$ 28,485	0	\$ -
-	\$ 68,347	0	1	\$ 68,347	0	\$ -
-	\$ 67,194	0	1	\$ 67,194	0	\$ -
-	\$ 52,333	0	1	\$ 52,333	0	\$ -
-	\$ 48,291	0	1	\$ 48,291	0	\$ -
-	\$ 31,531	0	1	\$ 31,531	0	\$ -
-	\$ 25,258	0	1	\$ 25,258	0	\$ -
-	\$ 42,675	0	1	\$ 42,675	0	\$ -
-	\$ 24,408	0	1	\$ 24,408	0	\$ -
-	\$ 27,298	0	1	\$ 27,298	0	\$ -
-	\$ 17,547	0	1	\$ 17,547	0	\$ -
-	\$ 14,983	0	1	\$ 14,983	0	\$ -
-	\$ 29,205	0	1	\$ 29,205	0	\$ -
-	\$ 23,508	0	1	\$ 23,508	0	\$ -
-	\$ 13,064	0	1	\$ 13,064	0	\$ -
-	\$ 33,221	0	1	\$ 33,221	0	\$ -
-	\$ 30,126	0	1	\$ 30,126	0	\$ -
-	\$ 40,109	0	1	\$ 40,109	0	\$ -
-	\$ 54,171	0	1	\$ 54,171	0	\$ -
-	\$ 33,277	0	1	\$ 33,277	0	\$ -
-	\$ 20,100	0	1	\$ 20,100	0	\$ -
-	\$ 23,259	0	1	\$ 23,259	0	\$ -
-	\$ 23,840	0	1	\$ 23,840	0	\$ -
-	\$ 33,298	0	1	\$ 33,298	0	\$ -
0	\$ 1,426,688		42	\$ 1,426,688	\$ -	\$ -





Environmental Considerations

Purpose and Need

The proposed action is warranted to acquire FEMA grant money to upgrade or remove dwellings from flood damaged areas within the town of Aguila, Arizona.

Description of the Proposed Action

- 1) Option 1 will include removal of homes from the floodplain. This will include removal and disposal of hazardous waste followed by demolition and disposal of houses in the appropriate and approved landfill.
- 2) Option 2 will include elevating the existing homes and rebuilding the existing building pads above the 100 year floodplain elevation.

Alternatives and Associated Impacts

Under alternative 1, impacts would be limited to removal of specific homes out of the floodplain. Impacts would be confined to clearing and removal of all material including the house and foundation as well as surrounding vegetation.

Under alternative 2, the impacts would include elevating the existing foundations. This would require removal of the homes and raising the existing building pads with fill dirt. Impacts would include clearing and grubbing of existing vegetation prior to filling and resetting existing homes on new building pad elevations.

Affected Environments

Physical Environment –

1. Water Resources- See hydrology report

2. Human Environment

Health, public safety resources – Option 1 will promote public safety by removing people from known flooding areas.

3. Transportation resources – See lands report

4. Economic Resources – See lands report

5. Land Use – See lands report

6. Aesthetic Resources - There will be minimum impact to aesthetic resources within the area from removal of the homes.

7. Recreational Resources – Consideration for recreational facilities in the project area is unknown at this time. There are currently no recreational amenities within the flood impacted areas.

8. Historical, cultural and archeological resources – See paragraph 10

9. Ecological Environment

Attached is a letter received from Arizona Game and Fish indicating that the Heritage Data Management System (HDMS) was accessed and determined that the Sonoran Desert Tortoise was documented in the project vicinity.

10. Cultural Issues

Attached is a letter submitted to the State Historic Preservation Office to determine whether or not there are historic artifacts within older housing dated before 1950.

11. Wild and Scenic Rivers

There are no wild and scenic rivers within the area of concern.

12. Executive Order 11988 – Floodplain Management

See hydrology report

13. Executive Order 11990 – Protection of Wetlands

There are no wetlands within the areas of concern.

14. Environmental Justice

All areas are located within low income and minority housing. Option 1 would offer relocation benefits for families with damaged homes.

Other relevant Laws and Environmental Regulations

The structures will potentially be removed so there will be minimum concerns for seismic safety.

15. Land Use and Socio-economic Factors

Within the areas of concern the land use is essentially residential with primarily low income and minority housing.

16. Air and Water Quality

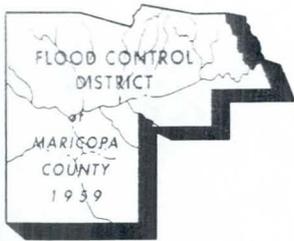
The hazardous waste removal and construction demolition will adhere to all federal, state and local environmental regulations including NESHAP, AHERA and OSHA regulations

It is not anticipated that there will be any impacts to designated waters of the United States from the removal of the homes and at this time will not require a US Army Corps of Engineers Section 404 permit.

There will be no modifications to streambeds of banks of waterways that may result from the project.

17. Natural Resources

- a) The Department of Agriculture will be notified prior to demolition to allow time for salvage of plants adjacent to each of the dwellings.
- b) There will be no adverse impacts to wetlands or marshlands
- c) There have been no rare or endangered species documented within the areas of concern.
- d) The area is not located inside or near a wildlife conservation area.



FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
Telephone (602) 506-1501
Fax (602) 506-4601
TT (602) 506-5897

BOARD OF DIRECTORS
Jan Brewer
Fulton Brock
Andrew Kunasek
Don Stapley
Mary Rose Garrido Wilcox

December 22, 2000

David Lambson
National Resource Conservation Service
3003 N. Central Avenue
Phoenix, Arizona 85012

**RE: Fairhaven RV Park
Aguila, Arizona**

Dear Mr. Lambson:

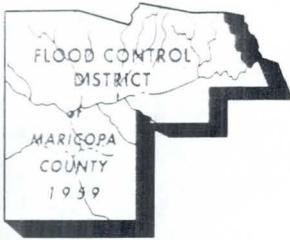
This letter is to notify you that the Flood Control District of Maricopa County may be anticipating conducting the demolition of the Fairhaven RV Park located at 52227 West US 60 in Aguila, Arizona.. Due to previous flood damage in the area the buildings will be removed and the tenants relocated through a FEMA flood mitigation grant. The buildings on the site include primarily RV units with some permanent housing. The area will be cleared of all buildings and trailer foundations and the land returned to its natural state.

Please call me at (602) 506-4073 if you have any questions.

Sincerely,

Robert B. Stevens
Environmental Services Planner

Cc: MSE KRB File: Aguila (1.5.1)



FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
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Fax (602) 506-4601
TT (602) 506-5897

BOARD OF DIRECTORS
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Don Stapley
Mary Rose Garrido Wilcox

December 22, 2000

Jo Anne Miller, Compliance Specialist/Archeologist
State Historic Preservation Office
1300 West Washington
Phoenix, Arizona 85007

**RE: Potential for Registration as Historic Properties
Aguila, Arizona**

Dear Mrs. Miller:

The Flood Control District of Maricopa County is requesting information on the potential presence of historical artifacts for Aguila, Arizona in accordance with the National Historic Preservation Act of 1966 (NHPA). The information will be used in compliance with the National Environmental Policy Act as well as the State of Arizona environmental requirements for a FEMA Hazard Mitigation Grant application to remove houses and relocate property owners and tenants out of flooding areas. A list of these properties is as follows:

Fairhaven RV Park
52227 West US 60
Township 7 North, Range 9 West, Section 22
8 Apartment Units
County assessor's records date dwellings at 1946

Kent Bowman
51425 West US 60
(520) 685-2653
County assessor's record date house at 1926

Florence Moody
51791 E. Ray
Aguila, Arizona
County Assessor's record date house at 1945

The buildings are currently occupied and have undergone renovations. Please call me at (602) 506-4073 if you have any questions.

Sincerely,

Robert B. Stevens
Environmental Services Planner

Cc: MSE KRB File: Aguila (1.5.1)



THE STATE OF ARIZONA

GAME AND FISH DEPARTMENT

2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399
(602) 942-3000 • WWW.AZGFD.COM

GOVERNOR
JANE DEE HULL
COMMISSIONERS
CHAIRMAN, W. HAYS GILSTRAP, PHOENIX
DENNIS D. MANNING, ALPINE
MICHAEL M. GOLIGHTLY, FLAGSTAFF
JOE CARTER, SAFFORD
WILLIAM BERLAT, TUCSON
DIRECTOR
DUANE L. SHROUFE
DEPUTY DIRECTOR
STEVE K. FERRELL



JOD CONTROL DIST
RECEIVED

DEC 21 '00

C- & G	FINANCE
PIO	LANDS
ADMN	C & M
REG	P & PM
ENV	FILE
CONTRACTS	

KRB

December 18, 2000

Ms. Kristina Baxter
Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, Arizona 85009-1501

Re: Special Status Species; Housing Construction Project in Aguila, Arizona

Dear Ms. Baxter:

The Arizona Game and Fish Department (Department) has received your request, dated December 18, 2000, regarding special status species for the above-referenced project and the following information is provided. The Department's Heritage Data Management System (HDMS) has been accessed and current records show that the **Sonoran desert tortoise** (*Gopherus agassizii*-WC) has been documented as occurring in the project vicinity.

STATUS DEFINITIONS

WC - Wildlife of Special Concern in Arizona. Species whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines, as described by the Department's listing of **Wildlife of Special Concern in Arizona** (WSCA, in prep.). Species included in WSCA are currently the same as those in **Threatened Native Wildlife in Arizona** (1988).

We recommend following the attached guidelines if desert tortoise is encountered at any time during the project. At this time, the Department's comments are limited to the special status species information provided above. This correspondence does not represent the Department's evaluation of impacts to other wildlife resources or wildlife habitat associated with activities occurring in the subject area. If you have any questions regarding the HDMS information provided in this letter, please contact me at (602) 789-3605.

Sincerely,

Bob Broscheid
Project Evaluation Program Supervisor
Habitat Branch

cc: Russ Engel, Habitat Program Manager, Region IV, Yuma

AGFD# 12-16-00(01)

GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department
Revised January 17, 1997

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

Desert tortoises of the Sonoran population are those occurring south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position at all times and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 105 degrees fahrenheit unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to two miles, but no further than necessary from its original location. If a release site, or alternate burrow, is unavailable within this distance, and ambient air temperature exceeds 105 degrees fahrenheit, the Department should be contacted to place the tortoise into a Department-regulated desert tortoise adoption program. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, will also be placed in desert tortoise adoption programs. *Managers of projects likely to affect desert tortoises should obtain a scientific collecting permit from the Department to facilitate temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

- These guidelines do not apply to the Mohave population of desert tortoises (north and west of the Colorado River). Mohave desert tortoises are specifically protected under the Endangered Species Act, as administered by the U.S. Fish and Wildlife Service.
- These guidelines are subject to revision at the discretion of the Department. We recommend that the Department be contacted during the planning stages of any project that may affect desert tortoises.
- Take, possession, or harassment of wild desert tortoises is prohibited by state law. Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.

RAC:NLO:rc

ADMMR

Arizona Department of Mines and Mineral Resources

1502 West Washington, Phoenix, AZ 85007 Phone (602) 255-3795
Toll Free in Arizona 1-800-446-4259 FAX (602) 255-3777

December 19, 2000

Kris Baxter
Public Information Officer
Flood Control District--Maricopa County
2801 West Durango Street
Phoenix, Arizona 85009

Re: FEMA Hazard Mitigation Grant Program Application

Dear Ms. Baxter:

This letter is written in response to your telephone request of December 18, 2000. As we understand it, the Flood Control District for Maricopa County is requesting funds from FEMA to assist in relocating the community of Aguila, Arizona. Furthermore, we understand that as part of the application process, FEMA requires a statement from state agencies that such relocation will not cause further degradation of the environment.

The Arizona Department of Mines and Mineral Resources (ADMMR) is enabled by the Arizona Legislature to promote mining and mineral education in Arizona. We do not engage in any enforcement or regulatory functions. Based on our understanding and enabling legislation, we see no reason that would preclude the relocation of Aguila, Arizona for flood control purposes.

In closing, thank you again for the opportunity to respond to your request for information. If you have any other questions or require additional information, please do not hesitate to contact me. I wish you the best in all of your endeavors.

Sincerely,



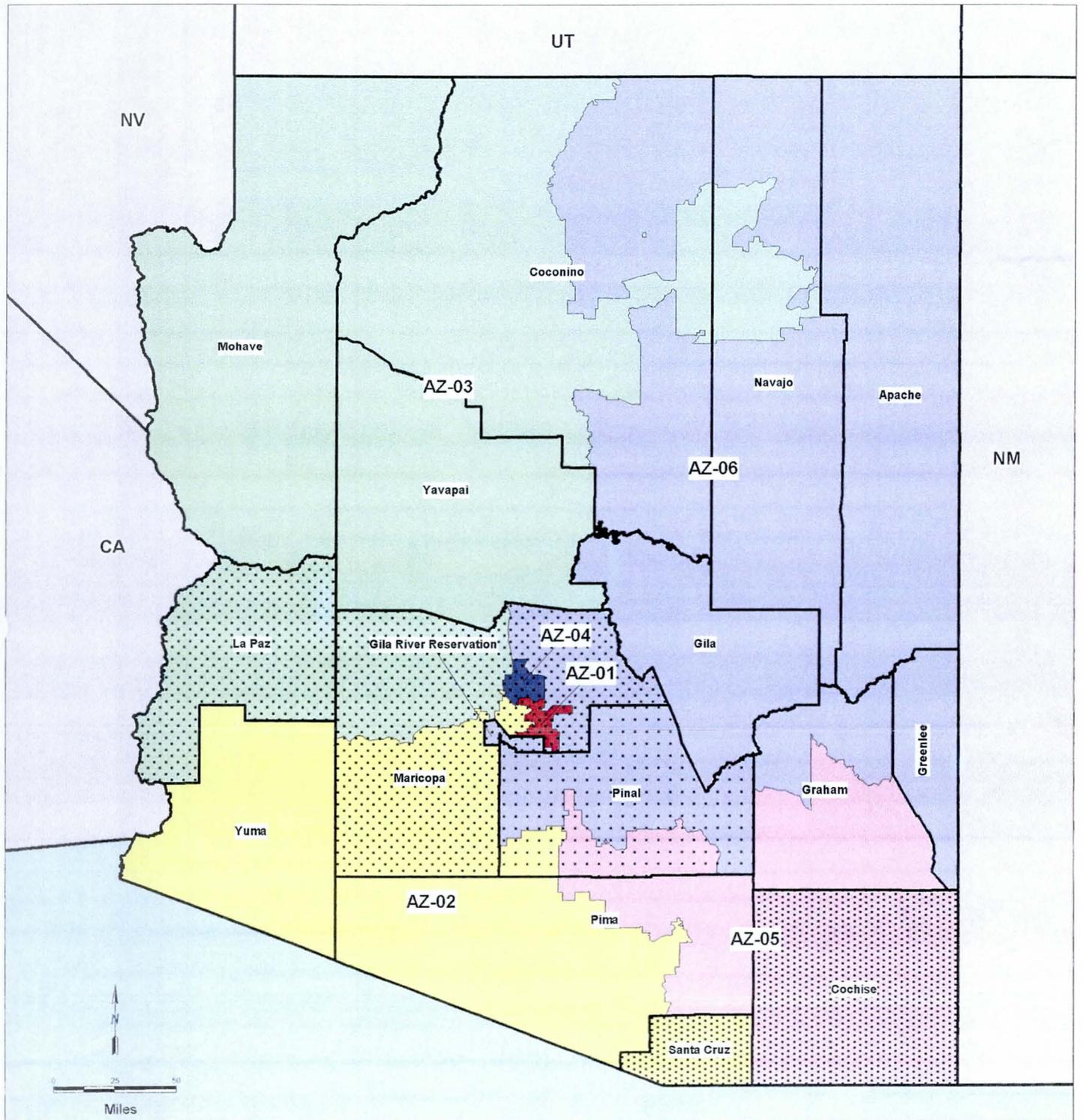
Doug Sawyer, Director
Director ADMMR



DR-1347-AZ

Severe Storms and Flooding

Designated Counties and Congressional Districts



Designated Areas by Assistance Type

- Individual Assistance and Public Assistance
Gila River Indian Community,
La Paz, Maricopa and Pinal Counties
- Public Assistance
Cochise and Santa Cruz Counties

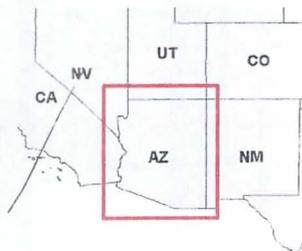
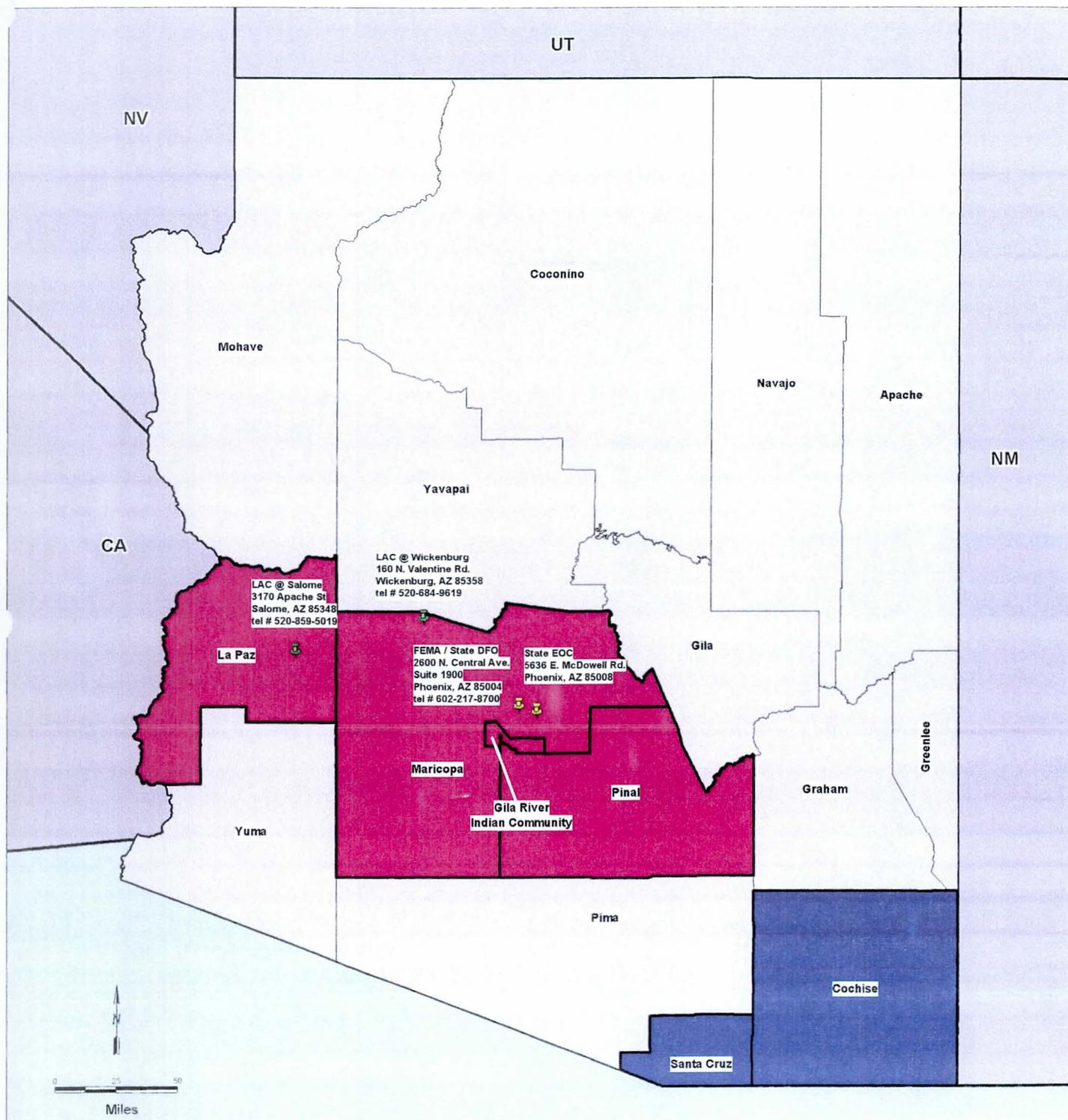
* All Counties eligible for Mitigation Program

106 Congressional Districts

- AZ-01 Matt Salmon (R)
- AZ-02 Ed Pastor (D)
- AZ-03 Bob Stump (R)
- AZ-04 John B. Shadegg (R)
- AZ-05 Jim Kolbe (R)
- AZ-06 J. D. Hayworth (R)



DR-1347-AZ Severe Storms and Flooding Office Locations



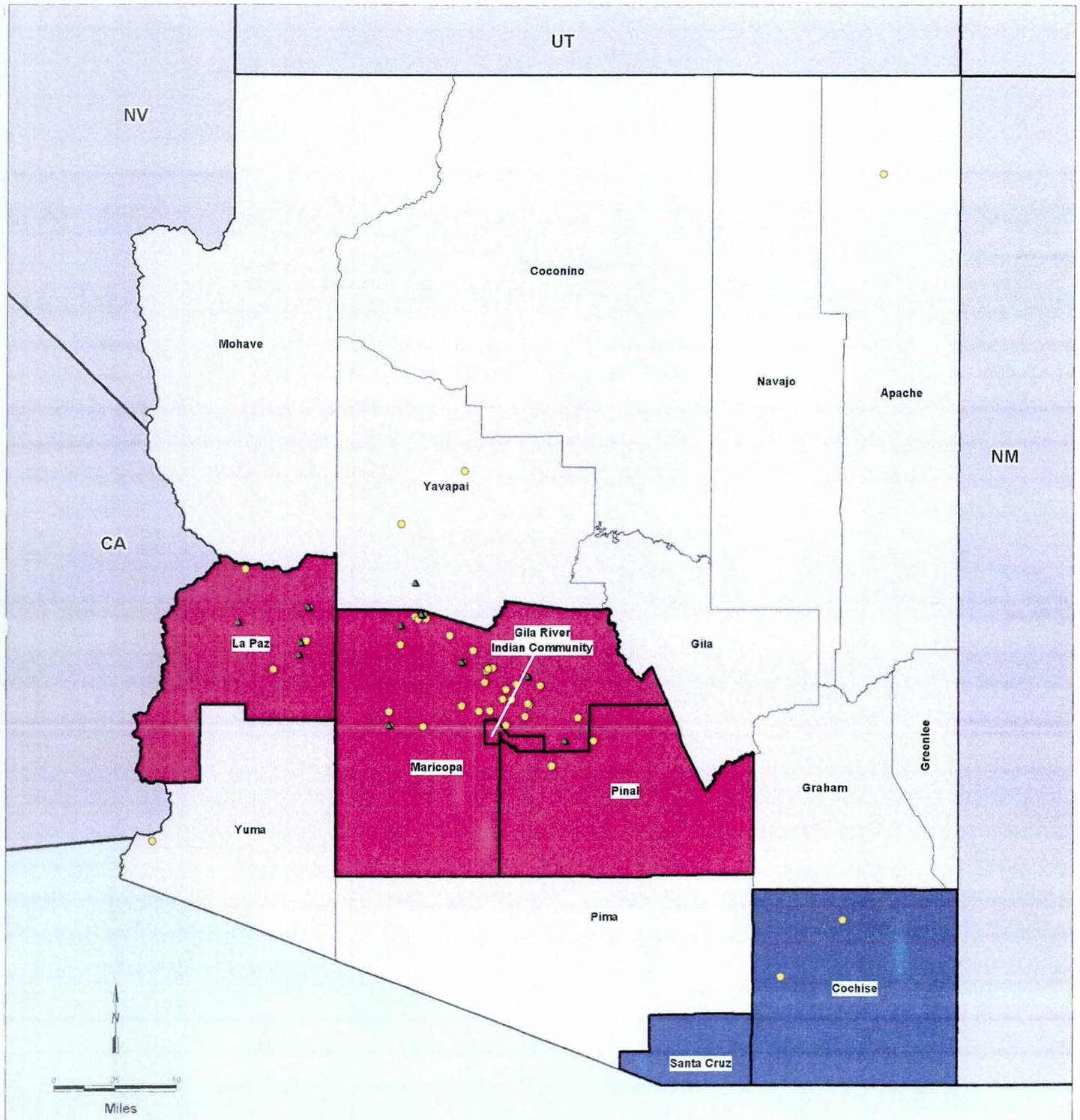
Designated Areas by Assistance Type

- Individual Assistance and Public Assistance
Gila River Indian Community,
La Paz, Maricopa and Pinal Counties
- Public Assistance
Cochise and Santa Cruz Counties

* All Counties designated for Mitigation Program



DR-1347-AZ
 Severe Storms and Flooding
 Designated Areas and Human Service Applicants
 11/21/00



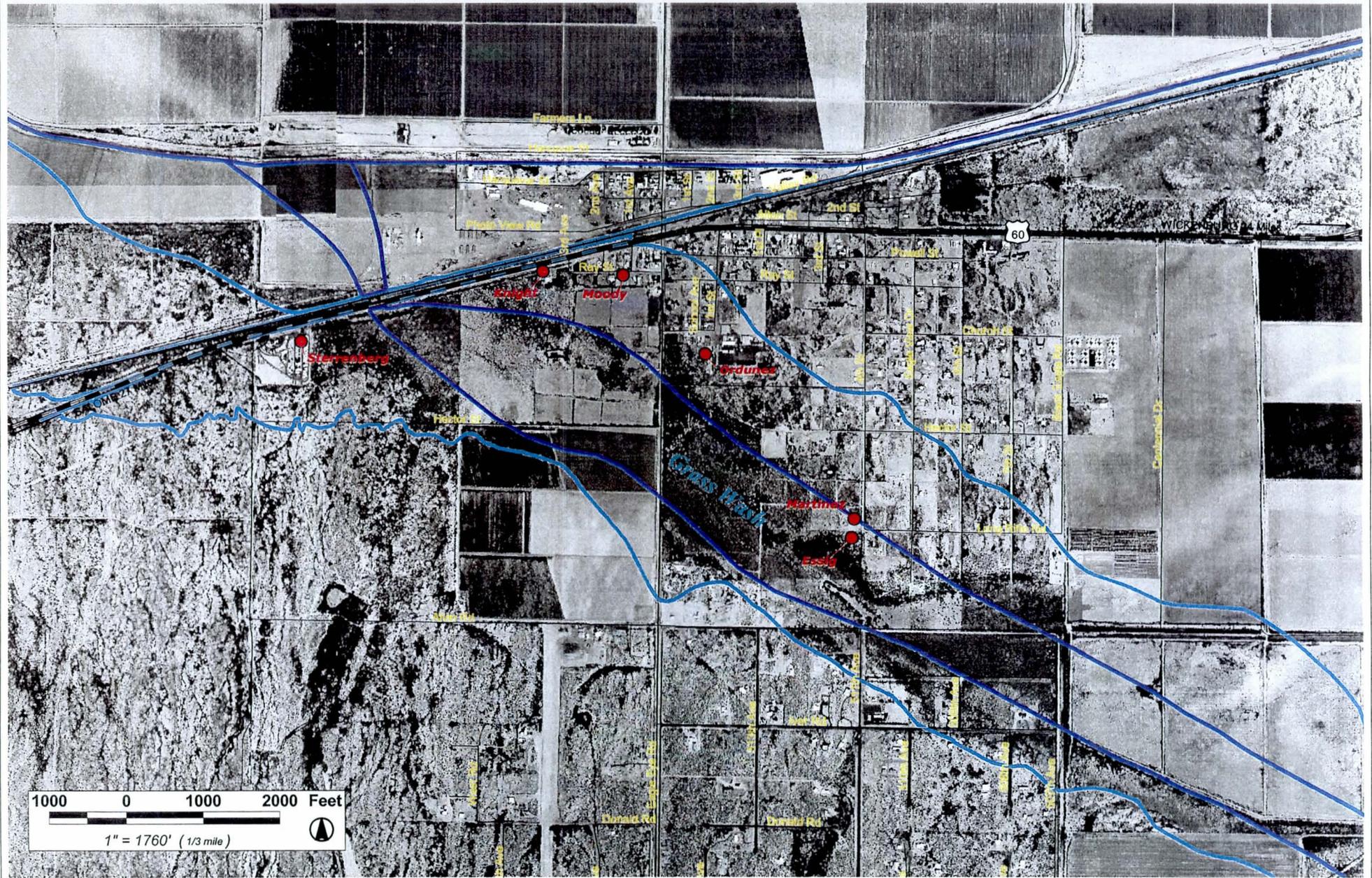
Designated Areas by Assistance Type

- Individual Assistance and Public Assistance
 Gila River Indian Community,
 La Paz, Maricopa and Pinal Counties
- Public Assistance
 Cochise and Santa Cruz Counties
- Individual Assistance Applicants
 304 total as of 11/21/00
- Small Business Administration Applicants
 41 total as of 11/21/00
- * All Counties designated for Mitigation Program

Town of AGUILA

Maricopa County, Arizona

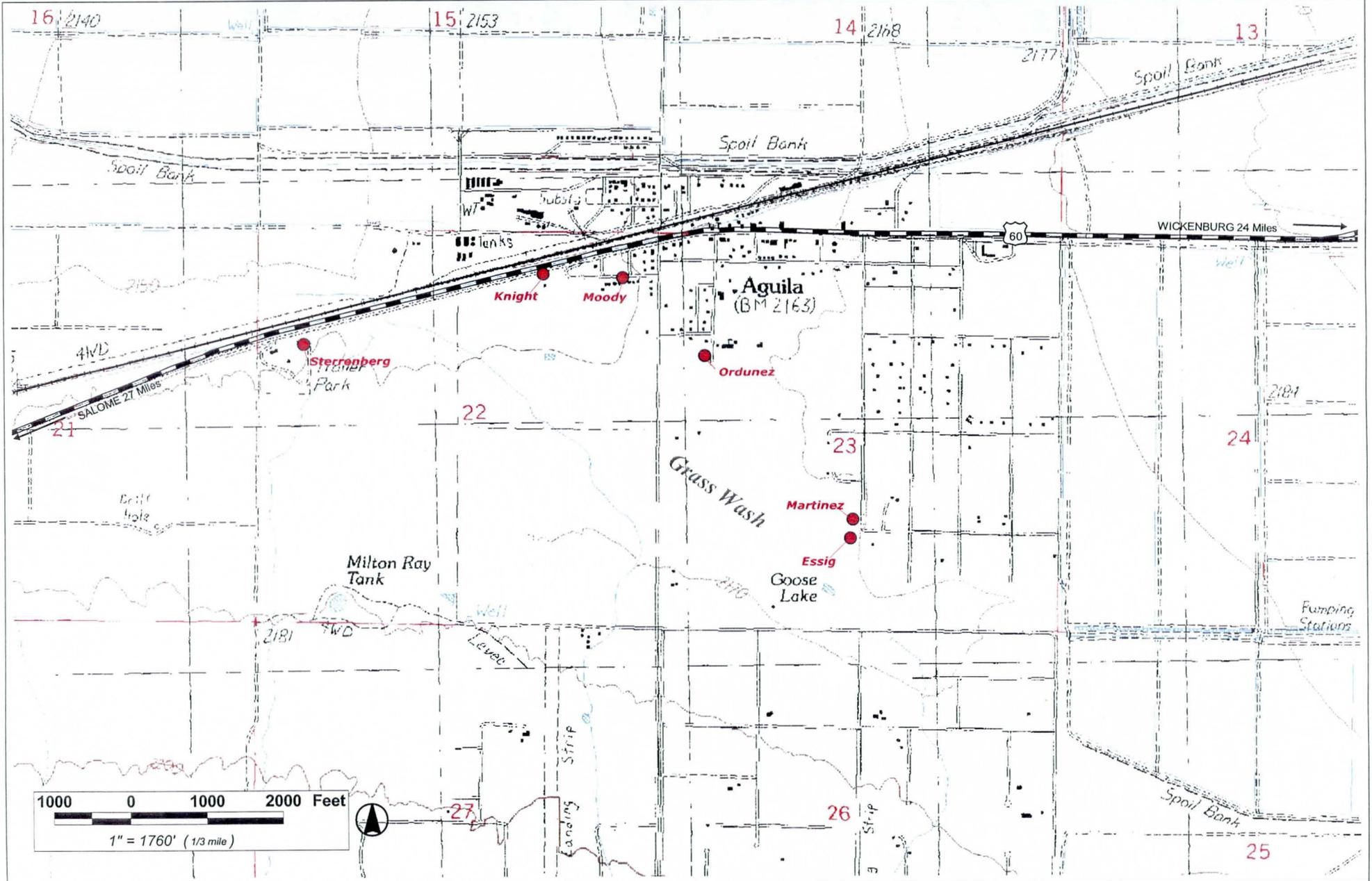
Aerial Map

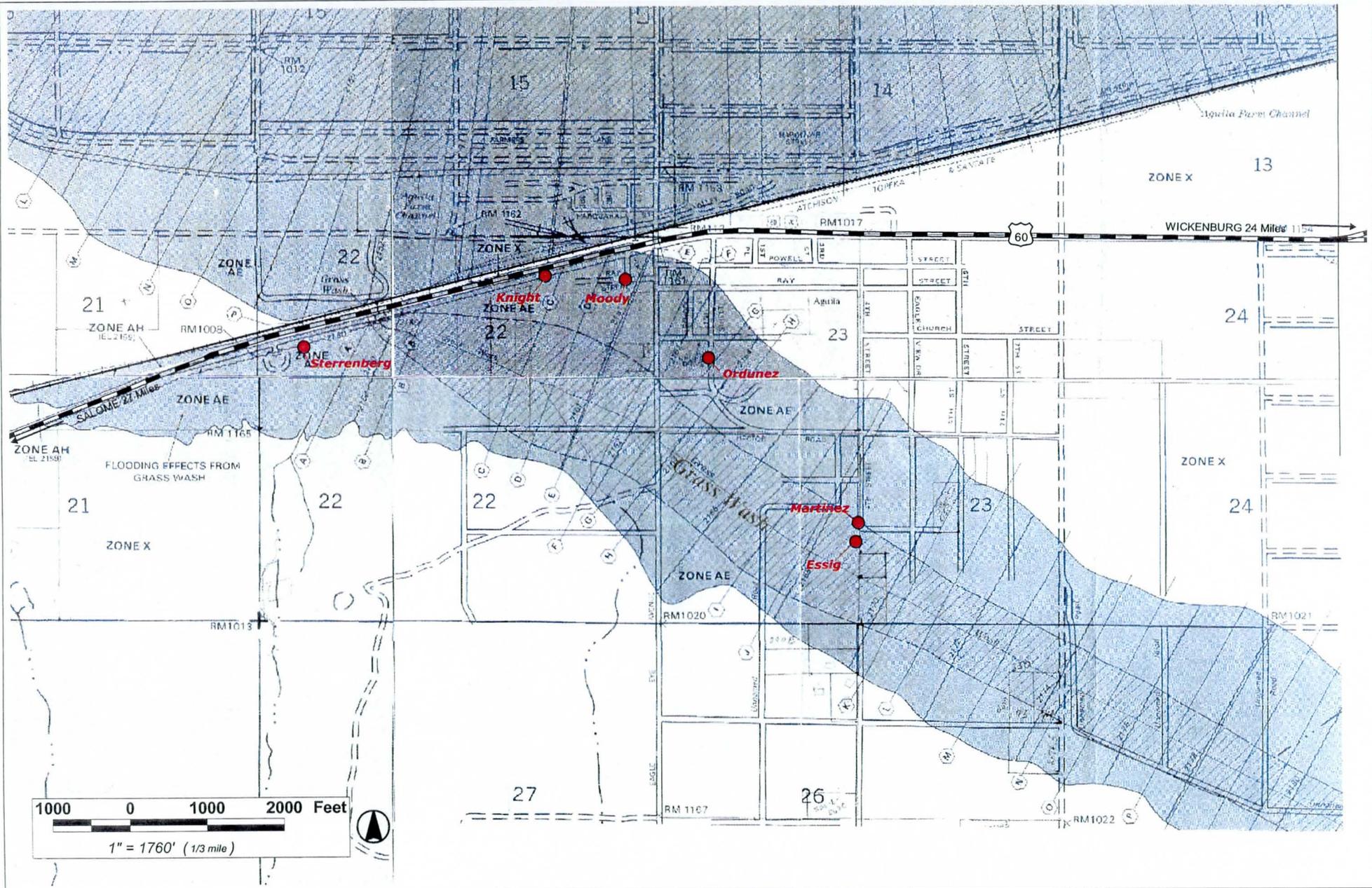


Town of **AGUILA**

Maricopa County, Arizona

USGS Quadrangle Map





Town of AGUILA

Maricopa County, Arizona

County Street Map

